REMEDIAL INVESTIGATION/FEASIBILITY STUDY SWALE AREA

CATERPILLAR INC.
MAPLETON, ILLINOIS

VOLUME I – TEXT, FIGURES & TABLES

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EXECUTIVE SUMMARY

Caterpillar Inc. (Caterpillar) operates a gray iron foundry at its Mapleton, Illinois facility that manufactures engine blocks, cylinder heads, liners, and camshafts. In 1998, Caterpillar initiated a soil investigation in a small portion of the plant property where drums containing hazardous wastes were formerly stored in a drum storage area permitted under the Resource Conservation and Recovery Act (RCRA). During the investigation, polychlorinated biphenyls (PCBs) were detected in soil samples. The subsequent soil investigations completed by Caterpillar identified the presence of PCBs in soil within and adjacent to the former RCRA Drum Storage Area. A more comprehensive soil and groundwater investigation was then initiated within and proximal to the area where PCB-containing soil was previously identified.

The area that is the primary focus of this report is the Swale Area. The Swale Area is located on the northern 200 acres of the Caterpillar property and is bounded to the south and east by the Toledo, Peoria, and Western Railroad (TP&W) easement, to the west by the road to the pump houses, and to the north by Building B. The Swale Area is divided into two sections, the West Swale Area (WSA) and the East Swale Area (ESA). The Swale Area was originally a low-lying area on the plant property covering approximately 13 acres formed by the construction of rail easements, access roads, and structures. Subsequently, used foundry sand was used to fill this low lying area.

Investigative activities completed to date have been successful in delineating the nature and extent of PCB impacts in the soils of the Swale Area. In addition to successfully delineating PCB impacts, a thorough understanding of the geology and hydrogeology of the plant property was obtained during the investigations documented by this report.

A Human Health Risk Assessment (HHRA) was completed for the two sections of the Swale Area (ESA and WSA). The HHRA was prepared in accordance with the National Contingency Plan and applicable U.S. Environmental Protection Agency (U.S. EPA) guidance. The HHRA included PCBs as the Chemicals of Potential Concern and concluded that the total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within or below the U.S. EPA's acceptable target cancer risk range and that the estimated hazard indices are below the level of concern. Therefore, very costly remedies that permanently remove PCBs from the Swale Area are not warranted. However, PCBs are present in soil at concentrations above the objectives promulgated at 40 Code of Federal Regulations (CFR) Part 761.61. Therefore, actions to mitigate potential human exposure to the PCB-containing soil and ensure proper future management of PCB-containing soil are warranted.

The ESA meets the criteria for a low occupancy area as described in 40 CFR Part 761.3. The WSA is considered a high occupancy area. The PCB concentrations in soil in the ESA and WSA are above the cleanup level for bulk PCB remediation waste for low and high occupancy areas, respectively.

An Ecological Risk Evaluation of the PCBs in soils within the Swale Area was performed. This screening level evaluation indicates that no significant ecological risk is present from the Swale Area. Exposure pathways from the PCBs to ecological receptors are functionally incomplete.

Based upon the results of the soil investigations, the Human Health Risk Assessment, and the Ecological Risk Evaluation, the following Remedial Action Objectives were developed for the Swale Area.

EAST SWALE AREA (ESA)

The ESA will be maintained as a low occupancy area. The specific Remedial Action Objectives include:

1. minimize direct contact to PCBs in soil at concentrations above 25 milligrams per kilogram (mg/kg)
2. minimize inhalation of soil containing PCBs at concentrations above 25 mg/kg
3. ensure occupancy levels remain at or below the low occupancy level specified at 40 CFR Part 761
4. reduce surface water infiltration into the existing soils through grading and drainage controls of the surface cover

WEST SWALE AREA (WSA)

The WSA is a high occupancy area. The specific Remedial Action Objectives include:

1. minimize direct contact to PCBs in soil at concentrations above 10 mg/kg
2. minimize inhalation of soil containing PCBs at concentrations above 10 mg/kg
3. control worker access to the open land found east and immediately south of Building R
4. reduce surface water infiltration into existing soils through grading and drainage controls of the surface cover

PCBs were not detected in groundwater in the Swale Area. Therefore, Remedial Action Objectives are not necessary for the groundwater media.

A number of remedial technologies applicable to PCB-containing soil in both the ESA and the WSA were identified and screened. The following Remedial Action Alternatives were developed to satisfy the Remedial Action Objectives for PCB-containing soil using the following retained remedial technologies.

- Alternative 1 - No Action;
- Alternative 2 - Partial Capping, Grading Improvements, Vegetative Cover, Deed Restrictions, Access Controls, and Inspection and Maintenance; and
- Alternative 3 - Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance.

Each of the above-noted alternatives, except no action, would include upgrading and maintaining the fencing surrounding the Swale Area (ESA and WSA). Deed restrictions would be established to ensure the Swale Area remains in industrial use. Further deed restrictions and access controls would be established to ensure the ESA remains a low occupancy area as defined by 40 CFR Part 761.61.

Alternative 1 is the lowest cost alternative but does not meet the Remedial Action Objectives, does not comply with Applicable or Relevant and Appropriate Requirements (ARARs), and would not be protective of human health and the environment.

Alternatives 2 and 3 both rated favorably in the following criteria:

1. overall protection of human health and the environment
2. compliance with ARARs
3. long-term effectiveness and permanence
4. reduction in the toxicity, mobility, or volume of material
5. short-term effectiveness
6. implementability
7. cost

Alternatives 2 and 3 comply with ARARs and provide nearly equivalent levels of protection to human health and the environment. However, Alternative 2 accomplishes this protectiveness at the lowest cost and is the preferred alternative.

A summary of the estimated costs for the Remedial Action Alternatives, in reverse order (from most expensive to least expensive), is provided below:

Remedial Alternative Description		*Present Worth Cost*
Alternative 3:	Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,430,000
Alternative 2:	Partial Capping, Grading Improvements, Vegetative Cover, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,270,000
Alternative 1:	No Action	$0

The Remedial Investigation and Feasibility Study was completed, and this document was prepared for the purposes of obtaining approval from the U.S. EPA Regional Administrator for a risk-based closure at the Swale Area pursuant to 40 CFR Part 761.61(c).

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LIST OF COMMONLY USED ACRONYMS AND SHORT FORMS

AMSL	above mean sea level
ARAR	applicable or relevant and appropriate requirements
AST	aboveground storage tanks
AT	averaging time
bgs	below ground surface
BCF	Bioconcentration Factor
°C	Degrees Centigrade
CDI	Chronic Daily Intake
CERCLA	Comprehensive Response Compensation and Liability Act
CILCO	Central Illinois Light Company
CFR	Code of Federal Regulations
cm/s	centimeters per second
COPC	compound of potential concern
CRA	Conestoga-Rovers & Associates
CSF	Cancer Slope Factor
CT	Central Tendency
°F	Degrees Fahrenheit
Daily	Daily Analytical Laboratories of Peoria, Illinois
ED	exposure duration
EPC	exposure point concentration
ESA	East Swale Area
Hanson	Walter E. Hanson Company
HHRA	Human Health Risk Assessment
HI	Hazard Index
HQ	Hazard Quotient
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
Koc	Octonol-Carbon Coefficient
K_{ow}	n-octanol-water
LMS	linearized multistage
LOAEL	Lowest-Observed Adverse Effect Level
MLE	maximum likelihood estimate
mg/kg	milligrams per kilogram
mg/m^3	milligrams per cubic meter

LIST OF COMMONLY USED ACRONYMS AND SHORT FORMS (CONT'D)

mg/L	milligrams per liter
mmHg	millimeters of mercury
NCP	National Contingency Plan
NOAEL	No-Observed Adverse Effect Level
O&M	Operation and Maintenance
OSWER	Office of Solid Waste and Emergency Response
PCBs	Polychlorinated Biphenyls
PEF	particulate emission factor
PRG	Preliminary Remediation Goal
PVC	Polyvinyl Chloride
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
RfC	Reference Concentration
RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Ftudy
RME	Reasonable Maximum Exposure
RMT	Residuals Management Technology
SARA	Superfund Amendment and Reauthorization Act
SRP	Site Remediation Program
TP&W	Toledo, Peoria, and Western Railroad
TSCA	Toxic Substances Control Act
UCL	upper concentration limit
URF	unit risk factor
U.S. EPA	United States Environmental Protection Agency
USCS	Unified Soil Classification System
WSA	West Swale Area

1.0 INTRODUCTION

1.1 PLANT LOCATION

This Remedial Investigation/Feasibility Study (RI/FS) report summarizes the results of investigative activities completed at the Caterpillar Inc., Mapleton, Illinois plant property. Caterpillar operates a gray iron foundry on the northern 200 acres of property. The plant property consists of approximately 350 acres and is located adjacent to the Illinois River immediately south of the Village of Mapleton, Illinois, and approximately 4 miles west of the City of Pekin, in Hollis Township, Peoria County, Illinois. The plant property is located in Sections 29 and 30, Township 7 North, Range 5 West of the Third Principal Meridian in Peoria County, Illinois, between U.S. Highway 24/Illinois Highway 9 and the Illinois River (Figure 1.1). The plant property lies in the valley of the Illinois River at River Mile 147, approximately 11 river miles downstream of the Peoria Lock and Dam. The plant property and features are shown on Figure 1.2

The Swale Area, which is the focus of this report, is an approximately 13 acre parcel located south and southwest of former Building B, as shown on Figure 1.3. The Swale Area is a formerly-low lying area formed by the construction of rail easements, access roads, and structures that was subsequently filled with used foundry sand.

1.2 BACKGROUND

In 1998, Caterpillar initiated a soil investigation in a small portion of the plant property where drums containing hazardous wastes were formerly stored in a Drum Storage Area permitted under the Resource Conservation and Recovery Act (RCRA). During the course of this investigation, polychlorinated biphenyls (PCBs) were detected in soil samples although these compounds were not among the chemicals stored in the former Drum Storage Area. Subsequent soil investigations completed by Caterpillar identified the presence of PCBs in soil within and adjacent to the former RCRA Drum Storage Area.

Caterpillar subsequently retained Conestoga-Rovers & Associates (CRA) to implement a soil and groundwater investigation within and proximal to the area where PCB-containing soil was identified during Caterpillar's investigations. CRA implemented this investigation, and this report provides a comprehensive summary of the related plant property investigations completed to date. These investigations focused on the distribution of PCBs in soils and/or groundwater in the Swale Area. In addition to completing a soil and groundwater investigation in the Swale Area, background information concerning the geology and hydrogeology of the plant

property was compiled from the public literature and previous work at the plant property.

Investigative activities completed to date were successful in delineating the nature and extent of PCB impacts to soils and groundwater in the Swale Area. A consistent and comprehensive understanding of the geology and hydrogeology of the plant property has been obtained through these and previous investigations. PCBs were found to occur in soil over a limited area of the plant property that was filled historically with foundry sand (Swale Area). Although PCBs have been detected in foundry sand fill over a limited area of the plant property, PCBs were not detected above concentrations of concern in later foundry sand fill deposits. No impact to groundwater resulting from the placement of this material has been observed at the plant property.

1.3 PURPOSE

The purpose of this report is to provide the information, as summarized at 40 Code of Federal Regulations (CFR) Part 761.61(c), to the U.S. Environmental Protection Agency (U.S. EPA) Regional Administrator and to seek approval from the Regional Administrator for a risk-based closure at the Swale Area.

During the meeting with the U.S. EPA on May 31, 2000, Caterpillar presented the available findings and made a request to pursue risk-based closure of the Swale Area consistent with the regulations codified at 40 CFR Part 761, which was published in the Federal Register on June 29, 1998. The U.S. EPA agreed to consider the risk-based approach and stated that such a closure may proceed under the auspices of Illinois' Site Remediation Program (SRP) as codified at Title 35 Illinois Administrative Code (IAC) Part 740. These findings also were presented to the Illinois Environmental Protection Agency (IEPA) during a subsequent meeting convened on June 29, 2000. This document represents the next step in the pursuit of a risk-based closure.

Caterpillar submitted an RI/FS report to the U.S. EPA in May 2001 that included a summary of the plant property environmental setting and analytical data, and evaluated the human health risks consistent with applicable U.S. EPA guidance. Several remedial options were evaluated to address the presence of PCBs in soil at the Swale Area. In December 2001, the U.S. EPA submitted a number of preliminary comments on the RI/FS report. Subsequently, Caterpillar re-assessed its future land use plans for the Mapleton plant and, in response, completed further investigative activities in 2005. In September 2005, another meeting was held with the U.S. EPA to discuss the analytical data, risk-based closure options under the Toxic Substances Control Act (TSCA), and flexibility to alter the closure of an area should the future land use change.

This revised RI/FS report contains additional data, updated information concerning future land use assumptions, and a revised risk assessment. Therefore, this RI/FS report is intended to supplant the May 2001 submittal for the Swale Area.

1.4 REPORT ORGANIZATION

This report has been organized into 12 sections as summarized below.

- Section 1.0 provides the background, purpose, and organization of this report.
- Section 2.0 presents an overview of the plant property including the definition, location and description, geologic and hydrogeologic setting, and history.
- Section 3.0 provides an overview of investigations completed.
- Section 4.0 summarizes the data compiled during investigative activities.
- Section 5.0 provides a summary of the Human Health Risk Assessment.
- Section 6.0 provides an ecological risk evaluation.
- Section 7.0 discusses PCB fate and transport mechanisms.
- Section 8.0 identifies remedial action goals and objectives.
- Section 9.0 identifies, summarizes, and screens remedial technologies.
- Section 10.0 identifies and evaluates remedial alternatives.
- Section 11.0 provides a comparative analysis of remedial alternatives.
- Section 12.0 provides a summary and conclusions.

2.0 PLANT PROPERTY OVERVIEW

2.1 PLANT PROPERTY DESCRIPTION AND FEATURES

2.1.1 HISTORY AND DESCRIPTION

Caterpillar operates a gray iron foundry located in Mapleton, Illinois. The foundry manufactures engine blocks, cylinder heads, liners, and crankshafts used in Caterpillar equipment and for sale to other companies. The Mapleton plant is a major metal recycler. Caterpillar acquired and began to develop the property in the middle 1960s. Building B, the first foundry building constructed on the property, and a number of adjacent support buildings were constructed in the late 1960s. The first iron was poured in Building B in 1967. Building D, the second foundry building, and associated support buildings were constructed in the middle 1970s. The first iron was poured in Building D in 1978. Currently, Caterpillar's foundry operations and associated administrative offices are housed in Building D. Operations in Building B were shut down in the late 1980s due to excess capacity and process modernization, and Building B was subsequently demolished in 2008/2009. Figure 1.2 provides a map depicting major features at the plant property.

Building B is located on the eastern portion of the plant property, east of Little LaMarsh Creek. A paved road connects the active western portion of the plant with the eastern portion. Building B formerly occupied an area of approximately 1,000,000 square feet. Buildings A and M were connected to the north side of Building B and formerly served as plant administrative offices and a pattern shop. East of Building B is a 12-acre asphalt parking lot. West of Building B is undeveloped plant property. A rail easement owned by the Toledo, Peoria, and Western Railroad (TP&W) lies several hundred feet south of Building B. TP&W's rail easement runs east-west and then curves towards the northeast. TP&W's rail line was originally located north of its present location but was relocated south to facilitate construction of Building B. Directly south of Building B, between Building B and the TP&W railroad line, are Building V, Building P, Building Q, and a substation owned by Central Illinois Light Company (CILCO). Building V is currently used for material storage, and Building P is unused and currently vacant. Building Q is an unused electrical switchgear facility. Southwest of Building B and west of Building V is Building R, which provides the plant's compressed air, potable water, and sanitary waste treatment. Farther to the west of Building B are Building RR, the industrial wastewater treatment plant, and the former Building N, an unused heating complex that was demolished in 2008/2009.

Caterpillar operates an 80-acre foundry sand landfill on land located south of the TP&W rail easement, between the rail easement and the Illinois River. The foundry sand

landfill (hereinafter designated the "817 landfill") is operated under Title 35 IAC Part 817 rules and does not accept any material from off-site sources.

2.1.2 SWALE AREA DESCRIPTION

The Swale Area comprises an area of approximately 13 acres and is bounded to the south and east by the TP&W rail easement, to the west by the road to the pump houses, and to the north by Building B (see Figure 1.3).

Extensive geotechnical investigations of the plant property, undertaken in 1964 and 1965, concluded that the native soils did not have the physical capacity to support a large manufacturing building. Therefore, the upper layers of soil were removed down to a solid base, and clay fill was imported and compacted as engineered fill. The engineered fill is as much as 10 feet thick in some locations. The edges of the engineered fill were tapered to match the surrounding grade. A subsurface "clay-core dike" was constructed around Building B to provide subsurface groundwater seepage control. The TP&W rail easement was relocated several hundred feet to the south of its original position. The relocated rail bed was raised on compacted engineered clay fill by as much as 10 feet above the grade that existed at that time.

The Swale Area formerly was a low-lying area formed by the clay sidewalls of the TP&W rail bed to the south and east, the engineered fill to the north, and the clay road embankment leading to the pump houses on the west (near Buildings N and RR). The Swale Area is underlain by a native clay layer. Rail spurs trending north-south from the TP&W rail easement to Building B were built on engineered fill and divide the Swale Area. The Swale Area was completely formed when industrial production began at Building B in 1967. The Swale Area was filled in the past with used foundry sand in order to bring it up to the grade of the features that surrounded the Swale Area (i.e., the engineered fill areas to the north, south, and west). Based upon a review of aerial photographs, it is believed that filling of the Swale Area occurred primarily in the early 1970s. The 817 landfill was placed in operation in 1977, and after that time, used foundry sand was deposited exclusively in the 817 landfill.

2.2 PHYSICAL SETTING

2.2.1 LAND USE

Land use in the vicinity of the plant property is a mixture of industrial, agricultural, and open space. Land use south of U.S. Highway 24/Illinois Highway 9, a four lane divided

highway, is primarily industrial. The plant property abuts industrial property to the east, and this industrial land use extends approximately 2 miles to the east, upstream along the Illinois River. North of Highway 24/9, land use is primarily sparse residential, agricultural, and open space. Much of the land immediately north of the plant property is wooded, especially in the deeply incised drainage valleys. The Village of Mapleton, Illinois (population approximately 200) lies across Highways 24/9 from the eastern portion of the plant property.

South of the Illinois River, land use is primarily agricultural, with widely scattered residences. There are no major population centers within a 3-mile radius of the plant property. Southeast of the plant property and on the opposite side of the Illinois River, lies Powerton Lake, a large cooling water reservoir serving the Powerton electrical generating plant.

2.2.2 TOPOGRAPHY AND DRAINAGE

Topography in the vicinity of the plant property ranges from nearly flat to steeply sloping. Between the north bank of the Illinois River and Highway 24/9, surface topography is relatively flat to gently sloping towards the Illinois River. The normal pool elevation of the Illinois River is approximately 431 to 435 feet above average mean sea level (AMSL). At the shore of the Illinois River, the elevation is approximately 435 feet AMSL. Surface elevations inland of the Illinois River range from approximately 440 feet to 460 feet AMSL. To the north of Highway 24/9, the elevation increases relatively steeply, forming bluffs that rise to an elevation of over 600 feet AMSL (see Figure 1.1). These bluffs are incised by deep, steeply sloped drainage valleys associated with tributaries that convey water towards the Illinois River. These valleys are generally wooded.

The most significant of the drainage tributaries is Little LaMarsh Creek, which drains most of the land north of the plant property. Little LaMarsh Creek flows in a north to south direction through the center of the plant property and discharges into the Illinois River. The central portion of the plant property is unpaved, and surface water runoff is directed towards Little LaMarsh Creek. Areas surrounding the plant structures are covered with impervious surfaces (concrete, asphalt, or compacted gravel). Surface water runoff from these areas and the roofs is directed to subsurface storm sewers and discharges to the Illinois River.

South of the TP&W rail easement, surface water is routed by overland flow, ditches, and channels towards the Illinois River.

2.2.3 CLIMATE

The climate in central Illinois is continental with a wide range of temperature extremes. Based on recorded weather data for Peoria from 1961 to 1990, the mean January temperature is 21.7 degrees Fahrenheit (°F), and the mean July temperature is 75.4°F. The mean annual temperature is 50.5°F. The mean annual precipitation is 36.2 inches. February is normally the driest month with 1.4 inches of precipitation, and July is usually the wettest month with 4.2 inches of precipitation.

2.2.4 POPULATION

Peoria County is located in the north-central portion of Illinois and has a land area of approximately 629 square miles. The estimated population of Peoria County is approximately 183,400, according to the County's web site. The major population center is located in and around the City of Peoria. The average number of persons per square mile in Peoria County was approximately 292 in 1999. The population of Mapleton, the village located closest to the Site, is approximately 200. The Village of Mapleton is approximately 0.9 square miles in area. The City of Pekin, located in Tazewell County approximately 4 miles southeast, has a population of approximately 32,000.

2.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

2.3.1 REGIONAL GEOLOGY

The plant property is located on the Galesburg Ridge Plain area of the Till Plains Section in the Central Lowland Province (Figure 2.1). Regionally, this area has prominent glacial topography characteristics of the Illinoian Glaciation Stage (Figure 2.2). However, within the Illinois River Valley and in the vicinity of the plant, deposits from the Illinoian Glaciation have been eroded, and outwash deposits from the more recent Wisconsinan Glaciation and recent alluvium sediments are present.

Published literature regarding the regional stratigraphy beneath the plant property indicates that it is comprised of a layer of unconsolidated alluvium consisting of clay, silt, sand, and gravel, which overlies bedrock. The area of the plant property has been mapped as A2 and B2 for the northern half of the plant property on Plates 1 and 2 of the Berg Circular, respectively, and as AX on both Plates 1 and 2 for the southern half of the

plant property (Figures 2.3A and 2.3B).[1] Areas mapped as A2 on Plate 1 are described as "Thick, permeable sand and gravel within 20 feet of land surface". Areas mapped as B2 on Plate 2 are described as "Permeable bedrock between 5 and 20 feet of surface, overlain by silty or clayey till and loess; relatively impermeable weathered zone in till". Areas mapped as AX are described as "Alluvium, a mixture of gravel, sand, silt, and clay along streams, variable in composition and thickness".

On the Stack-Unit Map of Illinois (Figure 2.4)[2] the northern half of the plant property is shown as overlying at least 20 feet of the Henry Formation, and the southern half of the plant property is shown as overlying at least 20 feet of the Cahokia Alluvium and at least 20 feet of the Henry Formation. The Henry Formation consists of glacial outwash of sand and gravel[3]. The Cahokia Alluvium includes the deposits in the floodplains and channels of present rivers and consists mainly of poorly sorted silt, clay, and silty sand, but locally contains lenses of sand and gravel[4].

Bedrock beneath the plant property is identified as Pennsylvanian-age strata of the Carbondale and Modesto Formations (Figure 2.5)[5]. The Pennsylvanian System is approximately 200 feet in thickness beneath the area (Figure 2.6)[6]. The Carbondale and Modesto Formations are comprised primarily of shale with interbedded limestone, coal and sandstone units (Figures 2.7A and 2.7B)[7].

2.3.2 REGIONAL HYDROGEOLOGY

Regionally, the alluvial sand and gravel deposits adjacent to the Illinois River are known as the Sankoty aquifer.[8] The Sankoty Aquifer has a relatively wide distribution and potentially large groundwater yields. Regional flow in the Sankoty Aquifer is towards the Illinois River. The Sankoty Aquifer is hydraulically connected to the river and contributes to its base flow.

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[1] R.C. Berg, Kempton, J.P. and Cartwright, K., Potential for Contamination of Shallow Aquifers in Illinois, Illinois Department of Energy and Natural Resources, Circular 532, 1984.
[2] R.C. Berg, Kempton, J.P., Stack-Unit Mapping of Geologic Materials in Illinois to a Depth of 15 Meters, Illinois State Geologic Survey, Circular 542.
[3] H.B. William et al., Handbook of Illinois Stratigraphy, Illinois State Geological Survey, Bulletin 95, 1975, p 164.
[4] IBID.
[5] IBID.
[6] IBID.
[7] IBID.
[8] S.L. Burch and Kelly, D.J., Peoria-Pekin Regional Groundwater Quality Assessment, Illinois Department of Energy and Natural Resources, Illinois State Water Survey Division, Research Report 124, 1993.

2.4 PLANT PROPERTY GEOLOGY AND HYDROGEOLOGY

The following provides an overview of the specific geologic and hydrogeologic conditions in the Swale Area and in the nearby plant property.

2.4.1 PLANT PROPERTY GEOLOGY

Historically, extensive geotechnical investigations of the property were undertaken to determine if the soils would support industrial development. During the period of October 1964 through February 1965, Walter E. Hanson Company (Hanson) advanced numerous geotechnical soil borings over the area formerly occupied by Building B and its surroundings. Most of the geotechnical boring locations were referenced to the plant property's horizontal grid, which is still in use. As such, the locations of these geotechnical soil borings are recoverable and are plotted on Figure 2.8. Stratigraphic logs generated during geotechnical investigations are reproduced in Appendix A. These geotechnical soil borings were advanced before development and are useful for establishing baseline conditions.

General subsurface stratigraphy identified by Hanson included clays and silts to depths ranging from 2 to 13 feet below ground surface (bgs). Underlying the clays and silts, a granular deposit consisting of sand, gravel, and some small boulders was identified. The thickness of the granular deposit was variable and extended to the top of the bedrock surface. Bedrock identified beneath the plant property consisted of brown to gray shale and fine-grained gray sandstone. Soil boring logs indicate that the unconsolidated stratigraphic units at the plant property range in thickness from approximately 20 feet at several Hanson soil borings in the northern portion of the plant property to greater than 70 feet in the southern portion of the plant property (B-311) and are bounded at their base by shale bedrock. The stratigraphic information indicates that the depth to the bedrock surface increases to the south towards the Illinois River.

Additional geological investigations were completed at the plant property by Residual Management Technology, Inc. of Madison, Wisconsin (RMT) in the early to middle-1990s, in association with Caterpillar's 817 landfill. RMT's investigations were primarily focused on the 817 landfill, which is located south of the TP&W rail easement. The stratigraphy beneath the plant property was described as consisting of valley fill and outwash deposits that overlie shale bedrock.[9] Four significant local hydrogeologic

[9] Residual Management Technology, Inc., Additional Information for Significant Modification Application, Log #1995-154, 35 IAC Part 817.309 Facility Location Demonstration, March 1997, p 8.

units were identified overlying bedrock at the plant property and included the Upper Sand Unit, Intermediate Clay Aquitard, Lower Sand Unit, and Lower Clay Aquitard. These are described below in more detail.

Upper Sand Unit

An upper sand unit is only present beneath the southeastern portion of the plant property. The upper sand unit pinches out towards the north and is not present north of the TP&W rail easement in the Swale Area. The upper sand unit is generally described as a yellowish-brown and poorly graded (Unified Soil Classification System [USCS] designation "SP"). Based on drilling logs prepared by RMT (Appendix B) the unit ranges in thickness from 4 to 15 feet.

Intermediate Clay Aquitard

The intermediate clay aquitard underlies approximately the southern two-thirds of the plant property, including the Swale Area. This unit consists of medium-dense, greenish-gray clay with some silt, with moderate to high plasticity. The unit ranges from 12 feet to 56 feet in thickness and has a reported hydraulic conductivity in the range of 10^{-7} to 10^{-9} centimeters per second (cm/s). At depth, the unit becomes gray and/or brown in color, and the silt and sand content increases. This unit extends from the south side of Building B to the Illinois River. In the central third of the plant property, the intermediate clay aquitard overlies bedrock, and in the southern third the unit overlies the lower clay unit. The intermediate clay aquitard underlies the fill in the Swale Area.

Lower Sand Unit

Information on the lower sand unit is based on drilling logs from Hanson's geotechnical investigation (Appendix A) and from several of RMT's monitoring well logs (G103, G104D, and G106D) and soil boring logs (B-311, B-313, B-317, and B-318) presented in Appendix B. The lower sand unit appears to be present only beneath the southern third of the plant property and underlies the intermediate clay aquitard and the Illinois River. The lower sand unit appears to be typical channel sand and lag sediment deposited in a fluvial environment. The unit has been described as a well to poorly graded, loose to medium dense sand with some to no gravel (SP). The lower sand unit pinches out toward the north against the shale bedrock surface and is not present beneath the Swale Area.

Lower Clay Aquitard

Information on the lower clay aquitard is based on drilling logs from the same locations as those identified for the lower sand unit. The unit has been described as a lean to silty, loose to medium stiff/stiff gray clay. The upper portion of the lower clay aquitard is believed to represent more recent deposition of fine-grained low-energy river sediments and contains organic matter, wood fragments, and shells. In some places, the lower portion of the lower clay becomes greenish gray in color and is believed to represent weathered shale bedrock, based on the amount of shale fragments present in soil samples. The lower clay unit appears to be present only in the southern third of the plant property, south of the Swale Area, and underlies the lower sand unit and overlies bedrock.

Bedrock

Stratigraphic logs from deep geotechnical and investigative soil borings indicate that the depth to bedrock beneath the plant property ranges from approximately 10 feet to greater than 70 feet at B-311. The depth to the bedrock surface increases to the south towards the Illinois River. The bedrock was described as blue/gray or brown shale with traces of sandstone. Appendix C contains a stratigraphic log from a test well drilled to a depth of 310 feet bgs. The stratigraphy for the test well indicated that the bedrock underlying the plant property is comprised primarily of shale with interbedded limestone, coal, and sandstone units. This stratigraphy is consistent with the published bedrock geologic description of the area.

Using soil borings advanced during previous investigations and the investigation described in Section 3.0, geologic cross-sections were developed. These cross-sections are provided as Figures 2.9 (north-south) and 2.10 (east-west). The north-south geologic cross-section depicts subsurface geology from a point just north of Building B through Building B to a point due south located in the center of the Illinois River. In general, unconsolidated Cahokia Alluvium overburden deposits, consisting of alternating layers of sand and clay, thicken towards the south.

2.4.2 PLANT PROPERTY HYDROGEOLOGY

In general, groundwater flow in the unconsolidated deposits beneath the plant property is to the south, towards the Illinois River. The Illinois River is the discharge point for groundwater in the alluvial deposits. Additional information regarding the groundwater flow beneath the plant property was obtained from several hydrogeologic investigations completed by RMT. Groundwater was encountered within the

engineered fill, the underlying native silty clay, and the foundry sand fill in the Swale Area. Groundwater investigations and regular monitoring activities conducted in the vicinity of the 817 landfill demonstrate groundwater flow in the alluvial deposits to be consistently southerly, towards the Illinois River.[10]

As expected, hydraulic conductivity values vary widely based upon the composition of the formations. Sand and gravel deposits exhibit hydraulic conductivity values in the 10^{-2} to 10^{-4} cm/s range, while silt and clay units exhibited hydraulic conductivity values in the 10^{-7} to 10^{-9} cm/s range.

[10] Residual Management Technology, Inc., Groundwater Assessment Report, October 1996, p 11.

3.0 SWALE AREA INVESTIGATIONS

3.1 RCRA DRUM STORAGE AREA INVESTIGATION

Caterpillar conducted soil sampling activities associated with the closure of a former RCRA Drum Storage Area (located in the eastern part of the Swale Area), which formerly abutted the southwest corner of the CILCO transformer yard (Figure 3.1). PCBs were detected in the soil that had been excavated from the Drum Storage Area that was sampled in accordance with IEPA requirements. In response to this finding, Caterpillar undertook a soil sampling program in the Drum Storage Area to determine the extent of the PCBs detected in the soil. Caterpillar's investigations were performed in several stages during the period from May to July 1998, as Caterpillar expanded the investigation beyond the Drum Storage Area to delineate the extent the PCB impacted soils within other parts of the Swale Area. The CILCO electrical substation located near the Drum Storage Area was suspected initially to be the source of the PCBs. However, the results of the soil investigations suggested that the CILCO electrical substation was not the source of the PCBs.

Caterpillar advanced 53 soil borings in the Swale Area proximal to the former Drum Storage Area. Soil encountered in the boreholes included foundry sand fill, underlain by a native clay layer. Soil borings were advanced to the top of the underlying clay layer, generally present at depths of 8 and 13 feet bgs. The soil boring locations from Caterpillar's investigations are illustrated on Figure 3.2. Soil samples were submitted to Daily Analytical Laboratories of Peoria, Illinois (Daily) for PCB analysis. Daily has since consolidated with PDC Laboratories of Peoria, Illinois.

3.2 ADDITIONAL SOIL INVESTIGATIONS

An additional 36 soil borings were advanced in the Swale Area under the supervision of CRA following an evaluation of the soil analytical data obtained by Caterpillar. The intent of the additional soil borings was to delineate the vertical and horizontal extent of PCB-containing soil. The locations of these soil borings are illustrated on Figure 3.3. These soil borings were advanced during several phases to allow receipt and evaluation of the soil analytical data and scoping of subsequent phases of the investigation.

The first phase of soil investigation was performed on December 1 and 2, 1998, and included advancement of 14 soil borings (identified as locations B-1 through B-14) within the Swale Area. The soil borings were advanced on the points of a grid that was established and staked by a registered land surveyor. Seven of the soil borings (B-2 through B-8) were spaced most densely around the perimeter of the former Drum

Storage Area. The intent of these soil borings was to obtain independent confirmation of the presence of PCBs from an environmental laboratory not previously used by Caterpillar for this program. One soil boring (B-1) was advanced inside the former Drum Storage Area.

The second phase, completed in February 1999, included advancement of five additional soil borings (identified as B-15 through B-19) within the Swale Area. The third phase, completed in September 1999, included advancement of three soil borings (B-20, B-21, and B-26) within the Swale Area. The fourth phase, completed in April 2005, included advancement of 14 soil borings (identified as B-53 through B-66) within the Swale Area.

Table 3.1 provides a summary of CRA soil samples collected in 1998, 1999, and 2005. A summary of CRA drilling and soil sampling protocols is provided in Appendix D. Soil boring stratigraphic logs are provided in Appendix E.

3.3 GROUNDWATER INVESTIGATION

Three groundwater monitoring wells (MW-99A, MW-99B, and MW-99C) were installed within the Swale Area on November 15 and 16, 1999, at the locations shown on Figure 3.4. These monitoring wells were installed at the downgradient edge of the Swale Area to determine if dissolved PCBs were present in the groundwater within, and potentially migrating from, the Swale Area.

Following installation, the monitoring wells were developed to establish hydraulic communication with the aquifer and reduce the volume of sediment in the monitoring wells. Monitoring wells MW-99A and MW-99C were sampled on December 16, 1999. Monitoring well MW-99B was only purged dry on this date due to the extremely slow recharge rate of this well and was sampled on January 6, 2000. A summary of the field parameters measured during well development is provided in Table 3.2.

A summary of CRA monitoring well installation, development, and sampling protocols is provided in Appendix D. Table 3.1 provides a summary of groundwater samples collected in 1999 and 2000. Stratigraphic and instrumentation logs for the monitoring wells are provided in Appendix F.

3.4 HYDRAULIC MONITORING

The depth to groundwater was measured at the three new monitoring wells (MW-99A, MW-99B, and MW-99C) and three existing monitoring wells/piezometers (G101S,

G102S, and P-109) to assist with the evaluation of shallow groundwater flow beneath the Swale Area. Depth to water measurements were taken on November 19, 1999, December 16, 1999, and February 11, 2000. The depth to groundwater measurements and the surveyed top of casing elevations of the monitoring wells were used to calculate the groundwater elevations. A summary of the calculated groundwater elevations is provided in Table 3.3.

4.0 INVESTIGATIVE FINDINGS

4.1 SOIL ANALYTICAL DATA

4.1.1 CATERPILLAR INVESTIGATIONS

In total, 107 individual soil samples were collected from the Swale Area by Caterpillar during the 1998 soil investigations and submitted to Daily for PCB analysis. PCBs were detected in 49 of the 53 soil borings and in 106 of the 107 samples analyzed. PCB concentrations ranged from non-detect in the sample collected from the 5- to 6-foot depth interval of EX-1 to 340 mg/kg in the soil sample collected from the 4- to 5-foot interval of R-19A. The most elevated PCB detections were noted in the soil samples collected from the foundry sand layer. All PCB detections were reported as Aroclor 1242 by the project laboratory.

The analytical results for soil samples collected by Caterpillar are summarized in Table 4.1. Figure 4.1 depicts the maximum detected concentration of PCBs in soil at each of the soil borings advanced under the supervision of Caterpillar.

4.1.2 CRA INVESTIGATIONS

During the 1998 and 1999 soil investigations, soil samples were collected from the Swale Area by CRA and submitted to Quanterra Incorporated of North Canton, Ohio for PCB analysis. Soil samples collected during the 2005 soil investigation were analyzed by STL North Canton (the successor to Quanterra Incorporated). The analytical results from the soil sampling program completed by CRA are summarized in Table 4.2. Data validation memoranda are provided in Appendix G. Copies of the laboratory analytical reports are reproduced in Appendix H. Soil analytical data are summarized on Figure 4.2.

Thirty-six soil borings (B-1 through B-21, B-26, and B-53 through B-66) were advanced in the Swale Area, and 145 soil samples were submitted for PCB analyses. Figure 4.2 depicts the soil boring locations and summarizes the soil detected analytical results. PCB concentrations ranged from non-detect at many locations/intervals to a maximum of 1,200 mg/kg in the soil sample collected from the 6- to 7-foot interval at soil boring B-56. Aroclors 1242 and 1248 were the PCB species detected most frequently in the soil samples. These Aroclors are typically used in hydraulic fluids, which is the suspected source of these compounds. PCB-containing hydraulic fluids were phased out of use in the 1970s and are no longer used at the Mapleton plant.

The following provides a summary of maximum PCB detections in the soil samples collected by CRA in the Swale Area during the 1998, 1999, and 2005 investigations:

Maximum Detected PCB Concentration	***No. of Borings***	***Boring Location/ (Depth Interval)***
>500 mg/kg	3	B-2 (4-6 feet) B-9 (6-8 feet) B-56 (6-7 feet)
>100 up to 500 mg/kg	4	B-7 (2-4 feet) B-8 (5-7 feet) B-11 (8-9 feet) B-15 (6-8 feet)
>50 up to 100 mg/kg	8	B-1 (4-6 feet) B-6 (6-8 feet) B-10 (2-4 feet) B-12 (0-2 feet) B-55 (6-7 feet) B-60 (4-6 feet) B-63 (0-2 feet) B-66 (0-2 feet)
>10 up to 50 mg/kg	10	B-5 (6-8 feet) B-13 (6-8 feet) B-16 (4-6 feet) B-19 (2-4 feet) B-54 (6-7 feet) B-57 (0-2 feet) B-59 (0-2 feet) B-61 (2-4 feet) B-62 (0-2 feet) B-64 (6-8 feet)
10 mg/kg or less	11	B-3 B-4 B-14 B-17 B-18 B-20 B-21 B-26 B-53 B-58 B-65

Figures 4.3 and 4.4 provide cross-sectional views within the Swale Area. As illustrated on these figures, the foundry sand was placed in areas that are surrounded with clay. Stratigraphic information from soil borings completed within the Swale Area indicates that the foundry sand is underlain by clay throughout the area. Ten soil borings (B-3, B-4, B-12, B-14, B-17, B-18, B-53, B-59, B-63, and B-64) contacted the underlying clay unit, and samples collected from the clay were analyzed for PCBs. PCBs were not detected in nine of the ten soil samples collected from clay. PCBs were detected at a concentration of 0.062 mg/kg in one sample collected from the 8- to 10-foot depth interval at B-64. However, foundry sand fill was present immediately above this layer, and the detection is likely the result of some sand becoming mixed with clay in the sample. These data indicate that the detections of PCBs occur in the foundry sand fill and not in the underlying clay layer.

4.2 GROUNDWATER FLOW

Groundwater flow beneath the Swale Area was evaluated by measuring the groundwater elevation in the three new monitoring wells installed within the Swale Area (MW-99A, MW-99B, and MW-99C), two existing monitoring wells (G-101S and G-102S), and one existing piezometer (P-109S). Monitoring wells MW-99A, MW-99B, and MW-99C were screened at depths ranging from approximately 17 to 17.5 feet. Monitoring wells G-101S and G-102S are approximately 18 feet and 15 feet deep, respectively. Piezometer P-109S is approximately 17 feet deep. All are constructed with 10 feet of slotted well screen.

Groundwater elevation data are summarized in Table 3.3, and the groundwater elevation data from the November 19, 1999, December 16, 1999, and February 11, 2000 monitoring events are illustrated on Figures 4.5, 4.6, and 4.7, respectively. The groundwater elevation data from monitoring well MW-99B is not expected to represent static conditions due to the extremely slow recharge rate of water into the well (the well was dry when the November 19, 1999 depths to water were measured and had a 5- to 10-foot lower groundwater elevation during subsequent events). The screened interval for MW-99B penetrates 4 feet of the foundry sand fill and 6 feet of the underlying clay unit whereas monitoring wells MW-99A and MW-99C penetrate the native upper sand unit, which appear to be acting as distinct hydrostratigraphic units. Therefore, monitoring well MW-99B groundwater elevation data was not used when developing the groundwater contours.

Evaluation of the groundwater elevation data indicates the presence of a groundwater high (mound) within the Swale Area. This conclusion is supported by the fact that the groundwater elevations are the highest at monitoring wells MW-99A and MW-99C,

suggesting a radial flow outward from the Swale Area. The radial groundwater flow pattern suggests that groundwater flow in the Swale Area is driven by precipitation rather than local or regional gradient effects. Precipitation falling on the Swale Area would infiltrate the foundry sand deposits relatively quickly and percolate much more slowly into the underlying clay layer.

As discussed previously, the Swale Area was a low-lying area formed by the engineered fill walls and underlain by a native clay unit. Permeability testing of the clay unit indicates a vertical hydraulic conductivity of 4.2×10^{-8} cm/sec, indicating that the underlying clay would act as an aquitard. The lower hydraulic conductivity of the engineered clay sidewalls and the native clay base of the Swale Area would slow infiltration to deeper levels and inhibit lateral flow within the foundry sand fill, resulting in the observed local groundwater mounding effect.

The magnitude of the groundwater mounding would vary depending upon the amount of precipitation. Most likely, the groundwater mounding effect in the Swale Area is more pronounced during periods of heavier precipitation when groundwater infiltration would be greater. This would result in higher water levels in the Swale Area. The condition would be less pronounced during dry periods. In light of this information, the observed radial groundwater flow pattern is consistent with the known conditions.

4.3 GROUNDWATER ANALYTICAL DATA

Groundwater samples were collected from monitoring wells located within the Swale Area on December 16, 1999 (MW-99A and MW-99C) and on January 6, 2000 (MW-99B). PCBs were not detected at a quantitation limit of 1.0 milligram per liter (mg/L) in the groundwater samples collected from the three monitoring wells.

The data validation memorandum is provided in Appendix G. A copy of the laboratory analytical report is provided in Appendix H.

5.0 HUMAN HEALTH RISK ASSESSMENT

5.1 INTRODUCTION

A Human Health Risk Assessment (HHRA) was completed for two discrete areas within the Swale Area that is the focus of this RI. The first area, referred to as the West Swale Area, is located in the vicinity of Building R and extends south to the fence line. The second area, referred to as the East Swale Area, is located south of Buildings V and P and extends south to the railroad. Figure 5.1 delineates the two areas within the Swale Area that are evaluated in this HHRA. The Swale Areas were characterized to determine the potential current and future threats, if any, to human health associated with PCB residuals identified in soil in these areas. The current and likely continued future use of the Swale Area is as an industrial property.

The HHRA was conducted following the general format proposed in U.S. EPA guidance for Superfund risk assessments. In addition, the U.S. EPA PCB Risk Assessment Review Guidance Document and the guidance specified in the 40 CFR Part 761 Disposal of Polychlorinated Biphenyls (PCBs); Final Rule were used in completing the HHRA.

Specific guidance utilized in the development of the HHRA includes:

i) U.S. EPA Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A) (RAGS), EPA/540/1-89/002, December 1989

ii) U.S. EPA RAGS Supplemental Guidance, Standard Default Exposure Factors, OSWER Directive 9285.6-03, March 25, 1991

iii) U.S. EPA Supplemental Guidance to RAGS: Calculating the Concentration Term, OSWER Publication 9285.7-081, May 1992

iv) U.S. EPA Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites, Office of Emergency and Remedial Response, OSWER 9285.6-10, December 2002

v) U.S. EPA Exposure Factors Handbook, EPA/600/P-95/002Ba, August 1997

vi) U.S. EPA RAGS Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments, Final, Publication 9285.7-01D, December 2001

vii) USEPA RAGS Part E, Supplemental Guidance, Dermal Risk Assessment, Final, July 2004

viii) USEPA RAGS Part F, Supplemental Guidance for Inhalation Risk Assessment, Final, January 2009

ix) U.S. EPA Disposal of Polychlorinated Biphenyls (PCBs); Final Rule, 40 CFR Part 761, Federal Registrar Volume 63. No. 124, June 29, 1998, Rules and Regulations

x) U.S. EPA RAGS Vol. 1: Human Health Evaluation Manual, Part E Supplemental Guidance for Dermal Risk Assessment, Final, July 2004

xi) U.S. EPA Supplemental Guidance for Developing Soil Screening Levels for Superfund Site. OSWER Directive 9355.4-24, December 2002

xii) U.S. EPA Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins EPA Region 4, May 2000 (USEPA, 2000a)

xiii) U.S. EPA PCB Risk Assessment Review Guidance Document, Interim Draft, January 2000 (USEPA, 2000b)

xiv) U.S. EPA, Child-Specific Exposure Factors Handbook, September 2008

xv) other applicable guidance and reference documents referenced herein

5.1.1 SCOPE AND ORGANIZATION OF THE HHRA

The HHRA has been prepared in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 1990) and applicable U.S. EPA guidance. The HHRA utilizes validated analytical data generated from previous investigations. The validated data was used to evaluate the potential current and future impact, if any, to human health based on exposure to PCBs identified in the Swale Area.

The HHRA is focused on direct dermal and incidental ingestion exposure to PCB Aroclors and total PCBs present in the Swale Area. In addition, the soil-to-ambient air exposure pathway was quantified in the HHRA where applicable. Other potential exposure pathways, such as soil-to-groundwater protection, were not considered significant for the exposure areas and, thus, were not quantitatively evaluated in this HHRA. PCBs in the soil of the Swale Area are not expected to leach to groundwater due to their high affinity to stay sorbed to organic rich media, such as soil (U.S. EPA, 2000b).

Table 1.0 of Appendix I presents a summary of the exposure pathway scenarios selected for evaluation in the HHRA. Under the current condition, there is potential for direct incidental ingestion, dermal contact, and inhalation of airborne particulate of PCBs in soil from the Swale Area by industrial workers and trespassers. Under the future condition, there is potential for direct incidental ingestion, dermal contact, and inhalation of airborne particulate of PCBs in soil from the Swale Area by industrial workers, trespassers, and construction workers.

A HHRA generally incorporates the following major segments:

i) Site Characterization - information relevant to the RA describing the past and current use and condition of the Swale Area and surrounding area is presented, in addition to the presentation of data;

ii) Identification of Chemicals of Potential Concern (COPCs) - the presence, distribution, and concentration of chemicals detected in affected media are identified and evaluated. PCB Aroclors are the COPCs based on Swale Area soil analytical data

iii) Exposure Assessment - potential exposure pathways are evaluated to identify possible receptors and to determine how these receptors could be exposed to the COPCs; exposure point concentrations and the daily chemical intakes for receptors are estimated

iv) Toxicity Assessment - toxicity factor data are identified for COPCs from which potential health effects associated with chemical exposure are estimated

v) Risk Characterization - estimates of potential carcinogenic risks and non-carcinogenic hazards are calculated for each potentially complete exposure pathway based on the results of the exposure and toxicity assessments. A section on the uncertainties identified in the RA process is included

The HHRA process applies several theoretical assumptions to determine a numerical expression of both carcinogenic and non-carcinogenic risks to human health. The HHRA characterizes potential carcinogenic effects in terms of probabilities that an individual will develop cancer over a lifetime based on an exposure period to hazardous constituents related to the Swale Area. The potential for non-carcinogenic effects is evaluated by comparing an estimated daily intake level from potential exposures to a reference dose which is defined as the intake level at which a receptor can be exposed through their entire lifetime without experiencing appreciable adverse health effects. The results of the evaluation of carcinogens and non-carcinogens are compared to acceptable levels determined by the U.S. EPA.

Agency guidelines require that the estimates of potential carcinogenic risk and non-carcinogenic hazard be based on the reasonable maximum exposure (RME), which could result from the presence of reported residues of hazardous constituents.

5.1.2 ANALYTICAL DATA

A comprehensive description of the investigations that have been conducted in the Swale Area is presented in Section 3.0, while a description of the analytical data collected from the previous investigations is presented in Section 4.0. Caterpillar and CRA collected soil sample data as part of their investigations. All analytical soil data collected from the Swale Area from both the Caterpillar and the CRA investigations have been used in the HHRA to estimate risks and hazards to potential human receptors. Soil data from samples collected from a depth of 0 to 2 feet bgs were used to characterize potential risk to receptors exposed to surface soils, while soil data from samples collected from a depth of 0 to 12 feet bgs were used to characterize potential risk to receptors exposed to surface and subsurface soils combined. Table 4.1 presents a summary of the soil analytical results from the Caterpillar investigations, and Table 4.2 presents a summary of the soil analytical results from the CRA investigations. CRA also collected groundwater data from the three monitoring wells in the Swale Area in December 1999/January 2000. PCBs were not detected in the groundwater samples collected from the three monitoring wells.

Following PCB Risk Assessment Guidance (U.S. EPA, 2000b), if Aroclors are analyzed individually, the Aroclor results should also be summed to calculate risks from total PCBs. The total PCB concentration for each soil sample was determined by summing the positively detected Aroclor results for that sample. Thus, to avoid duplication, the risks and hazards resulting from exposure to PCB Aroclors and total PCBs were separately estimated for each evaluated exposure scenario.

Analytical data were reviewed for validation qualifiers on concentration values and sample duplicates. Rejected samples ("R" qualifiers) were not included in the database for the risk assessment. Estimated results, usually indicated by a "J" qualifier, were included in the evaluation. Duplicate samples were averaged and considered as one sample.

5.2 IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN

In general, the primary purpose of identifying the COPCs is to determine which detected chemicals are predominantly significant from a toxicity and occurrence perspective, so that potential remedial efforts can be focused on those chemicals contributing the majority of potential risk. In the West Swale Area and the East Swale Area, PCBs have been identified as COPCs based on detections in surface soil and soil (surface and subsurface soil). Detected PCB Aroclors, as well as total PCBs, were identified as COPCs for the datasets from each of the two Swale Areas.

The available sample data were evaluated to summarize the chemical detection frequencies, the minimum and maximum detected concentrations, and the locations of the maximum detected concentrations consistent with U.S. EPA RAGS Part D guidance (2001). Tables 2.1 and 2.3 of Appendix I present the occurrence, distribution, and selection of the surface soil COPCs in West Swale Area and East Swale Area, respectively. Tables 2.2 and 2.4 of Appendix I present the occurrence, distribution, and selection of the soil (surface and subsurface) COPCs in West Swale Area and East Swale Area, respectively. Table 2.5 of Appendix I presents the occurrence, distribution, and selection of groundwater COPCs in East Swale Area. All PCBs analyzed within the groundwater were not detected. On this basis, and due to the lack of leaching potential for PCBs because of their affinity to stay sorbed to organic matter present in soils (U.S. EPA, 2000b), there are no groundwater COPCs. As a result, the groundwater medium is not evaluated further in the HHRA.

5.3 EXPOSURE ASSESSMENT

5.3.1 POTENTIAL HUMAN EXPOSURE PATHWAYS

To determine whether an exposure to COPCs remaining in a medium exists, the environmental and human components that lead to human exposure must be evaluated.

An exposure pathway consists of four necessary elements:

i) A source and mechanism of chemical release to the environment

ii) An environmental transport medium

iii) A point of potential human contact within the impacted medium (exposure point)

iv) A human exposure route (ingestion, dermal contact, or inhalation) at the contact point

Exposure pathways are classified as complete, potential, or incomplete. For an exposure pathway to be complete, the aforementioned four elements must be present, which indicates that the exposure is occurring or will occur in the future. Potential exposure pathways have one element presently missing, which indicates that the exposure pathway may be complete in the future. Incomplete exposure pathways have one or more elements missing which are not present and will likely never be present and thus are not complete.

Table 1.0 of Appendix I presents a summary of the exposure pathways identified for analysis in the HHRA. Land use is an important consideration in determining the exposure pathways of concern at any particular site. It is anticipated that the current industrial use of the Swale Area will continue to remain the same under the future land use condition.

The following section provides the rationale for selecting or eliminating exposure pathways for quantitative analysis in the HHRA based on the current and future intended land uses.

5.3.2 EXPOSURE PATHWAY DETERMINATION

Exposure pathways were determined to be complete, potentially complete, or incomplete based on the current and future intended industrial land use of the Swale Area, the presence of the PCBs in the West and East Swale Areas, and the anticipated human activity patterns in the area.

Surface Soil

The current and future anticipated use of the Swale Area, and in the areas of focus in this HHRA, is that of an on-site industrial worker. It is possible that an industrial worker could be exposed to PCBs present in surface soils in the West Swale Area and East Swale Area through incidental ingestion, dermal contact, and inhalation of airborne particulates.

The West Swale Area is an area of higher activity, and thus, for the purpose of this HHRA, was considered a "high occupancy" area. As defined in 40 CFR 761, Disposal of PCBs; Final Rule Details, a high occupancy area means any area where PCB remediation waste has been placed, and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is 335 hours or more (equal to or greater than 6.7 hours per day) for bulk waste. As the West Swale Area is defined as a high occupancy area, an industrial worker was conservatively assumed to be exposed to West Swale Area surface soil for 8 hours per day for 250 days per year. This is consistent with U.S. EPA (2002).

The East Swale Area is not a high activity area and, therefore, it is appropriate to assume that an industrial worker will not be exposed to the Swale Area surface soils at as high a rate as might a typical industrial worker. Thus, the East Swale Area was treated as a "low occupancy" area, and a low occupancy industrial worker exposure scenario was evaluated in the HHRA. As defined in 40 CFR 761, Disposal of PCBs; Final Rule Details,

a low occupancy area means any area where PCB remediation waste has been placed and where occupancy for any individual not wearing dermal and respiratory protection for a calendar year is less than 335 hours (an average of 6.7 hours/week) for bulk waste.

The nearest residential areas are located across Highway 24/9, a limited access divided highway. Although unlikely, due to physical features, it is possible that individuals may trespass on the Swale Area both currently and in the future. The trespassers were assumed to be adolescents who may be exposed to PCBs present in surface soils in the West and East Swale Areas through incidental ingestion, dermal contact, and inhalation of air-borne particulate. Although the Swale Areas are small relative to the entire plant property, it was assumed that the trespassers would spend their entire time within the Swale Area exposed to surface soil in one of these two areas.

Total Soil

It is possible that some construction activities could occur within the Swale Area at some time in the future. Thus, future construction worker exposures to Swale Area soil were evaluated in the HHRA for both the West and East Swale Areas. It is assumed that the construction activities would be comprised of a short-term excavation event typical of utility trenching work. The construction worker was assumed to be exposed to PCBs present in soils in the Swale Areas at depths from 0 to 12 feet bgs through incidental ingestion, dermal contact, and inhalation of air-borne particulate.

Groundwater

The soil leaching to groundwater exposure pathway is considered incomplete for the due to the lack of leaching potential for PCBs and their affinity to stay sorbed to organic matter present in soils (U.S. EPA, 2000b). In addition, stratigraphic information from soil borings completed within the Swale Area indicates that the foundry sand is underlain by clay throughout the area. PCBs were not detected in the groundwater samples collected from the monitoring wells located within the Swale Area (see Table 2.5 of Appendix I). Thus, although PCBs have been detected in the soil in both the East and West Swale Areas, no impact to groundwater resulting from the presence of this material in these areas has been observed, nor is expected to occur under the future condition.

5.3.3 EXPOSURE POINT CONCENTRATIONS

Two levels of assumptions are presented in this HHRA. The Central Tendency (CT) assumptions present the average or mean exposure point concentration (EPC) values

and approximate the most probable exposure conditions. The RME are conservative assumptions that generally utilize the 90th to 95th percentile EPC values, depending upon available data.

The CT and RME EPC values for the various exposure scenarios were determined based on the observed data distribution and the percentage of censored data points (non-detected results). Both the CT and RME EPC values have been conservatively based on the 95 percent upper confidence limit (UCL) of the mean. Appendix J contains a detailed description of the statistical methods used to determine the 95 percent UCL values.

Tables 3.1 and 3.3 of Appendix I present the calculated arithmetic mean concentrations, the maximum detected concentrations, and the 95 percent UCL concentrations for surface soil in West and East Swale Areas, respectively. Tables 3.2 and 3.4 of Appendix I present the calculated arithmetic mean concentrations, the maximum detected concentrations, and the 95 percent UCL concentrations for soil in the West and East Swale Areas, respectively.

5.3.4 QUANTIFICATION OF EXPOSURE

To quantify exposures, potential exposure scenarios were developed using exposure assumptions presented in U.S. EPA guidance documents. In instances where the U.S. EPA documents did not present the necessary assumptions and where specific appropriate exposure information was not available, professional judgment was used to develop conservative and health protective exposure assumptions. The CT and RME assumptions were noted for each exposure scenario evaluated.

5.3.5 EXPOSURE ESTIMATES

In the HHRA, the magnitude of exposure reflects the chemical concentration, contact rate, exposure time, and body weight. This section outlines the approach for determining the amount of the identified COPCs to which the selected receptors may be exposed via the media.

5.3.5.1 SPECIFIC INTAKE EQUATIONS

The following sections provide the intake equations for ingestion, dermal, and inhalation exposure to soil that were applied in the HHRA. In the HHRA, exposure

estimates reflect chemical concentration, contact rate, exposure time, and body weight in a term called "intake" or "dose".

Incidental Ingestion of Soil Exposure Pathway

The intake equation for calculating chemical intake from the incidental ingestion of soil (USEPA, 1989) is:

$$CDI = \frac{CS \times IR \times CF \times EF \times ED}{BW \times AT} \qquad \text{Equation 1}$$

Where:

CDI = chronic daily intake (mg/kg body weight/day)
CS = chemical concentration in soil (mg/kg)
IR = incidental ingestion rate (mg soil/day)
CF = conversion factor (kg/10^6 mg)
EF = exposure frequency (days/year)
ED = exposure duration (years)
BW = body weight (kg)
AT = averaging time [period over which exposure is averaged] (days)

Soil Dermal Contact Exposure Pathway

The intake equation for calculating chemical intake from dermal exposure to soil (USEPA, 1989) is:

$$CDI = \frac{CS \times CF \times SA \times AF \times ABS \times EF \times ED}{BW \times AT} \qquad \text{Equation 2}$$

Where:

CDI = chronic daily intake (mg/kg body weight/day)
C = chemical concentration in soil (mg/kg)
CF = conversion factor (kg/10^6 mg)
SA = skin surface area available for contact (cm^2/event)
AF = soil to skin adherence factor (mg/cm^2)
ABS = chemical absorption rate (unitless)
EF = exposure frequency (days/year)
ED = exposure duration (years)
ED = event frequency (events/day)
BW = body weight (kg)
AT = averaging time (averaging period, days)

Soil Particulate or Vapor Inhalation from Soil Exposure Pathway

The intake equation for calculating chemical intake from the inhalation of particulate or vapors originating from soil is, after USEPA (2002a):

$$CDI = \frac{CS \times FT \times EF \times ED}{VF \times AT} \qquad \text{Equation 3}$$

Where:

CDI = chronic daily intake via particulate and soil vapor inhalation (mg/m^3)
CS = chemical concentration in soil (mg/kg)
FT = fraction of time exposed (hours per 24 hours) (unitless)
EF = exposure frequency (days/year)
ED = exposure duration (years)
VF = volatilization factor (m^3/kg)
AT = averaging time (averaging period, days)

For carcinogens, a lifetime average daily dose of the chemical is estimated which pro-rates the total cumulative intake over a lifetime. An averaging time (AT) of 70 years is applied for carcinogens.

For non-carcinogens, the chemical intake is estimated over the appropriate exposure period or averaging time. The averaging time selected depends on the exposure duration of the specific population being evaluated and the toxic endpoint being assessed.

5.3.5.2 EXPOSURE SCENARIO ASSUMPTIONS

Separate exposure scenarios were developed for each receptor population exposure evaluated in the HHRA. A description of each exposure scenario and the associated exposure assumptions are presented in the following subsections.

5.3.5.2.1 SURFACE SOIL EXPOSURES

a) Current/Future Trespasser Exposure to Surface Soil

The trespasser exposure scenario for the current/future Swale Area condition was developed to reflect infrequent and occasional trespasser exposure to surface soils in the West and East Swale Areas. The trespasser was assumed to be an adolescent who would gain unauthorized access to the Swale Area for trespassing activities. Table 4.1 of

Appendix I presents a summary of the conservative and health-protective assumptions that were used to calculate the trespasser exposure.

The exposure assumptions are described as follows:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME scenarios.

  Note: The current/future surface soil datasets include all soil results from 0 to 2 feet bgs for the West Swale Area and East Swale Area.
- The trespasser is an adolescent between ages 8 and 17 years old (U.S. EPA, 2000a).
- The inadvertent soil ingestion rate for the trespassers is 100 mg/per daily trespass event for both the CT and RME (U.S. EPA, 1991).
- The exposed skin surface area for the trespasser is 3,500 cm^2 for both the CT and RME. The exposed skin surface area is based on variations of the amount of clothing cover provided during different times of the year and involves the estimation that 25 percent of the total body surface area may be exposed to direct soil contact (U.S. EPA, 1997). Table 6-6 of the Exposure Factors Handbook (U.S. EPA, 1997) presents the total body surface area of male children. Taking the average of the 50th percentile total body weights of the 8 to 17 year old male child results in a total body surface area of 14,160 cm^2. Applying the 25 percent exposed skin factor results in an exposed skin surface area of approximately 3,500 cm^2.
- The soil-to-skin adherence factor is 0.04 mg/cm^2 (CT) and 0.2 mg/cm^2 (RME) based U.S. EPA (2004) recommended values for dry soil.
- The dermal absorption factor is 14 percent for PCBs (U.S. EPA, 2004).
- The exposure frequency is 8 days/year for the CT and 16 days/year for the RME. The RME exposure frequency is based on trespassing occurring twice a month for 8 months. It is assumed that trespassing will occur primarily during the warmer months of the year. Limited soil contact will occur over the winter months of the year when surface soils are either covered by snow, frozen, or constantly wet.
- The exposure duration for the trespasser is 10 years (CT and RME) (U.S. EPA, 2000a).
- The body weight for the trespasser is 45 kg. Data in Tables 7-6 and 7-7 of the Exposure Factors Handbook (U.S. EPA, 1997) were used to derive the trespasser body weight by averaging the 50th percentile body weight for male and female children aged 8 to 17 years old.
- The carcinogenic averaging time is 75 years times 365 days per year or 27,375 days (U.S. EPA, 2000b). The averaging time for non-carcinogens is 365 times the exposure duration (ED).

b) Current/Future High Occupancy Industrial Worker Exposure to Surface Soil in West Swale Area

A high occupancy industrial worker exposure to surface soils was evaluated under the current/future condition in the West Swale Area. Table 4.3 of Appendix I presents a summary of the conservative and health-protective assumptions that were used to calculate the industrial worker exposure, as appropriate.

The exposure assumptions are described as follows:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.

  Note: The current/future surface soil datasets include all soil results from 0 to 2 feet bgs for the West Swale Area.
- The ingestion rate of soil is 50 mg soil/day for both the CT and RME (U.S. EPA, 1991).
- The exposed skin surface area for the industrial worker is 3,300 cm^2 for the CT and RME, based on U.S. EPA (2002) recommended values.
- The soil-to-skin adherence factors are 0.02 mg/cm^2 (CT) and 0.2 mg/cm^2 (RME) based on U.S. EPA (2004) recommended values.
- The dermal absorption factor is 14 percent for PCBs (U.S. EPA, 2004).
- The exposure frequency is 250 days/year for the CT and RME (U.S. EPA, 1991).
- The exposure durations for the worker are 9 years (CT) (U.S. EPA, 1991) and 25 years (RME) (U.S. EPA, 2002) based on the length of time the worker is employed at the same job.
- The body weight for the adult worker is 70 kg (U.S. EPA, 2002).
- The carcinogenic averaging time is 75 years times 365 days per year or 27,375 days (U.S. EPA, 2000b). The averaging time for non-carcinogens is 365 times the exposure duration (ED).

c) Current/Future Low Occupancy Industrial Worker Exposure to Surface Soil in East Swale Area

A low occupancy industrial worker exposure to Swale Area surface soils was evaluated under the current/future condition in the East Swale Area. Table 4.4 of Appendix I presents a summary of the conservative and health-protective assumptions that were used to calculate the industrial worker exposure, as appropriate.

The exposure assumptions are the same as those outlined for the Current/Future Industrial Worker Scenario for the West Swale Area, with the exception of the following:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.

  Note: The current/future surface soil datasets include all soil results from 0 to 2 feet bgs for the East Swale Area.
- The exposure frequency for the industrial worker is 50 weeks/year for the CT and RME (U.S. EPA, 1991).
- The inadvertent soil ingestion rate for the industrial worker is 50 mg/day, or 6.25 mg/hour for an 8-hour workday, for both the CT and RME (U.S. EPA, 1991).

5.3.5.2.2 SOIL EXPOSURE

a) Future Construction Worker Exposure to Soils

A hypothetical construction worker exposure to Swale Area soils during utility excavation activities was evaluated under the future condition. Table 4.5 of Appendix I presents a summary of the conservative and health-protective assumptions that were used to calculate the construction worker exposure, as appropriate.

The exposure assumptions are described as follows:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.

  Note: The future soil datasets include all soil results from 0 to 12 feet bgs for both Swale Areas.
- The inadvertent soil ingestion rate for the construction worker is 330 mg/day for both the CT and RME (U.S. EPA, 2002).
- The exposed skin surface area for the construction worker is 3,300 cm^2 for the CT and RME, based on U.S. EPA (2002) recommended values.
- The soil-to-skin adherence factors are 0.1 mg/cm^2 (CT) and 0.3 mg/cm^2 (RME) based on U.S. EPA (2004) guidance.
- The dermal absorption factor is 14 percent for PCBs (U.S. EPA, 2004).
- The exposure frequency for the construction worker is 5 days/year for a 1-week excavation event (CT) and 20 days/year for a 4-week or an approximate 1-month excavation event (RME).

- The excavation activities are expected to occur during a 1-year time period, thus the exposure duration is 1 year (CT and RME) (U.S. EPA, 2002).
- The body weight for the adult worker is 70 kg (U.S. EPA, 2002).
- The carcinogenic averaging time is 75 years times 365 days per year or 27,375 days (U.S. EPA, 2000b). The averaging time for non-carcinogens is 365 times the exposure duration (ED).

5.3.5.2.3 AMBIENT AIR EXPOSURE

a) Current/Future Trespasser Exposure to Ambient Air

The trespasser exposure scenario for the current/future condition includes exposure to airborne particulate originating from the West Swale Area surface soil. Table 4.1 of Appendix I includes a summary of the conservative and health-protective assumptions that were used to calculate the trespasser inhalation exposure.

The exposure assumptions for the trespasser inhalation exposure are the same as those presented in Section 5.3.5.2.1(a) except for the following:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.
- The fraction time exposed is 2 hours for the RME and 0.5 hours for the CT within a 24 hour period.
- The particulate emission factor (PEF) is calculated consistent with U.S. EPA (2002) and is presented in Table 4.2.

b) Current/Future High Occupancy Industrial Worker Exposure to Ambient Air in West Swale Area

A high occupancy industrial worker exposure to ambient air was evaluated under the current/future condition. Table 4.3 of Appendix I includes a summary of the conservative and health-protective assumptions that were used to calculate the industrial worker exposure, as appropriate.

The exposure assumptions for the industrial worker inhalation exposure are the same as those presented in Section 5.3.5.2.1(b) except for the following:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.
- The fraction time exposed is 8 hours for both the CT and the RME within a 24 hour period.
- The PEF is calculated consistent with U.S. EPA (2002) and is presented in Table 4.2

c) Current/Future Low Occupancy Industrial Worker Exposure to Ambient Air in East Swale Area

A low occupancy industrial worker exposure to ambient air was evaluated under the current/future condition. Table 4.4 of Appendix I includes a summary of the conservative and health-protective assumptions that were used to calculate the industrial worker exposure, as appropriate.

The exposure assumptions for the industrial worker inhalation exposure are the same as those presented in Section 5.3.5.2.1(c) except for the following:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.
- The fraction time exposed is 6.7 hours for both the CT and the RME within 120 hours (5 days times 24 hours per work week).
- The PEF is calculated consistent with U.S. EPA (2002) and is presented in Table 4.2.

d) Future Construction Worker Exposures to Ambient Air

A hypothetical construction worker exposure to ambient air while excavating was evaluated under the future condition. Table 4.5 of Appendix I presents a summary of the conservative and health-protective assumptions that were used to calculate the construction worker exposure, as appropriate.

The exposure assumptions for the future construction worker inhalation exposure are the same as those presented in Section 5.3.5.2.2(a) except for the following:

- The exposure point concentrations are the 95 percent UCL for both the CT and RME exposure scenarios.

- The fraction time exposed is 8 hours for both the CT and the RME within a 24 hour period.
- The PEF is consistent with U.S. EPA (2002) and is presented in Tables 4.6 and 4.7 for the West and East Swale Areas, respectively.

5.4 TOXICITY ASSESSMENT

The toxicity assessment weighs the available evidence regarding the potential for a particular COPC to cause adverse effects in exposed individuals and estimates the extent of exposure and possible severity of adverse effects. To develop toxicity values, two steps are taken: hazard identification and dose-response assessment. The hazard identification determines the potential adverse effects associated with exposure to a COPC. In the dose-response assessment, numerical toxicity values are determined or selected from the available toxicity data.

In the selection of toxicity values, preference has been given to the most recently developed values because these would incorporate the most recent toxicological information and would provide the best basis upon which to assess potential health hazards/risks.

5.4.1 NON-CARCINOGENIC HAZARDS

5.4.1.1 TOXICITY INFORMATION FOR NON-CARCINOGENIC EFFECTS

For substances suspected to cause non-carcinogenic chronic effects, the health criteria are usually expressed as chronic intake levels (Reference Dose or RfDs) (in units of mg/[kg-day]) or Reference Concentration (RfCs) (in units of mg/m^3) below which no adverse effects are expected. In other words, there is a level of exposure to a chemical below which no toxic effects are expected. In contrast to the toxicological model used to assess carcinogenic risk, which assumes no concentration threshold, the non-carcinogenic dose-response model postulates a "threshold".

In this risk assessment, chronic RfDs and RfCs are used as the toxicity values for non-carcinogenic health effects. A chronic RfD and RfC is defined as an estimate (with an uncertainty spanning an order of magnitude or greater) of a daily exposure level for the human population, including sensitive sub-populations, which poses no appreciable risk of deleterious effects over a lifetime of exposure. Uncertainty factors are incorporated into the RfDs or RfCs to account for extrapolations from animal toxicity

data and for data quality, and to protect sensitive sub-populations. The basis of an RfD or RfC is usually the highest dose level administered to laboratory animals that did not cause observable adverse effects after chronic (usually lifetime) exposure. This is called the No-Observed Adverse Effect Level (NOAEL). The NOAEL is then divided by an uncertainty (safety) factor, and sometimes an additional modifying factor, to obtain the RfD or RfC. In general, an uncertainty factor of 10 is used to account for interspecies variation and another factor of 10 to account for sensitive human populations. Additional factors of 10 are included in the uncertainty factor if the RfD or RfC is based on the Lowest-Observed Adverse Effect Level (LOAEL) instead of the NOAEL, or if data inadequacies are present (e.g., the experiment for which the RfD or RfC was derived had less than lifetime exposure). The LOAEL is the dose level administered to laboratory animals that causes the lowest adverse effect (i.e., liver toxicity – although this is species and chemical-specific) after chronic exposure.

Non-cancer toxicity data for PCBs is limited, with published oral RfDs available only for Aroclor 1016. Non-cancer inhalation toxicity data for PCBs is not available. Thus, extrapolation from the oral-to-inhalation route was applied for Aroclor 1016.

Table 5.1 of Appendix I presents the non-cancer toxicity data (RfDs) used to estimate human health effects for oral and dermal exposure routes for all exposure areas. The dermal toxicity data presented in Table 5.1 of Appendix I was adjusted consistent with U.S. EPA (2004) guidance. Table 5.2 of Appendix I presents RfCs used for the inhalation exposure route for all exposure areas.

5.4.2 CARCINOGENIC RISKS

5.4.2.1 TOXICITY INFORMATION FOR CARCINOGENIC EFFECTS

Cancer Slope Factors (CSFs) and inhalation unit risk factors (URFs) are quantitative risk estimates of carcinogenic potency. Slope factors relate the lifetime probability of excess cancers to the lifetime average exposure dose of a substance. CSFs and URFs are estimated using mathematical extrapolation models, most commonly the linearized multistage (LMS) model, and are presented as risk per mg/(kg-day) (i.e., mg carcinogen per kg body weight per day) for oral CSFs and risk per mg/m^3 for inhalation URFs. These models assume low dose-response linearity and thus may not be appropriate for some suspect carcinogens, in particular those that function as promoters. As well, the body's natural repair processes and defense mechanisms may decrease cancer risk at low exposure levels. Thus, the risks at lower exposure levels are likely overestimated using the LMS model. When adequate human epidemiology data are available,

maximum likelihood estimates (MLEs) of model parameters are used to generate a CSF or URF. When only animal data are available, the CSF or URF is derived from the largest possible linear slope that is consistent with the data (within the upper 95 percent confidence limit). In other words, the true risk to humans, while not identifiable, is not likely to exceed the upper-bound estimate. This is a conservative estimate, and in some cases a linear slope of zero may be as appropriate for the data (i.e., no carcinogenic risk).

The CSF or URF when multiplied by the lifetime average daily dose expressed will provide an estimate of the probability that the dose will cause cancer during the lifetime of the exposed individual. This increased cancer risk is expressed by terms such as 1E-06 or 1×10^{-6}. This is a hypothetical estimate of the upper limit of risk based on very conservative, health-protective assumptions and statistical evaluations of data from animal experiments or from epidemiological studies. To state that a chemical exposure causes a 1E-06 added upper limit risk of cancer means that if 1,000,000 people are exposed, one additional incident of cancer is expected to occur. The calculations and assumptions yield an upper limit estimate that indicates that no more than one case is expected, and, in fact, there may be no additional cases of cancer. U.S. EPA policy, as specified in the National Oil and Hazardous Substances Pollution Contingency Plan, Final Rule (EPA 1990, Federal Register 55 FR 8666), has established that an upper limit cancer risk falling below or within the range of 1E-06 to 1E-04 is acceptable. Since U.S. EPA CSFs or URF represent 95 percent upper confidence levels, the calculated risks are 95 percent upper bound estimates. Thus, actual risks associated with exposure to a potential carcinogen are not likely to exceed the risks estimated using CSFs or URF, but may be lower.

The following chart further explains these cancer risk estimates:

Estimate of Excess Cancer Risk	***Maximum Number of Additional Cancer Cases Expected***	***Number of People in the Exposed Population***
1×10^{-6}	1	1,000,000
1×10^{-5}	1	100,000
1×10^{-4}	1	10,000

Known or suspect human carcinogens have been evaluated and identified by the Carcinogen Assessment Group using the U.S. EPA Weight-of-Evidence approach for carcinogenicity classification[11]. The U.S. EPA classification is based on an evaluation of the likelihood that the agent is a human carcinogen.

[11] U.S. EPA, Health Effects Assessment Summary Table, EPA 540/R-97-036, July 1997.

The evidence is characterized separately for human and animal studies as follows:

Group A- Known Human Carcinogen (sufficient evidence of carcinogenicity in humans);

Group B- Probable Human Carcinogen (B1 – limited evidence of carcinogenicity in humans; B2 – sufficient evidence of carcinogenicity in animals with inadequate or lack of evidence in humans);

Group C- Possible Human Carcinogen (limited evidence of carcinogenicity in animals and inadequate or lack of human data);

Group D- Not Classifiable as to Human Carcinogenicity (inadequate or no evidence); and

Group E- Evidence of Noncarcinogenicity for Humans (no evidence of carcinogenicity in animal studies).

The COPCs were classified utilizing the U.S. EPA system. Table 6.1 of Appendix I presents the cancer toxicity data (CSFs) used in the HHRA to estimate the risk of cancer for the oral and dermal exposure routes for all exposure areas. The dermal toxicity data presented in Table 6.1 of Appendix I was adjusted consistent with U.S. EPA (2004) guidance. Table 6.2 of Appendix I presents URFs for the inhalation exposure route for all exposure areas.

5.5 RISK CHARACTERIZATION

The objective of this risk characterization is to integrate information developed in the exposure assessment (Section 5.3) and the toxicity assessment (Section 5.4) into a complete evaluation of the potential human health risks associated with exposure to soil potentially containing PCBs. The methods used in this risk characterization are based on U.S. EPA guidance for human exposures (U.S. EPA, 1989, 1991, 1997, 2001, 2002, 2004, 2008, 2009).

5.5.1 HAZARD ESTIMATES

The potential for non-cancer health effects from exposure to a COPC is evaluated by comparing an exposure level over a specified time period to a RfD or RfC for a similar time period. This ratio, termed the hazard quotient, is calculated according to the following general equation:

$$HQ = \frac{CDI}{RfD \text{ or } RfC}$$

Where:

HQ = The Hazard Quotient (unitless) is the ratio of the exposure dose of a chemical to a reference dose not expected to cause adverse effects from a lifetime exposure. A hazard quotient equal to or below 1.0 is considered protective of human health.

CDI = The Chronic Daily Intake is the chemical dose calculated by applying the exposure scenario assumptions and expressed as mg/(kg-day). The intake represents the average daily chemical dose over the expected period of exposure.

RfD = The Reference Dose is a daily dose believed not to cause an adverse effect from even a lifetime exposure [mg/(kg-day)]. The RfD is based on experimental data and/or epidemiological studies.

RfC = The Reference Concentration is a daily concentration believed not to cause an adverse effect from even a lifetime exposure [mg/m^3]. The RfC is based on experimental data.

The Hazard Index (HI) is the sum of Hazard Quotients for individual COPCs for a specific exposure scenario.

The summation of non-carcinogenic effects is only additive as they pertain to similar target organs. The HIs presented in Section 5.5 conservatively sum the non-carcinogenic effects without regard to target organs. HIs summed across similar target organs are presented on the hazard quotient calculation tables for each exposure unit in their respective appendix.

The calculated HIs resulting from exposure to the COPCs are compared to a HI of 1. An HI equal to or below 1.0 is considered protective of human health over a lifetime and indicates that the exposure scenarios are not of concern. Typically, an HI between 1 and 10 suggests that exposure may reduce the margin of safety inherent in the exposure scenario and may be of possible concern for sensitive individuals. When the HI exceeds 10, there may be substantial concern for potential health effects. While any single COPC with an exposure level greater than the toxicity value will cause the HI to exceed 1, for multiple COPCs the HI can also exceed 1 due to the addition of multiple COPC HQs.

5.5.2 CANCER RISK ESTIMATES

Exposure scenarios may involve potential exposure to more than one carcinogen. To represent the potential carcinogenic effects posed by exposure to multiple carcinogens, it

is assumed, in the absence of information on synergistic or antagonistic effects, that these risks are additive. Cancer risks are calculated utilizing the following general equation:

$$\text{Cancer Risk} = \text{LADD} \times (\text{CSF or URF})$$

Where:

Cancer Risk	=	Estimated upper bound on additional risk of cancer over a lifetime in an individual exposed to the carcinogen for a specified exposure period (unitless).
LADD	=	The Lifetime Average Daily Dose of the chemical calculated using exposure scenario assumptions and expressed in mg/(kg-day). The intake represents the total lifetime chemical dose averaged over an individual expected lifetime of 70 years.
CSF	=	The Cancer Slope Factor models the potential carcinogenic response and is expressed as $[mg/(kg\text{-}day)]^{-1}$.
URF	=	The inhalation Unit Risk Factor models the potential carcinogenic response and is expressed as $(mg/m^3)^{-1}$.

For estimating cancer risks from exposure to multiple carcinogens from a single exposure route, the following equation is used:

$$Risk_T = \sum_{i=1}^{N} Risk_i$$

Where:

$Risk_T$	=	Total cancer risk from route of exposure
$Risk_I$	=	Cancer risk for the chemical
N	=	Number of chemicals

The cumulative carcinogenic risks are presented and discussed in Section 5.5. The potential cumulative risks resulting from exposure to the COPCs are compared to a target risk range of 1E-06 to 1E-04. When a cumulative risk to an individual under the assumed exposure conditions in an exposure unit exceeds 1E-04, remedial actions may be necessary.

5.5.3 RISK QUANTIFICATION SUMMARY

The hazard indices and excess lifetime cancer risks for the various exposure scenarios for Swale Area media are presented below. Note that combined risks from dermal contact, incidental ingestion, and ambient air inhalation exposure are presented for soil.

5.5.3.1 WEST SWALE AREA

The non-cancer hazard calculations and calculated lifetime cancer risks for receptors in the West Swale Area are presented in Appendix I and summarized below:

Medium	*Receptor*	*Route*	*Exposure*	*Non-Carcinogenic Hazard Index*	*HI >1.0*	*Carcinogenic Risk*	*Risk >10^{-6}*	*Risk >10^{-4}*	*Appendix I Table Reference*
Surface Soil	Trespasser (Current/ Future)	Ingestion Dermal Inhalation	CT (1)	NC	NA	1.4E-06	Yes	No	7.1 CT
			CT (2)	NC	NA	1.2E-06	Yes	No	7.1 CT
			RME (1)	NC	NA	4.6E-06	Yes	No	7.1 RME
			RME (2)	NC	NA	4.0E-06	Yes	No	7.1 RME
	Industrial Worker (Current/ Future)	Ingestion Dermal Inhalation	CT (1)	NC	NA	1.2E-05	Yes	No	7.2 CT
			CT (2)	NC	NA	1.1E-05	Yes	No	7.2 CT
			RME (1)	NC	NA	8.3E-05	Yes	No	7.2 RME
			RME (2)	NC	NA	7.2E-05	Yes	No	7.2. RME
Soil	Construction Worker (Future)	Ingestion Dermal Inhalation	CT (1)	NC	NA	3.3E-07	No	No	7.3 CT
			CT (2)	NC	NA	2.3E-07	No	No	7.3 CT
			RME (1)	NC	NA	1.6E-06	Yes	No	7.3 RME
			RME (2)	NC	NA	1.2E-06	Yes	No	7.3 RME

Notes:

(1) The non-carcinogenic hazard index and carcinogenic risk are based on the Aroclors results.
(2) The non-carcinogenic hazard index and carcinogenic risk are based on the Total PCB results.
NC = Not Calculated
NA = Not Applicable

5.5.3.2 EAST SWALE AREA

The non-cancer hazard calculations and calculated lifetime cancer risks for receptors in the East Swale Area are presented in Appendix I and summarized below:

Medium	*Receptor*	*Route*	*Exposure*	*Non-Carcinogenic Hazard Index*	*HI >1.0*	*Carcinogenic Risk*	*Risk >10^{-6}*	*Risk >10^{-4}*	*Appendix I Table Reference*
Surface Soil	Trespasser (Current/ Future)	Ingestion Dermal Inhalation	CT (1)	3.6E-04	No	1.1E-06	Yes	No	7.4 CT
			CT (2)	NC	NA	9.4E-07	No	No	7.4 CT
			RME (1)	1.2E-03	No	3.7E-06	Yes	No	7.4 RME
			RME (2)	NC	NA	3.1E-06	Yes	No	7.4 RME
	Industrial Worker (Current/ Future)	Ingestion Dermal Inhalation	CT (1)	6.0E-04	No	1.7E-06	Yes	No	7.5 CT
			CT (2)	NC	NA	1.4e-06	Yes	No	7.5 CT
			RME (1)	1.4E-03	No	1.1E-05	Yes	No	7.5 RME
			RME (2)	NC	NA	9.4E-06	Yes	No	7.5 RME
Soil	Construction Worker (Future)	Ingestion Dermal Inhalation	CT (1)	5.9E-02	No	2.8E-07	No	No	7.6 CT
			CT (2)	NC	NA	2.2E-07	No	No	7.6 CT
			RME (1)	3.0E-01	No	1.4E-06	Yes	No	7.6 RME
			RME (2)	NC	NA	1.1E-06	Yes	No	7.6 RME

Notes:

(1) The non-carcinogenic hazard index and carcinogenic risk are based on the Aroclors results.
(2) The non-carcinogenic hazard index and carcinogenic risk are based on the Total PCB results.
NC = Not Calculated
NA = Not Applicable

5.5.4 SUMMATION OF RISKS

A given population may be exposed to a chemical from several exposure routes and from more than one medium. The purpose of this section is to identify the risks associated with a population that may be exposed to COPCs through a combination of exposure pathways.

U.S. EPA (1989) states that risks should be combined across exposure pathways only where the following occurs:

a) reasonable exposure pathway combinations are identified

b) it appears likely that the <u>same</u> individuals would <u>consistently</u> face the "reasonable maximum exposure" ("RME") by more than one pathway

As opposed to encouraging the calculation of combined risks from across exposure pathways, U.S. EPA (1989) cautions that each RME estimate includes many conservative assumptions and combining estimates is not appropriate unless the combination itself is an RME:

> ***"For real world situations in which contaminant concentrations vary over time and space, the same individual may or may not experience the RME for more than one pathway over the same period of time. One individual might face the RME through one pathway, and a different individual face the RME through a different pathway. <u>Only if you can explain why the key RME assumptions for more than one pathway apply to the same individual or sub-population should the RME risks for more than one pathway be combined</u>.***
>
> ***In some situations, it may be appropriate to combine one pathway's RME risks with other pathways' risk estimates that have been derived <u>from more typical exposure</u> parameter values". (Emphasis added).***

It is improbable that the same person would experience all potential exposures the same number of times or over the period of years specified in the individual RME scenarios. As a result, it may be inappropriate to add together the estimated risks and hazards for the different exposure routes and pathways because this could result in the exaggeration of an appropriate RME for the summed exposures. The summation of the CT estimates may be the more appropriate representation of a cumulative RME. To maintain a conservative approach, RME risk and hazard for separate exposure routes were combined to estimate total RME exposures for the same exposure scenario. Therefore, it is unlikely the summation of the RME estimates would result in an underestimation of risk, and this estimate should be evaluated as a conservative estimate of the potential exposures.

However, it would be inappropriate to sum the exposures that were evaluated separately for the exposed populations in the Swale Area without accounting for the percentage of time a receptor would spend in one area versus the other. The exposure scenarios evaluated in the HHRA assumed that the receptor spent 100 percent of the time in the exposure area being considered in order to receive the chemical dose. Thus, the risks and hazards estimated separately for a receptor group (i.e., trespasser, industrial worker, and construction worker) in the two Swale Areas are not considered additive. The following combined exposure scenarios were considered:

5.5.4.1 WEST SWALE AREA

The cumulative HIs and lifetime cancer risks across all applicable exposure routes for receptors in the West Swale Area are presented in Appendix I and summarized below:

Receptor	*Media*	*Exposure*	*Non-Carcinogenic Hazard Index*	*HI >1.0*	*Carcinogenic Risk*	*Risk >10^{-6}*	*Risk >10^{-4}*	*Appendix I Table Reference*
Trespasser (Current/ Future)	Surface Soil	CT (1)	NC	NA	1.4E-06	Yes	No	9.1 CT
		CT (2)	NC	NA	1.2E-06	Yes	No	9.1 CT
		RME (1)	NC	NA	4.6E-06	Yes	No	9.1 RME
		RME (2)	NC	NA	4.0E-06	Yes	No	9.1 RME
Industrial Worker (Current/ Future)	Surface Soil	CT (1)	NC	NA	1.2E-06	Yes	No	9.2 CT
		CT (2)	NC	NA	1.1E-05	Yes	No	9.2 CT
		RME (1)	NC	NA	8.3E-05	Yes	No	9.2 RME
		RME (2)	NC	NA	7.2E-05	Yes	No	9.2 RME
Construction Worker (Future)	Soil	CT (1)	NC	NA	3.3E-07	No	No	9.3 CT
		CT (2)	NC	NA	2.3E-07	No	No	9.3 CT
		RME (1)	NC	NA	1.6E-06	Yes	No	9.3 RME
		RME (2)	NC	NA	1.2E-06	Yes	No	9.3 RME

Notes:

(1) The non-carcinogenic hazard index and carcinogenic risk are based on the Aroclors results.
(2) The non-carcinogenic hazard index and carcinogenic risk are based on the Total PCB results.
NC = Not Calculated
NA = Not Applicable

5.5.4.2 EAST SWALE AREA

The cumulative HIs and lifetime cancer risks across all applicable exposure routes for receptors in the East Swale Area are presented in Appendix I and summarized below:

Receptor	*Media*	*Exposure*	*Non-Carcinogenic Hazard Index*	*HI >1.0*	*Carcinogenic Risk*	*Risk >10^{-6}*	*Risk >10^{-4}*	*Appendix I Table Reference*
Trespasser (Current/ Future)	Surface Soil	CT (1)	3.6E-04	No	1.1E-01	Yes	No	9.4 CT
		CT (2)	NC	NA	9.4E-07	No	No	9.4 CT
		RME (1)	1.2E-03	No	3.7E-06	Yes	No	9.4 RME
		RME (2)	NC	NA	3.1E-06	Yes	No	9.4 RME
Industrial/ Commercial Worker (Current/ Future)	Surface Soil	CT (1)	6.0E-04	No	1.7E-06	Yes	No	9.5 CT
		CT (2)	NC	NA	1.4E-06	Yes	No	9.5 CT
		RME (1)	1.4E-03	No	1.1E-05	Yes	No	9.5 RME
		RME (2)	NC	NA	9.4E-06	Yes	No	9.5 RME
Construction Worker (Future)	Soil	CT (1)	5.9E-02	No	2.8E-07	No	No	9.6 CT
		CT (2)	NC	NA	2.2E-07	No	No	9.6 CT
		RME (1)	3.0E-01	No	1.4E-06	Yes	No	9.6 RME
		RME (2)	NC	NA	1.1E-06	Yes	No	9.6 RME

Notes:

(1) The non-carcinogenic hazard index and carcinogenic risk are based on the Aroclors results.
(2) The non-carcinogenic hazard index and carcinogenic risk are based on the Total PCB results.
NC = Not Calculated
NA = Not Applicable

Table 10.0 of Appendix I presents a summary of the total combined risks and hazards estimated for all exposure scenarios evaluated in the HHRA.

5.5.5 IDENTIFICATION OF UNCERTAINTIES

The purpose of this Section is to provide a summary evaluation and discussion regarding the uncertainties associated with the final characterization of risk for the Swale Area. Uncertainties identified in the HHRA are discussed below.

5.5.5.1 EXPOSURE SCENARIO ASSUMPTIONS

There is often a degree of uncertainty involved with any evaluation where multiple assumptions are made. Because the assumptions used in some of the exposure scenarios evaluated are not based on objective test data but are subjective estimates based on judgment and experience applied to the data available, the tendency is to select

conservative, health-protective values to guard against under-estimating exposure (and associated risk). This approach leads to a general over-estimate in all assumptions. When more than one over-estimate of individual assumptions are included in the scenario equations this exaggerates the over-estimation of each assumption and overstates the total exposure to an even greater degree. The exposure scenarios are therefore conservative in nature to provide a factor of safety that is protective of health.

The intent of this HHRA was to estimate the potential exposure point intakes for both the "average" (CT) and the "RME" scenarios. In order to accomplish this goal, a series of standardized U.S. EPA exposure assumptions were utilized, where available. In the absence of available U.S. EPA guidance on exposure assumptions, professional judgment was used to establish necessary assumptions which are protective of human health.

The CT exposure scenario represents the "average" exposure scenario that may reasonably be expected to occur. The RME exposure scenario represents the reasonable maximum exposure expected to occur. The RME exposure scenario presented in this RA was developed in accordance with the U.S. EPA guidance. The exposure scenarios (CT and RME) were developed to represent reasonable exposures, which may occur under both current and future land use conditions. For the CT exposure scenarios, the CT EPC was the same as the RME EPC rather than the average or mean value for all exposure media. This will result in an overestimation of the risks and hazards for the CT exposure scenarios.

The major uncertainties utilized in the HHRA regarding the physical exposure scenarios are summarized as follows:

- The actual exposure frequency or exposure time of potential industrial workers, construction workers, and trespassers in either Swale Area is unknown. As a result, professional judgment was used to conservatively estimate an RME exposure scenario for the construction worker and trespasser. Guidance presented in the U.S. EPA Disposal of Polychlorinated Biphenyls (PCBs); Final Rule on low occupancy exposure areas was applied in the derivation of the industrial worker exposure scenario in the East Swale Area.
- The utilization of present exposure point concentrations for future exposure scenarios is conservative due to the fact that source material is not being added to the areas of concern and that the levels of PCBs in the soils may decrease with time through natural processes such as biodegradation. The use of steady-state contaminant concentrations generally overestimates future exposures.

- It is assumed that orally ingested chemicals are 100 percent absorbed into the body. Actual absorption rates for ingested contaminants may vary from 5 to 100 percent. Therefore, assuming 100 percent absorption of ingested contaminants may overestimate the associated risks.
- It is assumed that trespassers will spend 100 percent of their time in either one of the exposure areas and will receive all of their potential PCB intake from this area. This is a conservative assumption because the West and East Swale Areas comprise such small percentages of the total plant property. It is more reasonable to assume that a trespasser would spend equal amounts of time in all areas of the plant property.

5.5.5.2 DOSE RESPONSE

One of the major uncertainties in the quantification of risk involves the application of toxicity information. Examples of the uncertainties associated with the toxicity values are presented as follows:

- CSFs are derived from study data on animals dosed with high concentrations and therefore may not be applicable to evaluation of low concentration exposures. High levels of chemicals may override the detoxification or excretion capabilities and allow the chemical to impact the target cells;
- CSFs are developed in a conservative manner. The model used by U.S. EPA makes a number of conservative assumptions which may over estimate carcinogenic potency by several orders of magnitude;
- RfDs are also established with conservative factors of safety in comparison to actual studies, which may be in error. For example, it is assumed that all chemicals are more toxic for man than the test animals studied while the opposite may be true; and
- Non-cancer toxicity data is not available for the majority of PCB Aroclors and total PCBs evaluated in the HHRA. Thus, there is an unknown degree of uncertainty associated with the non-cancer hazard estimates for all of the evaluated exposure scenarios.

5.5.5.3 THE THEORETICAL NATURE OF RISK ESTIMATES

As indicated previously, the results of a health risk assessment assign a numerical value to the probability that a receptor group will develop an additional case of cancer due to the exposure to a specific amount of chemical which is a known or suspect carcinogen. This numerical value is presented as an upper limit excess cancer risk such as 1.0E-06, or

one additional cancer case in a million people exposed to the designated chemical concentration for the exposure duration averaged over their entire lifetime. The models that are applied to calculate the numerical risk values typically reflect the uncertainty associated with the data sets used to estimate the slope factors so the true value could be lower. The Cancer Risk Model and the assumptions used to estimate exposure are considered protective of the most sensitive sub-populations, such as children.

6.0 ECOLOGICAL RISK EVALUATION

The PCBs in soils within the Swale Area were evaluated with respect to their potential to generate a risk or threat to ecological receptors. The exposure pathways to these ecological receptors were evaluated with respect to the conditions at the Swale Area. This evaluation was performed within the guidance provided by 40 CFR Part 761 (Rule).

Although potential ecological risks are not explicitly mentioned by the Rule, it does address them implicitly. The ruling states that its default clean-up levels are not intended for PCB releases to habitats typically considered to be public wildlife resources areas (e.g., surface water, sediments). The Rule also states that more stringent clean-up levels could be required if the PCB contamination is too close to important ecological resources, such as "endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, and sport fisheries." Finally, with respect to areas that are currently low occupancy, the Rule states that more stringent high occupancy clean-up levels should be applied if an expected land-use could reasonably be expected to increase the "exposure of people or **animal life**" [bolding added for emphasis]. Thus, the Rule implicitly requires that the potential for ecological risks should be considered before it is applied. As such, a screening level ecological risk evaluation is presented herein for the Swale Area. This evaluation focused on the pathways for exposure.

The available information suggests that there is no significant ecological risk. First, the Swale Area is a small area (about 13 acres) of disturbed land on a working industrial facility. Wildlife use and potential exposure thus will be limited by the small size, poor habitat, and ongoing human disturbance. Second, higher PCB concentrations in the Swale Area occur primarily below the soil surface. In contrast, ecological receptors are generally exposed to the top foot or less of soil, so most of the elevated concentrations of PCBs are well below soil strata to which ecological receptors would be exposed. Similarly, contamination in deeper soils does not represent a significant risk to off-site resources, since deeper strata are less likely to erode. Thus, exposure pathways between ecological receptors and PCBs are currently very limited, and these are functionally incomplete pathways.

Exposure pathways to off-site ecological receptors are also functionally incomplete. The Illinois River, located approximately 1,800 feet south of the Swale Area, contains sports fisheries. The PCBs are contained in soil within the Swale Area are unlikely to migrate to the Illinois River. PCBs are sparingly soluble and very particle-reactive; consequently, they do not migrate efficiently via groundwater, as is evident by the groundwater data. Consistent with this general Rule, no PCBs were detected in samples of groundwater in

the Swale Area. Groundwater movement of PCBs is further limited by various clay layers and aquitards surrounding the PCB-contaminated waste.

The Swale Area is relatively flat and enclosed so it is unlikely that the soil particles will travel to the Illinois River or Little LaMarsh Creek (located over 500 feet west of the East Swale Area) by erosion. Additionally, as shown in the Flood Insurance Rate Map presented on Figure 6.1, the Swale Area is mapped in Zone C, an area of minimal flood hazard above the 500-year flood level. The Swale Area is located outside the flood plain associated with the Illinois River (mapped as Zone A13 on Figure 6.1). The absence of migration by groundwater and minimal potential for erosion transport and flooding demonstrate that the exposure pathways from the Swale Area to the Illinois River are effectively incomplete.

The results of this ecological screening evaluation indicated that the exposure pathways from PCBs in the Swale Area are functionally incomplete for ecological receptors.

7.0 FATE AND TRANSPORT

7.1 GENERAL

Properties which affect chemical mobility include, but are not limited to, aqueous solubility, liquid density, vapor pressure, and chemical affinity. The partitioning of chemicals between media is controlled by a variety of factors such as adsorption, absorption, volatilization, solubility, and chemical affinity. PCBs are a group of chemicals comprised of 209 individual compounds (known as congeners). PCBs are chlorinated biphenyls (phenols containing a hydroxyl group bonded directly to the benzene ring) with varying degrees of chloride ion substitution on the benzene ring. PCBs are mixtures of synthetic organic chemicals with the same basic chemical structure and similar physical properties ranging from oily liquids to waxy solids.

Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and in many other applications. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.[12] PCBs are most commonly known by the trade name "Aroclor", which was formerly produced by Monsanto Corporation. However, there were other manufacturers of PCBs. Aroclors were PCB mixtures sold according to their relative chlorine content by weight percent. Each of the Aroclors is comprised of many PCB congeners (biphenyl, chlorobiphenyls, dichlorobiphenyls, trichlorobiphenyls, tetrachlorobiphenyls, etc.). However, the mixtures were adjusted to produce the desired chemical/physical properties for their intended use. A summary of the most common Aroclors is provided below.

Aroclor 1016: A mixture of PCBs containing approximately 41 percent chlorine by weight, Aroclor 1016 is a viscous, oily, light yellow liquid or white powder with a weak hydrocarbon odor. It was most commonly used as an insulator fluid for electrical condensers and as an additive in high-pressure lubricants.

Aroclor 1221: A mixture of PCBs containing 21 percent chlorine by weight, Aroclor 1221 is a viscous, oily, colorless to light yellow liquid with a weak odor. Aroclor 1221 was used as an insulator fluid for electrical condensers, an additive for very high pressure fluids, a plasticizer, an additive in epoxy resins to approve adhesion and resistance to chemical attack, and an additive in polyvinyl acetate.

[12] U.S. Environmental Protection Agency, Office of Water, Technical Factsheet on Polychlorinated Biphenyls (PCBs), http://www.epa.gov/OGWDW/dwt/t-soc/pcbs.html, January 27, 1998

Aroclor 1232: A mixture of PCBs containing 32 percent chlorine by weight, Aroclor 1232 is a viscous, oily, nearly colorless light yellow liquid with a weak hydrocarbon odor. Aroclor 1232 was used as an additive in polyvinyl acetate, an insulator fluid for electrical condensers, and an additive in very high-pressure lubricants.

Aroclor 1242: A mixture of PCBs containing 42 percent chlorine by weight, Aroclor 1242 is a viscous, oily, nearly colorless to light yellow liquid with a weak hydrocarbon odor. Aroclor 1242 was used in dielectric liquids, in heat-transfer fluids widely used in transformers, in lubricants, as an additive in polyvinyl acetate, and as a plasticizer.

Aroclor 1248: A mixture of PCBs containing 48 percent chlorine by weight, Aroclor 1248 is a viscous, oily, light yellow liquid with a weak hydrocarbon odor. Aroclor 1248 was used as an additive in polyvinyl acetate, an insulator fluid for electrical condensers, and an additive in very high-pressure lubricants.

Aroclor 1254: A mixture of PCBs containing 54 percent chlorine by weight, Aroclor 1254 is a viscous, oily, light yellow liquid with a weak hydrocarbon odor. Aroclor 1254 was used as a secondary plasticizer for polyvinyl chloride (PVC) and as co-polymers of styrene-butadiene and chlorinated rubber.

Aroclor 1260: A mixture of PCBs containing 60 percent chlorine by weight, Aroclor 1260 is a light yellow, sticky, soft resin with a weak hydrocarbon odor. Aroclor 1260 was used as a secondary plasticizer for PVC, an additive in polyester resins and varnish formulations, an insulator fluid for electrical condensers, and an additive for very high-pressure lubricants.

7.2 ENVIRONMENTAL FATE

PCBs are mixtures of different congeners of chlorinated biphenyl, and the relative importance of the environmental fate mechanisms generally depends on the degree of chlorination. In general, the persistence of PCBs increases with an increase in the degree of chlorination. Mono-, di- and trichlorinated biphenyls biodegrade relatively rapidly, tetrachlorinated biphenyls biodegrade slowly, and more highly chlorinated biphenyls are resistant to biodegradation. Although biodegradation of higher chlorinated congeners may occur very slowly on an environmental basis, no other degradation mechanisms have been shown to be important in natural water and soil systems; therefore, biodegradation may be the ultimate degradation process in water and soil.

If released to soil, PCBs experience tight adsorption to organic carbon with that adsorption generally increasing with the degree of chlorination of the PCB. PCBs will generally not leach significantly in aqueous soil systems; the higher chlorinated congeners will have a lower tendency to leach than the lower chlorinated congeners. However, in the presence of organic solvents (both chlorinated and non-chlorinated), PCBs may leach rapidly through soil. Vapor loss of PCBs from soil surfaces appears to be an important fate mechanism with the rate of volatilization decreasing with increasing chlorination. Although the volatilization rate may be low, the total loss by volatilization over time may be significant because of the persistence and stability of PCBs. Enrichment of the low-chlorine PCBs occurs in the vapor phase relative to the original Aroclor, with the residual mixture becoming enriched in the PCBs containing high chlorine content as volatilization continues.

If released to water, adsorption to sediment and suspended matter will be an important fate process; PCB concentrations in sediment and suspended matter have been shown to be greater than in the associated water column. The PCB composition in the water will be enriched in the lower chlorinated PCBs because of their greater water solubility, and the least water-soluble PCBs (highest chlorine content) will remain adsorbed. In the absence of adsorption, PCBs volatilize relatively rapidly from water. However, strong PCB adsorption to sediment significantly competes with volatilization, with the higher chlorinated PCBs having longer half-lives than the lower chlorinated PCBs. Although the resulting volatilization rate may be low, the total loss by volatilization over time may be significant because of the persistence and stability of the PCBs.

If released to the atmosphere, PCBs will primarily exist in the vapor phase; the tendency to become associated with the particulate phase will increase as the degree of chlorination of the PCB increases. The dominant atmospheric transformation process is probably the vapor phase reaction with hydroxyl radicals, which have estimated half-lives ranging from 12.9 days for monochlorobiphenyl to 1.31 years for heptachlorobiphenyl. Physical removal of PCBs from the atmosphere, which is very important environmentally, is accomplished by wet and dry deposition.

PCBs have been shown to bioconcentrate significantly in aquatic organisms. Average log bioconcentration factors reported for various congeners in aquatic organisms show increasing accumulation with the more highly chlorinated congeners. The major PCB exposure routes to humans are through food and drinking water, and by inhalation of contaminated air.

7.3 CHEMICAL/PHYSICAL PROPERTIES

The chemical and physical properties of PCBs (CAS Number 1336-36-3) are summarized below. Citations are from U.S. EPA's Technical Factsheet on Polychlorinated Biphenyls (PCBs) unless otherwise noted.[13]

Color/Form/Odor: PCB is generic term for a group of organic chemicals which can be odorless or mildly aromatic solids or oily liquids; available in mixtures containing several PCBs and other organics as well.

Melting Point: 340 to 375 degrees Centigrade (°C)

Octanol/Water Partition (K_{ow}): 2.44 to 6.24[14]

Vapor Pressure at 25°C: 7E-03 millimeters of mercury (mmHg) for low chlorine congeners to 1.305EE-12 mmHg for high chlorine congeners

Density/Specific Gravity: 1.44 at 30°C

Solubility: Not applicable; insoluble in water

Octanol/Water Partition Coefficient (log K_{oc}): 2.8 (low chlorine content congeners) to 6.94 (high chlorine content congeners).

Bioconcentration Factor (Log BCF): 3.26 to 5.27 in aquatic organisms; expected to bioconcentrate in aquatic organisms.

Henry's Law Coefficient: 3.3E-04 to 5E-05 atmosphere cubic meters/mole at 20°C.

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[13] U.S. Environmental Protection Agency, Office of Water, January 27, 1998.
[14] Montgomery, J. H., Groundwater Chemicals Desk Reference, Second Edition, Boca Raton, Florida, CRC Press, Inc./Lewis Publishers, 1996, pp 814-835.

8.0 REMEDIAL ACTION GOALS AND OBJECTIVES

8.1 OVERVIEW

This section established the remedial action goals and objectives that were later used to assess and compare various remedial actions and their technologies.

The general objective of a Feasibility Study is to develop a remedy which:

- protects public health and the environment;
- satisfies applicable or relevant and appropriate requirements (ARARs);
- provides practical, cost-effective remediation; and
- utilizes permanent remedies which are completed in a short time frame, where applicable.

Remedial action objectives are established under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 121 (Cleanup Standards) as amended by the Superfund Amendment and Reauthorization Act (SARA). Remedial actions are developed in accordance with the requirements of CERCLA Section 121 and, to the greatest extent practicable, with the NCP as codified in 40 CFR Part 300. As stated in the NCP under Section 300.68(i), remedies selected shall be cost effective and shall effectively mitigate and minimize threats to, and provide adequate protection of, public health and welfare and the environment. SARA expanded the statutory scope of CERCLA and codified requirements, which, before the enactment of SARA, were essentially non-promulgated U.S. EPA policies.

Additional requirements under CERCLA as amended by SARA include the following.

- Preference is to be given to the selection of remedial actions "in which treatment that permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants is a principal element" [SARA, Section 121(b)] (Where permanent remedies involving treatment or recovery technologies are not to be considered, such decisions shall be supported by appropriate explanations).
- Remedial actions "shall attain a degree of cleanup of hazardous substances, pollutants, and contaminants released into the environment and of control of further release at a minimum which assures protection of human health and the environment" [SARA Section 121(d)].

- "With respect to any hazardous substances, pollutant, or contaminant that will remain on site" that the residual levels will attain "any standard, requirement, criteria, or limitation under any Federal environmental law" and "any promulgated standard, requirement, criteria, or limitation under a State environmental or facility citing law that is more stringent than the Federal requirements where such goals are relevant and appropriate" [SARA Section 121(d)(2)(A)].

The Federal and State requirements referred to above are collectively referred to as ARARs and are discussed later in this section. Guidelines for the determination of ARARs that may have to be considered during the FS are presented in the U.S. EPA documents entitled:

1. CERCLA Compliance with Other Laws Manual, August 1988
2. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, October 1988

8.2 PRELIMINARY REMEDIATION GOALS

Preliminary remediation goals (PRGs) are established using readily available information such as reference doses, risk-specific doses, or frequently used standards such as ARARs. Selection of PRGs should permit a range of treatment and containment alternatives to be developed. The final acceptable levels should be based upon the results of the baseline HHRA and an evaluation of the expected exposures and associated risks for each alternative.

8.3 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

The potential ARARs are listed in Tables 8.1 through 8.3 and are divided into location-specific, chemical-specific, and action-specific ARARs. Location-specific ARARs are requirements that place restrictions on the implementation of remedial alternatives and the potential impact of the remedial activities would have upon the physical environment (i.e., wetlands, airports, floodplain, etc.). Chemical-specific ARARs are health or risk-based requirements that exclusively pertain to the chemicals of concern. Chemical-specific ARARs may include matrix-specific standards, guidance values, or discharge rates. Action-specific ARARs are technology or activity-based requirements that pertain to the remedial technology to be implemented.

Action-specific ARARs may address material handling, storage, disposal, permitting, and reporting requirements.

Each of the potential remedial alternatives will be screened with respect to the potential ARARs listed in Tables 8.1 through 8.3.

8.4 REMEDIAL ACTION OBJECTIVES

8.4.1 OVERVIEW

The U.S. EPA guidance document entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA", October 1988, states "specific remedial action objectives consist of medium-specific or operable unit-specific goals for protecting human health and the environment". The objectives must not be so specific that the range of remedial alternatives which can be developed becomes overly limited.

Remedial action objectives established to protect human health and the environment are to specify:

- the chemicals of concern
- the exposure routes and receptors
- an acceptable chemical concentration or range of concentrations for each exposure route

Specifying remedial action objectives in this manner is deemed appropriate since protectiveness may be achieved by reducing exposure to receptors either separately or in conjunction with reducing chemical levels. The guidance further states that "because remedial action objectives for protecting environmental receptors typically seek to preserve or restore a resource, environmental objectives should be addressed in terms of the medium of interest and target cleanup levels, whenever possible". The remedial objectives themselves are not the motivation for initiating a remedial action, but are a set of performance standards against which to compare remedial alternatives.

The HHRA demonstrated that there were no excess cancer risks or hazards associated with the presence of PCBs in the Swale Area based upon the current occupancy levels.

The following significant conclusions were drawn from the HHRA.

West Swale Area (WSA):

1. The HI did not exceed the level of potential concern; and
2. The lifetime excess cancer risks were below to within U.S. EPA's acceptable risk range of 1.0E-06 to 1.0E-04 for the CT and RME for the trespasser, industrial worker, and construction worker exposure scenarios.

East Swale Area (ESA):

1. The HI did not exceed the level of potential concern; and
2. The lifetime excess cancer risks were below to within U.S. EPA's acceptable risk range of 1.0E-06 to 1.0E-04 for the CT and RME for the trespasser, industrial worker, and construction worker exposure scenarios.

8.4.2 REMEDIAL ACTION OBJECTIVES FOR THE SWALE AREA

8.4.2.1 EAST SWALE AREA

The ESA includes land in the vicinity of the former Building Y-12, land in the vicinity of the CILCO substation and south of Buildings P and V, and a portion of the land south of Building R as depicted on Figure 8.1. The ESA meets the criteria for a low occupancy area as described in 40 CFR Part 761.3. However, at a number of locations the PCB concentrations in soil in the ESA were above the 25 mg/kg cleanup level for bulk PCB remediation waste for a low occupancy area as specified at 761.61(a)(4)(i)(B). Therefore, a risk-based closure for the ESA is warranted.

The remedial action objectives identified for the ESA include the following:

1. minimize direct contact to PCBs in soil at concentrations above 25 mg/kg
2. minimize inhalation of soil containing PCBs at concentrations above 25 mg/kg
3. ensure occupancy levels remain at or below the low occupancy level specified at 40 CFR Part 761
4. reduce surface water infiltration through grading and drainage controls

PCBs were not detected in groundwater in the Swale Area. Therefore, no remedial action objectives are necessary for groundwater.

8.4.2.2 WEST SWALE AREA

The WSA includes lands in the vicinity of Building R as depicted on Figure 8.1. In general, due to the presence of plant operations in the area, the WSA does not meet the criteria for a low occupancy area as described in 40 CFR Part 761.3. The PCB concentrations in soil in the WSA are above the 1 mg/kg cleanup level for bulk PCB remediation waste for a high occupancy area as specified at 761.61(a)(4)(i)(A). Therefore, a risk-based closure for the WSA is warranted.

The HHRA concluded that the HI did not exceed the level of potential concern, and the lifetime excess cancer risks were below to within U.S. EPA's acceptable risk range of 1.0E-06 to 1.0E-04 for the CT and RME for the trespasser, industrial worker, and construction worker exposure scenarios.

The remedial action objectives identified for the WSA include the following:

1. minimize direct contact to PCBs in soil at concentrations above 10 mg/kg
2. minimize inhalation of soil containing PCBs at concentrations above 10 mg/kg
3. control worker access to open land east and immediately south of Building R and
4. reduce surface water infiltration through grading and drainage controls

PCBs were not detected in groundwater in the Swale Area. Therefore, no remedial action objectives are necessary for groundwater.

9.0 IDENTIFICATION AND SCREENING OF REMEDIAL TECHNOLOGIES

9.1 GENERAL

Remedial technologies applicable to soil that were identified consistent with the remedial action objectives described in the previous section were screened using the criteria summarized below.

a) Short- and Long-Term Effectiveness

The short-term effectiveness is assessed by its ability to protect human health and the environment during the construction and implementation of a remedy before response objectives are met. The time required to meet these response objectives also factored into this criterion. Long-term effectiveness and permanence are assessed by its ability to maintain the protection of human health and the environment after response objectives have been met. The magnitude of residual risk and adequacy, and reliability of controls are also taken into consideration.

b) Implementability

Under this criterion, a technology is assessed in terms of its technical and administrative feasibility and the availability of required goods and services. Also considered is the reliability of the technology, the ability to monitor the effectiveness of the remedy, and the ease of undertaking additional remedial actions, if necessary.

c) Cost

Under this criterion, a technology is assessed in terms of the relative cost to implement the technology as compared to other applicable remedial technologies.

Remedial technologies applicable to the contaminants and conditions and consistent with the remedial action objectives are identified and screened in this section. Remedial technologies were screened using professional judgment and U.S. EPA guidance documents. Identification and screening of the potential remedial technologies is provided in the following subsections. Table 9.1 presents the results of the screening process. All appropriate technology options are categorized and described by technology type and general response action. Those technologies that were found appropriate have been carried forward for detailed analysis in later sections of this FS. The selected technologies are summarized below.

9.2 NO ACTION

Description

The No Action Alternative allows the Swale Area to exist as is, without implementation of any remedial technologies. There would be no controls on current or future uses. The No Action Alternative is also a requirement for evaluation to serve as a baseline for other alternatives.

Evaluation

The effectiveness of No Action is evaluated, in part, on the basis of whether implementation of other technology options cause greater harm to the public welfare and environment than No Action or provide little benefit relative to their cost.

No costs would be associated with No Action relative to other potentially applicable remedial technologies, and there are no concerns relative to implementability of this remedial technology. This technology would be effective in the short term since the HHRA identified no lifetime excess cancer risk or hazard concerns based upon anticipated exposure scenarios.

The long-term effectiveness of this alternative is suspect due to the absence of controls on future land use. Long-term effectiveness would likely compare favorably with respect to other technologies evaluated assuming current land use and occupancy levels remain at current levels. However, no controls would be established to ensure future occupancy levels remain at acceptable levels.

No Action will be retained as a baseline for evaluating other remedial technologies.

9.3 ADMINISTRATIVE CONTROLS

Administrative controls include:

1. Deed Restrictions
2. Restrictive Ordinances

9.3.1 DEED RESTRICTIONS

Description

Restrictive covenants on deeds on property are intended to prevent or limit unacceptable use and development. Restrictive covenants written into the property deed serve to notify any potential purchaser of the property that potential hazards exist with certain property uses. Restrictive covenants on groundwater usage are intended to prevent or limit the use of the property or certain portions of the property. Restrictive covenants written into the property deed notify any potential purchaser of the property that land use must be restricted and regulated to ensure that there are no health concerns.

This remedial technology involves the legal restriction of future uses of a site. The notice and deed restrictions would mean that any future owner or lessee would have notice of site conditions and could use the land only for non-residential purposes. Specifically, as specified at 40 CFR Part 761.61, the notation on the deed or some other instrument that is normally examined during a title search must be recorded in accordance with state law that will in perpetuity notify any purchaser:

1. that the land has been used for PCB-containing fill
2. of any land-use and occupancy restrictions associated with the final remedy
3. of the existence of a fence or cap and the requirement to maintain the fence or cap
4. of the applicable cleanup levels at the site inside the fence and/or under the cap

In accordance with 40 CFR Part 761.61, a record or notation on the deed of a property must be made within 60 days following completion of remedial activities to address PCB remediation waste.

Evaluation

This technology is effective in the short and long term at controlling property use and maintaining current occupancy levels. These actions effectively minimize future human exposure to PCB-containing soil. Administrative controls can be easily implemented at a low relative cost and are required under the applicable regulations. There are no legal or administrative concerns with implementation of this technology, and this technology is commonly implemented in conjunction with other remedial technologies to form a remedial action.

Administrative controls will be retained for detailed analysis.

9.3.2 RESTRICTIVE ORDINANCES

Description

Local ordinances restricting future land use could prevent or reduce the potential for human contact with the contaminated soil. State or local governments can also implement public education programs. Such programs would be focused on keeping the public aware of both current and future activities and the concerns raised by potential contaminants.

Evaluation

There are no short-term risks associated with implementation of this technology. The property is currently zoned for heavy manufacturing. Therefore, this option would not be effective in the long term at further restricting future land use. This option will not be retained for further evaluation.

9.4 ACCESS CONTROLS

Description

This remedial technology involves measures such as installation of perimeter fencing and signage to restrict physical access to the affected area. In accordance with 40 CFR Part 761.61, a fence and warning sign must be constructed at PCB remediation areas and must remain in place in perpetuity.

Evaluation

Short-term risk to workers is low and can be further reduced through implementation of appropriate health and safety procedures. This technology is effective in the long term at minimizing human exposure to PCB-containing soil and could be easily implemented at a low relative cost. This technology is commonly implemented in conjunction with other technologies to form a remedial action.

This technology will be retained for detailed analysis.

9.5 MONITORING AND MAINTENANCE

Description

Monitoring involves regular inspection of remedial measures implemented at a site. Monitoring also may include collection of soil, sediment, surface water, air, and groundwater samples for analysis. Maintenance includes regular inspection and completing repairs, as necessary, to ensure remedial actions remain effective.

Evaluation

Monitoring and maintenance is frequently used in combination with other remedial technologies. This technology is effective in the short and long term in determining site conditions. There are no concerns with respect to implementability, and relative costs are low to moderate. Short-term risk to site workers is low and can be further reduced through implementation of appropriate health and safety procedures. This technology is frequently implemented in conjunction with other technologies to form a remedial action.

This technology will be retained for detailed analysis.

9.6 CAPPING

Description

This remedial technology involves the design and construction of a cap. The regulation in 40 CFR Part 761.61 defines a cap as a uniform placement of concrete, asphalt, or similar material spread over an area where remediation waste was left in place or removed. A cap constructed of soil must have minimum thickness of 25 centimeters (cm) (10 inches) and a cap constructed of asphalt or concrete must have a minimum thickness of 15 cm (6 inches).

Evaluation

Short-term risk to site workers is low to moderate and can be further reduced through implementation of appropriate health and safety procedures. This technology is effective at minimizing future human exposure to soil and could be easily implemented at a moderate cost.

This technology will be retained for detailed analysis.

9.7 EXCAVATION AND OFF-SITE LANDFILLING

Description

This technology would include excavation of soil impacted by PCBs above a specific concentration and transport of this soil to a permitted TSCA landfill or a RCRA Subtitle D landfill, depending upon the results of soil characterization data. Land disposal does not involve soil treatment but relies on the technologies incorporated in the construction of the landfill to contain the soil and sediment and prevent a future release to the environment. Excavated areas would require backfilling to re-establish grade and positive drainage.

Evaluation

Limitations of this technology include availability of approved disposal space, transportation distance, and cost. Short-term impacts associated with off-site landfilling would include potential worker exposure to PCBs and emissions of fugitive dust during excavation, transportation, and disposal activities. This technology is effective at permanently reducing concentrations of PCBs but the relative cost of this technology is high compared to other technologies identified. Based on the HHRA which indicated that cancer risks and hazards fall within the acceptable range and the lack of exposed ecological receptors, the high costs for this technology are not warranted. Therefore, this technology will not be retained for detailed analysis.

9.8 EXCAVATION AND INCINERATION

Description

This technology would involve excavation of PCB-impacted soil and incineration of the soil either on site or, more likely, at an approved off-site TSCA-permitted incinerator. Incineration is a treatment method for organic compounds which uses high temperature oxidation under controlled conditions to degrade a substance into carbon dioxide, water vapor, sulfur dioxide, nitrogen oxides, hydrogen chloride gases, and ash. The hazardous products of incineration, such as particulates, sulfur dioxide, nitrogen oxides, and hydrogen chloride, require air emission control equipment. When soil is incinerated, there is only a small volume reduction and the byproducts of incineration would then require disposal at a RCRA Subtitle C or Subtitle D landfill, depending on characterization results. Additional concerns with respect to the incineration of organic

constituents involve the potential incineration byproducts that may be produced through incomplete combustion as well as the exhaust of particulate containing inorganic constituents.

Evaluation

Incineration is a proven technology that permanently destroys PCBs through thermal treatment. Short-term risk to site workers is moderate to high since this technology would involve excavation and potential worker exposure to PCBs. However, the short-term risks may be managed through implementation of health and safety protocols. The relative costs for incineration are based on unit cost per pound and are very high as compared to other technologies evaluated. Based on the HHRA which indicated that cancer risks and hazards fall within the acceptable range and the lack of exposed ecological receptors, the high costs for this technology are not warranted. Therefore, this technology will not be retained for detailed analysis.

9.9 SOLVENT EXTRACTION/WASHING

Description

Solvent extraction/washing involves removing PCBs from excavated soils and concentrating them in a residual waste stream. The extracted chemicals would require treatment. The solvent often may be recovered by taking advantage of certain properties of the solvent being used. Aliphatic amines (e.g., triethylamine) below 15 ^{o}C can simultaneously solvate oils and water. Above this temperature, water becomes immiscible and separates from the oil and solvent. Consequently, a process can be designed to remove water and organic compounds at low temperatures, separate the water from the organic phase at higher temperatures, and recover most of the solvent through distillation.

A similar process, called critical fluid extraction, involves taking advantage of increased solvent properties of certain gases (e.g., propane or carbon dioxide) when they are compressed to their "critical point". Once the constituents have been extracted, the pressure can be reduced, allowing the solvent to vaporize. The solvent can be recovered and the remaining materials may be used as an industrial fuel or sent to an incinerator or other disposal facility.

Treatability tests run at other sites have indicated that there may be a limit to the reduction of contaminants achievable with these processes under ideal conditions. These tests also indicate this technology is cost effective for soil volumes of 5,000 cubic

yards or less. Repeat applications may increase the reductions obtained. However, it may not be cost effective for sites where there are large volumes of material at high concentrations. The application of this technology typically requires a treatability study to determine its suitability.

Evaluation

This technology is more effective on uniform granular soil than on cohesive soil. The technology would permanently reduce PCB concentrations in soil but its effectiveness would need to be determined through treatability testing. Short-term risk to site workers is moderate to high since this technology would involve excavation and potential worker exposure to PCBs. However, the short-term risks may be managed through implementation of health and safety protocols. The relative costs for this technology are very high as compared to other technologies evaluated. Based on the HHRA which indicated that cancer risks and hazards fall within the acceptable range and the lack of exposed ecological receptors, the high costs for this technology are not warranted. Therefore, this technology will not be retained for detailed analysis.

9.10 ON-SITE STABILIZATION

Description

This technology involves mixing of the excavated soil with a fixing agent such as cement rotary kiln dust or fly ash. This technology permanently fixes PCBs in place. Implementation of this technology would include excavation of a limited volume of soil and chemical fixation through mixing in an on-site pug mill. The treated soil would then be replaced in the excavation or placed in a central stockpile. The chemical fixants would immobilize the PCBs.

Evaluation

This technology is very effective at permanently immobilizing PCBs but does not reduce the PCB concentrations in soil except through dilution. This technology has been successfully implemented at other PCB sites. Short-term risk to site workers is moderate to high since this technology would involve excavation and potential worker exposure to PCBs. The relative costs for this technology are very high as compared to other technologies evaluated. Based on the HHRA which indicated that cancer risks and hazards fall within the acceptable range and the lack of exposed ecological receptors, the high costs for this technology are not warranted. Therefore, this technology will not be retained for detailed analysis.

9.11 SUMMARY OF REMEDIAL TECHNOLOGIES

A number of remedial technologies were screened for short- and long-term effectiveness, implementability, and cost. The results of this screening are summarized in Table 9.1.

Remedial Technology	*Retained?*
No Action	Yes
Monitoring	Yes
Deed Restrictions	Yes
Restrictive Ordinances	No
Access Controls	Yes
Capping	Yes
Off-Site Landfilling	No
Incineration	No
Solvent Extraction/Soil Washing	No
On-Site Stabilization	No

The retained technologies will be evaluated in detail in the next section of this report.

10.0 DETAILED EVALUATION OF REMEDIAL ALTERNATIVES

10.1 REMEDIAL OBJECTIVE

The overall remedial objective is to ensure the protection of human health and the environment. The need for remedial action is based on unacceptable health risks and concentrations above chemical-specific ARARs. The U.S. EPA generally considers a site safe when current or future human health carcinogenic risks are between $1x10^{-4}$ to $1x10^{-6}$ and a non-carcinogenic hazard index is below the level of concern. If the HHRA does not identify unacceptable human health risks, it is necessary to assess the requirements for remedial action based upon the determination of unacceptable environmental risks or an exceedance of chemical-specific standards.

The HHRA for the study area concluded that the total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within or below the U.S. EPA's acceptable target cancer risk range, and the estimated hazard indices are below the level of concern. Therefore, very costly remedies that are not warranted by the risks posed by the Swale Area. This is consistent with U.S. EPA's Office of Solid Waste and Emergency Response (OSWER) Directive 9355.0-30[15]. However, PCBs are present in soil at concentrations above the objectives promulgated at 40 CFR Part 761.61. Therefore, actions to mitigate potential human exposure to the PCB-containing soil and ensure proper future management of PCB-containing soil are warranted.

10.2 IDENTIFICATION OF SWALE AREA REMEDIAL ALTERNATIVES

The development of Remedial Action Alternatives is based upon combinations of the selected remedial technologies and associated process options required to address the Remedial Action Objectives detailed in the previous section. Specific technology options that survived the initial screening process in Section 9.0 are listed below with their respective technology type. The technology options will be combined to form Remedial Action Alternatives in this section.

As discussed in Section 5.0, the total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within or below the acceptable target cancer risk range of 10^{-6} to 10^{-4}, and the estimated hazard indices for all reasonably expected potentially exposed populations are below 1.0. Therefore, remedial

[15] U.S. EPA, Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions, OSWER Directive 9355.0-30, April 22, 1991.

alternatives were developed to attain the remedial action objective for the Swale Area described in Section 8.4.2.

PCBs were not detected in groundwater in the Swale Area. Therefore, no remedial action objectives are necessary for groundwater.

Potential remedial alternatives for the Swale Area include the following:

- Alternative 1 - No Action (Baseline Alternative)
- Alternative 2 - Partial Capping, Vegetative Cover and Grading Improvements, Deed Restrictions, Access Controls, and Inspection and Maintenance
- Alternative 3 - Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance

10.3 EVALUATION CRITERIA

This section presents an evaluation of the remedial alternatives described in the previous section. Each alternative is evaluated based on the criteria identified below, with the exception of U.S. EPA and community acceptance. The criteria are:

- Overall Protection of Human Health and the Environment: The assessment of this criterion describes how an alternative, as a whole, achieves and maintains protection of human health and the environment. The focus of this criterion is the effectiveness of the alternative to reduce the overall risk to human health or the environment. Overall protection of human health and the environment is referred to as a threshold criterion. An alternative must meet this criterion to be considered for selection.
- Compliance with ARARs: Each alternative is evaluated based on its compliance with ARARs. ARARs may be action, chemical, or location specific and are governed by federal, state, and local laws or ordinances.
- Long-Term Effectiveness and Permanence: Long-term effectiveness is defined as the ability of the alternative to maintain protection of human health and the environment after the response objectives have been met.
- Reduction of Toxicity, Mobility, or Volume of Materials: This criterion is designed to evaluate a remedial alternative based on its effectiveness in reducing the toxic effects, migration potential, and quantity of associated contaminants in order to protect human health and the environment.

- Short-Term Effectiveness: This criterion is designed to assess the protection of human health and the environment during construction and implementation of a remedial alternative prior to meeting the response action objectives.
- Implementability: Each alternative will be assessed with regard to the technical and administrative feasibility of alternatives and the availability of the good or services outlined in the alternatives.
- Cost: The capital cost and annual operation and maintenance costs are provided for comparison of alternatives. Cost estimates are expected to provide an accuracy of -50 to +30 percent. They provide a basis for comparison between alternatives but do not represent exact budget estimates. The cost estimates are based on current price levels and actual costs of similar projects. Engineering costs reflect the costs to complete the design of the various remedial alternatives including the 30 percent, 60 percent, 90 percent, pre-final, and final design submittals, and engineering costs encompass construction oversight and management, project management, inspections, and construction certification.

This remedial alternative evaluation was developed consistent with the NCP to assess any remedial alternative that may be required based on human health risks, environmental risk, or exceedances of chemical-specific standards. This remedial alternative evaluation was conducted in accordance with the U.S. EPA guidance document entitled Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (EPA/540/G-89/004) dated October 1988.

10.4 ALTERNATIVE 1: NO ACTION

10.4.1 PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

Alternative 1 involves no remedial action and, therefore, does not have any direct effects on overall protection of human health or the environment. However, as discussed Section 5.0, the total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within the acceptable target cancer risk range of 10^{-4} to 10^{-6}, and the hazard index for all reasonably expected potentially exposed populations was below 1.0, assuming these areas will continue to be in industrial use.

No Action does not provide any access or administrative controls to ensure future industrial/commercial use. Therefore, this remedial alternative is not fully protective of human health. Additionally, PCBs are present in soil at concentrations above the levels

regulated under TSCA. This alternative does not provide any controls to ensure proper soil management and handling practices consistent with the Part 761 regulations.

10.4.2 COMPLIANCE WITH ARARs

Alternative 1 would not comply with ARARs.

10.4.3 LONG-TERM EFFECTIVENESS AND PERMANENCE

Alternative 1 involves no remedial action and would not be effective in the long term unless current land use and occupancy levels are maintained.

10.4.4 REDUCTION OF TOXICITY, MOBILITY, OR VOLUME

Alternative 1 would not reduce the toxicity, mobility, or volume of contaminants through treatment.

10.4.5 SHORT-TERM EFFECTIVENESS

Alternative 1 involves no remedial action and there would be no short-term impacts to construction workers and the community during construction and implementation of this alternative.

10.4.6 IMPLEMENTABILITY

There are no concerns associated with implementation of this technology.

10.4.7 COST

There are no costs associated with implementation of Alternative 1.

10.5 ALTERNATIVE 2: DEED RESTRICTIONS, PARTIAL CAPPING, VEGETATIVE COVER, ACCESS CONTROLS, AND INSPECTION AND MAINTENANCE

Alternative 2 would employ the following technologies:

- capping over a limited area
- grading and vegetative cover improvements
- deed restrictions
- access controls (fencing)
- inspection and maintenance

Capping would occur in the northern portion of the WSA where there is the potential for higher levels of human occupancy. A compacted soil cap would be constructed in accordance with 40 CFR Part 761.61, would mitigate direct contact with surface contamination, and would reduce the volume of infiltration of water through contaminated soils. The compacted soil cap would include reworking and compaction of the upper 4 to 6 inches of the existing soil cover and placement of 6 inches of compacted clean fill from an existing on-site soil stockpile. This would be covered with 4 inches of soil suitable for sustaining a vegetative cover. The access roads and drives in the vicinity of Building R would be upgraded to asphalt or concrete to permit vehicular access and act as a cap.

Regrading and reseeding would establish a robust vegetative cover over the ESA to prevent erosion and transport of contaminated soil. The existing soil would be regraded to promote surface drainage. In addition, a layer of imported topsoil would be placed, as necessary, to promote the growth of a grass vegetative cover to stabilize the soil. The landfill access road in the eastern portion of the ESA would be upgraded with asphalt or concrete to permit vehicular access to the permitted foundry sand landfill to the south. Fencing and signage would be installed around the ESA to reduce potential industrial worker and trespasser access to the area.

Institutional controls in the form of deed restrictions would be used to identify areas where remedial actions were implemented, specify ongoing maintenance of these areas, and identify low occupancy areas (ESA). The deed restrictions would also specify industrial/commercial land use and a groundwater use restriction. A soil management plan would be developed to ensure proper handling of any soil removed from the area in the future. A health and safety plan would be prepared and implemented for work required in these areas to minimize short-term construction worker exposure to PCBs. Finally, an operations and maintenance (O&M) plan would be developed to specify the

tasks to be performed to ensure the fence, cap, and vegetative cover areas remain in good repair.

The areas where caps, vegetative covers, and fencing would be installed are depicted on Figure 10.1.

10.5.1 PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

The total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within the acceptable target cancer risk range of 10^{-4} to 10^{-6}, and the hazard index for all reasonably expected potentially exposed populations was below 1.0, assuming these areas will continue to be in industrial use. This alternative ensures that the PCBs that remain in place above chemical-specific criteria are properly managed. The results of the ecological screening evaluation indicated that the exposure pathways from PCBs in the Swale Area are functionally incomplete for on-site and for off-site ecological receptors. This alternative would meet all established Remedial Action Objectives.

10.5.2 COMPLIANCE WITH ARARs

Alternative 2 would comply with 40 CFR Part 761 upon approval by the U.S. EPA's Regional Administrator.

10.5.3 LONG-TERM EFFECTIVENESS AND PERMANENCE

Alternative 2 would be effective at reducing human exposure to PCBs in the soil. This would be accomplished through a combination of capping, grading improvements, deed restrictions, access controls, and periodic monitoring and maintenance to ensure the cap, vegetative cover, and perimeter fencing remain in good repair.

10.5.4 REDUCTION OF TOXICITY, MOBILITY, OR VOLUME

Alternative 2 would not reduce the toxicity or volume of contaminants through treatment. However, Alternative 2 would reduce the mobility of the contaminants by ensuring an adequate cover is established to minimize potential fugitive dust emissions.

10.5.5 SHORT-TERM EFFECTIVENESS

Potential short-term impacts posed by this alternative would be caused by fugitive dust emissions during upgrade of the vegetative cover and installation of the perimeter fence. However, these emissions would be minimized by implementation of appropriate dust control measures and decontamination procedures and establishment of proper work zones during construction activities. Construction workers would be protected through implementation of appropriate health and safety procedures.

10.5.6 IMPLEMENTABILITY

There are no concerns associated with implementation of this technology.

10.5.7 COST

The capping and vegetative cover improvements are depicted on Figure 10.1. The area to be capped encompasses approximately 3.2 acres and the area of grading/vegetative cover improvements encompasses an area of approximately 9.3 acres. The cost of Alternative 2 is summarized in Table 10.1. The present worth of Alternative 2 based on a 5 percent discount rate over a 30-year period is estimated to be $1,270,000.

Much of the capital costs for this alternative result from improvements to existing features such as roads and other paved surfaces required to access structures and allow business operations to continue. For example, concrete access and turnaround areas would be constructed near Building R2 to allow trucks and equipment ingress and egress to this building. Similarly, an aggregate or asphalt-paved road would be constructed through the ESA to permit access to the active 817 landfill located to the south. These paved surfaces would serve as engineered barriers over PCB-containing soil.

Other costs are tied to demolition work required to complete the cap and vegetative cover. For example, an out-of-service diesel fuel aboveground storage tank (AST) and containment structure located in the southeastern portion of the WSA would be decommissioned as would an out-of-service AST farm located within the proposed vegetative cover area south of Building P. The required improvements are summarized in Table 10.1.

Although rough grading and fill would be completed to improve drainage, no drainage controls would be installed as part of this alternative. Existing drainage patterns would be largely preserved.

10.6 ALTERNATIVE 3: CAPPING, DEED RESTRICTIONS, ACCESS CONTROLS, AND MONITORING AND MAINTENANCE

Alternative 3 would employ the following technologies:

- capping over the entire Swale Area where PCB concentrations in soil exceed 10 mg/kg
- deed restrictions
- access controls (fencing)
- inspection and maintenance

Alternative 3 is substantially similar to Alternative 2 except capping would occur in the portions of the ESA and WSA where PCB concentrations in soil are above 10 mg/kg. A compacted soil cap would be constructed in accordance with 40 CFR Part 761.61, would mitigate direct contact with surface contamination, and would reduce the volume of infiltration of water through contaminated soils. The compacted soil cap would include reworking and compaction of the upper 4 to 6 inches of the existing soil cover and placement of 6 inches of compacted clean fill. This would be covered with 4 inches of soil suitable for sustaining a vegetative cover. The access roads and drives in the vicinity of Building R would be upgraded to asphalt or concrete to permit vehicular access and act as a cap. Fencing would be installed and upgraded in a manner similar to Alternative 2.

Institutional controls in the form of deed restrictions would be used to identify areas where remedial actions were implemented, and specify ongoing maintenance of these areas. The deed restrictions would also specify industrial/commercial land use and a groundwater use restriction. A soil management plan would be developed to ensure proper handling of any soil removed from the area in the future. A health and safety plan would be prepared and implemented for work required in these areas to minimize short-term construction worker exposure to PCBs. Finally, an O&M plan would be developed to specify the tasks to be performed to ensure the fence, cap, and vegetative cover areas remain in good repair.

The areas where and fencing would be installed are depicted on Figure 10.2.

10.6.1 PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

The total estimated lifetime cancer risks for all reasonably expected potentially exposed populations fall within the acceptable target cancer risk range of 10^{-4} to 10^{-6}, and the hazard index for all reasonably expected potentially exposed populations was below 1.0, assuming these areas will continue to be in industrial use. This alternative ensures that the PCBs that remain in place above chemical-specific criteria are properly managed. The results of ecological screening evaluation indicated that the exposure pathways from PCBs in the Swale Area are functionally incomplete for ecological receptors. This alternative would meet all of the established Remedial Action Objectives.

10.6.2 COMPLIANCE WITH ARARs

Alternative 3 would comply with 40 CFR Part 761 upon approval by the U.S. EPA's Regional Administrator.

10.6.3 LONG-TERM EFFECTIVENESS AND PERMANENCE

Alternative 3 would be effective at reducing human exposure to PCBs in the soil. This would be accomplished through a combination of capping, grading improvements, deed restrictions, access controls, and periodic monitoring and maintenance to ensure the cap, vegetative cover, and perimeter fencing remain in good repair.

10.6.4 REDUCTION OF TOXICITY, MOBILITY, OR VOLUME

Alternative 3 would not reduce the toxicity or volume of contaminants through treatment. However, Alternative 3 would reduce the mobility of the contaminants by ensuring an adequate cover is established to minimize erosion and transport of soil by wind or water.

10.6.5 SHORT-TERM EFFECTIVENESS

Short-term impacts posed by this alternative would be caused by fugitive dust emissions during construction of the cap and installation of the fence. However, these emissions

would be minimized by implementation of appropriate dust control measures and decontamination procedures and establishment of proper work zones during construction activities. Construction workers would be protected through implementation of appropriate health and safety procedures.

10.6.6 IMPLEMENTABILITY

There are no concerns associated with implementation of this technology.

10.6.7 COST

The cap would be constructed over the area depicted on Figure 10.2. This area encompasses approximately 13 acres. The cost of Alternative 3 is summarized in Table 10.2. The present cost of Alternative 3 based on a 5 percent discount rate over a 30-year period is estimated to be $1,430,000. Similar to Alternative 2, much of the capital costs for this alternative result from the same improvements described previously, which are necessary to allow business operations to continue and/or to complete construction of the cap. Significant filling and regrading would be conducted to improve drainage in the Swale Area.

Similar to Alternative 2, this alternative ensures that the soil containing PCBs above chemical-specific criteria are properly managed. Therefore, this remedial alternative is fully protective of human health. However, Alternative 3 is more expensive than Alternative 2 but does not provide significantly more protection to human health or the environment because current human health and environmental risk is low.

11.0 COMPARATIVE ANALYSIS OF REMEDIAL ALTERNATIVES

The remedial alternatives were evaluated based on seven of the nine criteria set out in the RI/FS guidance. U.S. EPA and Community Acceptance criteria were not evaluated. Alternative 2 (partial cap/grading improvements) and Alternative 3 (capping) rated favorably in the following criteria:

1. overall protection of human health and the environment
2. compliance with ARARs
3. long-term effectiveness and permanence
4. reduction in the toxicity, mobility or volume of material
5. short-term effectiveness
6. implementability
7. cost

Alternative 1 (No Action) did not comply with the ARARs, did not ensure long-term effectiveness of the remedy, and did not reduce the toxicity, mobility, or volume of waste.

This section evaluates the remedial alternatives against each other relative to the criteria summarized above.

11.1 OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

Alternatives 2 and 3 rated favorably with respect to protection of human health and the environment. Alternatives 2 and 3 address PCB-containing soil through in-place encapsulation and use administrative controls that would also serve to notify future property owners of the presence of a PCB remediation area and the requirements to control access to the area and maintain and repair the cap or vegetative cover area, drainage controls, and fencing and signage.

Although the HHRA indicates no significant excess risk to human health with respect to exposure to PCB-containing soil at current occupancy levels, no administrative or access controls would be employed with Alternative 1 to ensure industrial/commercial land use is maintained or that PCB-containing soil would be properly managed in the future. As such, Alternative 1 is not protective of human health and the environment.

11.2 COMPLIANCE WITH ARARs

Alternatives 2 and 3 comply with the ARARs and accomplish this through engineering improvements and institutional controls. Alternative 1 does not comply with ARARs since impacted media would remain in place above regulatory levels and no measures would be employed to prevent access to the area.

11.3 LONG-TERM EFFECTIVENESS AND PERMANENCE

Alternatives 2 and 3 leave the PCB-containing soil in place but use engineering, administrative, and access controls to control human exposure and reduce mobility of PCBs. Inspection and maintenance would ensure these remedies remain effective.

Under Alternative 1, PCB-containing soil would remain in place with no controls to ensure occupancy remains at acceptable levels. Similarly, no access controls would be constructed to limit access to the area.

11.4 REDUCTION IN TOXICITY, MOBILITY, OR VOLUME OF MATERIAL

Alternatives 2 and 3 would result in a reduction in mobility of PCBs through use of a vegetative cover and/or capping to reduce surface exposure, the volume of infiltration through PCB-containing soils, fugitive emissions, and transport of impacted soil through wind and water erosion.

No reduction in the toxicity, mobility, or volume of PCB-containing soil would occur under Alternative 1.

11.5 SHORT-TERM EFFECTIVENESS

None of the alternatives represents a significant risk to the public or workers. Alternative 1 provides the least short-term risk to workers and the public. Due to the construction requirements, Alternatives 2 and 3 pose some short-term risk to site workers due to potential exposure to PCBs but the limited short-term risks that exist for these alternatives could be effectively managed through implementation of health and safety programs.

11.6 IMPLEMENTABILITY

There are no serious concerns regarding the implementability of any of the three alternatives. Alternative 1 is the easiest to implement, followed by Alternatives 2 and 3.

11.7 COST

A summary of the Remedial Action Alternatives in reverse order of cost (most expensive to least expensive) is provided below:

Remedial Alternative Description		*Present Worth Cost*
Alternative 3:	Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,430,000
Alternative 2:	Partial Capping, Grading Improvements, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,270,000
Alternative 1:	No Action	$0

Alternatives 2 and 3 provide nearly equivalent levels of protection to human health and the environment. Alternative 2 accomplishes this protection at the lowest cost. Alternative 1 is the lowest cost alternative but does not meet the Remedial Action Alternatives and would not be protective of human health and the environment.

Alternative 2 is the preferred remedial alternative because it provides a similar level of protectiveness to human health and environment at a lower cost than Alternative 3.

12.0 SUMMARY AND CONCLUSIONS

12.1 SOIL AND GROUNDWATER INVESTIGATIONS

Caterpillar operates a gray iron foundry at its Mapleton, Illinois facility that manufactures engine blocks, cylinder heads, liners, and camshafts used in Caterpillar equipment and for sale to other companies. In 1998, Caterpillar initiated a soil investigation in a small portion of the Swale Area where drums containing hazardous wastes were formerly stored in a RCRA Drum Storage Area. During the course of this investigation, PCBs were detected in soil samples although these compounds were not among the chemicals stored in this area. The subsequent soil investigations completed by Caterpillar identified the presence of PCBs in soil within and adjacent to the former RCRA Drum Storage Area. Caterpillar retained CRA to implement a soil and groundwater investigation within and proximal to the area where PCB-containing soil was identified during Caterpillar's investigations.

The two areas investigated include the West Swale Area and the East Swale. Both Swale Areas comprise an area of approximately 13 acres and are bounded to the south and east by the TP&W rail easement, to the west by the road to the pump houses, and to the north by engineered fill and Building B. The investigations were completed, and this report was prepared to obtain approval from the Regional Administrator for a risk-based closure pursuant to 40 CFR Part 761.61(c) (Rule). Investigative activities completed to date were successful in delineating the nature and extent of PCB impacts in the soil Swale Area. In addition to successfully delineating PCB impacts, a thorough understanding of the geology and hydrogeology was obtained during the investigations documented by this report.

Significant findings of the soil and groundwater investigations are provided below.

LAND USE

- Land use south of Highway 24/9, a four lane divided highway, is primarily industrial. The plant property abuts industrial property to the east, and industrial land use extends approximately 2 miles to the east, upstream along the Illinois River.
- North of Highway 24/9, land use is primarily agricultural. The Village of Mapleton, Illinois (population approximately 200) lies across Highways 24/9 from the eastern portion of the plant property. Much of the land immediately north of the plant property is wooded, especially in the deeply incised drainage valleys.
- South of the Illinois River, land use is primarily agricultural.

- Southwest of the plant property and on the opposite side of the Illinois River lies Powerton Lake, a large cooling water reservoir serving the Powerton electrical generating plant which is located southeast of the plant property.
- There are no major population centers within a 3-mile radius of the plant property.

GEOLOGY

- Information on plant property geology compiled during this investigation is supplemented by numerous soil borings advanced during previous investigations.
- Geology beneath the plant property consists of alternating layers of unconsolidated alluvial deposits underlain by shale bedrock of the Pennsylvanian System.
- Unconsolidated alluvial deposits thicken at the plant property as the Illinois River is approached. Near the Illinois River, alternating layers of sand and clay beds are present.
- Beneath the study area, bedrock elevations increase and the top of the bedrock approaches the surface. Clay sand layers pinch out with distance from the Illinois River, and clay soil overlies bedrock.

HYDROGEOLOGY

- Groundwater was encountered within the engineered fill, the underlying native silty clay, and the foundry sand fill in the Swale Area.
- Groundwater investigations and regular monitoring activities conducted in the vicinity of the 817 landfill demonstrate groundwater flow in the alluvial deposits to be consistently southerly, towards the Illinois River.
- Hydraulic conductivity values vary widely based upon the composition of the formations. Sand and gravel deposits exhibit hydraulic conductivity values in the 10^{-2} to 10^{-4} cm/s range, while silt and clay units exhibited hydraulic conductivity values in the 10^{-7} to 10^{-9} cm/s range.
- Groundwater elevation data indicates the presence of a groundwater high (mound) within the Swale Area, suggesting a radial groundwater flow outward from the Swale Area.
- The radial groundwater flow pattern suggests that groundwater flow in the Swale Area is driven by precipitation rather than local or regional gradient effects.
- The magnitude of the groundwater mounding would vary depending upon the amount of precipitation. Most likely, the groundwater mounding effect in the Swale Area is more pronounced during periods of heavier precipitation when groundwater infiltration would be greater.

SOIL ANALYTICAL DATA

Caterpillar Soil Data

- 107 individual soil samples were collected by Caterpillar and submitted for PCB analysis.
- PCBs were detected in 49 of the 53 soil borings and in 106 of the 107 samples analyzed. PCB concentrations ranged from non-detect to a maximum of 340 mg/kg.
- The most elevated PCB detections were noted in the soil samples collected from the foundry sand layer.

Swale Area Soil Analytical Data

- Thirty-six soil borings (B-1 through B-21, B-26, and B-53 through B-66) were advanced in the Swale Area and 145 soil samples were submitted for PCB analyses.
- Total PCB concentrations in the Swale Area ranged from non-detect at many locations/intervals to a maximum of 1,200 mg/kg in the soil sample collected from the 6- to 7-foot interval at soil boring B-56.

Groundwater Analytical Data

- Three groundwater monitoring wells were installed in the Swale Area, and groundwater samples were collected for PCB analysis.
- PCBs were not detected in the groundwater samples collected from the three monitoring wells located within the Swale Area.

12.2 HUMAN HEALTH RISK ASSESSMENT

A HHRA was completed for the two areas that were the focus of this report. The WSA and ESA are the western and eastern portions of the Swale Area, respectively. The HHRA was prepared in accordance with the NCP and applicable U.S. EPA guidance.

The HHRA utilized analytical data generated from investigations including Caterpillar's initial investigation of the former Drum Storage Area and the Swale Area investigation completed by CRA. The data were used to evaluate the potential current and future impact, if any, to human health based on exposure to PCBs identified in the study area. Since the ESA meets the definition of a low occupancy area pursuant to 40 CFR

Part 761.61 of the federal regulations, the exposure levels defined therein were used to calculate potential risk. The WSA was assessed using industrial/commercial exposure assumptions documented in the applicable guidance.

The following significant conclusions were drawn from the HHRA.

West Swale Area (WSA):

1. The HI did not exceed the level of potential concern.
2. The lifetime excess cancer risks were below to within U.S. EPA's acceptable risk range of 1.0E-06 to 1.0E-04 for the CT and RME for the trespasser, industrial worker, and construction worker exposure scenarios.

East Swale Area (ESA):

1. The HI did not exceed the level of potential concern.
2. The lifetime excess cancer risks were below to within U.S. EPA's acceptable risk range of 1.0E-06 to 1.0E-04 for the CT and RME for the trespasser, industrial worker, and construction worker exposure scenarios.

The HHRA demonstrated that there were no excess cancer risks or hazards associated with the presence of PCBs in the Swale Area based upon current occupancy levels. As such, at a minimum, administrative controls are warranted to ensure that current occupancy levels are maintained.

12.3 ECOLOGICAL RISK EVALUATION

A screening level Ecological Risk Evaluation was completed for the Swale Area. This evaluation focused on the potential risk or threat to ecological receptors. The results of this evaluation indicated that the exposure pathways from PCBs in the Swale Area are functionally incomplete for ecological receptors. As such, the current conditions along with remedies contemplated for the Swale Area will ensure that these pathways for ecological exposure remain incomplete.

12.4 FEASIBILITY STUDY

12.4.1 REMEDIAL ACTION OBJECTIVES

Remedial action objectives were established for the Swale Area to protect human health and the environment.

REMEDIAL ACTION OBJECTIVES FOR THE SWALE AREA

EAST SWALE AREA (ESA)

The remedial action objectives for the identified for the ESA include the following:

1. minimize direct contact to PCBs in soil at concentrations above 25 mg/kg
2. minimize inhalation of soil containing PCBs at concentrations above 25 mg/kg
3. ensure occupancy levels remain at or below the low occupancy level specified at 40 Code of Federal Regulations (CFR) Part 761
4. reduce surface water infiltration through grading and drainage controls

WEST SWALE AREA (WSA)

The remedial action objectives for the identified for the WSA include the following:

1. minimize direct contact to PCBs in soil at concentrations above 10 mg/kg
2. minimize inhalation of soil containing PCBs at concentrations above 10 mg/kg
3. control worker access to open land east and immediately south of Building R
4. reduce surface water infiltration through grading and drainage controls

PCBs were not detected in groundwater in the Swale Area. Therefore, no remedial action objectives are necessary for groundwater.

12.4.2 IDENTIFICATION AND SCREENING OF REMEDIAL TECHNOLOGIES

A number of remedial technologies focused in soils in the Swale Area were screened for short- and long-term effectiveness, implementability, and cost, and the result of this screening is summarized as follows.

Remedial Technology	*Retained?*
No Action	Yes
Monitoring	Yes
Deed Restrictions	Yes
Restrictive Ordinances	No
Access Controls	Yes
Capping	Yes
Off-Site Landfilling	No
Incineration	No
Solvent Extraction/Soil Washing	No
On-Site Stabilization	No

The retained technologies were evaluated in detail and used to develop Remedial Action Alternatives that met the established Remedial Action Objectives.

12.4.3 EVALUATION OF REMEDIAL ACTION ALTERNATIVES

A number of remedial technologies applicable to PCB-containing soil were identified and screened. The following Remedial Action Alternatives were developed for PCB-containing soil using the retained remedial technologies and were evaluated in detail.

Potential remedial alternatives for the Swale Area include the following:

- Alternative 1 - No Action
- Alternative 2 - Partial Capping, Vegetative Cover, Deed Restrictions, Access Controls, and Inspection and Maintenance
- Alternative 3 - Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance

Each of the above-noted alternatives, except Alternative 1 (No Action), would include upgrading and maintaining the fencing surrounding the Swale Area and minor

improvements to the existing drainage swale to prevent soil erosion. Deed restrictions and access controls would be established to ensure this Swale Area remains a low occupancy area as defined by 40 CFR Part 761.61.

The remedial alternatives were evaluated based on seven of the nine criteria setout in the RI/FS guidance except that Agency and Community Acceptance criteria were not evaluated. Alternatives 2 and 3 rated favorably in the following criteria:

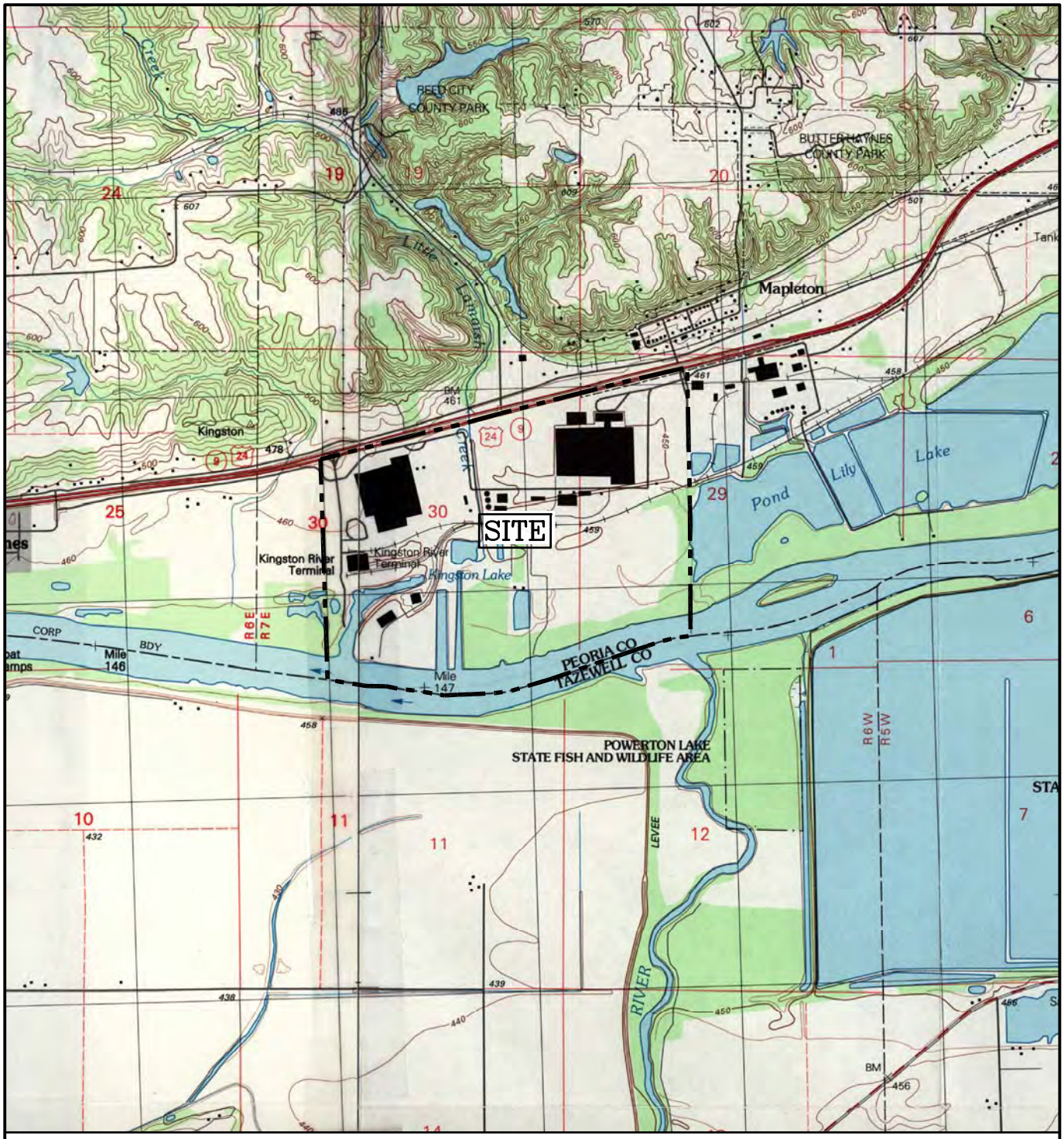
1. overall protection of human health and the environment
2. compliance with ARARs
3. long-term effectiveness and permanence
4. reduction in the toxicity, mobility or volume of material
5. short-term effectiveness
6. implementability
7. cost

A summary of the Remedial Action Alternatives in reverse order of cost (most expensive to least expensive) is provided below:

Remedial Alternative Description		***Present Worth Cost***
Alternative 3:	Capping, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,430,000
Alternative 2:	Partial Capping, Grading Improvements, Deed Restrictions, Access Controls, and Inspection and Maintenance	$1,270,000
Alternative 1:	No Action	$0

Alternatives 2 and 3 provide nearly equivalent levels of protection to human health and the environment. Alternative 2 accomplishes this protection at the lowest cost. Alternative 1 is the lowest cost alternative but does not meet the Remedial Action Alternatives and would not be protective of human health and the environment.

Alternative 2 is the preferred remedial alternative because it provides a similar level of protectiveness to human health and environment at a lower cost than Alternative 3.



BASE SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE; GLASFORD AND PEKIN, IL 1996

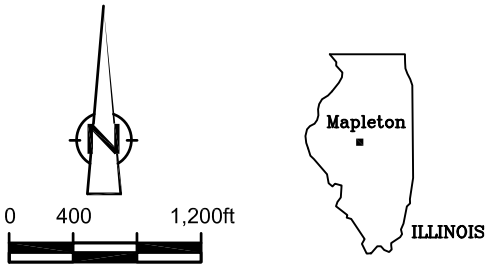


figure 1.1

PLANT LOCATION
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO001 MAY 03/2010

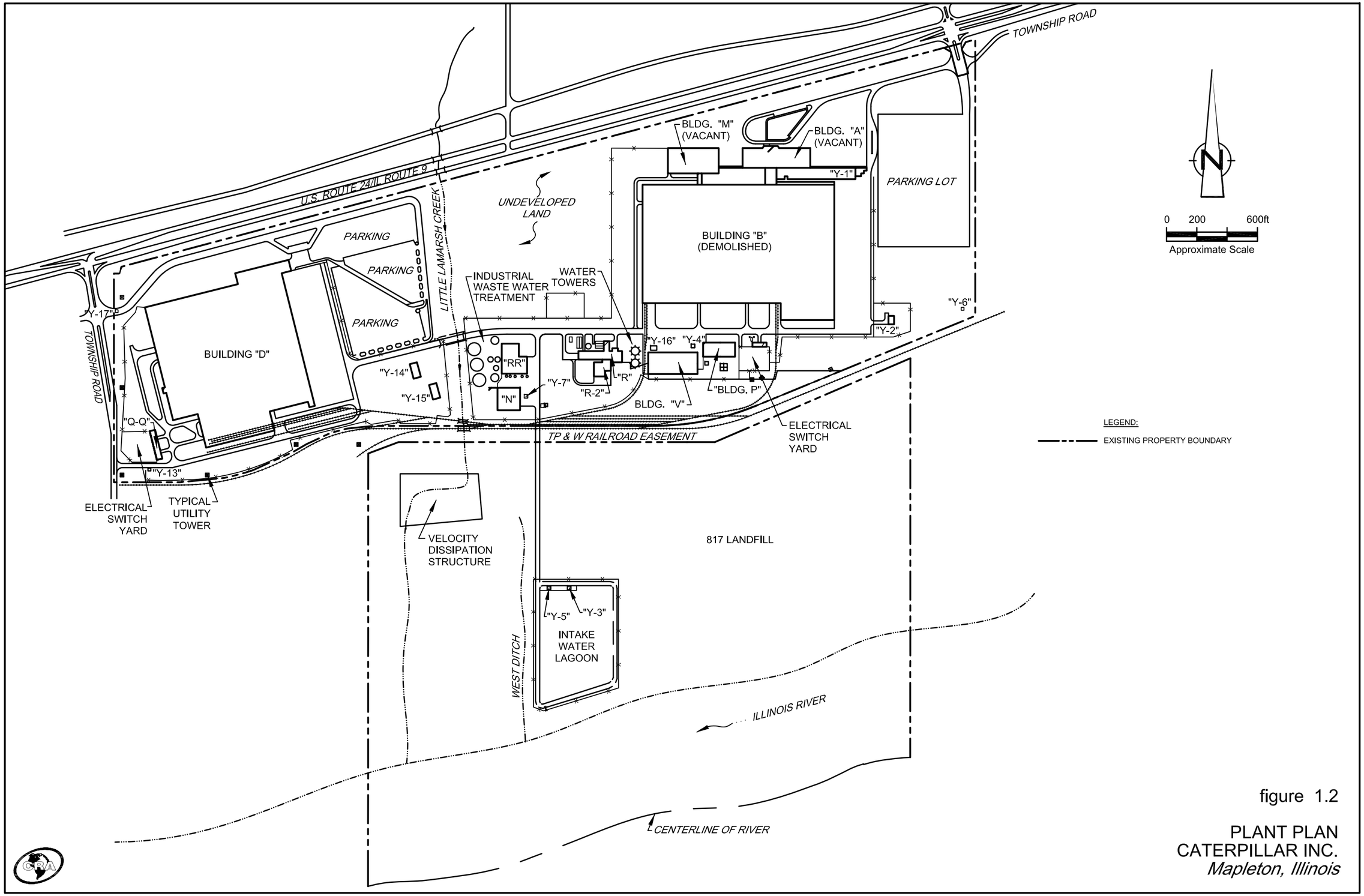


figure 1.2

PLANT PLAN
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO002 MAY 04/2010

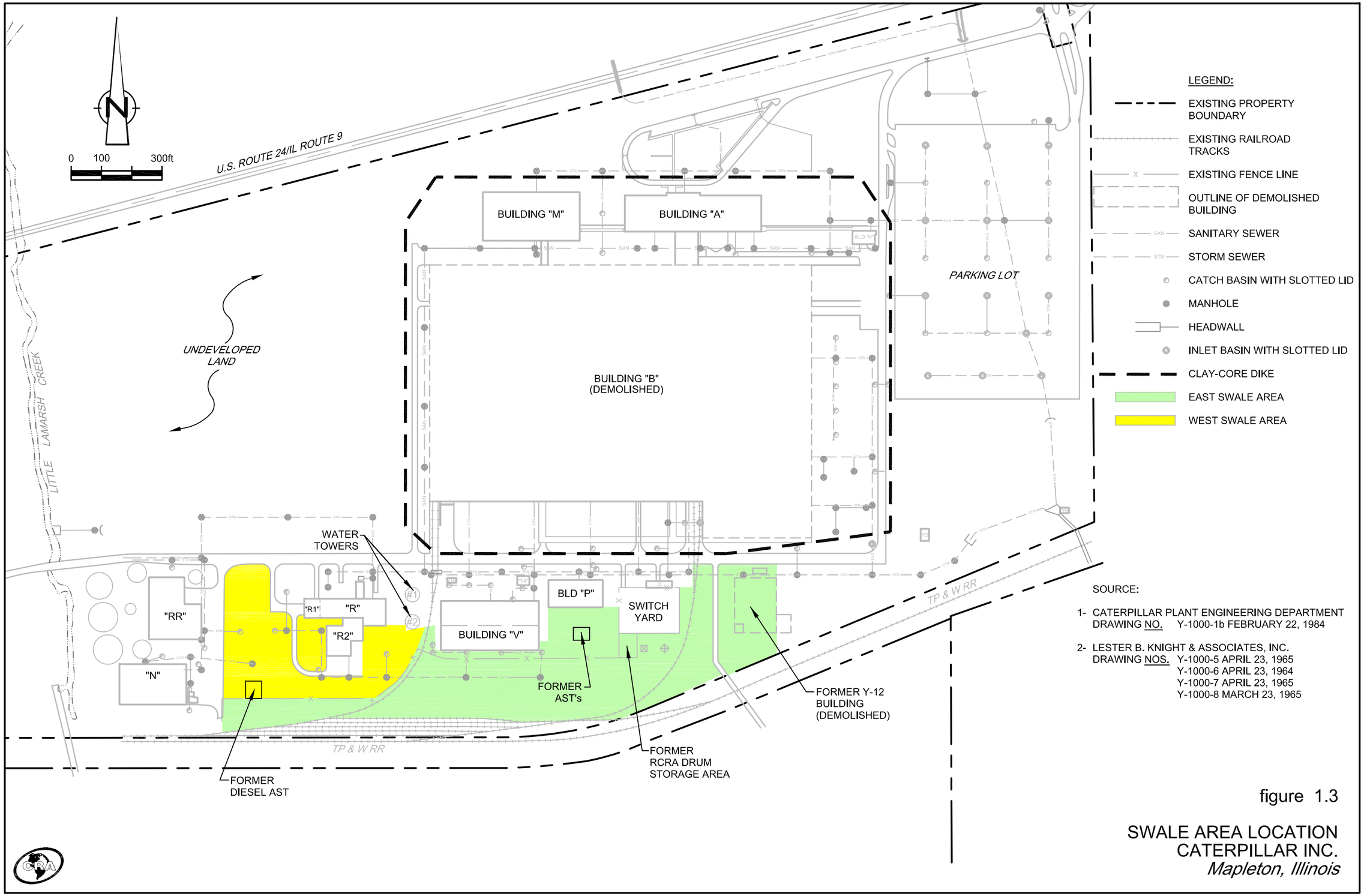
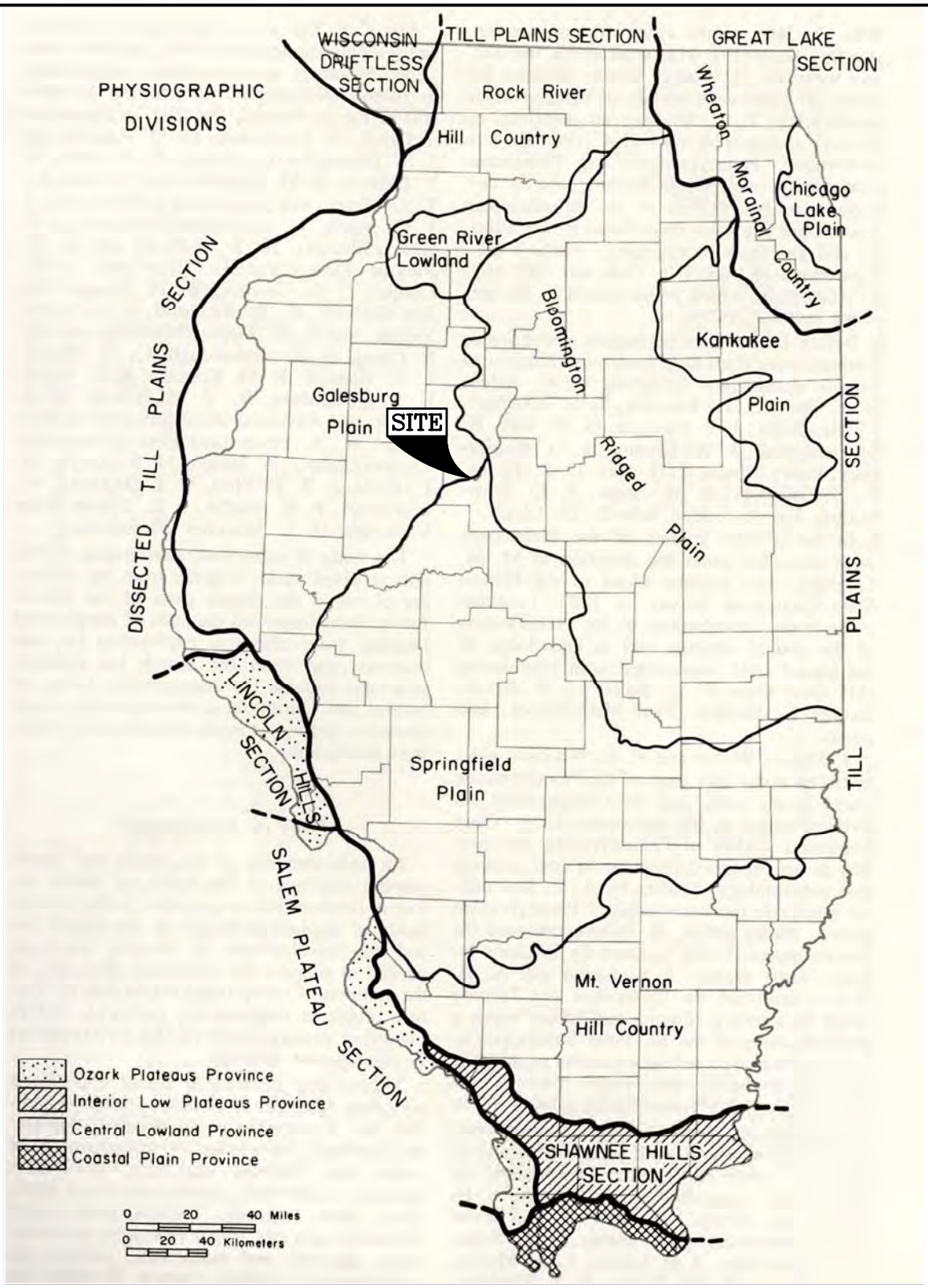


figure 1.3

SWALE AREA LOCATION
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO003 MAY 04/2010



SOURCE: ILLINOIS STATE GEOLOGICAL SURVEY DEPARTMENT OF REGISTRATION AND EDUCATION BULLETIN 95, 1975

figure 2.1

PHYSIOGRAPHIC DIVISIONS OF ILLINOIS
CATERPILLAR INC.
Mapleton, Illinois

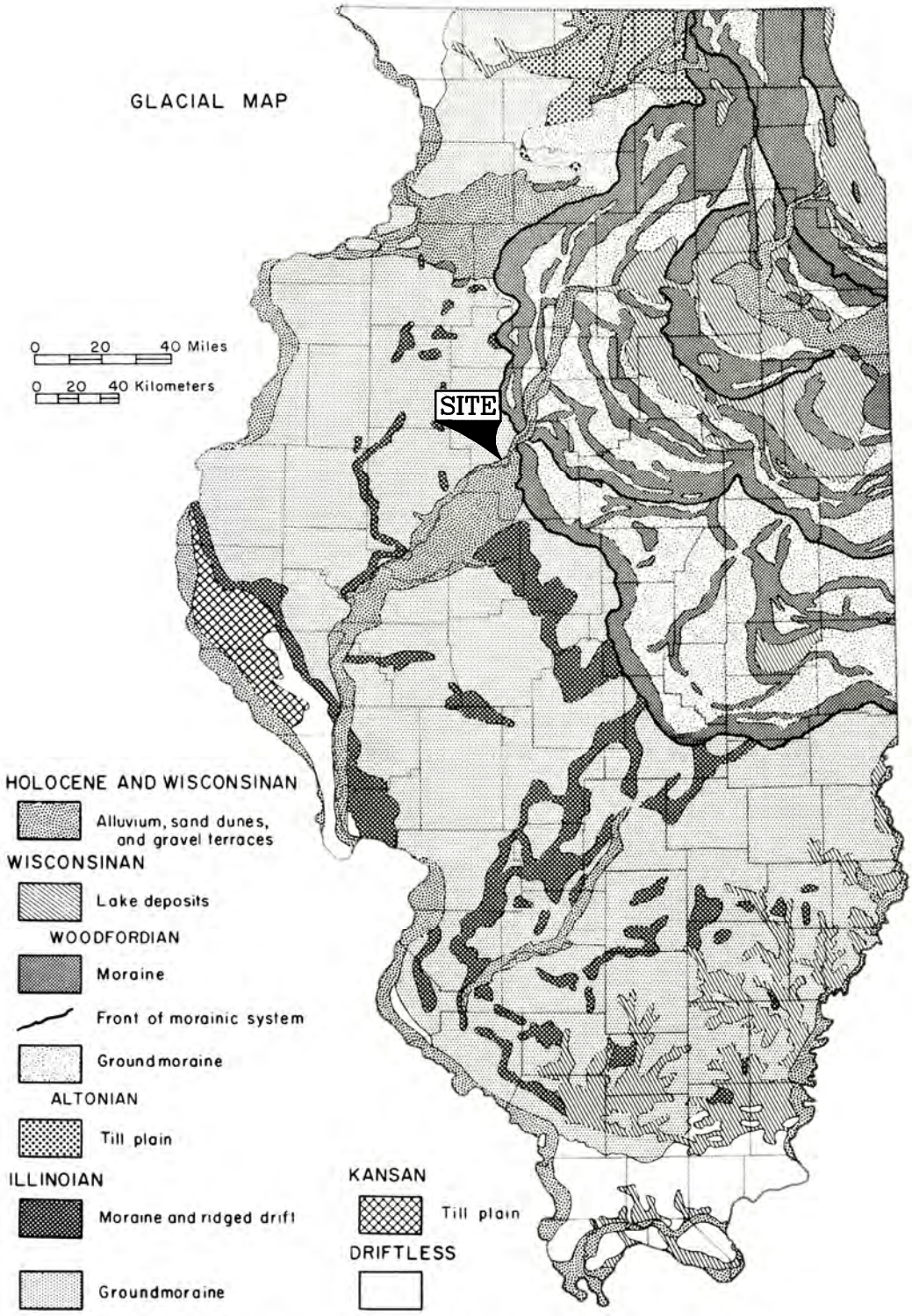
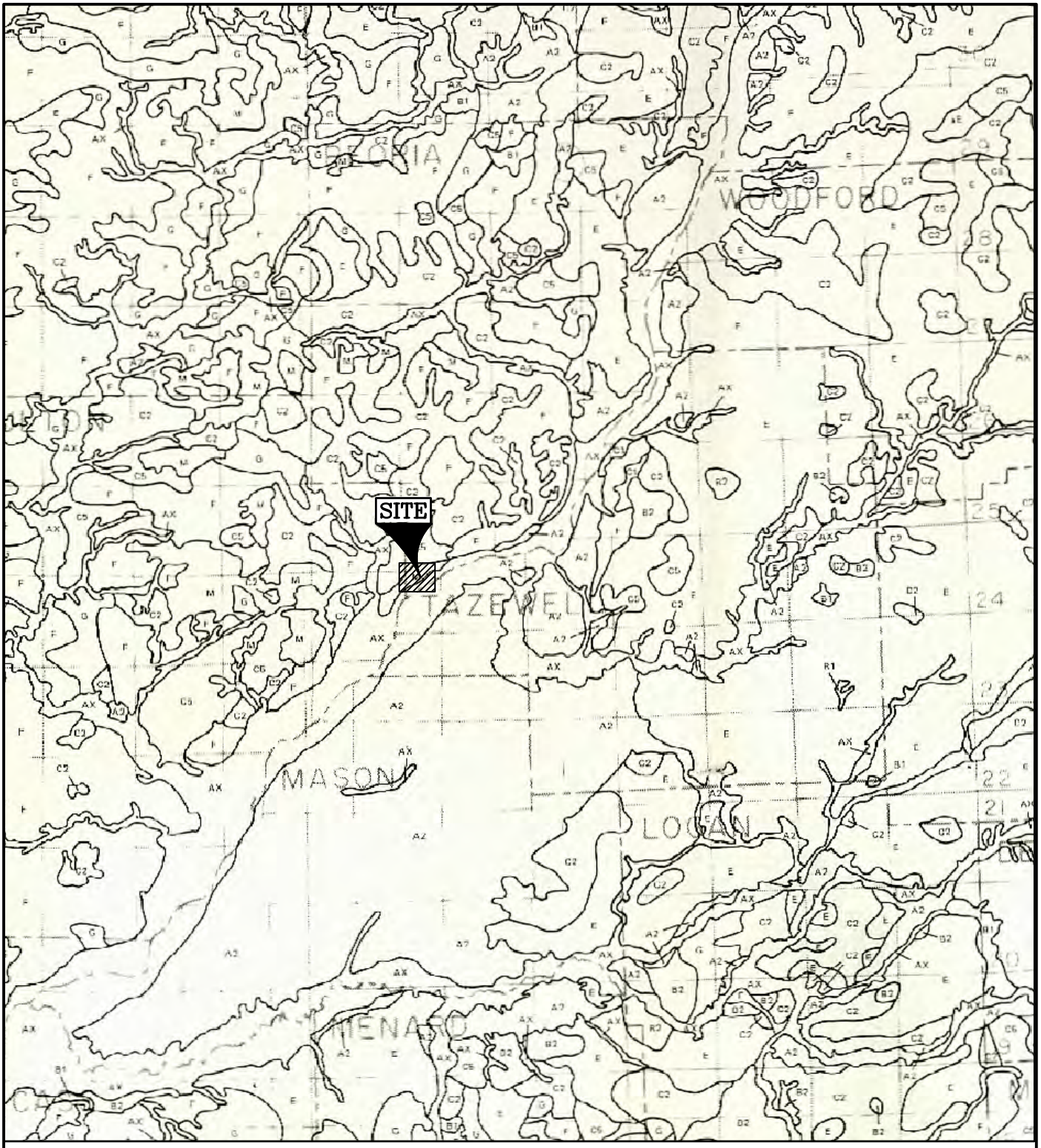
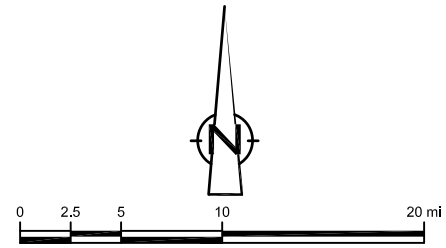


Fig. Q-2—Glacial map of Illinois (after Willman and Frye, 1970).

figure 2.2

GLACIAL MAP OF ILLINOIS
AFTER WILLMAN AND FRYE, 1970
CATERPILLAR INC.
Mapleton, Illinois



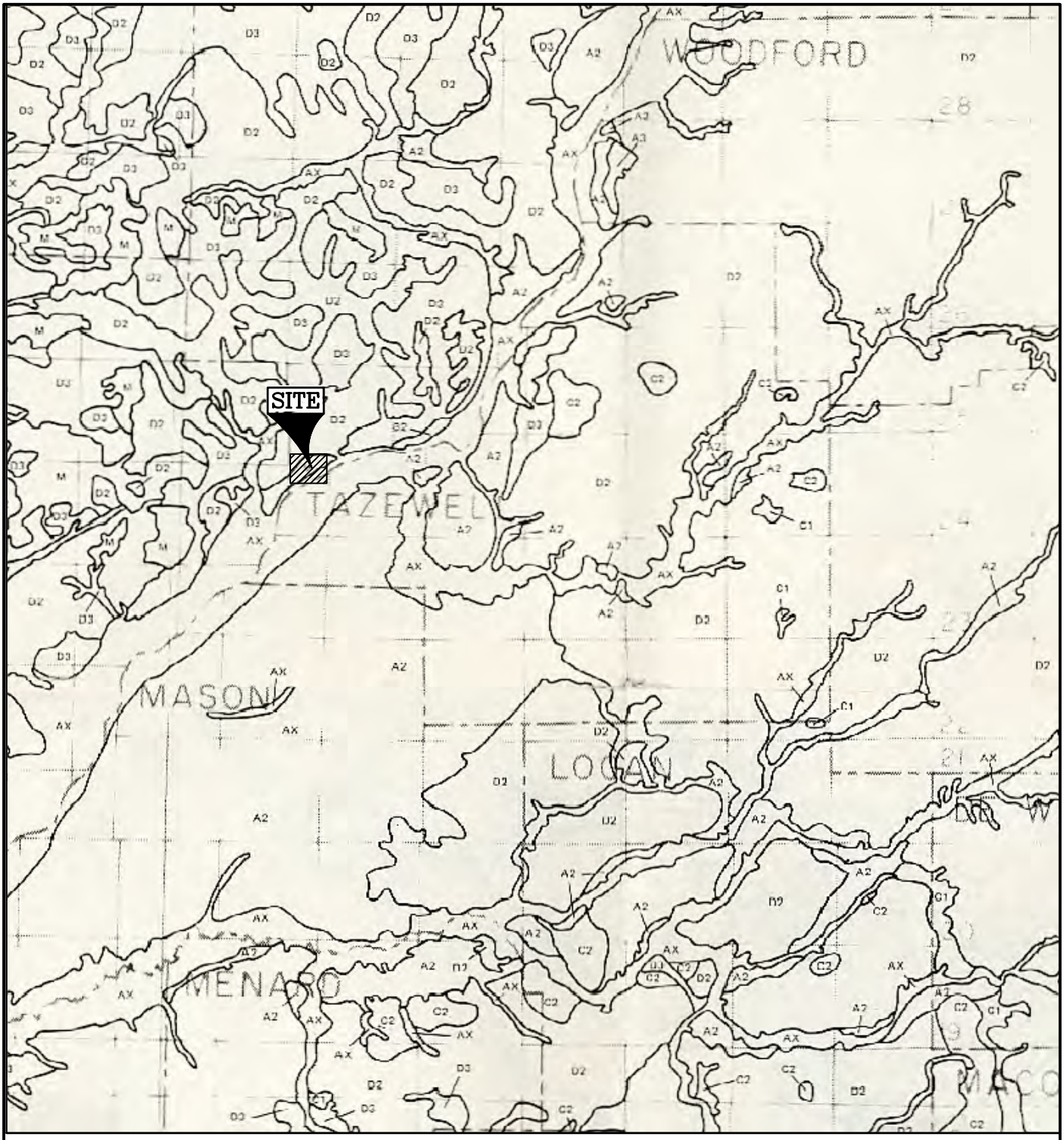


BASE SOURCE: RICHARD C. BERG 1984
JOHN P. KEMPTON
ROBERT C. VAIDEN
AMY N. STECYK

figure 2.3A

BERG CIRCULAR MAP
PLATE 1
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO006 MAY 04/2010



BASE SOURCE: RICHARD C. BERG 1984
JOHN P. KEMPTON
ROBERT C. VAIDEN
AMY N. STECYK

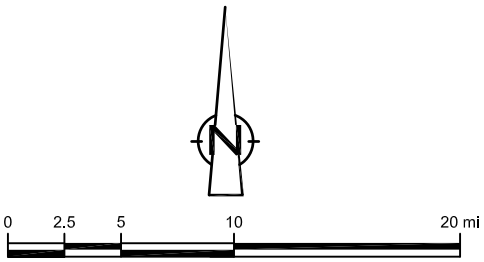


figure 2.3B

BERG CIRCULAR MAP
PLATE 2
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO007 MAY 04/2010

Description of Geologic Materials

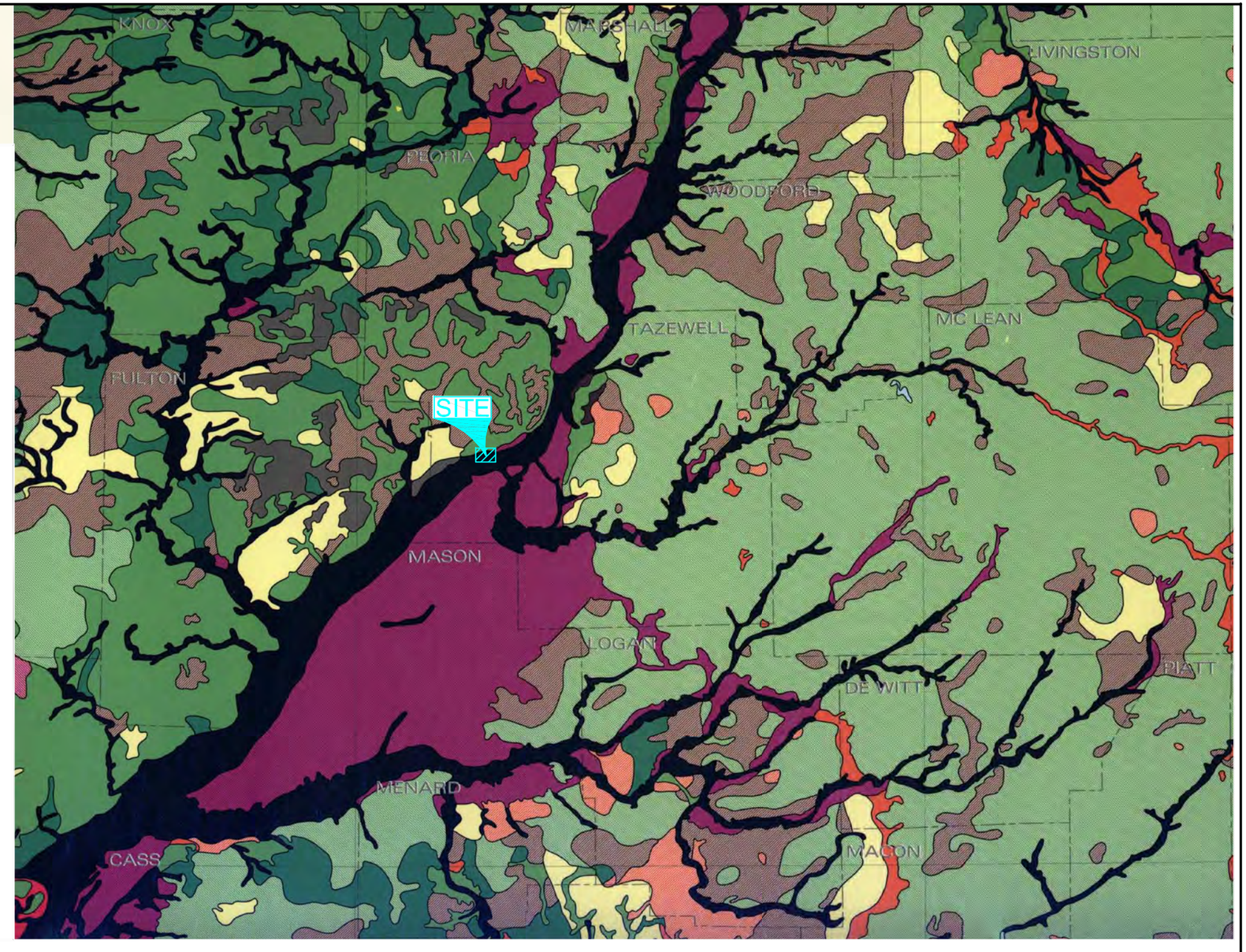
Ratings of the capacities of earth materials to accept, transmit, restrict, or remove contaminants from waste effluents

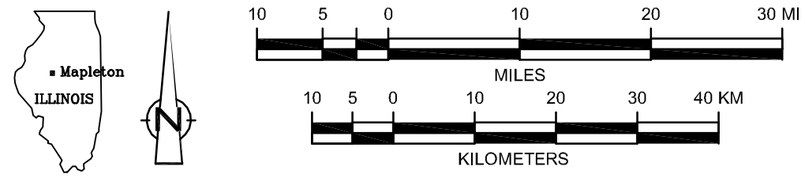
Potential for aquifer contamination increasing

Man made land or surface mines

Lake

Unit	ft.	Description
A1	20 / 50	Permeable bedrock at or within 20 ft of land surface, variable overlying materials.
A2	20 / 50	Thick, permeable sand and gravel within 20 ft of land surface.
A3	20 / 50	Permeable bedrock generally within 20 ft of land surface; where deeper, sand and gravel may be present.
A4	20 / 50	Cemented sandstone within 20 ft of land surface; variable, relatively impermeable overlying materials.
A5	20 / 50	Permeable bedrock generally within 20 ft of land surface; overlying materials variable but mostly till.
AX	20 / 50	Alluvium, a mixture of gravel, sand, silt, and clay along streams, variable in composition and thickness.
B1	20 / 50	Sand and gravel less than 20 ft thick over relatively impermeable till or bedrock.
B2	20 / 50	Sand and gravel, within 20 ft of surface, overlain and underlain by relatively impermeable till, other fine-grained material, and/or bedrock.
BX		Map complex of permeable bedrock on ridges, underlain primarily by shale on slopes and in valleys.
C1	20 / 50	Permeable bedrock within 20 to 50 ft of surface, overlain by till or other fine-grained material.
C2	20 / 50	Sand and gravel within 20 to 50 ft of surface, overlain and underlain by relatively impermeable till, other fine-grained material, and/or bedrock.
C3	20 / 50	Permeable bedrock, mostly within 20 to 50 ft of surface, overlain by till or other fine-grained materials; bedrock surface below 50 ft in places.
C4	20 / 50	Cemented sandstone, within 20 to 50 ft of surface, overlain by relatively impermeable till or other fine-grained materials.
C5	20 / 50	Fine-grained materials with discontinuous sand and gravel locally present within 50 ft of land surface.
D	20 / 50	Uniform, relatively impermeable sandy till at least 50 ft thick; no evidence of interbedded sand and gravel.
E	20 / 50	Uniform, relatively impermeable silty or clayey till at least 50 ft thick; no evidence of interbedded sand and gravel.
F	20 / 50	Relatively impermeable bedrock within 20 ft of surface, mostly overlain by till or other fine-grained materials.
G	20 / 50	Relatively impermeable bedrock within 20 to 50 ft of surface, overlain by till or other fine-grained materials.





SOURCE:
ILLINOIS DEPARTMENT OF ENERGY AND NATURAL RESOURCES
ILLINOIS STATE GEOLOGICAL SURVEY

figure 2.4

STACK-UNIT MAP
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO008 MAY 04/2010

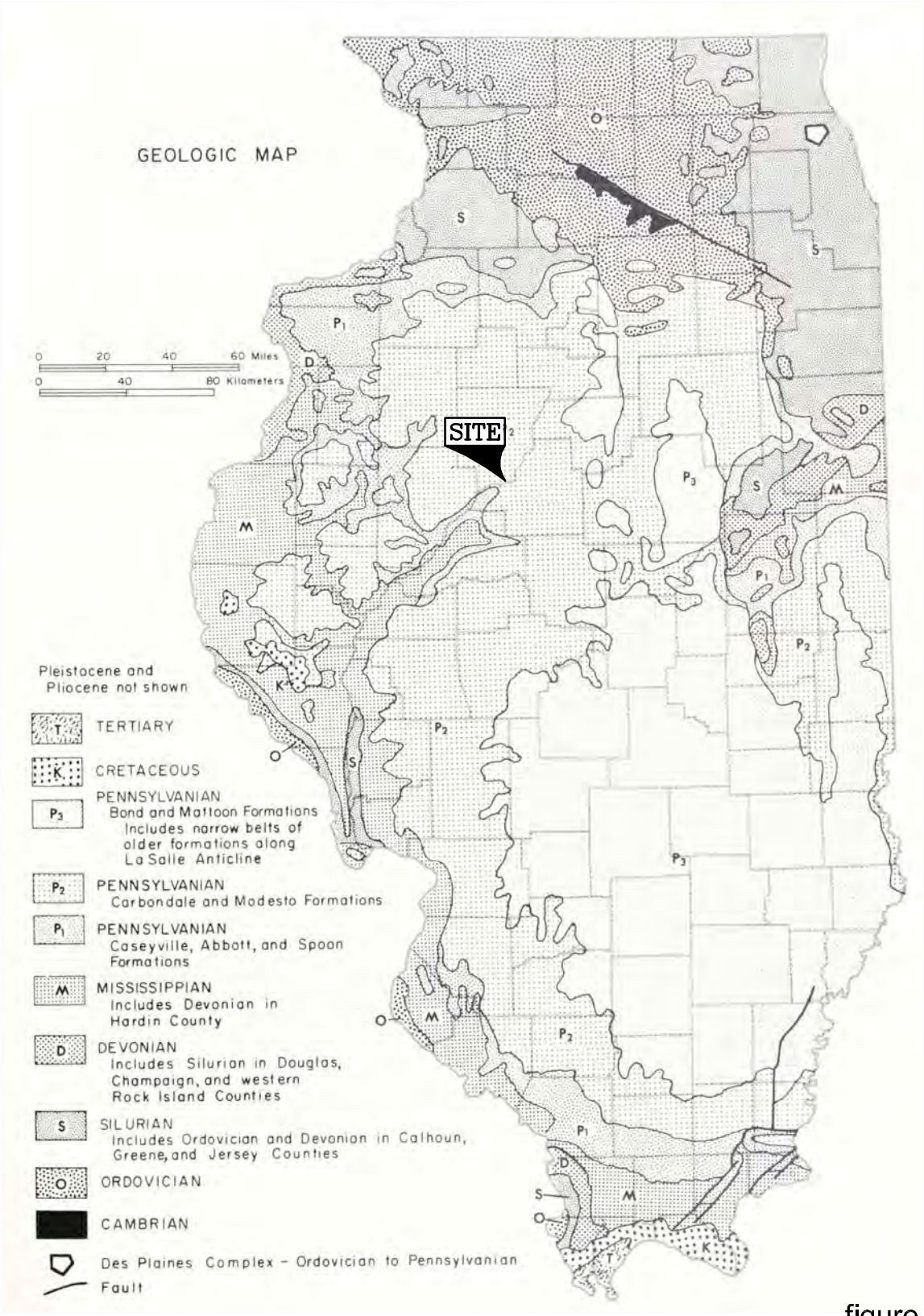


figure 2.5

GENERALIZED AREAL GEOLOGY OF THE BEDROCK SURFACE
WILLMAN AND FRYE, 1970
CATERPILLAR INC.
Mapleton, Illinois

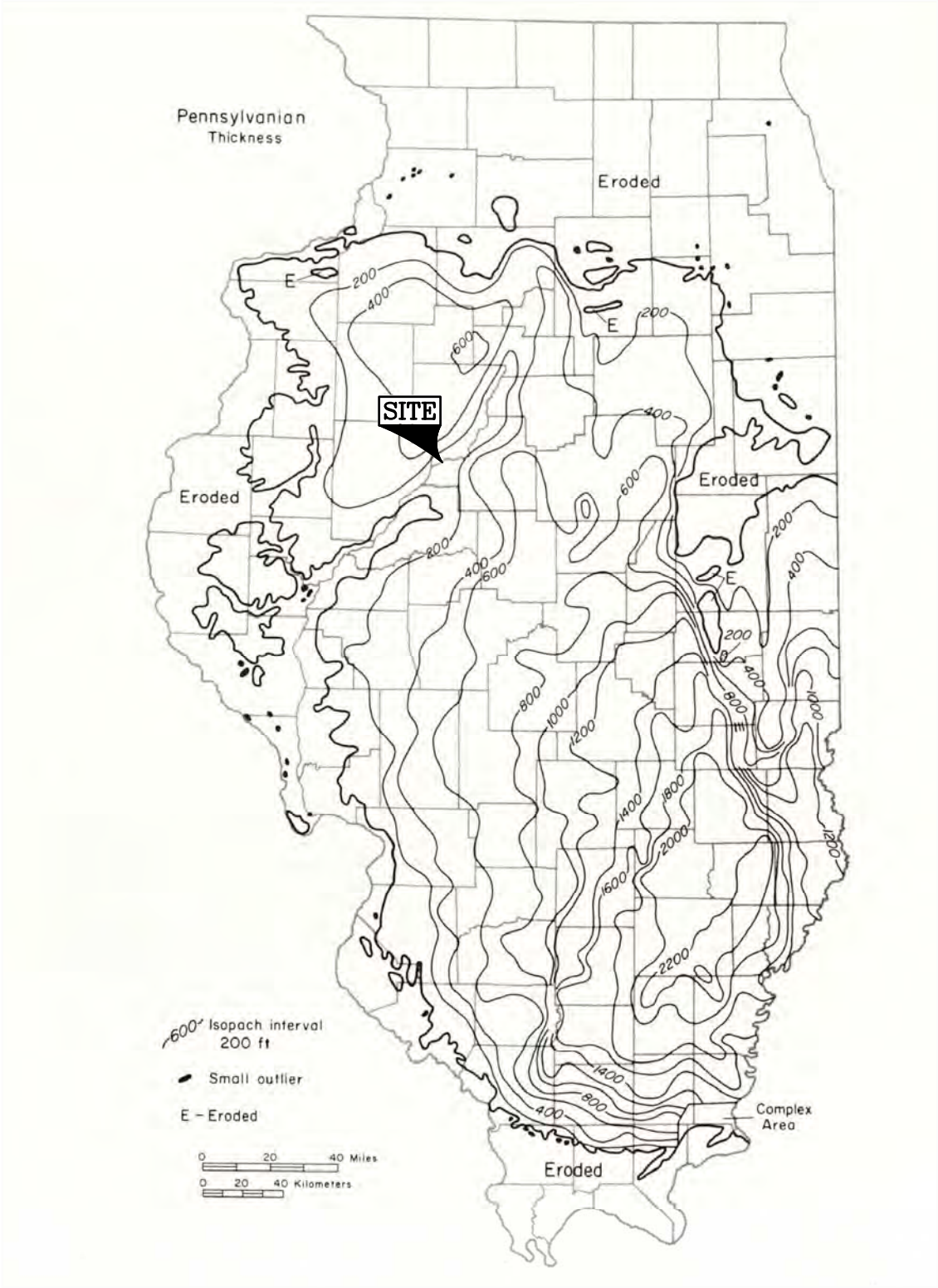


figure 2.6

THICKNESS OF THE PENNSYLVANIAN SYSTEM
CATERPILLAR INC.
Mapleton, Illinois

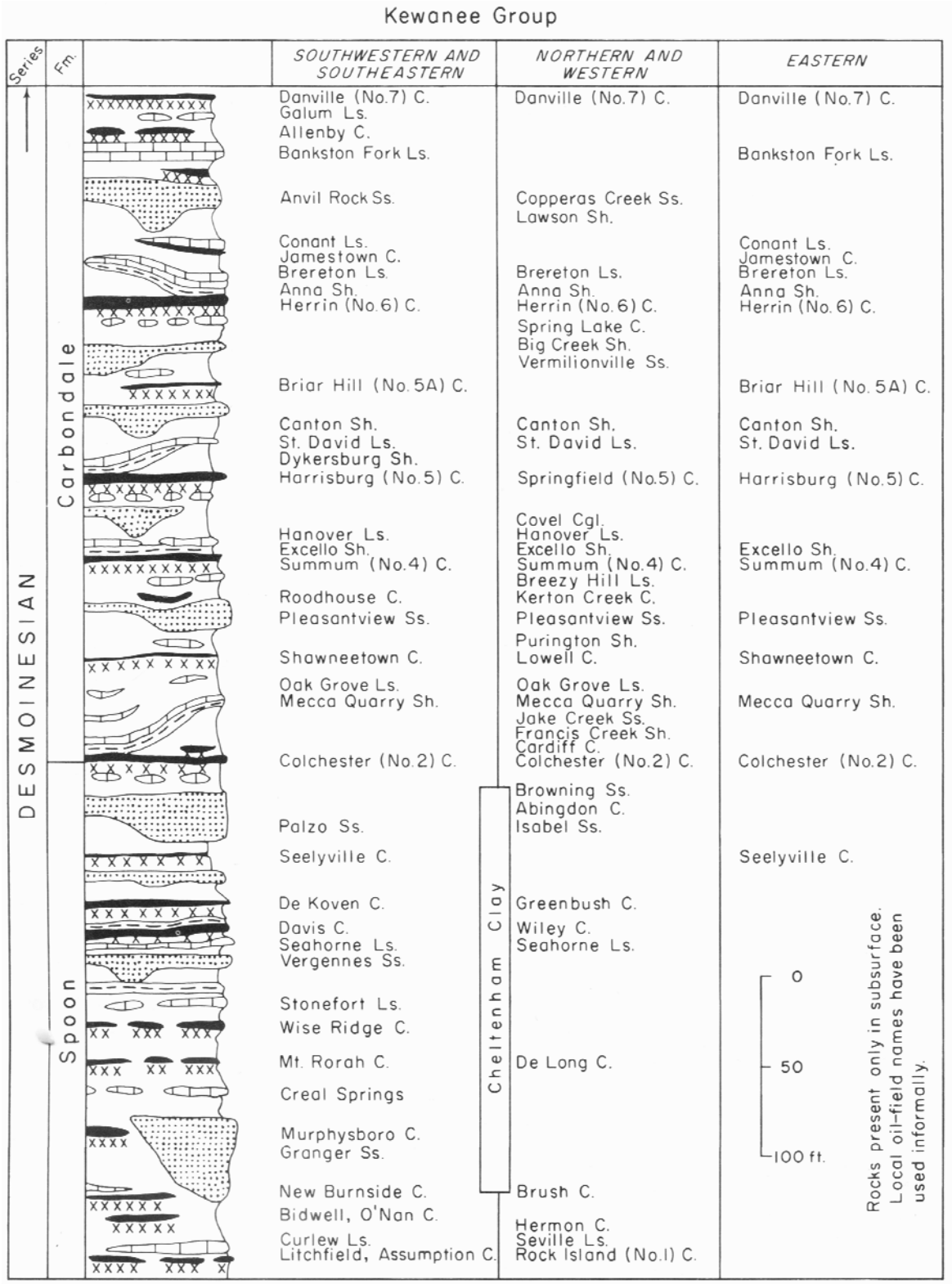


figure 2.7A

KEWANEE GROUP
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO011 MAY 04/2010

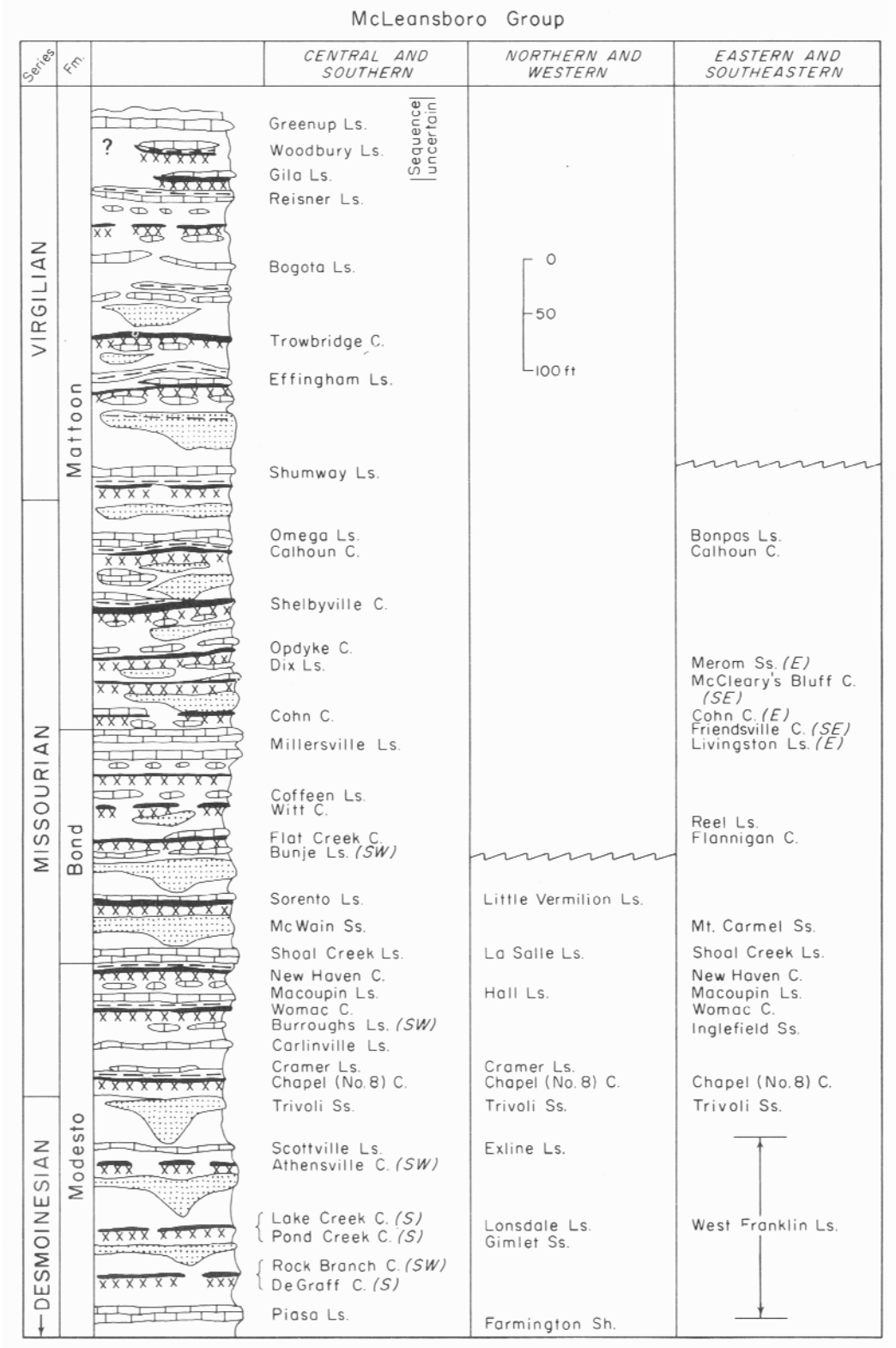


figure 2.7B

McLEANSBORO GROUP
CATERPILLAR INC.
Mapleton, Illinois

Nº	Revision	Date	Initial

0 100 200ft

LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- EXISTING EASEMENT LIMIT
- SANITARY SEWER
- STORM SEWER
- CATCH BASIN WITH SLOTTED LID
- MANHOLE
- HEADWALL
- INLET BASIN WITH SLOTTED LID
- CLAY-CORE DIKE
- AH66-138 HISTORICAL SOIL BORING LOCATION AND IDENTIFIER

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved

DRAWING STATUS

Status	Date	Initial

CATERPILLAR INC.
MAPLETON, ILLINOIS

13307-00

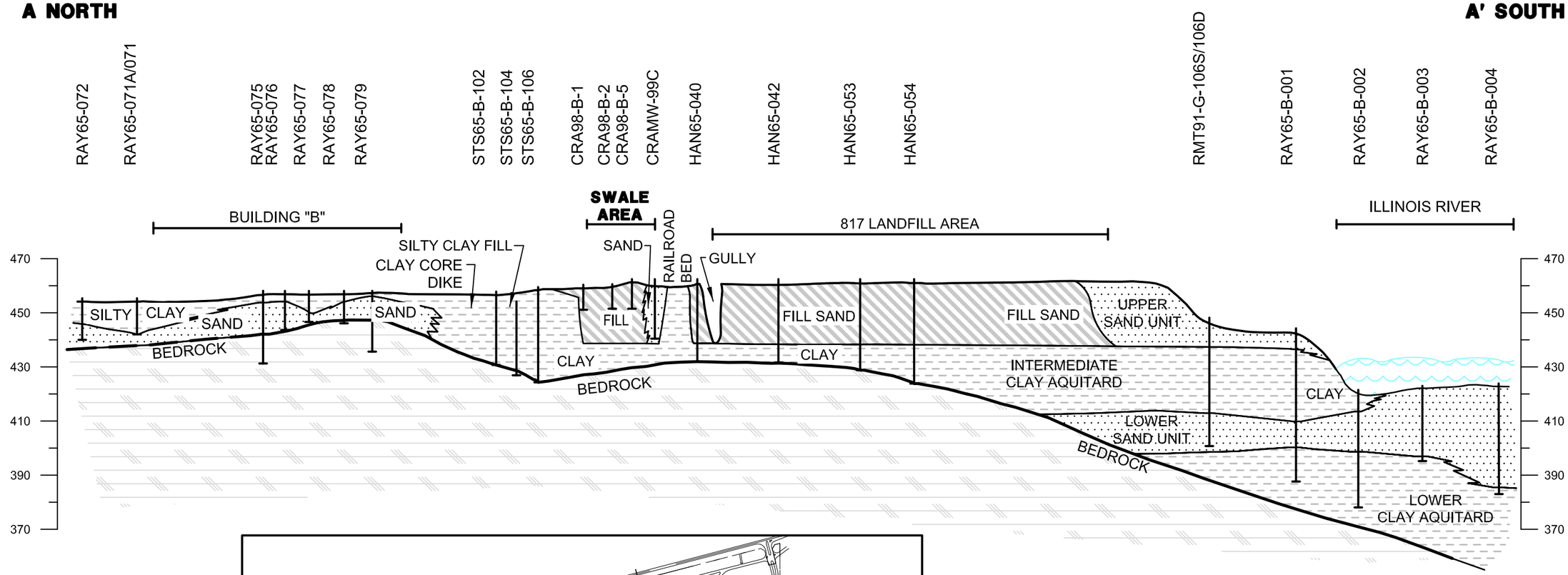
PLANT PROPERTY
HISTORIC SOIL BORING LOCATIONS
1964-1965

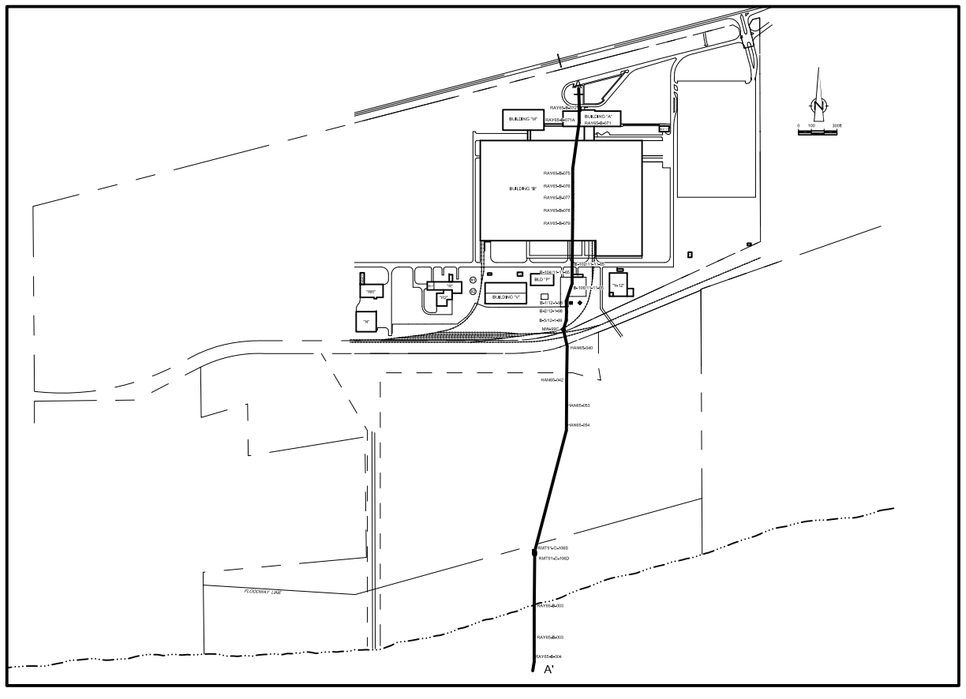
CONESTOGA-ROVERS & ASSOCIATES

Source Reference: SEE ABOVE

Project Manager:	Reviewed By:	Date:	
S. WANNER		AUGUST 24, 1999	
Scale: AS SHOWN	Project Nº: 13307-00	Report Nº: 004	Drawing Nº: fig. 2.8

13307-00(004)GN-CO013 MAY 04/2010





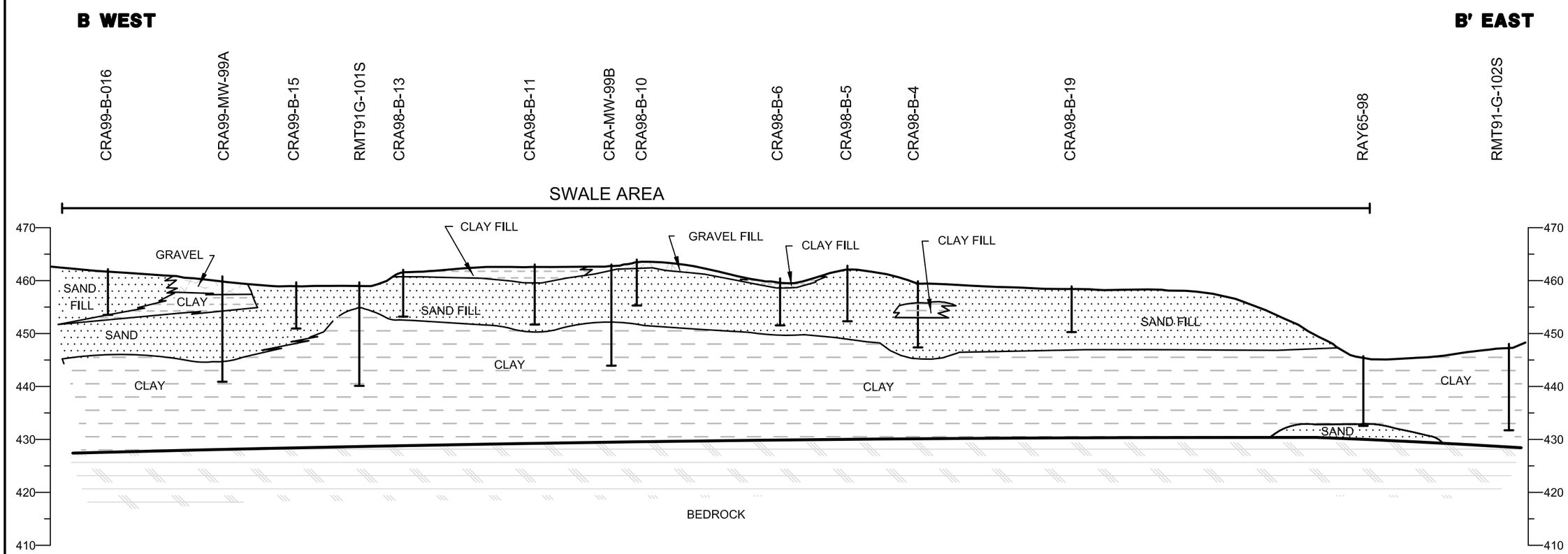
LEGEND:

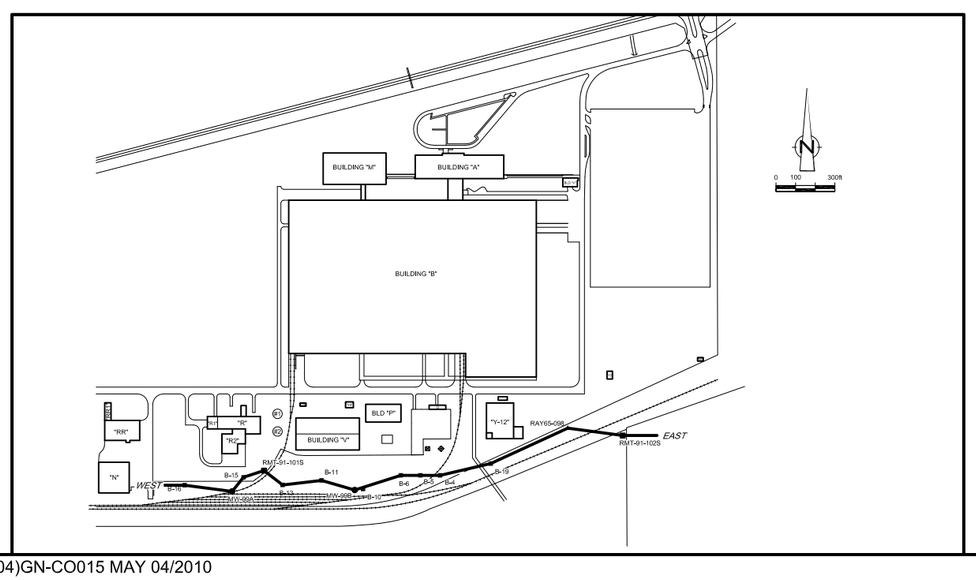
- CLAY
- SAND
- FILL SAND

figure 2.9

GEOLOGIC CROSS-SECTION A-A'
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO014 MAY 04/2010





SCALE: HORZ. 1"=200
VERT. 1"=10'

LEGEND:

CLAY

SAND

figure 2.10

GEOLOGIC CROSS-SECTION B-B'
CATERPILLAR INC.
Mapleton, Illinois

CRA

13307-00(004)GN-CO015 MAY 04/2010

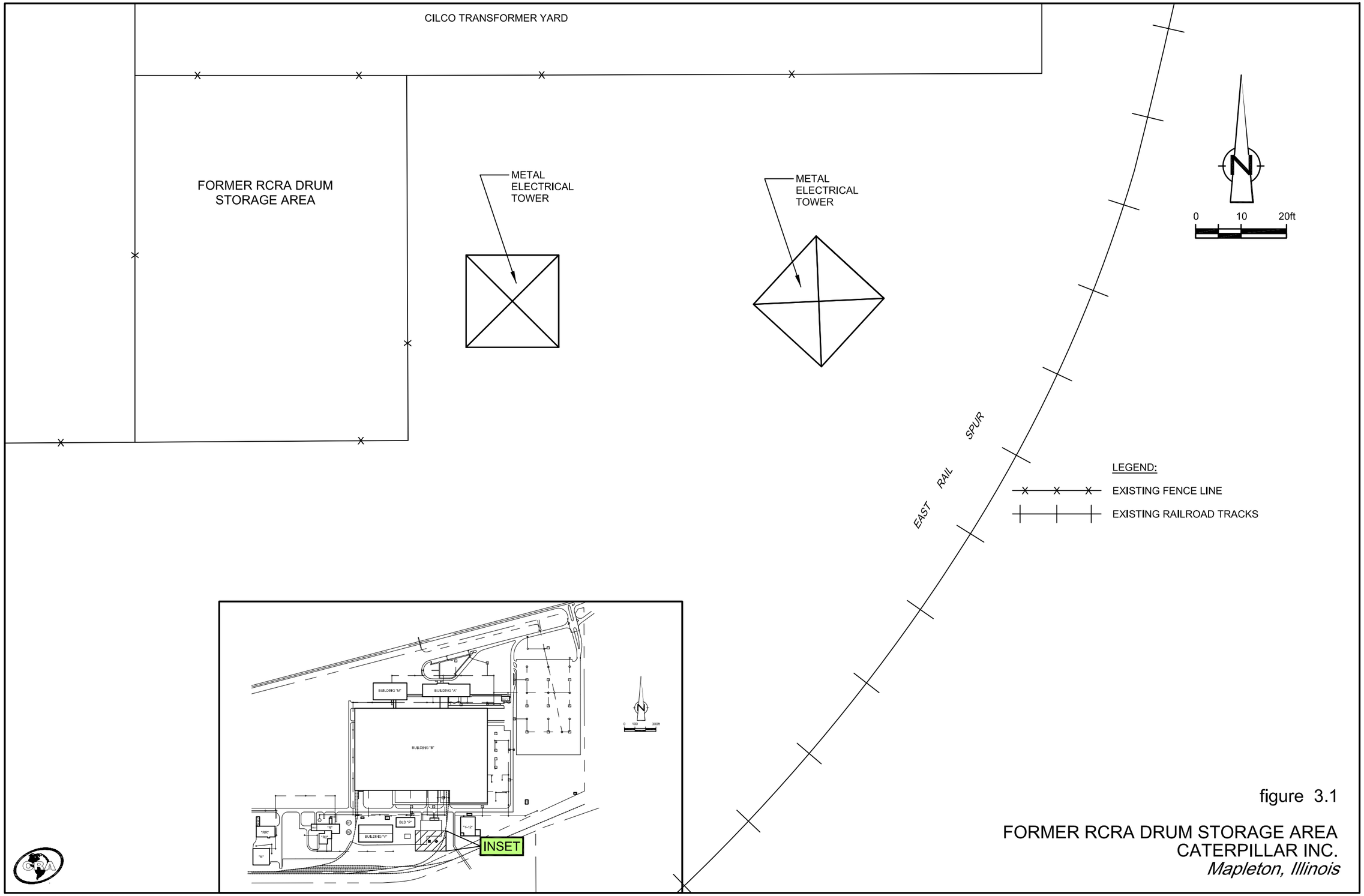


figure 3.1

FORMER RCRA DRUM STORAGE AREA
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO016 APR 20/2010

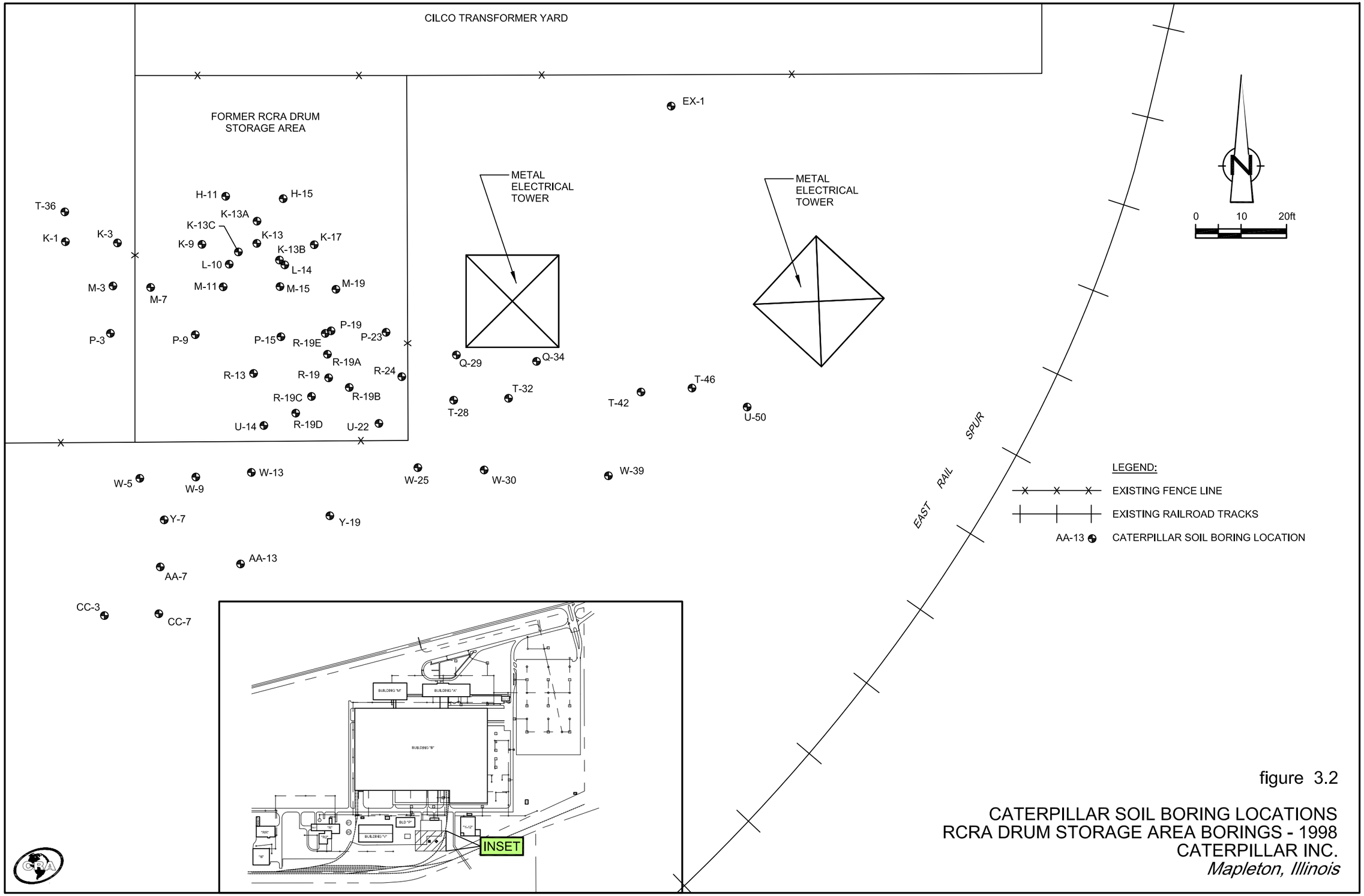


figure 3.2

CATERPILLAR SOIL BORING LOCATIONS
RCRA DRUM STORAGE AREA BORINGS - 1998
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO017 MAY 05/2010

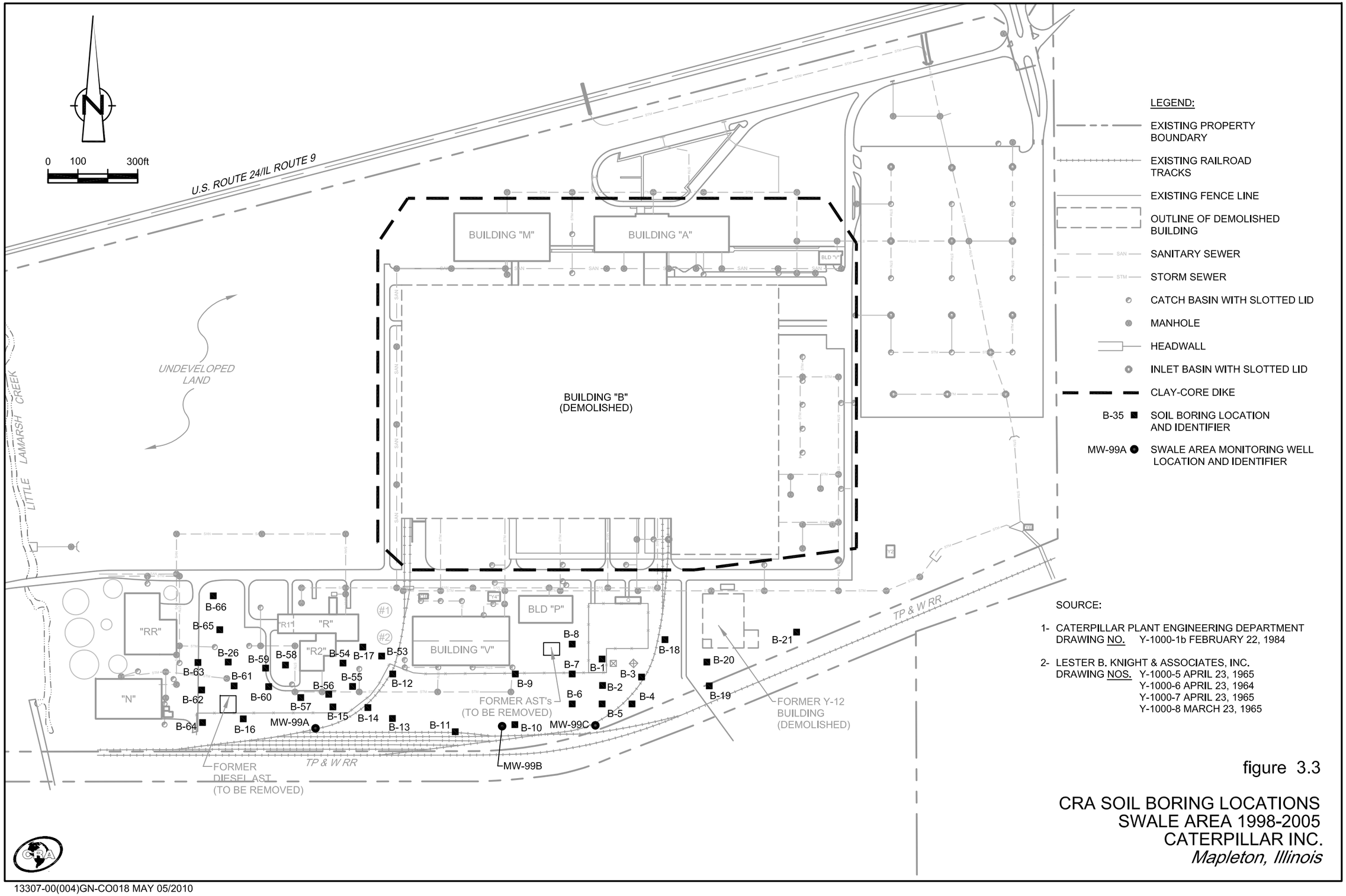


figure 3.3

CRA SOIL BORING LOCATIONS
SWALE AREA 1998-2005
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO018 MAY 05/2010

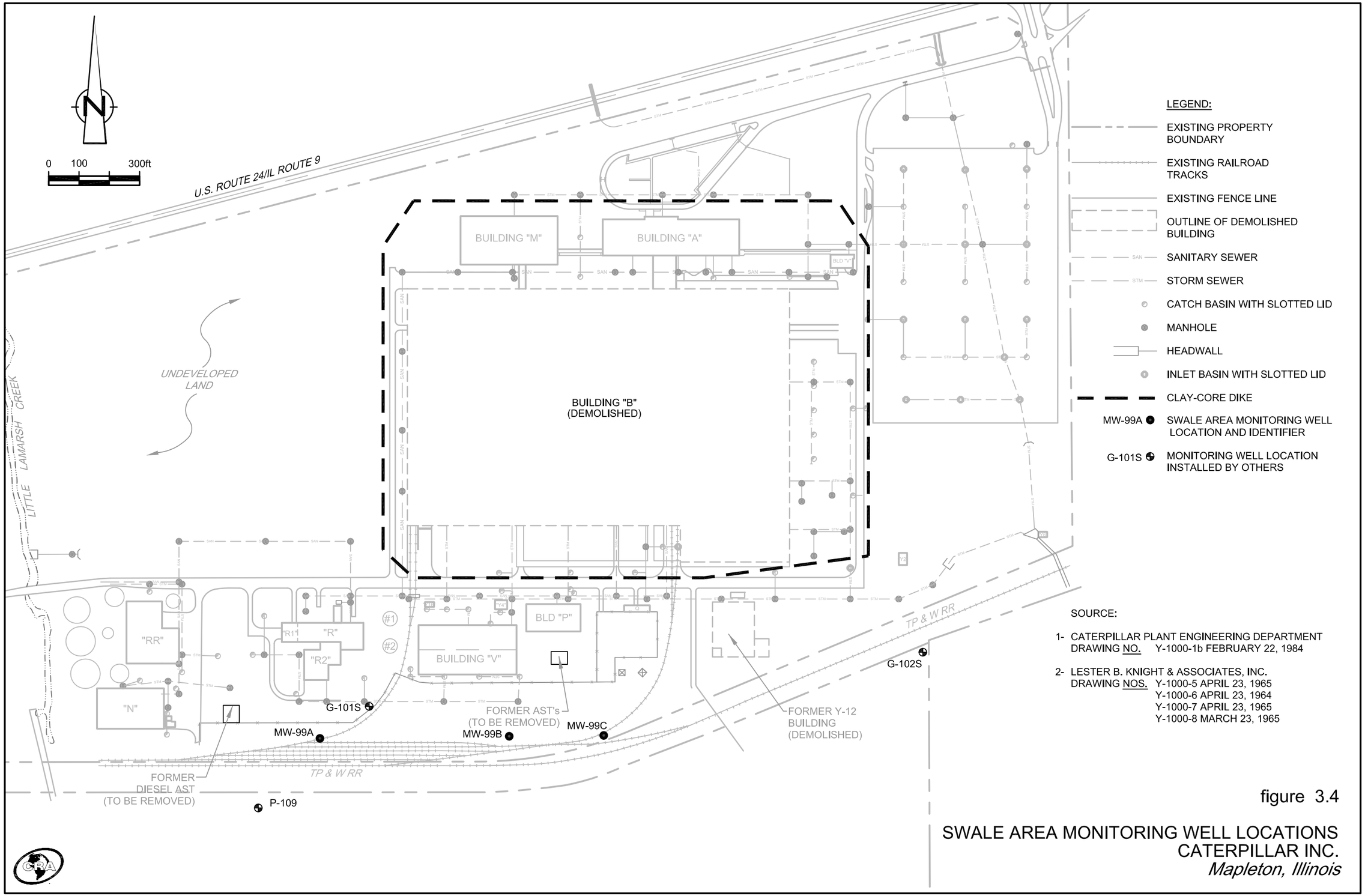


figure 3.4

SWALE AREA MONITORING WELL LOCATIONS
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO019 MAY 04/2010

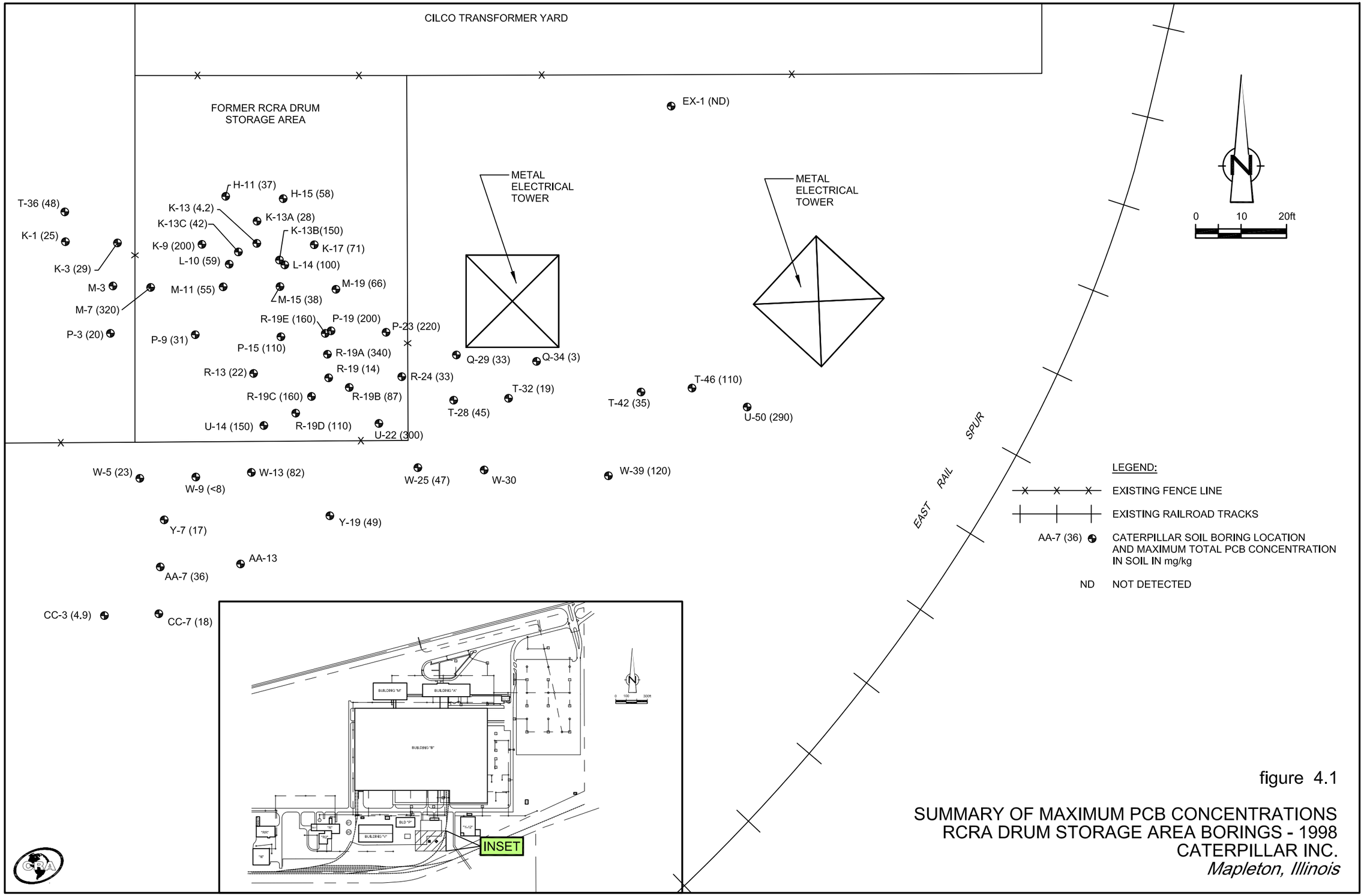
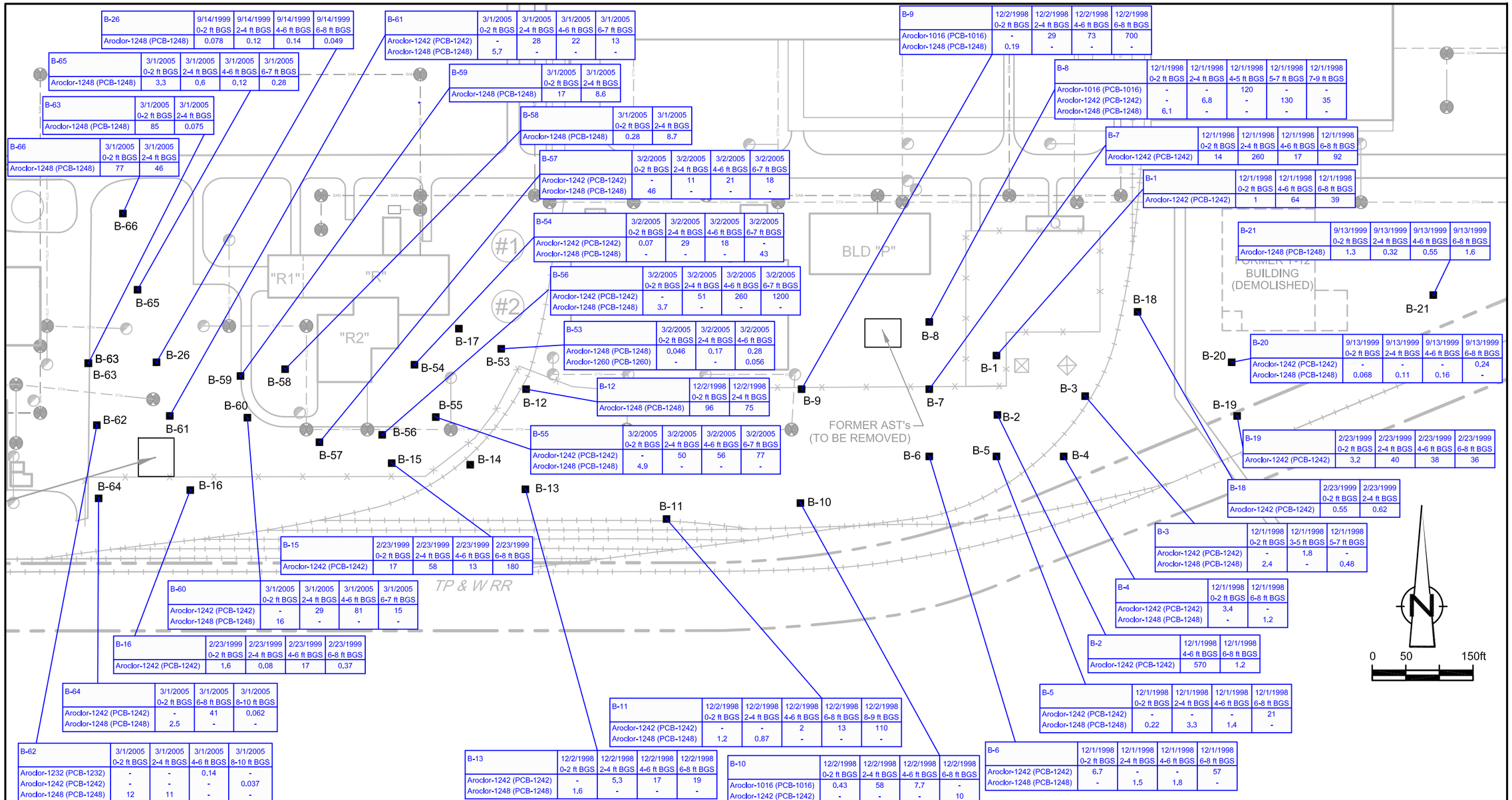


figure 4.1

SUMMARY OF MAXIMUM PCB CONCENTRATIONS
RCRA DRUM STORAGE AREA BORINGS - 1998
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO020 MAY 06/2010



B-26	9/14/1999 0-2 ft BGS	9/14/1999 2-4 ft BGS	9/14/1999 4-6 ft BGS	9/14/1999 6-8 ft BGS
Aroclor-1248 (PCB-1248)	0.078	0.12	0.14	0.049

B-65	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS	3/1/2005 4-6 ft BGS	3/1/2005 6-7 ft BGS
Aroclor-1248 (PCB-1248)	3.3	0.6	0.12	0.28

B-63	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS
Aroclor-1248 (PCB-1248)	85	0.075

B-66	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS
Aroclor-1248 (PCB-1248)	77	46

B-61	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS	3/1/2005 4-6 ft BGS	3/1/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	-	28	22	13
Aroclor-1248 (PCB-1248)	5.7	-	-	-

B-59	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS
Aroclor-1248 (PCB-1248)	17	8.6

B-58	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS
Aroclor-1248 (PCB-1248)	0.28	8.7

B-57	3/2/2005 0-2 ft BGS	3/2/2005 2-4 ft BGS	3/2/2005 4-6 ft BGS	3/2/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	-	11	21	18
Aroclor-1248 (PCB-1248)	46	-	-	-

B-54	3/2/2005 0-2 ft BGS	3/2/2005 2-4 ft BGS	3/2/2005 4-6 ft BGS	3/2/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	0.07	29	18	-
Aroclor-1248 (PCB-1248)	-	-	-	43

B-56	3/2/2005 0-2 ft BGS	3/2/2005 2-4 ft BGS	3/2/2005 4-6 ft BGS	3/2/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	-	51	260	1200
Aroclor-1248 (PCB-1248)	3.7	-	-	-

B-53	3/2/2005 0-2 ft BGS	3/2/2005 2-4 ft BGS	3/2/2005 4-6 ft BGS
Aroclor-1248 (PCB-1248)	0.046	0.17	0.28
Aroclor-1260 (PCB-1260)	-	-	0.056

B-12	12/2/1998 0-2 ft BGS	12/2/1998 2-4 ft BGS
Aroclor-1248 (PCB-1248)	96	75

B-55	3/2/2005 0-2 ft BGS	3/2/2005 2-4 ft BGS	3/2/2005 4-6 ft BGS	3/2/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	-	50	56	77
Aroclor-1248 (PCB-1248)	4.9	-	-	-

B-15	2/23/1999 0-2 ft BGS	2/23/1999 2-4 ft BGS	2/23/1999 4-6 ft BGS	2/23/1999 6-8 ft BGS
Aroclor-1242 (PCB-1242)	17	58	13	180

B-60	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS	3/1/2005 4-6 ft BGS	3/1/2005 6-7 ft BGS
Aroclor-1242 (PCB-1242)	-	29	81	15
Aroclor-1248 (PCB-1248)	16	-	-	-

B-16	2/23/1999 0-2 ft BGS	2/23/1999 2-4 ft BGS	2/23/1999 4-6 ft BGS	2/23/1999 6-8 ft BGS
Aroclor-1242 (PCB-1242)	1.6	0.08	17	0.37

B-64	3/1/2005 0-2 ft BGS	3/1/2005 6-8 ft BGS	3/1/2005 8-10 ft BGS
Aroclor-1242 (PCB-1242)	-	41	0.062
Aroclor-1248 (PCB-1248)	2.5	-	-

B-62	3/1/2005 0-2 ft BGS	3/1/2005 2-4 ft BGS	3/1/2005 4-6 ft BGS	3/1/2005 8-10 ft BGS
Aroclor-1232 (PCB-1232)	-	-	0.14	-
Aroclor-1242 (PCB-1242)	-	-	-	0.037
Aroclor-1248 (PCB-1248)	12	11	-	-

B-11	12/2/1998 0-2 ft BGS	12/2/1998 2-4 ft BGS	12/2/1998 4-6 ft BGS	12/2/1998 6-8 ft BGS	12/2/1998 8-9 ft BGS
Aroclor-1242 (PCB-1242)	-	-	2	13	110
Aroclor-1248 (PCB-1248)	1.2	0.87	-	-	-

B-13	12/2/1998 0-2 ft BGS	12/2/1998 2-4 ft BGS	12/2/1998 4-6 ft BGS	12/2/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	-	5.3	17	19
Aroclor-1248 (PCB-1248)	1.6	-	-	-

B-10	12/2/1998 0-2 ft BGS	12/2/1998 2-4 ft BGS	12/2/1998 4-6 ft BGS	12/2/1998 6-8 ft BGS
Aroclor-1016 (PCB-1016)	0.43	58	7.7	-
Aroclor-1242 (PCB-1242)	-	-	-	10

B-9	12/2/1998 0-2 ft BGS	12/2/1998 2-4 ft BGS	12/2/1998 4-6 ft BGS	12/2/1998 6-8 ft BGS
Aroclor-1016 (PCB-1016)	-	29	73	700
Aroclor-1248 (PCB-1248)	0.19	-	-	-

B-8	12/1/1998 0-2 ft BGS	12/1/1998 2-4 ft BGS	12/1/1998 4-5 ft BGS	12/1/1998 5-7 ft BGS	12/1/1998 7-9 ft BGS
Aroclor-1016 (PCB-1016)	-	-	120	-	-
Aroclor-1242 (PCB-1242)	-	6.8	-	130	35
Aroclor-1248 (PCB-1248)	6.1	-	-	-	-

B-7	12/1/1998 0-2 ft BGS	12/1/1998 2-4 ft BGS	12/1/1998 4-6 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	14	260	17	92

B-1	12/1/1998 0-2 ft BGS	12/1/1998 4-6 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	1	64	39

B-21	9/13/1999 0-2 ft BGS	9/13/1999 2-4 ft BGS	9/13/1999 4-6 ft BGS	9/13/1999 6-8 ft BGS
Aroclor-1248 (PCB-1248)	1.3	0.32	0.55	1.6

B-20	9/13/1999 0-2 ft BGS	9/13/1999 2-4 ft BGS	9/13/1999 4-6 ft BGS	9/13/1999 6-8 ft BGS
Aroclor-1242 (PCB-1242)	-	-	-	0.24
Aroclor-1248 (PCB-1248)	0.068	0.11	0.16	-

B-19	2/23/1999 0-2 ft BGS	2/23/1999 2-4 ft BGS	2/23/1999 4-6 ft BGS	2/23/1999 6-8 ft BGS
Aroclor-1242 (PCB-1242)	3.2	40	38	36

B-18	2/23/1999 0-2 ft BGS	2/23/1999 2-4 ft BGS
Aroclor-1242 (PCB-1242)	0.55	0.62

B-3	12/1/1998 0-2 ft BGS	12/1/1998 3-5 ft BGS	12/1/1998 5-7 ft BGS
Aroclor-1242 (PCB-1242)	-	1.8	-
Aroclor-1248 (PCB-1248)	2.4	-	0.48

B-4	12/1/1998 0-2 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	3.4	-
Aroclor-1248 (PCB-1248)	-	1.2

B-2	12/1/1998 4-6 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	570	1.2

B-5	12/1/1998 0-2 ft BGS	12/1/1998 2-4 ft BGS	12/1/1998 4-6 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	-	-	-	21
Aroclor-1248 (PCB-1248)	0.22	3.3	1.4	-

B-6	12/1/1998 0-2 ft BGS	12/1/1998 2-4 ft BGS	12/1/1998 4-6 ft BGS	12/1/1998 6-8 ft BGS
Aroclor-1242 (PCB-1242)	6.7	-	-	57
Aroclor-1248 (PCB-1248)	-	1.5	1.8	-

LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- SANITARY SEWER
- STORM SEWER
- CATCH BASIN WITH SLOTTED LID
- MANHOLE
- HEADWALL
- INLET BASIN WITH SLOTTED LID
- B-35 ■ SOIL BORING LOCATION AND IDENTIFIER

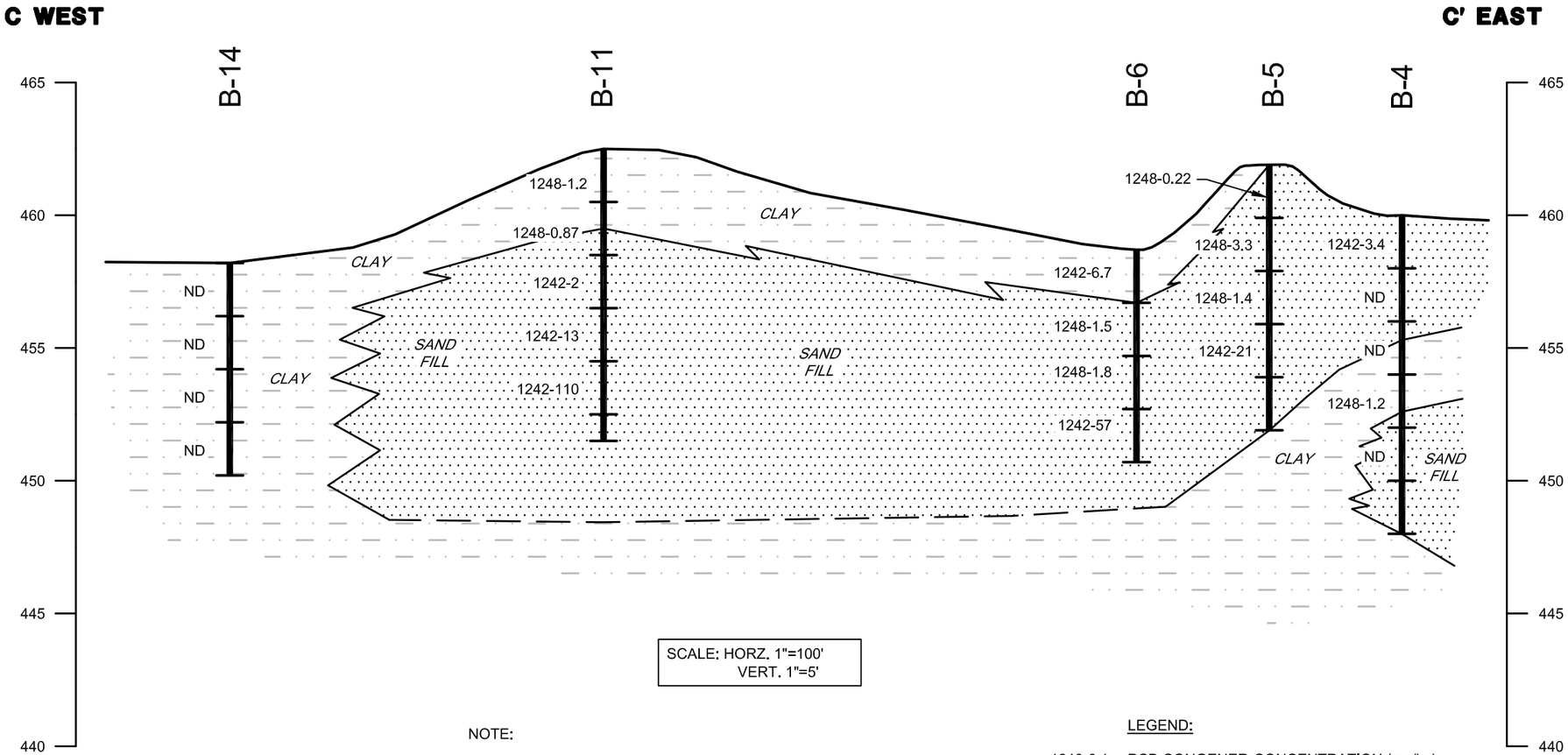
B-1	12/1/1998
	0-2 ft BGS
Aroclor-1242 (PCB-1242)	1

SAMPLE IDENTIFIER
SAMPLE DATE
SAMPLE DEPTH
SAMPLE RESULT (ug/kg)
DETECTED COMPOUND

figure 4.2

SUMMARY OF PCB DETECTED ANALYTICAL DATA
CRA SWALE AREA SOIL BORINGS 1998-2005
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO021 MAY 06/2010



SCALE: HORZ. 1"=100'
VERT. 1"=5'

NOTE:

1- ALL ELEVATIONS IN FEET REFERENCED TO CATERPILLAR DATUM

2- ND-NOT DETECTED

LEGEND:

1248-6.1	PCB CONGENER-CONCENTRATION (mg/kg)
ND	PCBs NOT DETECTED
	SAND SOIL
	CLAY SOIL

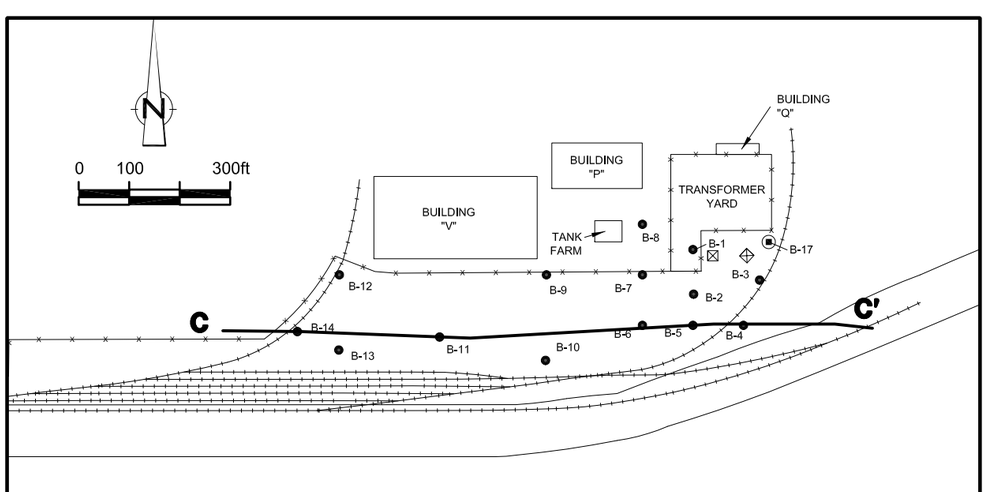
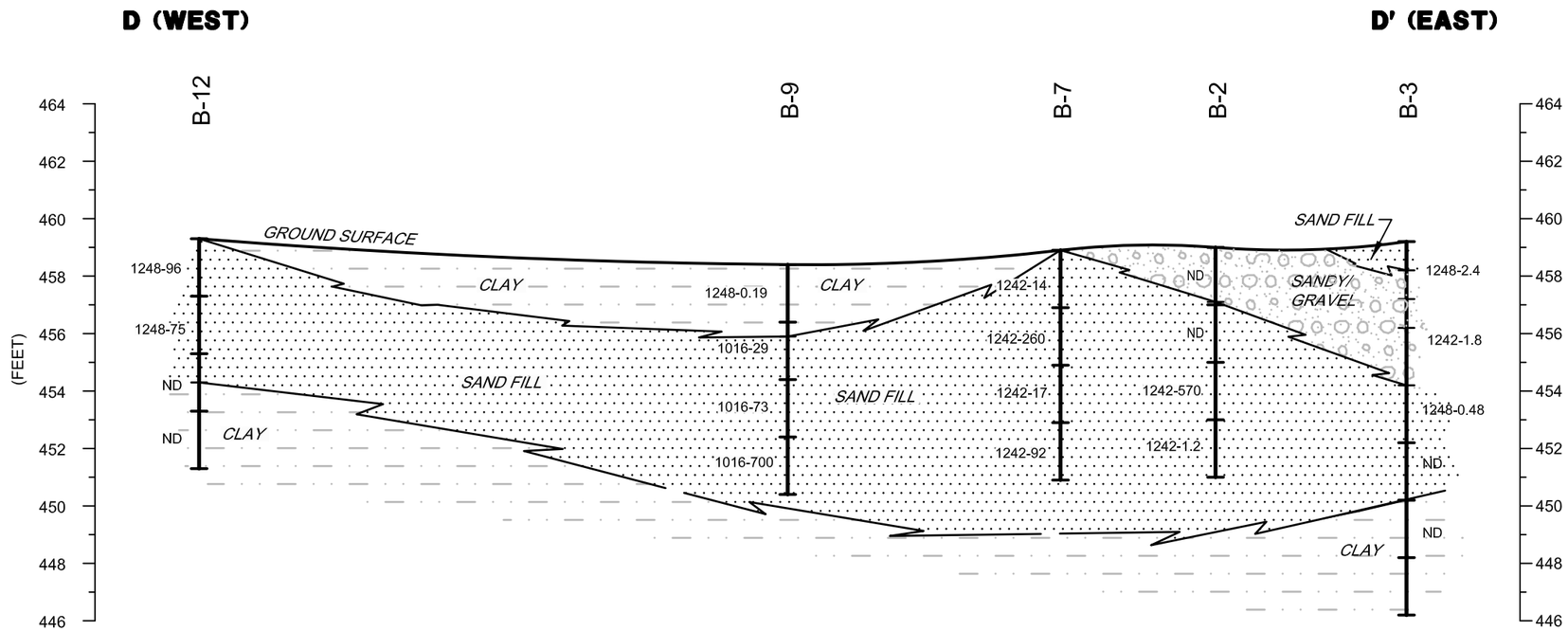


figure 4.3

PCB CONCENTRATIONS IN SOIL WITH DEPTH
CROSS-SECTION C-C'
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO022 APR 20/2010



NOTE:

1- ALL ELEVATIONS IN FEET REFERENCED TO CATERPILLAR DATUM

2- ND-NOT DETECTED

LEGEND:

1248-6.1 PCB CONGENER-CONCENTRATION (mg/kg)

ND PCBs NOT DETECTED

SANDY GRAVEL SOIL

SAND SOIL

CLAY SOIL

SCALE: HORZ. 1"=100'
VERT. 1"=5'

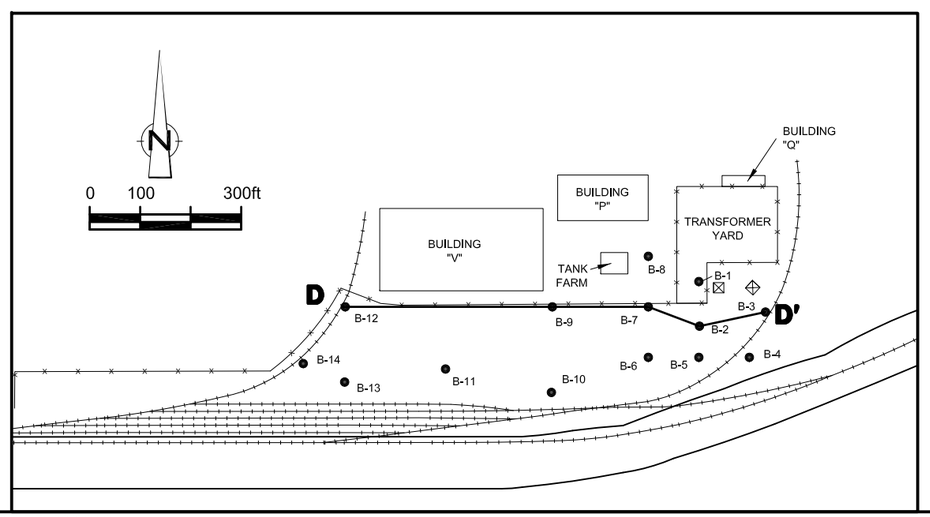
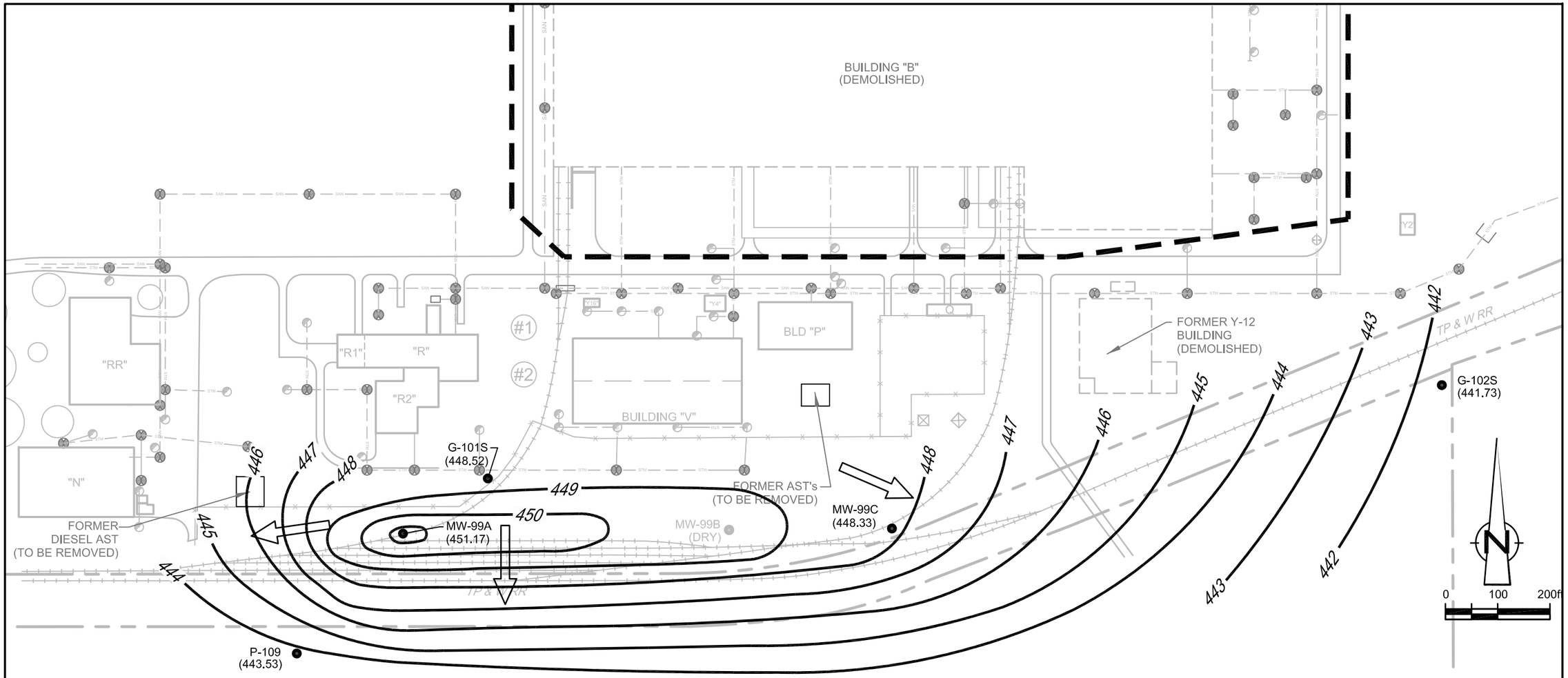


figure 4.4

PCB CONCENTRATIONS IN SOIL WITH DEPTH
CROSS-SECTION D-D'
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO023 APR 20/2010



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- SANITARY SEWER
- STORM SEWER
- CATCH BASIN WITH SLOTTED LID
- MANHOLE
- HEADWALL
- INLET BASIN WITH SLOTTED LID
- CLAY-CORE DIKE
- INLET BASIN WITH SLOTTED LID
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- MW-99A MONITORING WELL LOCATION AND IDENTIFIER
- (450.40) SHALLOW GROUNDWATER ELEVATIONS (FT. AMSL)

figure 4.5

SHALLOW GROUNDWATER CONTOURS
NOVEMBER 19, 1999
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO024 MAY 04/2010

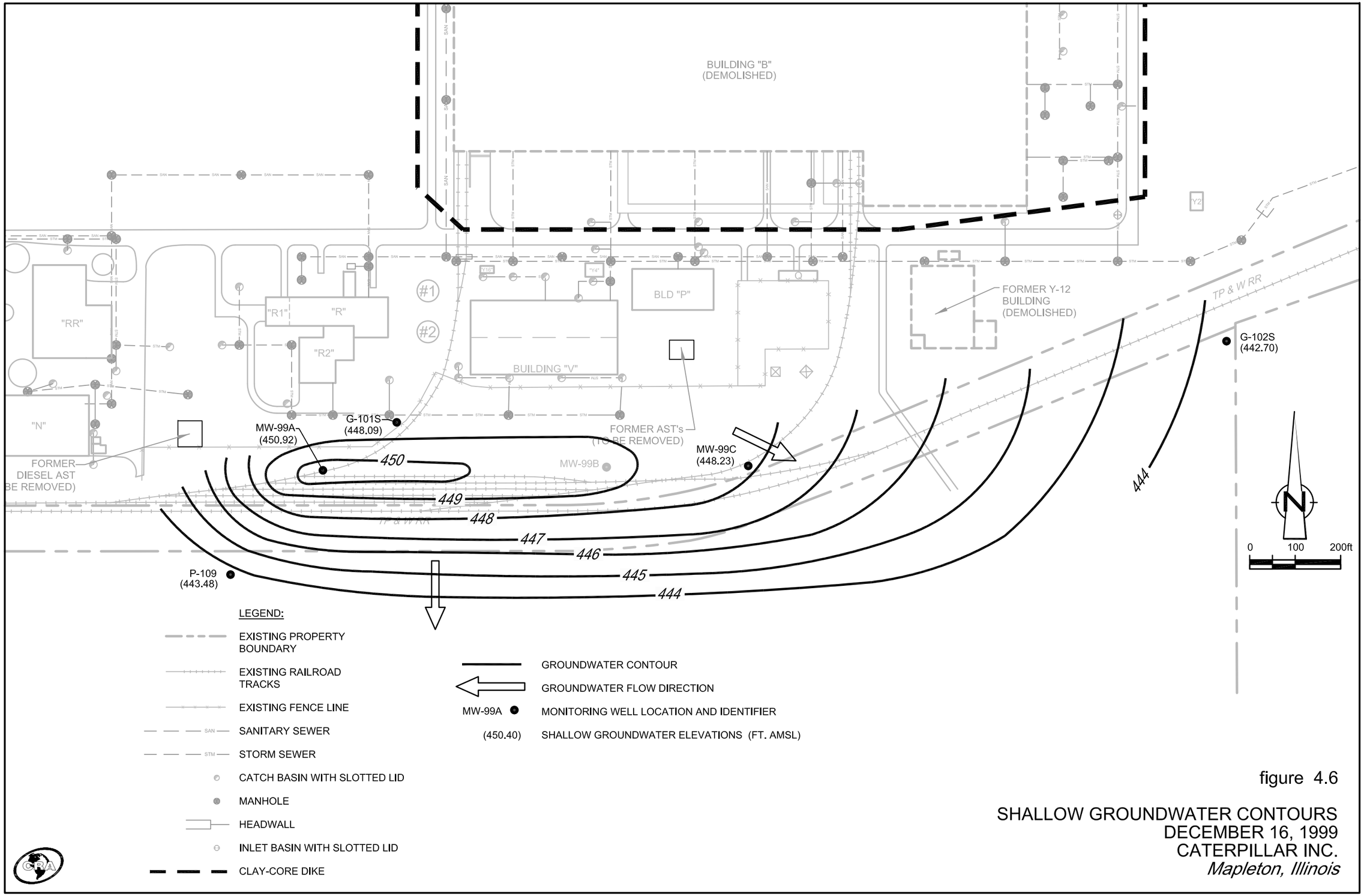
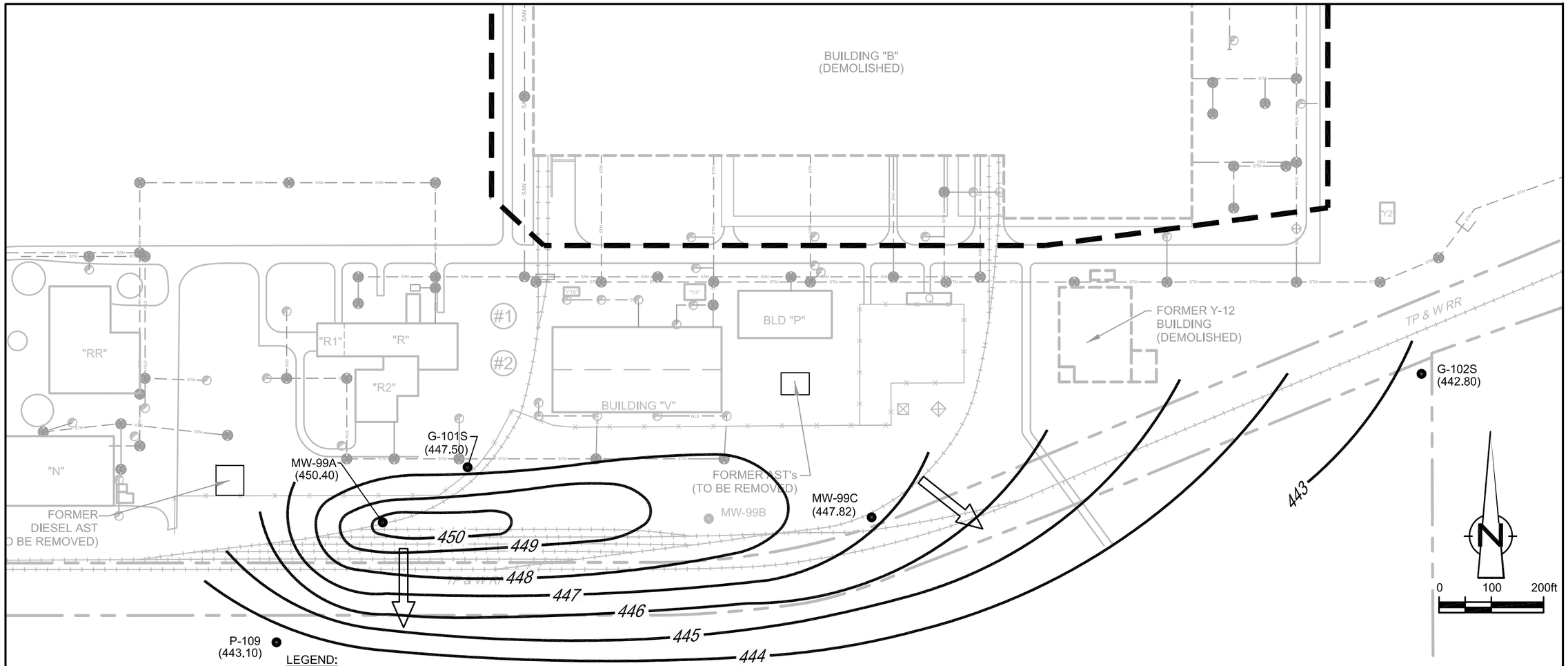


figure 4.6

SHALLOW GROUNDWATER CONTOURS
DECEMBER 16, 1999
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO025 MAY 04/2010



LEGEND:

- EXISTING PROPERTY BOUNDARY
- EXISTING RAILROAD TRACKS
- EXISTING FENCE LINE
- SANITARY SEWER
- STORM SEWER
- CATCH BASIN WITH SLOTTED LID
- MANHOLE
- HEADWALL
- INLET BASIN WITH SLOTTED LID
- CLAY-CORE DIKE
- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- MW-99A — MONITORING WELL LOCATION AND IDENTIFIER
- (450.40) — SHALLOW GROUNDWATER ELEVATIONS (FT. AMSL)

figure 4.7

SHALLOW GROUNDWATER CONTOURS
FEBRUARY 11, 2000
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO026 MAY 04/2010

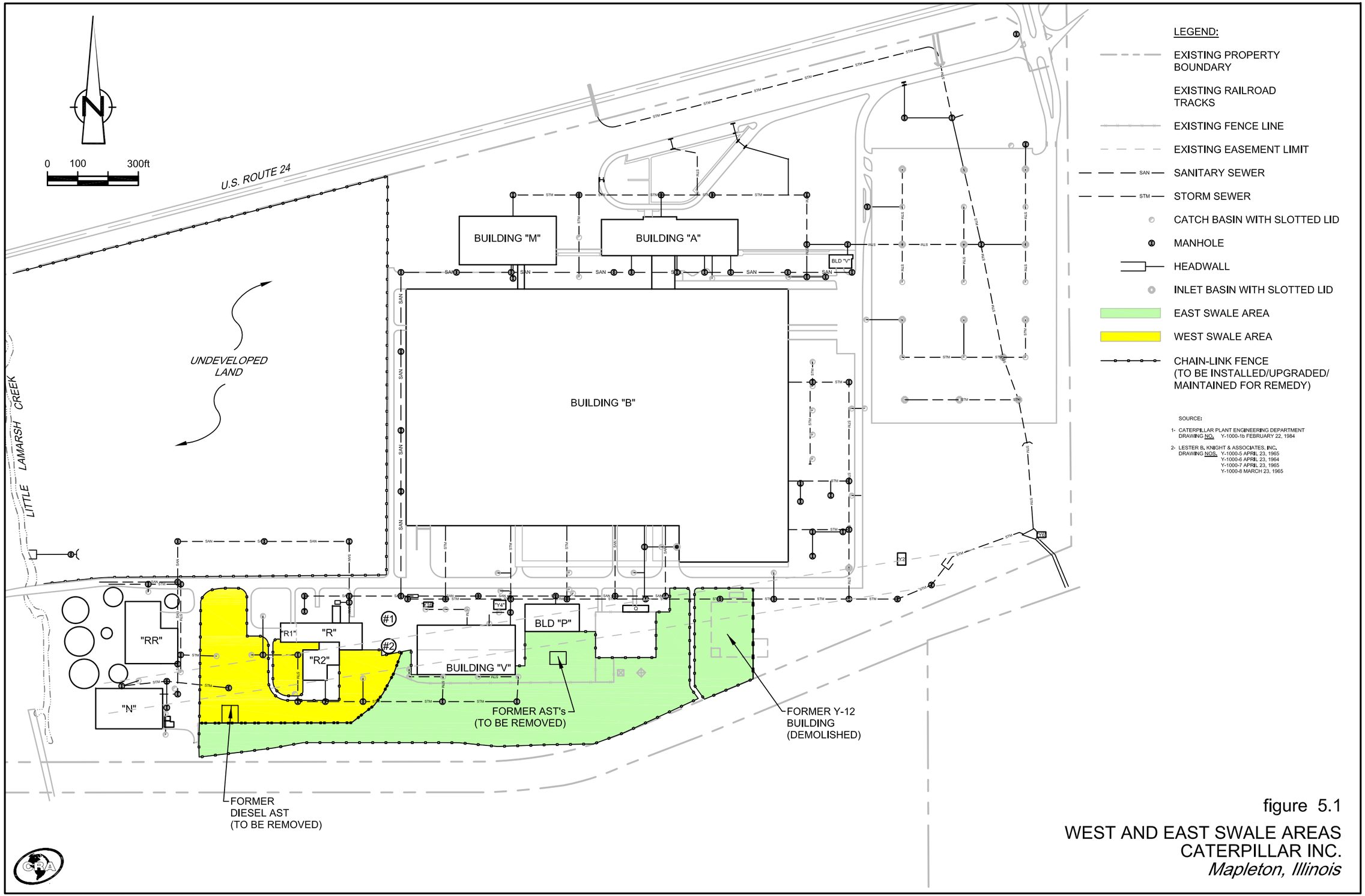
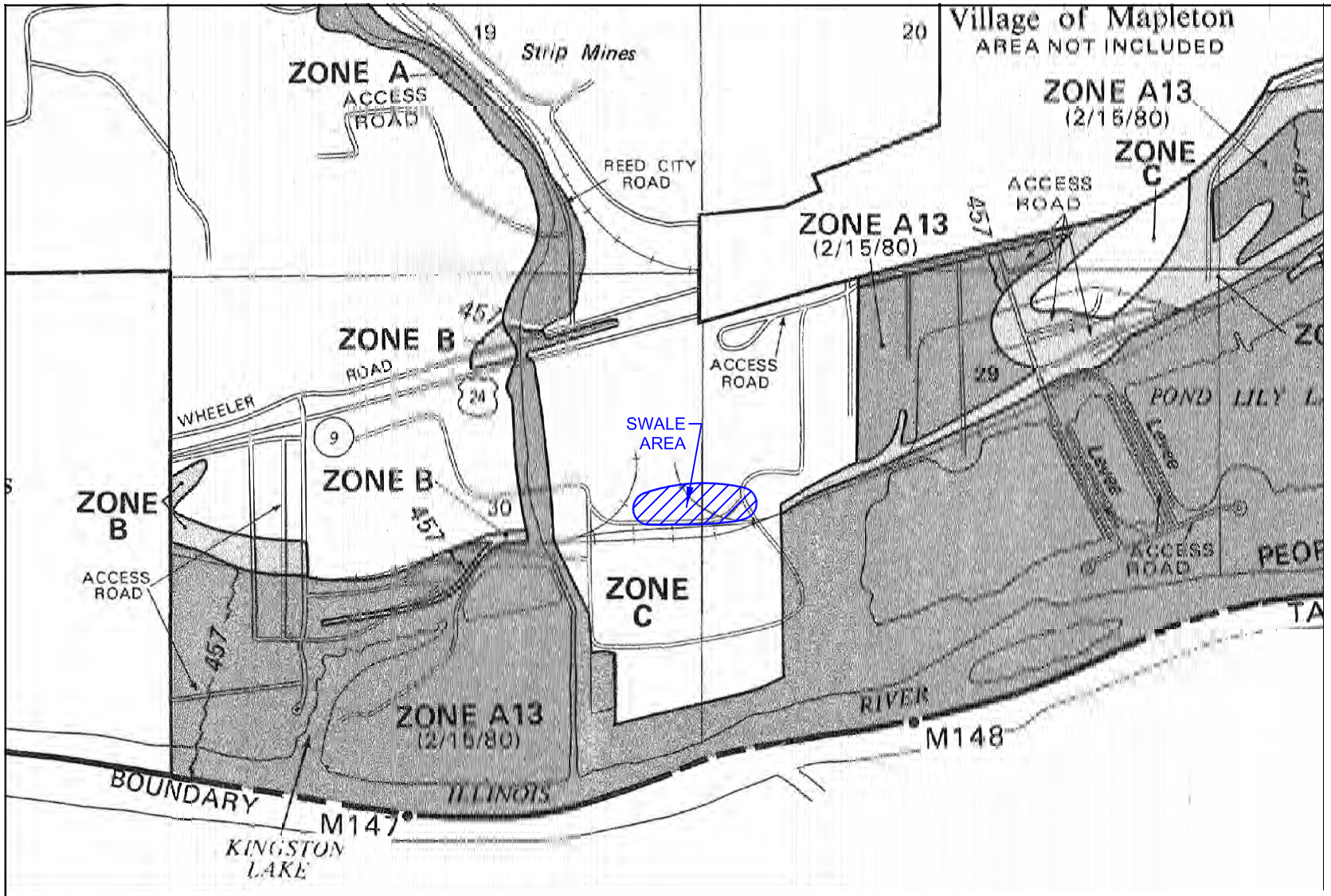


figure 5.1

WEST AND EAST SWALE AREAS
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO027 MAY 04/2010



2000 0 2000 FEET

APPROXIMATE SCALE

ZONE C - AREA OF MINIMAL FLOOD HAZARD
ABOVE THE 500-YEAR FLOOD LEVEL

figure 6.1

FLOOD INSURANCE RATE MAP
CATERPILLAR INC.
Mapleton, Illinois

BASE SOURCE:
FIRM
FLOOD INSURANCE RATE MAP
COMMUNITY-PANEL NUMBER 170533 0200 B
MAP REVISED JUNE 1, 1983

13307-00(004)GN-CO032 MAY 04/2010

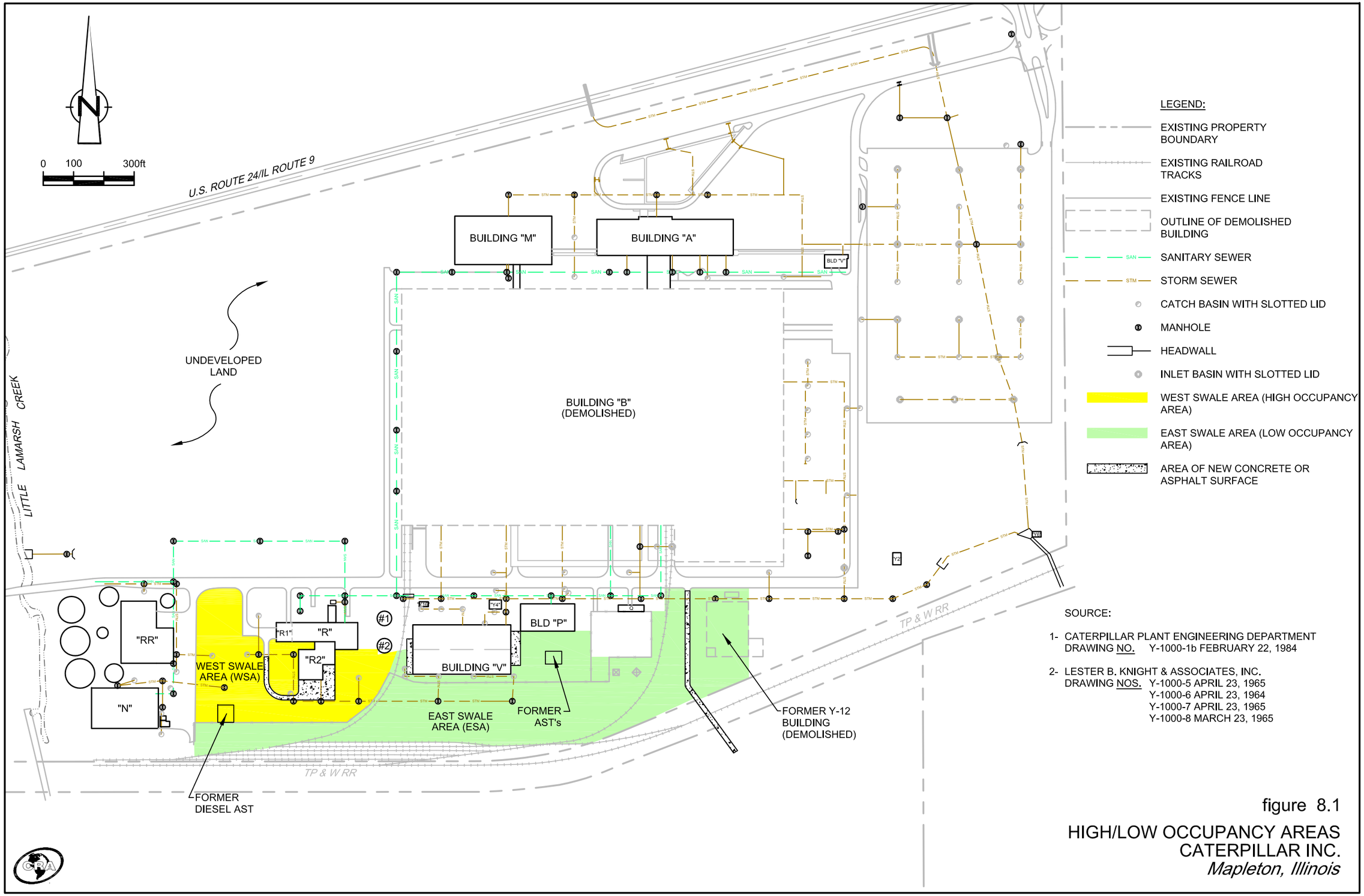


figure 8.1

HIGH/LOW OCCUPANCY AREAS
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO028 MAY 04/2010

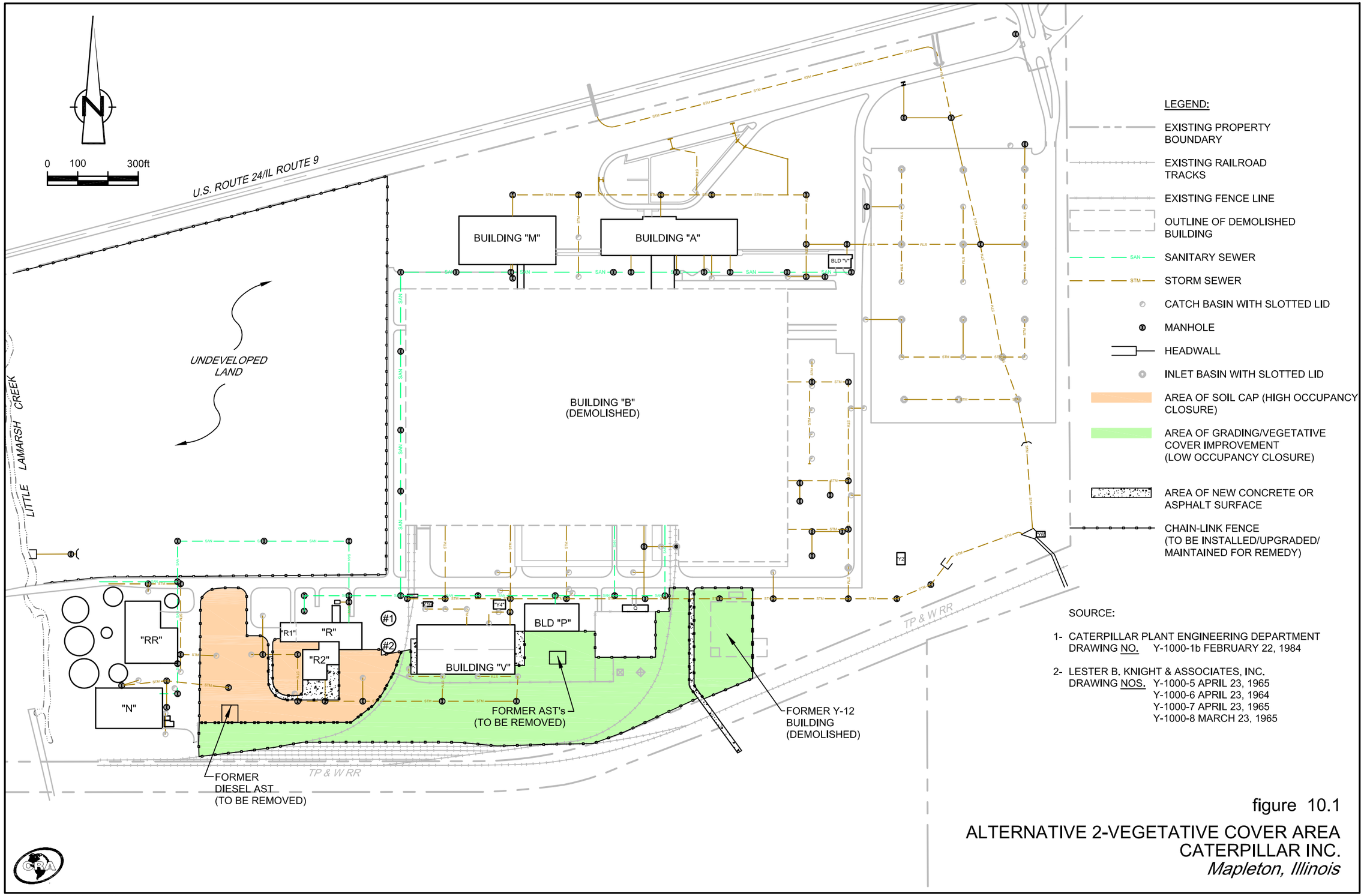


figure 10.1

ALTERNATIVE 2-VEGETATIVE COVER AREA
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO029 APR 20/2010

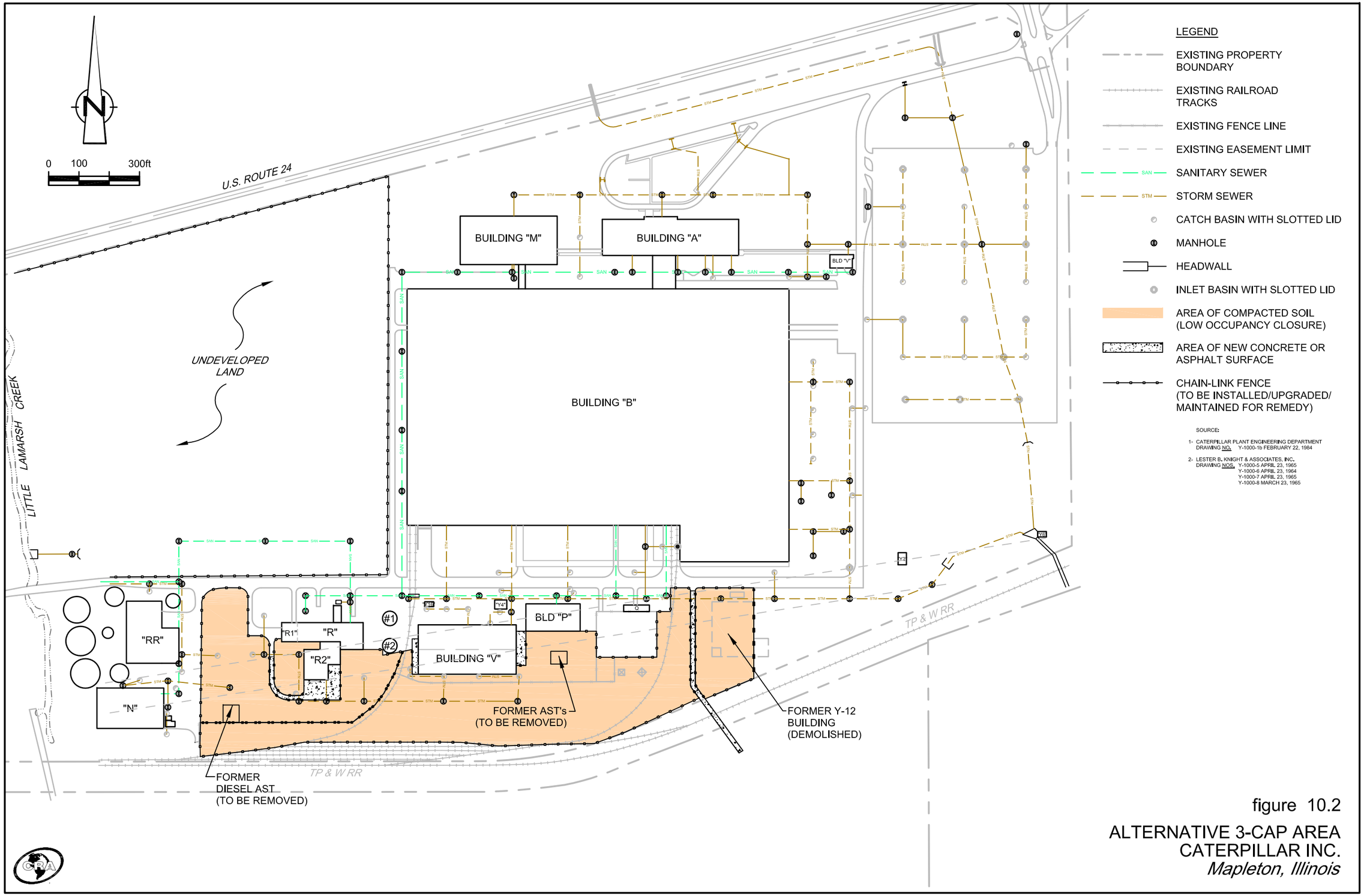


figure 10.2

ALTERNATIVE 3-CAP AREA
CATERPILLAR INC.
Mapleton, Illinois

13307-00(004)GN-CO030 APR 20/2010

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Phase 1 - December 1998					
B-3	0/2	S-120198-JH-001	Soil	12/01/98	PCBs
B-3	3/5	S-120198-JH-002	Soil	12/01/98	PCBs
B-3	5/7	S-120198-JH-003	Soil	12/01/98	PCBs
B-3	7/9	S-120198-JH-004	Soil	12/01/98	PCBs
B-3	9/11	S-120198-JH-005	Soil	12/01/98	PCBs
B-4	0/2	S-120198-JH-006	Soil	12/01/98	PCBs
B-4	2/4	S-120198-JH-007	Soil	12/01/98	PCBs
B-4	4/6	S-120198-JH-008	Soil	12/01/98	PCBs
B-4	6/8	S-120198-JH-009	Soil	12/01/98	PCBs
B-4	8/10	S-120198-JH-010	Soil	12/01/98	PCBs
B-5	0/2	S-120198-JH-011	Soil	12/01/98	PCBs
B-5	2/4	S-120198-JH-012	Soil	12/01/98	PCBs
B-5	4/6	S-120198-JH-013	Soil	12/01/98	PCBs
B-5	6/8	S-120198-JH-014	Soil	12/01/98	PCBs
B-2	0/2	S-120198-JH-015	Soil	12/01/98	PCBs
B-2	2/4	S-120198-JH-016	Soil	12/01/98	PCBs
B-2	4/6	S-120198-JH-017	Soil	12/01/98	PCBs
B-2	6/8	S-120198-JH-018	Soil	12/01/98	PCBs
B-6	0/2	S-120198-JH-019	Soil	12/01/98	PCBs
B-6	2/4	S-120198-JH-020	Soil	12/01/98	PCBs
B-6	4/6	S-120198-JH-021	Soil	12/01/98	PCBs
B-6	6/8	S-120198-JH-022	Soil	12/01/98	PCBs
B-7	0/2	S-120198-JH-023	Soil	12/01/98	PCBs
B-7	2/4	S-120198-JH-024	Soil	12/01/98	PCBs
B-7	4/6	S-120198-JH-025	Soil	12/01/98	PCBs
B-7	6/8	S-120198-JH-026	Soil	12/01/98	PCBs
B-8	0/2	S-120198-JH-027	Soil	12/01/98	PCBs
B-8	2/4	S-120198-JH-028	Soil	12/01/98	PCBs
B-8	4/5	S-120198-JH-029	Soil	12/01/98	PCBs
B-8	5/7	S-120198-JH-030	Soil	12/01/98	PCBs
B-8	7/9	S-120198-JH-031	Soil	12/01/98	PCBs

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Phase 1 - December 1998 (continued)					
B-1	0/2	S-120198-JH-032	Soil	12/01/98	PCBs
B-1	2/4	S-120198-JH-033	Soil	12/01/98	PCBs
B-1	4/6	S-120198-JH-034	Soil	12/01/98	PCBs
B-1	6/8	S-120198-JH-035	Soil	12/01/98	PCBs
B-10	0/2	S-120298-JH-036	Soil	12/02/98	PCBs
B-10	2/4	S-120298-JH-037	Soil	12/02/98	PCBs
B-10	4/6	S-120298-JH-038	Soil	12/02/98	PCBs
B-10	6/8	S-120298-JH-039	Soil	12/02/98	PCBs
B-13	0/2	S-120298-JH-040	Soil	12/02/98	PCBs
B-13	2/4	S-120298-JH-041	Soil	12/02/98	PCBs
B-13	4/6	S-120298-JH-042	Soil	12/02/98	PCBs
B-13	6/8	S-120298-JH-043	Soil	12/02/98	PCBs
B-14	0/2	S-120298-JH-044	Soil	12/02/98	PCBs
B-14	2/4	S-120298-JH-045	Soil	12/02/98	PCBs
B-14	4/6	S-120298-JH-046	Soil	12/02/98	PCBs
B-14	6/8	S-120298-JH-047	Soil	12/02/98	PCBs
B-14	8/10	S-120298-JH-048	Soil	12/02/98	PCBs
B-12	0/2	S-120298-JH-049	Soil	12/02/98	PCBs
B-12	2/4	S-120298-JH-050	Soil	12/02/98	PCBs
B-12	4/6	S-120298-JH-051	Soil	12/02/98	PCBs
B-12	6/8	S-120298-JH-052	Soil	12/02/98	PCBs
B-11	0/2	S-120298-JH-053	Soil	12/02/98	PCBs
B-11	2/4	S-120298-JH-054	Soil	12/02/98	PCBs
B-11	4/6	S-120298-JH-055	Soil	12/02/98	PCBs
B-11	6/8	S-120298-JH-056	Soil	12/02/98	PCBs
B-11	8/9	S-120298-JH-057	Soil	12/02/98	PCBs
B-9	0/2	S-120298-JH-058	Soil	12/02/98	PCBs
B-9	2/4	S-120298-JH-059	Soil	12/02/98	PCBs
B-9	4/6	S-120298-JH-060	Soil	12/02/98	PCBs
B-9	6/8	S-120298-JH-061	Soil	12/02/98	PCBs

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Phase 2 - February 1999					
B-18	0/2	S-022399-JH-062	Soil	02/23/99	PCBs
B-18	2/4	S-022399-JH-063	Soil	02/23/99	PCBs
B-18	4/6	S-022399-JH-064	Soil	02/23/99	PCBs
B-18	6/8	S-022399-JH-065	Soil	02/23/99	PCBs
B-19	0/2	S-022399-JH-066	Soil	02/23/99	PCBs
B-19	2/4	S-022399-JH-067	Soil	02/23/99	PCBs
B-19	4/6	S-022399-JH-068	Soil	02/23/99	PCBs
B-19	6/8	S-022399-JH-069	Soil	02/23/99	PCBs
B-16	0/2	S-022399-JH-070	Soil	02/23/99	PCBs
B-16	2/4	S-022399-JH-071	Soil	02/23/99	PCBs
B-16	4/6	S-022399-JH-072	Soil	02/23/99	PCBs
B-16	6/8	S-022399-JH-073	Soil	02/23/99	PCBs
B-17	0/2	S-022399-JH-074	Soil	02/23/99	PCBs
B-17	2/4	S-022399-JH-075	Soil	02/23/99	PCBs
B-17	4/6	S-022399-JH-076	Soil	02/23/99	PCBs
B-17	6/8	S-022399-JH-077	Soil	02/23/99	PCBs
B-15	0/2	S-022399-JH-078	Soil	02/23/99	PCBs
B-15	2/4	S-022399-JH-079	Soil	02/23/99	PCBs
B-15	4/6	S-022399-JH-080	Soil	02/23/99	PCBs
B-15	6/8	S-022399-JH-081	Soil	02/23/99	PCBs
Phase 3 - September 1999					
B-20	0/2	S-091399-JH-082	Soil	09/13/99	PCBs
B-20	2/4	S-091399-JH-083	Soil	09/13/99	PCBs
B-20	4/6	S-091399-JH-084	Soil	09/13/99	PCBs
B-20	6/8	S-091399-JH-085	Soil	09/13/99	PCBs
B-21	0/2	S-091399-JH-086	Soil	09/13/99	PCBs
B-21	2/4	S-091399-JH-087	Soil	09/13/99	PCBs
B-21	4/6	S-091399-JH-088	Soil	09/13/99	PCBs
B-21	6/8	S-091399-JH-089	Soil	09/13/99	PCBs

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Phase 3 - September 1999 (continued)					
B-26	0/2	S-091499-JH-106	Soil	09/14/99	PCBs
B-26	2/4	S-091499-JH-107	Soil	09/14/99	PCBs
B-26	4/6	S-091499-JH-108	Soil	09/14/99	PCBs
B-26	6/8	S-091499-JH-109	Soil	09/14/99	PCBs
Phase 4 - March 2005					
B-60	0/2	S-030105-JH-001	Soil	03/01/05	PCBs
B-60	2/4	S-030105-JH-002	Soil	03/01/05	PCBs
B-60	4/6	S-030105-JH-003	Soil	03/01/05	PCBs
B-60	6/7	S-030105-JH-004	Soil	03/01/05	PCBs
B-59	0/2	S-030105-JH-005	Soil	03/01/05	PCBs
B-59	2/4	S-030105-JH-006	Soil	03/01/05	PCBs
B-59	4/6	S-030105-JH-007	Soil	03/01/05	PCBs
B-58	0/2	S-030105-JH-008	Soil	03/01/05	PCBs
B-58	2/4	S-030105-JH-009	Soil	03/01/05	PCBs
B-61	0/2	S-030105-JH-010	Soil	03/01/05	PCBs
B-61	2/4	S-030105-JH-011	Soil	03/01/05	PCBs
B-61	4/6	S-030105-JH-012	Soil	03/01/05	PCBs
B-61	6/7	S-030105-JH-013	Soil	03/01/05	PCBs
B-62	0/2	S-030105-JH-014	Soil	03/01/05	PCBs
B-62	2/4	S-030105-JH-015	Soil	03/01/05	PCBs
B-62	4/6	S-030105-JH-016	Soil	03/01/05	PCBs
B-62	6/8	S-030105-JH-017	Soil	03/01/05	PCBs
B-62	8/10	S-030105-JH-018	Soil	03/01/05	PCBs
B-64	0/2	S-030105-JH-019	Soil	03/01/05	PCBs
B-64	2/4	S-030105-JH-020	Soil	03/01/05	PCBs
B-64	4/6	S-030105-JH-021	Soil	03/01/05	PCBs
B-64	6/8	S-030105-JH-022	Soil	03/01/05	PCBs
B-64	8/10	S-030105-JH-023	Soil	03/01/05	PCBs

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Phase 4 - March 2005 (continued)					
B-63	0/2	S-030105-JH-024	Soil	03/01/05	PCBs
B-63	2/4	S-030105-JH-025	Soil	03/01/05	PCBs
B-63	4/6	S-030105-JH-026	Soil	03/01/05	PCBs
B-65	0/2	S-030105-JH-027	Soil	03/01/05	PCBs
B-65	2/4	S-030105-JH-028	Soil	03/01/05	PCBs
B-65	4/6	S-030105-JH-029	Soil	03/01/05	PCBs
B-65	6/7	S-030105-JH-030	Soil	03/01/05	PCBs
B-66	0/2	S-030105-JH-031	Soil	03/01/05	PCBs
B-66	2/4	S-030105-JH-032	Soil	03/01/05	PCBs
B-57	0/2	S-030205-JH-033	Soil	03/02/05	PCBs
B-57	2/4	S-030205-JH-034	Soil	03/02/05	PCBs
B-57	4/6	S-030205-JH-035	Soil	03/02/05	PCBs
B-57	6/7	S-030205-JH-036	Soil	03/02/05	PCBs
B-56	0/2	S-030205-JH-037	Soil	03/02/05	PCBs
B-56	2/4	S-030205-JH-038	Soil	03/02/05	PCBs
B-56	4/6	S-030205-JH-039	Soil	03/02/05	PCBs
B-56	6/7	S-030205-JH-040	Soil	03/02/05	PCBs
B-55	0/2	S-030205-JH-041	Soil	03/02/05	PCBs
B-55	2/4	S-030205-JH-042	Soil	03/02/05	PCBs
B-55	4/6	S-030205-JH-043	Soil	03/02/05	PCBs
B-55	6/7	S-030205-JH-044	Soil	03/02/05	PCBs
B-54	0/2	S-030205-JH-045	Soil	03/02/05	PCBs
B-54	2/4	S-030205-JH-046	Soil	03/02/05	PCBs
B-54	4/6	S-030205-JH-047	Soil	03/02/05	PCBs
B-54	6/7	S-030205-JH-048	Soil	03/02/05	PCBs
B-53	0/2	S-030205-JH-049	Soil	03/02/05	PCBs
B-53	2/4	S-030205-JH-050	Soil	03/02/05	PCBs
B-53	4/6	S-030205-JH-051	Soil	03/02/05	PCBs
B-53	6/7	S-030205-JH-052	Soil	03/02/05	PCBs

TABLE 3.1

SUMMARY OF SOIL AND GROUNDWATER SAMPLES
COLLECTED BY CRA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location	*Sample Depth Interval (ft bgs)*	*Sample ID*	*Sample Type*	*Sample Date*	*Analytes*
Groundwater - December 1999 - January 2000					
MW-99C	- -	GW-121699-WP-001	Groundwater	12/16/99	PCBs
MW-99C	- -	GW-121699-WP-002	Groundwater	12/16/99	PCBs (Duplicate)
MW-99A	- -	GW-121699-WP-003	Groundwater	12/16/99	PCBs
MW-99B	- -	GW-010600-JH-001	Groundwater	01/06/00	PCBs

Notes:
ft bgs - feet below ground surface
PCBs - polychlorinated biphenyls

TABLE 3.2

SUMMARY OF WELL DEVELOPMENT PARAMETERS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Well Number	*Date Conducted*	*Depth to Water (ft BTOC)*	*Well Volume (gallons)*	*Volume Removed (gallons)*	*pH (Standard Units)*	*Conductivity (µS/cm)*	*Temperature (°C)*	*Appearance*
MW-99A	11/16/1999	14.01	0.95	2.5	7.10	842	16.0	very turbid, gray
				5.0	7.18	888	16.6	very turbid, gray
				7.5	7.23	870	16.3	cloudy, gray
				10.0	7.25	880	16.4	cloudy, gray
				12.5	7.33	888	15.8	slightly cloudy, gray
				15.0	7.29	885	16.3	slightly cloudy, gray
				17.5	7.29	885	16.2	slightly cloudy, gray
				20.0	7.25	884	16.3	slightly cloudy, gray
				22.5	7.29	887	16.3	slightly cloudy, gray
				25.0	7.30	885	16.3	very slightly cloudy, gray
				27.5	7.27	880	16.3	very slightly cloudy, gray
				30.0	7.26	875	16.3	clear
				32.5	7.31	870	16.3	clear
				35.0	7.26	868	16.3	clear
MW-99B	11/16/1999	Dry	-	-	-	-	-	
	12/16/1999	18.72	0.5	0.5	6.51	1,460	7.7	clear
								purged dry at 0.6 gallons
MW-99c	11/16/1999	16.95	0.5	2.5	7.50	778	15.4	very turbid, gray
		Slow recovery		5	7.38	772	15.4	cloudy, gray
				6	7.14	747	16.4	clear
				7	7.20	756	16.4	clear
				8	7.22	758	16.4	clear
				9	7.23	757	16.3	clear
				10	7.22	759	16.3	clear

ft BTOC - feet below top of casing
µS/cm - microsiemens per centimeter
°C - degrees Celcius

TABLE 3.3

SUMMARY OF GROUNDWATER ELEVATION DATA
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

		November 19, 1999		*December 16, 1999*		*February 11, 2000*	
Well Identification	*Top of Casing Elevation (ft AMSL)*	*Depth to Water (ft BTOC)*	*Groundwater Elevation (ft AMSL)*	*Depth to Water (ft BTOC)*	*Groundwater Elevation (ft AMSL)*	*Depth to Water (ft BTOC)*	*Groundwater Elevation (ft AMSL)*
G-101S	460.52	12.00	448.52	12.43	448.09	13.02	447.50
G-102S	449.59	7.86	441.73	6.89	442.70	6.79	442.80
P-109	451.96	8.43	443.53	8.48	443.48	8.86	443.10
MW-99A	462.98	14.06	451.17	14.31	450.92	14.83	450.40
MW-99B	465.23	Dry	NA	18.72	442.96	18.91	442.77
MW-99C	461.68	13.35	448.33	13.45	448.23	13.86	447.82

Notes:
ft AMSL - feet above mean sea level
ft BTOC - feet below top of casing
NA - not applicable

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

K-1			*K-3*			*M-3*			*P-3*			*Q-29*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	13		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	--		3 - 4	29		3 - 4	--		3 - 4	--		3 - 4	33	
4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	25		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	23		6 - 7	--		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--	Clay @ 8.7	8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--	Clay @ 9.8	9 - 10	--		9 - 10	--	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	20		10 - 11	--	
11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	Clay @ 11.1	11 - 12	20	Clay @ 11.7
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

Q-34			*T-32*			*T-36*			*T-42*			*T-46*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	--		3 - 4	--		3 - 4	42		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	--		4 - 5	14		4 - 5	--		4 - 5	110	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	35		10 - 11	45	Clay @ 10.8
11 - 12	--		11 - 12	19	Clay @ 12.5	11 - 12	48	Clay @ 11.5	11 - 12	--	Clay @ 11.2	11 - 12	--	
12 - 13	3	Clay @ 12.4	12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

U-50			*W-5*			*W-9*			*W-30*			*W-39*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	220		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	120	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	--		6 - 7	<8		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--	
10 - 11	290	Clay @ 10.8	10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--	
11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	Clay @ 11.5	11 - 12	5.4	Clay @ 11.3
12 - 13	--		12 - 13	23	Clay @ 12.5	12 - 13	--	Clay @ 12.2	12 - 13	--		12 - 13	--	

Y-7			*Y-19*			*AA-7*			*AA-13*			*CC-3*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	Sand heaving,	0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	couldn't	1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	reach clay	2 - 3	--	
3 - 4	??		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	17		9 - 10	--		9 - 10	36		9 - 10	--		9 - 10	--	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--	
11 - 12	--	Clay @ 11.2	11 - 12	49	Clay @ 11.6	11 - 12	--	Clay @ 11.4	11 - 12	--		11 - 12	4.9	Clay @ 11.5
12 - 13	--		12 - 13			12 - 13	--		12 - 13	--		12 - 13	--	

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

CC-7			*K-13*			*K-13A*			*K-13B*			*K-13C*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	4.2		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	24		5 - 6	63		5 - 6	42	
6 - 7	--		6 - 7	--		6 - 7	28		6 - 7	63		6 - 7	41	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	150		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	150		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--	
11 - 12	18	Clay @ 11.3	11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

R-19			*R-19A*			*R-19B*			*R-19C*			*R-19D*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	0.64		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	9.8		3 - 4			3 - 4	87		3 - 4	67		3 - 4	--	
4 - 5	14		4 - 5	340		4 - 5	17		4 - 5	39		4 - 5	--	
5 - 6	--		5 - 6	48		5 - 6	55		5 - 6	160		5 - 6	38	
6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	160		6 - 7	110	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	11		7 - 8	44	
8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--	
11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

R-19E			*H-11*			*H-15*			*K-9*			*K-17*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	28		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	160		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	68		5 - 6	--	
6 - 7	--		6 - 7	37		6 - 7	58		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	190		7 - 8	71	
8 - 9	--		8 - 9	0.4		8 - 9	--		8 - 9	200		8 - 9	--	
9 - 10	--		9 - 10	--	Clay @ 8.7	9 - 10	1.1	Clay @ 9.0	9 - 10	--	Clay @ 9.2	9 - 10	0.5	
10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--		10 - 11	--	Clay @ 10.0
11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

L-10			*L-14*			*M-7*			*M-11*			*M-15*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	--	
3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	17		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	55		6 - 7	--	
7 - 8	--		7 - 8	61		7 - 8	29		7 - 8	--		7 - 8	--	
8 - 9	59		8 - 9	--		8 - 9	--		8 - 9	--		8 - 9	38	
9 - 10	--	Clay @ 9.7	9 - 10	100		9 - 10	320		9 - 10	20		9 - 10	--	Clay @ 9.5
10 - 11	--		10 - 11	--	Clay @ 10.5	10 - 11	--	Clay @ 10.7	10 - 11	--	Clay @ 10.2	10 - 11	--	
11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--		11 - 12	--	
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

M-19			*P-9*			*P-15*			*P-19*			*P-23*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	66		2 - 3	--		2 - 3	--		2 - 3	--		2 - 3	160	
3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	26		4 - 5	100		4 - 5	200		4 - 5	220	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--	
6 - 7	--		6 - 7	--		6 - 7	72		6 - 7	--		6 - 7	84	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	110		8 - 9	3.4		8 - 9	43	
9 - 10	51		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--	
10 - 11	--	Clay @ 10.7	10 - 11	31		10 - 11	59		10 - 11	140		10 - 11	38	
11 - 12	--		11 - 12	--	Clay @ 11.5	11 - 12	--	Clay @ 11.2	11 - 12	--	Clay @ 11.2	11 - 12	--	Clay @ 11.0
12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--		12 - 13	--	

R-13			*R24*			*T-28*			*U-14*			*U-22*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	--		2 - 3	16		2 - 3	--		2 - 3	--	
3 - 4	--		3 - 4	--		3 - 4	--		3 - 4	150		3 - 4	28	
4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	--		5 - 6	28	
6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	35		8 - 9	61		8 - 9	35	
9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	--		9 - 10	300	
10 - 11	--		10 - 11	--		10 - 11	45		10 - 11	48		10 - 11	--	
11 - 12	22		11 - 12	33		11 - 12	--	Clay @ 11.7	11 - 12	--	Clay @ 11.2	11 - 12	73	
12 - 13	--	Clay @ 12.0	12 - 13	--	Clay @ 12.2	12 - 13	--		12 - 13	--		12 - 13	--	Clay @ 12.5

TABLE 4.1

SOIL ANALYTICAL RESULTS
COLLECTED BY CATERPILLAR
CATERPILLAR DRUM STORAGE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

W-13			*W-25*			*EX-1*		
Depth Interval (ft bgs)	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*	*Depth Interval (ft bgs)*	*PCB Result (mg/kg)*	*Observation*
0 - 1	--		0 - 1	--		0 - 1	--	
1 - 2	--		1 - 2	--		1 - 2	--	
2 - 3	--		2 - 3	19		2 - 3	--	
3 - 4	82		3 - 4	--		3 - 4	--	
4 - 5	--		4 - 5	--		4 - 5	--	
5 - 6	--		5 - 6	--		5 - 6	<DL	
6 - 7	47		6 - 7	36		6 - 7	--	
7 - 8	--		7 - 8	--		7 - 8	--	
8 - 9	--		8 - 9	--		8 - 9	--	
9 - 10	--		9 - 10	--		9 - 10	--	Clay @ 9.0
10 - 11	46		10 - 11	47		10 - 11	--	
11 - 12	--	Clay @ 11.7	11 - 12	--	Clay @ 11.5	11 - 12	--	
12 - 13	--		12 - 13	--		12 - 13	--	

Notes:
ft bgs - feet below ground surface
mg/kg - milligrams per kilogram
<DL - less than detection limit

TABLE 4.2

SUMMARY OF CRA SOIL ANALYTICAL RESULTS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location		*B-1*	*B-1*	*B-1*	*B-1*	*B-2*	*B-2*	*B-2*	*B-2*	*B-3*	*B-3*	*B-3*
Sample Identification		*S-120198-JH-032*	*S-120198-JH-033*	*S-120198-JH-034*	*S-120198-JH-035*	*S-120198-JH-015*	*S-120198-JH-016*	*S-120198-JH-017*	*S-120198-JH-018*	*S-120198-JH-001*	*S-120198-JH-002*	*S-120198-JH-003*
Sample Date		*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*
Sample Depth (ft bgs)	*Units*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(3-5)*	*(5-7)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	ND(0.35)	ND(0.37)	ND(0.036)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	ND(0.35)	ND(0.37)	ND(0.036)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	ND(0.35)	ND(0.37)	ND(0.036)
Aroclor-1242 (PCB-1242)	mg/kg	1	ND(0.2)	64	39	ND(0.035)	ND(0.036)	570	1.2	ND(0.35)	1.8	ND(0.036)
Aroclor-1248 (PCB-1248)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	2.4	ND(0.37)	0.48
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	ND(0.35)	ND(0.37)	ND(0.036)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.37)	ND(0.2)	ND(3.9)	ND(4.3)	ND(0.035)	ND(0.036)	ND(75)	ND(0.39)	ND(0.35)	ND(0.37)	ND(0.036)

Sample Location		*B-3*	*B-3*	*B-4*	*B-4*	*B-4*	*B-4*	*B-4*	*B-5*	*B-5*	*B-5*	*B-5*
Sample Identification		*S-120198-JH-004*	*S-120198-JH-005*	*S-120198-JH-006*	*S-120198-JH-007*	*S-120198-JH-008*	*S-120198-JH-009*	*S-120198-JH-010*	*S-120198-JH-011*	*S-120198-JH-012*	*S-120198-JH-013*	*S-120198-JH-014*
Sample Date		*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*
Sample Depth (ft bgs)	*Units*	*(7-9)*	*(9-11)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-10)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	ND(3.8)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	ND(3.8)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	ND(3.8)
Aroclor-1242 (PCB-1242)	mg/kg	ND(0.034)	ND(0.043)	3.4	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	21
Aroclor-1248 (PCB-1248)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	1.2	ND(0.036)	0.22	3.3	1.4	ND(3.8)
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	ND(3.8)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.034)	ND(0.043)	ND(0.36)	ND(0.036)	ND(0.036)	ND(0.36)	ND(0.036)	ND(0.034)	ND(0.35)	ND(0.35)	ND(3.8)

Sample Location		*B-6*	*B-6*	*B-6*	*B-6*	*B-7*	*B-7*	*B-7*	*B-7*	*B-8*	*B-8*	*B-8*
Sample Identification		*S-120198-JH-019*	*S-120198-JH-020*	*S-120198-JH-021*	*S-120198-JH-022*	*S-120198-JH-023*	*S-120198-JH-024*	*S-120198-JH-025*	*S-120198-JH-026*	*S-120198-JH-027*	*S-120198-JH-028*	*S-120198-JH-029*
Sample Date		*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*	*12/1/1998*
Sample Depth (ft bgs)	*Units*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-5)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(1.1)	ND(0.36)	ND(0.35)	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	ND(1.8)	ND(3.7)	120
Aroclor-1221 (PCB-1221)	mg/kg	ND(1.1)	ND(0.36)	ND(0.35)	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	ND(1.8)	ND(3.7)	ND(36)
Aroclor-1232 (PCB-1232)	mg/kg	ND(1.1)	ND(0.36)	ND(0.35)	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	ND(1.8)	ND(3.7)	ND(36)
Aroclor-1242 (PCB-1242)	mg/kg	6.7	ND(0.36)	ND(0.35)	57	14	260	17	92	ND(1.8)	6.8	ND(36)
Aroclor-1248 (PCB-1248)	mg/kg	ND(1.1)	1.5	1.8	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	6.1	ND(3.7)	ND(36)
Aroclor-1254 (PCB-1254)	mg/kg	ND(1.1)	ND(0.36)	ND(0.35)	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	ND(1.8)	ND(3.7)	ND(36)
Aroclor-1260 (PCB-1260)	mg/kg	ND(1.1)	ND(0.36)	ND(0.35)	ND(3.8)	ND(3.7)	ND(34)	ND(3.8)	ND(39)	ND(1.8)	ND(3.7)	ND(36)

TABLE 4.2

SUMMARY OF CRA SOIL ANALYTICAL RESULTS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location		*B-8*	*B-8*	*B-9*	*B-9*	*B-9*	*B-9*	*B-10*	*B-10*	*B-10*	*B-10*	*B-11*
Sample Identification		*S-120198-JH-030*	*S-120198-JH-031*	*S-120298-JH-058*	*S-120298-JH-059*	*S-120298-JH-060*	*S-120298-JH-061*	*S-120298-JH-036*	*S-120298-JH-037*	*S-120298-JH-038*	*S-120298-JH-039*	*S-120298-JH-053*
Sample Date		*12/1/1998*	*12/1/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*
Sample Depth (ft bgs)	*Units*	*(5-7)*	*(7-9)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(38)	ND(3.7)	ND(0.036)	29	73	700	0.43	58	7.7	ND(3.6)	ND(0.36)
Aroclor-1221 (PCB-1221)	mg/kg	ND(38)	ND(3.7)	ND(0.036)	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	ND(3.6)	ND(0.36)
Aroclor-1232 (PCB-1232)	mg/kg	ND(38)	ND(3.7)	ND(0.036)	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	ND(3.6)	ND(0.36)
Aroclor-1242 (PCB-1242)	mg/kg	130	35	ND(0.036)	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	10	ND(0.36)
Aroclor-1248 (PCB-1248)	mg/kg	ND(38)	ND(3.7)	0.19	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	ND(3.6)	1.2
Aroclor-1254 (PCB-1254)	mg/kg	ND(38)	ND(3.7)	ND(0.036)	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	ND(3.6)	ND(0.36)
Aroclor-1260 (PCB-1260)	mg/kg	ND(38)	ND(3.7)	ND(0.036)	ND(3.6)	ND(18)	ND(180)	ND(0.18)	ND(36)	ND(3.6)	ND(3.6)	ND(0.36)

Sample Location		*B-11*	*B-11*	*B-11*	*B-11*	*B-12*	*B-12*	*B-12*	*B-12*	*B-13*	*B-13*	*B-13*
Sample Identification		*S-120298-JH-054*	*S-120298-JH-055*	*S-120298-JH-056*	*S-120298-JH-057*	*S-120298-JH-049*	*S-120298-JH-050*	*S-120298-JH-051*	*S-120298-JH-052*	*S-120298-JH-040*	*S-120298-JH-041*	*S-120298-JH-042*
Sample Date		*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*
Sample Depth (ft bgs)	*Units*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-9)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.35)	ND(0.37)	ND(3.4)	ND(18)	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	ND(1.8)	ND(3.6)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.35)	ND(0.37)	ND(3.4)	ND(18)	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	ND(1.8)	ND(3.6)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.35)	ND(0.37)	ND(3.4)	ND(18)	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	ND(1.8)	ND(3.6)
Aroclor-1242 (PCB-1242)	mg/kg	ND(0.35)	2	13	110	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	5.3	17
Aroclor-1248 (PCB-1248)	mg/kg	0.87	ND(0.37)	ND(3.4)	ND(18)	96	75	ND(0.038)	ND(0.038)	1.6	ND(1.8)	ND(3.6)
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.35)	ND(0.37)	ND(3.4)	ND(18)	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	ND(1.8)	ND(3.6)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.35)	ND(0.37)	ND(3.4)	ND(18)	ND(18)	ND(19)	ND(0.038)	ND(0.038)	ND(0.36)	ND(1.8)	ND(3.6)

Sample Location		*B-13*	*B-14*	*B-14*	*B-14*	*B-14*	*B-14*	*B-15*	*B-15*	*B-15*	*B-15*	*B-16*
Sample Identification		*S-120298-JH-043*	*S-120298-JH-044*	*S-120298-JH-045*	*S-120298-JH-046*	*S-120298-JH-047*	*S-120298-JH-048*	*S-022399-JH-078*	*S-022399-JH-079*	*S-022399-JH-080*	*S-022399-JH-081*	*S-022399-JH-070*
Sample Date		*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*12/2/1998*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*
Sample Depth (ft bgs)	*Units*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-10)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)
Aroclor-1221 (PCB-1221)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)
Aroclor-1232 (PCB-1232)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)
Aroclor-1242 (PCB-1242)	mg/kg	19	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	17	58	13	180	1.6
Aroclor-1248 (PCB-1248)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)
Aroclor-1254 (PCB-1254)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)
Aroclor-1260 (PCB-1260)	mg/kg	ND(3.7)	ND(0.038)	ND(0.038)	ND(0.039)	ND(0.036)	ND(0.036)	ND(3.7)	ND(18)	ND(3.5)	ND(38)	ND(0.47)

TABLE 4.2

SUMMARY OF CRA SOIL ANALYTICAL RESULTS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location		*B-16*	*B-16*	*B-16*	*B-17*	*B-17*	*B-17*	*B-17*	*B-18*	*B-18*	*B-18*	*B-18*
Sample Identification		*S-022399-JH-071*	*S-022399-JH-072*	*S-022399-JH-073*	*S-022399-JH-074*	*S-022399-JH-075*	*S-022399-JH-076*	*S-022399-JH-077*	*S-022399-JH-062*	*S-022399-JH-063*	*S-022399-JH-064*	*S-022399-JH-065*
Sample Date		*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*
Sample Depth (ft bgs)	*Units*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)
Aroclor-1242 (PCB-1242)	mg/kg	0.08	17	0.37	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	0.55	0.62	ND(0.036)	ND(0.039)
Aroclor-1248 (PCB-1248)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.038)	ND(3.6)	ND(0.037)	ND(0.038)	ND(0.033)	ND(0.039)	ND(0.039)	ND(0.38)	ND(0.37)	ND(0.036)	ND(0.039)

Sample Location		*B-19*	*B-19*	*B-19*	*B-19*	*B-20*	*B-20*	*B-20*	*B-20*	*B-21*	*B-21*	*B-21*
Sample Identification		*S-022399-JH-066*	*S-022399-JH-067*	*S-022399-JH-068*	*S-022399-JH-069*	*S-091399-JH-082*	*S-091399-JH-083*	*S-091399-JH-084*	*S-091399-JH-085*	*S-091399-JH-086*	*S-091399-JH-087*	*S-091399-JH-088*
Sample Date		*2/23/1999*	*2/23/1999*	*2/23/1999*	*2/23/1999*	*9/13/1999*	*9/13/1999*	*9/13/1999*	*9/13/1999*	*9/13/1999*	*9/13/1999*	*9/13/1999*
Sample Depth (ft bgs)	*Units*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	ND(0.037)	ND(0.038)	ND(0.038)	ND(0.037)	ND(0.35)	ND(0.036)	ND(0.038)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	ND(0.037)	ND(0.038)	ND(0.038)	ND(0.037)	ND(0.35)	ND(0.036)	ND(0.038)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	ND(0.037)	ND(0.038)	ND(0.038)	ND(0.037)	ND(0.35)	ND(0.036)	ND(0.038)
Aroclor-1242 (PCB-1242)	mg/kg	3.2	40	38	36	ND(0.037)	ND(0.038)	ND(0.038)	0.24	ND(0.35)	ND(0.036)	ND(0.038)
Aroclor-1248 (PCB-1248)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	0.068	0.11	0.16	ND(0.037)	1.3	0.32	0.55
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	ND(0.037)	ND(0.038)	ND(0.038)	ND(0.037)	ND(0.35)	ND(0.036)	ND(0.038)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.35)	ND(3.7)	ND(3.6)	ND(3.9)	ND(0.037)	ND(0.038)	ND(0.038)	ND(0.037)	ND(0.35)	ND(0.036)	ND(0.038)

Sample Location		*B-21*	*B-26*	*B-26*	*B-26*	*B-26*	*B-53*	*B-53*	*B-53*	*B-53*	*B-54*	*B-54*
Sample Identification		*S-091399-JH-089*	*S-091499-JH-106*	*S-091499-JH-107*	*S-091499-JH-108*	*S-091499-JH-109*	*S-030205-JH-049*	*S-030205-JH-050*	*S-030205-JH-051*	*S-030205-JH-052*	*S-030205-JH-045*	*S-030205-JH-046*
Sample Date		*9/13/1999*	*9/14/1999*	*9/14/1999*	*9/14/1999*	*9/14/1999*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*
Sample Depth (ft bgs)	*Units*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-7)*	*(0-2)*	*(2-4)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	ND(0.035)	ND(0.038)	ND(0.04)	ND(1.8)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	ND(0.035)	ND(0.038)	ND(0.04)	ND(1.8)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	ND(0.035)	ND(0.038)	ND(0.04)	ND(1.8)
Aroclor-1242 (PCB-1242)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	ND(0.035)	ND(0.038)	0.07	29
Aroclor-1248 (PCB-1248)	mg/kg	1.6	0.078	0.12	0.14	0.049	0.046	0.17	0.28	ND(0.038)	ND(0.04)	ND(1.8)
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	ND(0.035)	ND(0.038)	ND(0.04)	ND(1.8)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.18)	ND(0.034)	ND(0.037)	ND(0.034)	ND(0.034)	ND(0.04)	ND(0.068)	0.056	ND(0.038)	ND(0.04)	ND(1.8)

TABLE 4.2

SUMMARY OF CRA SOIL ANALYTICAL RESULTS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location		*B-54*	*B-54*	*B-55*	*B-55*	*B-55*	*B-55*	*B-56*	*B-56*	*B-56*	*B-56*	*B-57*
Sample Identification		*S-030205-JH-047*	*S-030205-JH-048*	*S-030205-JH-041*	*S-030205-JH-042*	*S-030205-JH-043*	*S-030205-JH-044*	*S-030205-JH-037*	*S-030205-JH-038*	*S-030205-JH-039*	*S-030205-JH-040*	*S-030205-JH-033*
Sample Date		*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/2/2005*
Sample Depth (ft bgs)	*Units*	*(4-6)*	*(6-7)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-7)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-7)*	*(0-2)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(1.8)	ND(7.4)	ND(1.8)	ND(7.4)	ND(18)	ND(7.3)	ND(0.71)	ND(19)	ND(36)	ND(74)	ND(7.5)
Aroclor-1221 (PCB-1221)	mg/kg	ND(1.8)	ND(7.4)	ND(1.8)	ND(7.4)	ND(18)	ND(7.3)	ND(0.71)	ND(19)	ND(36)	ND(74)	ND(7.5)
Aroclor-1232 (PCB-1232)	mg/kg	ND(1.8)	ND(7.4)	ND(1.8)	ND(7.4)	ND(18)	ND(7.3)	ND(0.71)	ND(19)	ND(36)	ND(74)	ND(7.5)
Aroclor-1242 (PCB-1242)	mg/kg	18	ND(7.4)	ND(1.8)	50	56	77	ND(0.71)	51	260	1200	ND(7.5)
Aroclor-1248 (PCB-1248)	mg/kg	ND(1.8)	43	4.9	ND(7.4)	ND(18)	ND(7.3)	3.7	ND(19)	ND(36)	ND(74)	46
Aroclor-1254 (PCB-1254)	mg/kg	ND(1.8)	ND(7.4)	ND(1.8)	ND(7.4)	ND(18)	ND(7.3)	ND(0.71)	ND(19)	ND(36)	ND(74)	ND(7.5)
Aroclor-1260 (PCB-1260)	mg/kg	ND(1.8)	ND(7.4)	ND(1.8)	ND(7.4)	ND(18)	ND(7.3)	ND(0.71)	ND(19)	ND(36)	ND(74)	ND(7.5)

Sample Location		*B-57*	*B-57*	*B-57*	*B-58*	*B-58*	*B-59*	*B-59*	*B-59*	*B-60*	*B-60*	*B-60*
Sample Identification		*S-030205-JH-034*	*S-030205-JH-035*	*S-030205-JH-036*	*S-030105-JH-008*	*S-030105-JH-009*	*S-030105-JH-005*	*S-030105-JH-006*	*S-030105-JH-007*	*S-030105-JH-001*	*S-030105-JH-002*	*S-030105-JH-003*
Sample Date		*3/2/2005*	*3/2/2005*	*3/2/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*
Sample Depth (ft bgs)	*Units*	*(2-4)*	*(4-6)*	*(6-7)*	*(0-2)*	*(2-4)*	*(0-2)*	*(2-4)*	*(4-6)*	*(0-2)*	*(2-4)*	*(4-6)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	ND(1.9)	ND(18)
Aroclor-1221 (PCB-1221)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	ND(1.9)	ND(18)
Aroclor-1232 (PCB-1232)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	ND(1.9)	ND(18)
Aroclor-1242 (PCB-1242)	mg/kg	11	21	18	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	29	81
Aroclor-1248 (PCB-1248)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	0.28	8.7	17	8.6	ND(0.039)	16	ND(1.9)	ND(18)
Aroclor-1254 (PCB-1254)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	ND(1.9)	ND(18)
Aroclor-1260 (PCB-1260)	mg/kg	ND(1.8)	ND(3.8)	ND(1.9)	ND(0.074)	ND(1.9)	ND(3.6)	ND(1.8)	ND(0.039)	ND(1.9)	ND(1.9)	ND(18)

Sample Location		*B-60*	*B-61*	*B-61*	*B-61*	*B-61*	*B-62*	*B-62*	*B-62*	*B-62*	*B-62*	*B-63*
Sample Identification		*S-030105-JH-004*	*S-030105-JH-010*	*S-030105-JH-011*	*S-030105-JH-012*	*S-030105-JH-013*	*S-030105-JH-014*	*S-030105-JH-015*	*S-030105-JH-016*	*S-030105-JH-017*	*S-030105-JH-018*	*S-030105-JH-024*
Sample Date		*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*
Sample Depth (ft bgs)	*Units*	*(6-7)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-7)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-10)*	*(0-2)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(1.9)	ND(1.8)	ND(7.5)	ND(7.4)	ND(3.7)	ND(3.6)	ND(1.8)	ND(0.035)	ND(0.034)	ND(0.034)	ND(19)
Aroclor-1221 (PCB-1221)	mg/kg	ND(1.9)	ND(1.8)	ND(7.5)	ND(7.4)	ND(3.7)	ND(3.6)	ND(1.8)	ND(0.035)	ND(0.034)	ND(0.034)	ND(19)
Aroclor-1232 (PCB-1232)	mg/kg	ND(1.9)	ND(1.8)	ND(7.5)	ND(7.4)	ND(3.7)	ND(3.6)	ND(1.8)	0.14	ND(0.034)	ND(0.034)	ND(19)
Aroclor-1242 (PCB-1242)	mg/kg	15	ND(1.8)	28	22	13	ND(3.6)	ND(1.8)	ND(0.035)	ND(0.034)	0.037	ND(19)
Aroclor-1248 (PCB-1248)	mg/kg	ND(1.9)	5.7	ND(7.5)	ND(7.4)	ND(3.7)	12	11	ND(0.035)	ND(0.034)	ND(0.034)	85
Aroclor-1254 (PCB-1254)	mg/kg	ND(1.9)	ND(1.8)	ND(7.5)	ND(7.4)	ND(3.7)	ND(3.6)	ND(1.8)	ND(0.035)	ND(0.034)	ND(0.034)	ND(19)
Aroclor-1260 (PCB-1260)	mg/kg	ND(1.9)	ND(1.8)	ND(7.5)	ND(7.4)	ND(3.7)	ND(3.6)	ND(1.8)	ND(0.035)	ND(0.034)	ND(0.034)	ND(19)

TABLE 4.2

SUMMARY OF CRA SOIL ANALYTICAL RESULTS
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Sample Location		*B-63*	*B-63*	*B-64*	*B-64*	*B-64*	*B-64*	*B-64*	*B-65*	*B-65*	*B-65*	*B-65*
Sample Identification		*S-030105-JH-025*	*S-030105-JH-026*	*S-030105-JH-019*	*S-030105-JH-020*	*S-030105-JH-021*	*S-030105-JH-022*	*S-030105-JH-023*	*S-030105-JH-027*	*S-030105-JH-028*	*S-030105-JH-029*	*S-030105-JH-030*
Sample Date		*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*	*3/1/2005*
Sample Depth (ft bgs)	*Units*	*(2-4)*	*(4-6)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-8)*	*(8-10)*	*(0-2)*	*(2-4)*	*(4-6)*	*(6-7)*
PCBs												
Aroclor-1016 (PCB-1016)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)
Aroclor-1221 (PCB-1221)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)
Aroclor-1232 (PCB-1232)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)
Aroclor-1242 (PCB-1242)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	41	0.062	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)
Aroclor-1248 (PCB-1248)	mg/kg	0.075	ND(0.036)	2.5	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	3.3	0.6	0.12	0.28
Aroclor-1254 (PCB-1254)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)
Aroclor-1260 (PCB-1260)	mg/kg	ND(0.047)	ND(0.036)	ND(0.72)	ND(0.035)	ND(0.035)	ND(3.7)	ND(0.038)	ND(0.75)	ND(0.19)	ND(0.035)	ND(0.069)

Sample Location		*B-66*	*B-66*
Sample Identification		*S-030105-JH-031*	*S-030105-JH-032*
Sample Date		*3/1/2005*	*3/1/2005*
Sample Depth (ft bgs)	*Units*	*(0-2)*	*(2-4)*
PCBs			
Aroclor-1016 (PCB-1016)	mg/kg	ND(19)	ND(7.6)
Aroclor-1221 (PCB-1221)	mg/kg	ND(19)	ND(7.6)
Aroclor-1232 (PCB-1232)	mg/kg	ND(19)	ND(7.6)
Aroclor-1242 (PCB-1242)	mg/kg	ND(19)	ND(7.6)
Aroclor-1248 (PCB-1248)	mg/kg	77	46
Aroclor-1254 (PCB-1254)	mg/kg	ND(19)	ND(7.6)
Aroclor-1260 (PCB-1260)	mg/kg	ND(19)	ND(7.6)

Notes:
ft bgs - feet below ground surface
mg/kg - milligrams per kilogram
ND ( ) - not detected at the detection limit shown in parentheses.

TABLE 8.1

POTENTIAL CHEMICAL-SPECIFIC ARARs
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Potential Chemical-Specific Requirements	*Citation*
Disposal of Polychlorinated Biphenyls	40 Code of Federal Regulations (CFR) 761
Risk-Based Cleanup Objectives	35 Illinois Administrative Code (IAC) 742
Illinois Water Quality Standards	35 IAC 302
Illinois Groundwater Quality Standards	35 IAC 620
Federal Drinking Water Standards	40 CFR 141

TABLE 8.2

POTENTIAL FEDERAL AND STATE LOCATION-SPECIFIC ARARS
SWALE AREA
CATERPILLAR, INC.
MAPLETON, ILLINOIS

Location	*Requirement*	*Citation*	*Applicable, Appropriate or Relevant*
Within 100-year floodplain	Facility must be designed, constructed, operated, and maintained to prevent washout.	40 CFR 264.18(b);	NA
Within floodplain	Action must avoid adverse effects, minimize potential harm, and if necessary, restore and preserve natural and beneficial values of the floodplain.	Executive Order 11988, Floodplain Management, (40 CFR 6, Appendix A)	NA
Within floodplain in Illinois	Action must avoid adverse effects, minimize potential harm, and restore and preserve natural and beneficial values of the floodplain. Construction of abodes or residences is prohibited and prior approval is required for other types of construction, excavation, or filling in or on a floodway. This includes but is not limited to construction of a fence, water treatment facility, dredging, and/or dewatering in a floodway.	Illinois Flood Control Act	NA
Wetland	Action must minimize the destruction, loss, or degradation of wetlands and to preserve the value of wetlands.	Executive Order 11990, Protection of Wetlands, (40 CFR 6, Appendix A)	NA
	Discharge of dredged or fill material into wetlands without permit is prohibited. Water quality certification may also be required from IDEM.	Clean Water Act, Sections 401 and 404; 40 CFR Parts 230, 231	

TABLE 8.2

POTENTIAL FEDERAL AND STATE LOCATION-SPECIFIC ARARS
SWALE AREA
CATERPILLAR, INC.
MAPLETON, ILLINOIS

Location	*Requirement*	*Citation*	*Applicable, Appropriate or Relevant*
Critical habitat upon which endangered species or threatened species depends	Action to conserve endangered species or threatened species, including consultation with the Department of Interior	Endangered Species Act of 1973 (16 USC 1531 et. Seq.); 50 CFR Part 200; 50 CFR Part 402 Fish and Wildlife Coordination Act (16 USC 661 et. seq.); 33 CFR Parts 320-330.	NA
Near a coastal zone	Protect land and waters of coastal zones.	Coastal Zone Management Act, 16 USC 1451	NA
Near a designated coastal barrier	Minimize the damage to fish, wildlife and other natural resources associated with the coastal barriers.	Coastal Barrier Resources Act, 16 USC 3501	NA
Near a Federally-owned area designated as a wilderness area	Protect and preserve Federally designated areas as "wilderness areas".	Wilderness Act, 16 USC 1131	NA
Near a National Wildlife Refuge System	Conservation of fish and wildlife including species that are threatened.	Wildlife Refuge, 16 USC 668 dd; 50 CFR 27	NA

Notes:
Modified from Exhibit 1-2 of USEPA's Draft Guidance CERCLA Compliance With Other Laws (August 1988).
N/A – Not Applicable

TABLE 8.3

POTENTIAL FEDERAL AND STATE ACTION-SPECIFIC ARARs
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Actions	*Requirement*	*Citation*
Construction Activity	Stormwater runoff associated with construction activity.	40 CFR 122.26; 35 IAC 309 Illinois General NPDES Permit No. ILR10
	Fugitive dust emissions during construction activity	35 IAC 212
Operation and maintenance (O&M)	Post-closure care to ensure that site is maintained and monitored.	40 CFR 264.118 (RCRA Subpart G)
	Develop Contingency Plan and Emergency Procedures to minimize potential hazards from fires, explosions or any unplanned release during closure and post-closure status.	40 CFR 264 (Subpart D)
Surface water control and discharge	Prevent run-on, and control and collect runoff from a 24-hour, 25-year storm during closure and post-closure status.	40 CFR 264.301(f)(g)(h)(i);
	Management of stormwater run-off associated with Construction Activity, and stormwater run-off associated with industrial activity.	40 CFR 122.26; 35 IAC 309; Illinois General NPDES Permit No. ILR10 (Construction) Illinois General NPDES Permit No. ILR00 (Industrial)
Excavation	Develop fugitive and odor emission control plan for this action if existing site plan is inadequate.	CAA Section 101[2]; 40 CFR 52[2]
	Particulate emissions from earth moving and material handling activities must be controlled, such that no visible emissions cross the property line and the increase in upward/downward total suspended particulate concentration is limited to 50 $\mu g/m^3$.	35 IAC 212
	Register with Commissioner of the State to include estimation of emission rates for each pollutant expected.	40 CFR 52[2]; 35 IAC 201

Notes:

1 Modified from Exhibit 1-3 of USEPA's Draft Guidance CERCLA Compliance With Other Laws (August 1988) and Exhibit 1-3 of CERCLA Compliance With Other Laws, Part II (August 1989).

2 All of the Clean Air Act ARARs that have been established by the Federal government may be covered by matching State regulations. The State may have the authority to manage these programs through the approval of its implementation plans (40 CFR 52).

Key:

CAA = Clean Air Act
CFR = Code of Federal Regulations
CWA = Clean Water Act
IAC = Illinois Administrative Code

TABLE 9.1

REMEDIAL TECHNOLOGIES SCREENING SUMMARY
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Technology	*Description*	*Effectiveness*	*Implementability*	*Short Term Risk*	*Relative Cost*	*Retain*
No Action						
No Action	No remedial technologies are implemented at the Site	May not achieve remedial action objectives	No Action alternative is required	None	Low	Yes
Administrative Controls and Monitoring						
Monitoring	Inspection of remedial measures (fencing, caps, etc.)	Effective at determining Site conditions	Easily implementable	Low	Low	Yes
Deed Restrictions	Restrictive covenants on deed	Effective at minimizing potential exposure to soil	Easily implementable	None	Low	Yes
Access Controls	Construct/maintain perimeter fencing	Effective at minimizing potential exposure to soil	Easily Implementable	Low	Low	Yes
Restrictive Ordinances	State or Local zoning restrictions on property use	Ineffective at Site	Not implementable. No zoning ordinances	None	Low	No

TABLE 9.1

REMEDIAL TECHNOLOGIES SCREENING SUMMARY
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Technology	*Description*	*Effectiveness*	*Implementability*	*Short Term Risk*	*Relative Cost*	*Retain*
Encapsulation						
Vegetative Cover	Place a layer of topsoil and seed	Effective at stabilizing surface soil. May not meet ARARs	Implementable	Low	Low	Yes
Capping	Construction of a barrier of clay, concrete, and asphalt meeting requirements of 761.61	Effective at minimizing exposure to soil, limiting percolation, and preventing erosion	Implementable	Low to Moderate	Moderate	Yes
Removal						
Excavation and Off-Site Landfilling	Excavate, transport, and dispose of soil at an off-Site landfill	Effective at minimizing exposure to soil. Permanently removes PCBs from Site	Implementable	Moderate	High	No
Soil Treatment						
Incineration	Excavate, transport, and treat soil at TSCA incineration facility	Permanent solution	Implementable	Moderate to High	Prohibitively High	No
Solvent Extraction/Washing	Chemically remove PCBs from soil	Permanent solution. Questionable effectiveness	Difficult to Implement	Moderate to High	Prohibitively High	No

TABLE 10.1

COST PROJECTION
ALTERNATIVE 2 - PARTIAL CAPPING/ VEGETATIVE COVER
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Description	*Units*	*Quantity*	*Unit Price*	*Total*
Capital Construction Costs				
Predesign Investigation	LS	1	$21,000.00	$21,000
Site Preparation				
Well Abandonment/Modifications	Each	6	$750.00	$4,500
Clearing and Grubbing	Acre	13	$500.00	$6,500
Rough Grading and Shaping	CY	11,500	$6.25	$71,875
AST Tank Farm Demolition				
AST Cleaning & Removal & Demolition of Structures	LS	1	$27,000.00	$27,000
T & D of Demolition Debris (120 CY Concrete)	CY	120	$36.00	$4,320
Diesel Tank Farm Demolition				
AST Cleaning & Removal	EA	1	$21,200.00	$21,200
T & D of Demolition Debris (120 CY concrete)	CY	120	$36.00	$4,320
Building P Demolition				
Remove Fan and Ductwork East of Building P	LS	1	$3,100.00	$3,100
Remove Fan Stack West of Building P Annex	LS	1	$2,900.00	$2,900
Remove Building P Annex	LS	1	$8,100.00	$8,100
Building V Pavement				
Concrete with reinforcement (6 in.)	SY	450	$36.00	$16,200
Base course placement (6 in. rock)	SY	450	$4.70	$2,115
Subgrade preparation	CY	140	$12.50	$1,750
Vegetative Cover Construction (9.3 acres)				
Topsoil (4")	CY	5,000	$30.00	$150,000
Seeding/Fertilizing/Mulching	Acre	9	$3,300.00	$30,690
Install Additional Groundwater Monitoring Wells	EA	7	$1,000.00	$7,000
Compacted Soil Cap (3.7 acres)				
Rework and compact subgrade (top 6 ")	CY	3,000	$1.05	$3,150
Compacted soil layer (6" use onsite soil)	CY	3,000	$15.00	$45,000
Topsoil (4")	CY	2,000	$30.00	$60,000
Seeding/Fertilizing/Mulching	Acre	4	$3,300.00	$12,210
Asphalt Roads and Driveways - Building R Complex				
Asphalt placement (4 in. binder + 3 in. surface)	SY	2,100	$17.50	$36,750
Base course placement with fabric (6 in. rock)	SY	2,100	$8.50	$17,850
Subgrade preparation	SY	2,100	$1.60	$3,360
Asphalt Access Road - Landfill Access Road				
Asphalt placement (4 in. binder + 3 in. surface)	SY	1,000	$17.50	$17,500
Base course placement with fabric (12 in. rock)	SY	1,000	$14.50	$14,500
Subgrade preparation	SY	1,000	$1.60	$1,600

TABLE 10.1

COST PROJECTION
ALTERNATIVE 2 - PARTIAL CAPPING/ VEGETATIVE COVER
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Description	*Units*	*Quantity*	*Unit Price*	*Total*
Grassed Drainage Channel (Land West of Building B)				
Grade and Shape	LF	1600	$0.50	$800
Seeding/Fertilizing/Mulching	Acre	1.4	$3,300.00	$4,620
Gabions at Outfall	SY	125	$52.00	$6,500
Security				
Fencing and Signage (6' chain link) (Swale Area and Land West of Building B)	LF	8,000	$25.50	$204,000
			Subtotal	**$810,000**
Project Administration				
Bonds and Insurance	%	2	$16,200.00	$16,200
Mobilization/Demobilization	%	5	$40,500.00	$40,500
Permits	%	2	$16,200.00	$16,200
Health and Safety	%	3	$24,300.00	$24,300
Construction Facilities and Temporary Controls	%	1	$8,100.00	$8,100
			Subtotal	**$915,300**
			Engineering (20%)	**$183,060**
			TOTAL CAPITAL CONSTRUCTION COST	**$1,100,000**
Annual Operations and Maintenance Costs				
Inspections and Reporting (Years 1 through 5)	EA	20	$5,000	$100,000
Inspection and Reporting (Years 6 through 10)	EA	10	$5,000	$50,000
Inspection and Reporting (Years 11 through 30)	EA	20	$5,000	$100,000
Cap Maintenance	YR	30	$2,500	$75,000
			TOTAL ANNUAL O & M COST	**$325,000**
			PRESENT WORTH OM&M COSTS (5% DISCOUNT RATE)	**$170,000**
			TOTAL CAPITAL AND OM&M COSTS	**$1,270,000**

Notes:
LS - lump sum
CY - cubic yard
SY - square yard
LF - linear feet
EA - each
YR - year

TABLE 10.2

COST PROJECTION
ALTERNATIVE 3 - CAPPING
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Description	*Units*	*Quantity*	*Unit Price*	*Total*
Capital Construction Costs				
Predesign Investigation	LS	1	$21,000.00	$21,000
Site Preparation				
Well Abandonment/Modifications	Each	6	$750.00	$4,500
Clearing and Grubbing	Acre	13	$500.00	$6,500
Rough Grading and Shaping	CY	11,500	$6.25	$71,875
AST Tank Farm Demolition				
AST Cleaning & Removal & Demolition of Structures	LS	1	$27,000.00	$27,000
T & D of Demolition Debris (120 CY Concrete)	CY	120	$36.00	$4,320
Diesel Tank Farm Demolition				
AST Cleaning & Removal	EA	1	$21,200.00	$21,200
T & D of Demolition Debris (120 CY concrete)	CY	120	$36.00	$4,320
Building P Demolition				
Remove Fan and Ductwork East of Building P	LS	1	$3,100.00	$3,100
Remove Fan Stack West of Building P Annex	LS	1	$2,900.00	$2,900
Remove Building P Annex	LS	1	$8,100.00	$8,100
Building V Pavement				
Concrete with reinforcement (6 in.)	SY	450	$36.00	$16,200
Base course placement (6 in. rock)	SY	450	$4.70	$2,115
Subgrade preparation	CY	140	$12.50	$1,750
Compacted Soil Cap Construction (13 acres)				
Rework and compact subgrade (top 6 ")	CY	10,500	$1.05	$11,025
Compacted soil layer (6")	CY	10,500	$15.00	$157,500
Topsoil (4")	CY	7,000	$30.00	$210,000
Seeding/Fertilizing/Mulching	Acre	13	$3,300.00	$42,900
Install Additional Groundwater Monitoring Wells	EA	7	$1,000.00	$7,000
Asphalt Roads and Driveways - Building R Complex				
Asphalt placement (4 in. binder + 3 in. surface)	SY	2,100	$17.50	$36,750
Base course placement with fabric (6 in. rock)	SY	2,100	$8.50	$17,850
Subgrade preparation	SY	2,100	$1.60	$3,360
Asphalt Access Road - Landfill Access Road				
Asphalt placement (4 in. binder + 3 in. surface)	SY	1,000	$17.50	$17,500
Base course placement with fabric (12 in. rock)	SY	1,000	$14.50	$14,500
Subgrade preparation	SY	1,000	$1.60	$1,600

TABLE 10.2

COST PROJECTION
ALTERNATIVE 3 - CAPPING
SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Description	*Units*	*Quantity*	*Unit Price*	*Total*
Grassed Drainage Channel (Land West of Building B)				
Grade and Shape	LF	1600	$0.50	$800
Seeding/Fertilizer/Mulching	Acre	1.4	$3,300.00	$4,620
Gabions at Outfall	SY	125	$52.00	$6,500
Security				
Fencing and Signage (6' chain link)	LF	8,000	$25.50	$204,000
			Subtotal	**$930,000**
Project Administration				
Bonds and Insurance	%	2	$18,600.00	$18,600
Mobilization/Demobilization	%	5	$46,500.00	$46,500
Permits	%	2	$18,600.00	$18,600
Health and Safety	%	3	$27,900.00	$27,900
Construction Facilities and Temporary Controls	%	1	$9,300.00	$9,300
			Subtotal	**$1,050,900**
			Engineering (20%)	**$210,180**
			TOTAL CAPITAL CONSTRUCTION COST	**$1,260,000**
Annual Operations and Maintenance Costs				
Inspections and Reporting (Years 1 through 5)	EA	20	$5,000	$100,000
Inspection and Reporting (Years 6 through 10)	EA	10	$5,000	$50,000
Inspection and Reporting (Years 11 through 30)	EA	20	$5,000	$100,000
Cap Maintenance	YR	30	$2,500	$75,000
			TOTAL ANNUAL O & M COST	**$325,000**
			PRESENT WORTH OM&M COSTS (5% DISCOUNT RATE)	**$170,000**
			TOTAL CAPITAL AND OM&M COSTS	**$1,430,000**

Notes:
LS - lump sum
CY - cubic yard
SY - square yard
LF - linear feet
EA - each
YR - year

REMEDIAL INVESTIGATION/FEASIBILITY STUDY SWALE AREA

CATERPILLAR INC.
MAPLETON, ILLINOIS

VOLUME II – APPENDICES A THROUGH J

DISCLAIMER:
SOME FORMATTING CHANGES MAY HAVE OCCURRED WHEN THE ORIGINAL DOCUMENT WAS PRINTED TO PDF; HOWEVER, THE ORIGINAL CONTENT REMAINS UNCHANGED.

JUNE 3, 2010
REF. NO. 013307 (4)

Prepared by:
Conestoga-Rovers & Associates

6520 Corporate Drive
Indianapolis, IN 46278

Office: (317) 291-7007
Fax: (317) 328-2666

web: http:\\www.CRAworld.com

APPENDIX A

HISTORIC GEOTECHNICAL SOIL BORINGS

Soils and Foundation Report

NEW FOUNDRY BUILDING

CATERPILLAR TRACTOR COMPANY

Mapleton, Illinois

13307 Client - supplied information

walter e. hanson company

engineers / consultants

Index

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GROUND WATER CONDITIONS	2
FOUNDATION RECOMMENDATIONS	3
Building A (Office Building) and	3
Building M (Pattern Shop)	3
Building B (Foundry Building)	4
Non-Basement Areas	5
Shallow Basement Areas	6
Deep Basement Areas	6
APPENDIX	7

Soils and Foundation Report
NEW FOUNDRY BUILDING
CATERPILLAR TRACTOR COMPANY
Mapleton, Illinois

INTRODUCTION:

This report presents our final foundation recommendations for Building A (Office Building), Building M (Pattern Shop), and Building B (Foundry Building). The recommendations are based on the building locations, column loads, and equipment placement information which we have received to date. Should any basic information be changed significantly from that given in this report, a re-evaluation of the foundation recommendations should be made.

This report does not contain any evaluation of possible borrow sources or fill placement procedures. This is because we have not received any definite information other than hydraulic fill consisting of material dredged from the Illinois River appears to be the most practical method for producing and placing 1.5 million cubic yards of fill at this site.

The 49 sheets attached to this report present the results of our laboratory classification and testing of the soil samples obtained during the boring program, as well as soil profile cross-sections, bedrock elevation tabulations, bedrock cross-sections, bedrock descriptions, and other pertinent data.

GENERAL SUBSOIL CONDITIONS:

The north, east and west portions of the site around the old borrow pit are covered with clays and silts to depths which vary from only 2 or 3 feet to as much as 12 or 13 feet. In general, this soil possesses fair to good strengths.

Below the clays and silts described above, the subsoil consists of sands, gravels and some small boulders. This type of soil is exposed all over the bottom of the old borrow pit.

It extends downward until the underlying shale is reached. This deposit of granular material varies greatly in its natural density from as loose as 2 or 3 blows to as high as 30 or 40 blows per foot as reflected by standard penetration tests.

Gray bedrock underlies the granular deposit. The rock varies from weathered brown and grayshale to sound shale and well cemented fine grained gray sandstone. The elevation at which the bedrock was encountered varied considerably across the site. In general, the bedrock was encountered at deeper elevations as the borings progressed from north to south across the site. Sheets 36 through 38 of 49 give a tabulation of the depth to bedrock at the various boring locations. Sheet 46 shows the boring locations and the elevation at which bedrock was encountered in each boring.

The quality of the bedrock varies considerably across the site. In some boring locations the shale bedrock is very weathered and was classified (by the boring foreman) as compact silt. At other locations the shale and sandstone is relatively unweathered, well cemented and hard. The quality of the bedrock generally increases with increasing depth.

The subsoil conditions in the southwest corner of the building deserve special attention. Apparently, the creek now located some 1400 feet west of the building was located at one time very near this corner of the plant. Several borings in this area found very soft compressible silts, clays and organic material.

GROUND WATER CONDITIONS:

During the period (October 10 to December 8, 1964) when the recent borings were made, the highest ground water level appeared to be about elevation 444.5. During the performance of Borings 63-92 (January 19 - February 5, 1965), the highest elevation at which ground water was encountered was approximately 449. Our first Interim Report (dated January 13, 1965) stated that because of drainage from the bluffs to the north of the site, and possibly also because of variation in the river stages, a rather wide seasonal variation of ground water at the site can be expected.

Due to the probable granular nature of the fill material to be placed at the site, it should be anticipated, at least

OPERATOR: LLM & JHO

GROUND SURFACE ELEV. _____

GROUND WATER ELEV. _____

GROUND WATER DEPTH _____

WALTER E. HANSON & CO.

LABORATORY SOIL TEST DATA

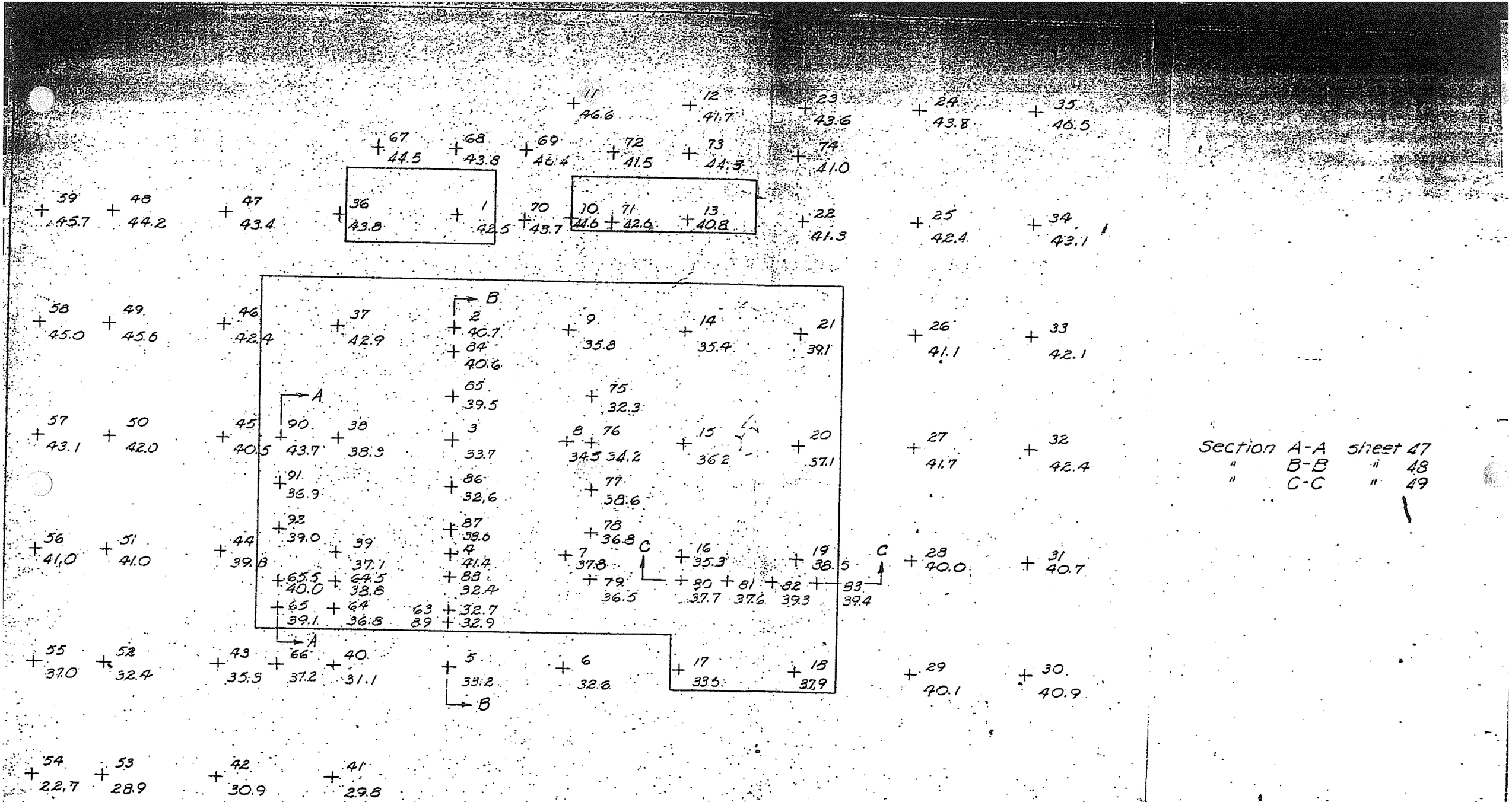
LOCATION Caterpillar Foundry
Peoria, Illinois

STRENGTH = UNCONFINED COMPRESSIVE STRENGTH IN TONS PER SQUARE FOOT.

N = BLOWS TO DRIVE SAMPLER 12" WITH 140 POUND WEIGHT FALLING 30".

W = NATURAL WATER CONTENT (% DRY WEIGHT)

BOR.	SAMP.	DEPTH	ELEV.	N	STRENGTH TEST	STRENGTH EST.	STRENGTH PEN.	W			DESCRIPTION
	Ground Surface Elev = 454.7										
1	1	2'-6"	52.2	16				10			Brown silt / some clay
	2	5'-0"	49.7	12			4.5+	19			" clayey silt
	3	7'-6"	47.2	9				15			" " " c. sand & f. gravel
	4	9'-9"	44.9	11/9				15			Yel. brn. silt / some clay & rock frags
	5	9'-10"	44.8	60/1				–			Rock frags
	6	13'-4"	41.4	100/3				7			Gra. soft shale
	7	14'-6"	40.2	100/				7			" " "
	8	19'-1"	35.6	100/1				6			" " "
	Ground Surface Elev = 454.7										
1A	1-1	1'-0"	53.7				1.0	20			Brn. v.f. sa. silt (tr clay) / small root holes - fissured
	1-2	1'-6"	53.2		0.74	Sp	1.5/0.7	17			" " " " " / " " " "
	1-3	2'-0"	52.7		0.74	Sp	1.0	17			" " " " " / " " " "
	1-4	2'-6"	52.2					–			Same
	Ground Surface Elev = 447.3										
2	1	2'-6"	44.8	13				10			Brn. silty m.-c. sand / some f. gravel & stones
	2	5'-0"	42.3	4				–			No sample
	3	6'-7"	40.7	60/1				–			" "
	4	8'-8"	38.6	60/2				7			Gra. soft shale
	Ground Surface Elev = 445.2										
3	1	2'-6"	42.7	7				10			Brn. c. sand & f. gravel (tr. silt)
	2	5'-0"	40.2	10				10			" " " & f.-m. " (" ")
	3	7'-6"	37.7	11				11			" " " & " " " (" ")
	4	10'-0"	35.2	5				9			" " " & f. " (" ")
	5	11'-9"	33.4	60/3			4.5+	9			Lt. gra. brn. v.f. sandy silt - cmtd.
	Ground Surface Elev = 445.2										
4	1	2'-6"	42.7	7				11			Brn. c. sand & f. gravel (tr. silt)
	2	4'-6"	40.7	60/6			4.5+	8			Gra. clayey silt - cmtd.
	3	7'-1"	38.1	60/7	9.21	Sp.	4.5+	7			" " " - "



Section A-A sheet 47
" B-B " 48
" C-C " 49

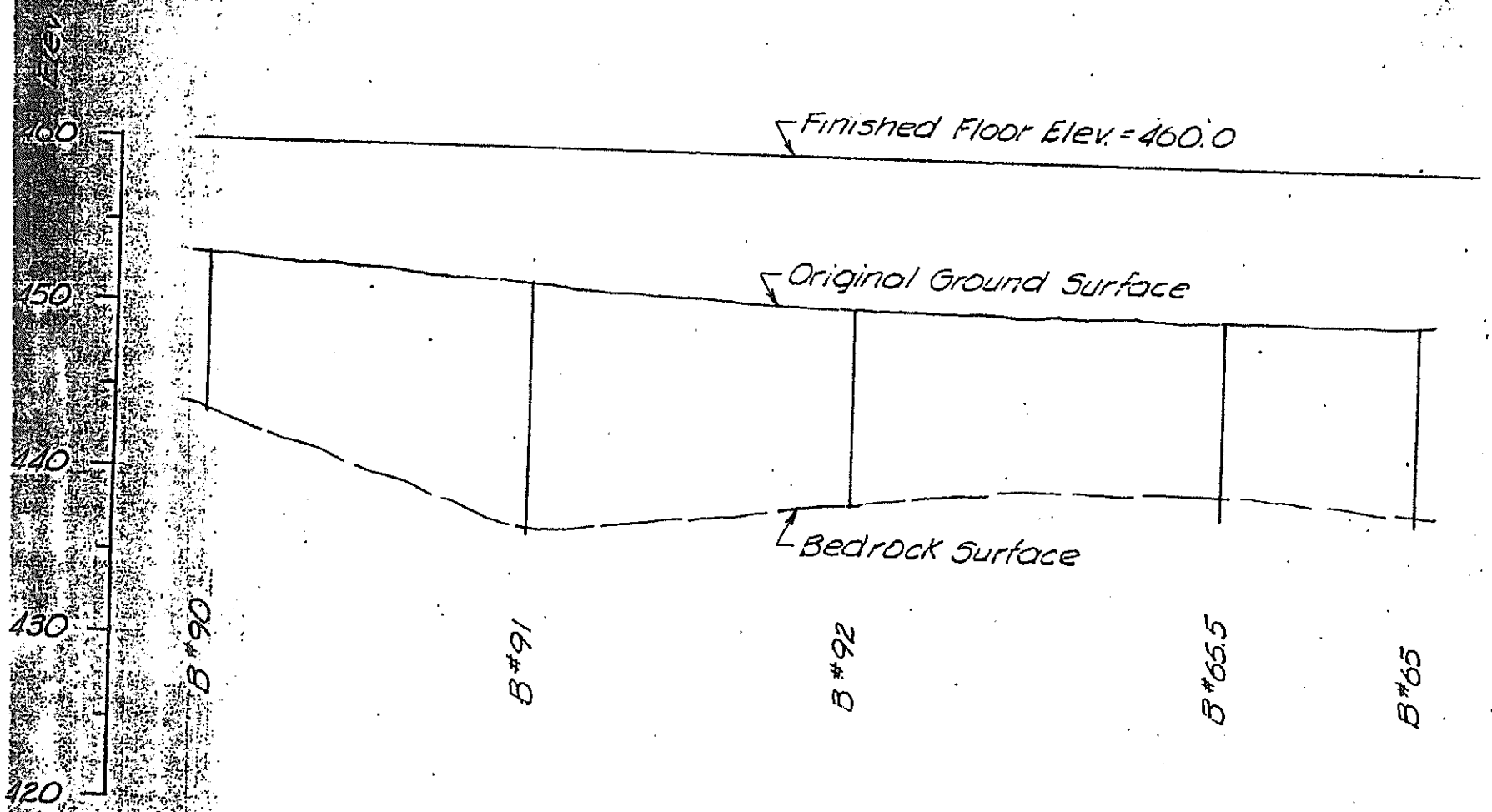
SCALE - 1" = 200'

LEGEND

+ BORING LOCATION

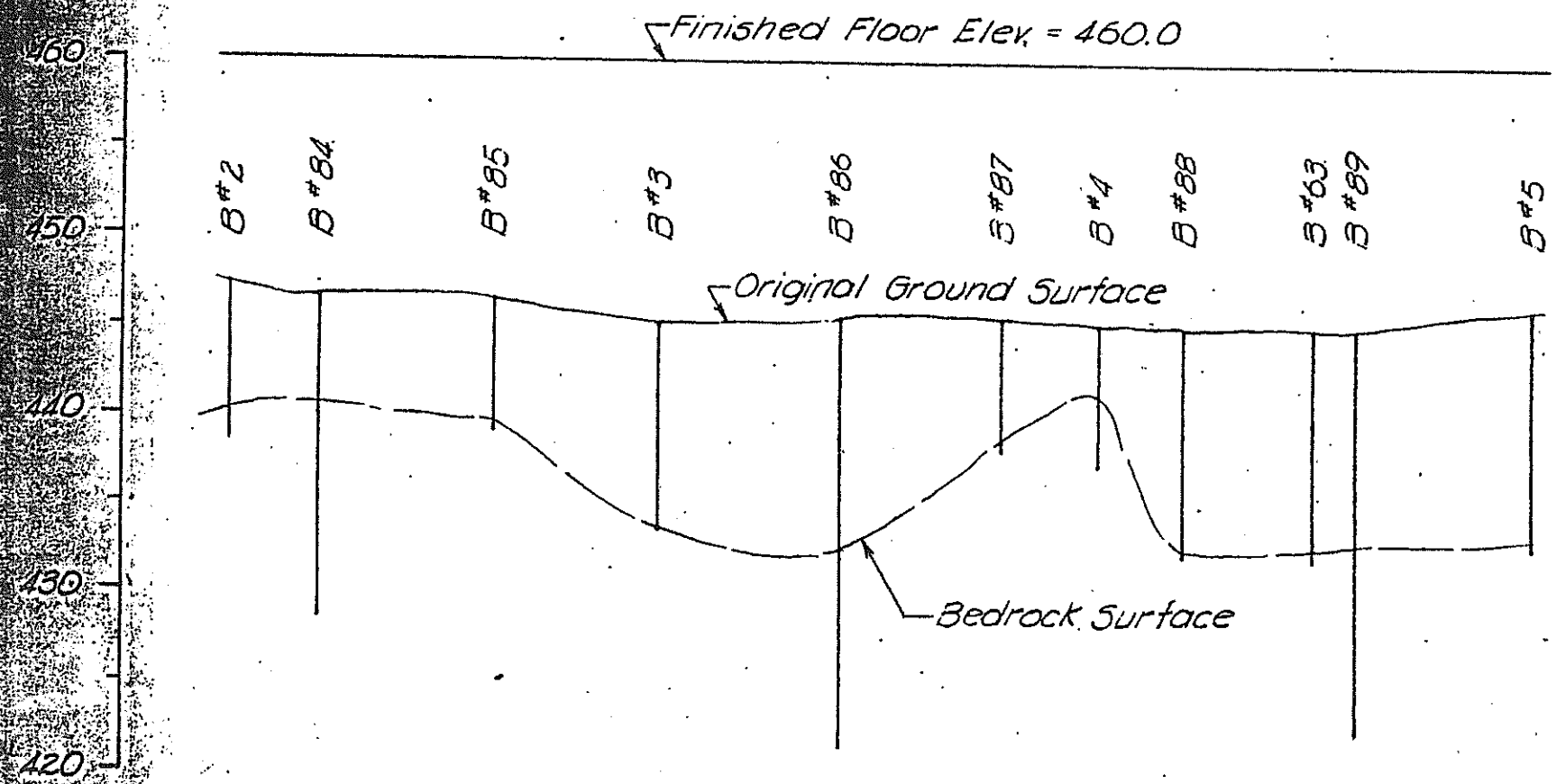
13 BORING NUMBER
408 BEDROCK SURFACE ELEV.

BEDROCK SURFACE ELEVATIONS
CATERPILLAR FOUNDRY
Mapleton, Illinois
WALTER E. HANSON CO.



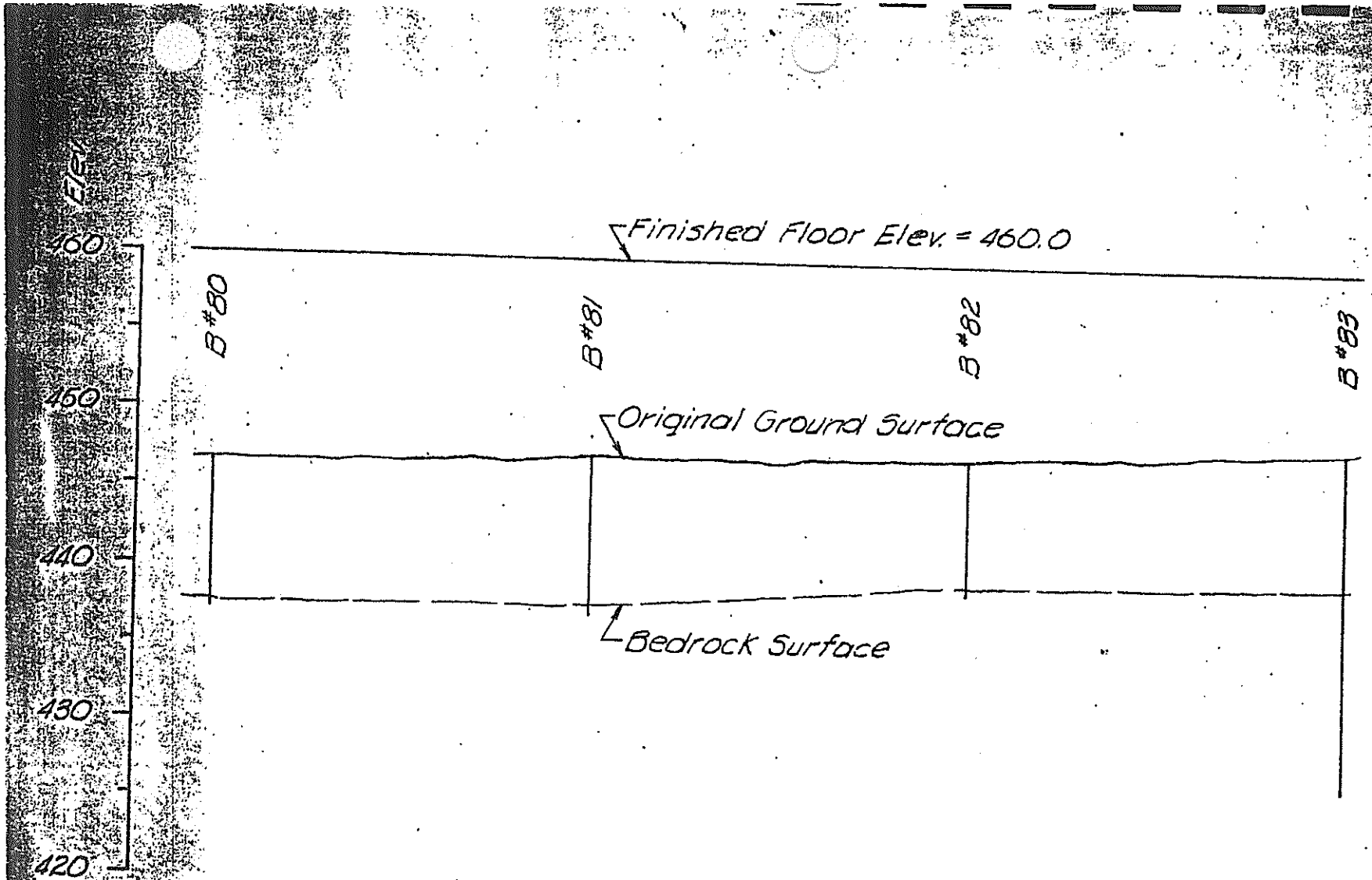
scale:
V- 1" = 10'
H- 1" = 50'

BEDROCK CROSS SECTION
CATERPILLAR FOUNDRY
Mapleton, Illinois
WALTER E. HANSON CO.



scale:
V - 1" = 10'
H - 1" = 100'

BEDROCK CROSS SECTION
CATERPILLAR FOUN[illegible]Y



scale:
V - 1" = 10'
H - 1" = 40'

BEDROCK CROSS SECTION
CATERPILLAR FOUNDRY
Mapleton, Illinois

F-340-C-50 PADS 1-62

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION
RAYMOND INTERNATIONAL INC.
140 CEDAR STREET - NEW YORK 6, N. Y.

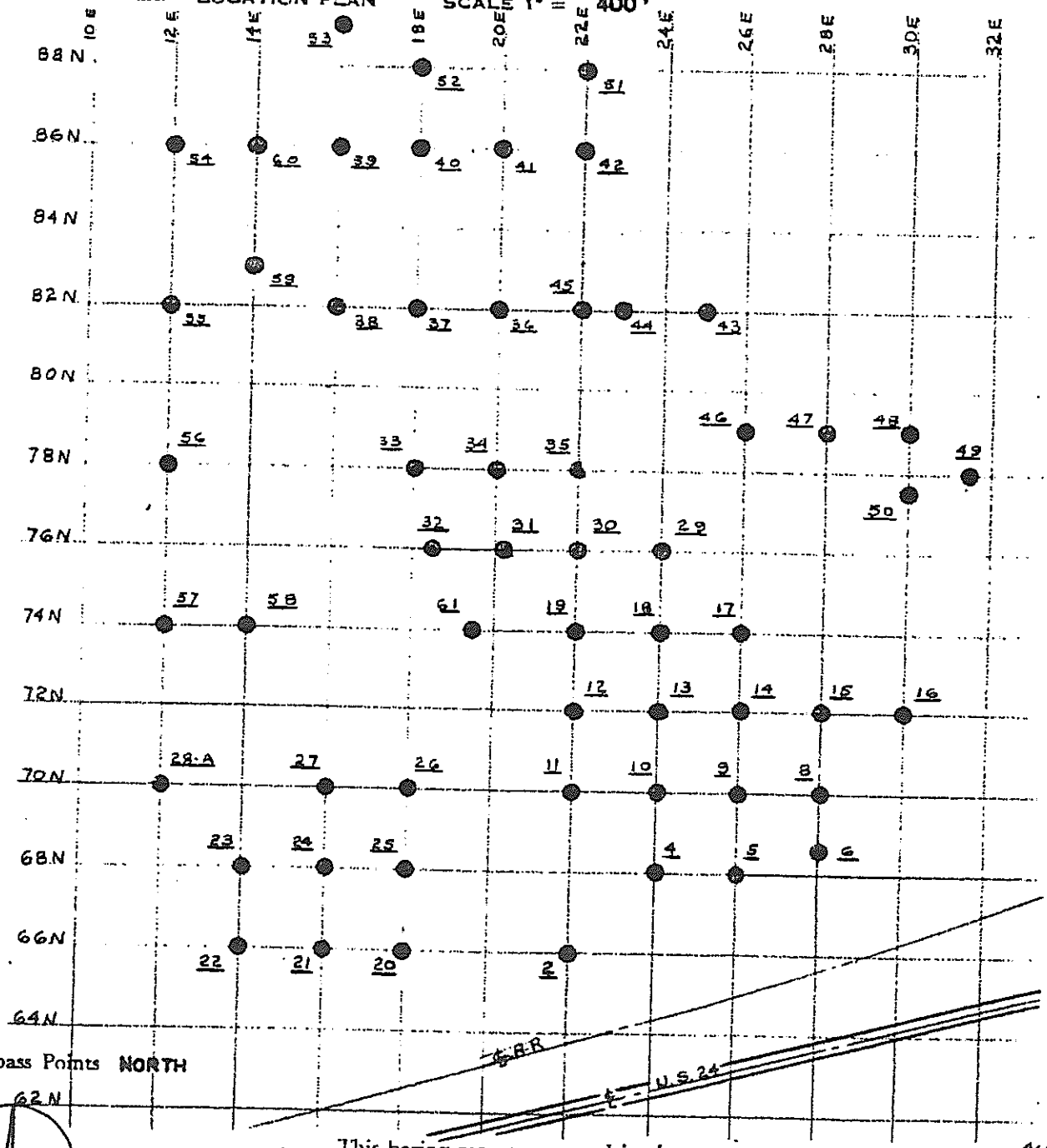
EXHIBIT W
Complete Set

To CATERPILLAR TRACTOR CO., MANUFACTURING GENERAL OFFICE Date 22 APRIL 1965 19 6

Address PLANT ENGINEERING, PEORIA, ILLINOIS ATTENTION: MR. PAUL ZUMWALT

We have completed the following borings for you at CATERPILLAR TRACTOR COMPANY, BORROW PIT AREA, MAPLETON, ILLINOIS with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered To _____ Address _____ Via _____ under date of _____ Raymond Concrete Pile Division

Raymond International Inc. LOCATION PLAN SCALE 1" = 400'



Compass Points NORTH

This boring report prepared in the CHICAGO OFFICE of the Raymond Concrete Pile Division RAYMOND INTERNATIONAL INC.

By WMO

Job No. CB-3450-C-8

Sheet 1 of 20

RAYMOND

CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 6 APRIL 1965

Location of Borings CATERPILLAR TRACTOR COMPANY, BORROW PIT AREA, MAPLETON, ILLINOIS

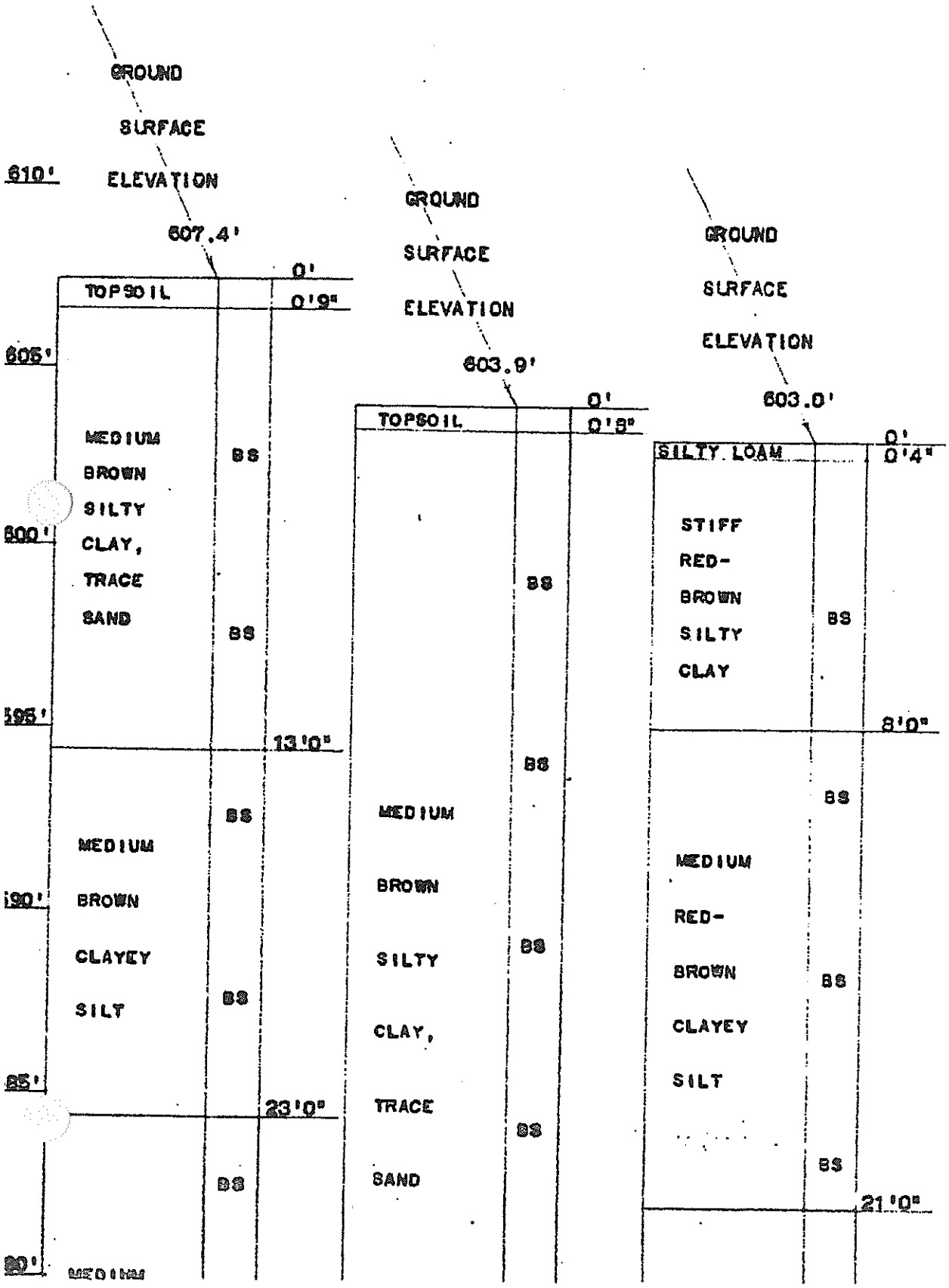
All borings are plotted to a scale of 1"= 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

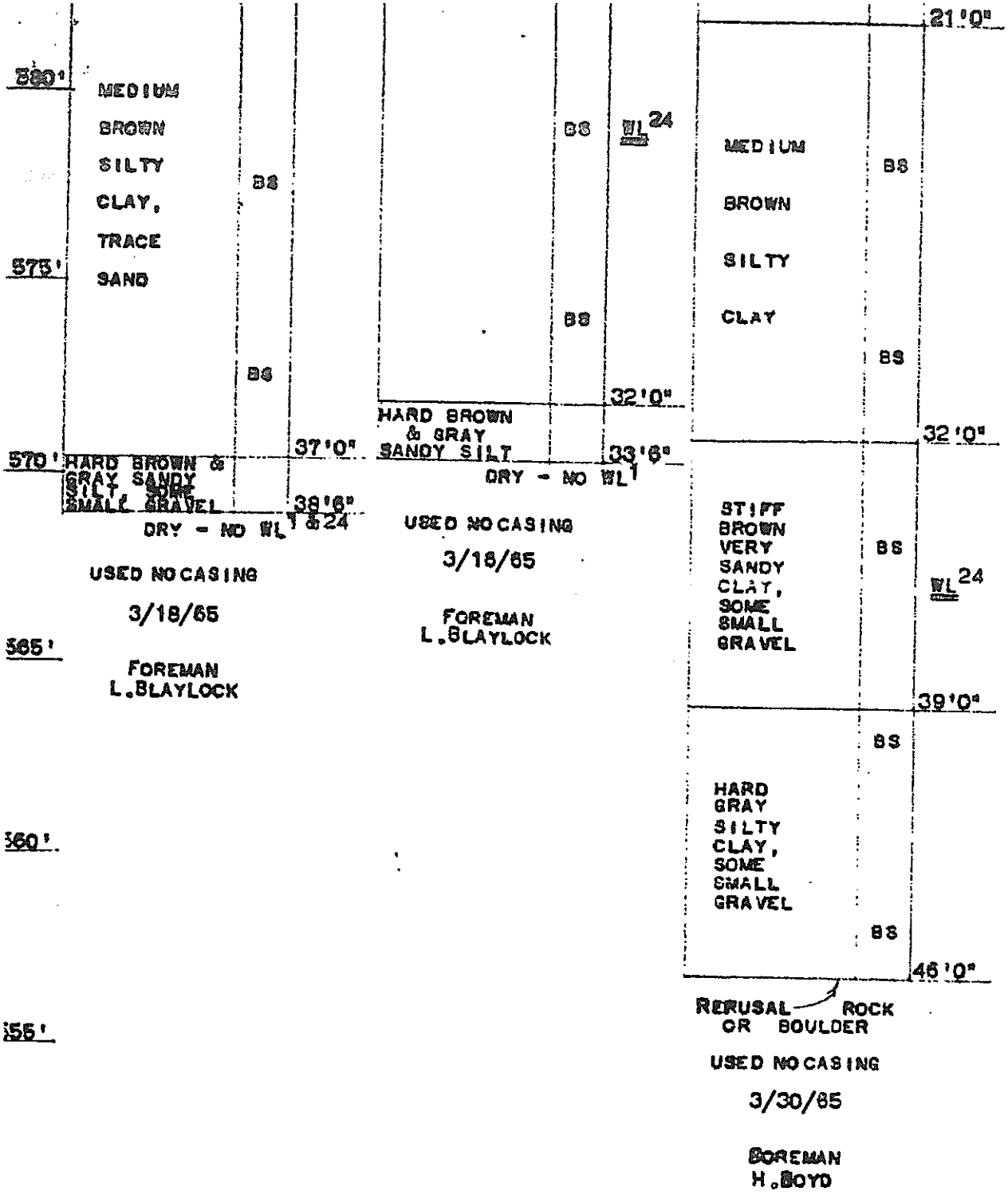
Boring No. 51 — 88+00 N & 22+00 E

Boring No. 52 — 88+00 N & 18+00 E

Boring No. 53 — 89+00 N & 16+00 E

Boring No. _____





BS = BOTTOM OF BAG SAMPLE

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows [illegible]

Total Footage 118'0"

Foreman AS NOTED

Job No. CS-3450-C-3

Classification by FOREMAN

140 CEDAR STREET NEW YORK 6, N. Y.

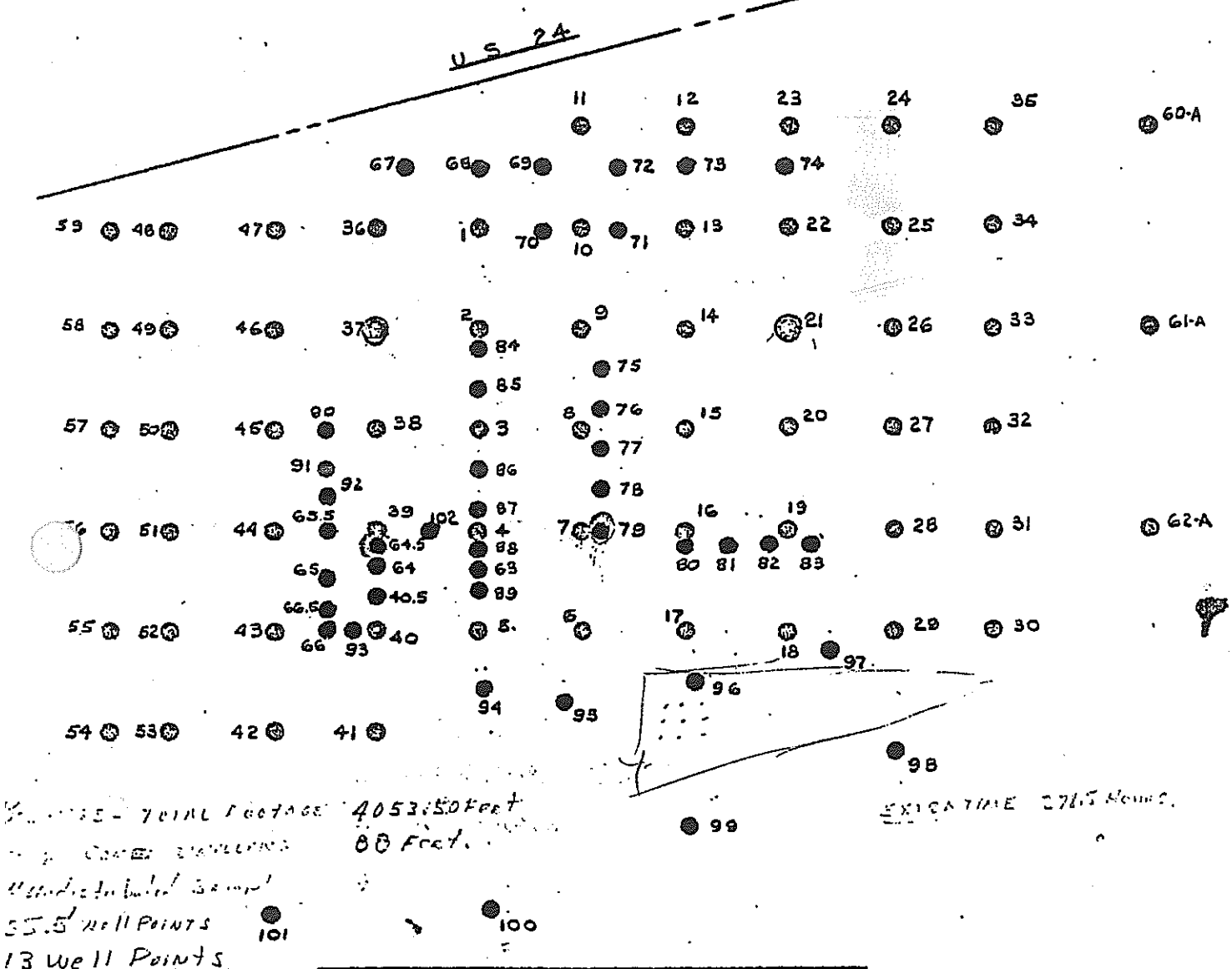
	ATTEN:

CATERPILLAR TRACTOR CO., MANUFACTURING GENERAL OFFICE Date 1 MAY 1965

Dress PLANT ENGINEERING, PEORIA, ILLINOIS ATTENTION: MR. PAUL ZUMWALT

We have completed the following borings for you at CATERPILLAR TRACTOR COMPANY, ADDITIONAL BORINGS FOR FOUNDRY EXPLORATION, MAPLETON, ILLINOIS with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered To _____ Address _____ Via _____ under date of _____ Raymond Concrete Pile Division

Raymond International Inc. LOCATION PLAN SCALE 1" = 400'



TOTAL FOOTAGE 4053.50 Feet
88 Feet.
55.5' Well Points
13 Well Points

EXIGN TIME 276.5 Hours.

⊙	ORIGINAL BORINGS COMPLETED 12/29/64 RAYMOND JOB NUMBER CB-3450-C
●	BORINGS COVERED ON THIS REPORT

Compass Points NORTH

This boring report prepared in the CHICAGO OFFICE of the Raymond Concrete Pile Division

By WMO

Job No. CB-3450-C(A)

Sheet 1 of 20

RAYMOND INTERNATIONAL INC.

[illegible] Total Footage [illegible]
Foreman [illegible] HERSCHEL [illegible]
Classification [illegible]

[illegible]

[illegible]

[illegible]

To CATERPILLAR TRACTOR COMPANY [illegible] DECEMBER 20, 1954

Address [illegible] GENERAL OFFICE PLANT ENGINEERING, PEORIA, ILLINOIS [illegible]

We have completed the following borings for you at [illegible] RAPELTON, ILLINOIS

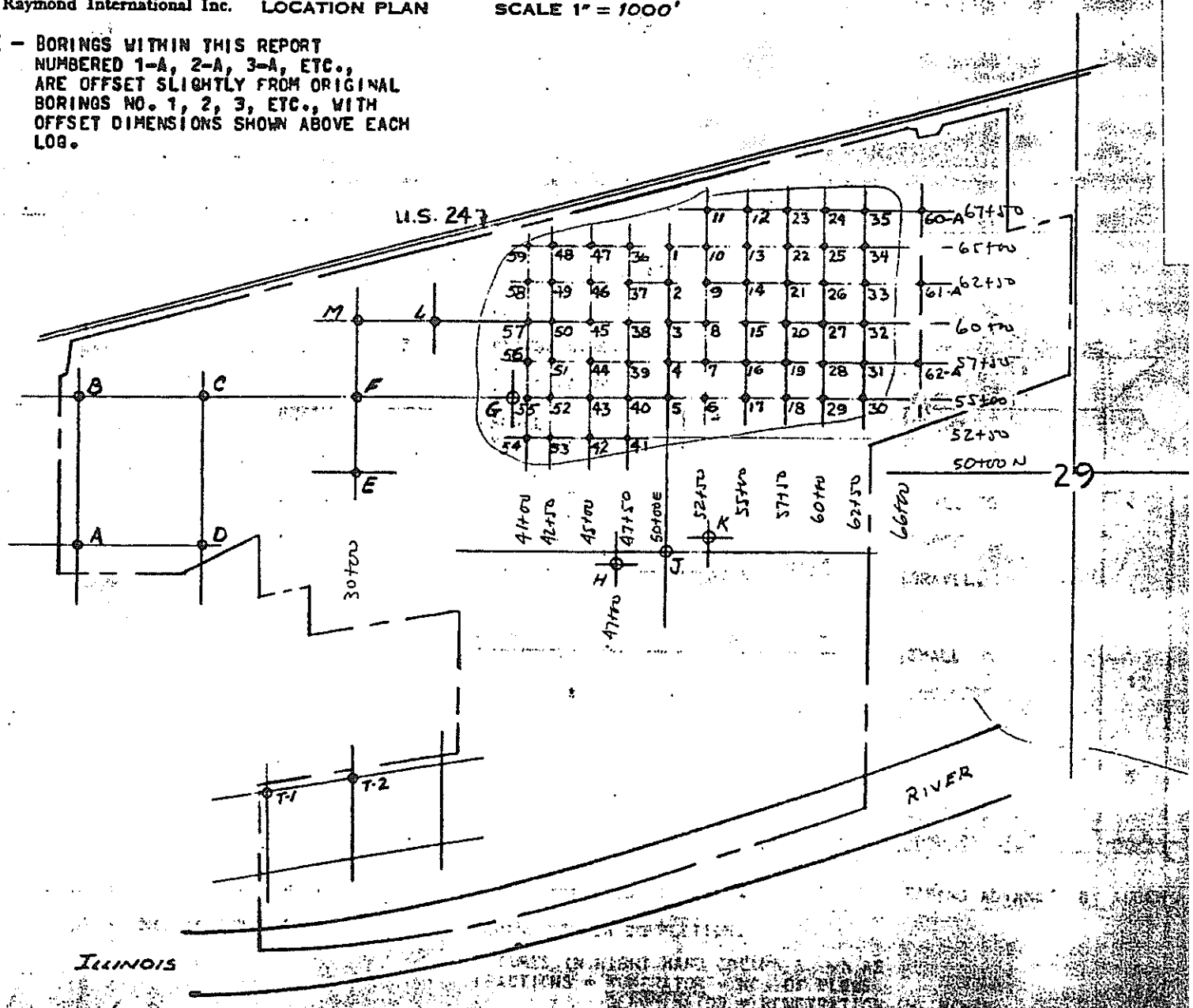
with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered

To TOUR LAB Address

Via under date of Raymond Concrete Pile Divi

Raymond International Inc. LOCATION PLAN SCALE 1" = 1000'

NOTE – BORINGS WITHIN THIS REPORT NUMBERED 1-A, 2-A, 3-A, ETC., ARE OFFSET SLIGHTLY FROM ORIGINAL BORINGS NO. 1, 2, 3, ETC., WITH OFFSET DIMENSIONS SHOWN ABOVE EACH LOG.



Compass Points

This boring report prepared in the ST. LOUIS, MO. OFFICE of the Raymond Concrete Pile Division RAYMOND INTERNATIONAL INC.

By [illegible]

Job No. [illegible]

Sheet [illegible]

F-348-C-50 PADS 1-62

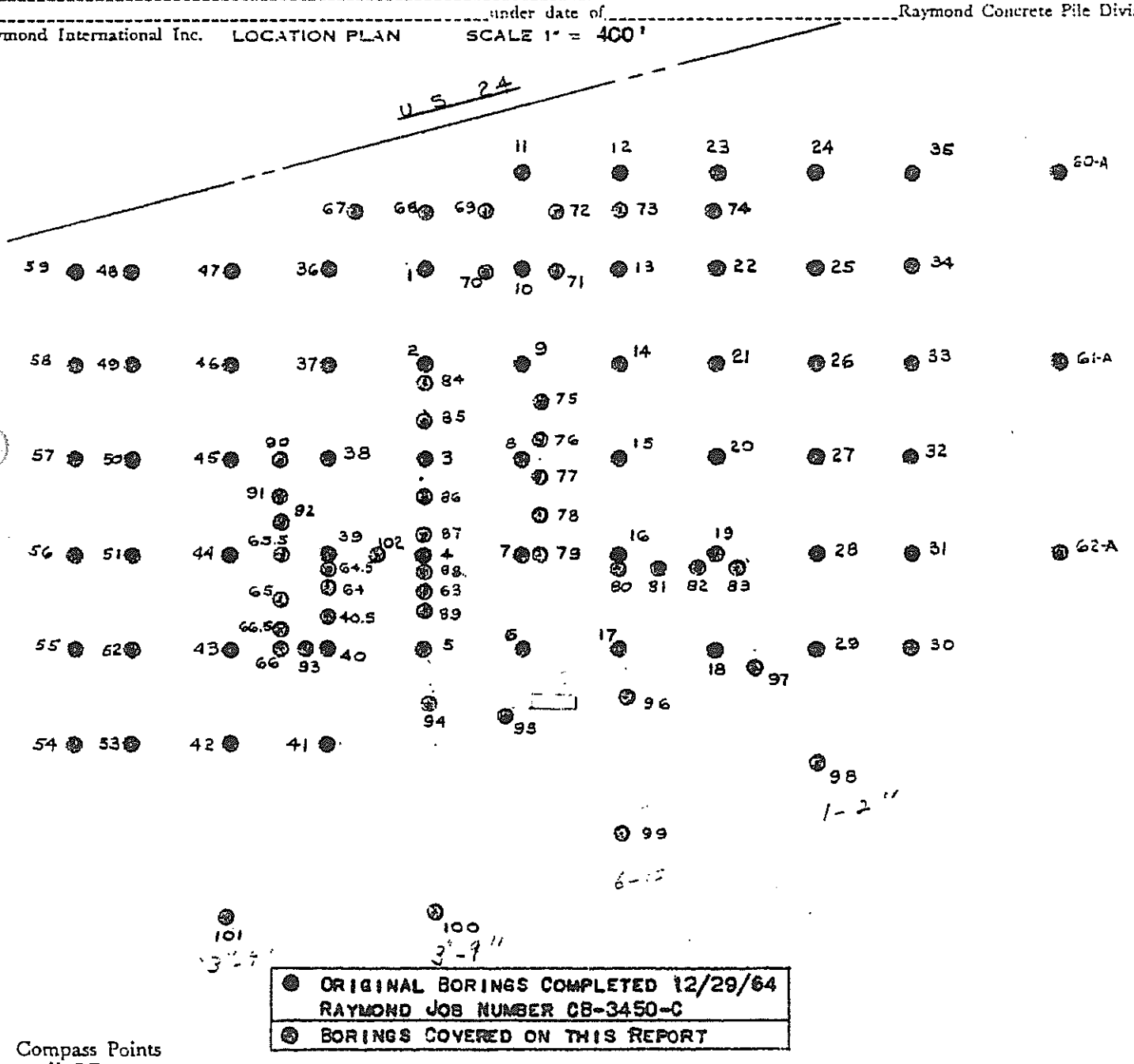
TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION
RAYMOND INTERNATIONAL INC.
140 CEDAR STREET - NEW YORK 6, N. Y.

To CATERPILLAR TRACTOR CO., MANUFACTURING GENERAL OFFICE Date 1 MAY 1965

Address PLANT ENGINEERING, PEORIA, ILLINOIS ATTENTION: MR. PAUL ZUMWALT

We have completed the following borings for you at CATERPILLAR TRACTOR COMPANY, ADDITIONAL BORINGS FOR FOUNDRY EXPLORATION, MAPLETON, ILLINOIS with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered To _____ Address _____ Via _____ under date of _____ Raymond Concrete Pile Division Raymond International Inc.

LOCATION PLAN SCALE 1" = 400'



●	ORIGINAL BORINGS COMPLETED 12/29/64 RAYMOND JOB NUMBER CB-3450-C
⊗	BORINGS COVERED ON THIS REPORT

Compass Points
NORTH

This boring report prepared in the CHICAGO OFFICE of the Raymond Concrete Pile Division
RAYMOND INTERNATIONAL INC.

By WMO

Job No. CB-3450-C(A)

Sheet 1 of 20

844-2—100 Pub—10-58

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965195 Job No. 08-345

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

50' 45' 40' 35' 30' 25'

No. 63

GROUND SURFACE ELEVATION 45.2'

ICE 0'

LOOSE BROWN SILTY SAND, TRACE GRAVEL & PEAT	9	2'0"
MEDIUM BROWN SMALL TO LARGE GRAVEL & FINE TO MEDIUM SILTY SAND	12	
	10	
	11	
	15	11'6"
SEE NOTE A	100/5	12'0"

USED AUGER

2/2/65

NOTE A: VERY DENSE BROWN SHALE

No. 64

GROUND SURFACE ELEVATION 49.3'

MEDIUM BROWN CLAYEY SILT	6	0'
		3'0" WL
MEDIUM BROWN FINE SILTY SAND & GRAVEL (WET)	12	
		6'0"
LOOSE BROWN FINE SILTY SAND & GRAVEL	4	
	7	
		11'0"
HARD GRAY SHALE, TRACE SANDSTONE FRAG.	100	12'6"

USED AUGER

1/19/65

INDICATES SHELBY TUBE SAMPLE — A / B / C

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
C = WEIGHT (POUNDS)

No. 64-A

THIS BORING OFF-SET 1'0" NORTH OF B-64

GROUND SURFACE ELEVATION 49.3'

MEDIUM BROWN CLAYEY SANDY SILT	ST #1 24 / 12	0' / 0'6"
	300	2'6"
	ST #2 24 / 12	3'0"
MED. BROWN FINE SILTY SAND & GRAVEL	350	4'6"

USED AUGER

1/19/65

INDICATES CORE DRILLING — X / Y

X. AMOUNT OF CORE DRILLED (INCHES)
Y. AMOUNT OF CORE RECOVERED (INCHES)

No. 64.5

GROUND SURFACE ELEVATION 49.2'

MEDIUM BROWN VERY SILTY CLAY, SOME GRAVEL	8
	WL
MEDIUM BROWN SMALL-MEDIUM GRAVEL & SAND	13
LOOSE BROWN SMALL-MEDIUM GRAVEL & SILTY SAND	3
	9
SEE NOTE B	50/3
VERY HARD GRAY SHALE	50/2
MEDIUM GRAY SILTY SHALE, SOME SANDSTONE FRAGMENTS	24/50

USED 13'6" OF 4" CASING

1/21/65

NOTE B: BROWN WEATHERED SHALE

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 48'0"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 2 of 13

344-2—100 Pads—10-66

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965 195 Job No. CB-3450-C(A)

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 65

GROUND SURFACE ELEVATION 50.3'

Depth	Description	Blows	Depth
50'	MEDIUM RED-BROWN CLAYEY SANDY SILT, SOME GRAVEL	6	0'
			3'6" WL
45'	MEDIUM BROWN SILTY SAND & GRAVEL	14	
		12	8'0"
40'	LOOSE BROWN SILTY SAND & GRAVEL	4	
			11'3"
	~~SEE NOTE C~~		11'6"
	SEE NOTE D	60/4	12'0"

USED AUGER

1/19/65

35'

NOTE C: VERY HARD BROWN SHALE

NOTE D: VERY HARD GRAY SHALE, TRACE SANDSTONE

No. 65-A

THIS BORING OFF-SET 1'0" NORTH OF B-65

GROUND SURFACE ELEVATION 50.3'

Description	Blows	Depth
		0'
		0'6"
MED. BROWN CLAYEY SANDY SILT, SOME GRAVEL ST #1	24 / 6 / 300	2'6"
MEDIUM BROWN SILTY SAND & GRAVEL ST #2	24 / 8 / 300	3'6"
		4'6"

USED AUGER

1/19/65

No. 65.5

GROUND SURFACE ELEVATION 50.5'

Description	Blows	Depth
		0'
BROWN SILTY LOAM		1'0"
MEDIUM BROWN SILTY CLAY, SOME GRAVEL	7	WL 3'0"
MEDIUM BROWN FINE SILTY SAND & GRAVEL (WET)	13	6'0"
LOOSE BROWN FINE SILTY SAND & GRAVEL (WET)	7	9'6"
SEE NOTE E	35	10'6"
VERY HARD GRAY SHALE	80/6	12'0"

USED AUGER

1/19/65

NOTE E: HARD BROWN & GRAY SHALE, TRACE SANDSTONE

No. 65.5-A

THIS BORING OFF-SET 1'0" NORTH OF B-65.5

GROUND SURFACE ELEVATION 50.5'

Description	Blows	Depth
		0
BROWN SILTY LOAM		1
MED. BROWN SILTY CLAY, SOME GRAVEL ST #1	24 / 12 / 350	3'

USED AUGER

1/19/65

INDICATES SHELBY TUBE SAMPLE (A / B / C)

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
C = WEIGHT (POUNDS)

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 31'6"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 3 of 13

344-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965 195 Job No. CB-3450

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 66 — GROUND SURFACE ELEVATION 48.7'

MEDIUM DARK BROWN CLAYEY SILT, TRACE ORGANIC MAT'L	7 WL	0' – 3'0"
STIFF RED-BROWN SANDY SILTY CLAY, SOME GRAVEL	8	3'0" – 6'0"
LOOSE BROWN FINE SILTY SAND GRAVEL (WET)	3, 4	6'0" – 11'6"
SEE NOTE F	60/6	11'6" – 12'0"

USED AUGER 1/19/65

NOTE F: VERY HARD BROWN & GRAY SHALE, TRACE SANDSTONE

No. 66-A — THIS BORING OFF-SET 1'0" NORTH OF B-66

GROUND SURFACE ELEVATION 48.7'

MEDIUM DARK BROWN CLAYEY SILT	ST #1 24/15, 350	0' – 2'6"
STIFF RED-BROWN SANDY SILTY CLAY, SOME GRAVEL	ST #2 24/8, 400	2'6" – 4'6"
	LOST ST	4'6" – 6'0"

USED AUGER 1/19/65

No. 67 — GROUND SURFACE ELEVATION 55.0'

STIFF BROWN CLAYEY SILT, SOME GRAVEL	8, 10	0' – 6'0"
MEDIUM BROWN MIXTURE CLAY, SILT & SAND, TRACE GRAVEL	6 WL	6'0" – 9'9"
LOOSE BROWN SILTY SAND & GRAVEL (WET)	5	9'9" – 10'6"
SEE NOTE G		10'6" – 12'0"
SEE NOTE H	60/6	

USED AUGER 1/20/65

NOTE G: VERY HARD BROWN SHALE

NOTE H: VERY HARD GRAY SHALE, SOME SANDSTONE FRAGMENTS

No. 67-A — THIS BORING OFF-SET 1'0" NORTH OF B-67

GROUND SURFACE ELEVATION 55.0'

STIFF BROWN CLAYEY SILT, SOME GRAVEL	ST #1 24/12, 500	0' – 3'0"
	ST #2 24/11, 400	3'0" – 5'0"
MIXTURE OF SILT, CLAY & SAND	ST #3 24/13, 400	5'0" – 7'0"

USED AUGER 1/20/65

INDICATES SHELBY TUBE SAMPLE (A / B / C)

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
C = WEIGHT (POUNDS)

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 37'6"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 4 of 13

344-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965 195 Job No CS-3450-C(A

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 68

GROUND SURFACE ELEVATION 55.3'

STIFF DARK BROWN CLAYEY SILT	13	3'0"
VERY STIFF BROWN CLAYEY SILT, TRACE GRAVEL	20	6'0"
LOOSE BROWN MIXTURE SAND, SILT & CLAY	4	WL 8'0"
LOOSE BROWN SILTY SAND & GRAVEL	4	11'6"
SEE NOTE 1	80/8	12'0"

USED AUGER

1/20/65

NOTE 1: VERY HARD BROWN & GRAY SHALE, SOME SANDSTONE FRAGMENTS

No. 68-A

THIS BORING OFF-SET 1'0" EAST OF B-68

GROUND SURFACE ELEVATION 55.3'

STIFF TO VERY STIFF BROWN CLAYEY SILT		6'0"
LOOSE BROWN MIXTURE SAND, SILT & CLAY	ST #1 24/10/400	8'0"

USED AUGER

1/20/65

No. 69

GROUND SURFACE ELEVATION 54.2'

STIFF DARK BROWN CLAYEY SILT, TRACE GRAVEL	12	2'6"
STIFF BROWN SANDY CLAYEY SILT, SOME GRAVEL	9	WL 5'0"
SOFT BROWN VERY SANDY SILTY CLAY, SOME GRAVEL	3	7'9"
VERY HARD BROWN & GRAY SHALE	60/3	9'0"

USED AUGER

1/20/65

No. 69-A

THIS BORING OFF-SET 1'0" NORTH OF B-69

GROUND SURFACE ELEVATION 54.2'

STIFF DARK BROWN SILTY CLAY		2
	ST #1 24/8/500	2
STIFF BROWN SANDY CLAYEY SILT, SOME GRAVEL		4
	ST #2 24/8/400	6

USED AUGER

1/20/65

INDICATES SHELBY TUBE SAMPLE	A / B / C

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
C = WEIGHT (POUNDS)

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 35'0"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 5 of 13

344-4—100 Pads—10-66

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965 195 Job No. 03-3450

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 70 | No. 70-A | No. 71 | No. 71-A

THIS BORING OFF-SET 1'0" NORTH OF 3-70

THIS BORING OFF-SET 1'0" NORTH OF 8-71

No. 70

GROUND SURFACE ELEVATION 54.1'

Depth	Description	Blows	Depth
55'	DARK BROWN SILT		0'
			1'0"
	STIFF BROWN SILTY CLAY, TRACE GRAVEL	10	
50'		14	
			6'0"
	MEDIUM BROWN MIXTURE CLAY, SAND & GRAVEL	6	
		WL	8'0"
45'	LOOSE BROWN SILTY SAND & GRAVEL	2	
			10'3"
	VERY HARD GRAY SHALE, TRACE SANDSTONE FRAGMENTS	89/6	12'0"
40'	USED AUGER 1/21/65		

No. 70-A

GROUND SURFACE ELEVATION 54.1'

Depth	Description	Blows	Depth
	DARK BROWN SILT		0'
			1'0"
	STIFF BROWN SILTY CLAY, TRACE GRAVEL	ST #1 24 / 9 / 600	3'0"
		ST #2 24 / 12 / 450	5'0"
		ST #3 24 / 7 / 300	6'0"
	MEDIUM BROWN MIXTURE CLAY, SAND & GRAVEL	ST #4 16 / 16 / 900	7'0"
			8'4"
	USED AUGER 1/21/65		

No. 71

GROUND SURFACE ELEVATION 54.0'

Depth	Description	Blows	Depth
	STIFF BROWN CLAYEY SILT		0'
		10	2'0"
	VERY STIFF BROWN SILTY CLAY, TRACE GRAVEL	16	
			5'6"
	LOOSE BROWN MIXTURE CLAY, SAND & GRAVEL	2	
		WL	8'0"
	LOOSE BROWN SMALL-MEDIUM GRAVEL, SOME SAND & CLAY (WET)	2	
	SEE NOTE J	65/4	11'3" / 12'0"
	USED AUGER 1/21/65		

No. 71-A

GROUND SURFACE ELEVATION 54.0'

Depth	Description	Blows	Depth
	STIFF BROWN CLAYEY SILT		
	VERY STIFF BROWN SILTY CLAY		
		ST #1 24 / 9	
	LOOSE BROWN MIXTURE CLAY, SAND & GRAVEL	ST #2 24 / 9 / 300	
			30
	USED AUGER 1/21/65		

NOTE J: VERY HARD BROWN & GRAY SHALE

INDICATES SHELBY TUBE SAMPLE (A, B, C)

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
C = WEIGHT (POUNDS)

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 41'4"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 6 of 13

344-2—100 Pads—10-64

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL, INC.

To CATERPILLAR TRACTOR COMPANY Date 6 FEBRUARY 1965 195 Job N68-3450-C(A)

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 72

GROUND SURFACE ELEVATION 54.0'

Description	Blows	Depth
STIFF DARK BROWN CLAYEY SILT	11	3'0"
STIFF BROWN SILTY CLAY, TRACE GRAVEL	13	6'0"
LOOSE BROWN MIXTURE SAND, CLAY, SILT & GRAVEL (WET)	5	8'0"
LOOSE BROWN FINE SILTY SAND & SMALL GRAVEL (WET)	1	12'6"
SEE NOTE K		13'0"
VERY HARD GRAY SHALE	60/1	14'1"

WL

USED AUGER

1/20/65

NOTE K: VERY HARD BROWN SHALE

No. 73

GROUND SURFACE ELEVATION 54.3'

Description	Blows	Depth
STIFF DARK BROWN CLAYEY SILT, TRACE GRAVEL	13	3'0"
STIFF BROWN SILTY CLAY	8	6'0"
MEDIUM BROWN MIXTURE SAND, CLAY, SILT & GRAVEL	6	8'0"
BLACK COAL		8'6"
MEDIUM BROWN SILTY SAND & GRAVEL	10	10'0"
VERY HARD BROWN SHALE	60/3	11'9"

WL

USED AUGER

1/20/65

No. 74

GROUND SURFACE ELEVATION 54.0'

Description	Blows	Depth
STIFF DARK BROWN CLAYEY SANDY SILT	10	2'6"
VERY STIFF BROWN SILTY CLAY, SOME GRAVEL	15	5'6"
SEE NOTE L	3	7'6"
LOOSE BROWN SMALL-MEDIUM GRAVEL WITH FINE SILTY SAND (WET)	3	13'0"
VERY HARD GRAY SHALE	60/2	14'2"

WL

USED AUGER

1/20/65

NOTE L: LOOSE BROWN MIXTURE GRAVEL, SAND & SILT, TRACE CLAY (DRY)

No. 74-A

THIS BORING OFF-SET 1'0" NORTH OF B-74

GROUND SURFACE ELEVATION 54.0'

Description	Blows	Depth
STIFF DARK BROWN CLAYEY SILT		2'
VERY STIFF BROWN CLAYEY SILT, SOME GRAVEL		5'
LOOSE BROWN MIXTURE GRAVEL, SAND & SILT, TRACE CLAY	LOST ST	7'

USED AUGER

1/20/65

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 47'6"

Foreman HERSCHEL BOYD

Classification by FOREMAN

Sheet 7 of 13

344-2—100 Pub—10-64

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 20 FEBRUARY 1965195 Job No. 03-3450

Location of Borings CATERPILLAR TRACTOR Co., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

+50'

No. 75

GROUND SURFACE ELEVATION 47.8'

Description	Blows	Depth
STIFF BROWN VERY SANDY SILT, SOME GRAVEL	11	0' WL; 3'0"
LOOSE BROWN SMALL TO MEDIUM GRAVEL & SAND	5, 5, 8	11'0"
MEDIUM BROWN SMALL-LARGE GRAVEL, SOME SILTY SAND	15, 24	15'5"
SEE NOTE M	60/3	16'0" LOST
HARD GRAY SHALE, SOME SANDSTONE	52/60	21'0"
HARD GRAY SHALE, SOME HARD SANDSTONE	49/60	26'0"

+45' +40' +35' +30' +25' +20'

USED 16'0" OF 3" CASING

1/28 & 2/5/65

NOTE M: BROWN & GRAY SHALE

No. 76

GROUND SURFACE ELEVATION 47.7'

Description	Blows	Depth
DENSE BROWN SANDY SILT, SOME GRAVEL & SANDSTONE	30	0' WL; 3'0"
LOOSE BROWN SMALL TO MEDIUM GRAVEL, SOME SAND	4, 8, 7, 10	13'6"
DENSE GRAVEL SOME SAND	60/3	14'5"

REFUSAL ROCK OR BOULDER

USED AUGER

1/28/65

No. 77

GROUND SURFACE ELEVATION 47.8'

Description	Blows	Depth
BROWN SILT, SOME GRAVEL		0' WL; 1'0"
LOOSE BROWN SMALL-LARGE GRAVEL, SOME SAND	9	3'6"
LOOSE BLACK PEATY SILT, SOME GRAVEL	6	5'6"
LOOSE BLACK DECAYED WOOD & SILT	7	7'6"
MEDIUM BROWN SAND & GRAVEL		9'0"
SEE NOTE N	60	9'6"

USED AUGER

1/29/65

NOTE N: VERY DENSE GRAY SILT, SOME SANDSTONE

No. 78

GROUND SURFACE ELEVATION 47.3'

Description	Blows
BROWN SANDY SILT, SOME GRAVEL	WL
LOOSE BROWN FINE TO MEDIUM SILTY SAND, & GRAVEL	3, 8
MEDIUM BROWN FINE TO MEDIUM SILTY SAND & GRAVEL	15, 14
SEE NOTE O	65/

USED AUGER

1/29/65

NOTE O: VERY DENSE BROWN & GRAY SILTY SHALE

INDICATES CORE DRILLING X/Y

X = AMOUNT OF CORE RECOVERED
Y = AMOUNT OF CORE DRILLED (INCHES)

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 60'11"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 8 of 20

844-2—100 Pads—10-58

TEST BORING REPORT

RAYMOND

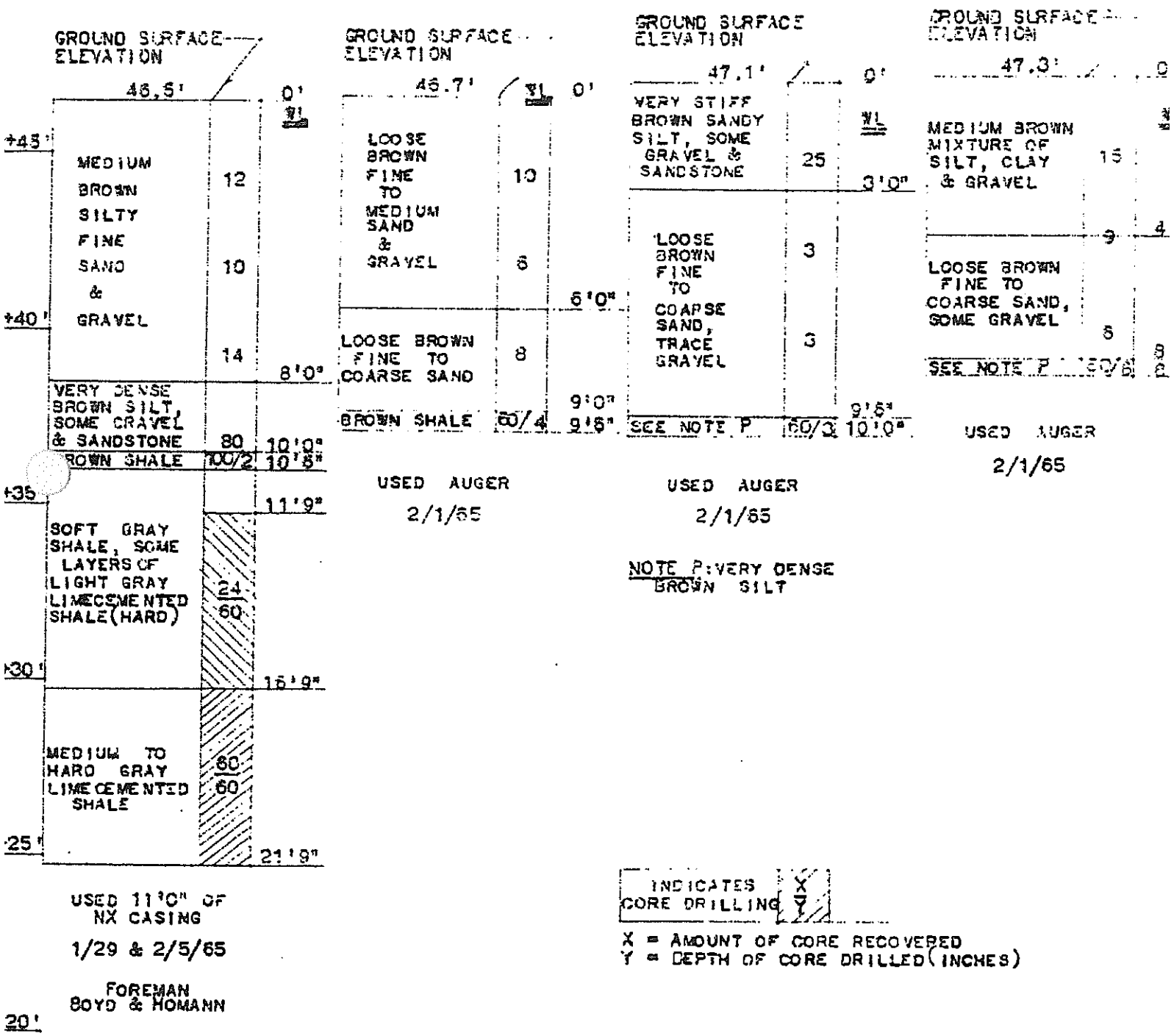
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 20 FEBRUARY 1965 195 Job No. 28-3450-2(A)

Location of Borings CATERPILLAR TRACTOR Co., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 49'9"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 9 of 20

344-B—100 Pads—10-56

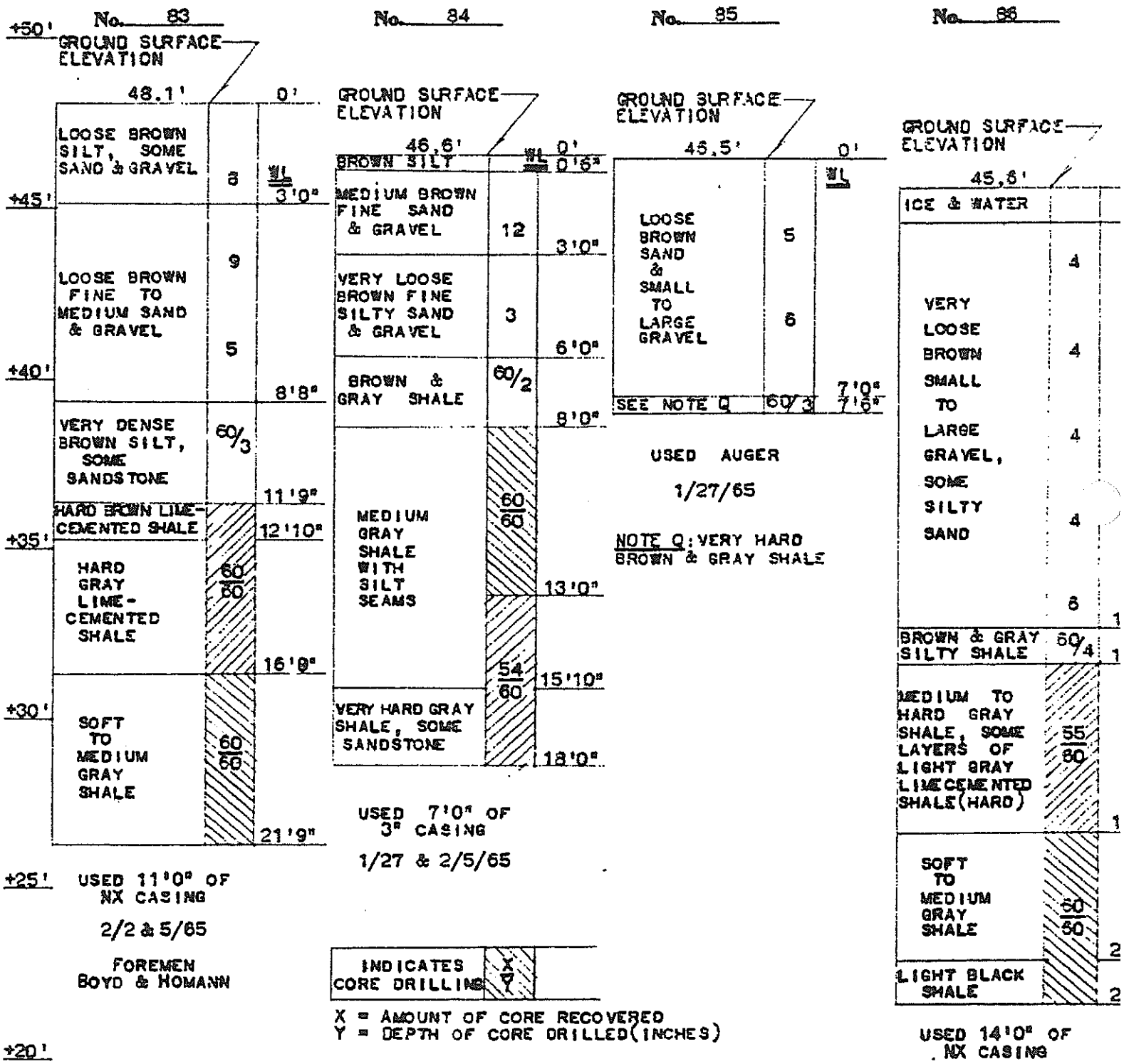
TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 20 FEBRUARY 1965 195 Job No. 63-345

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 71'3"

Foreman ~~HERSCHEL BOYD~~

Classification by FOREMAN

Sheet 10 of 20

B44-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

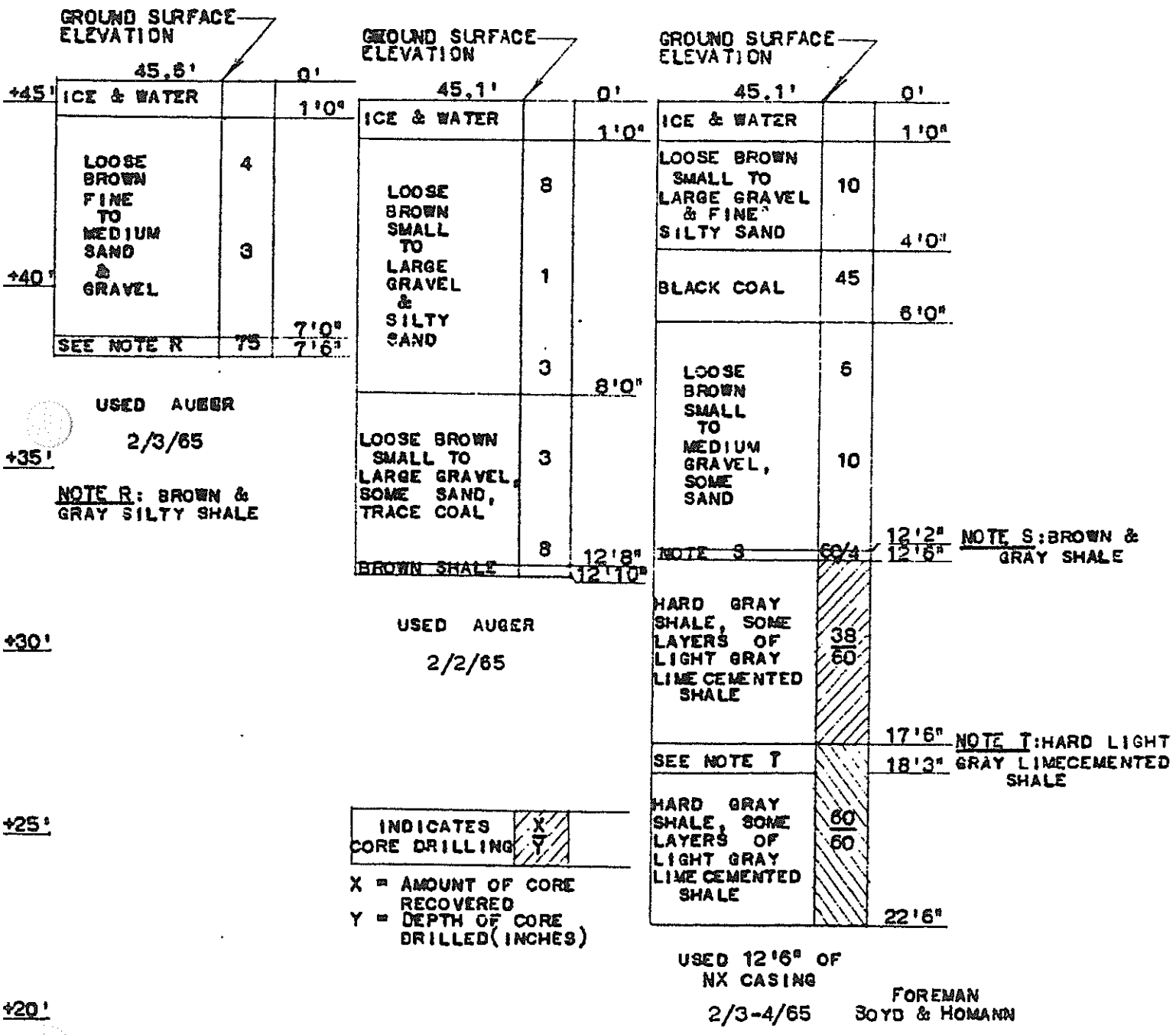
RAYMOND INTERNATIONAL INC

CATERPILLAR TRACTOR COMPANY Date 20 FEBRUARY 1965 195 Job No. CB-3450-C(

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

+50'



Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 42'10"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 11 of 20

344-2—100 Pads—10-64

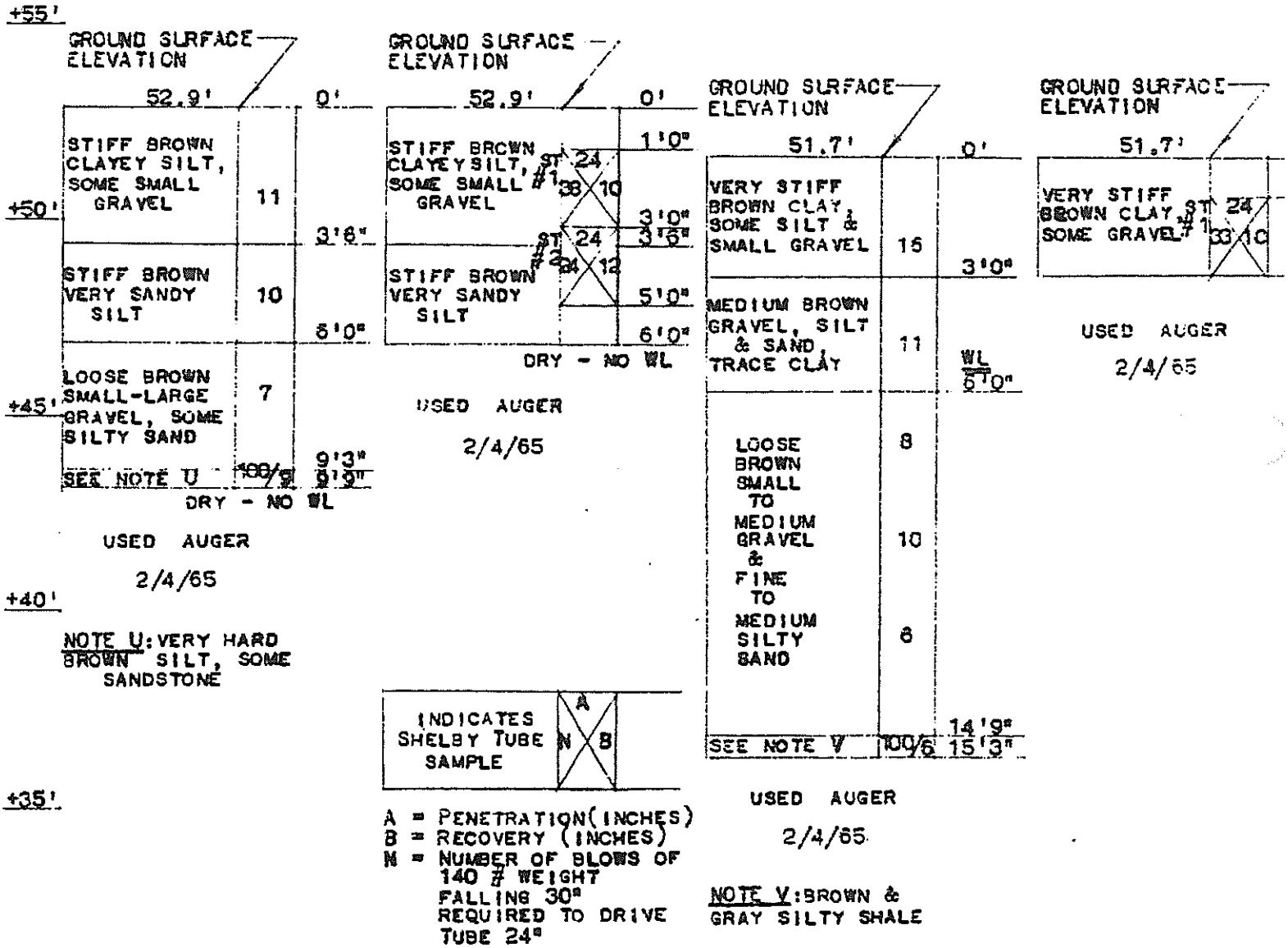
TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 20 FEBRUARY 1965 95 Job No. CB-345

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 34'0"
Foreman HERSCHEL BOYD
Classification by FOREMAN
Sheet 12 of 20

844-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

CATERPILLAR TRACTOR COMPANY Date 21 FEBRUARY 1965 195 Job No. C8-3450-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 92 | No. 92-A | No. 93 | No.

+55'

No. 92

GROUND SURFACE ELEVATION 50.5'

BROWN CLAYEY SILTY LOAM		0' – 1'0"
STIFF BROWN MIXTURE OF CLAY, GRAVEL, SILT & SAND	14	1'0" – 3'6" (WL)
MEDIUM BROWN SMALL-LARGE GRAVEL & SAND	12	3'6" – 6'0"
LOOSE BROWN SMALL-MEDIUM GRAVEL & SILTY SAND	5, 8	6'0" – 11'6"
SEE NOTE W	100/6	11'6" – 12'0"

USED AUGER

2/4/65

NOTE W: BROWN & GRAY SILTY SHALE

FOREMAN HERSCHEL BOYD

No. 92-A

GROUND SURFACE ELEVATION 50.5'

BROWN CLAYEY SILTY LOAM		0' – 1'0"
STIFF BROWN MIXTURE OF CLAY, GRAVEL, SILT & SAND	ST #1 23 24 16	1'0" – 3'0"

USED AUGER

2/4/65

FOREMAN HARSCHEL BOYD

INDICATES SHELBY TUBE SAMPLE (N / A / B)

A = PENETRATION (INCHES)
B = RECOVERY (INCHES)
N = NUMBER OF BLOWS OF 140# WEIGHT FALLING 30" REQUIRED TO DRIVE TUBE 24"

No. 93

GROUND SURFACE ELEVATION 48.2'

VERY SOFT DARK GRAY SILTY LOAM, TRACE ORGANIC MATTER	3, 2	0' (WL) – 6'6"
MEDIUM DARK BROWN SANDY CLAY WITH SANDSTONE	5	6'6" – 8'3"
VERY LOOSE BROWN SMALL-MEDIUM GRAVEL & FINE-COARSE SAND WITH CLAY BINDER	2, 2, 1	8'3" – 18'1"
HARD GRAY CLAY	39	18'1" – 18'10"

REFUSAL — ROCK OR BOULDER

USED 16'0" OF NX CASING

2/10/65

FOREMAN WAYNE HOMANN

+50' +45' +40' +35' +30'

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 33'10"
Foreman AS NOTED
Classification by FOREMAN
Sheet 13 of 20

344-3—100 Pads—10-56

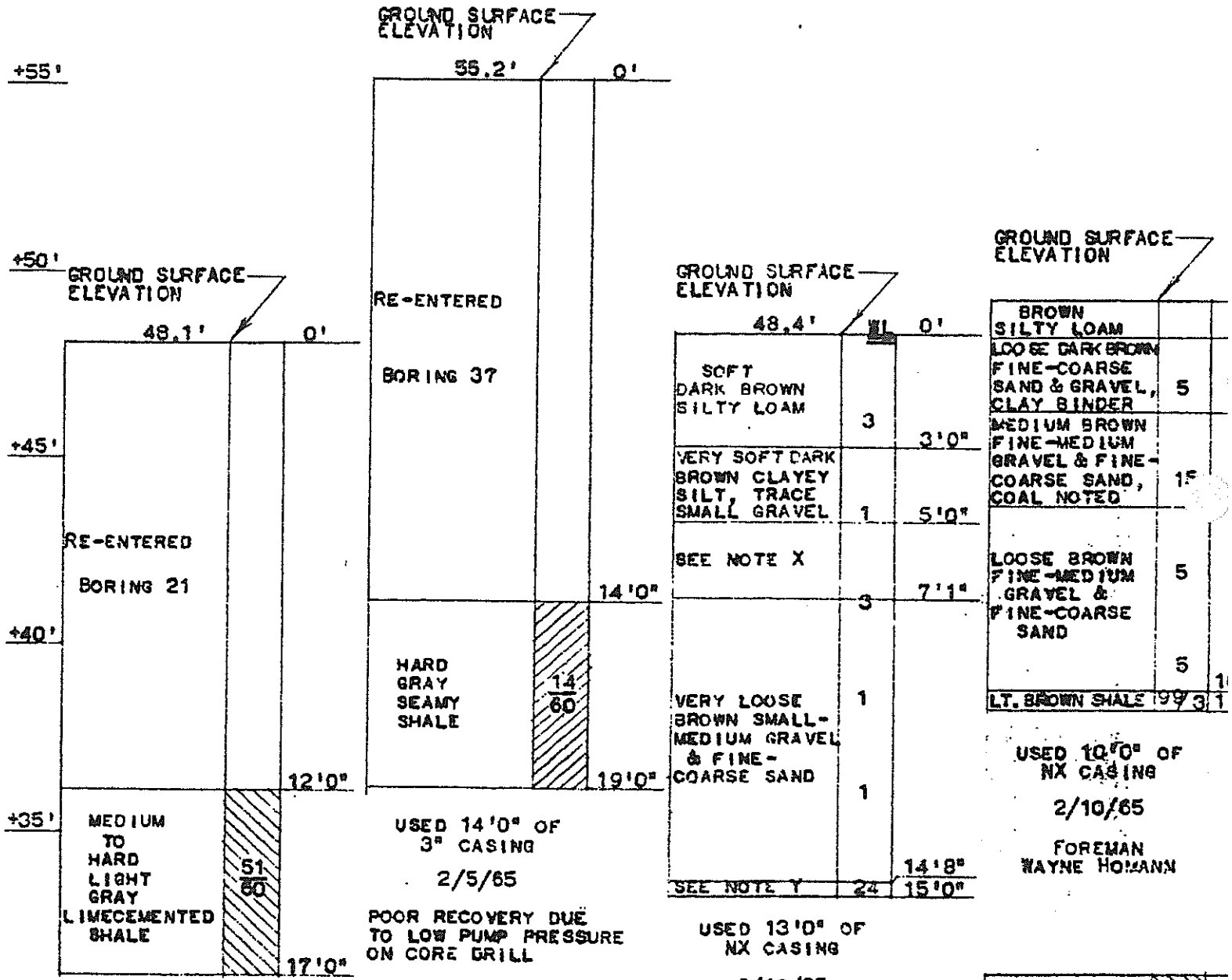
TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 21 FEBRUARY 1965195 Job No. CB-34

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 36'0"
Foreman AS NOTED
Classification by FOREMAN
Sheet 14 of 20

346-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

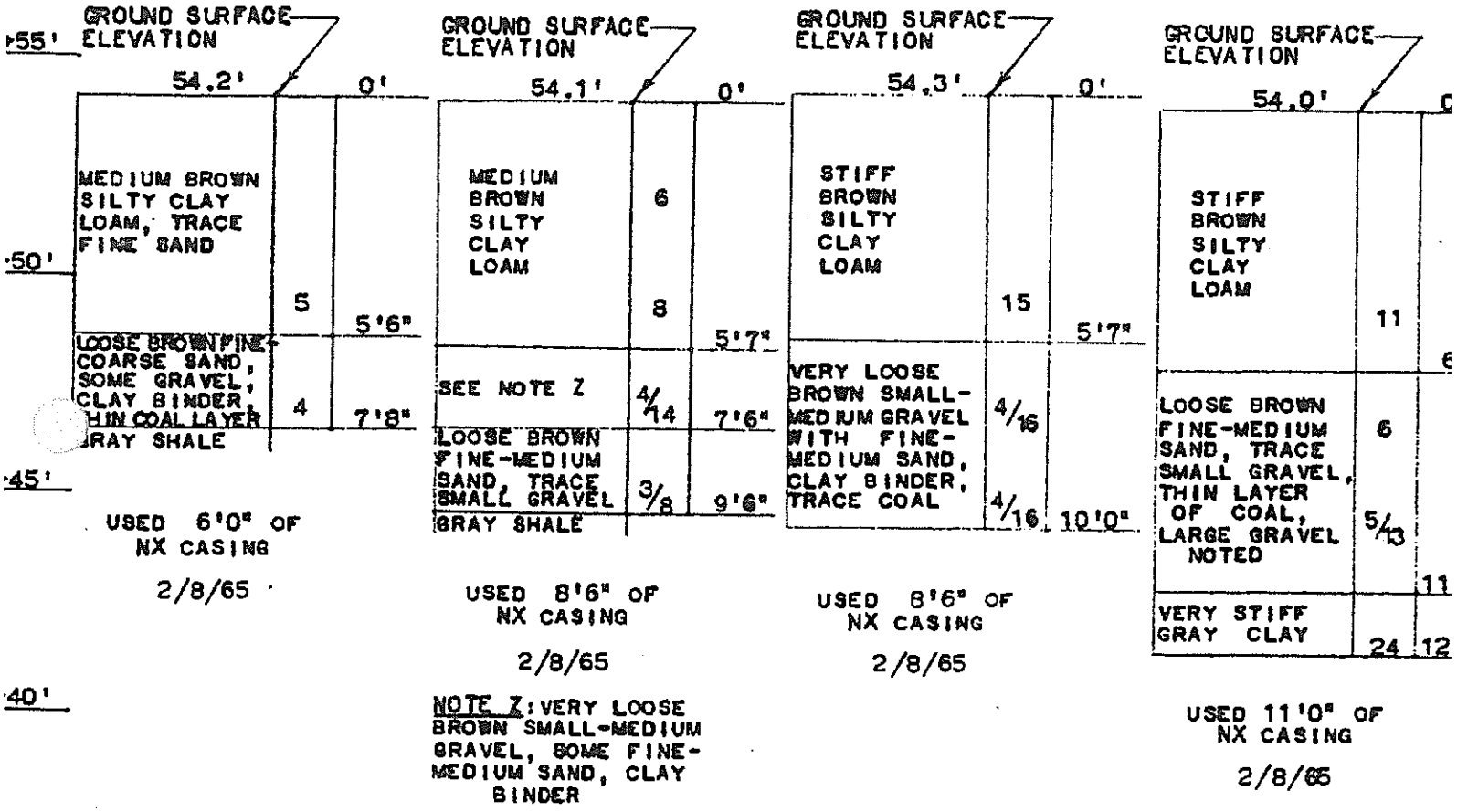
RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 30 APRIL 1965 195 Job No. CB-3450-C(

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 69-B | No. 70-B | No. 71-B | No. 72-B



NOTE: THESE BORINGS ARE LOCATED ADJACENT TO THE ORIGINAL BORINGS.

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 39'8"
Foreman WAYNE HOMANN
Classification by FOREMAN
Sheet 15 of 20

344-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

To CATERPILLAR TRACTOR COMPANY Date 26 APRIL 1965 195 Job No. GB-3450-

Location of Borings CATERPILLAR TRACTOR COMPANY, FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATION SUPPLIED as a fixed datum.

No. 102 No. No. No.

GROUND SURFACE ELEVATION 50.6'

Depth	Description	Blows	Depth
			0'
-50'	LOOSE BROWN SILTY LOAM	7	2'6"
-45'	MEDIUM BROWN FINE-LARGE GRAVEL, CLAY BINDER	19	WL ½ & 3 6'0"
	LOOSE BROWN FINE-MEDIUM GRAVEL & FINE-COARSE SAND	7	
		6	10'0"
-40'	DENSE LIGHT BROWN SILT		11'0"
	VERY HARD GRAY CLAYEY SHALE	99/7	12'6"

USED NO CASING

4/12/65

-35'

WELL POINT READINGS FOR BORINGS, 6, 29, 48 & 53

BORING	ELEVATION OF TOP OF BLACK PIPE	WATER READING AS OF: 2/11	2/17	3/5	3/11	3/15	3/26	4/5	4/1
6	446.82'	0.45'	0.45'	0.55'	0.57'	0.58'	0.61'	0.37'	0.40
29	448.80'	1.90'	2.33'	2.20'	3.32'	2.71'	2.30'	2.17'	2.04
48	458.65'	9.40'	9.50'	8.11'	9.20'	8.42'	8.26'	5.89'	2.88
53	452.15'	4.84'	5.26'	4.84'	4.52'	5.00'	5.34'	4.39'	4.28

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 12'6"

Foreman WAYNE HOMANN

Classification by FOREMAN

Sheet 18 of 20

844-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

CATERPILLAR TRACTOR COMPANY Date 26 APRIL 1965 195 Job No. CB-3450-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 94

GROUND SURFACE ELEVATION 46.8'

Elevation	Description	Blows	Depth
			0' WL ¼
+45'	SOFT DARK BROWN CLAYEY SILT, TRACE ORGANIC MAT'L	3	3'6"
+40'	VERY SOFT DARK BROWN ORGANIC SILT	2	
		2	7'5"
	FINE-COARSE GRAY SAND		8'6"
+35'	SOFT BLACK SILTY ORGANIC CLAY	3	
		3	14'5"
	SEE NOTE AA		15'0"
	SEE NOTE BB		15'3"

REFUSAL ROCK OR BOULDER

USED 10'0" OF 2-1/2" CASING

3/30/65

FOREMAN WAYNE HOMANN

+30'

+25' NOTE AA: MED. BROWN FINE-MEDIUM GRAVEL & FINE-COARSE SAND

NOTE BB: VERY HARD BROWN & GRAY CLAYEY SHALD

No. 95

GROUND SURFACE ELEVATION 46.3'

Description	Blows	Depth
		0' WL ¼
VERY SOFT BROWN & GRAY ORGANIC SILT	2/14	3'8"
VERY SOFT DARK GRAY ORGANIC CLAYEY SILT, SOME LENSES OF SAND	2	
	2/14	
	2	
	2/14	
	2	16'0"
VERY HARD BROWN & GRAY CLAYEY SHALE	99/10	17'3"

REFUSAL ROCK OR BOULDER

USED 15'0" OF 2-1/2" CASING

3/31/65

AT COMPLETION OF BORING, WL = 0'2". BAILED 4 GALLONS OF WATER TO 2'6" AFTER 3 MIN. WL=0'2"

No. 96

GROUND SURFACE ELEVATION 46.8'

Description	Blows	Depth
		0' WL ¼
SOFT BLACK LOAM		0'6"
MEDIUM BROWN SANDY SILT WITH CLAY BINDER	6	4'0"
SOFT BROWN & GRAY CLAYEY SANDY SILT WITH FINE-MEDIUM GRAVEL & SANDSTONE FRAGMENTS, COAL NOTED	4	
	6	7'7"
MEDIUM BROWN FINE-MEDIUM GRAVEL & FINE MEDIUM SAND, CLAY BINDER	14	10'8"
SEE NOTE CC		10'8"
SEE NOTE DD	99/3	11'2"

REFUSAL ROCK OR BOULDER

USED 8'6" OF 2-1/2" CASING

3/30/65

NOTE CC: BROWN MEDIUM-COARSE SAND

NOTE DD: VERY HARD BROWN & GRAY CLAYEY SHALE

AT COMPLETION OF BORING, WL = 0'6". BAILED 3 GALLONS OF WATER TO 3'6" AFTER 8 MIN. WL=0'6"

No. 97

GROUND SURFACE ELEVATION 46.8'

Description	Blows	Depth
BROWN SILTY CLAYEY LOAM, TRACE SAND		WL ¼
MEDIUM BROWN SILTY CLAY, SOME FINE TO MEDIUM GRAVEL, TRACE SAND & SANDSTONE FRAGMENTS	6	
MEDIUM BROWN FINE-MEDIUM GRAVEL & FINE-COARSE SAND WITH CLAY BINDER, LARGE GRAVEL NOTED	16	
	15	
SEE NOTE EE		

REFUSAL ROCK OR BOULDER

USED 8'0" OF 2-1/2" CASING

3/26/65

NOTE EE: HARD BROWN & GRAY CLAYEY SHALE

AT COMPLETION OF BORING, WL = 0'5". BAILED 2 GALLONS OF WATER TO 3'3" AFTER 12 MIN. WL=0'5"

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage 52'2"

Foreman WAYNE HOMANN

Classification by FOREMAN

Sheet 16 of 20

TEST BORING REPORT

RAYMOND

CONCRETE PILE DIVISION

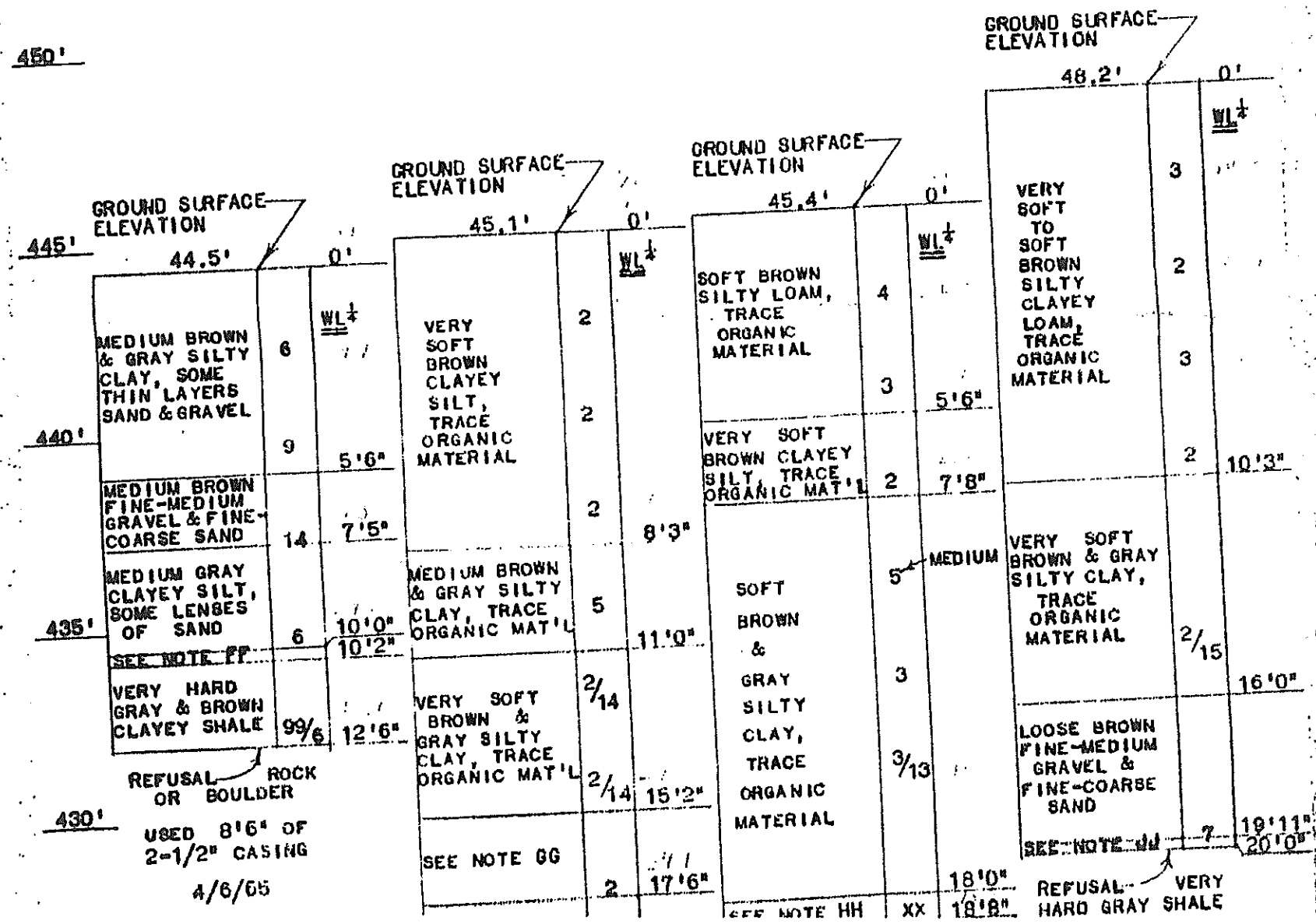
RAYMOND INTERNATIONAL INC.

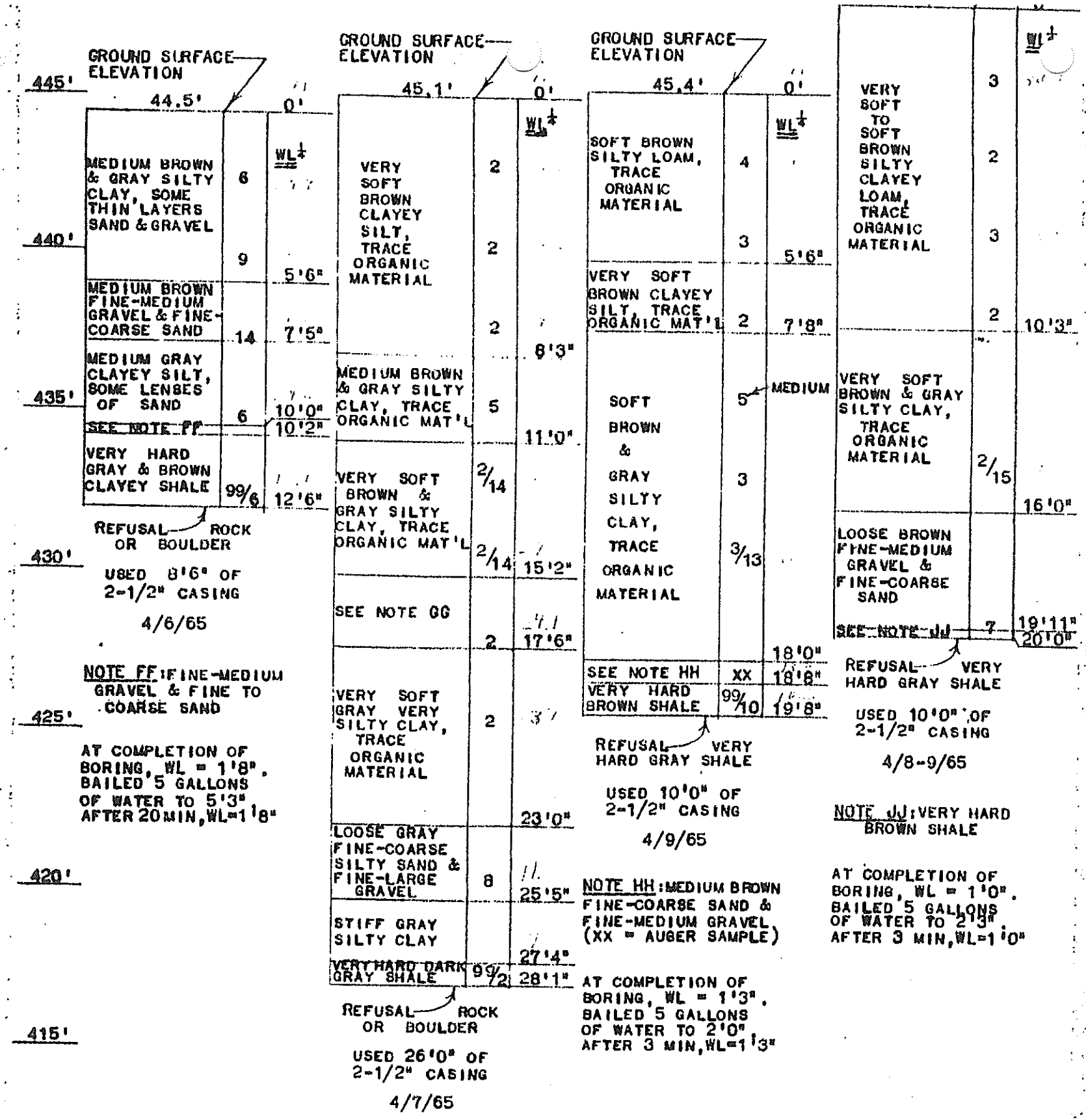
Date 27 APRIL 1965

To CATERPILLAR TRACTOR COMPANY

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



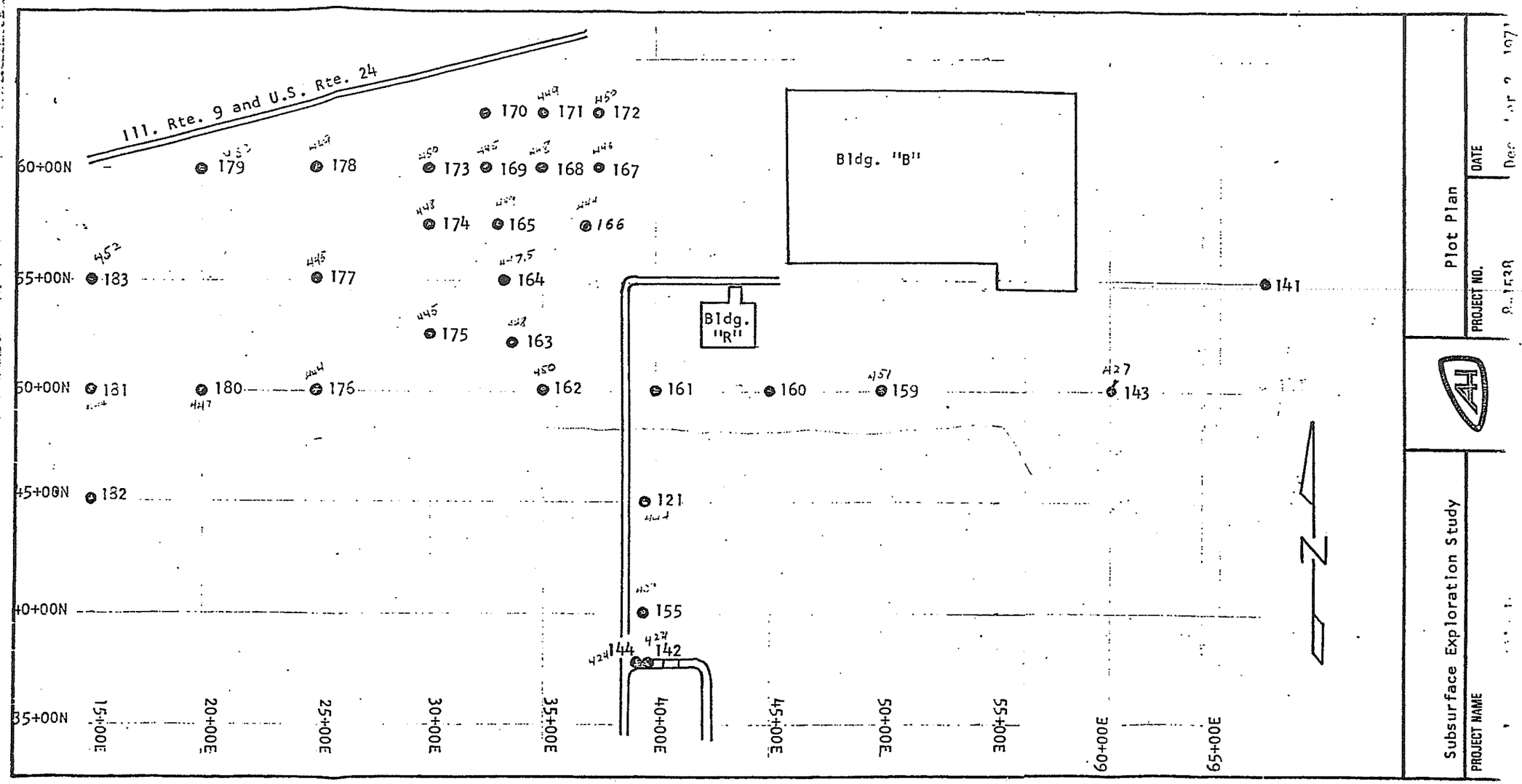


Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140 lb. weight falling 30 inches.

Total Footage 80'3"
Foreman WAYNE HOMANN
Job No. CB-3450-C(A)
Classification by FOREMAN
Sheet 17 of 20


Ill. Rte. 9 and U.S. Rte. 24
Bldg. "B"
Bldg. "R"
170
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172
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121
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144
142
60+00N
55+00N
50+00N
45+00N
40+00N
35+00N
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20+00E
25+00E
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50+00E
55+00E
60+00E
65+00E
N
Plot Plan
DATE
PROJECT NO.
Subsurface Exploration Study
PROJECT NAME

264-S—100 Pads—10-56

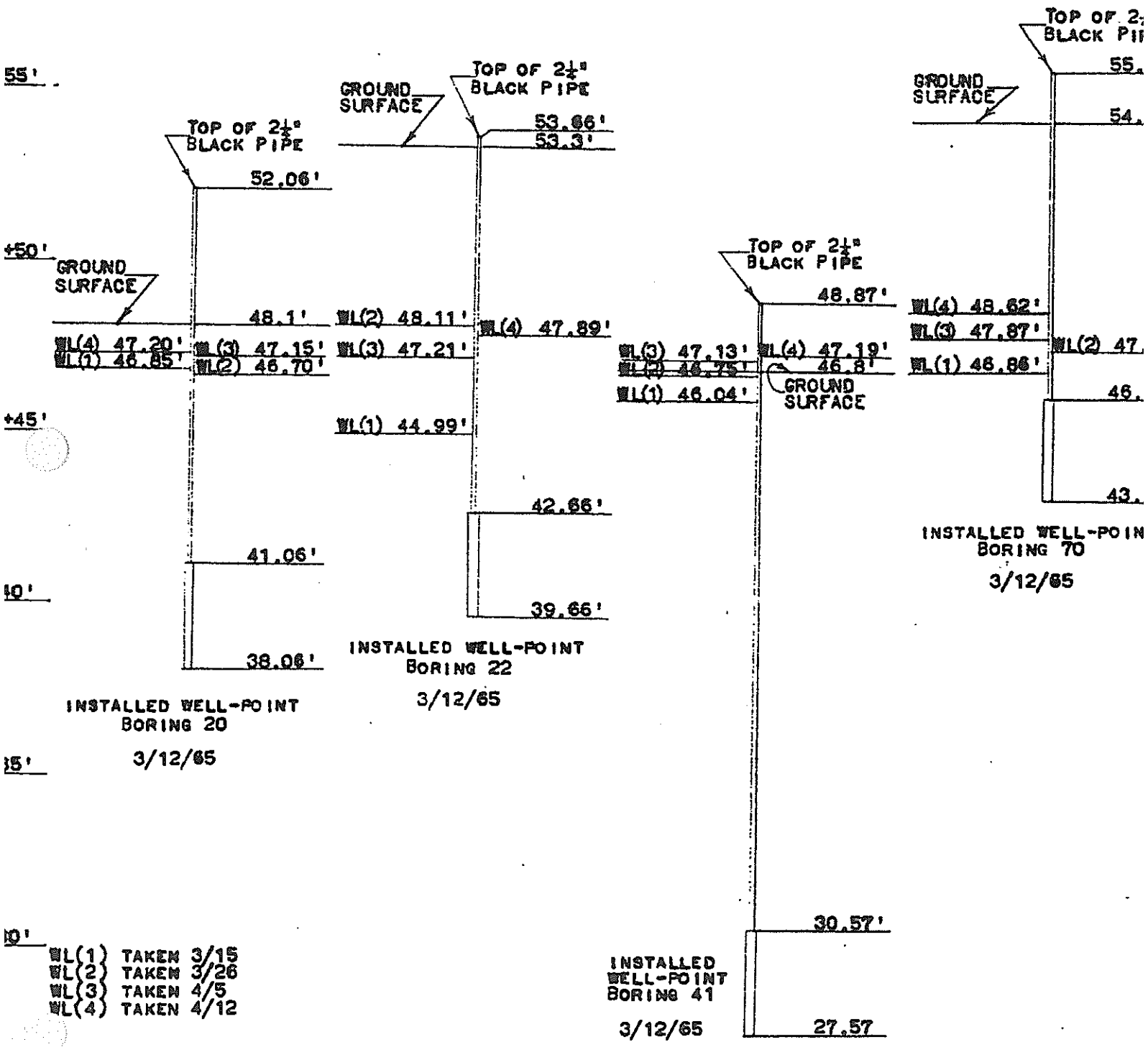
TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC.

CATERPILLAR TRACTOR COMPANY Date 30 APRIL 1965 195 Job No. C8-3450-C(

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



WL(1) TAKEN 3/15
WL(2) TAKEN 3/26
WL(3) TAKEN 4/5
WL(4) TAKEN 4/12

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage
Foreman WAYNE HOMANN
Classification by FOREMAN
Sheet 19 of 20

844-2—100 Pads—10-56

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION

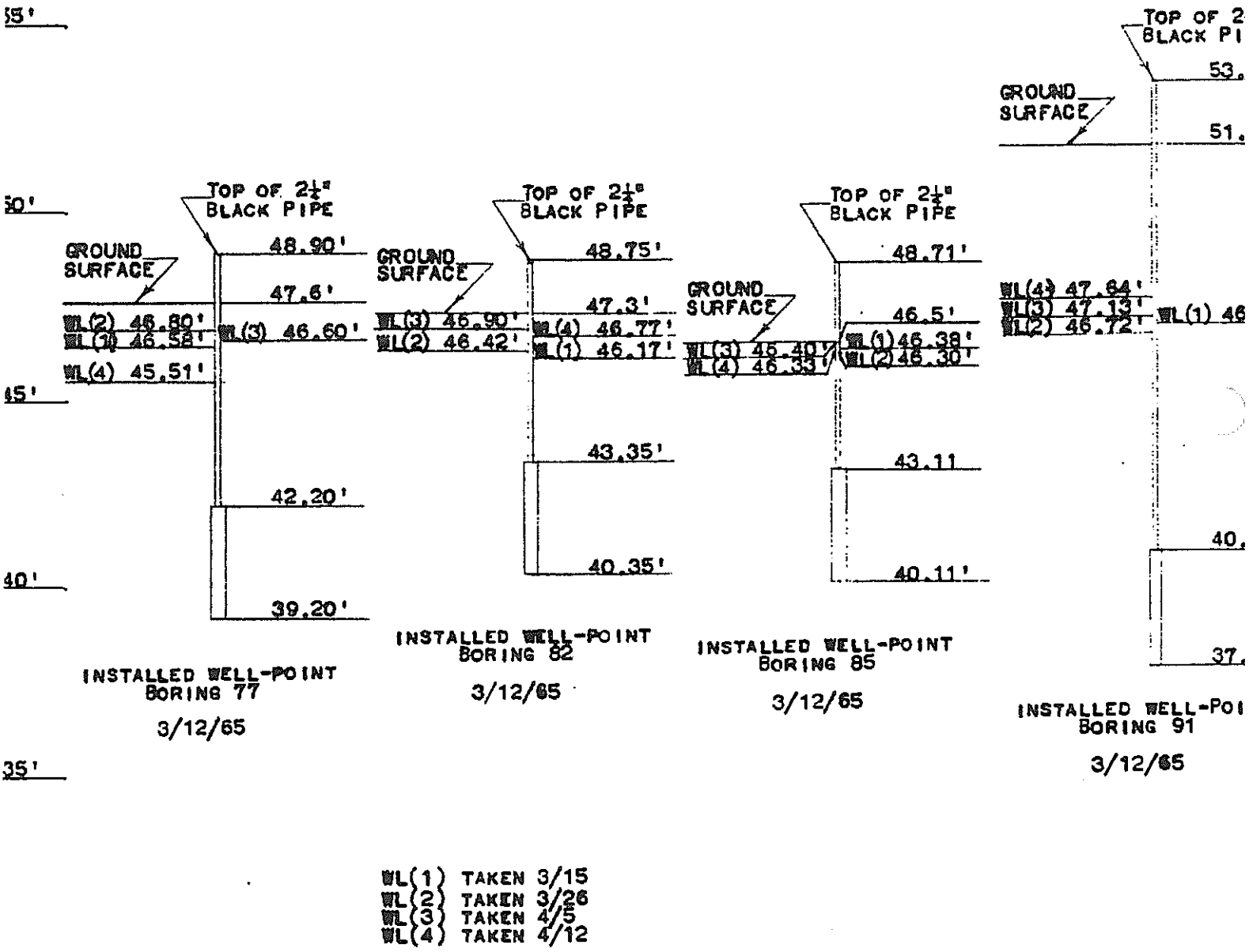
RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 30 APRIL 1965 195 Job No. CB-3450

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, MAPLETON, ILLINOIS

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. 77 No. 82 No. 85 No. 91



WL(1) TAKEN 3/15
WL(2) TAKEN 3/26
WL(3) TAKEN 4/5
WL(4) TAKEN 4/12

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage

Foreman WAYNE HOMANN

Classification by FOREMAN

Sheet 20 of 20

A & H ENGINEERING CORPORATION - CONSULTING ENGINEERS

CATERPILLAR TRACTOR CO.

SUBSURFACE EXPLORATION STUDY

MAPLETON, ILLINOIS

INSPECTION TESTING ENGINEERING

RECORDS RETENTION Official Record

Active + ___ yr Creation + ___ yr

Indefinite ISO/QS 9000

Until Superseded Maximum = ___ yr

Reference Life of Property + 15 yr

Termination + ___ yr

CHAMPAIGN, ILLINOIS PEORIA, ILLINOIS SPRINGFIELD, ILLINOIS CARBONDALE, ILLINOIS CHICAGO, ILLINOIS

RECORD OF SUBSURFACE EXPLORATION

Boring 159

Project Name: Subsurface Exploration Study Date of Boring: November 8, 1971

Site: Mapleton, Illinois Project No.: 8-1538

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	Mc	REMARK
SURFACE	458.8						
		1-Au				1.4	
Foundry SAND		2-SS	4			18.2	
	5	3-SS	5			15.9	
		4-SS	4			14.4	0 Hrs.
	10	5-SS	17			11.2	
		6-SS	17	1.6	1.5	13.3	
Gray brown clayey SILT	15	7-SS	15		1.0	18.8	
	20	8-SS	11		.8	24.7	
	25	9-SS	4		.5	22.3	
Brown clayey SILT	30	10-SS	5		.8	16.3	
Gray SHALE	35	11-SS	51		4.5+	8.3	
END OF BORING Hole Caved in 23 Days							

RECORD OF SUBSURFACE EXPLORATION

Boring 160

Project Name: Subsurface Exploration Study **Date of Boring:** November 12, 19

Site: Mapleton, Illinois **Project No.:** 8-1538

DESCRIPTION	DEPTH	SAMPLE	N	Qu	Qp	Mc	RE
SURFACE	458.7						
Foundry SAND		1-Au				5.8	
		2-SS	3			12.9	
	5	3-SS	3			11.1	
Gray brown silty CLAY		4-SS	10		.75	16.2	
	10	5-SS	11		.75	17.0	
		6-SS	12		.75	19.0	
Brown clayey SILT	15	7-SS	16		1.0	18.8	
	20	8-SS	2			23.7	
Brown silty SAND							
	25	9-SS	3			16.3	
Gray silty SAND w/small pebbles	30	10-SS	4			23.4	
Blue gray SHALE	35	11-SS	100/7'			7.4	
END OF BORING							
Hole Caved In							

F-341-C-50 PADS 1-62

TEST BORING REPORT
RAYMOND
CONCRETE PILE DIVISION
RAYMOND INTERNATIONAL INC.
140 CEDAR STREET - NEW YORK 6, N. Y.

DATE RECEIVED
MAY 7 1965
DEPT. ATTEN.

To CATERPILLAR TRACTOR COMPANY, MANUFACTURING GENERAL OFFICE Date 5 MAY 19 65

Address PLANT ENGINEERING, PEORIA, ILLINOIS ATTENTION: MR. PAUL ZUMWALT

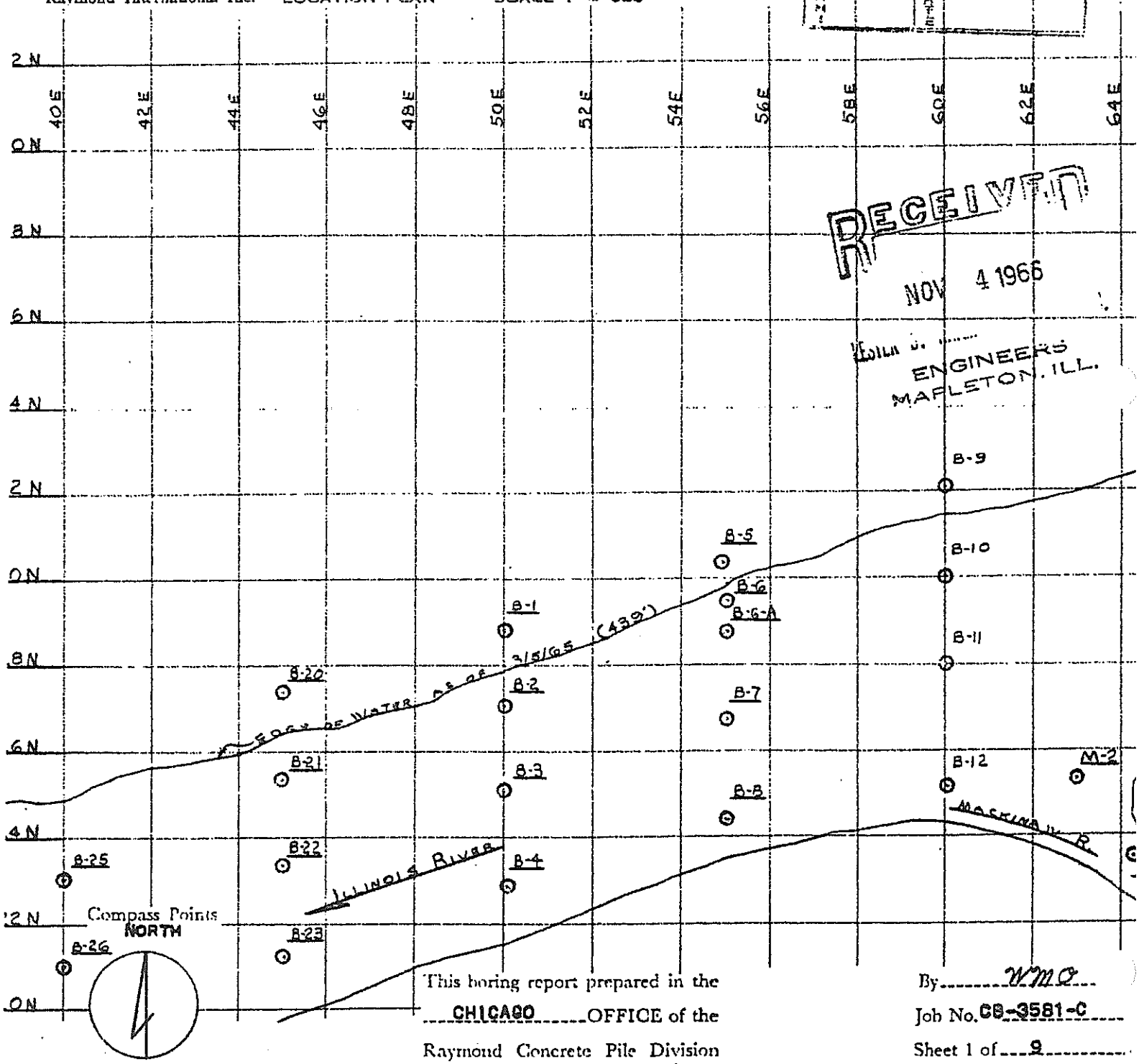
We have completed the following borings for you at: CATERPILLAR TRACTOR COMPANY, FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILLINOIS

with results shown below. In accordance with your instructions, we have sent labelled samples of the strata encountered

To _____ Address _____

Via _____ under date of _____ Raymond Concrete Pile Division

Raymond International Inc. LOCATION PLAN SCALE 1" = 320'



RECEIVED
NOV 4 1966
ENGINEERS
MAPLETON, ILL.

This boring report prepared in the CHICAGO OFFICE of the Raymond Concrete Pile Division
RAYMOND INTERNATIONAL INC.

By WMO

Job No. CB-3581-C

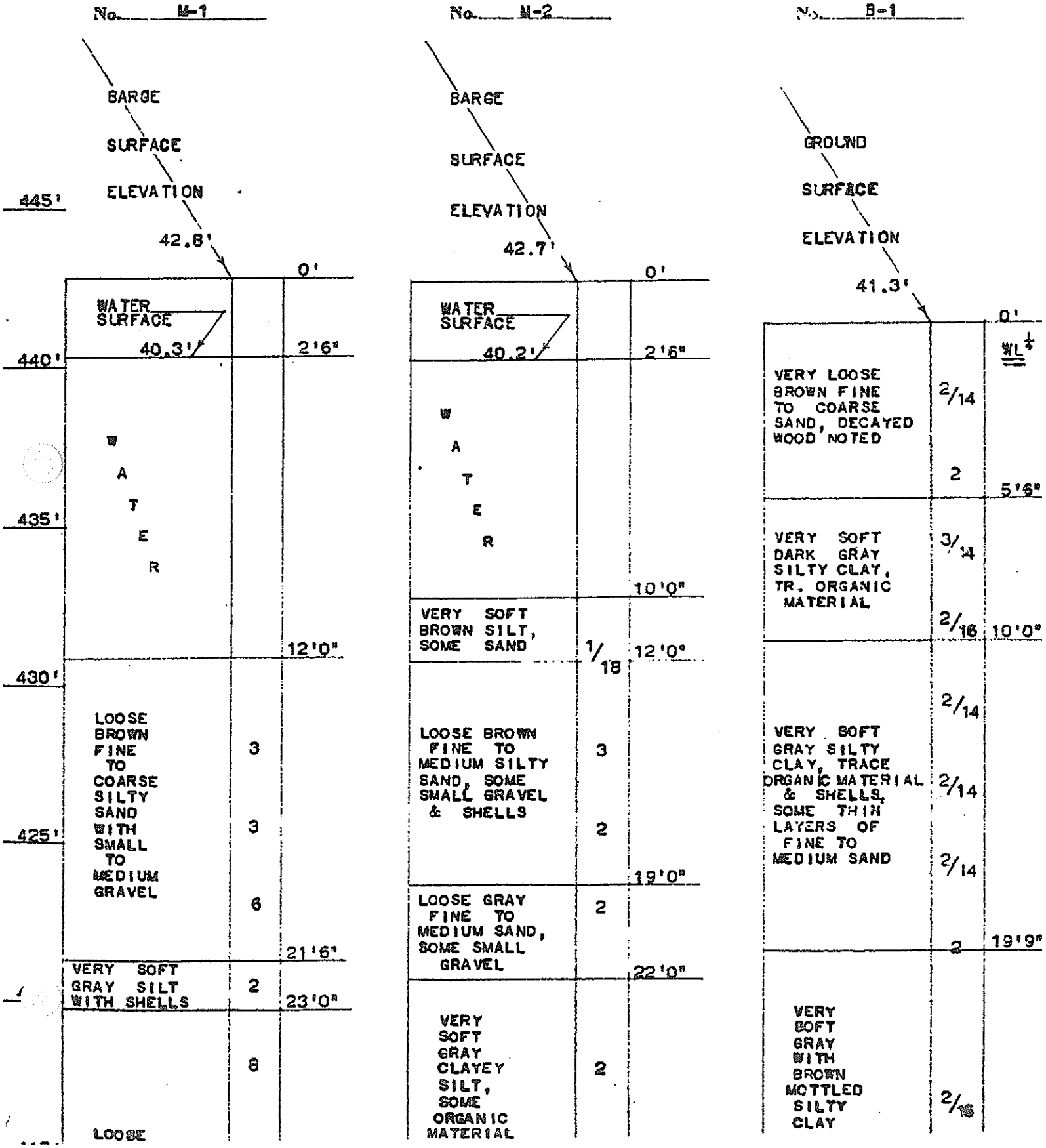
Sheet 1 of 9

TEST BORING REPORT
RAYMOND
CONCRETE PILE COMPANY
GOW DIVISION

To CATERPILLAR TRACTOR COMPANY Date 3 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION ON ILLINOIS RIVER, MAPLETON, I

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



415'	LOOSE GRAY FINE TO MEDIUM SILTY SAND, SOME SHELLS, TRACE GRAVEL	8	
		7	
410'			
		7	
405'			
		8	
400'			
		8	46'0"
395'	MEDIUM GRAY FINE TO COARSE SILTY SAND, SOME SMALL GRAVEL & SHELLS	26	
			52'6"
390'	SOFT BLACK & BROWN DECAYED WOOD & ORGANIC SILT	WS	54'0"
	VERY SOFT GRAY VERY SILTY CLAY, TRACE SHELLS	3	
385'			
		2	60'0"

USED 55'0" OF 2-1/2" CASING

380' 2/18/65

FOREMAN
HERSCHEL BOYD

CLAYEY SILT, SOME ORGANIC MATERIAL	2	28'0"
LOOSE GRAY FINE TO COARSE SILTY SAND, SOME SHELLS & SMALL GRAVEL	7	
	6	
	7	
	12	49'0"
SOFT GRAY CLAYEY SILT, SOME ORGANIC MATERIAL	3	
	3	55'0"

USED 50'0" OF 2-1/2" CASING

2/19/65

FOREMAN
HERSCHEL BOYD

BROWN MOTTLED SILTY CLAY	2/18	27'0
MEDIUM GRAY FINE TO COARSE SAND	12*	31'6
LOOSE GRAY FINE TO COARSE SAND & SMALL GRAVEL	7*	
	7*	42'0
VERY SOFT GRAY SILTY CLAY, TRACE ORGANIC MATERIAL	2	
	3/14	
	3/14	55'0

USED 42'6" OF NX CASING

2/17/65

FOREMAN
WAYNE HOMANN

WS = WASH SAMPLE OBTAINED

Classifications are made by visual inspection. * INDICATES LOST CIRCULATING WATER

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site

Total Footage 148'0"

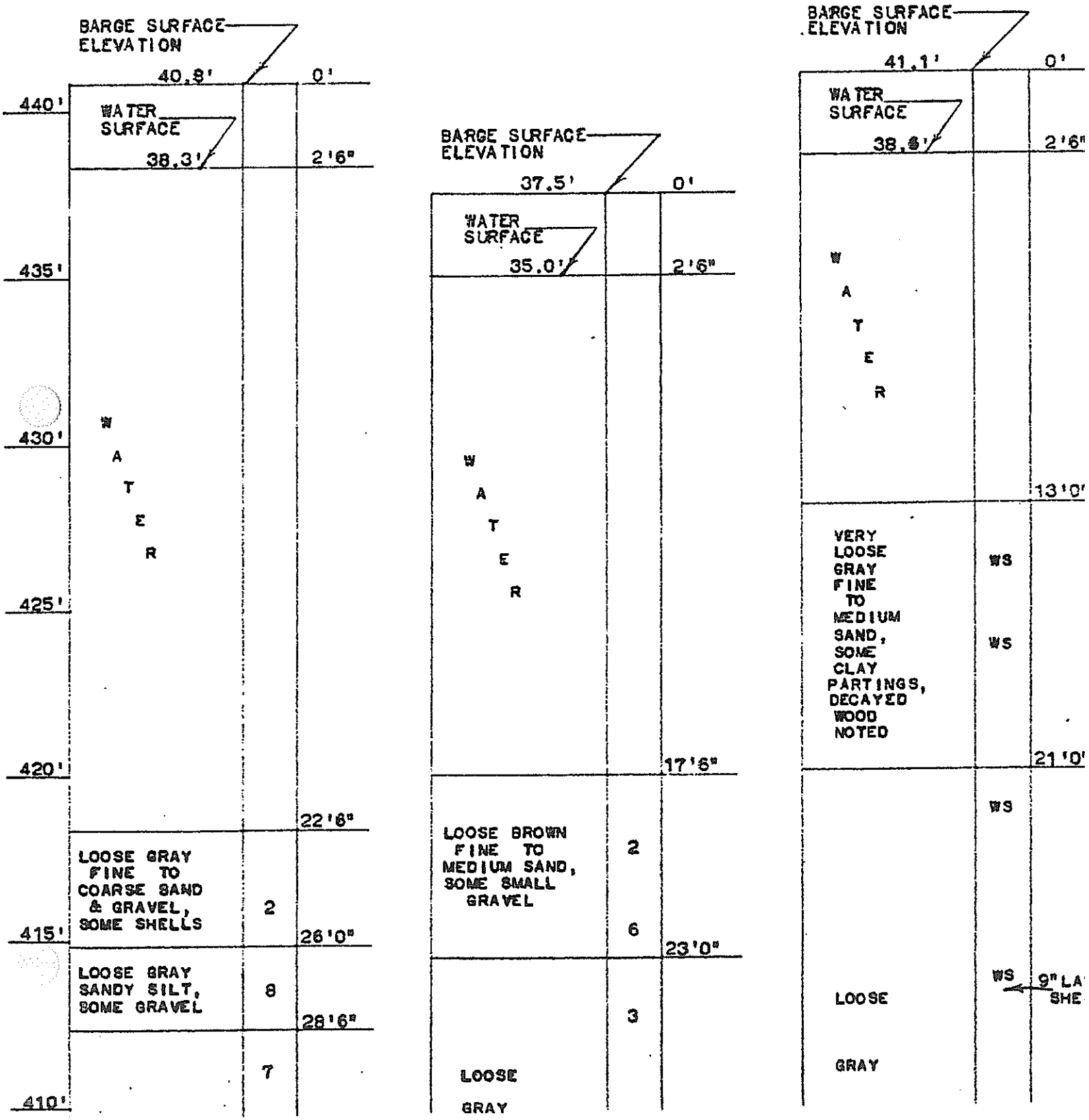
Foreman AS NOTED

TEST BORING REPORT
RAYMOND
CONCRETE PILE COMPANY
GOW DIVISION

CATERPILLAR TRACTOR COMPANY Date 3 MAY 1965 195 Job No. C8-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



Elevation	Description	Blows	Depth
410'	LOOSE GRAY FINE TO COARSE SILTY SAND, SOME SMALL GRAVEL, TRACE SHELLS	7	
		16 MEDIUM	
405'			
		10	
400'			43'6"
395'	VERY SOFT GRAY VERY SILTY CLAY, TRACE SMALL GRAVEL & SHELLS	3	
390'		2	
385'		2	
380'		2	
		NOTE A	
		2	65'0"
375'			

NOTE A: DENSE GRAY SAND & SMALL TO LARGE GRAVEL (62'0"-63'0")

USED 44'0" OF 2-1/2" CASING

2/23/65

FOREMAN
HERSCHEL BOYD

Description	Blows	Depth
LOOSE GRAY FINE TO COARSE SILTY SAND, SOME SMALL GRAVEL	4 SOME SHELLS 8	39'0"
LOOSE GRAY-BROWN FINE TO MEDIUM SILTY SAND	5	43'0"
SOFT GRAY SILTY CLAY	3	45'0"

USED 43'0" OF 2-1/2" CASING

3/1/65

FOREMAN
HERSCHEL BOYD

Description	Blows	Depth
GRAY FINE TO MEDIUM SAND, TRACE SMALL GRAVEL	WS WS WS WS	
		5
SOFT GRAY SILTY CLAY, TRACE ORGANIC MATERIAL	3	52'6

USED 48'0" OF 2-1/2" CASING

3/3/65

FOREMAN
WAYNE HOMANN

WS = WASH SAMPLE OBTAINED

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site

Total Footage 109'6"

Foreman AS NOTED

GOW DIVISION

To: CATERPILLAR TRACTOR COMPANY Date 4 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. B-5

GROUND SURFACE ELEVATION 41.5' — 0'

Elevation	Description	Blows	Depth
	SEE NOTE B		0'9"
440'	VERY LOOSE BROWN FINE TO COARSE SAND	3/14	3'9"
435'	SOFT BROWN TO DARK GRAY MOTTLED SILTY CLAY, TRACE ORGANIC MATERIAL,	4/13, 3, 4/13, 3, 3	17'0"
430'			
425'	VERY SOFT BROWN & GRAY CLAYEY SILT, TRACE ORGANIC MATERIAL	2, 3/13	19'9"
420'	VERY SOFT BLUE-GRAY CLAYEY SILT, TR. ORGANIC MATERIAL	2	24'0"
415'	VERY SOFT BLUE-GRAY CLAYEY SILT, SOME SAND SEAMS, TRACE ORGANIC MATERIAL	2/14, 2/15	31'6"
410'	MEDIUM GRAY FINE TO COARSE SAND & SMALL TO		

WL & 24

No. B-6

BARGE SURFACE ELEVATION 41.1' — 0'

WATER SURFACE 38.6' — 2'6"

Description	Blows	Depth
WATER		10'0"
VERY SOFT BROWN SILTY CLAY	1/18	13'0"
LOOSE BROWN & GRAY SILTY FINE TO COARSE SAND, TRACE SHELLS & GRAVEL	4, 3	17'0"
VERY SOFT GRAY SILTY CLAY	2, 2 TRACE SHELLS	27'0"
VERY SOFT GRAY SILTY CLAY, SOME SHELLS AND THIN SAND	1	

No. B-6-A

BARGE SURFACE ELEVATION 41.1' — 0'

WATER SURFACE 38.6' — 2'6"

Description	Blows	Depth
WATER		19'0"
VERY SOFT GRAY SILTY CLAY, SOME ORGANIC MATERIAL	1/18, 2	27'0"
LOOSE GRAY SANDY SILT WITH DECAYED WOOD & SHELLS, SOME SAND SEAMS	3	32'0"

	SEAMS, TRACE ORGANIC MATERIAL	2/15	31'6"
410'			
	MEDIUM GRAY FINE TO COARSE SAND & SMALL TO MEDIUM GRAVEL, SOME THIN LAYERS OF CLAYEY SILT	12*	37'0"
405'			
	MEDIUM GRAY FINE TO COARSE SAND, TRACE SMALL GRAVEL	14*	
400'		22*	44'3"
	VERY SOFT GRAY CLAYEY SILT, TRACE ORGANIC MATERIAL	2	
395'			
		2/13	52'6"
390'			
	LOOSE GRAY FINE TO COARSE SAND WITH SHELLS	3/13*	55'9"
385'			
	VERY SOFT GRAY CLAYEY SILT, TRACE ORGANIC MATERIAL	3/13	62'0"
380'			
	MEDIUM GRAY SMALL TO LARGE GRAVEL, SOME FINE TO COARSE SAND	25*	
		29*	65'0"
375'			

USED 63'6" OF 2-1/2" CASING

2/15-16/65

FOREMAN
WAYNE HOMANN

VERY SOFT GRAY SILTY CLAY, SOME SHELLS AND THIN SAND & GRAVEL SEAMS	1	
	2	38'0"
DENSE GRAY FINE-COARSE SILTY SAND, SOME SMALL TO MEDIUM GRAVEL	30	40'0"

USED 35'0" OF 2-1/2" CASING

3/3/65

FOREMAN
HERSCHEL BOYD

WITH DECAYED WOOD & SHELLS, SOME SAND SEAMS	3	32'0
LOOSE GRAY FINE TO MEDIUM SILTY SAND WITH SMALL TO MEDIUM GRAVEL	4	
	WS	43'0
SOFT GRAY SILTY CLAY	3	45'0

USED 43'0" OF 2-1/2" CASING

3/3/65

FOREMAN
HERSCHEL BOYD

NOTE B: VERY LOOSE BLACK SILTY SAND, TRACE ORGANIC MATERIAL

WS = WASH SAMPLE OBTAINED

* INDICATES LOST CIRCULATING WATER

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, as noted. Porosity of the soil strata, variations of rainfall, site

Total Footage 121'0"

Foreman AS NOTED

FOREMAN

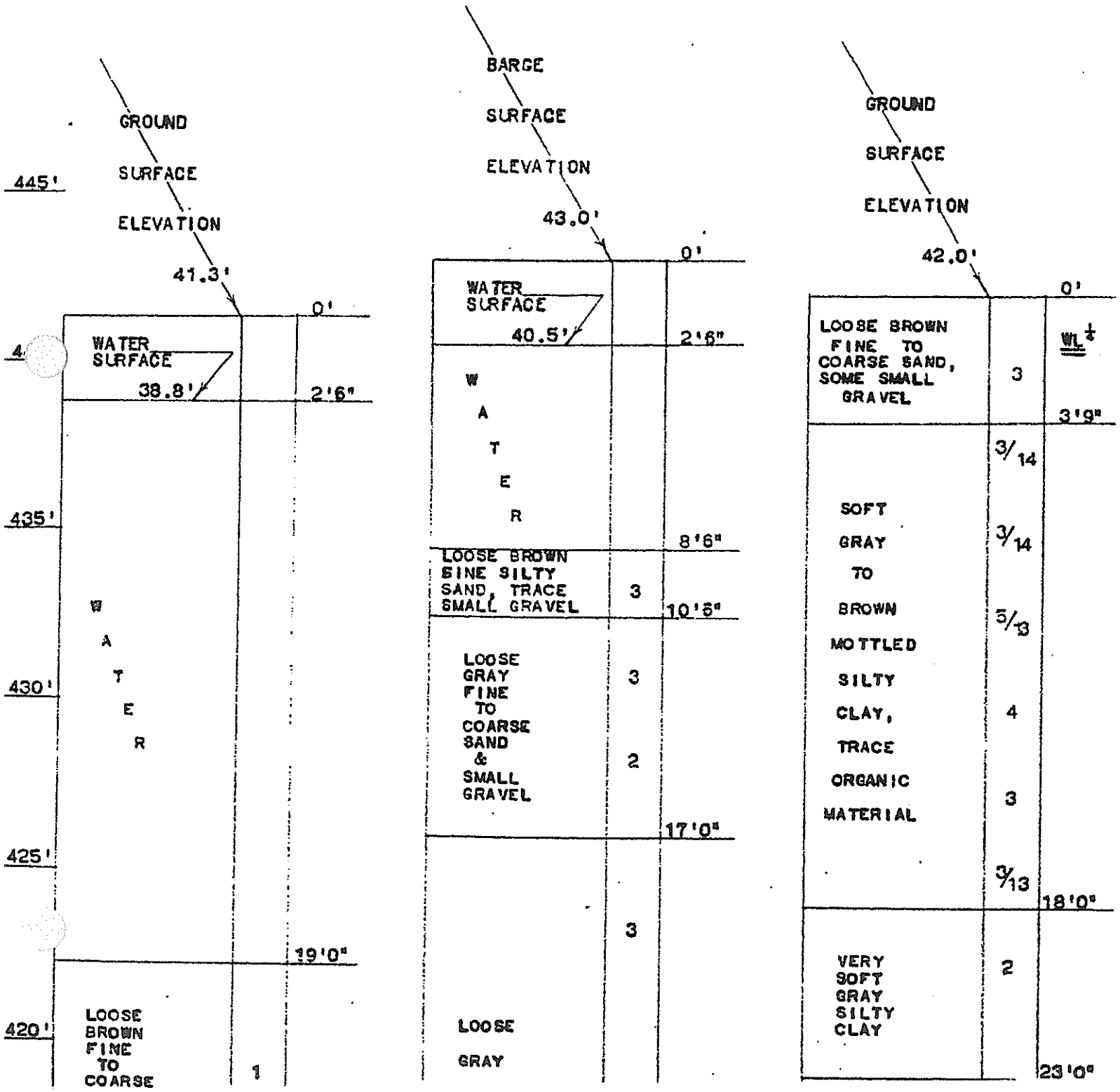
TEST BORING REPORT
RAYMOND
CONCRETE PILE COMPANY
GOW DIVISION

CATERPILLAR TRACTOR COMPANY Date 4 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.

No. B-7 No. B-8 No. B-9



Elevation	Description	Blows	Depth
420'	LOOSE BROWN FINE TO COARSE SAND WITH SMALL TO MEDIUM GRAVEL	1 2	
415'			27'6"
410'	LOOSE GRAY FINE TO MEDIUM SILTY SAND WITH SMALL GRAVEL, TRACE SHELLS	WS WS WS	
405'			
400'			43'0"
	VERY SOFT GRAY SILTY CLAY	2	45'0"
395'			
390'			
385'			

USED 43'6" OF 2-1/2" CASING

3/5/65

FOREMAN
HERSCHEL BOYD

Description	Blows	Depth
LOOSE GRAY FINE TO COARSE VERY SILTY SAND, TRACE SMALL GRAVEL & ORGANIC MATERIAL, SOME SHELLS	4 5 5 3	43'0"
MEDIUM GRAY FINE TO COARSE SILTY SAND, SOME SMALL GRAVEL	25*	48'0"
LOOSE GRAY FINE TO MEDIUM VERY SILTY SAND, TRACE SMALL GRAVEL	8*	52'0"
VERY SOFT GRAY SILTY CLAY WITH SEAMS OF ORGANIC SILT	1	55'0"

USED 53'6" OF 2-1/2" CASING

2/17/65

FOREMAN
HERSCHEL BOYD

Description	Blows	Depth
SILTY CLAY		23'0"
VERY SOFT GRAY SILTY CLAY, SOME THIN LAYERS OF GRAY FINE TO MEDIUM SAND	2	27'3"
LOOSE DARK GRAY FINE TO COARSE SAND, SMALL TO MEDIUM GRAVEL & COAL, SOME CLAY PARTINGS	6*	33'6"
MEDIUM GRAY FINE TO COARSE SAND, SOME SMALL TO MEDIUM GRAVEL	12* 15* 19* 14*	47'0"
LOOSE GRAY FINE TO COARSE SAND	7*	52'0"
LOOSE GRAY FINE TO COARSE SAND, SOME CLAYEY SILT LAYERS	8*	55'6"
SOFT GRAY CLAYEY SILT, TR. ORGANIC MATERIAL	3	60'0"

2/18/65

FOREMAN
WAYNE HOMANN

USED 58'0" OF NX CASING

WS = WASH SAMPLE OBTAINED

* INDICATES LOST CIRCULATING WATER

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings

Total Footage 132'6"

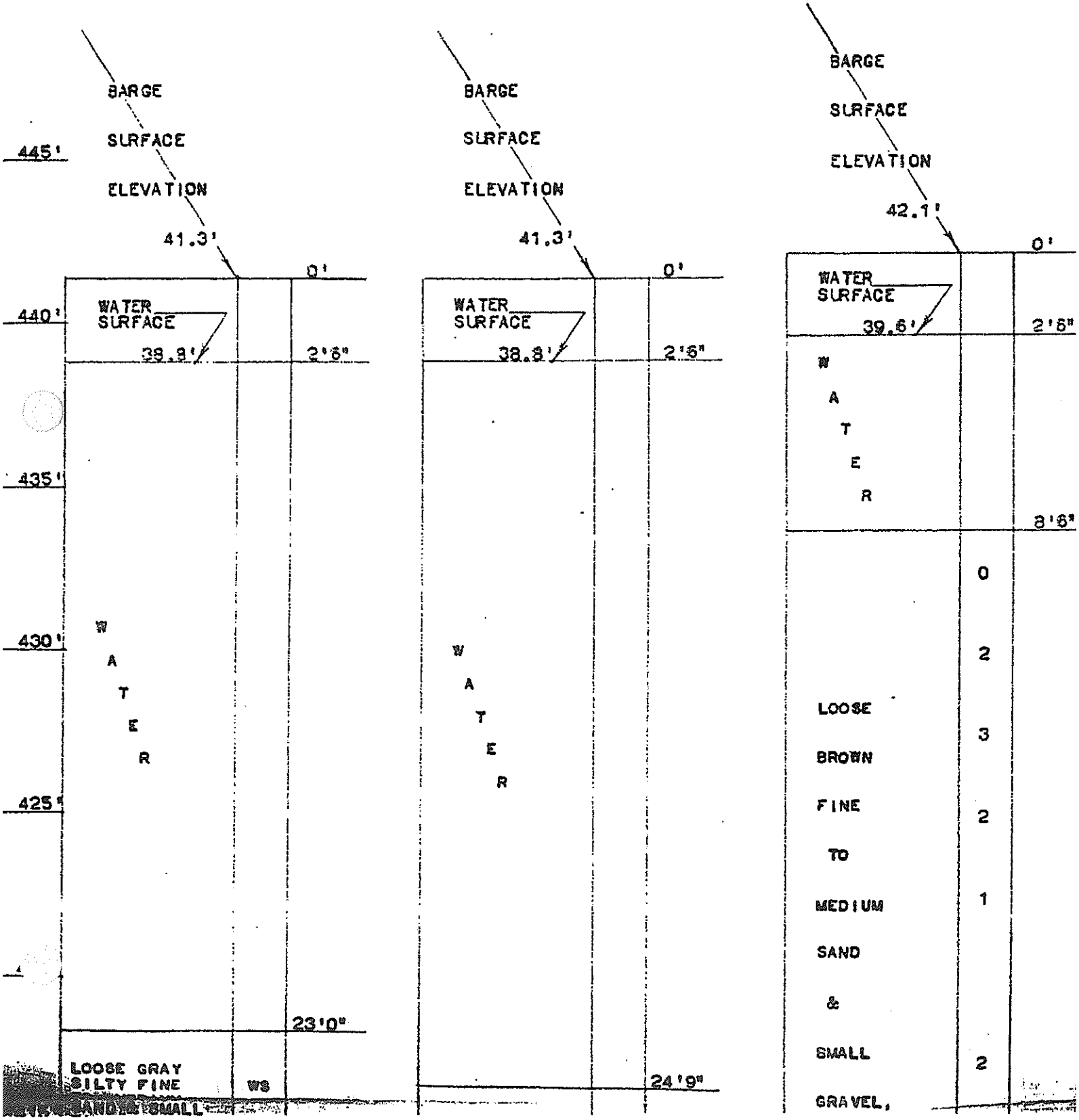
Foreman

TEST BORING REPORT
RAYMOND
CONCRETE PILE COMPANY
GOW DIVISION

CATERPILLAR TRACTOR COMPANY Date 4 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



415'	LOOSE GRAY SILTY FINE TO MEDIUM SAND & SMALL TO MEDIUM GRAVEL, SOME LAYERS CLAYEY SILT & SHELLS	WS WS	29'6"
410'	LOOSE GRAY FINE TO MEDIUM SAND & SMALL TO MEDIUM GRAVEL, TRACE SHELLS	WS WS WS WS WS	52'6"
	SOFT GRAY SANDY CLAYEY SILT, TRACE ORGANIC MATERIAL	WS	55'0"

385'

USED 50'0" OF 2-1/2" CASING

3/4/65

FOREMAN
WAYNE HOMANN

		24'9"
LOOSE GRAY FINE TO COARSE SAND & SMALL TO MEDIUM GRAVEL, TRACE DECAYED WOOD	WS WS WS	43'6"
SOFT GRAY SILTY CLAY, TRACE ORGANIC MATERIAL	3/13	45'0"

USED 40'0" OF 2-1/2" CASING

3/4/65

FOREMAN
WAYNE HOMANN

SMALL GRAVEL, TRACE SHELLS	2 3	32'0
MEDIUM GRAY FINE TO COARSE SILTY SAND & SMALL TO MEDIUM GRAVEL, TRACE SHELLS	12 10 14	48'0
SOFT GRAY SILTY CLAY, TRACE ORGANIC SILT	3 4	55'0

USED 49'0" OF 2-1/2" CASING

2/20/65

FOREMAN
HERSCHEL BOYD

WS = WASH SAMPLE OBTAINED

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site

Total Footage 98'9"

Foreman AS NOTED

Classification FOREMAN

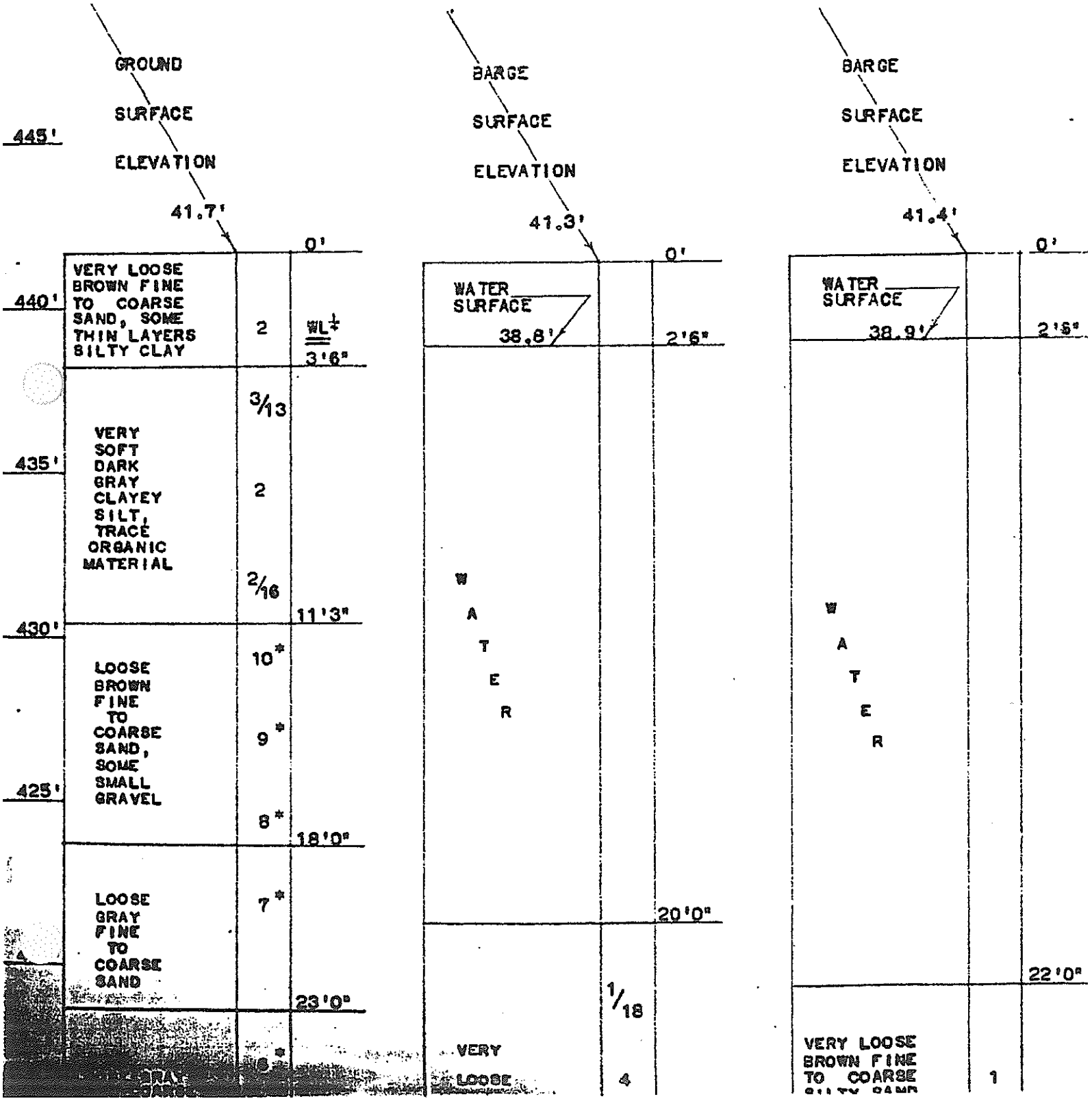
F 344-4 30 PAGE 2-62

TEST BORING REPORT
RAYMOND
CONCRETE PILE COMPANY
GOW DIVISION

CATERPILLAR TRACTOR COMPANY Date 5 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



No. B-20

GROUND SURFACE ELEVATION 41.7'

445'

Depth	Description	Blows	Depth
			0'
440'	VERY LOOSE BROWN FINE TO COARSE SAND, SOME THIN LAYERS SILTY CLAY	2	WL‡ 3'6"
435'	VERY SOFT DARK GRAY CLAYEY SILT, TRACE ORGANIC MATERIAL	3/13, 2, 2/16	11'3"
430'	LOOSE BROWN FINE TO COARSE SAND, SOME SMALL GRAVEL	10*, 9*, 8*	18'0"
425'	LOOSE GRAY FINE TO COARSE SAND	7*	23'0"
	[illegible] GRAY [illegible]	6*	

No. B-21

BARGE SURFACE ELEVATION 41.3'

Description	Blows	Depth
		0'
WATER SURFACE 38.8'		2'6"
WATER		20'0"
VERY LOOSE	1/18, 4	

No. B-22

BARGE SURFACE ELEVATION 41.4'

Description	Blows	Depth
		0'
WATER SURFACE 38.9'		2'6"
WATER		22'0"
VERY LOOSE BROWN FINE TO COARSE SILTY SAND	1	

415'	LOOSE GRAY FINE-COARSE SAND, SOME FINE GRAVEL & LAYERS OF CLAYEY SILT, WOOD & SHELLS NOTED	6*	
		8*	31'3"
410'	LOOSE GRAY FINE TO COARSE SAND, SMALL GRAVEL NOTED	6*	
405'			
		6*	
400'			
		7*	
395'			48'0"
390'	VERY SOFT GRAY SILTY CLAY, TRACE ORGANIC MATERIAL	3	
		3/16	55'0"

388' USED 48'0" OF NX CASING

2/19/65

FOREMAN
WAYNE HOMANN

VERY LOOSE GRAY FINE TO COARSE SILTY SAND, SOME FINE GRAVEL	4	
	WS	
	WS	38'0"
MEDIUM GRAY FINE TO COARSE SILTY SAND WITH SMALL GRAVEL, TRACE SHELLS	WS	
	WS	
	WS	54'0"
SOFT GRAY SILTY CLAY	4	LOST 55'0"

USED 53'6" OF 2-1/2" CASING

3/4/65

FOREMAN
HERSCHEL BOYD

BROWN FINE TO COARSE SILTY SAND, TRACE SMALL GRAVEL & ORGANIC MATERIAL	1	
	3	27'6
SHELLS, COAL & ORGANIC MATERIAL		2
MEDIUM GRAY FINE TO MEDIUM SILTY SAND WITH SHELLS & SMALL GRAVEL	WS	
	WS	38'0
MEDIUM GRAY FINE TO COARSE SILTY SAND, TRACE SMALL GRAVEL	WS	
	WS	
	WS	54'6"
VERY SOFT GRAY SILTY CLAY	1	56'0"

USED 54'0" OF 2-1/2" CASING

3/5/65

FOREMAN
HERSCHEL BOYD

WS = WASH SAMPLE OBTAINED
* INDICATES LOST CIRCULATING WATER

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Total Footage 124'0"
Foreman AS NOTED
Classification by FOREMAN

TEST BORING REPORT

RAYMOND

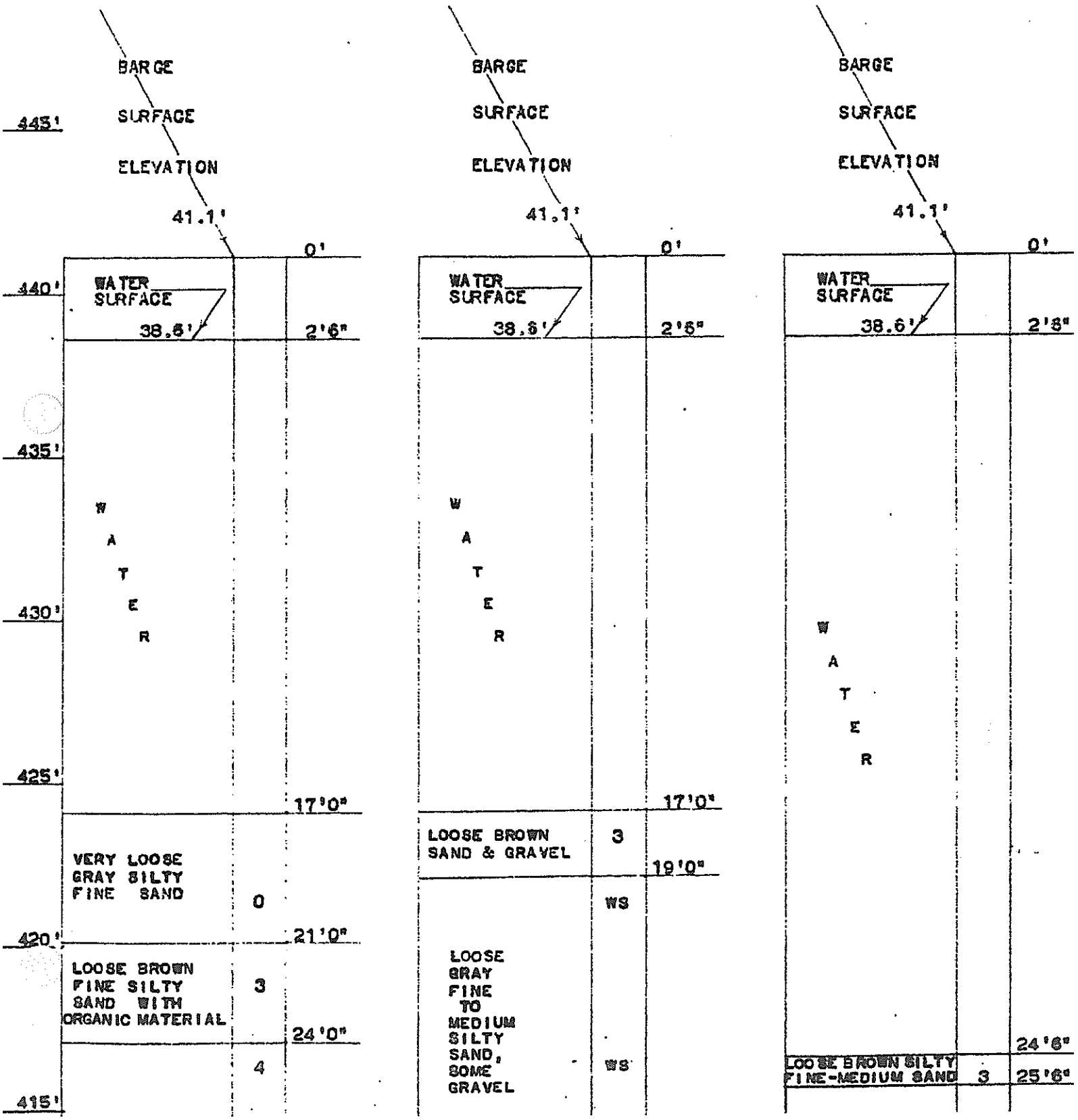
CONCRETE PILE COMPANY

GOW DIVISION

CATERPILLAR TRACTOR COMPANY Date 6 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR CO., FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON, ILL.

All borings are plotted to a scale of 1" = 4 ft. using ELEVATIONS SUPPLIED as a fixed datum.



415'

410'

405'

400'

395'

390'

385'

380'

LOOSE GRAY FINE TO COARSE SILTY SAND WITH SMALL GRAVEL, TRACE SHELLS	4 WS WS	38'0"
MEDIUM GRAY FINE TO COARSE SILTY SAND WITH SMALL GRAVEL	WS WS WS	54'0"
VERY SOFT GRAY SILTY CLAY	2	56'0"

USED 54'0" OF 2-1/2" CASING

3/8/65

SILTY SAND, SOME GRAVEL	WS	28'0"
MEDIUM GRAY FINE TO COARSE SILTY SAND WITH SMALL GRAVEL, SOME SHELLS	WS WS WS WS WS WS	55'0"
VERY SOFT GRAY SILTY CLAY	2	56'6"

USED 55'0" OF 2-1/2" CASING

3/9/65

		24'6
LOOSE BROWN SILTY FINE-MEDIUM SAND	3	25'6
LOOSE GRAY SILTY FINE TO COARSE SAND, SOME GRAVEL & SHELLS	4 WS	32'0
MEDIUM GRAY FINE TO COARSE SILTY SAND, SOME SMALL GRAVEL	WS WS WS WS	52'0
SOFT GRAY SILTY CLAY	3	55'0

USED 53'6" OF 2-1/2" CASING

3/11/65

Classifications are made by visual inspection. WS = WASH SAMPLE RECOVERED

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site

Total Footage 109'0"

Foreman HERSCHEL BOYD

244-2—100 Pads—10-56

RAYMOND

CONCRETE PILE DIVISION

RAYMOND INTERNATIONAL INC

To CATERPILLAR TRACTOR COMPANY Date 6 MAY 1965 195 Job No. CB-3581-C

Location of Borings CATERPILLAR TRACTOR COMPANY, FOUNDRY EXPLORATION, ILLINOIS RIVER, MAPLETON

All borings are plotted to a scale of 1" = ____ ft. using _____ as a fixed datum.

No. 45+00 E		No. 50+00 E		No. 55+00 E		No. 60+00 E	
NORTH CO-ORD.	RIVER BOTTOM ELEV.	NORTH CO-ORD.	RIVER BOTTOM ELEV.	NORTH CO-ORD.	RIVER BOTTOM ELEV.	NORTH CO-ORD.	RIVER BOTTOM ELEV.
26+43	439.0'	27+86	439.0'	29+58	439.0'	31+45	439.0'
26+00	431.2'	27+50	424.0'	29+50	432.8'	31+00	431.0'
25+75	428.0'	27+25	419.0'	29+00	423.8'	30+50	429.5'
25+50	422.0'	27+00	417.0'	28+50	417.0'	30+00	423.0'
25+00	418.7'	26+50	416.2'	28+00	415.5'	29+50	417.0'
24+50	418.0'	26+00	417.5'	27+50	416.0'	29+00	416.5'
24+00	418.0'	25+50	418.0'	27+00	419.0'	28+50	416.0'
23+50	417.5'	25+00	419.3'	26+50	424.7'	28+00	415.0'
23+00	419.4'	24+50	420.5'	26+00	429.3'	27+50	419.0'
22+50	419.8'	24+00	423.2'	25+50	432.5'	27+25	424.3'
22+00	422.8'	23+50	424.2'	25+00	433.0'	27+00	429.0'
21+50	425.0'	23+00	427.1'	24+50	435.0'	26+50	430.2'
21+00	427.3'	22+50	431.1'	24+00	435.5'	26+00	432.8'
20+50	429.9'	22+00	431.9'	23+75	435.0'	25+50	432.1'
20+00	433.0'	21+50	439.0'	23+50	439.0'	25+00	432.6'
19+78	439.0'					24+50	433.5'
						24+10	439.0'

THE TOP CO-ORDINATE IN EACH COLUMN INDICATES THE NORTH BANK OF THE ILLINOIS RIVER AS OF 3/5/65 AND THE BOTTOM CO-ORDINATE IN EACH COLUMN INDICATES THE SOUTH BANK.

Classifications are made by visual inspection.

Water levels (WL). Figure indicates time of reading (hours) after completion of boring. Water levels indicated are those observed when borings were made, or as noted. Porosity of the soil strata, variations of rainfall, site topography, etc., may cause changes in these levels.

Figures in right hand column indicate number of blows required to drive 2" O.D. sampling pipe one foot, using 140-lb. weight falling 30 inches.

Total Footage _____

Foreman WAYNE HOMANN

Classification by _____

Sheet 9 of 9

15307 Client-supplied Documents

LOG OF BORING NO. B-102

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE MAPLETON, ILLINOIS	**PROJECT NAME**

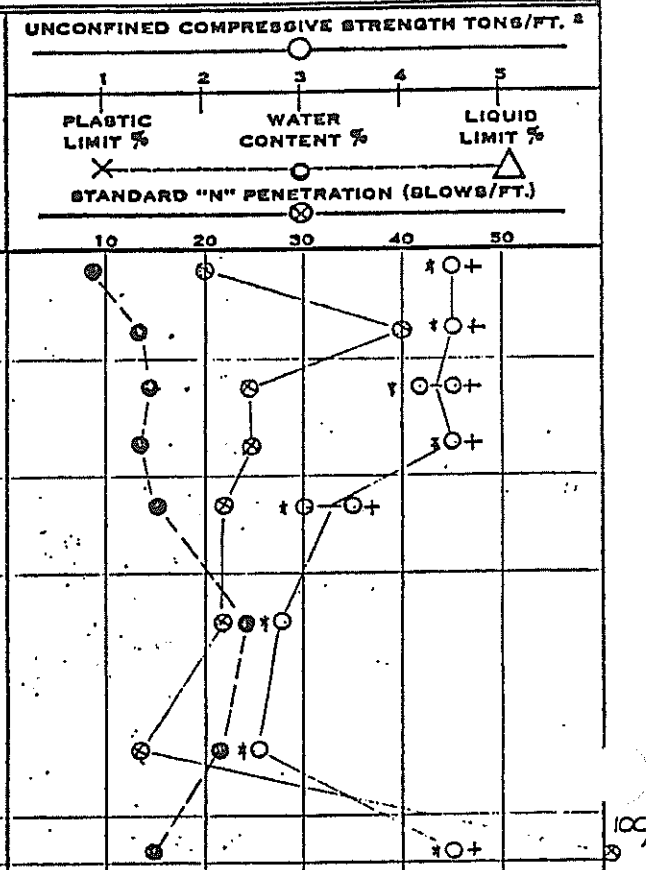
LOCATION: 53 + 64N
52 + 95E

SURFACE ELEVATION 456.6'

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			CLAYEY SILT-SOME FINE SAND-TRACE GRAVEL & FRAGMENTED SHALE-GRAY-BROWN-MEDIUM DENSE TO DENSE (SM-SC)	
	2	SS				
	3	SS			SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY & BROWN-HARD (CL-CH)	
	4	SS				
10.0	5	SS			SILTY CLAY-SOME SAND-TRACE GRAVEL-BROWN & GRAY-VERY TOUGH (CL-SC)	
	6	SS			SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN & GRAY-VERY TOUGH (CL-CH)	
20.0	7	SS				
					23.5	
25.3	8	SS			NOTE A	

END OF BORING
5' OF NX CASING USED

NOTE A: SILT-TRACE TO SOME CLAY, SAND & FINE GRAVEL-LIGHT GRAY-VERY DENSE-(ML-CL) POSSIBLE SILTSTONE



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L. 3'	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-11-65		
BORING COMPLETED	11-11-65		
RIG	70	FOREMAN	ZAPPIA
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B-103

OWNER: CATERPILLAR TRACTOR COMPANY	ARCHITECT-ENGINEER: LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME:

LOCATION: 53 + 64N
53 + 55E

SURFACE ELEVATION 456.1'

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL
	1	SS			NOTE A
	2	SS			SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN & GRAY-HARD (CL)
	3	SS			
	4	SS			SILTY CLAY-TRACE SAND-GRAY-BROWN-TOUGH (CL-CH)
10.0	5	SS			SILTY CLAY-TRACE SAND & GRAVEL-LIGHT BROWN & GRAY-HARD (CL)
	6	SS			CLAYEY & SILTY SAND-TRACE TO SOME GRAVEL-BROWN-MEDIUM DENSE-(SC)
20.0	—				SILTY CLAY-TRACE SAND & GRAVEL-GRAY & BROWN-SOFT TO VERY TOUGH (CL) NOTE: NO SAMPLE OBTAINED FROM 20' TO 21.5'
	7	SS			28.0
30.0	8	SS			NOTE B
30.3					END OF BORING

5' NX CASING USED

NOTE A: CLAYEY SILT-SOME SAND-TRACE GRAVEL-GRAY-BROWN-MEDIUM DENSE (SM-SC)

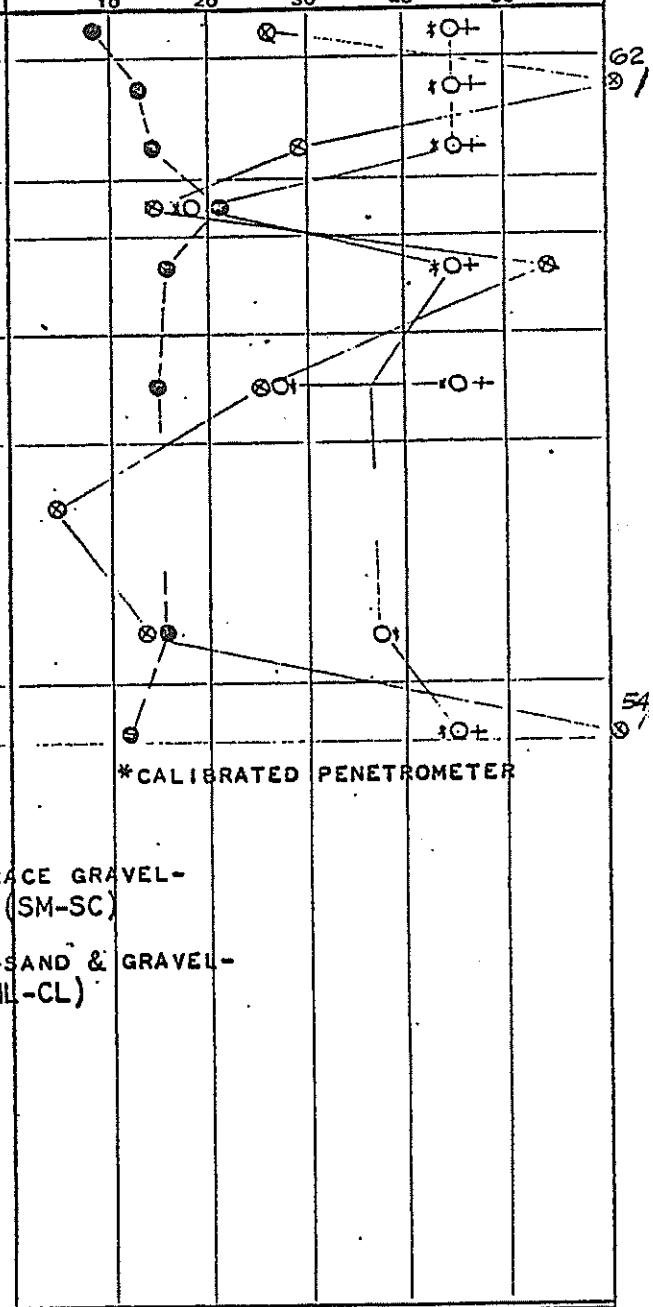
NOTE B: SILT-TRACE TO SOME CLAY-SAND & GRAVEL-VERY DENSE-LIGHT GRAY (ML-CL) POSSIBLE SILTSTONE

UNIT DRY WT. LBS./FT.³

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.) (10, 20, 30, 40, 50)



WATER LEVEL OBSERVATIONS		
W.L.		W.S. OR W.D.
W.L.	15' B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-11-65
BORING COMPLETED	11-11-65
RIG 70	FOREMAN ZAPPIA
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

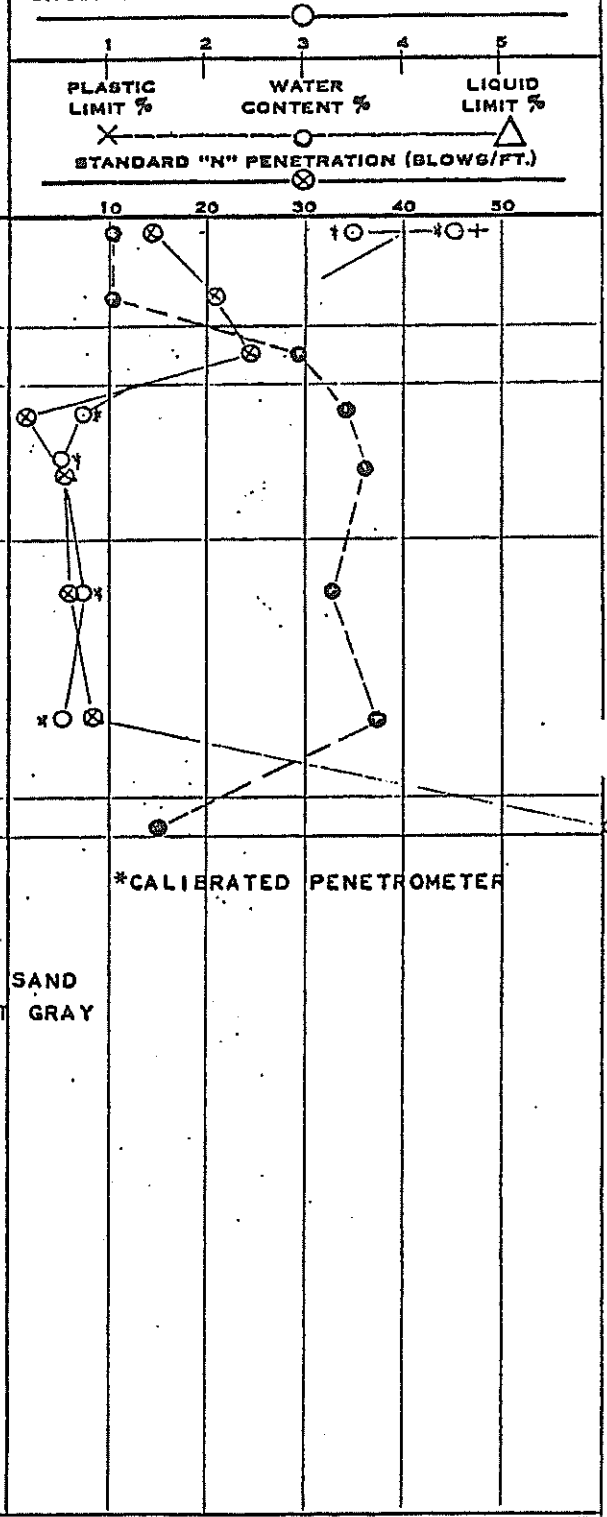
LOG OF BORING NO. B-104

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: 53 + 18N
52 + 95E

SURFACE ELEVATION 451.1'

DEPTH / ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			SILTY & CLAYEY SAND-TRACE TO SOME FINE GRAVEL-BROWN-MEDIUM DENSE-MOIST (SC) FILL	
	2	SS				
	3	SS			SILTY CLAY-SOME TOPSOIL-TRACE ROOTS-BROWN TO DARK BROWN-ORGANIC (OL)	
	4	SS			CLAYEY SILT-TRACE SAND-BROWN & GRAY-LOOSE-SATURATED (MH)	
10.0	5	SS				
	6	SS			SILTY CLAY-TRACE SAND-MEDIUM DARK GRAY-STIFF TO SOFT-SLIGHTLY ORGANIC (CL)	
20.0	7	SS				
					24.0	
25.8	8	SS			NOTE A	



END OF BORING
10' OF NX CASING USED

*CALIBRATED PENETROMETER

NOTE A: SILT-TRACE TO SOME CLAY, SAND & GRAVEL-VERY DENSE-LIGHT GRAY (ML-CL)

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L. 10' B.C.R.	A.C.R.	
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-11-65
BORING COMPLETED	11-11-65
RIG 70	FOREMAN [illegible]
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

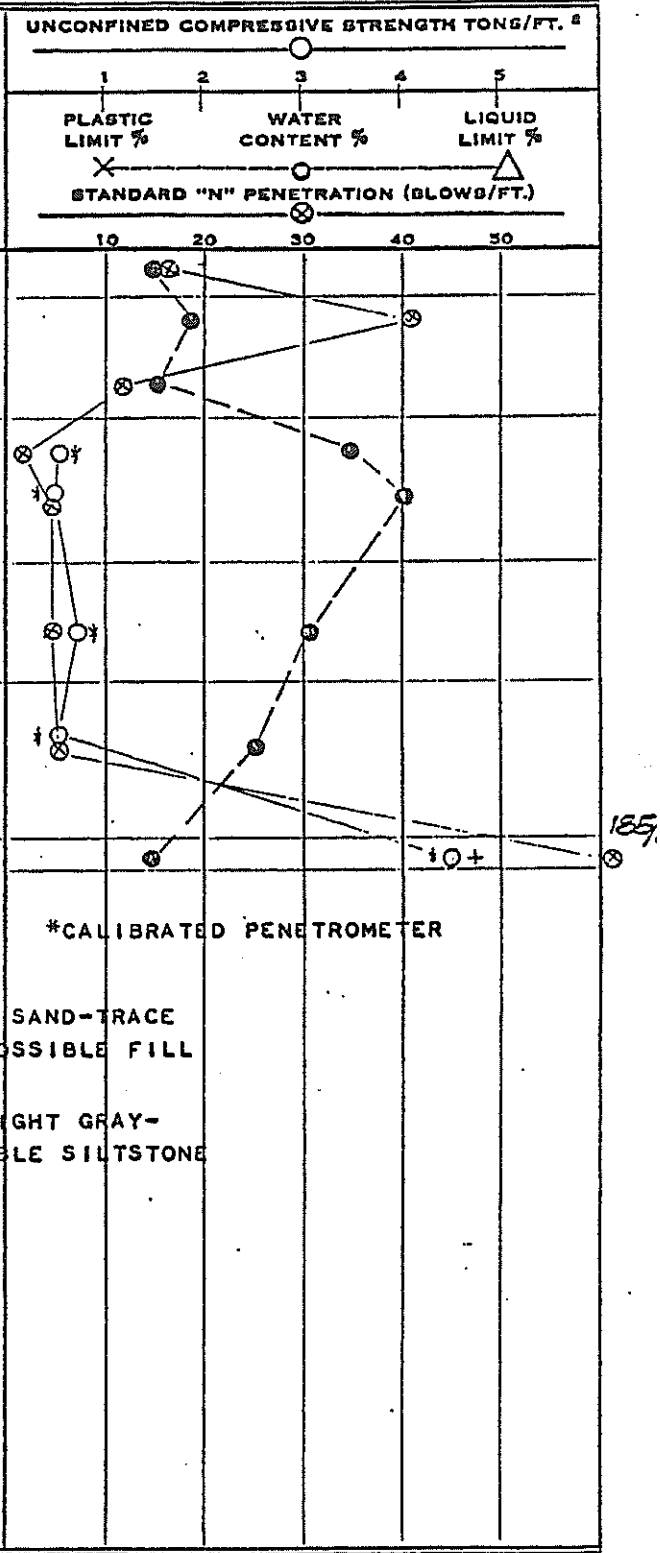
LOG OF BORING NO. B-105

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME

LOCATION: 53 + 18N
53 + 55E

SURFACE ELEVATION 451.3'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			NOTE A	
		2	SS			CLAYEY & SILTY SAND-TRACE GRAVEL-BROWN & GRAY-DENSE TO MEDIUM DENSE-(SC) POSSIBLE FILL	
		3	SS				
		4	SS			CLAYEY SILT-TRACE SAND & ROOTS-SATURATED-ORGANIC-LOOSE (MH)	
10.0		5	SS				
		6	SS			SILTY CLAY-TRACE SAND & ROOTS-MEDIUM DENSE-DARK GRAY-SLIGHTLY ORGANIC-STIFF (CL)	
20.0		7	SS			CLAYEY & SILTY SAND-MEDIUM DARK GRAY-LOOSE-SATURATED (SC)	
						24.5	
25.0		8	SS			NOTE B	



END OF BORING
10' NX CASING USED

*CALIBRATED PENETROMETER

NOTE A: SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN-HARD (CL) POSSIBLE FILL

NOTE B: CLAYEY SILT-TRACE SAND-LIGHT GRAY-VERY DENSE (ML-CL) POSSIBLE SILTSTONE

WATER LEVEL OBSERVATIONS			
W.L.		W.S. OR W.D.	
W.L.	10'	B.C.R.	A.C.R.
W.L.			

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-11-65
BORING COMPLETED	11-11-65
RIG 70	FOREMAN ZAPPIA
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

LOG OF BORING NO. B-106

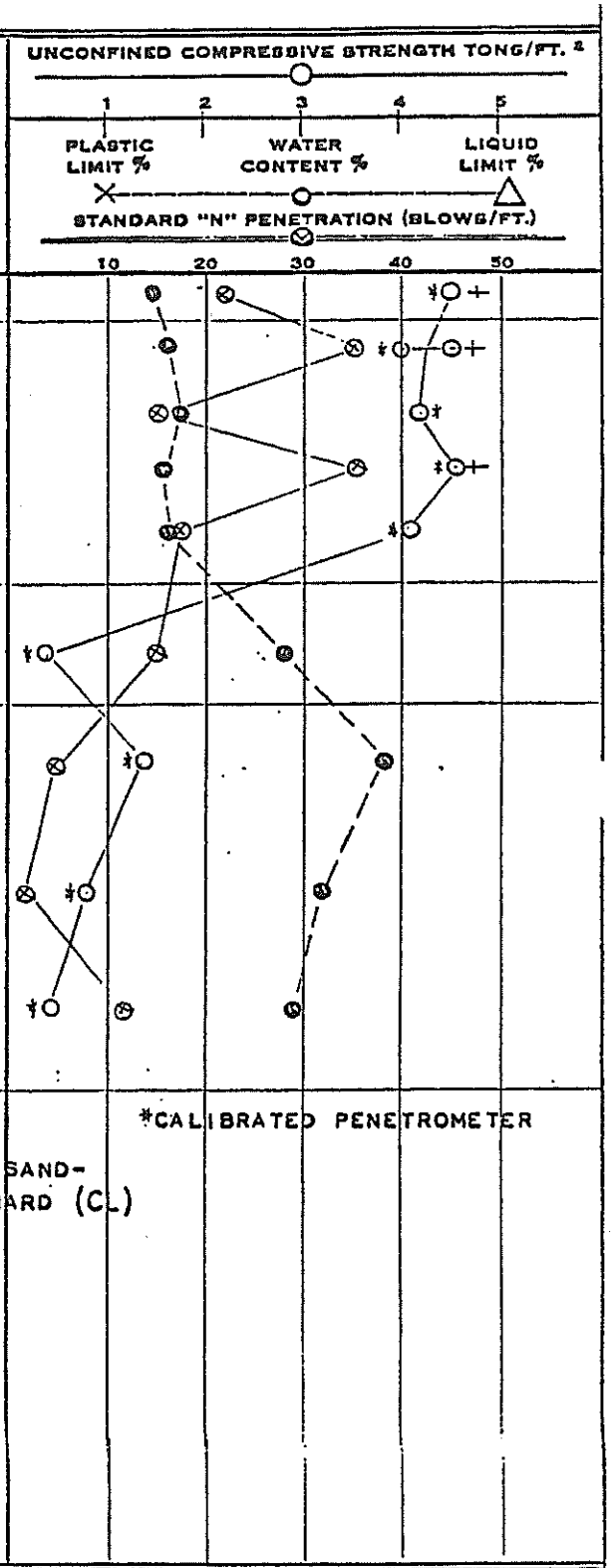
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOCIATES
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: 52 + 45N
52 + 95E

SURFACE ELEVATION 458.2'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			NOTE A	
		2	SS			SILTY CLAY-TRACE SAND TO TRACE TO SOME SAND-TRACE GRAVEL-GRAY & BROWN-HARD (CL-CH)	
		3	SS				
		4	SS				
10.0		5	SS				
		6	SS			SILTY CLAY-TRACE TO SOME GRAVEL-TRACE SAND-DARK GRAY & BROWN-SATURATED-SOFT (CL-CH)	
20.0		7	SS			CLAYEY SILT-TRACE TO SOME SAND-DARK GRAY-LOOSE TO MEDIUM DENSE (ML-OL) ROCK AT 34'	
		8	SS				
30.0		9	SS				
			RB				
34.0						END OF BORING	

NOTE A: SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY-BROWN- HARD (CL)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-10-65
BORING COMPLETED	11-10-65
RIG 70	FOREMAN ZAPPIA
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

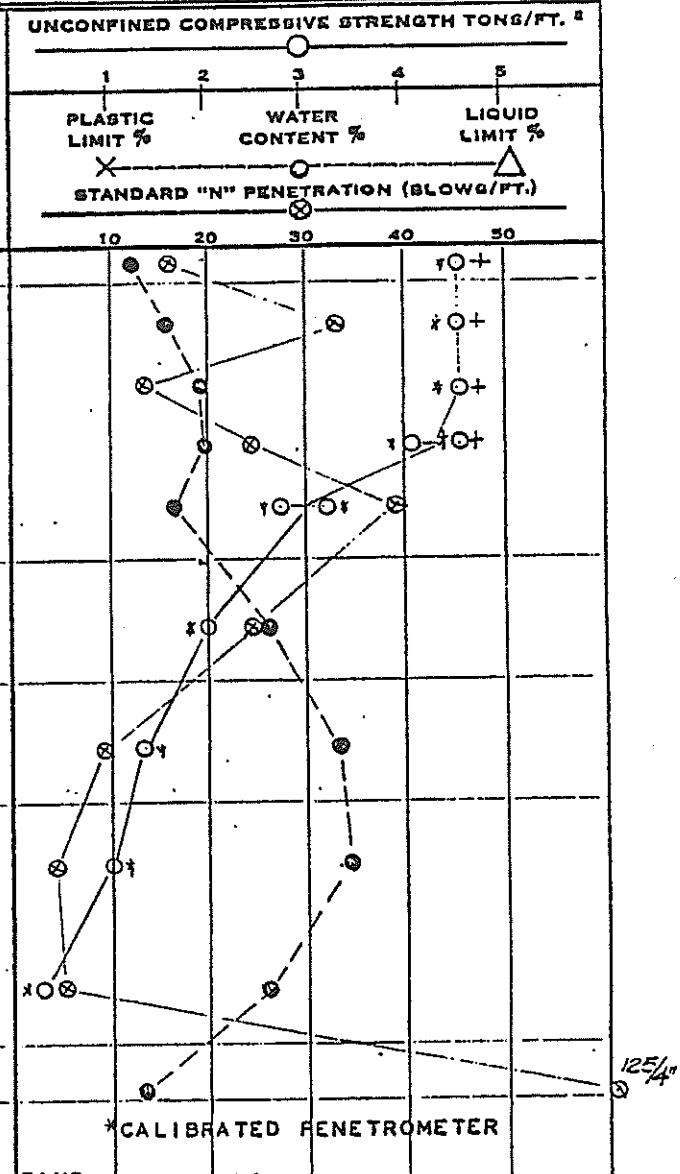
LOG OF BORING NO. B-107

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	PROJECT NAME
MAPLETON, ILLINOIS	

LOCATION: 52 + 45N
53 + 55E

SURFACE ELEVATION 458.0'

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			NOTE A	
	2	SS			SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN & GRAY-HARD TO VERY TOUGH (CL-CH)	
	3	SS				
	4	SS				
10.0	5	SS				
	6	SS			CLAYEY SILT-TRACE SAND-BROWN & GRAY-MEDIUM DENSE (ML-CL)	
20.0	7	SS			SILTY CLAY-TRACE SAND-MEDIUM DARK GRAY & BROWN-TOUGH (CL)	
	8	SS			CLAYEY SILT-TRACE FINE SAND-LOOSE (ML-OL)	
30.0	9	SS				
					33.0	
					NOTE B	
35.3	10	SS				
					END OF BORING	



*CALIBRATED PENETROMETER

NOTE A: SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-LIGHT BROWN & GRAY-HARD (CL)

NOTE B: CLAYEY SILT-TRACE FINE GRAVEL-TRACE SAND-LIGHT GRAY-VERY DENSE-SATURATED (ML-MH)

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-10-65		
BORING COMPLETED	11-10-65		
RIG	70	FOREMAN	ZAPPIA
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B-108

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

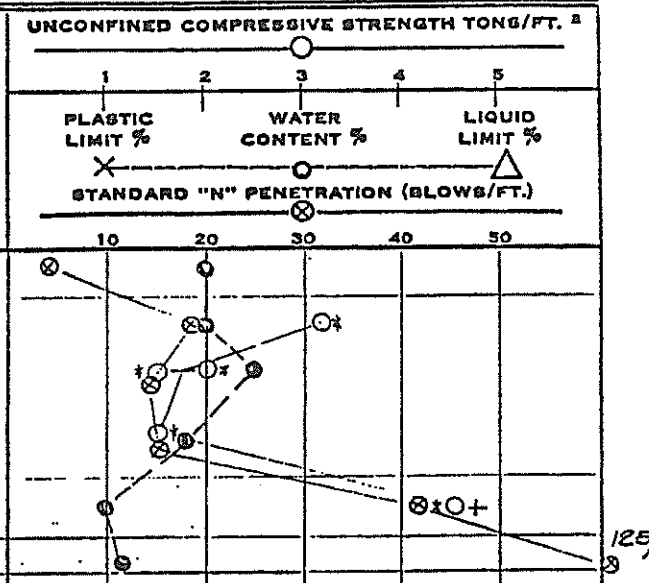
LOCATION: 55 + 00N
39 + 00E

SURFACE ELEVATION 450.6'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
X1							
		1	SS			CLAYEY & SILTY SAND-TRACE GRAVEL-BROWN-LOOSE (SC)	
		2	SS			SILTY CLAY-TRACE SAND TO TRACE TO SOME SAND-LIGHT BROWN & GRAY-VERY TOUGH TO TOUGH (CL-CH)	
		3	SS				
		4	SS				
10.0						SILTY CLAY-SOME SAND & GRAVEL-HARD-VERY BRITTLE (CL-ML)	
		5	SS				
13.5		6	SS			NOTE A	

END OF BORING

NOTE A: CLAYEY SILT-LIGHT GRAY-VERY DENSE (ML-CL) POSSIBLE SHALE



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-10-65
BORING COMPLETED	11-10-65
RIG 70	FOREMAN ZAPPIA
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

LOG OF BORING NO. B-109

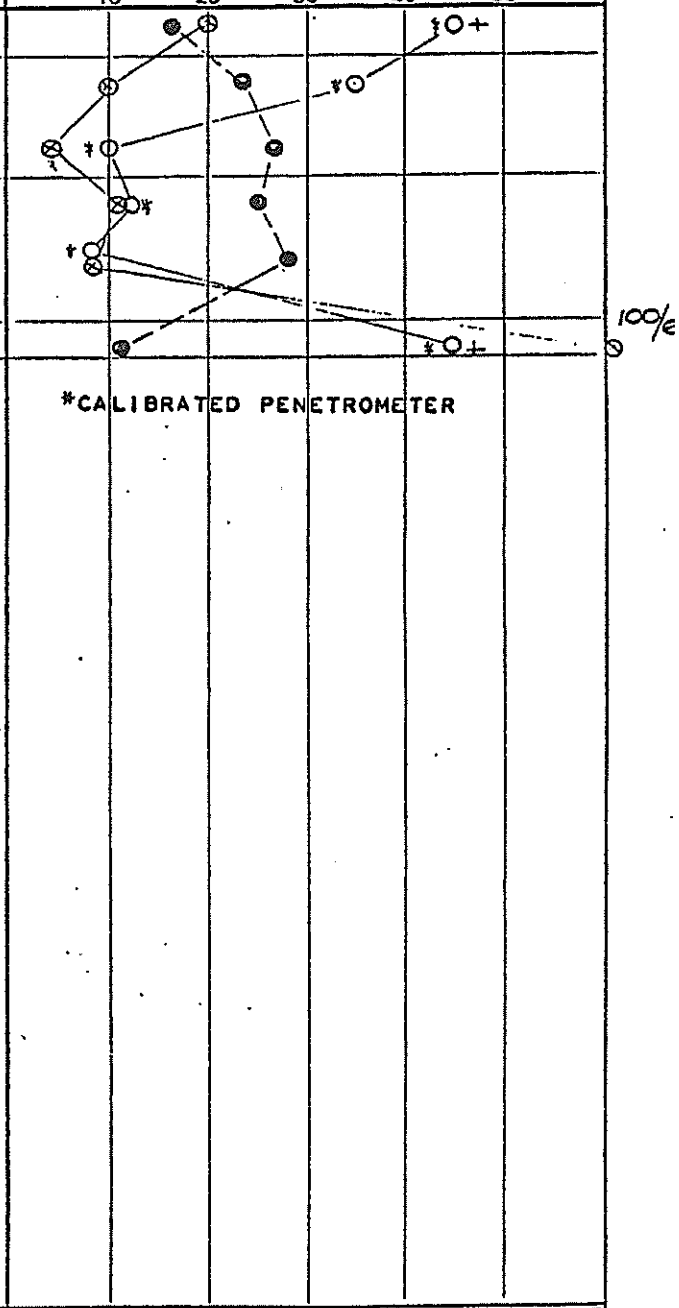
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: 52 + 00N
39 + 00E

SURFACE ELEVATION 450.2'

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			CLAYEY & SILTY SAND-BROWN-MEDIUM DENSE (SC)	
	2	SS			SILTY CLAY-TRACE SAND OR TRACE TO SOME SAND-LIGHT BROWN & GRAY-VERY TOUGH TO TOUGH (CL-CH)	
	3					
	4	SS			SILTY CLAY-TRACE SAND OR TRACE TO SOME SAND-TOUGH TO STIFF (CL)	
10.0	5	SS				
					13.0	
14.5	6	SS			NOTE A	

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.) (10, 20, 30, 40, 50)



END OF BORING

*CALIBRATED PENETROMETER

NOTE A: CLAYEY SILT-TRACE SAND & GRAVEL-LIGHT GRAY-VERY DENSE (ML-CL) POSSIBLE SILTSTONE

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED 11-10-65	
BORING COMPLETED 11-10-65	
RIG 70	FOREMAN ZAPPIA
DRAWN MP	APPROVED LDG
JOB # 9600-B	SHEET 1 OF 1

LOG OF BORING NO. B-110

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME

LOCATION: 55 + 00N
36 + 55E

SURFACE ELEVATION 451.4'

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)
PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %
STANDARD "N" PENETRATION (BLOWS/FT.) (10, 20, 30, 40, 50)

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			NOTE A	
	2	SS			SILTY CLAY-TRACE SAND-LIGHT BROWN & GRAY-VERY TOUGH TO TOUGH (CL-CH)	
	3	SS				
	4	SS				
10.0	5	SS			FINE TO COARSE SAND-SOME FINE GRAVEL-TRACE SILT-LIGHT BROWN & GRAY-DENSE-SATURATED (SW)	
	6	SS			SILTY CLAY-TRACE SAND-LIGHT BROWN & GRAY-STIFF (CL)	
	6A				NOTE B	
18.0	7	SS				

END OF BORING
15' OF NX CASING USED

*CALIBRATED PENETROMETER

NOTE A: CLAYEY SILT-SOME FINE SAND-BROWN & SLIGHTLY GRAY-MEDIUM DENSE (ML-CL)

NOTE B: FINE TO MEDIUM GRAVEL & SAND-TRACE SILT & CLAY-LIGHT BROWN & GRAY-DENSE TO VERY DENSE-SATURATED (GP)

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-10-65		
BORING COMPLETED	11-10-65		
RIG	70	FOREMAN	ZAPPIA
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

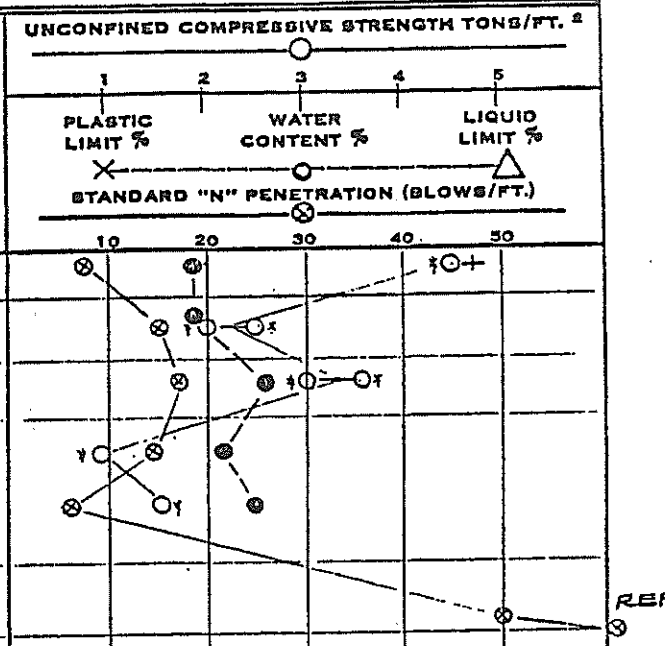
LOG OF BORING NO. B-111

OWNER: CATERPILLAR TRACTOR COMPANY	ARCHITECT-ENGINEER: LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME:

LOCATION: 52 + 00N, 36 + 50E

SURFACE ELEVATION: 452.6'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			NOTE A	
		2	SS			NOTE B	
		3	SS			SILTY CLAY-TRACE SAND-BROWN & GRAY-VERY TOUGH (CL-CH)	
		4	SS			SILTY CLAY-TRACE SANO-BROWN & GRAY-TOUGH (CL)	
10.0		5	SS				
						NOTE C	
16.0		6	SS				



END OF BORING

*CALIBRATED PENETROMETER

NOTE A: SILTY CLAY-SOME SAND-TRACE GRAVEL & ROOTS-GRAY & BROWN-HARD-(CL) FILL

NOTE B: SANDY & SILTY CLAY-TRACE GRAVEL & ROOTS-BROWN & GRAY-VERY TOUGH (CL_SC)

NOTE C: FINE TO COARSE GRAVEL & SAND-TRACE SILT & CLAY-LIGHT GRAY & BROWN-VERY DENSE-SATURATED (GP-GW)
NOTE: REFUSAL AT THE END OF BORING

WATER LEVEL OBSERVATIONS		
W.L.	8'	W.S. ~~OR W.D.~~
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-10-65		
BORING COMPLETED	11-10-65		
RIG	70	FOREMAN	ZAPPIA
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B-112

OWNER	ARCHITECT-ENGINEER
Caterpillar Tractor Company	Lester B. Knight & Assoc.
SITE: Peoria, Illinois	PROJECT NAME

LOCATION: N 53+50
E 42+00

SURFACE ELEVATION 458.8

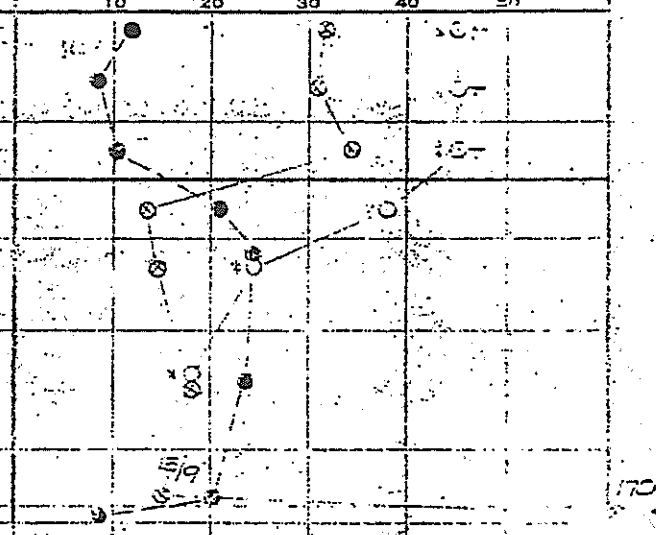
DEPTH	SAMPLE	TYPE SAMPLE	DESCRIPTION OF MATERIAL
	1	SS	SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY & BROWN-HARD (CL-ML) (FILL)
	2	SS	
	3	SS	SILTY & CLAYEY SAND-TRACE GRAVEL-GRAY-DENSE-MOIST (SC) (FILL)
	4	SS	NOTE A
	5	SS	SILT-TRACE CLAY & SAND-LIGHT BROWN & GRAY-MEDIUM DENSE-MOIST TO WET (ML)
	6	SS	SILTY CLAY-TRACE TO SOME SAND-LIGHT BROWN-TOUGH (CL)
			NOTE B
	7	SS	NOTE C

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.) (10, 20, 30, 40, 50)

UNIT DRY WT. LBS./FT.³



END OF BORING
NO CASING

*CALIBRATED PENETROMETER

NOTE A: SILTY CLAY-TRACE SAND & GRAVEL-LIGHT BROWN-VERY TOUGH-HORIZONTAL SAND SEAMS (CL)

NOTE B: SILTY & CLAYEY SAND-TRACE TO SOME GRAVEL-BROWN-MEDIUM DENSE-WET (SC)

NOTE C: GRAY TO GREEN & BROWN SILTY & CLAYEY SHALE

WATER LEVEL OBSERVATIONS		
W.S. OR W.D.		
D.C.R.		C.R.

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	[illegible]
BORING COMPLETED	[illegible]
RIG 70	FOREMAN
DRAWN [illegible]	APPROVED [illegible]
JOB # [illegible]	SHEET [illegible] OF

LOG OF BORING NO. B-113

OWNER: CATERPILLAR TRACTOR CO.	ARCHITECT-ENGINEER: LESTER B. KNIGHT & ASSOC.
SITE: [illegible]PLETON, ILLINOIS	PROJECT NAME

LOCATION: 43+40E
53+50 N

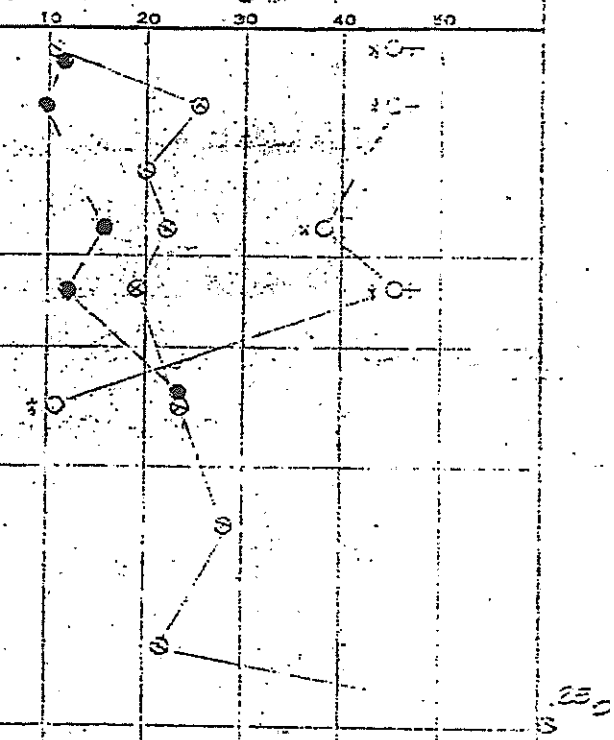
DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	BLOWS	DESCRIPTION OF MATERIAL
					SURFACE ELEVATION 458.8
		1	SS		SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY-HARD TO VERY TOUGH (CL-ML) (FILL)
		2	SS		
		3	SS		
		4	SS		
10.0		5	SS		SILTY CLAY-SOME SAND-TRACE GRAVEL-BROWN-HARD (CL-SC)
		6	SS		SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN-TOUGH (CL)
20.0		7	SS		FINE TO COARSE SAND-TRACE TO SOME SILT & CLAY-TRACE GRAVEL-BROWN-MEDIUM DENSE-WET (SM-SC)
		8	SS		REFUSAL WITH SPLIT-SPOON AT 29' INDICATES BEDROCK OR BOULDER
29.0			SS		

END OF BORING
29.0' NX CASING

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1, 2, 3, 4, 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT) (10, 20, 30, 40, 50)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.		A.S. OR W.D.
W.L.	[illegible] A.C.R.	7.0' A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-23-6[illegible]
BORING COMPLETED	11-23-6[illegible]
RIG 70	FOREMAN JT
DRAWN MP	APPROVED [illegible]
JOB # 9600-[illegible]	SHEET 1 OF [illegible]

LOG OF BORING NO. B-114

OWNER: CATERPILLAR TRACTOR COMPANY	ARCHITECT-ENGINEER: LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME

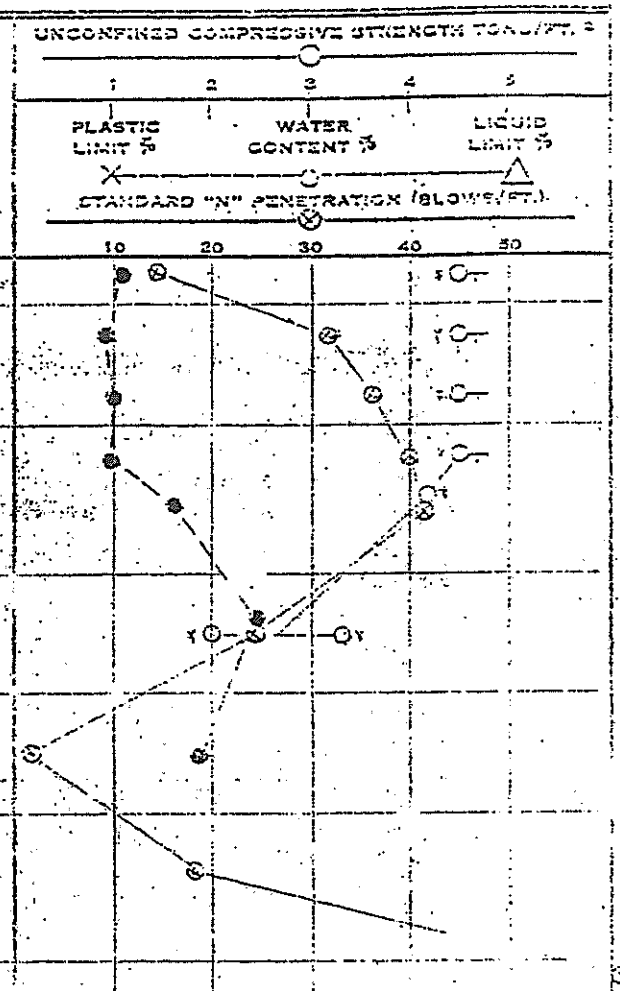
LOCATION: N 52+00
E 42+00

SURFACE ELEVATION 458.8

DEPTH / ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DEPTH / RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS		NOTE A.	
	2	SS		SANDY & SILTY CLAY-TRACE GRAVEL-GRAY & BROWN-HARD (CL-SC) (FILL)	
	3	SS			
10.0	4	SS		SILTY CLAY-SOME SAND-TRACE GRAVEL-LIGHT BROWN & GRAY-HARD (CL)	
	5	SS			
	6	SS		SILT-TRACE CLAY & SAND-BROWN-MEDIUM DENSE-WET (ML)	
[illegible]	7	SS		CLAYEY & SILTY SAND-TRACE GRAVEL-BROWN-LOOSE-WET (SC)	
	8	SS		FINE TO COARSE SAND-SOME GRAVEL-TRACE SILT & CLAY-BROWN-MEDIUM DENSE-MOIST TO WET (SW)	
				GRAY TO GREEN SILTY & CLAYEY SHALE	

END OF BORING
29.0' NX CASING

NOTE A: CLAYEY SILT-TRACE TO SOME SAND-LIGHT BROWN & GRAY-MEDIUM DENSE-MOIST (ML-CL) (FILL)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS	
W.L.	W.S. OR W.D.
W.L.	4.0' B.C.R. 7.0' A.C.R.
W.L.	

SOIL TESTING SERVICES, INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11-23-65		
BORING COMPLETED	11-23-65		
RIG	70	FOREMAN	
DRAWN	MP	APPROVED	[illegible]
JOB #	0600-B	SHEET	[illegible]

LOG OF BORING NO. B-115

OWNER: Caterpillar Tractor Company	ARCHITECT-ENGINEER: Lester B. Knight & Assoc.
SITE: Mapleton, Illinois	PROJECT NAME

LOCATION: N 5[illegible]-00, E 43-00

SURFACE ELEVATION 456.8

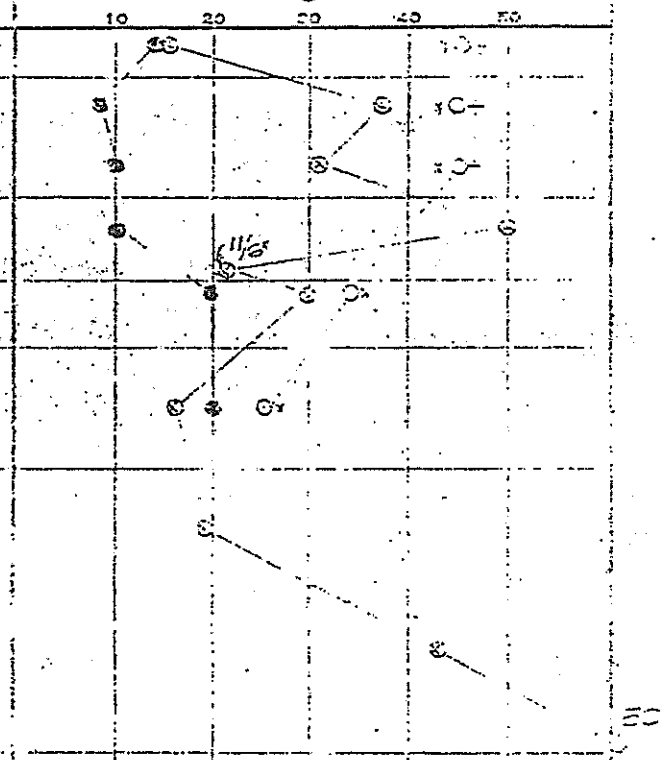
DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	DESCRIPTION OF MATERIAL
		1	SS	SILTY CLAY-TRACE SAND & GRAVEL-GRAY-HARD (CL-ML) (FILL)
		2	SS	SILTY CLAY-SOME SAND-TRACE GRAVEL-BROWN & GRAY-HARD (CL) (FILL)
		3	SS	
		4	SS	SANDY & SILTY CLAY-TRACE GRAVEL-BROWN & GRAY-HARD (CL-SC) (FILL)
		5	SS	
		5A		SILTY CLAY-TRACE SAND & GRAVEL-LIGHT BROWN & GRAY-VERY TOUGH (CL-CH) (POSSIBLE FILL)
		6	SS	SILTY CLAY-SOME SAND-TRACE GRAVEL-BROWN-VERY TOUGH (CL)
20.0		7	SS	FINE TO MEDIUM SAND-TRACE TO SOME GRAVEL-TRACE SILT & CLAY-BROWN-MEDIUM DENSE TO DENSE-WET (SP-SW)
			SS	NOTE: REFUSAL AT 30.0' WHICH INDICATES BEDROCK OR BOULDERS
30.0			SS	

END OF BORING
30.0' NX CASING

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² — 1, 2, 3, 4, 5

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.) — 10, 20, 30, 40, 50



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.		N.E. OR W.D.
W.L.	25.0' A.C.R.	1[illegible].0' A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	[illegible]
BORING COMPLETED	[illegible]
RIG	[illegible]
FOREMAN	[illegible]
DRAWN MP	APPROVED [illegible]
JOB # 9000-B	SHEET 1 OF [illegible]

LOG OF BORING NO. B-116

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE: MAPLETON, ILLINOIS	PROJECT NAME

LOCATION: N 53+50
E 45+00

SURFACE ELEVATION 458.8

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE NO.	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS/CU.FT.
		1	SS		SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY TO GREEN-HARD (CL-ML) (FILL)	
		2	SS			
		3	SS		SANDY & SILTY CLAY-TRACE GRAVEL-GRAY & BROWN-HARD (CL-SC) (FILL)	
		4	SS		SILTY CLAY-TRACE SAND & GRAVEL-GRAY-HARD (CL) (FILL)	
10.0		5	SS		CLAYEY & SILTY SAND-TRACE GRAVEL-BROWN-DENSE-MOIST (SC)	
		6	SS		SILTY CLAY-SOME SAND-TRACE GRAVEL-BROWN & GRAY-HARD TO VERY TOUGH (CL)	
		7	SS			
		8	SS		FINE TO COARSE SAND-TRACE TO SOME GRAVEL-TRACE SILT & CLAY-BROWN-MEDIUM DENSE-WET (SC)	
30.0		9	SS		NOTE A	

END OF BORING
30.0' NX CASING

NOTE A: SILTY SAND-TRACE CLAY & GRAVEL-BROWN-VERY DENSE-MOIST TO WET (SM)

UNCONFINED COMPRESSIVE STRENGTH TONS/SQ.FT.

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT %

STANDARD "N" PENETRATION (BLOWS/FT.)

*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS

DATE		M.S. OR M.D.
9/	7.0' B.G.S.	3.5' M.G.S.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	[illegible]
BORING COMPLETED	[illegible]
RIG 70	FOREMAN [illegible]
DRAWN [illegible]	APPROVED [illegible]
JOB 5600-B	SHEET [illegible] OF [illegible]

LOG OF BORING NO. 5-[illegible]

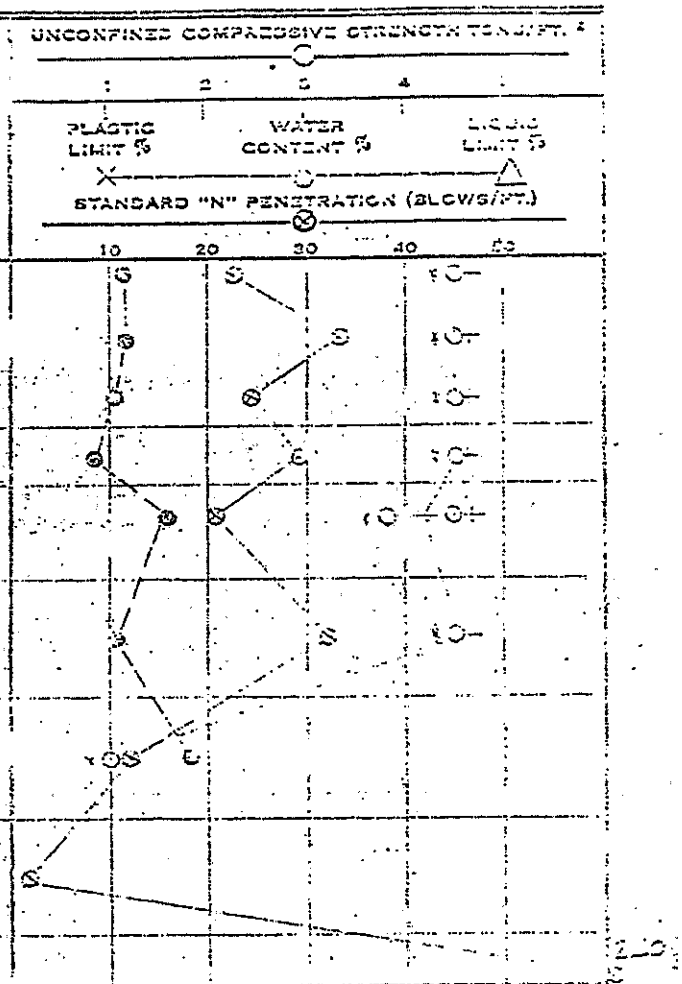
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER E. KNIGHT & ASSOC.
SITE: [illegible], ILLINOIS	PROJECT NAME

LOCATION: N 53+00
E 45+50

SURFACE ELEVATION 458.8

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.
		1	SS	SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-GRAY-HARD (CL-ML) (FILL)	
		2	SS		
		3	SS		
		4	SS	NOTE A	
10.0		5	SS	SILTY CLAY-SOME SAND-TRACE GRAVEL-LIGHT BROWN & GRAY-VERY TOUGH TO HARD (CL) (FILL)	
		6	SS	SANDY & SILTY CLAY-TRACE GRAVEL-BROWN-HARD (CL-SC) (FILL)	
20.0		7	SS	SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN-TOUGH (CL)	
		8	SS	CLAYEY & SILTY SAND-TRACE GRAVEL-BROWN-LOOSE-WET (SC)	
				28.5 GRAY & BROWN SILTY & CLAYEY SHALE	
30.0		9	SS		
30.2				END OF BORING NO CASING	

NOTE A: SILTY CLAYEY SAND-TRACE GRAVEL-GRAY-MEDIUM DENSE-MOIST (SM-SC) (FILL)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
	B.C.R.	A.C.R.

SOIL TESTING SERVICES INC.
[illegible] PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	[illegible]
BORING COMPLETED	[illegible]
R.G. [illegible]	FOREMAN
DRAWN [illegible]	APPROVED [illegible]
JOB # [illegible]	SHEET [illegible] OF [illegible]

LOG OF BORING NO. B-11[illegible]

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE: [illegible], ILLINOIS	PROJECT NAME

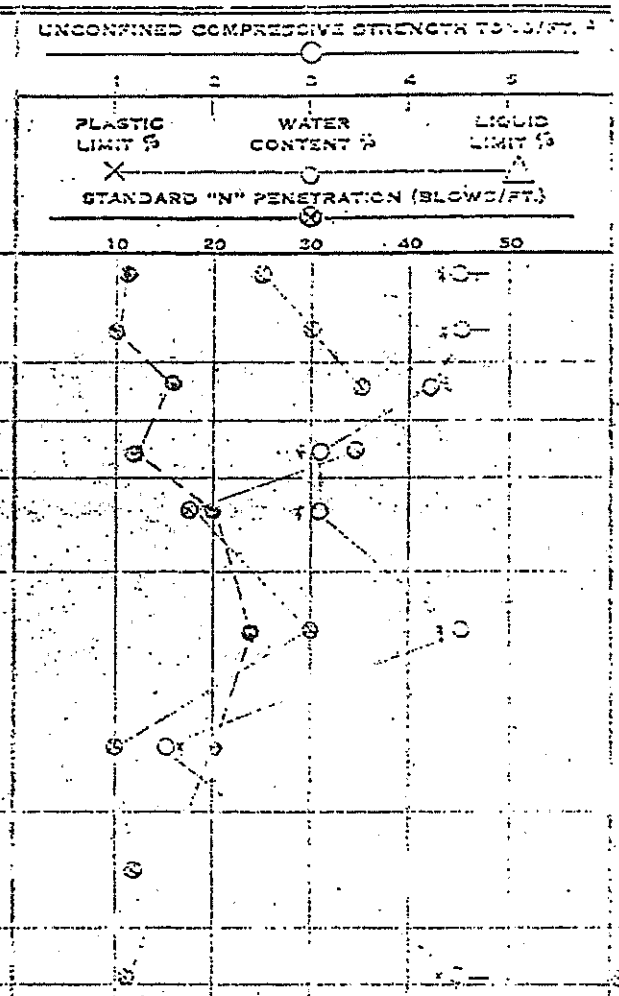
LOCATION: N 51+30
E 42-00

SURFACE ELEVATION 458.8

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	DESCRIPTION OF MATERIAL	DRY WT. LBS/FT.³
		1	SS	SILTY CLAY-SOME SAND-TRACE GRAVEL-GRAY & BROWN-HARD (CL-ML) (FILL)	
		2	SS		
		3	SS	SILTY CLAY-TRACE SAND & GRAVEL-GRAY TO GREEN-HARD (CL-CH) (FILL)	
		4	SS	NOTE A	
		5	SS	SILTY CLAY-TRACE SAND-BROWN DARK BROWN-VERY TOUGH (CL-ML)	
		6	SS	SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-BROWN-HARD TO TOUGH (CL)	
20.0		7	SS		
		8	SS	SILTY & CLAYEY SAND & GRAVEL-BROWN-MEDIUM DENSE-WET (CM)	
30.0		9	SS	SILTY & CLAYEY SAND-TRACE GRAVEL-BROWN-VERY DENSE-MOIST (SM-SC)	

END OF BORING
30.0' NX CASING

NOTE A: SILTY CLAY-TRACE TO SOME SAND-TRACE GRAVEL-LIGHT BROWN-VERY TOUGH (CL) (FILL)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	[illegible] B.C.R.	[illegible] C.R.
W		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	[illegible]
BORING COMPLETED	[illegible]
RIG	[illegible]
FORE[illegible]	[illegible]
DRAWN MP	APPROVED [illegible]
JOB # 9600-[illegible]	SHEET 1 OF 1

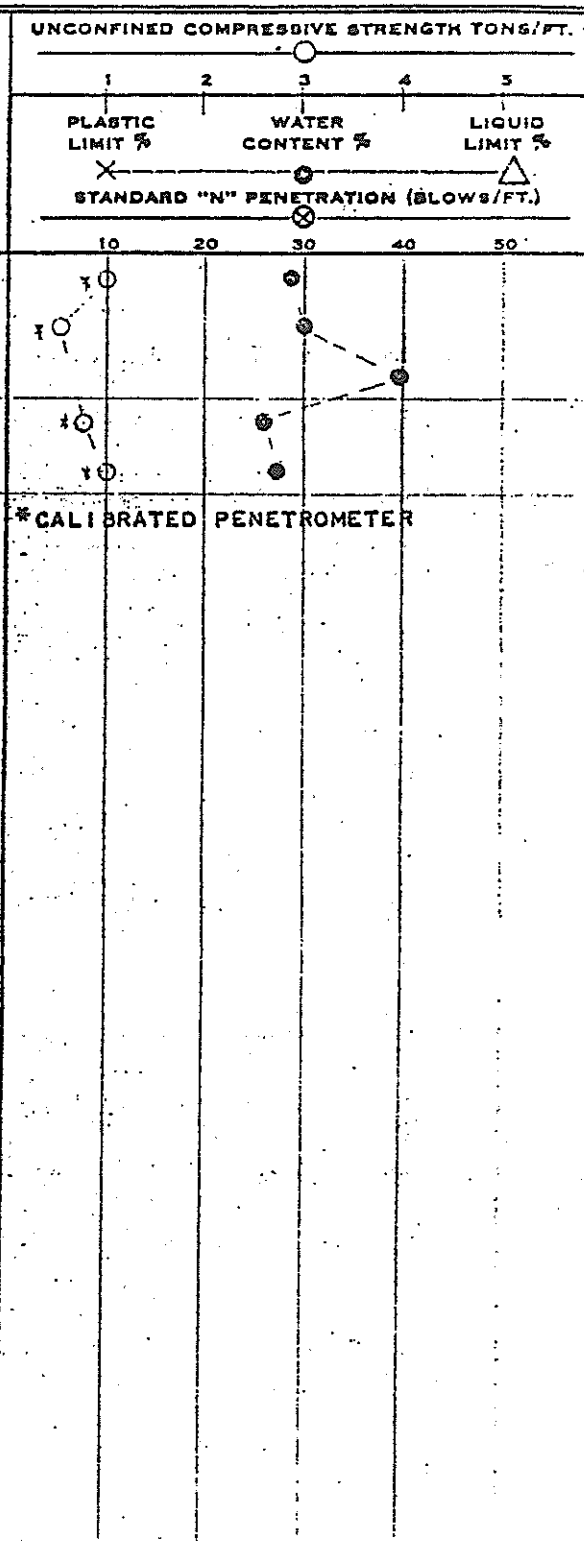
LOG OF BORING NO. B - 119

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: N44 + 50
E46 + 00

SURFACE ELEVATION 450.00'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	ST			SILTY CLAY, TRACE SAND - BROWN - TOUGH TO SOFT - (CL-ML)	
		2	ST				
		3	ST				
		4	ST			SILTY CLAY, TRACE SAND AND GRAVEL - BROWN - STIFF TO TOUGH - (CL)	
10.0		5	ST				
						END OF BORING NO CASING USED	



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L. 6.0'	W.S. ~~XXXXXX~~	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11/30/05		
BORING COMPLETED	11/30/05		
RIG	HA	FOREMAN	RR
DRAWN	MP	APPROVED	LG
JOB #	9600-B	SHEET	1 OF 1

(CORRECTED COPY)

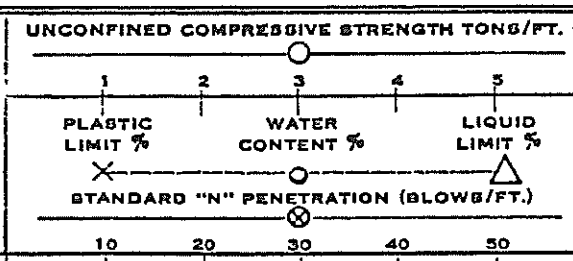
LOG OF BORING NO. B - 119-A

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR CO.	LESTER B. KNIGHT AND ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILL.	

LOCATION: N44 + 50
E46 + 00

SURFACE ELEVATION 450.0'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			CLAYEY SILT, TRACE SAND - BROWN - LOOSE - MOIST TO WET (ML-CL)	
		2	SS				
		3	SS			SILTY CLAY, TRACE SAND - BROWN & GRAY - TOUGH TO VERY TOUGH - (CL)	
		4	SS				
10.0		5	SS				
		6	SS			FINE TO MED. SAND, TRACE SILT AND GRAVEL - BROWN - LOOSE - WET - (SP)	
20.0		7	SS			FINE TO COARSE SAND, TRACE TO SOME GRAVEL, TRACE SILT - BROWN - DENSE - WET - (SW)	
		8	SS			GRAY SILTY SHALE	
30.0		9	DB			GRAY SILTY SHALE 40% RECOVERY	
31.0						END OF BORING 20' OF 4" CASING USED	



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS			
W.L.		W.S. OR W.D.	
W.L.	4.0' B.C.R.	3.0' A.C.R.	
W.L.			

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	12/9/65
BORING COMPLETED	12/9/65
RIG 65	FOREMAN WEBER
DRAWN MP	APPROVED LOG
JOB # 9600-B	SHEET 1 OF 1

LOG OF BORING NO. B - 120

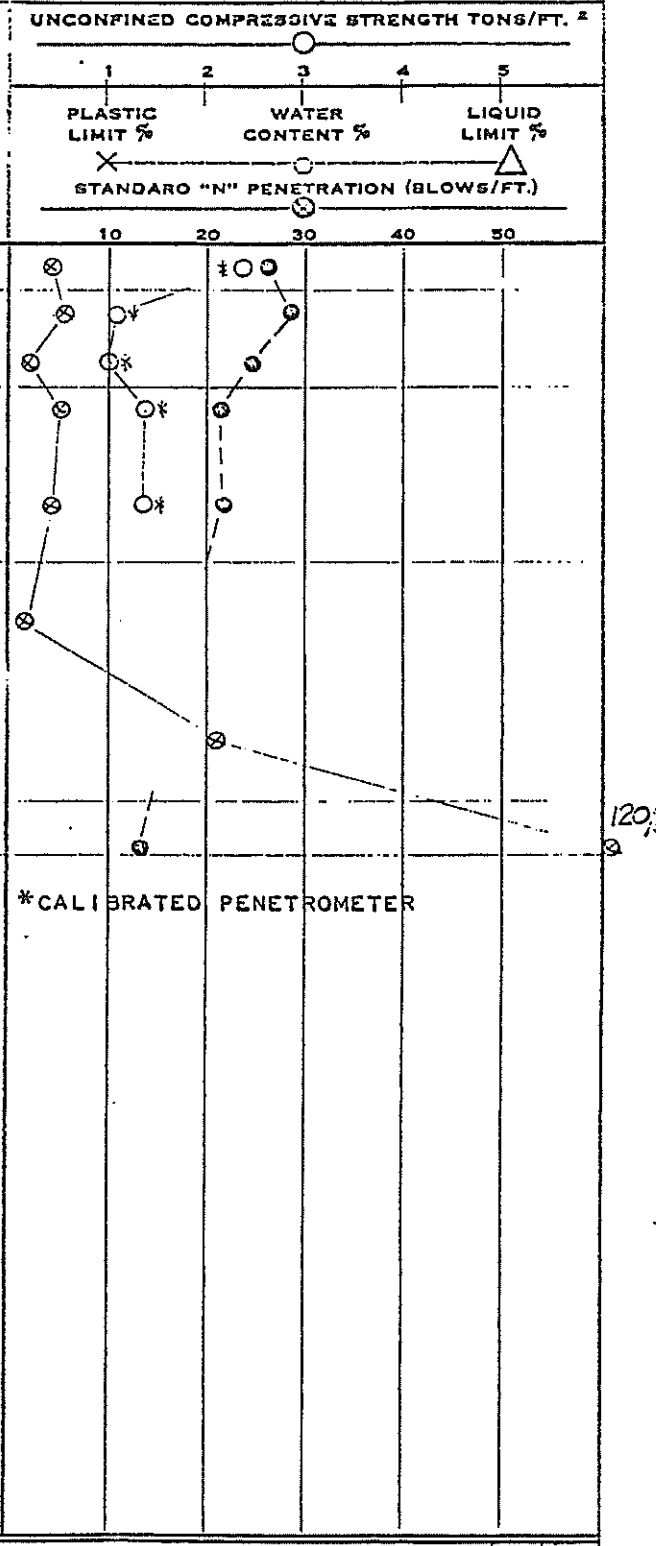
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR CO.	LESTER B. KNIGHT AND ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILL.	

LOCATION: N44 + 50
E45 + 00

SURFACE ELEVATION 448.4'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			CLAYEY SILT, TRACE SAND&ROOTS-BROWN-LOOSE-MOIST - (ML-CL)	
		2	SS			SILTY CLAY, TRACE SAND - BROWN - TOUGH - (CL)	
		3	SS				
		4	SS			SILTY CLAY, TRACE TO SOME SAND - LT.BROWN AND GRAY - TOUGH - (CL)	
10.0		5	SS				
		6	SS			FINE TO MEDIUM SAND, TRACE SILT AND GRAVEL - BROWN - LOOSE TO MEDIUM DENSE - WET - (SP)	
20.0		—					
25.4		7	SS			GRAY SILTY SHALE	

END OF BORING
25' NX CASING USED



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L. 5.0' B.C.R.	5.0' A.C.R.	
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	12/10/65		
BORING COMPLETED	12/10/65		
RIG	65	FOREMAN	WEBER
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B - 122

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

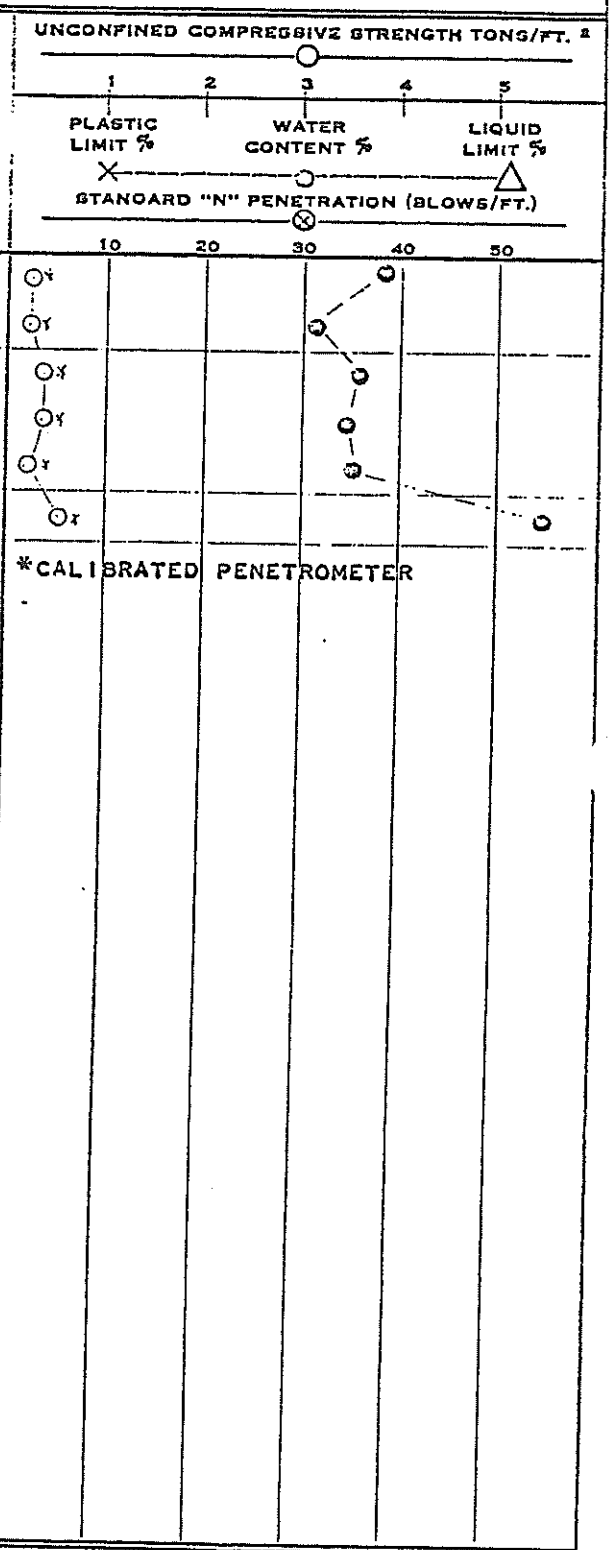
LOCATION: N38 + 00
E41 + 00

SURFACE ELEVATION 443.6'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	ST			CLAYEY SILT, TRACE TO SOME SAND - BROWN - LOOSE - WET - (ML-CL)	
		2	ST				
		3	ST			CLAYEY SILT, TRACE SAND - GRAY TO DK. GRAY - LOOSE - WET - (ML-CL)-(SLIGHTLY ORGANIC)	
		4	ST				
10.0		5	ST				
12.0		6	ST			NOTE A	

END OF BORING
NO CASING USED

NOTE A: SILTY CLAY, TRACE SAND AND ROOTS - GRAY TO DARK GRAY - SOFT - (CL-CH) - (MODERATELY ORGANIC)



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11/30/65		
BORING COMPLETED	11/30/65		
RIG		FOREMAN	RR
DRAWN	MP	APPROVED	LG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B - 123

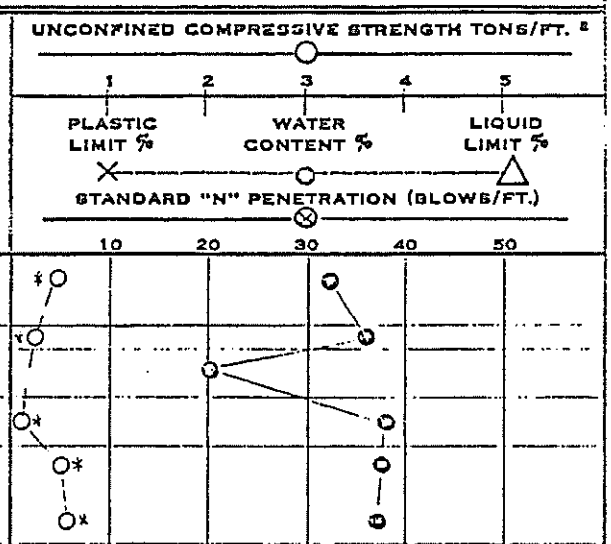
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: N35 + 00
E41 + 00

SURFACE ELEVATION 441.4'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	ST			SILTY CLAY, TRACE SAND-BROWN & GRAY - SOFT - (CL-ML)	
		2	ST				
		2A				NOTE A	
		3	ST			NOTE B	
		4	ST			NOTE C	
10.0		5	ST			SILTY CLAY, TRACE SAND, GRAVEL & ROOTS - GRAY-STIFF-(CL) - (SLIGHTLY ORGANIC)	
12.0		6	ST				

END OF BORING
NO CASING USED



*CALIBRATED PENETROMETER

NOTE A: CLAYEY SILT, SOME SAND - BROWN & GRAY - LOOSE - WET - (SM-SC)

NOTE B: FINE TO MED. SAND, TRACE SILT, CLAY & GRAVEL - BROWN - LOOSE - WET - (SP)

NOTE C: SILTY CLAY, TRACE SAND - GRAY TO DARK GRAY - SOFT - (CL) - (SLIGHTLY ORGANIC)

WATER LEVEL OBSERVATIONS		
W.L. 4.0'	W.S. ~~DRYWD.~~	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11/30/65		
BORING COMPLETED	12/1/65		
RIG	HA	FOREMAN	RR
DRAWN	MP	APPROVED	LG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. B - 124

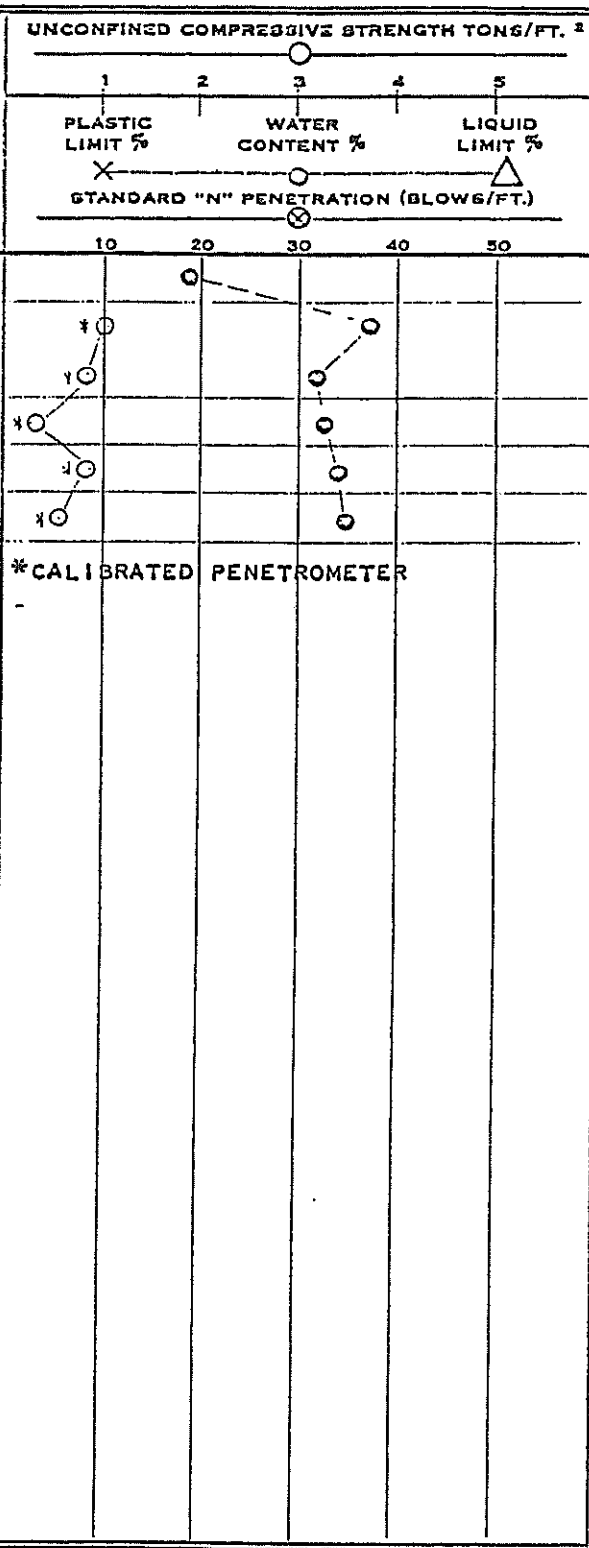
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR COMPANY	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILLINOIS	

LOCATION: N31 + 00
E41 + 00

SURFACE ELEVATION 441.00'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	HA			NOTE A	
		2	ST			SILTY CLAY, TRACE SAND AND GRAVEL - BROWN - TOUGH TO STIFF - (CL)	
		3	ST				
		4	ST			NOTE B	
10.0		5	ST			SILTY CLAY, TRACE SAND - BROWN - STIFF - (CL)	
12.0		6	ST			SILTY CLAY, TRACE SAND-LIGHT BROWN & GRAY - SOFT - (CL)	

END OF BORING
NO CASING USED



*CALIBRATED PENETROMETER

NOTE A: FINE TO MED. SAND, TRACE SILT, CLAY & SHELLS - BROWN - LOOSE - MOIST -(SP)

NOTE B: SILTY CLAY, TRACE TO SOME SAND, TRACE GRAVEL - BROWN - SOFT - (CL-ML)

WATER LEVEL OBSERVATIONS		
W.L.	7.0'	W.S. ~~CRKWXD~~
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	12/1/65
BORING COMPLETED	12/1/65
RIG	FOREMAN RR
DRAWN MP	APPROVED LG
JOB # 9600-B	SHEET 1 OF 1

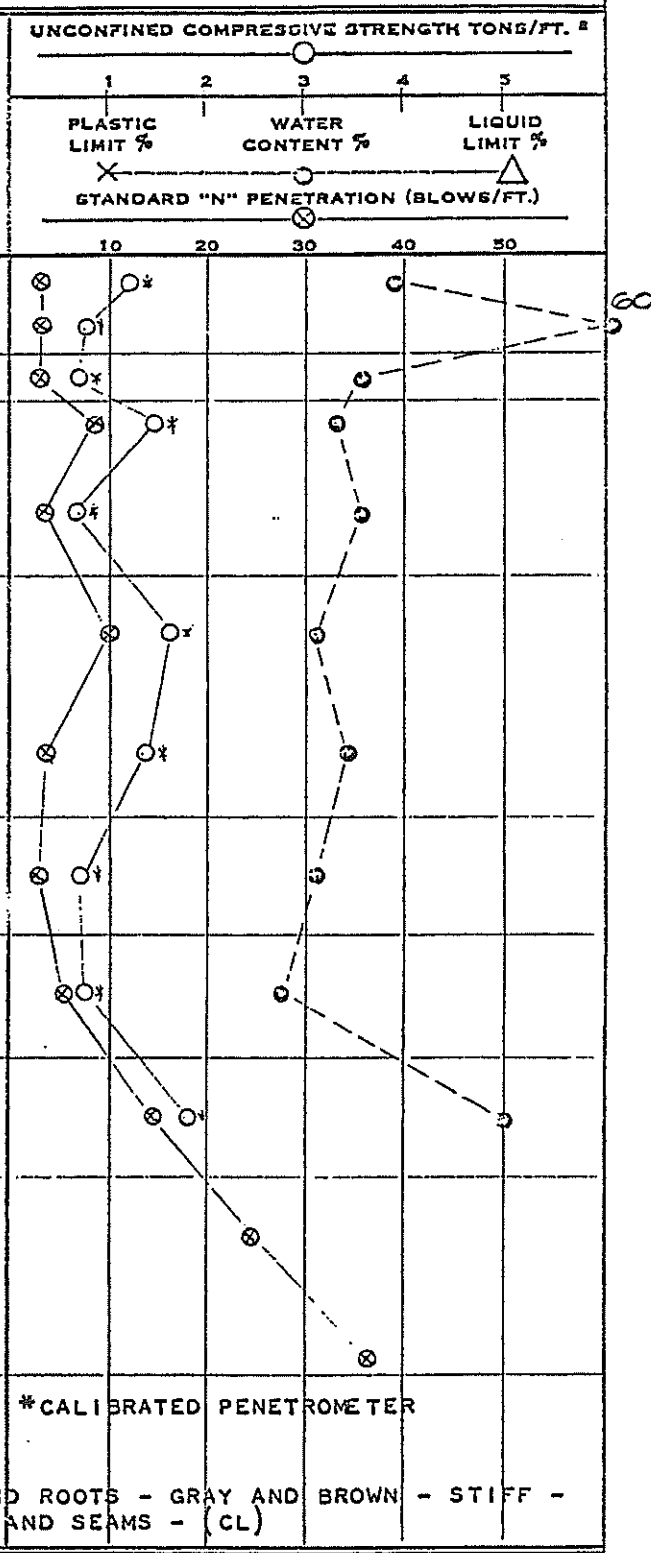
LOG OF BORING NO. 125

OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR CO.	LESTER B. KNIGHT & ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILL.	

LOCATION: N36 + 00
E46 + 00

SURFACE ELEVATION 443.0'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			SILTY CLAY, TRACE SAND AND ROOTS - BROWN & GRAY - TOUGH TO STIFF-(CL-ML)-(POSS.FILL)	
		2	SS				
		3	SS			NOTE A	
		4	SS			SILTY CLAY, TRACE SAND - GRAY - TOUGH TO SOFT-(CL-MH)	
10.0		5	SS				
		6	SS			SILTY CLAY, TRACE SAND AND GRAVEL - GRAY & BROWN - TOUGH - (CL-CH)	
20.0		7	SS				
		8	SS			CLAYEY SILT, TRACE SAND - GRAY - LOOSE - MOIST TO WET - (MH)	
30.0		9	SS			SILTY CLAY, TRACE SAND AND ROOTS - GRAY - STIFF -(CL-MH)	
		10	SS			SILTY CLAY, TRACE SAND, GRAVEL & ROOTS - GRAY - TOUGH -(CH)	
40.0		11	SS			FINE TO COARSE SAND, TRACE TO SOME GRAVEL, TRACE SILT-GRAY TO BROWN-MED.DENSE TO DENSE-WET - (SW)	
46.5		12	SS				



END OF BORING
5.0' OF 4" CASING USED

*CALIBRATED PENETROMETER

NOTE A: SILTY CLAY, TRACE SAND AND ROOTS - GRAY AND BROWN - STIFF - INTERMITTENT HORIZONTAL SAND SEAMS - (CL)

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	5.0' B.C.R.	4.0' A.C.R.
W.L.		

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	12/10/65		
BORING COMPLETED	12/10/65		
RIG	65	FOREMAN	WEBER
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. 126

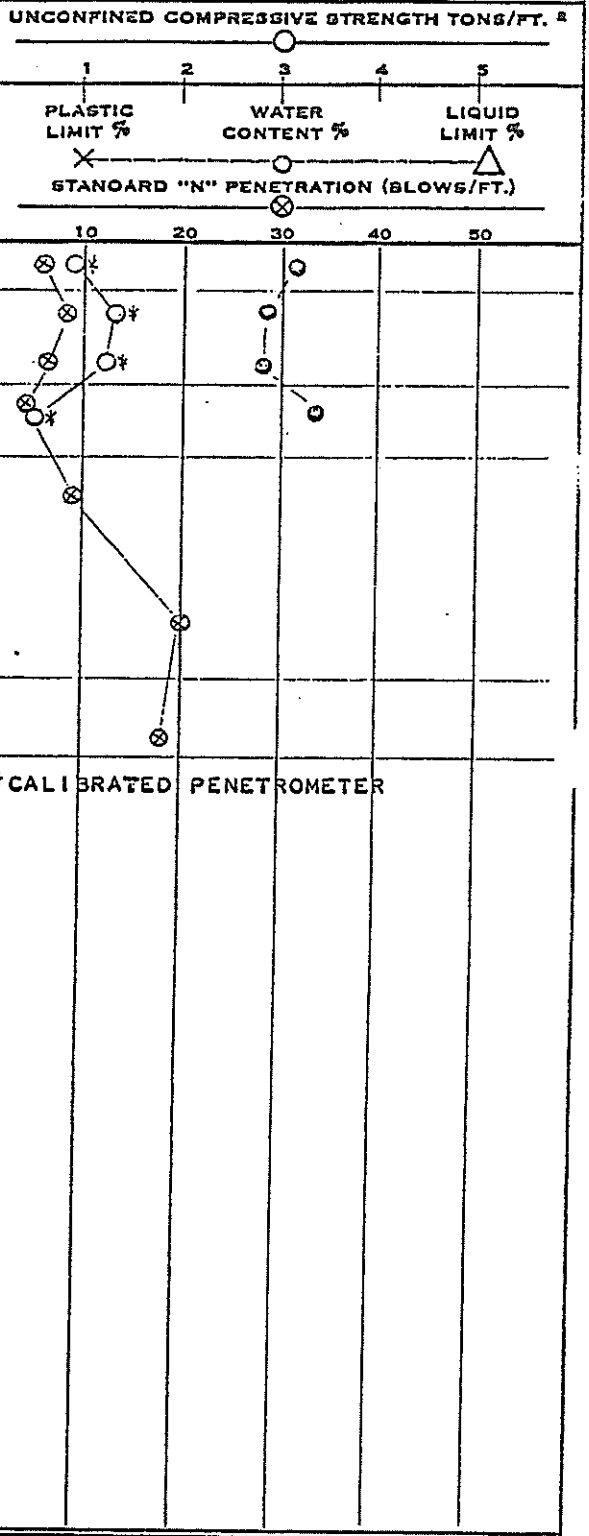
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR CO.	LESTER B. KNIGHT AND ASSOC.
SITE	**PROJECT NAME**
MAPLETON, ILL.	

LOCATION: N27 + 25
E48 + 00

SURFACE ELEVATION 441.0'

DEPTH	ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
		1	SS			SILTY CLAY, TRACE SAND AND ROOTS-BROWN-STIFF - (CL-ML)	
		2	SS			SILTY CLAY, TRACE SAND - BROWN & GRAY - TOUGH - (CL)	
		3	SS				
		4	SS			SILTY CLAY, TRACE SAND AND ROOTS-BROWN & GRAY-SOFT-(CL)	
10.0		5	SS			FINE TO MEDIUM SAND, TRACE SILT AND GRAVEL - GRAY TO BROWN - LOOSE TO MED.DENSE - WET - (SP)	
		6	SS				
20.0						FINE TO COARSE SAND, TRACE GRAVEL & SILT - BROWN - MED. DENSE - WET - (SP-SW)	
21.5		7	SS				

END OF BORING
NO CASING USED



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS		
W.L.	W.S. OR W.D.	
W.L.	B.C.R.	A.C.R.
W.L.		

SOIL TESTING SERVICES
INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	12/10/65		
BORING COMPLETED	12/10/65		
RIG	65	FOREMAN	WEBER
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

LOG OF BORING NO. 127

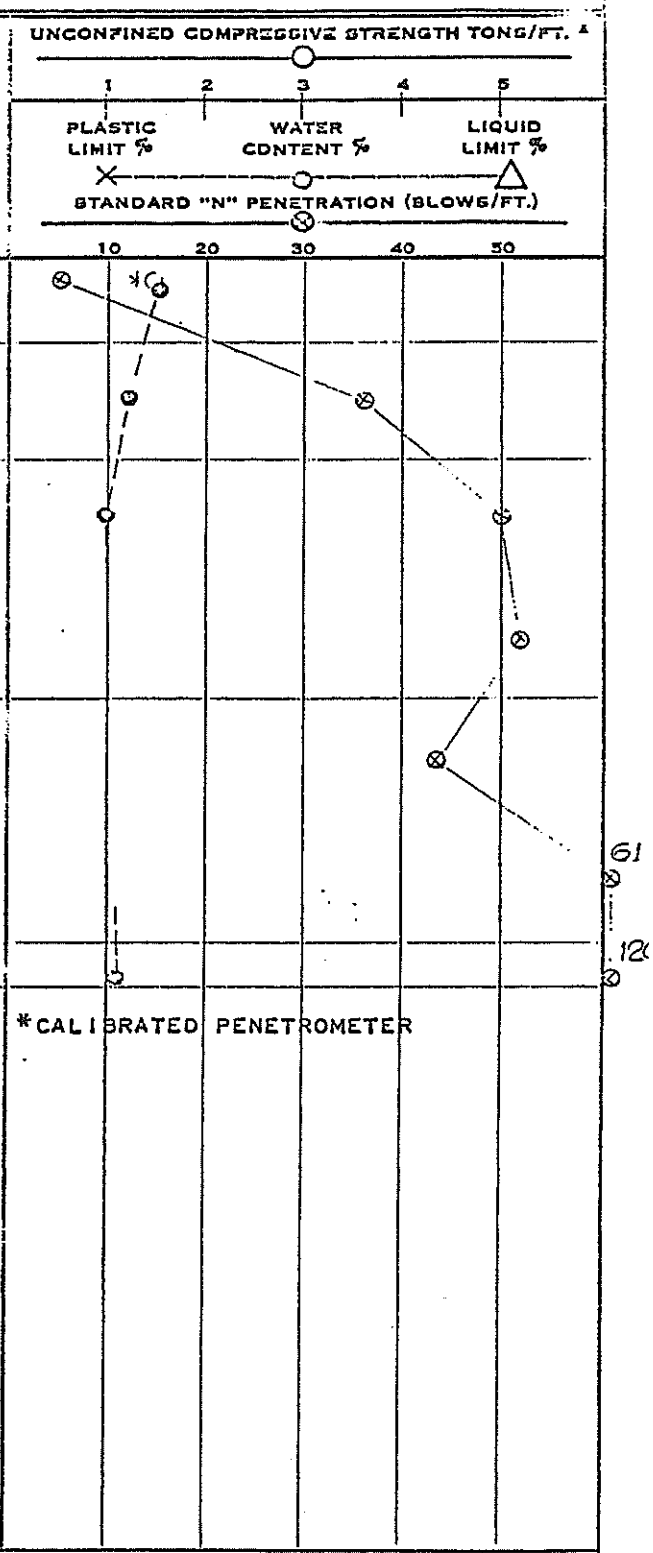
OWNER	ARCHITECT-ENGINEER
CATERPILLAR TRACTOR CO.	LESTER B. KNIGHT AND ASSOC.
SITE: MAPLETON, ILL.	PROJECT NAME

LOCATION: N43 + 60
E46 + 00

DEPTH ELEVATION	SAMPLE NO.	TYPE SAMPLE	SAMPLE DIST.	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³
	1	SS			SILTY CLAY, SOME SAND, TRACE GRAVEL - BROWN - TOUGH -(CL)- (POSSIBLE FILL)	
	2	SS			FINE TO MED. SAND, SOME GRAVEL, TRACE SILT - BROWN - DENSE - MOIST TO WET - (SP)	
10.0	3	SS			FINE TO COARSE SAND, SOME GRAVEL, TRACE SILT & CLAY - BROWN - DENSE - WET - (SW)	
	4	SS				
20.0	5	SS			FINE TO MED. SAND, TRACE SILT AND GRAVEL - BROWN - DENSE TO VERY DENSE - WET - (SP)	
	6	SS				
30.3	7	SS			GRAY SILTY SHALE	

SURFACE ELEVATION

END OF BORING
30.0' NX CASING USED



*CALIBRATED PENETROMETER

WATER LEVEL OBSERVATIONS			
W.L.		W.S. OR W.D.	
W.L.	7.0' B.C.R.	4.0' A.C.R.	
W.L.			

SOIL TESTING SERVICES INC.
111 PFINGSTEN ROAD
NORTHBROOK, ILLINOIS

BORING STARTED	11/9/65		
BORING COMPLETED	11/10/65		
RIG	65	FOREMAN	WEBER
DRAWN	MP	APPROVED	LDG
JOB #	9600-B	SHEET	1 OF 1

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System is used to identify the soil unless otherwise noted.

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140-pound hammer falling 30 inches on a 2 inch O.D. split-spoon.

Qu: Unconfined compressive strength, TSF

Qp: Penetrometer value, unconfined compressive strength, TSF

Mc: Water content, %

LL: Liquid limit, %

Pl: Plastic limit, %

Dd: Natural dry density, PCF

▼: Apparent groundwater level at time noted after completion.

DRILLING AND SAMPLING SYMBOLS

SS: Split-spoon - 1 3/8" I.D., 2" O.D., except where noted.
ST: Shelby Tube - 3" O.D., except where noted.
AU: Auger sample.
DB: Diamond bit.
CB: Carbide bit.
WS: Washed sample.

RELATIVE DENSITY AND CONSISTENCY CLASSIFICATION

TERM (NON-COHESIVE SOILS)	BLOWS PER FOOT
Very loose	0 - 4
Loose	5 - 10
Firm	11 - 30
Dense	31 - 50
Very dense	Over 50

TERM (COHESIVE SOILS)	Qu (TSF)
Very soft	0 - 0.25
Soft	0.25 - 0.50
Medium	0.50 - 1.00
Stiff	1.00 - 2.00
Very stiff	2.00 - 4.00
Hard	4.00+

PARTICLE SIZE

Boulders	8 in.+	Coarse Sand	5mm-0.6mm	Silt	0.074mm-0.005
Cobbles	8 in.-3 in.	Medium Sand	0.6mm-0.2mm	Clay	-0.005mm
Gravel	3 in.-5mm	Fine Sand	0.2mm-0.074mm		

DP9,7 13307
Client-Supplied Information

FOUNDATION INVESTIGATION
AND ENGINEERING ANALYSIS
PROPOSED DUST COLLECTOR
AND APPURTENANCES
MAPLETON, ILLINOIS
PURCHASE ORDER NO. FYJ 73829B

Prepared for

Caterpillar Tractor Co.
Mapleton, Illinois

By

A&H Engineering Corporation

March 17, 1976

CHAMPAIGN, ILLINOIS PEORIA, ILLINOIS SPRINGFIELD, ILLINOIS CARBONDALE, ILLINOIS CHICAGO, ILLINOIS WEST LAFAYETTE, INDIANA COLUMBUS, OHIO

A & H ENGINEERING CORPORATION

CHAMPAIGN, ILLINOIS 61820, 2112 NORTH MARKET STREET TELEPHONE 217 352-7918
EAST PEORIA, ILLINOIS 61611, 1501 N. MAIN STREET TELEPHONE 309 694-4311
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CHICAGO, ILLINOIS 60634, 7414 WEST BELMONT AVENUE TELEPHONE 312 637-8100
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WEST LAFAYETTE, IND. 47906, 2336 NORTHWESTERN AVE. TELEPHONE 317 463-4112

AFFILIATED OFFICES:
ROCHESTER, NEW YORK, 14623, 210 COMMERCE DRIVE TELEPHONE 716 359-1600

March 17, 1976

Caterpillar Tractor Co.
Mapleton Plant
Mapleton, IL 61547

Attn: Mr. D. Hoepker

Re: Foundation Investigation
and Engineering Analysis
Proposed Dust Collector
and Appurtenances
Mapleton, Illinois
P.O. No. FYJ 73829B
A&H File No. 03-6507

Gentlemen:

In compliance with your request, we have conducted a foundation investigation and evaluation for the above referenced project. It is our pleasure to transmit herewith three (3) copies of our report.

The results of our investigation and evaluation indicate that a raft or mat foundation appears to be the most feasible foundation type for the proposed dust collectors, fans, palletizer and substation. A raft or mat foundation may be founded at a depth of 3 feet below the final grade and may be dimensioned using a net allowable soil bearing pressure of 2000 psf. Further, that a pile foundation is recommended for the proposed stack. Point bearing steel "H" piles should achieve a 60 to 80 ton capacity at a penetration of approximately 20 to 25 feet. A qualified structural engineer should design the foundation to resist overturning moments using a maximum of 500 pounds per square foot skin friction on each pile.

Often because of design and construction details which occur on a project, questions arise concerning the soil conditions. If we can give further service in these matters, please contact us at your convenience.

Very truly yours,
A&H ENGINEERING CORPORATION

R. A. Bergquist, P.E.
Division Manager - East Peoria

James B. Thomas, P.E.
Regional Manager - East Peoria

Enc.

SUBSURFACE INVESTIGATION

AND

FOUNDATION RECOMMENDATIONS

PROPOSED DUST COLLECTOR AND APPURTENANCES

MAPLETON, ILLINOIS

Prepared For

Caterpillar Tractor Co.
Mapleton, Illinois

By

A&H Engineering Corporation

March 17, 1976

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SUBSURFACE INVESTIGATION

AND

FOUNDATION RECOMMENDATIONS

INTRODUCTION

General

This report presents the results of a foundation investigation for the proposed dust collectors and appurtenances conducted for Caterpillar Tractor Co. in Mapleton, Illinois.

Authorization to perform this investigation was in the form of a purchase order number FYJ 73829B from Caterpillar Tractor Co. to A & H Engineering Corporation.

The scope of this investigation included a review of geological maps of the area and a review of geologic and related literature; a reconnaissance of the immediate site; subsurface exploration; field and laboratory testing; and engineering analysis and evaluation of the materials.

The purpose of this foundation investigation was to determine the various soil profile components, the engineering characteristics of the foundation materials and to provide criteria for use by the design engineers and architects in preparing the foundation design.

DESCRIPTION OF SITE

Site Location

The site of the proposed structures is located immediately south of the existing foundry building bound by coordinates 52+00N to 54+00N and 55+00E to 57+00E.

Site Topography, Drainage, and Vegetation

The surface of the immediate site is relatively flat with little relief and slight slope downward from north to south. The lack of relief is attributed to past construction activity. The surrounding vicinity is well developed with paved roadways. Little or no surface drainage has developed and drainage is primarily through the storm sewer system. No vegetative cover exists due primarily to constant filling and re-working.

GEOLOGY

The geology of this region has been greatly influenced by several major landforming factors including bedrock formation and tectonic movements prior to the Pleistocene Period on the geological time scale, and the action of water and wind. A mantle of wind-deposited and water-worked loessial material overlies a deposit of glacial drift on much of the region in which the site is located.

In this region the glacial drift has been deposited in terminal glacial moraines or intermediate ground moraines composed of compact glacial till which is oftentimes overlain by glacio-fluvial outwash deposits of variable thickness and areal extent. The outwash materials are usually variable textured, but consist predominantly of coarser-grained soils such as silts, sands, and gravels. The underlying glacial till may also be variable textured, but is primarily a heterogeneous mixture of sands, gravels, and pebbles bound in a compact clay to silt matrix. Boulders up to two feet in diameter may exist within the glacial till. The bluffs which border the present Illinois River Valley generally consist of glacial drift of

quite variable texture with particle sizes ranging from fine clay-sized materials to boulders of erratic origin and of various shapes and sizes. Recently deposited river and stream alluvium of variable texture, consistency and density comprise most of the surface soils in the valley.

The glacial drift and underlying older drift extend to bedrock which generally consists of interbedded limestone, sandstone, coal and shale. Bedrock exists at a shallow depth below the ground surface.

FIELD INVESTIGATIONS

Scope

Field investigations to determine the engineering characteristics of the foundation materials included a reconnaissance of the project site, making eight (8) borings located as shown on the Plot Plan, Figure 1, performing standard penetration tests and performing unconfined compressive strength tests on the cohesive soil samples retained in the standard split-spoon sampler. The apparent groundwater level at each boring location was also determined.

Drilling and Sampling Procedures

The soil borings were performed with a drilling rig equipped with a rotary head. Conventional hollow-stem augers were used to advance the holes. Representative samples were obtained employing split-spoon sampling procedures in accordance with ASTM Procedure D-1586.

Field Tests and Measurements

Penetration tests. During the sampling procedure, standard

penetration tests were performed at regular intervals to obtain the standard penetration value of the soil. The standard penetration value is defined as the number of blows of a 140-pound hammer falling 30 inches required to advance the split-spoon sampler one foot into the soil. The results of the standard penetration tests indicate the relative density and comparative consistency of the soils and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components.

Strength tests. During the field boring operations, samples of the cohesive soil from the split-spoon sampling device were frequently tested in unconfined compression by use of a calibrated spring testing machine. In addition, a calibrated soil penetrometer was used as an aid in determining the strength of the soil. The values of the unconfined compressive strength as determined on samples of soil from the split-spoon sampling must be considered recognizing the manner in which they were obtained since the split-spoon sampling techniques provide a representative but somewhat disturbed soil sample.

Water level measurements. Water level observations were made during the boring operations and are noted on the boring logs presented herewith. In relatively pervious soils such as sandy soils, the indicated elevations are considered reliable groundwater levels. In relatively impervious soils, the accurate determination of the groundwater elevation is not possible in even several days observation.

LABORATORY INVESTIGATIONS

In addition to the field investigations, a supplemental laboratory

investigation was conducted to ascertain additional pertinent engineering characteristics of the foundation materials necessary in analyzing the behavior of the proposed structure.

The laboratory testing program included supplementary visual classification and water content tests on all samples. All phases of the laboratory investigation were conducted in general accordance with applicable ASTM Specifications.

SUBSURFACE CONDITIONS

General

The types of foundation materials encountered have been visually classified and are described in detail on the boring logs. The results of the field penetration tests, strength tests, water level observations and laboratory water content, are presented on the boring logs in numerical form. The soil profile corresponds relatively well to the surface profile of the area. Representative samples of the soils encountered in the field were placed in sample jars and are now stored in our laboratory for further analysis if desired. Unless notified to the contrary, all samples will be disposed of after one year.

A black medium to fine SAND used as a fill material is encountered at the surface of all proposed sites. This sand is four feet in depth at the stack, dust collector, substation, and the northern most fan sites (B-1, B-2, B-2A, B-5, and B-7). The depth of sand at the three remaining sites, those to the southeast, is a relatively uniform 11 feet. Occasional sand core and gravel fragments are found to be present in the sand at all sites.

The natural moisture content of this soil ranges from 11 to 29 percent with an average of 19 percent. The natural moisture content generally increases with increased depth into this soil stratum. The standard penetration resistance in blows per foot is variable depending on amount and size of sand core and gravel fragments encountered.

Strata of alluvial soils consisting of Silty CLAYS to Clayey SILTS with sand and gravel are encountered at all sites below the fill sand with varying thickness from 15 to 25 feet. There are two separate cohesive materials present. Brown Silty CLAY to Clayey SILT has an average moisture content of 16 percent, standard penetration resistance of 20 blows per foot, and penetrometer values of 2.3 tons per square foot. Dark gray Silty CLAY to Clayey SILT has an average moisture content of 25 percent, standard penetration resistence of 10 blows per foot, and penetrometer values of 1.0 ton per square foot. Below the Silty CLAY at the dust collector and northern most fan sites, a 3-1/2 foot layer of mixed sand and gravel exists. The moisture content is 13 percent and a standard penetration resistance of 23 blows per foot.

At all sites, gray or brown Silty SHALE is encountered at depths of 17 to 26 feet below the fill sand strata. Auger refusal is encountered and standard penetration resistance is 50 blows per 1-1/4 inches of penetration.

FOUNDATION DISCUSSION AND RECOMMENDATIONS

Project Description

Preliminary design plans indicate a 9 foot diameter, 80 foot tall stack will be erected near Boring 1. Two fans will be built at Borings 2

and 3, a palletizer at Boring 4, two dust collectors at Borings 5 and 6, and a substation at Boring 7. Except for the stack, the total loads transmitted to the foundation soils are assumed to be light and that the dimensions of the equipment will control the foundation dimension instead of the soil conditions dictating the foundation dimension. The stack foundation will primarily be designed with respect to overturning moment as opposed to bearing capacity or settlement.

FOUNDATION RECOMMENDATIONS

Various foundation types have been considered for support of the proposed structure. The foundation types considered included mat foundations, available types of piles and drilled piers or caissons.

Dust Collectors, Fans, Palletizer and Substation

Piling. Several types of piling may be used to support the proposed structures. However, this more elaborate and expensive deep foundation type does not appear to be economical for the proposed structures when the engineering characteristics of the foundation materials are considered with regard to the assumed design loads.

Caissons or Drilled Piers. A caisson or drilled pier is most advantageously used where relatively soft strata overlie a firm or dense foundation material.

Such conditions do exist at this site; however, other suitable foundation types are more feasible from the standpoint of economics.

Raft or Mat. A raft or mat foundation may be used to support the

proposed structures. The raft may be founded at a depth of three feet and may be dimensioned using a net allowable soil bearing pressure of 2,000 psf. The raft should be an adequately reinforced concrete slab with dimensions appropriately considered in light of the plan of the proposed structure.

Stack

Piling. Pile types available for support of the proposed stack include steel pipe piles, driven open-end or closed-end and filled with concrete, hollow shell, straight or tapered, mandrel driven, precast concrete piles, steel H-piles, and timber piles. It appears that, based on the soil conditions, proposed loadings, and other pertinent information, steel H-piles will be most feasible for support of the proposed stack. These piles should achieve a design load-carrying capacity of 60 to 80 tons at an average penetration of 20 to 25. Piles should be driven in groups of three or more to insure lateral stability of the foundation. The foundation should be designed to withstand wind imposed overturning moments using a maximum of 500 psf skin friction on each pile in negative loading.

Caissons or Drilled Piers. Caissons or drilled piers may be used to support the proposed stack. This type of foundation is most advantageously used when soft or weak soils overly firm to dense materials.

Such conditions do exist at this site. However, consideration of the integrity of the clay core dike and possible construction problems suggest that drilled piers would not be economical.

Recommended Foundation Type

When the foundation types discussed herein are considered, mat

foundations and piling are recommended for use as foundations for the proposed structures, as previously discussed. Parameters have been given which may be used in design of the foundation. However, the final choice of foundation type should be based on its relative economic, engineering and construction advantages.

CONSTRUCTION CONSIDERATIONS

Site Preparation

Excessively loose dumped fill materials when loaded generally undergo high volume changes which are detrimental to the behavior of pavements, floor slabs, structural fills and shallow foundations placed upon them. Therefore, it is recommended that excessively loose dumped fill materials be compacted with vibratory equipment prior to placing foundations.

Groundwater

Because of the relatively low groundwater level no difficulty during excavation and construction of the proposed shallow foundations is anticipated.

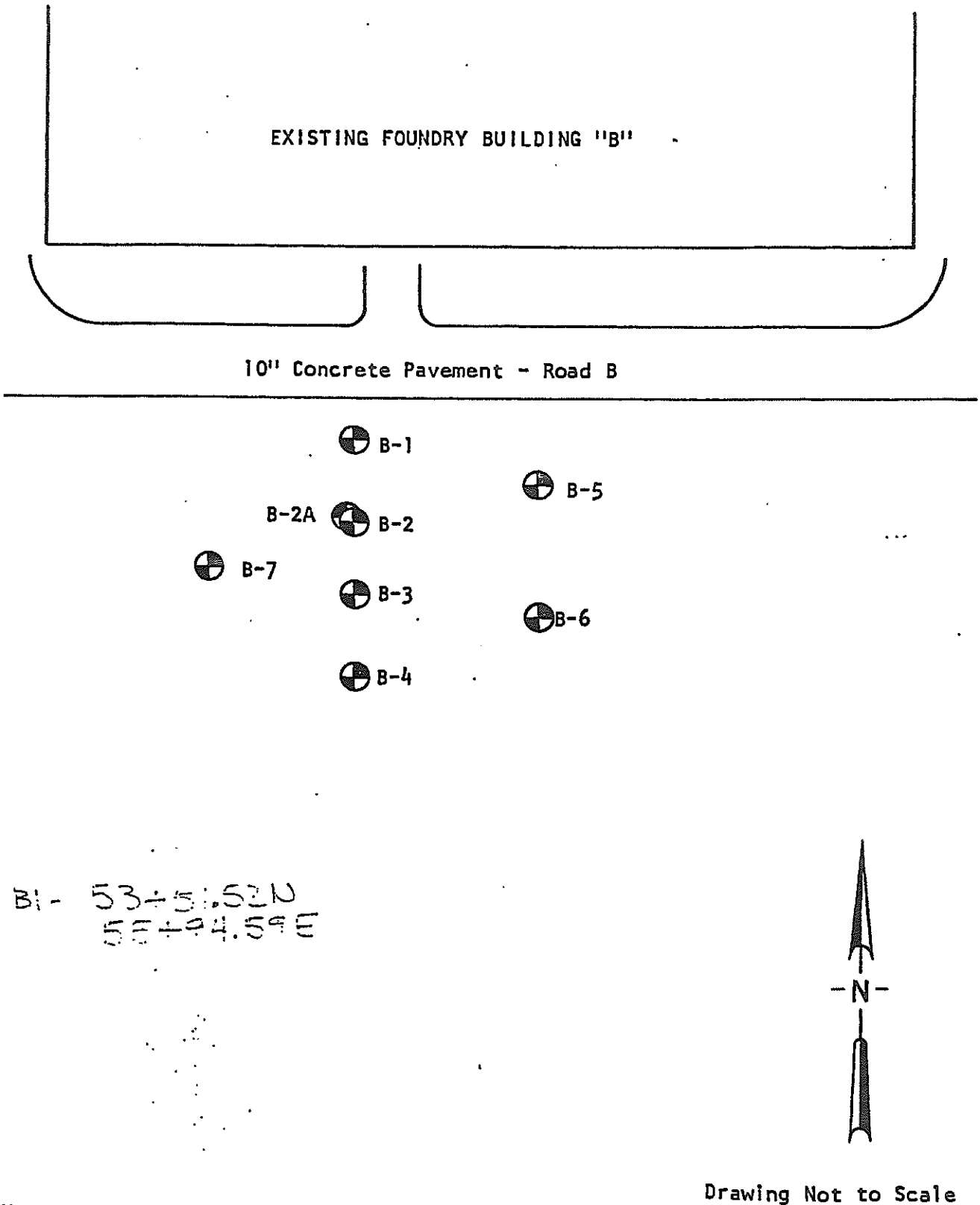
SUMMARY

An exploration and evaluation of the foundation conditions has been conducted at the site of the proposed dust collector and appurtenances.

Foundation criteria have been suggested and possible design and construction problems have been discussed.

The exploration and analysis of the foundation conditions reported

herein is considered in sufficient detail and scope to form a reasonable basis for final design. The recommendations submitted are based on the available soil information and the preliminary design details furnished by Caterpillar Tractor Co. for the proposed structure. Any revision in the plans for the proposed structure from those enumerated in this report should be brought to the attention of the soils engineer so that he may determine if changes in the foundation recommendations are required. If deviations from the noted subsurface conditions are encountered during construction, they should also be brought to the attention of the soils engineer.



Drawing Not to Scale

Caterpillar Tractor Co.		BORING LOCATION DIAGRAM	
PROJECT NAME Proposed Dust Collector & Appurtenances - Mapleton, IL		PROJECT NO. 03-6507	DATE March 17, 1976

RECORD OF SUBSURFACE EXPLORATION

Boring B-1
53+51.52 N
55+94.59 E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 2, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARK
SURFACE EL 458.55 ±							
Black medium to fine SAND occasional core fragments (fill)		1-AU	-	-	-	18	
		2-SS	30	NO SAMPLE RECOVERED			
Brown Clayey SILT with sand and gravel	5	3-SS	23	-	3.0	17	
		4-SS	19	-	2.3	16	
	10	5-SS	16	-	2.8	17	
Dark gray mottled brown Clayey SILT with sand and gravel		6-SS	24	2.0	-	17	
Brown mottled gray Silty CLAY with sand and gravel	15	7-SS	24	-	-	19	
Brown Clayey SILT with sand and gravel	20	8-SS	26	-	-	16	
Brown Silty CLAY with sand and gravel							
Gray Silty SHALE	25	9-SS	50/1¼"	-	-	11	
END OF BORING							Dry at 0 Hr.

RECORD OF SUBSURFACE EXPLORATION

Boring B-2
52+98.44N
55+95.21E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 2, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	q_u	q_p	M_c	REMARKS
SURFACE EL 458.17±							
Black medium to fine SAND occasional core fragments (fill)		1Au	-	-	-	12	
		2SS	19	-	-	14	
Dark gray Silty CLAY with sand and gravel	5	3SS	15	-	-	21	
Dark gray mottled brown Silty CLAY with sand and gravel		4SS	8	-	-	28	
Dark gray Silty CLAY with sand and gravel	10	5SS	3	-	-	47	
		6SS	10	-	1.3	22	
Brown mottled dark gray Silty CLAY with sand and gravel	15	7SS	17	-	-	15	
Brown mixed SAND and GRAVEL with silt and clay	20	8SS	17	-	-	15	
Gray SHALE		9SS	50/0"	-	-	10	
END OF BORING	25						Dry at 0 Hr.

RECORD OF SUBSURFACE EXPLORATION

Boring B-2A
MOVED ABOUT 3' FROM B2

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 2, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE							
	5						
	10						
	15						
Auger Refusal (probable SHALE)							
END OF BORING	20						

RECORD OF SUBSURFACE EXPLORATION

Boring B-3
52+58.44N
55+95.68E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 3, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE EL 458.25							
Black medium to fine SAND occasional core fragments (fill)		1Au	-	-	-	19	
		2SS	30	-	-	17	
	5	3SS	9	-	-	20	
		4SS	6	-	-	24	
	10	5SS	6	-	-	23	
Dark gray Silty CLAY with sand and gravel		6SS	18	-	-	22	
	15	7SS	16	-	-	24	
	20	8SS	6	-	-	34	
Dark brown coarse Silty SAND	25	9SS	18	-	-	21	
Dark gray Silty CLAY with sand and gravel	30	10SS	10	-	-	25	
Gray Silty SHALE	35	11SS	43/3"	-	-	20	
	40	12SS	50/1"	-	-	12	
END OF BORING							

RECORD OF SUBSURFACE EXPLORATION

Boring B-4
52+34.2 N
55+95.97 E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 3, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE EL 458.19							
Black medium to fine SAND occasional core fragments (fill)		1Au	-	-	-	23	
		2SS	25	-	-	16	
	5	3SS	8	-	-	21	
		4SS	10	-	-	23	
	10	5SS	11	-	-	29	
Brown Clayey SILT with sand and gravel		6SS	10	-	4.5+	14	
	15	7SS	21	-	-	13	
Dark gray Silty CLAY with sand and gravel	20	8SS	7	-	-	28	
	25	9SS	8	1.2	1.7	29	
	30	10SS	10	1.4	1.8	25	
Dark gray Clayey SILT with sand	35	11SS	5	-	-	20	
Gray Silty SHALE	40	12SS	50/1¼"	-	-	12	
END OF BORING							Dry at 0 Hr.

RECORD OF SUBSURFACE EXPLORATION

Boring B-5
53+09.89 N
56+58.55 E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 3, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE EL. 458.39 ±							
Black medium to fine SAND occasional core fragments (fill)		1Au	-	-	-	25	
		2SS	7	-	-	13	
Brown Silty CLAY with sand and gravel	5	3SS	11	-	-	19	
Brown mottled gray Silty CLAY with sand and gravel		4SS	10	1.5	1.0	22	
	10	5SS	50	-	-	22	
		6SS	12	-	-	20	
Gray mottled brown Silty CLAY with sand and gravel	15	7SS	13	1.2	1.0	26	
Brown mixed SAND and GRAVEL	20	8SS	23	-	-	13	
Gray SHALE		9SS	50/1½"	-	4.5+		
END OF BORING							

RECORD OF SUBSURFACE EXPLORATION

Boring B-6
52+48.51N
56+60.27E

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 3, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Qu	Qp	Mc	REMARKS
SURFACE 458.37 ft							
Black fine to medium SAND occasional core fragments (fill)		1Au	-	-	-	13	
		2SS	29	-	-	11	
	5	3SS	7	-	-	19	
		4SS	3	-	-	21	
	10	5SS	12	-	-	22	
Brown Silty CLAY with sand and gravel		6SS	19	-	1.3	19	
Brown Sandy SILT with gravel trace clay	15	7SS	29	-	-	9	
Dark gray Silty CLAY with sand	20	8SS	6	-	-	29	
	25	9SS	8	-	1.0	32	
Light brown mottled gray SILT	30	10SS	50/3"	-	-	13	
Gray Silty SHALE	35	11SS	100/2½"	-	-	10	
END OF BORING							Caved at 0 Hr.

RECORD OF SUBSURFACE EXPLORATION

Boring B-7
APPROX. LOCATION @ ℄
TRANSFORMER PAD

Project Name: Proposed Dust Collector & Appurtenances Date of Boring: March 4, 1976

Site: Caterpillar Tractor Co. - Mapleton, Illinois Project No.: 03-6507

DESCRIPTION	DEPTH	SAMPLE	N	Q_u	Q_p	M_c	REMARKS
SURFACE EL 459.67 ±							
Black fine to medium SAND occasional sand core fragments (fill)		1-AU	-	-	-	14	
		2-SS	78	-	-	17	
	5	3-SS	18	-	-	20	
Brown Silty CLAY with sand and gravel		4-SS	18	NO SAMPLE RECOVERED			
	10	5-SS	4	-	-	21	
Brown Clayey SILT with sand and gravel		6-SS	19	-	-	18	
	15	7-SS	43	-	-	11	
Brown Sandy SILT with gravel trace clay							
Brown Silty CLAY with sand and gravel	20	8-SS	6	-	-	18	
Brown Silty SHALE	25	8-SS	50/1½"	-	-	11	
END OF BORING							Dry at 0 Hr.

2112 NORTH MARKET STREET, CHAMPAIGN, ILLINOIS 61820
8111 NORTH UNIVERSITY ST., PEORIA, ILLINOIS 61614

AREA CODE 217 352-7918
AREA CODE 309 691-0431

Address Reply to: Peoria

OUR REPORT NO. 8-5037

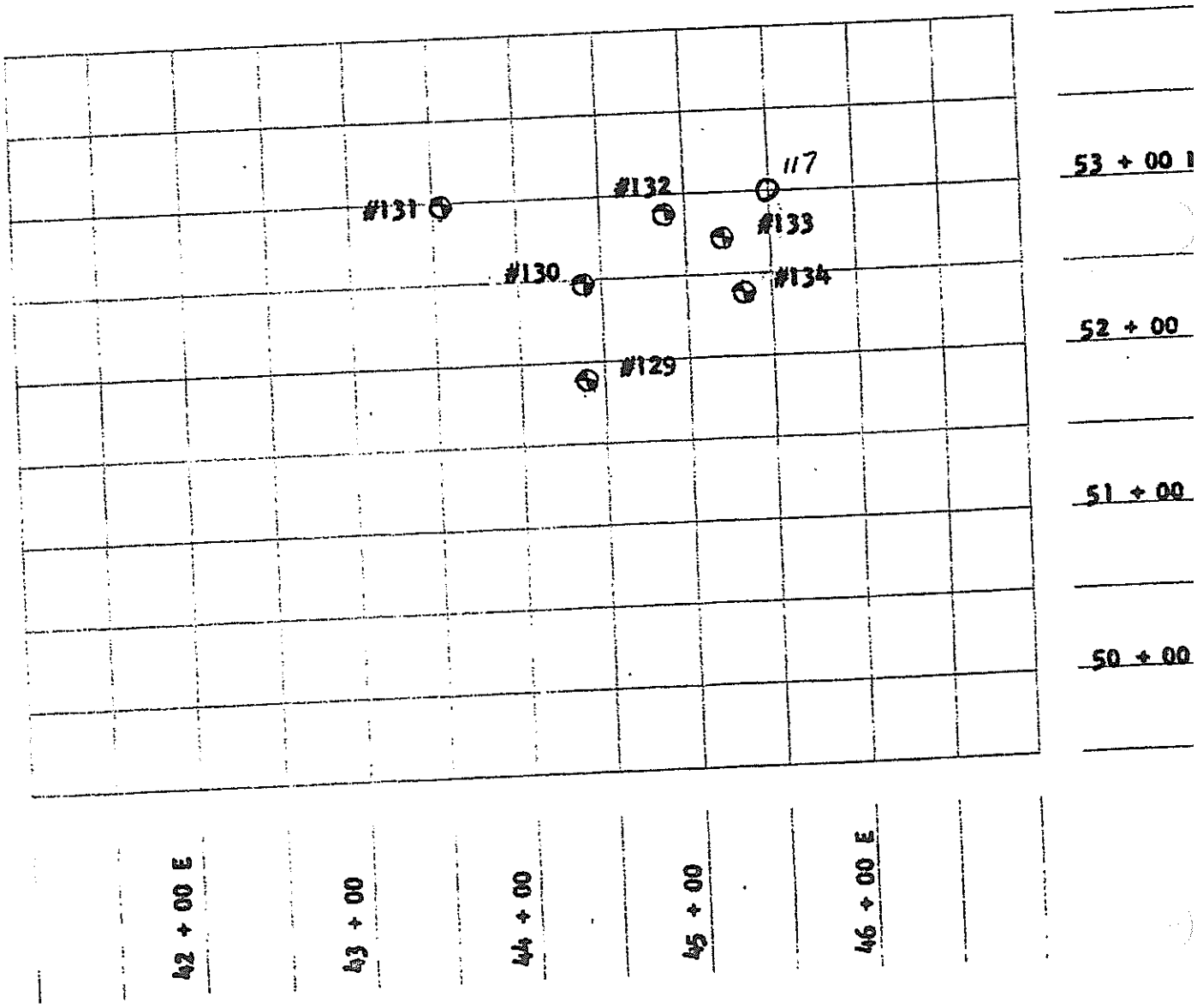
DATE February 2, 1966

TESTED FOR Caterpillar Tractor Company

PROJECT Mapleton Foundry

REMARKS: Boring Locations - Utility Building and Water Tower

LOCATION DIAGRAM



2112 NORTH MARKET STREET, CHAMPAIGN, ILLINOIS 61820
8111 NORTH UNIVERSITY ST., PEORIA, ILLINOIS 61614
AREA CODE 309 691-[illegible]

Address Reply to: Peoria

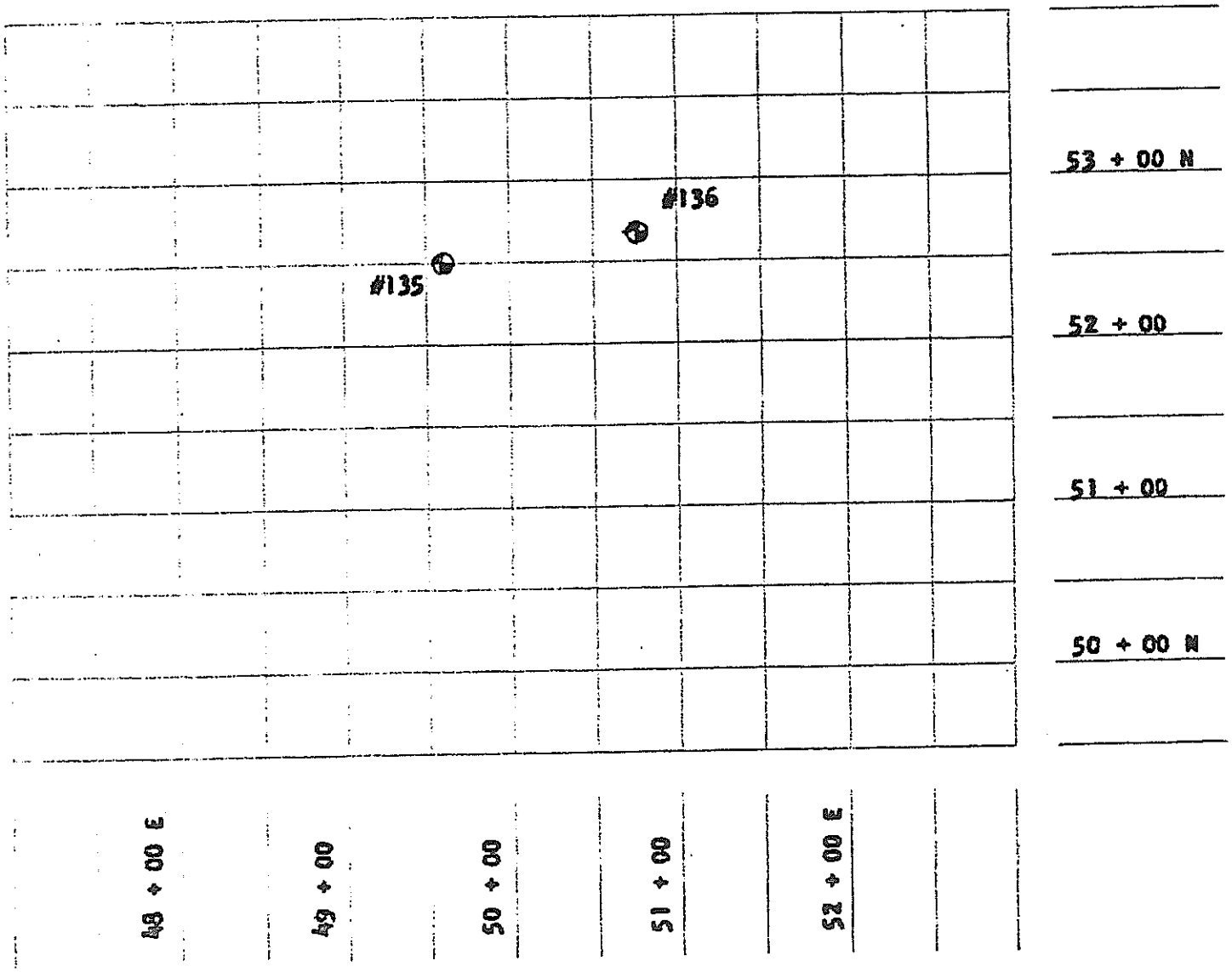
DATE February 2, 1966 OUR REPORT NO. 8-5037

TESTED FOR Caterpillar Tractor Company

PROJECT Mapleton Foundry

REMARKS: Boring Locations - Maintenance Building "P"

LOCATION DIAGRAM



MATERIALS TESTING CORPORATION
2112 NORTH MARKET STREET, CHAMPAIGN
8111 NORTH UNIVERSITY ST., PEORIA, ILLINOIS
Address Reply to:

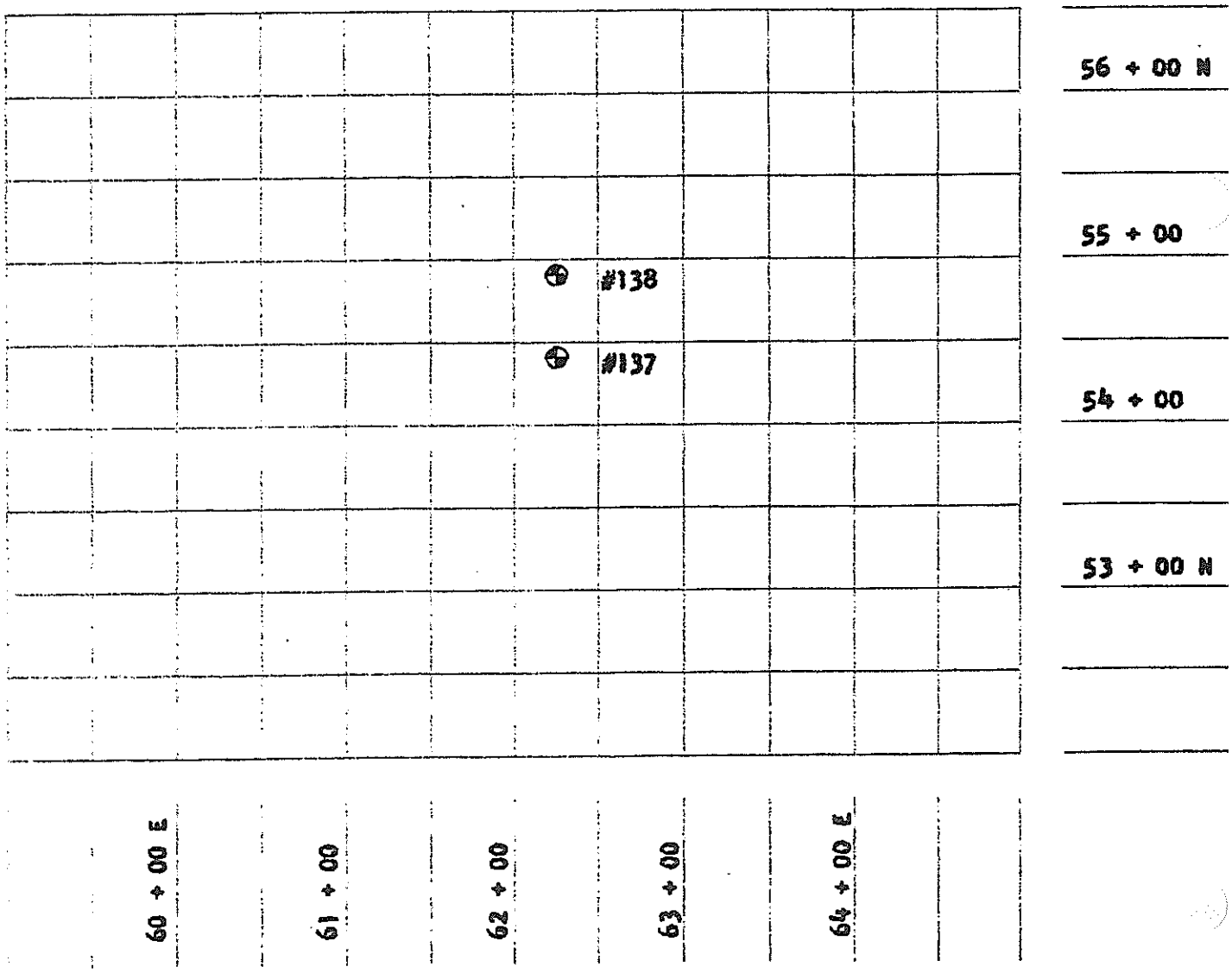
DATE February 2, 1966 OUR REPORT NO. 8-5037

TESTED FOR Caterpillar Tractor Company

PROJECT Mapleton Foundry

REMARKS: Boring Locations - X-Ray Building

LOCATION DIAGRAM



MATERIALS TESTING
AH
CORPORATION

2112 NORTH MARKET STREET, CHAMPAIGN, ILL.
8111 NORTH UNIVERSITY ST., PEORIA, ILLINOIS 61614

Address Reply to: PEORIA

DATE February 2, 1966

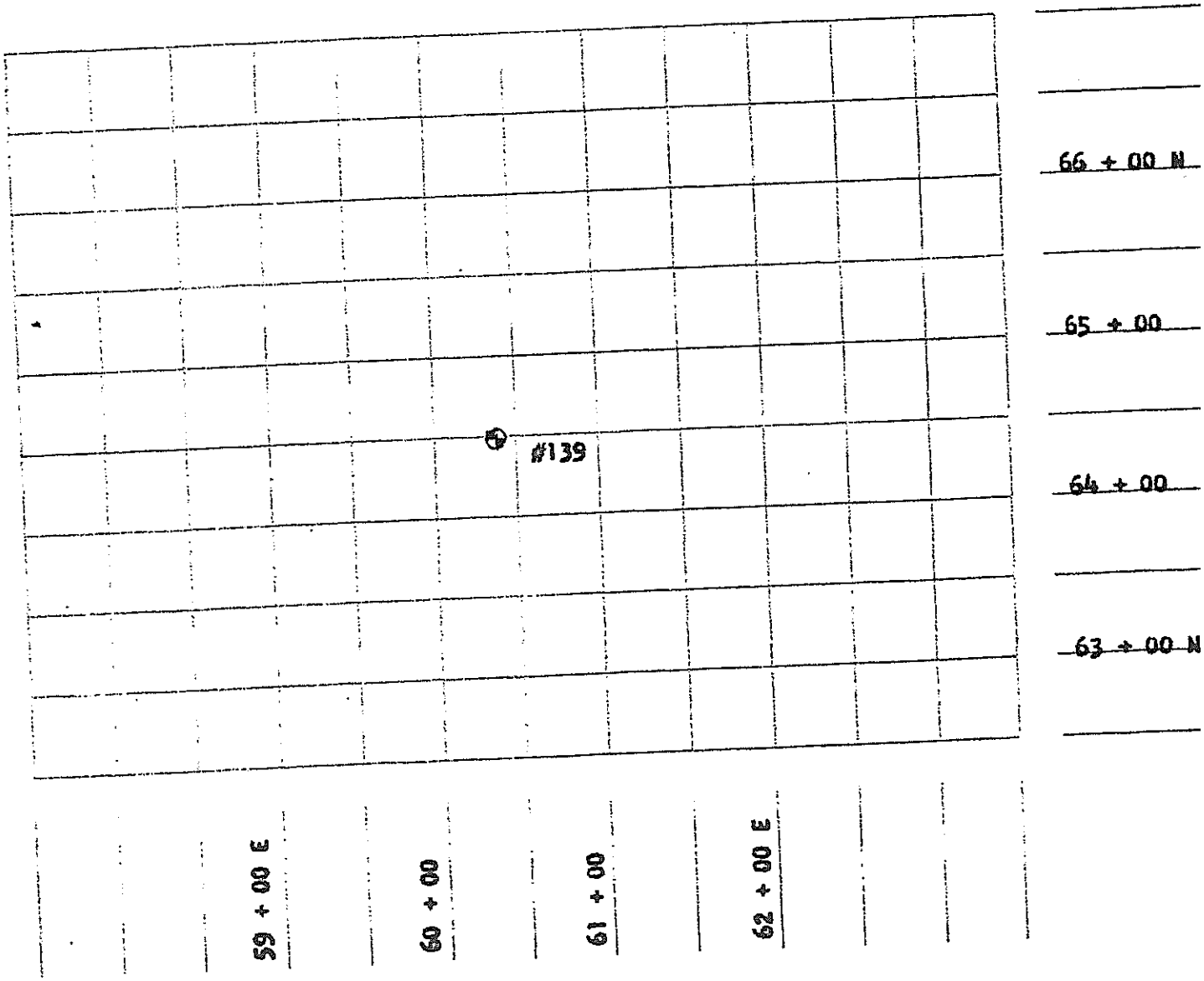
OUR REPORT NO. 8-5037

TESTED FOR Caterpillar Tractor Company

PROJECT Mapleton Foundry

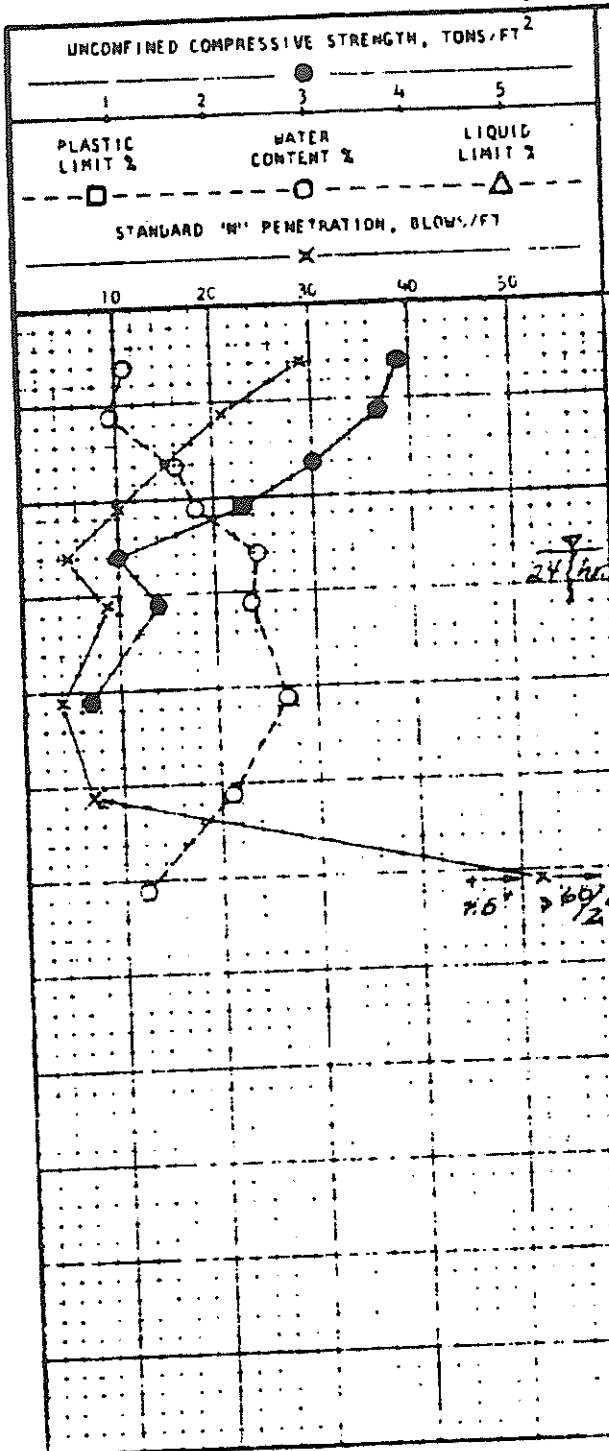
REMARKS: Boring Locations - Garage Building

LOCATION DIAGRAM



LOG OF BORING NO. 129

51 + 90 N - 44 + 40 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 458.8
	1	ss		Gray-brown clayey silt (ML) with numerous small pebbles
5	2	ss		
	3	ss		
10	4	ss		Reddish brown clayey silt (ML) with occasional small pebbles
	5	ss		
15	6	ss		
20	7	ss		Dark gray-brown clayey silt (ML)
25	8	ss		Gray-brown medium grained sand (SP) with some gravel
30	9	ss		Blue-gray shale (upper portion weathered)
35				End of Boring

PROJECT NAME
Caterpillar Foundry

SITE
Mapleton, Illinois

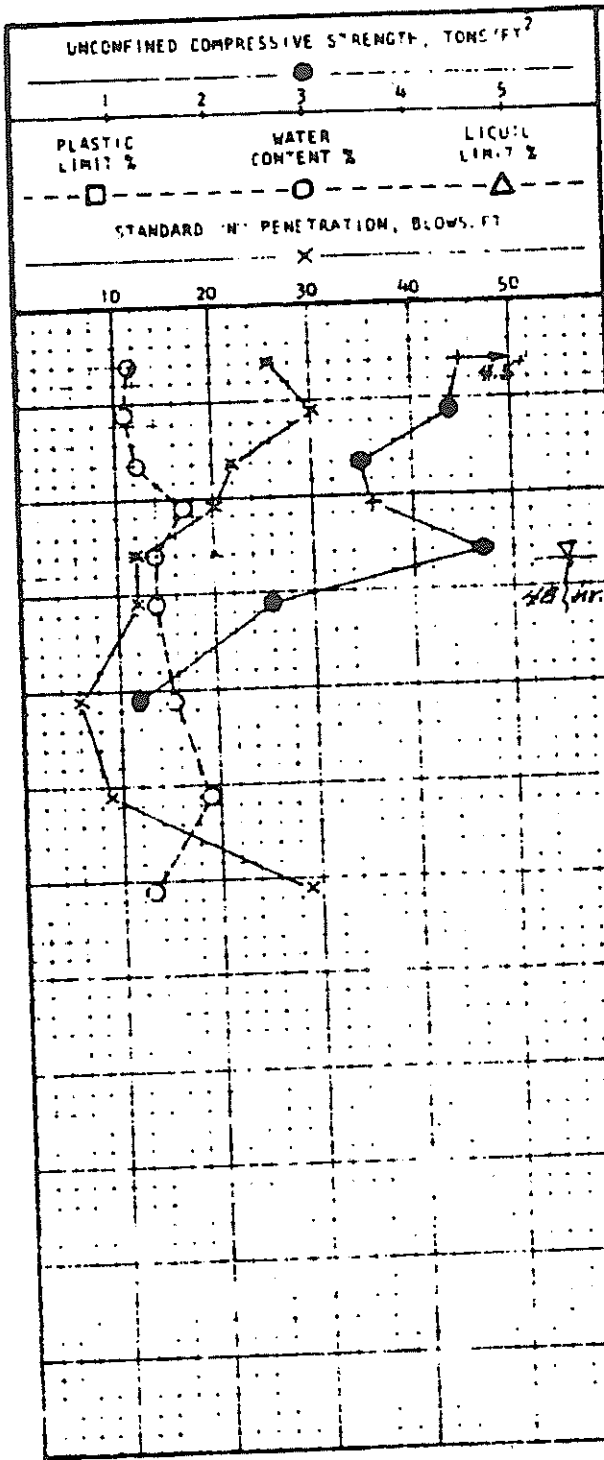
4

DATE OF BORING
January 25, 1966

PROJECT NO.
8-5937

LOG OF BORING NO. 130

52 + 50 N - 44 + 40 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 458.8
	1	ss		Gray-brown clayey silt (ML) with numerous small pebbles
5	2	ss		
	3	ss		
10	4	ss		
	5	ss		Reddish brown clayey silt (ML) with occasional small pebbles
15	6	ss		
20	7	ss		
25	8	ss		Gray-brown medium grained sand (SP) with some gravel Blue-gray shale bottom 1 inch
30	9	ss		
35				End of Bor ng

PROJECT NAME
Caterpillar Foundry

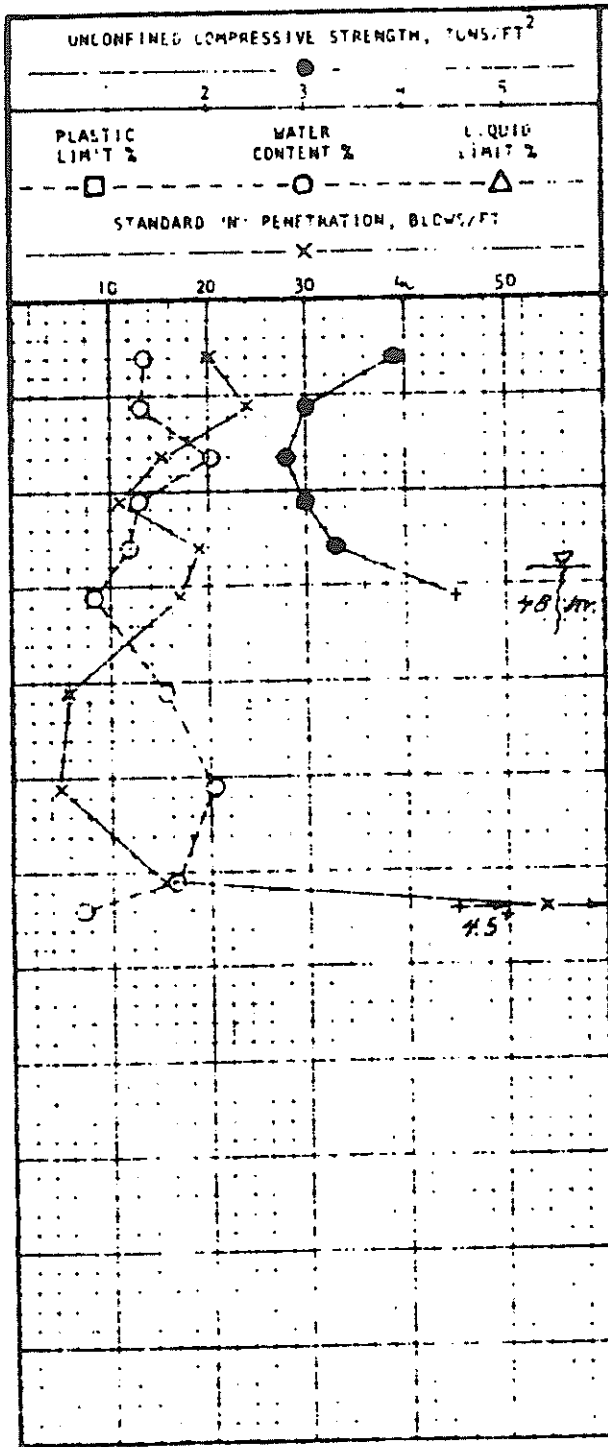
SITE
Mapleton, Illinois

DATE OF BORING
January 26, 1966

PROJECT NO.
3-5037

LOG OF BORING NO. 131

53 + 00 N - 43 + 57 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 458.8
	1	ss		
5	2	ss		Gray-brown clayey silt (ML) with numerous small pebbles
	3	ss		
10	4	ss		
	5	ss		
15	6	ss		
20	7	ss		Reddish-brown sand-gravel (SP) with occasional thin clay seams
25	8	ss		
30	9	ss		
	10	ss		Blue-gray shale
35				End of Boring

PROJECT NAME
Caterpillar Foundry

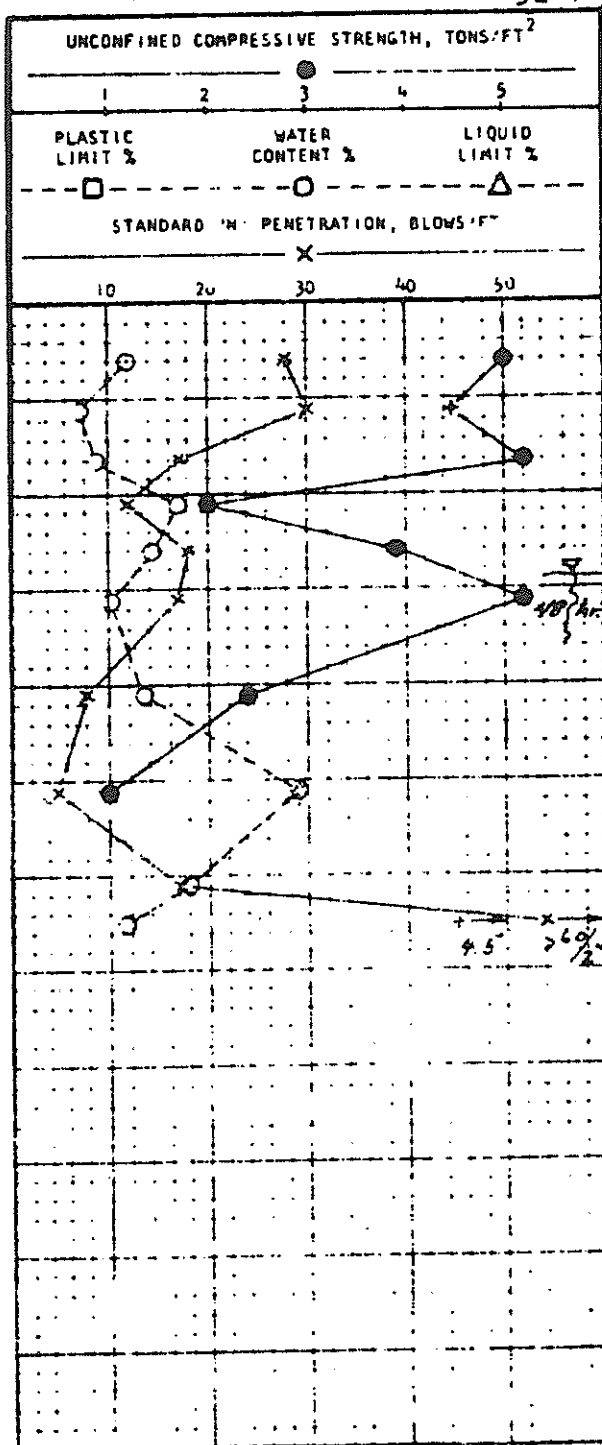
SITE
Mapleton, Illinois

DATE OF BORING
January 26, 1966

PROJECT NO.
4-5037

LOG OF BORING NO. 132

52 + 90 N - 44 + 90 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 458.8
	1	ss		Gray-brown clayey silt (ML) with numerous small pebbles
5	2	ss		
	3	ss		
10	4	ss		
	5	ss		
15	6	ss		Reddish brown clayey silt (ML) with occasional small pebbles
20	7	ss		
25	8	ss		Gray-black sandy silt (ML)
				Gray-brown medium grained sand (SP) with some gravel
30	9	ss		
	10	ss		Blue-gray shale
35				End of Boring

PROJECT NAME

Caterpillar Foundry

SITE

Mapleton, Illinois

DATE OF BORING

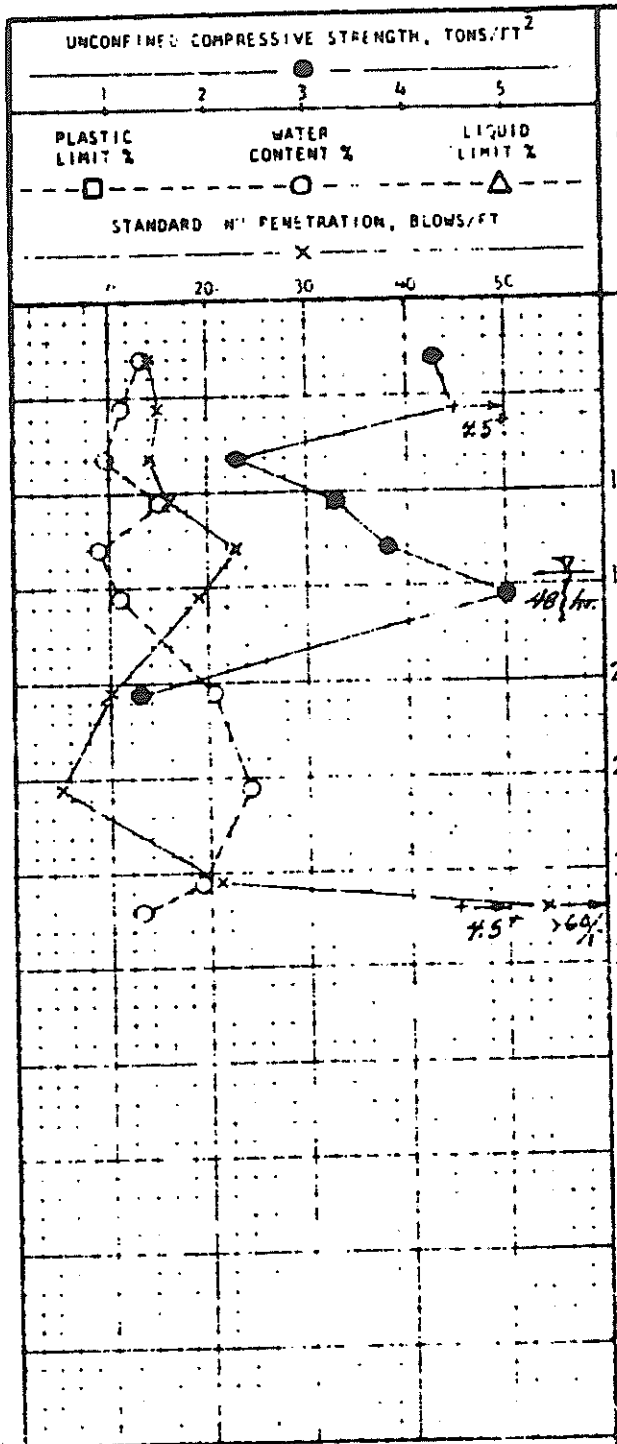
January 26, 1966

PROJECT NO.

8-5037

LOG OF BORING NO. 133

52 + 73 N - 45 + 23 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 453.8
	1	SS		Gray-brown clayey silt (ML) with numerous small pebbles
5	2	SS		
	3	SS		
10	4	SS		
	5	SS		
15	6	SS		
20	7	SS		
				Brown fine to coarse grained sand (SW-SP) with some gravel
25	8	SS		
30	9	SS		
	10	SS		Blue-gray shale
35				End of Boring

PROJECT NAME
Caterpillar Foundry

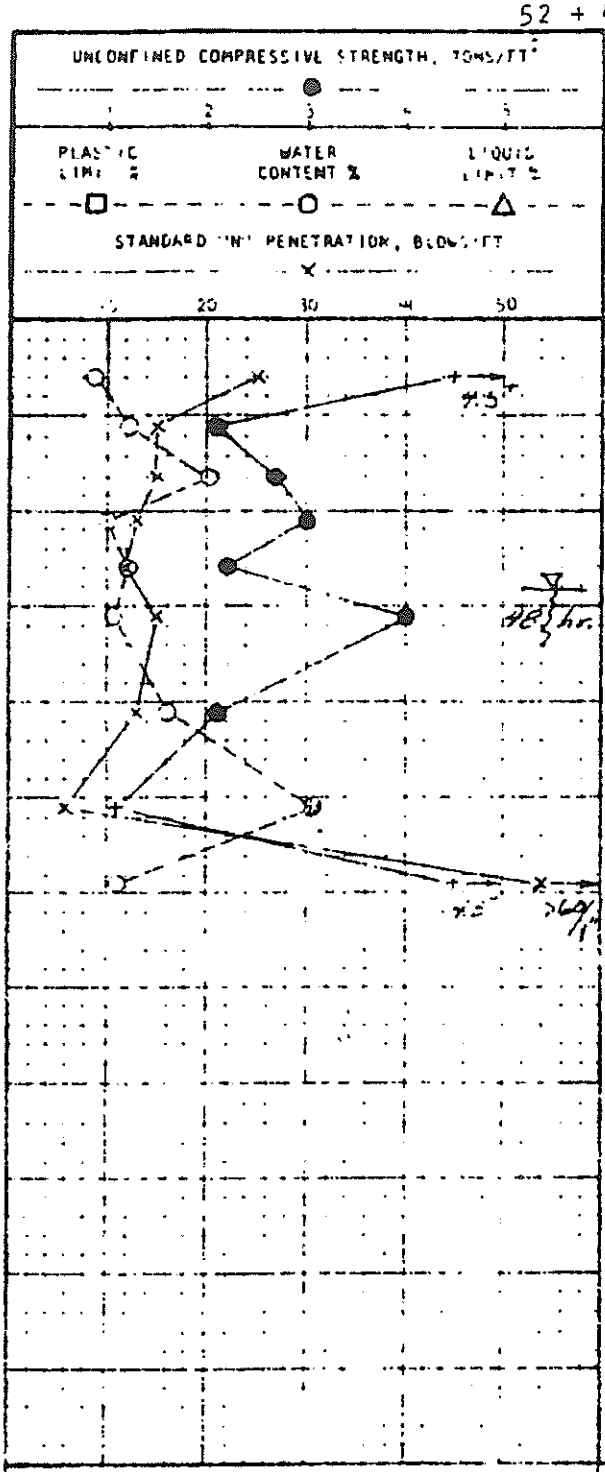
SITE
Mapleton, Illinois

DATE OF BORING
January 20, 1966

PROJECT NO.
8-5037

LOG OF BORING NO. 134

52 + 40 N - 45 + 35 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 458.8
	1	SS		
5	2	SS		Gray-brown clayey silt (ML) with numerous small pebbles
	3	SS		
10	4	SS		
	5	SS		
15	6	SS		
20	7	SS		
25	8	SS		Gray-black sandy silt (ML)
				Brown medium grained sand (SW)
30	9	SS		Blue-gray shale
				End of Boring
35				

PROJECT NAME
Caterpillar Foundry

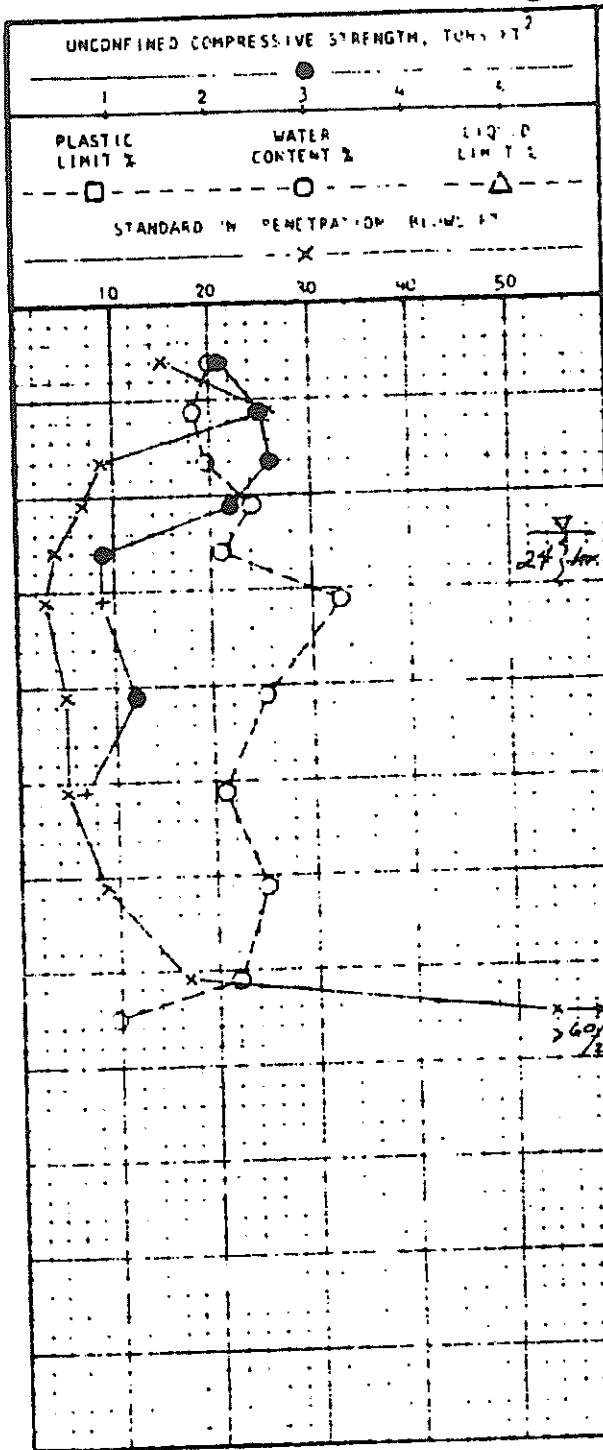
SITE
Mapleton, Illinois

DATE OF BORING
January 26, 1966

PROJECT NO.
3-5037

LOG OF BORING NO. 135

52+50 N 49+60 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
	1	SS		
5	2	SS		Gray-brown clayey silt (ML) with numerous small pebbles
	3	SS		
10	4	SS		
	5	SS		
15	6	SS		
20	7	SS		Gray-brown silty clay (CL)
25	8	SS		
30	9	SS		Gray-brown medium grained sand (SP) with some gravel
35	10	SS		
	11	SS		Gray-blue shale
40				End of Boring
45				

SURFACE ELEVATION

PROJECT NAME
Caterpillar Foundry

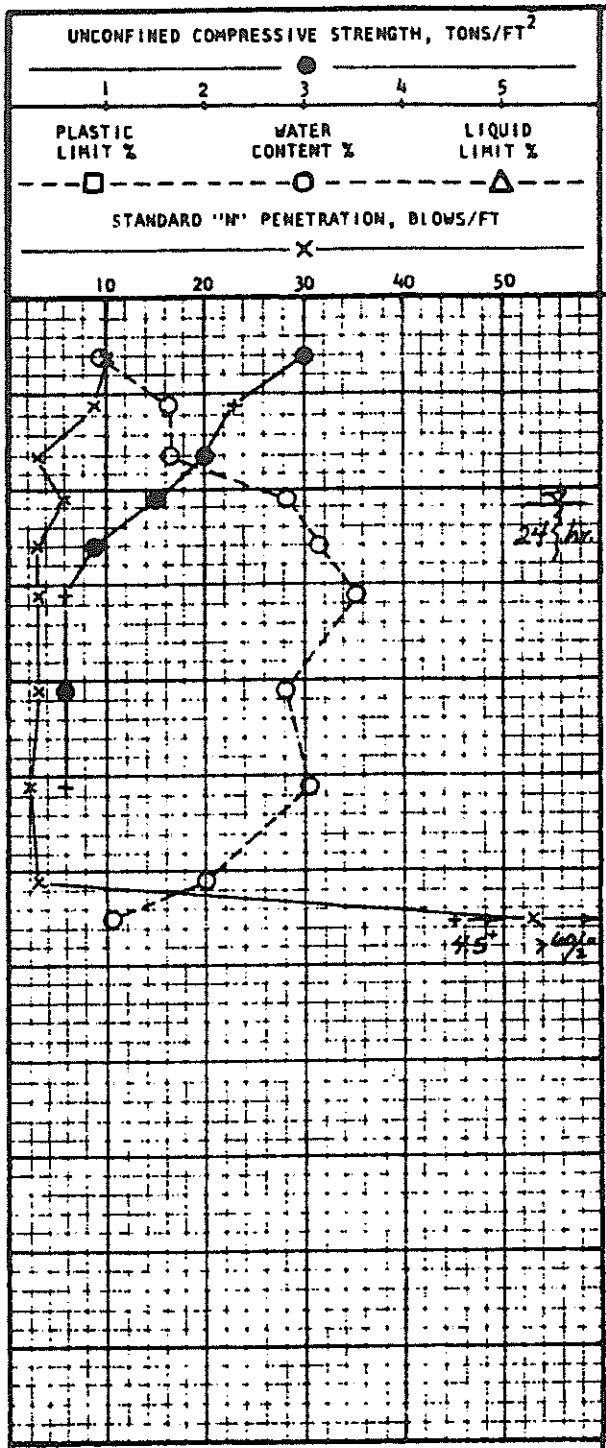
SITE
Mapleton, Illinois

DATE OF BORING
January 27, 1966

PROJECT NO.
8-5037

LOG OF BORING NO. 136

52 + 69 N - 50 + 74 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION 455.2
	1	ss		Gray-brown to brown clayey silt (ML)
5	2	ss		
	3	ss		
10	4	ss		Dark brown clayey silt (ML-OL) with occasional roots
	5	ss		
15	6	ss		
				Gray-brown clayey silt (ML) with occasional thin sand lenses
20	7	ss		
25	8	ss		
				Gray medium grained sand (SW)
30	9	ss		
	10	ss		Gray-blue shale
35				End of Boring

PROJECT NAME

Caterpillar Foundry

SITE

Mapleton, Illinois

DATE OF BORING

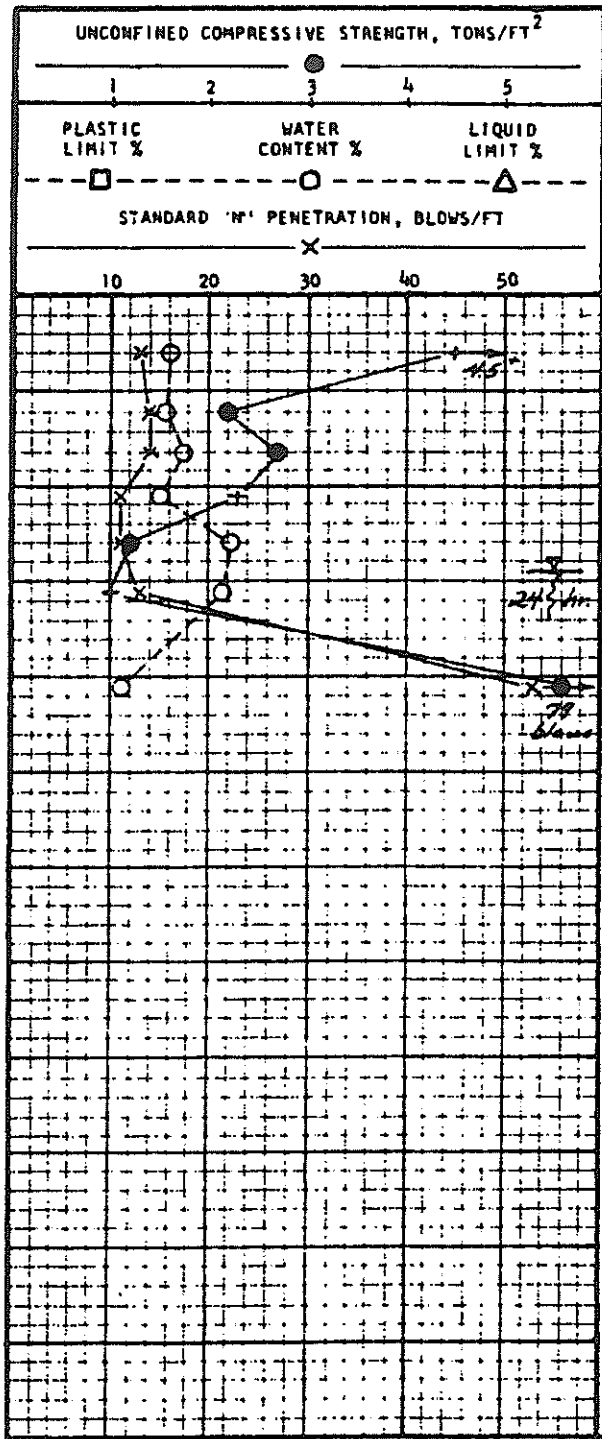
February 2, 1966

PROJECT NO.

8-5037

LOG OF BORING NO. 137

54 + 40 N - 62 + 25 E

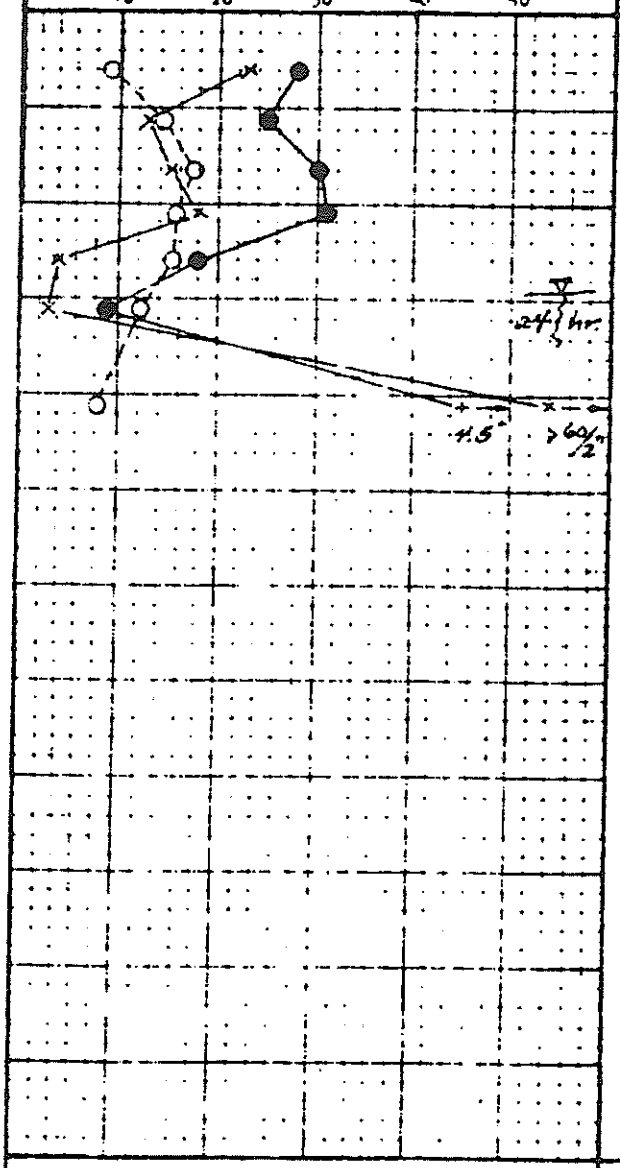


DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 457.0
	1	ss		Gray-brown clayey silt (ML) with occasional pebbles and sand particles
5	2	ss		
	3	ss		
10	4	ss		
	5	ss		
15	6	ss		Gray-brown clayey silt (ML) with occasional black organic clay streaks
20	7	ss		Gray-blue shale
25				End of Boring

PROJECT NAME Caterpillar Foundry	DATE OF BORING February 1, 1966
SITE Mapleton, Illinois	PROJECT NO. 8-5037

LOG OF BORING NO. 138

54 + 90 N - 62 + 25 E



DEPTH IN FEET	SAMPLE NO.	TYPE SAMPLE	SAMPLE DISTANCE	DESCRIPTION OF MATERIAL
				SURFACE ELEVATION → 557.0
	1	ss		Gray-brown to brown clayey silt (ML) with numerous small pebbles
5	2	ss		
	3	ss		
10	4	ss		
	5	ss		
15	6	ss		Gray brown clayey silt (ML) with considerable sand.
20	7	ss		Gray-brown to gray-blue shale
25				End of Boring

PROJECT NAME

Caterpillar Foundry

SITE

Mapleton, Illinois

DATE OF BORING

February 1, 1966

PROJECT NO.

8-5037

APPENDIX B

RMT SOIL BORING/MONITORING WELL STRATIGRAPHIC LOGS

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR - MAPLETON	BORING NO.	MW-1
LOCATION	MAPLETON, ILLINOIS	SHEET NO.	1 OF 1
CONTRACTOR	MES	PROJECT NO.	2185.22
DRILLING METHOD	4.25" HSA	INSTALLATION	4/25/94
		SURFACE ELEV.	100.0
		BOREHOLE DIA.	8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		MOISTURE			
NO.	TYPE	N	IN		DEPTH		
1	SS	7		M		LEAN CLAY (CL) trace sand, coarse grained, rounded, poorly graded, silty, plastic, olive 5Y 5/3, moist, stiff, root material.	
2	SS	14		M			
3	SS	9		M	5		
4	SS	9		D		LEAN CLAY (CL) silty, trace sand, fine grained, slightly plastic, greenish gray 5GY 6/1, dry, very hard.	
5	SS	8		M		LEAN CLAY with SAND (CL) fine to medium grained, some coarse grained, rounded, poorly graded, plastic, olive 5Y 5/3, change to brown 10YR 4/3 at depth, moist, stiff.	
6	SS	10		M	10		
7	SS	11		M		color changes to dark gray 5Y 4/1, increase sand content.	
8	SS	6		M	15	LEAN CLAY with SAND (CL) fine to medium grained, subrounded, poorly graded, silty, plastic, brown 10YR 4/3, moist, stiff.	
9	SS	7		M			
10	SS	7		W		LEAN CLAY (CL) trace sand, fine grained, subangular, poorly graded, silty, dark gray 5Y 4/1, moist, some organic material and decayed wood.	
11	SS	3		W	20	LEAN CLAY with SAND (CL) fine to medium grained, rounded, poorly graded, silty, plastic, brown, 10YR 4/3, stiff.	
					25	SILTY SAND (SM) fine to coarse grained, poorly graded, brown 10YR 4/3, moist to wet some gravel, rounded, poorly graded, wet.	
						SAND (SP) fine to medium grained, rounded, trace silt, yellowish brown 10YR 5/4, wet.	
						End of Boring at 22 Feet Install Monitoring Well at 21 Feet	

GENERAL NOTES

DATE STARTED	APR 25 94
DATE COMPLETED	APR 25 94
RIG	Diedrich D-120
CREW CHIEF	T. Bartholomew
LOGGED D. McQuade	CHECKED RLW

WATER LEVEL OBSERVATIONS

WHILE DRILLING	▽	16.5
AT COMPLETION	▼	13.3
AFTER DRILLING		

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

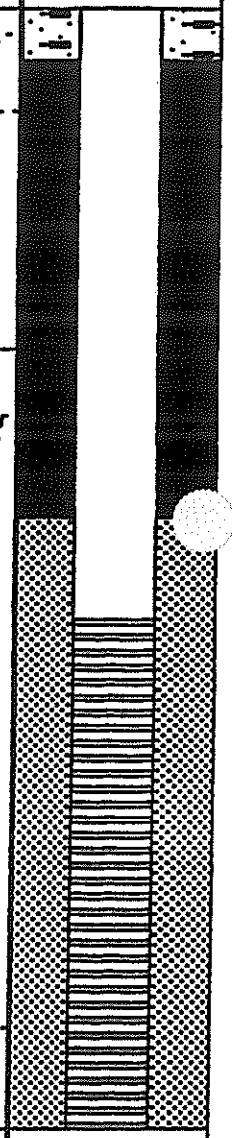
LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR - MAPLETON	BORING NO.	MW-2
LOCATION	MAPLETON, ILLINOIS	SHEET NO.	1 OF 1
CONTRACTOR	MES	PROJECT NO.	2185.22
DRILLING METHOD	4.25" HSA	INSTALLATION	4-26-94
		SURFACE ELEV.	99.7
		BOREHOLE DIA.	8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
						Concrete
1	SS	6		M		LEAN CLAY with SAND (CL) fine to medium grained, rounded, poorly graded, silty, plastic, dark yellowish brown 10YR 4/4, moist, stiff.
2	SS	7		M	5	
3	SS	15		M		
4	SS	13		M		SILTY LEAN CLAY (CL) sandy, fine to medium grained, rounded, poorly graded, slightly plastic, dark gray 5Y 4/1, moist, stiff.
5	SS	10		M	10	LEAN CLAY with SAND (CL) fine grained, silty, plastic, dark yellowish brown 10 YR 4/6, moist, stiff. color changes to dark gray 5Y 4/1.
6	SS	8		M		color changes to dark yellowish brown 10YR 5/6
7	SS	14		M	15	increased sand content.
8	SS	10		M		sand lens at 16.5 feet, fine grained, very moist.
9	SS	13		M		
10	SS	8		M	20	LEAN CLAY (CL) silty, plastic, yellowish brown 10YR 5/4, very moist, soft.
						End of Boring at 22 Feet Install Monitoring Well at 22 Feet

GENERAL WELL CONSTRUCT.



GENERAL NOTES

DATE STARTED APR 26 94

DATE COMPLETED APR 26 94

RIG Diedrich D-120

CREW CHIEF T. Bartholomew

LOGGED D. McQuade CHECKED

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽

AT COMPLETION ▽

AFTER DRILLING

CAVE-IN: DATE/TIME DEPTH

WATER: DATE/TIME DEPTH

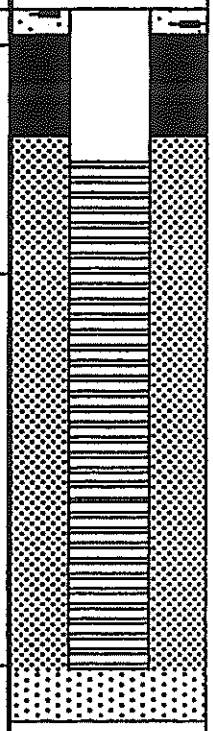
LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR - MAPLETON	BORING NO.	MW-3
LOCATION	MAPLETON, ILLINOIS	SHEET NO.	1 OF 1
CONTRACTOR	MES	PROJECT NO.	2185.22
DRILLING METHOD	4.25" HSA	INSTALLATION	4-26-94
		SURFACE ELEV.	100.3
		BOREHOLE DIA.	8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	17		M		Topsoil
						Foundry sand fine grained, black, 10YR 2/1, moist. (fill)
2	SS	21		W		
3	SS	5		W	5	
4	SS	2		W		SAND (SP) fine to medum grained, rounded, poorly graded, silty, dark gray 5Y 4/1, wet.
5	SS	12		W		
6	SS	13		W	10	
7	SS	2		W		
8	SS	4		M	15	LEAN CLAY (CL) trace sand, fine to medim grained, rounded, poorly graded, silty, plastic, olive gray 5Y 4/2, moist, stiff. Note: slight sheen visible on water in spoon.
9	SS	1		M		SILTY LEAN CLAY (CL) trace sand, fine grained, plastic, olive gray 5Y 4/2, moist, stiff.
10	SS	1		M		SILT (ML) clayey, plastic, olive gray 5Y 4/2, moist, soft.
11	SS	6		M	20	
						LEAN CLAY (CL) silty, very plastic, olive gray 5Y 4/2, moist, stiff.
						End of Boring at 22 Feet. Install Monitoring Well at 14 Feet.

GENERAL WELL CONSTRUCT.



GENERAL NOTES

DATE STARTED	APR 26 94
DATE COMPLETED	APR 26 94
RIG	Diedrich D-120
CREW CHIEF	T. Bartholomew
LOGGED	D. McQuade
CHECKED	

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽	3.0
AT COMPLETION ▽	3.0
AFTER DRILLING	
CAVE-IN: DATE/TIME	DEPTH
WATER: DATE/TIME	DEPTH

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR - MAPLETON	BORING NO.	MW-4
LOCATION	MAPLETON, ILLINOIS	SHEET NO.	1 OF 1
CONTRACTOR	MES	PROJECT NO.	2185.22
DRILLING METHOD	4.25" HSA	INSTALLATION	4-25-94
		SURFACE ELEV.	101.0
		BOREHOLE DIA.	8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS	GENERAL WELL CONSTRUCT.
INTERVAL		RECOVERY		MOISTURE			
NO.	TYPE	N	IN		DEPTH		
1	SS	15		M		LEAN CLAY (CL) trace sand, fine grained, poorly graded, silty, slightly plastic, dark brown 10YR 3/3, hard, moist.	
2	SS	30		W		Foundry sand fine grained, black 10YR 2/1 (fill).	
3	SS	8		W	5		
4	SS	2		W			
5	SS	4		M		LEAN CLAY with SAND (CL) fine to medium grained, subangular, poorly graded, silty, olive 5Y 4/3, changing to dark yellowish brown 10YR 4/4, stiff, moist.	
6	SS	7		M	10	color changes to light olive brown 2.5Y 5/4.	
7	SS	11		D		LEAN CLAY (CL) very silty, slightly plastic, greenish gray 5GY 6/1, dry, stiff.	
8	SS	8		D	15		
9	SS	5		M		CLAYEY SILT (ML) slightly plastic, dark greenish gray 5GY 6/1, moist, stiff.	
10	SS	8		W		sandy, fine grained, wet	
11	SS	4		W	20		
						End of Boring at 22 Feet Install Monitoring Well at 22 Feet	

GENERAL NOTES

DATE STARTED	APR 25 94
DATE COMPLETED	APR 25 94
RIG	Diedrich D-120
CREW CHIEF	T. Bartholomew
LOGGED D. McQuade	CHECKED

WATER LEVEL OBSERVATIONS

WHILE DRILLING	▽	18.0
AT COMPLETION	▽	14.3
AFTER DRILLING		
CAVE-IN: DATE/TIME		DEPTH
WATER: DATE/TIME		DEPTH

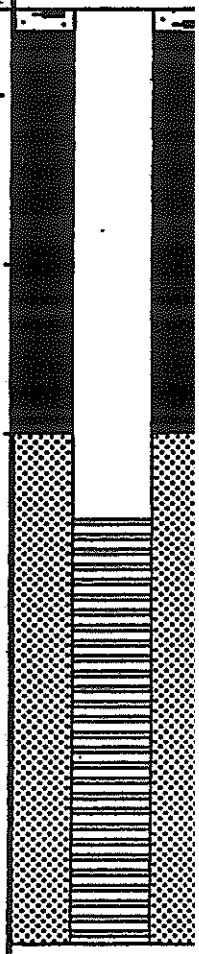
LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR - MAPLETON	BORING NO.	MW-5
LOCATION	MAPLETON, ILLINOIS	SHEET NO.	1 OF 1
CONTRACTOR	MES	PROJECT NO.	2185.22
DRILLING METHOD	4.25" HSA	INSTALLATION	4-26-94
		SURFACE ELEV.	100.6
		BOREHOLE DIA.	8 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	5				LEAN CLAY with SAND (CL) fine grained, rounded, silty, plastic, brown 10YR 4/3, stiff.
2	SS	12		M		LEAN CLAY with SAND (CL) fine to coarse grained, subangular, poorly graded, silty, plastic, dark yellowish brown 10YR 4/4, stiff, moist.
3	SS	3		M	5	
4	SS	4		M		LEAN CLAY (CL) silty, trace sand, fine to medium grained, subangular, poorly graded, plastic, olive 5Y 5/3, stiff, moist.
5	SS	12		M		
6	SS	12		M	10	LEAN CLAY with SAND (CL) fine to medium grained, subangular, poorly graded, silty, plastic, dark yellowish brown 10YR 4/4, stiff, moist.
7	SS	12		M		
8	SS	13		M		sand lens, medium to coarsed grained, wet
9	SS	16		M	15	
10	SS	12		M		
11	SS	3		M	20	increased sand content
12	SS	3		M		
					25	End of Boring at 24 Feet Install Monitoring Well at 22 Feet

GENERAL WELL CONSTRUCT



GENERAL NOTES

DATE STARTED	APR 25 94
DATE COMPLETED	APR 26 94
RIG	Diedrich D-120
CREW CHIEF	T. Bartholomew
LOGGED D. McQuade	CHECKED

WATER LEVEL OBSERVATIONS

WHILE DRILLING	▽	13.8
AT COMPLETION	▽	11.6
AFTER DRILLING		

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. + G-101S
SHEET NO. 1 OF 1
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 12/12/91
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 458.4
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		HNU(ppm)		
NO.	TYPE	N	IN.		DEPTH	
1	SS	14	24	M		POORLY GRADED SAND (SP), black 10YR 2/1 (Foundry Sand).
2	SS	23	18			Same as above, some red sand intermixed.
3	SS	12	13	M	5	SANDY LEAN CLAY (CL), olive gray 5Y 5/2, plastic, stiff [Pp=1.5].
4	SS	24	17			Same as above, light olive gray 5Y 6/2, rock in way of spoon shreds sample.
5	SS	19	22	W		Same as above, yellowish brown 10YR 5/6.
6	SS	8	24	M	10	Wet sand in tip of spoon.
7	SS	2	24	M		LEAN CLAY (CL), dark gray 5Y 4/1, plastic, stiff [Pp=1.75].
8	SS	4	24	M	15	Same as above.
9	SS	7	24	M		
					20	End of Boring at 19 Ft.
					25	
					30	
					35	

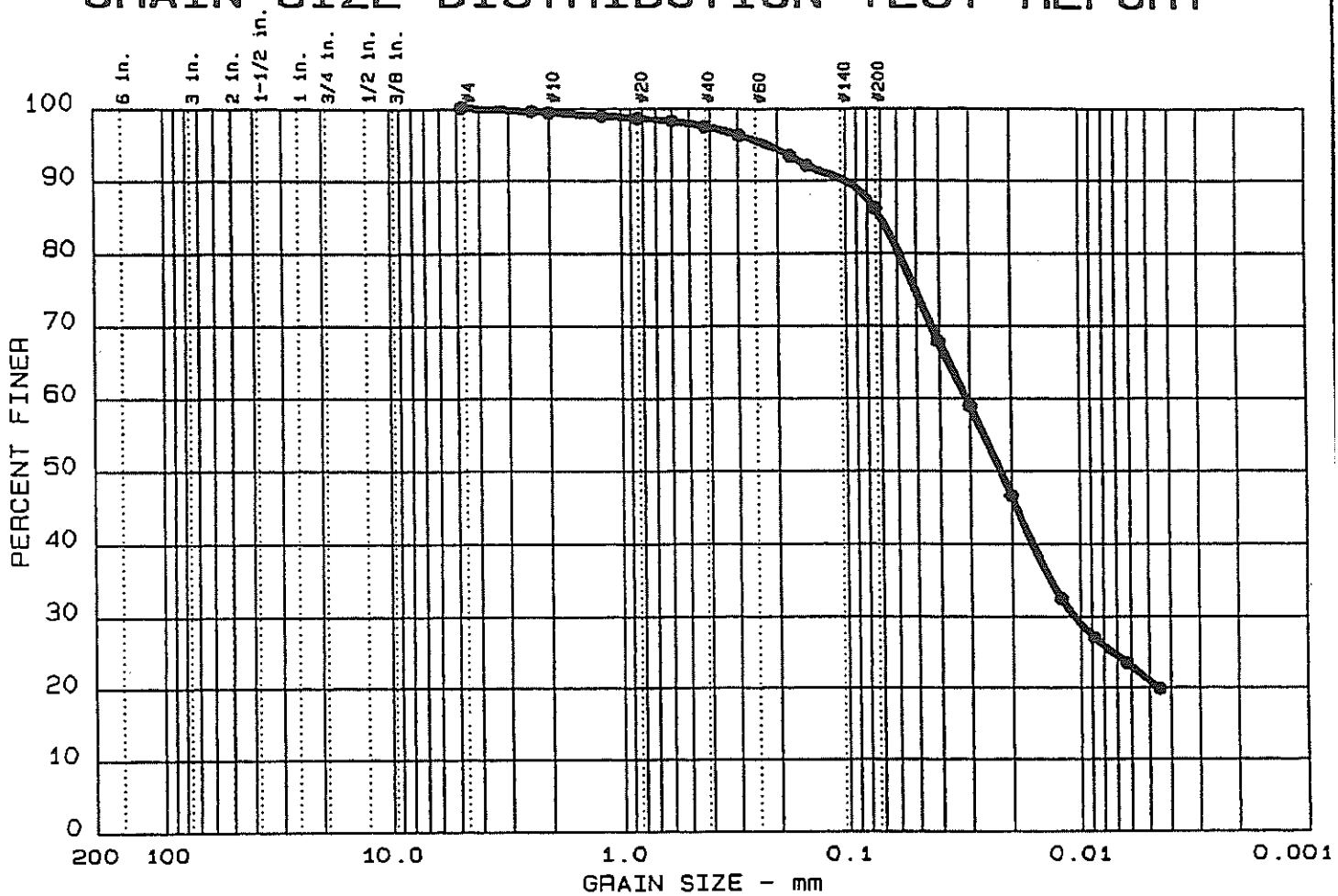
GENERAL NOTES

DATE STARTED DEC 12 91
DATE COMPLETED DEC 12 91
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED R. Sch

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 10.0 Ft.
AT COMPLETION ▽ 9.5 Ft.
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	0.0	13.9	65.1	21.0

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	28	8			0.02	0.011				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G101S, SS8, 14-16'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. + G-102S
SHEET NO. 1 OF 1
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 01/08/92
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 447.0
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS					SANDY LEAN CLAY (CL), dark yellow brown 10YR 4/4, slightly plastic, stiff [Pp=2.0].
2	SS	8	12			
3	SS	8	14		5	Same with wood fragments.
4	SS	12	15	W		
5	SS	5	13	W	▽	1" sand seam, wet.
6	SS	3	16	W	10	SANDY SILTY CLAY (CL-ML), gray 10YR 5/1, slightly plastic, medium dense. Same as above, but wet.
7	SS	128	12			SHALE, bedrock.
8	SS	80	8		15	
						End of Boring at 16 Ft.
					20	
					25	
					30	
					35	

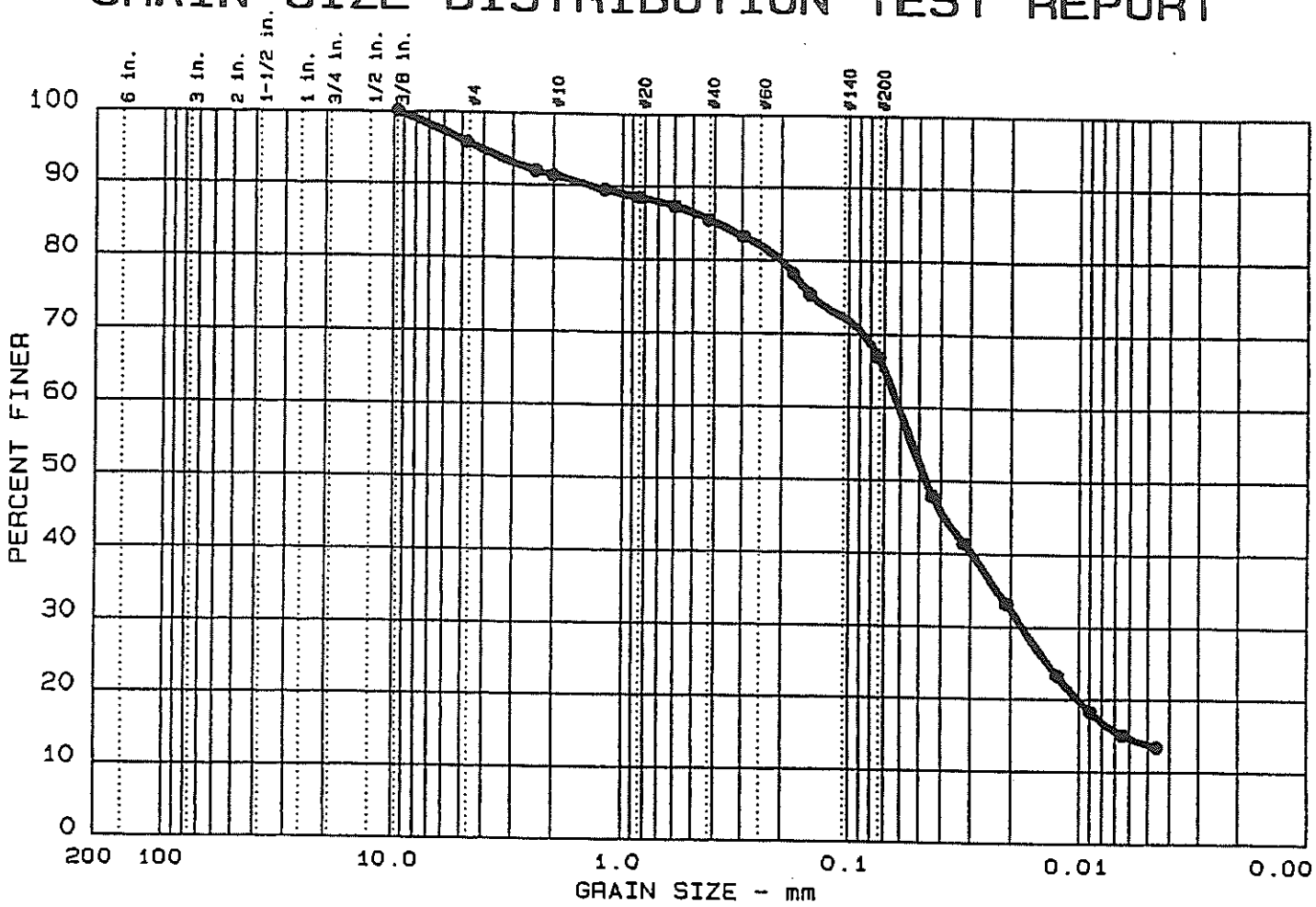
GENERAL NOTES

DATE STARTED JAN 8 92
DATE COMPLETED JAN 8 92
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED B. Sock

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 8.0 Ft.
AT COMPLETION ▼
AFTER DRILLING
CAVE-IN: DATE/TIME DEPTH
WATER: DATE/TIME DEPTH

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	6	0.0	4.2	29.0	53.1	13.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	23	6	0.39		0.05	0.018	0.0064			

MATERIAL DESCRIPTION	USCS	AASHTO
● Sandy silty clay	CL-ML	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G102S, SS6, 8-12'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

Note: This data also applies to Boring +G103S, which was adjacent.

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. + G-103D
SHEET NO. 1 OF 1
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 12/20/91
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 448.2
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	10	16	M		LEAN CLAY (CL), brown 10YR 5/3, plastic, stiff [Pp=1.75] (Fill).
2	SS	15	24			
3	SS	26	14	M	5	POORLY GRADED SAND (SP), black 10YR 2/1 (Foundry Sand).
4	SS	12	16			
5	SS	4	17	M		SILTY CLAY (ML/CL), dark gray 10YR 4/1, plastic, stiff [Pp=.75-1.0].
6	SS	4	18		10	Same as above, very moist.
7	SS	7	24		∇	POORLY GRADED SAND (SP), brown 10YR 5/3, loose.
8	SS	7	22		15	
9	SS	3	20	M		LEAN CLAY (CL), gray 10YR 5/1, plastic, stiff [Pp=1.75].
10	SS	3	20			SILTY CLAY (ML-CL), dark gray 10YR 4/1, slightly plastic, medium stiff.
11	SS	2	16	W	20	
12	SS	3	18			Same as above.
13	SS	3	16		25	
14	SS	4	16			
15	SS	3	14			Same as above.
16	SS	3	16	M-W	30	LEAN CLAY (CL), gray 10YR 5/1, plastic, stiff.
17	SS	8	18			
18	SS	36	12	W	35	WELL GRADED SAND (SW), grayish brown 10YR 5/2, dense.
19	SS	6	0	M		
20	SS	13				LEAN CLAY (CL), gray 10YR 6/1, plastic, stiff.
					40	End of Boring at 40 Ft.

GENERAL NOTES

DATE STARTED DEC 19 91
DATE COMPLETED DEC 20 91
RIG CME 55
CREW CHIEF R. Burton
LOGGED R. Welch CHECKED [illegible]

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ 12.0 Ft.
AT COMPLETION ∇
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

Note: This data also applies to Boring +G104S, which was adjacent.

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. + G-104D
SHEET NO. 1 OF 2
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 01/10/92
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 445.3
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
	SS					Grass (Topsoil).
1	SS	11	14	M		POORLY GRADED SAND (SP), dark yellow brown 10YR 4/4, medium dense (Fluvial).
2	SS	8	14	W	5	WELL GRADED SAND (SW), dark gray 5Y 4/1, loose (Fluvial).
3	SS	7	12			Same as above, but very dark gray 10YR 3/1.
4	SS	5	18			Same as above, but dark gray 10YR 4/1.
5	SS	2	22	M	10	FAT CLAY (CH), gray 5Y 5/1, medium stiff [Pp=1.0], plastic to very plastic.
6	SS	2	14			
7	SS	2	17		15	
8	ST		24	M		
9	SS	4				
10	SS	8	14	W	20	Same as above.
11	SS	8	18			
12	SS	6	22		25	
13	SS	8	22			
14	SS	4	24			Same as above.
15	SS	4	18		30	
						Silt layer (ML), 1' thick.
16	SS	5	16			SILTY CLAY (ML/CL), gray 10YR 5/1, slightly plastic, medium stiff [Pp=.75-1.0].
17	SS	8	20		35	
18	SS	8	19			
19	SS	6	18		40	POORLY GRADED SAND (SP), dark gray 10YR 4/1, loose (Fluvial).

GENERAL NOTES

DATE STARTED JAN 9 92
DATE COMPLETED JAN 10 92
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 4.0 Ft.
AT COMPLETION ▽
AFTER DRILLING
CAVE-IN: DATE/TIME DEPTH
WATER: DATE/TIME DEPTH

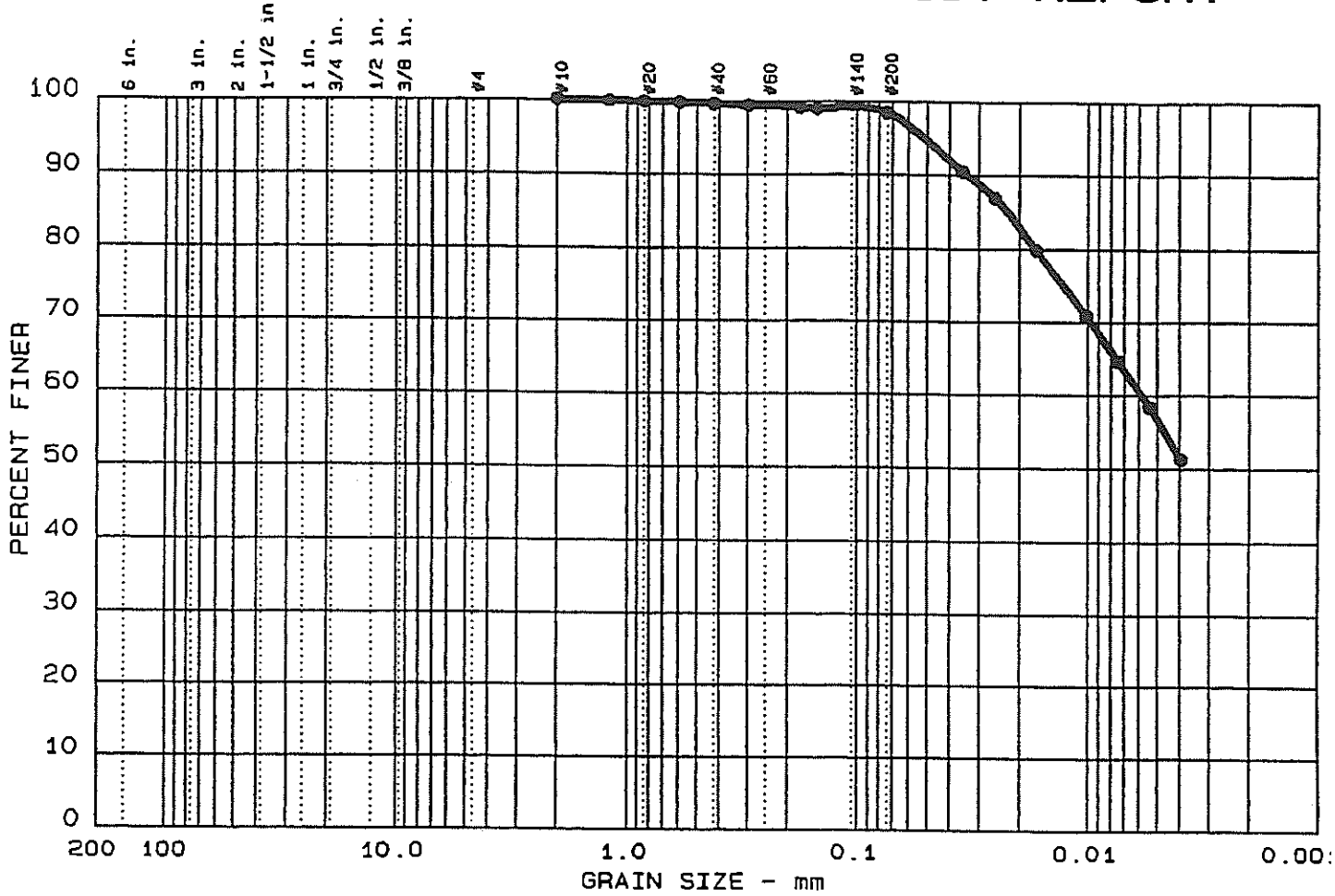
LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. + G-104D
SHEET NO. 2 OF 2
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 01/10/92
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 445.3
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
20	SS	19				
21	SS	19	20			
22	SS	46	20		45	WELL GRADED SAND (SW), gray 10YR 5/1, stiff.
23	SS	15	20			Silty clay and sand layers.
24	SS	7	17			LEAN CLAY (CL), gray 5Y 5/1, plastic, medium stiff [Pp=1.0].
25	SS	6	16		50	
26	ST		16			
27	SS	7	19		55	
28	SS	6				
29	SS	6				Same as above.
					60	
						SHALE, bedrock.
						End of Boring at 62 Ft.
					65	
					70	
					75	
					80	
					85	

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	0.0	1.6	41.7	56.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	53	26								

MATERIAL DESCRIPTION	USCS	AASHTO
● Fat clay	CH	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B204, STB, 16-18'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

✓ JPH 2-27-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B304, 16-18'
:
Date: 27-Feb-92
Tech: HJW
File: CATP5
Cell #: 9S

Visual Descript: GREY BROWN CLAY

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.86	2.86
Sample Ht. (in)	2.30	2.29
Tare & Wet (g)	461.1	536.7
Tare & Dry (g)	350.1	426.6
Tare (g)	0.0	76.6
Sample Wt. (g)	461.1	460.1

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

MOISTURE (%)	31.7	31.4
WET DENS. (pcf)	118.9	119.2
DRY DENS. (pcf)	90.3	90.6
SATURATION (%)	98.8	98.9

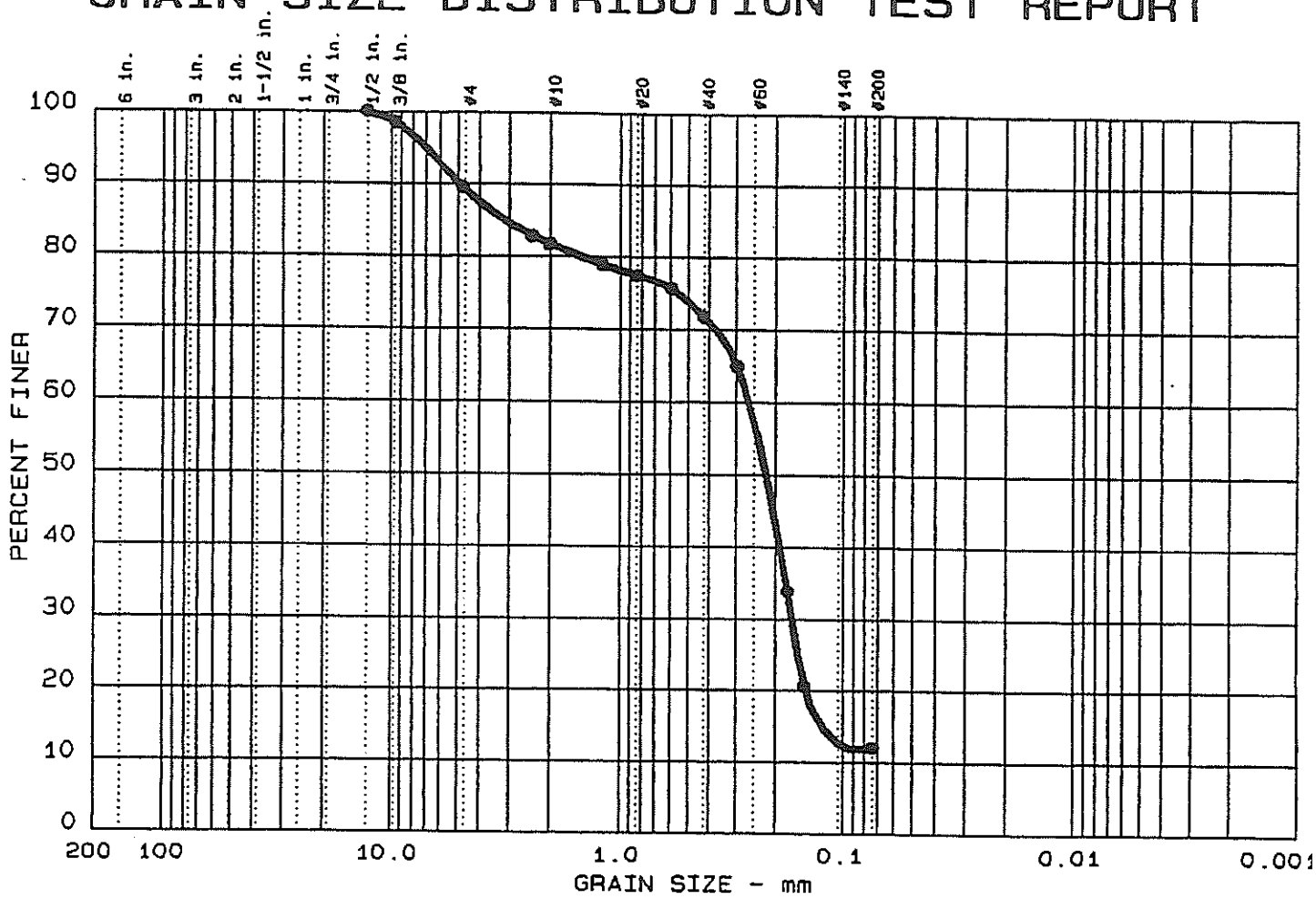
MAXIMUM GRADIENT:	12.1
AVERAGE GRADIENT:	11.2
MAX. EFFECT. STRESS (psi):	6.2
MIN. EFFECT. STRESS (psi):	4.8
AVE. EFFECT. STRESS (psi):	5.4

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	2	14	8	7	0	95	95	19.50	2.20	100.85			
92	2	14	9	23	21	95	95	19.30	2.50	100.40	-20.0	3.6E-08	
92	2	17	7	25	22	95	95	21.80	11.80	91.90	4.5	1.7E-08	
92	2	17	16	43	22	95	95	20.40	12.80	90.90	0.0	1.6E-08	
92	2	18	8	17	22	95	95	21.80	14.45	89.35	3.1	1.6E-08	
92	2	18	16	27	22	95	95	21.30	15.25	88.50	-3.0	1.6E-08	
92	2	19	7	42	22	95	95	22.30	16.80	87.10	5.1	1.6E-08	
92	2	19	16	41	22	95	95	21.20	17.60	86.30	0.0	1.5E-08	1
92	2	20	7	32	22	95	95	22.70	19.00	85.10	7.7	1.6E-08	1
92	2	21	7	18	22	95	95	23.90	21.05	83.10	1.2	1.6E-08	1
92	2	21	16	44	22	95	95	22.40	21.85	82.40	6.7	1.6E-08	1

NOTES or COMMENTS :

Average Kv for those rows with a 1 in the Ave. column 1.6E-08 cm/sec
Termination determined by stable Kv and low flow differential 6.2E-09 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	20	0.0	10.4	77.5	12.1	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	3.13	0.26	0.22	0.169	0.1240			

MATERIAL DESCRIPTION	USCS	AASHTO
● Silty sand	SM	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G104, 42-44'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. G-105S
SHEET NO. 1 OF 1
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 01/13/92
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 449.0
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	14	20	M		POORLY GRADED SAND (SP), light yellowish brown 10YR 6/4, medium dense (Fluvial).
2	SS	10	20		5	
3	SS	2	22			
4	SS	4	14	M		CLAYEY SILT (CL/ML), very dark gray 7.5YR N3/ (wet above clay layer, moist below), loose.
5	SS	6	16	W	10	POORLY GRADED SAND (SP), dark gray 10YR 4/1, loose (Fluvial).
6	SS	4	16			LEAN CLAY (CL), gray 10YR 5/1, plastic, medium stiff [Pp=1.0].
7	SS	5			15	
						End of Boring at 17 Ft.
					20	
					25	
					30	
					35	

GENERAL NOTES

DATE STARTED JAN 13 92
DATE COMPLETED JAN 13 92
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED

WATER LEVEL OBSERVATIONS

WHILE DRILLING 10.0 Ft.
AT COMPLETION 9.2 Ft.
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

Note: This data also applies to Boring G106S, which was adjacent.

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	G-106D
LOCATION	Mapleton, IL	SHEET NO.	1 OF 2
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 4 1/4"	INSTALLATION	12/17/91
		SURFACE ELEV.	445.6
		BOREHOLE DIA.	9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL NO.	TYPE	RECOVERY N	RECOVERY IN	MOISTURE	DEPTH	
1	SS	5	12	M		POORLY GRADED SAND WITH SILT (SP-SM), yellow brown 10YR 5/6 (Fluvial).
2	SS	12	14			
3	SS	14	14		5	Same as above.
4	SS	13	20	M		
5	SS	8	20		▽	
6	SS	4	20		10	SILTY CLAY (ML/CL), gray brown 10YR 5/2, stiff [Pp=1.5], plastic.
7	SS	2	22			
8	SS	6	14		15	
9	SS	3	14			Same as above.
10	SS	7	24			
11	SS	7	24		20	
12	SS	3	22			SILTY CLAY (ML/CL), light brown gray 10YR 4/2, stiff, plastic.
13	SS	4	20		25	
14	SS	4	20			Same as above.
15	SS	2	21			
16	SS	2	16		30	
17	SS	2	14			
18	SS	7	12	W	35	POORLY GRADED SAND (SP), dark brown 10YR 4/2, loose (Fluvial).
19	SS	18	14	W		
20	SS	24				

GENERAL NOTES

DATE STARTED DEC 17 92

DATE COMPLETED DEC 17 92

RIG D-50

CREW CHIEF R. Burton

LOGGED R. Welch CHECKED [illegible]

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 8.5 Ft.

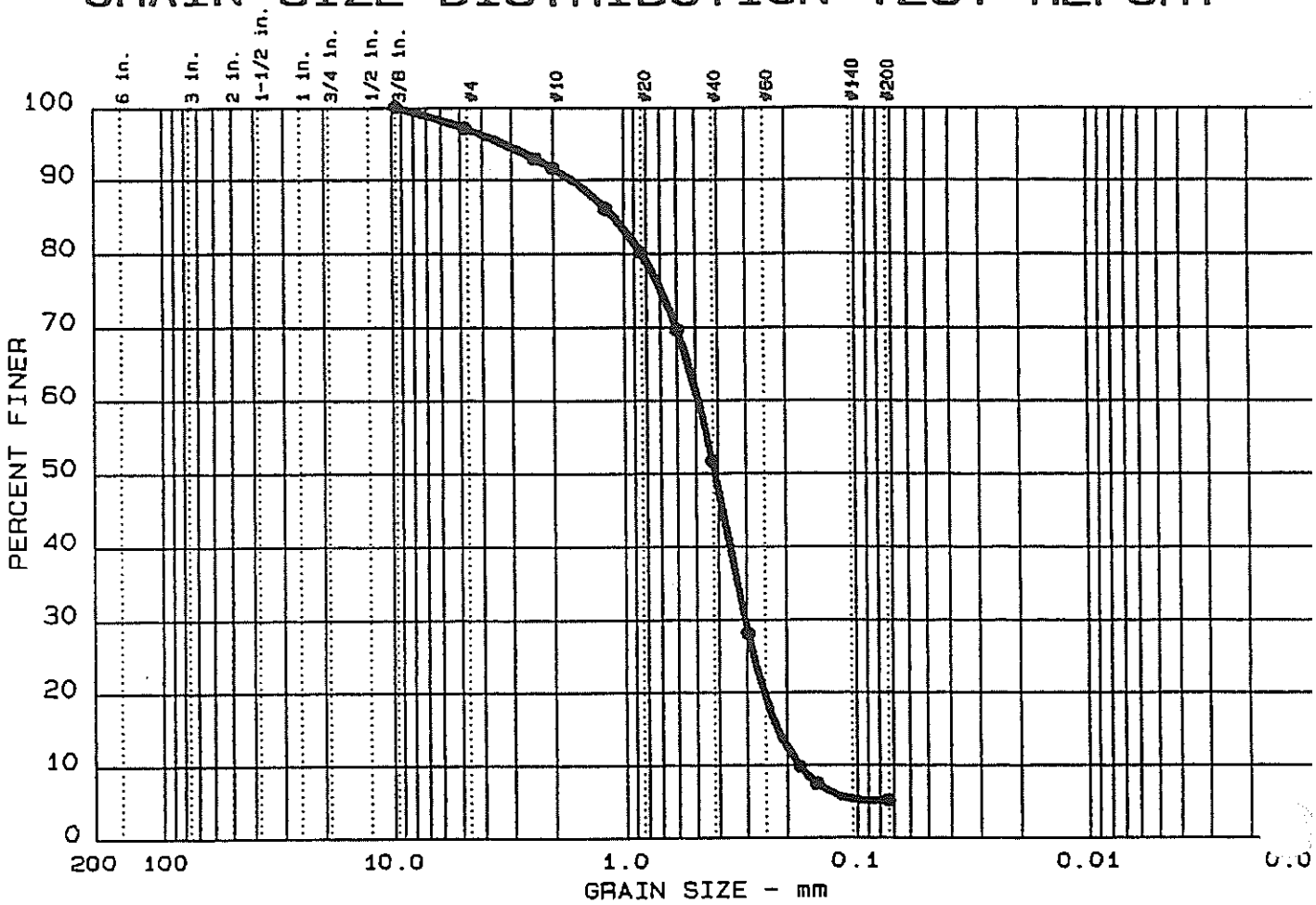
AT COMPLETION ▼

AFTER DRILLING

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	3	0.0	3.0	91.9	5.1	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	1.10	0.48	0.41	0.307	0.2208	0.1774	1.10	2.7

MATERIAL DESCRIPTION	USCS	AASHTO
● Poorly graded sand with silt	SP-SM	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G105, SS5, 8-10'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

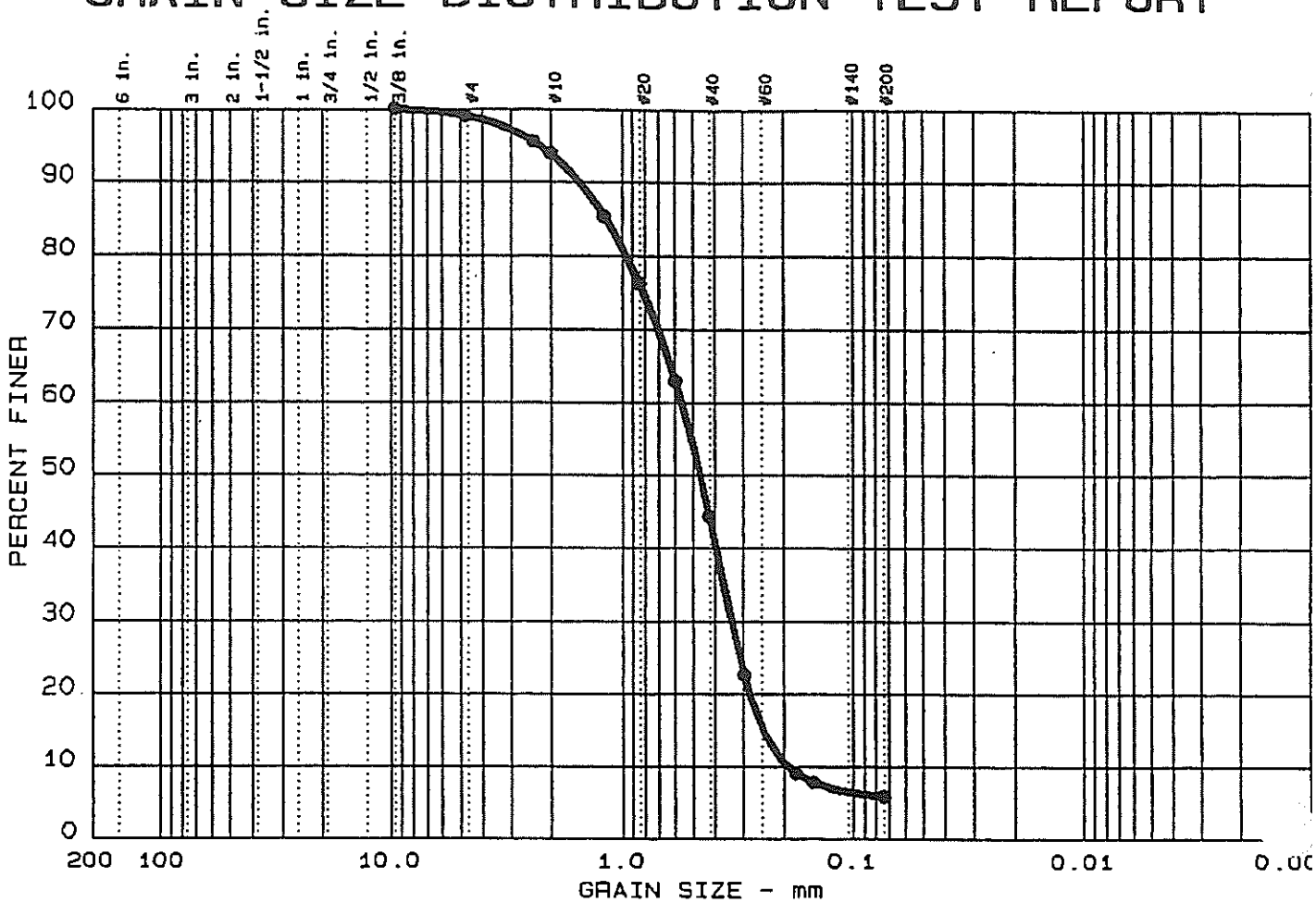
BORING NO. G-106D
SHEET NO. 2 OF 2
PROJECT NO. 2185.05
INSTALLATION 12/17/91
SURFACE ELEV. 445.6
BOREHOLE DIA. 9 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 4 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
21	SS					
22	SS	16		W		POORLY GRADED SAND (SP), brown 10YR 5/3, medium dense.
					45	
						End of Boring at 46 Ft.
					50	
					55	
					60	
					65	
					70	
					75	
					80	
					85	

✓ JMT 2-25-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	1.0	93.1	5.9	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	1.16	0.55	0.46	0.337	0.2443	0.1919	1.07	2.9

MATERIAL DESCRIPTION	USCS	AASHTO
● Poorly graded sand with silt	SP-SM	

Project No.: 2185.10
Project: CATERPILLAR
◆ Location: G106, SS5, 8-10'

Date: 2-12-92

Remarks:

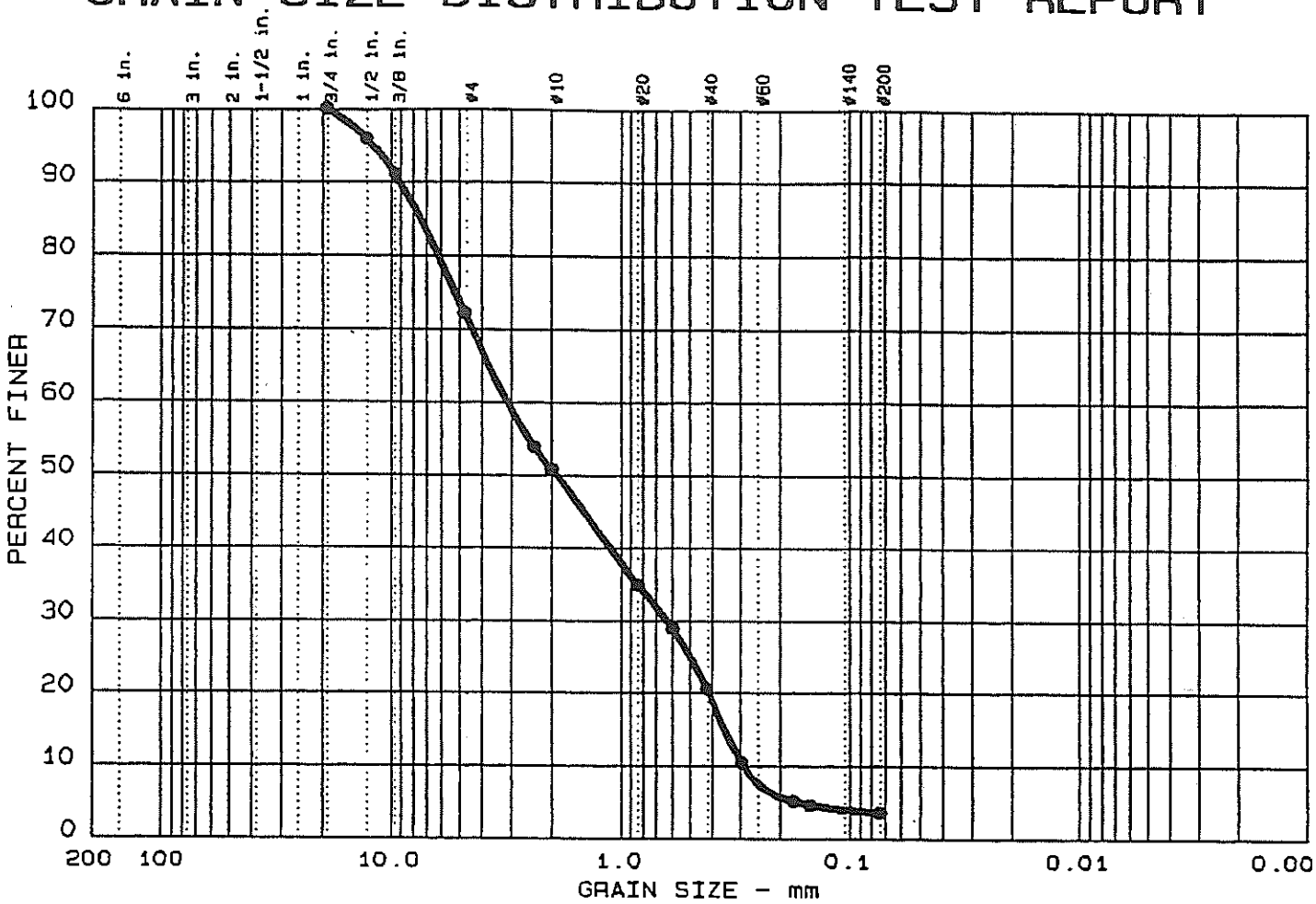
GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

✓ 2-27-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	5	0.0	27.8	68.7	3.5	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			7.33	3.11	1.90	0.628	0.3491	0.2904	0.44	10.7

MATERIAL DESCRIPTION	USCS	AASHTO
● Poorly graded sand with gravel	SP	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G106, SS21, 40-42'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. G-107S
SHEET NO. 1 OF 1
PROJECT NO. 2185.05
INSTALLATION 12/17/91
SURFACE ELEV. 444.5
BOREHOLE DIA. 9 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 4 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	8	12	M		POORLY GRADED SAND (SP), yellow brown 10YR 5/4 (fluvial). 6 in. clay layer at 2.5 ft.
2	SS	9	16			
3	SS	14	24		5	
4	SS	13	24	W		LEAN CLAY (CL), dark gray 10YR 4/1, stiff, plastic, [Pp=1.0].
5	SS	4	16			
6	SS	4	24		10	
7	SS	4	24			
8	SS	5	24		15	
						End Of Boring at 16.0 ft.
					20	
					25	
					30	
					35	

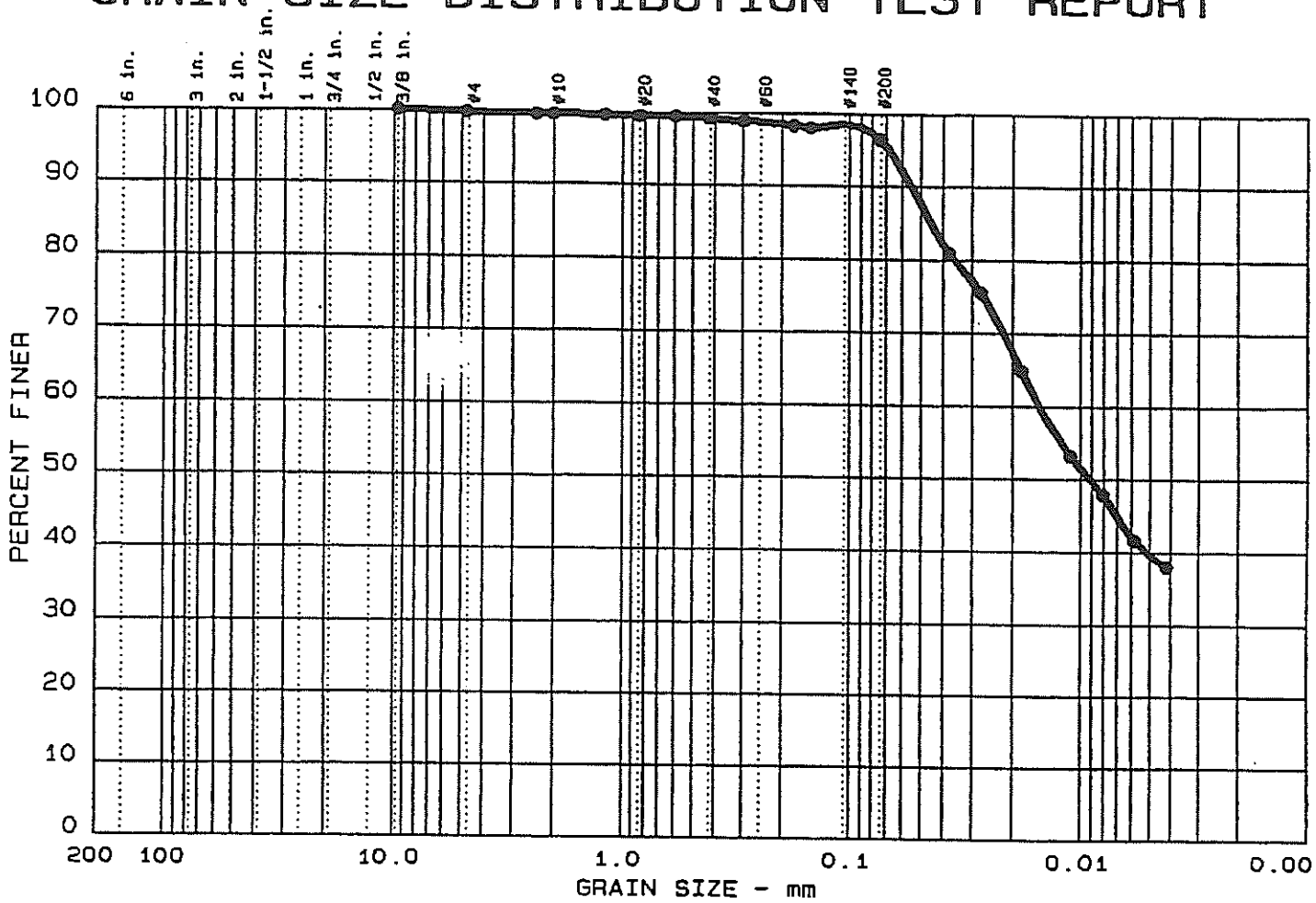
GENERAL NOTES

DATE STARTED DEC 17 91
DATE COMPLETED DEC 17 91
RIG D-50
CREW CHIEF R. Barton
LOGGED R. Welch CHECKED S. Sochs

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 10.0 Ft.
AT COMPLETION ▼ 3.5 Ft.
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	7	0.0	0.3	3.3	56.9	39.5

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	43	20			0.01					

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G107, SS8, 12-16'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. G-108S
SHEET NO. 1 OF 1
PROJECT NAME CATERPILLAR
PROJECT NO. 2185.05
LOCATION Mapleton, IL
INSTALLATION 01/13/92
CONTRACTOR Midwest Eng. Svcs.
SURFACE ELEV. 461.1
DRILLING METHOD HSA 4 1/4"
BOREHOLE DIA. 9 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	SS	24	18	M		POORLY GRADED SAND (SP), black 10YR 2/1, medium dense (Fill).
2	SS	16	19	M	5	POORLY GRADED SAND (SP), dark yellow brown 10YR 4/6, medium dense (Fluvial).
3	SS	12	24	M		LEAN CLAY (CL), gray 10YR 5/1, very stiff [Pp=4.0], slightly plastic (Fluvial).
4	SS	11	24			Same as above but sandy.
5	SS	4	24		10	
6	SS	8	24			
7	SS	15	24		15	
8	SS	9	24			
9	SS	12	24			
10	SS	7	24	M	20	LEAN CLAY (CL), dark gray 10YR 4/1, very stiff [Pp=2.0], plastic.
11	SS	8	24			
12	ST				25	
13	SS	10	2			
14	SS	4	24			Same as above.
15	SS	7	24	W	▽ 30	
16	SS	4	24			Same as above but wet.
17	SS	6			35	Same as above.
						POORLY GRADED SAND (SP), dark gray 5Y 4/1, loose (Fluvial).
					40	SILTY CLAY, dark gray 7.5YR N4/, very stiff [Pp=1.75], slightly plastic.
						End of Boring at 37 Ft.

GENERAL NOTES

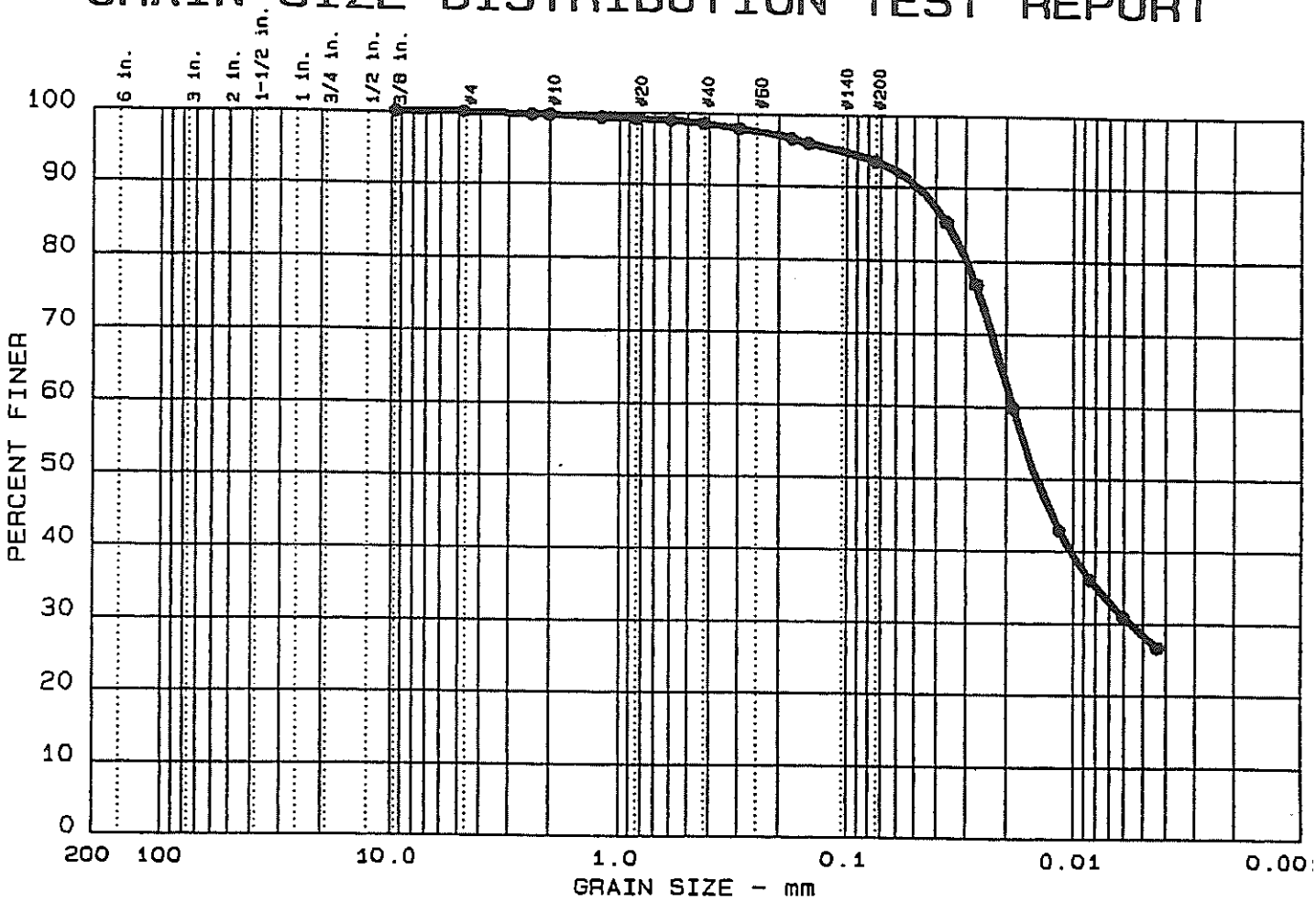
DATE STARTED JAN 13 92
DATE COMPLETED JAN 13 92
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED E. Sacher

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 30.0 Ft.
AT COMPLETION ▽
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

√ BPH 2-25-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	1	0.0	0.1	6.4	65.1	28.4

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	32	12			0.01	0.006				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: G108, ST12, 24-26'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

✓ JPH 2-27-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: G108, 24-26'
:
Date: 27-Feb-92
Tech: HJW
File: CATP6
Cell #: 7S

Visual Descript: YELLOW BROWN SILTY CLAY

INPUT VALUES

	INIT.	FINAL			
Sample Dia. (in)	2.82	2.82	Permeant:	WATER	
Sample Ht. (in)	2.31	2.28	Permeant Specific Gravity:	1.00	
Tare & Wet (g)	465.5	529.7	Sample Specific Gravity:	2.70	EST.
Tare & Dry (g)	381.3	431.0	Confining Pressure (psi):	100.0	
Tare (g)	76.5	76.1	Burette Diameter (in):	0.250	
Sample Wt. (g)	457.5	453.5	Burette Zero (cm):	100.0	

CALCULATED VALUES

MOISTURE (%)	27.6	27.8	MAXIMUM GRADIENT:	10.6
WET DENS. (pcf)	120.8	121.3	AVERAGE GRADIENT:	8.3
DRY DENS. (pcf)	94.7	94.9	MAX. EFFECT. STRESS (psi):	6.1
SATURATION (%)	95.6	96.9	MIN. EFFECT. STRESS (psi):	4.7
			AVE. EFFECT. STRESS (psi):	5.3

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	2	14	8	2	0	95	95	19.30	2.15	99.80			
92	2	14	9	20	21	95	95	19.20	3.40	99.90	117.4	5.6E-08	
92	2	17	7	22	22	95	95	21.80	34.40	70.50	2.6	8.7E-08	
92	2	17	16	42	22	95	95	20.00	36.70	68.40	4.5	8.6E-08	
92	2	18	8	12	22	95	95	21.50	39.95	65.50	5.7	8.6E-08	
92	2	18	8	14	0	95	95	21.60	1.75	98.30			
92	2	18	16	24	22	95	95	20.80	7.80	93.15	8.0	9.3E-08	
92	2	19	7	39	22	95	95	22.00	15.95	85.45	2.8	8.3E-08	
92	2	19	16	40	22	95	95	20.50	20.10	81.60	3.7	8.4E-08	
92	2	20	7	29	22	95	95	22.20	25.80	76.30	3.6	8.2E-08	1
92	2	20	15	41	22	95	95	20.90	28.45	73.80	2.9	8.1E-08	1
92	2	21	7	20	22	95	95	23.20	32.80	69.70	3.0	8.1E-08	1

NOTES or COMMENTS :

Average Kv for those rows with a 1 in the Ave. column 8.1E-08 cm/sec
Termination determined by stable Kv and low flow differential 3.2E-08 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME: CATERPILLAR
LOCATION: Mapleton, IL
CONTRACTOR: Midwest Eng. Svcs.
DRILLING METHOD: HSA 3 1/4"

BORING NO.: B-309
SHEET NO. 1 OF 1
PROJECT NO.: 2185.05
INSTALLATION: 12/05/91
SURFACE ELEV.: 461.1
BOREHOLE DIA.: 7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		54	M		POORLY GRADED SAND (SP), black 10YR 2/1, foundry molding fragments (Foundry Sand).
2	CS		30		5	Same as above but very pale brown 10YR 7/4 with black sand intermixed.
3	CS		24		10	
4	CS		24	W	15 ▽	
5	CS		54	M	20	POORLY GRADED SAND (SP), very dark gray 10YR 3/1 (Fluvial).
6	CS		60		25	LEAN CLAY (CL), dark gray 5Y 4/1, plastic, [Pp=1.5-2.0], stiff, organic matter present. Same but sandy.
7	CS		60	W	30	POORLY GRADED SAND (SP), gray 10YR 5/1 (Fluvial).
8	CS				35	SHALE, "LEAN CLAY (CL)", green gray, cohesive, brittle, very indistinct, horizontal bedding, uniform.
					40	End of Boring at 40 Ft.

GENERAL NOTES

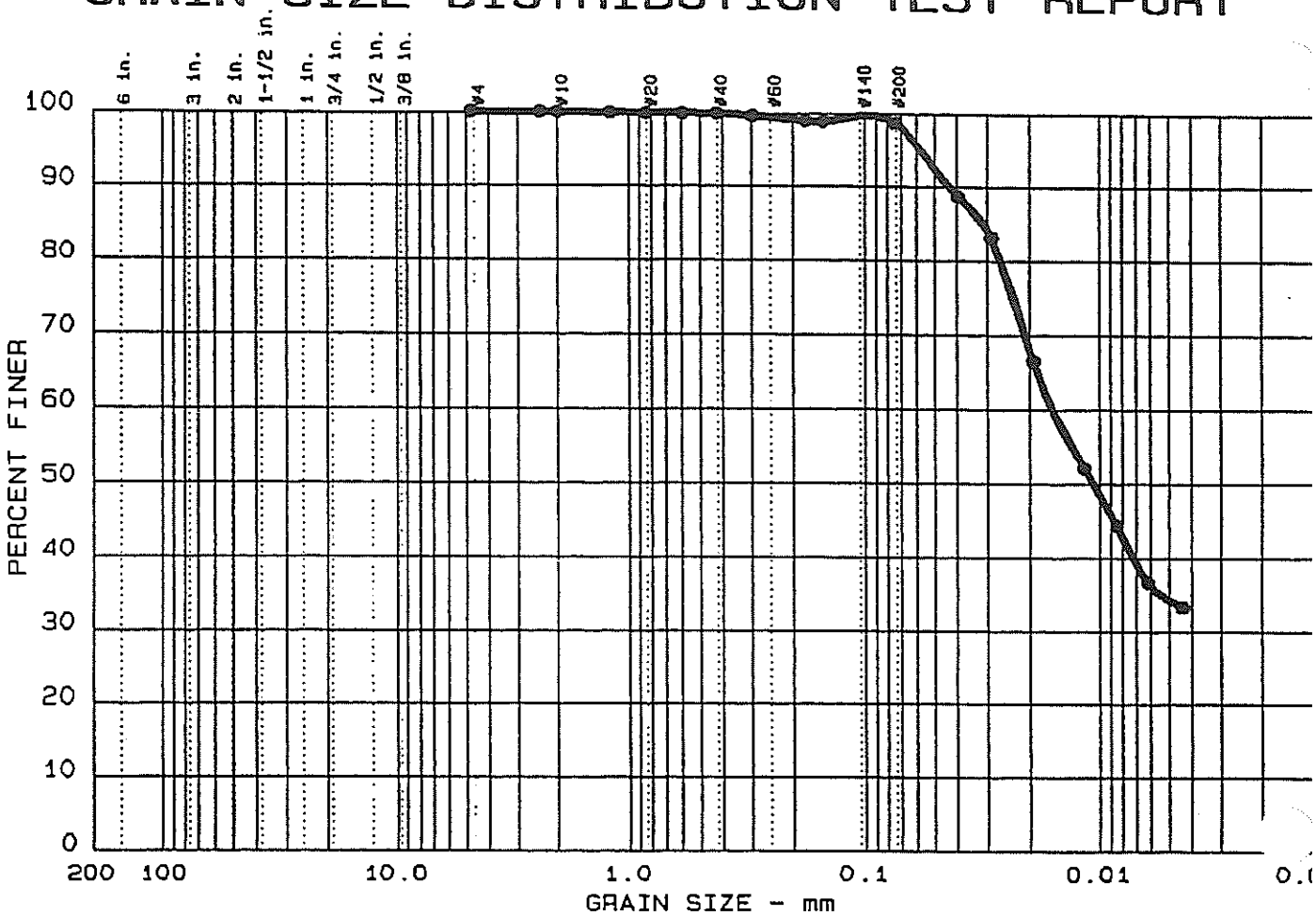
DATE STARTED: DEC 4 91
DATE COMPLETED: DEC 5 91
RIG: CME 55
CREW CHIEF: T. Bartholomew
LOGGED: R. Welch CHECKED: [illegible]

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽: 16.0 Ft.
AT COMPLETION ▽:
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

√ JPF 2-10-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	11	0.0	0.0	1.4	64.5	34.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	37	14			0.01					

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-309, 24-26'

Date: 1-13-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

✓ JAH 2-10-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B-309, 24-26'
:
Visual Descript: GRAY SILTY CLAY

Date: 24-Jan-92
Tech: HJW
File: CATP1
Cell #: 16S

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.29	2.27
Sample Ht. (in)	2.32	2.28
Tare & Wet (g)	491.6	372.0
Tare & Dry (g)	393.5	305.6
Tare (g)	76.0	78.0
Sample Wt. (g)	299.5	294.1

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	30.9	29.2
WET DENS. (pcf)	119.4	121.4
DRY DENS. (pcf)	91.2	94.0
SATURATION (%)	98.5	99.4

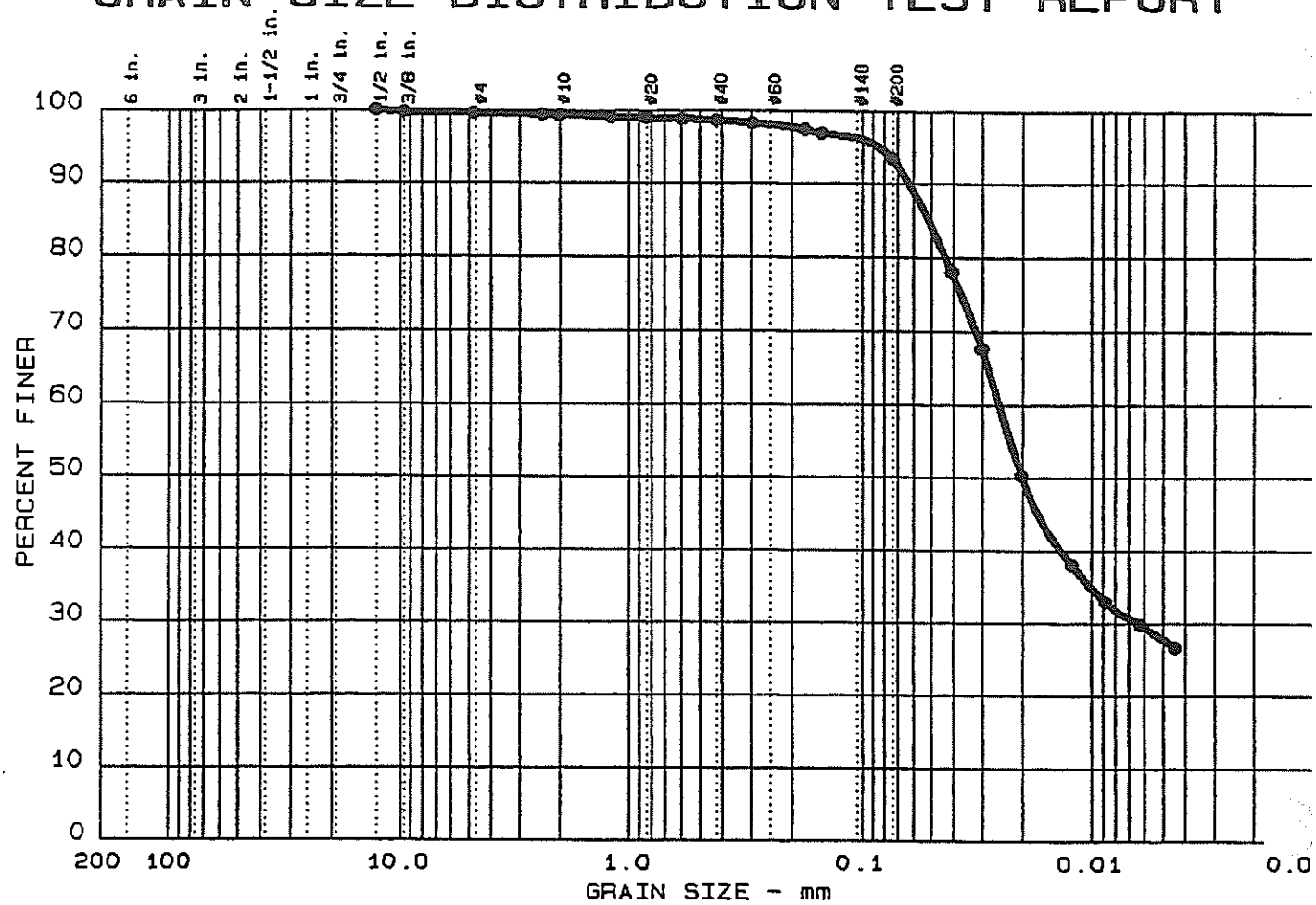
MAXIMUM GRADIENT:	14.3
AVERAGE GRADIENT:	10.7
MAX. EFFECT. STRESS (psi):	6.1
MIN. EFFECT. STRESS (psi):	4.6
AVE. EFFECT. STRESS (psi):	5.3

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	1	14	7	35	0	95	95	21.30	3.10	97.10			
92	1	14	9	40	22	95	95	21.30	5.20	95.20	5.0	2.0E-07	
92	1	14	11	53	22	95	95	21.30	7.20	93.40	5.3	1.9E-07	
92	1	14	16	30	22	95	95	21.40	10.95	89.90	3.4	1.8E-07	
92	1	15	7	36	21	95	95	24.60	20.40	80.80	1.9	1.7E-07	
92	1	15	16	12	21	95	95	23.50	24.70	76.70	2.4	1.7E-07	
92	1	16	8	53	20	95	95	30.90	30.90	70.45	-0.4	1.6E-07	
92	1	17	7	38	21	95	95	27.00	37.05	64.65	2.9	1.5E-07	
92	1	20	8	19	0	95	95	32.60	3.55	98.30			
92	1	20	13	17	20	95	95	31.30	7.40	94.60	2.0	1.6E-07	
92	1	20	16	47	21	95	95	30.20	9.80	92.35	3.2	1.5E-07	
92	1	21	8	9	21	95	95	30.00	18.65	83.85	2.0	1.5E-07	1
92	1	21	16	42	22	95	95	27.20	22.75	79.90	1.9	1.5E-07	1
92	1	22	8	41	22	95	95	28.00	29.05	73.80	1.6	1.5E-07	1

Average Kv for those rows with a 1 in the Ave. column 1.5E-07 cm/sec
Termination determined by stable Kv and low flow differential 5.8E-08 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

✓ JPH 2-10-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	7	0.0	0.5	6.1	65.7	27.7

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	28	10			0.02	0.006				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-309, 37-40'

Date: 1-13-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	B-310
LOCATION	Mapleton, IL	SHEET NO.	1 OF 1
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 3 1/4"	INSTALLATION	12/02/91
		SURFACE ELEV.	461.9
		BOREHOLE DIA.	7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		48	M		POORLY-GRADED SAND (SP), black 10YR 2/1, fill, waste. 2 in. light brown seam, foundry waste.
2	CS		54	M	5	
3	CS		42	M	10	
4	CS		60	W	▽ 15	As above, but wet (foundry sand).
5	CS		60	M	20	LEAN CLAY (CL), brown 10YR 5/3, stiff, very plastic, [Pp=1.75 to 2.5].
6	CS		60		25	SANDY FAT CLAY (CH), dark gray brown 10YR 4/2, stiff [Pp= 1.0-1.75], very plastic.
7	CS				30	WELL-GRADED SAND, 28.5 ft. to 29.0 ft. CLAY as above, some brown mottling. CLAY as above, with organics.
8	CS				35	LEAN CLAY WITH SAND (CL), light brown gray 10YR 6/2, with trace organics.
					40	End Of Boring at 40.0 ft.

GENERAL NOTES

DATE STARTED DEC 2 91

DATE COMPLETED DEC 2 91

RIG CME 55

CREW CHIEF T. Bartholomew

LOGGED R. Welch CHECKED G Sodha

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 15.0 Ft.

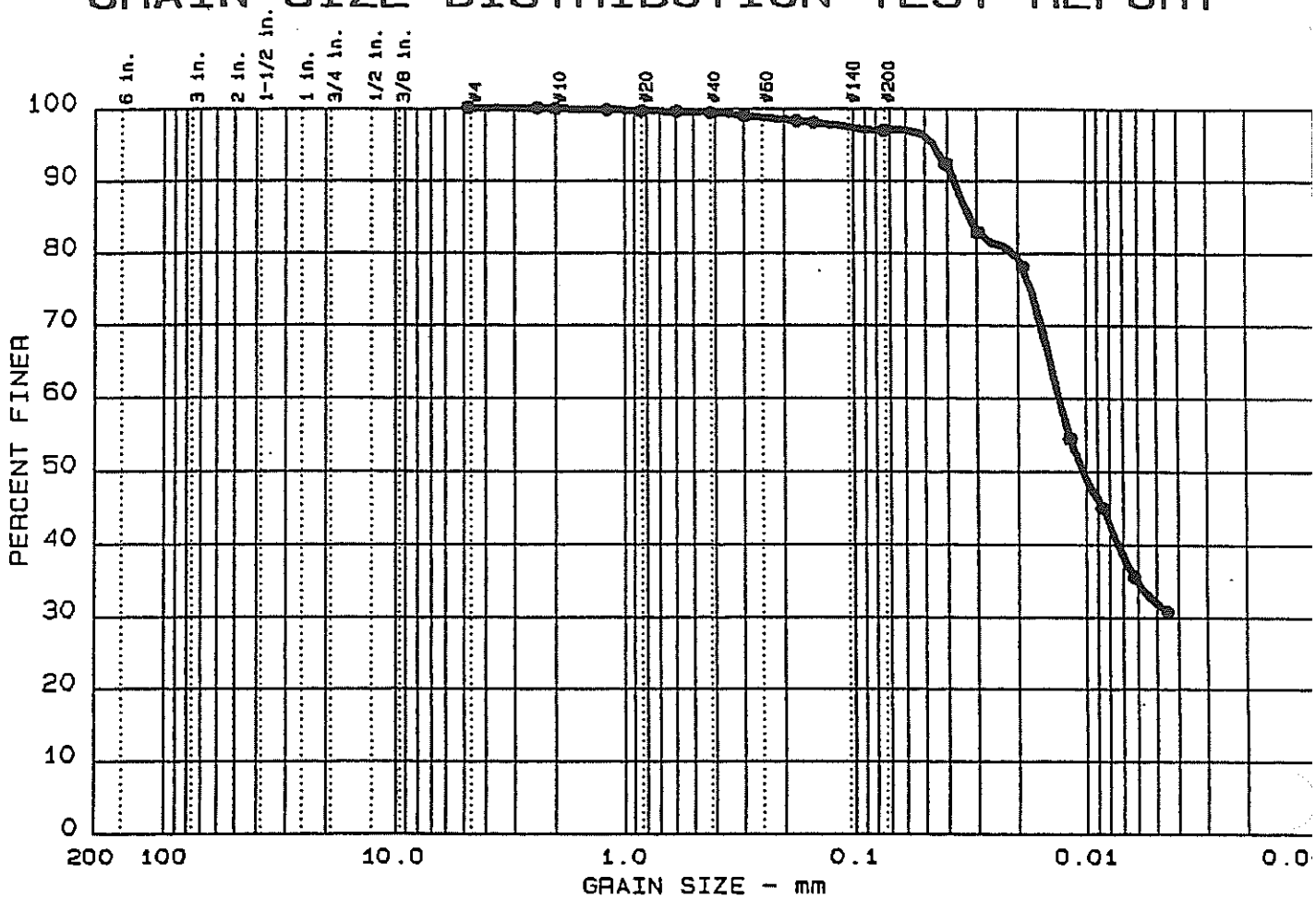
AT COMPLETION ▽

AFTER DRILLING

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	14	0.0	0.0	3.1	65.0	31.9

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	37	13			0.01					

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-310, 20-21'

Date: 1-13-92

Remarks:

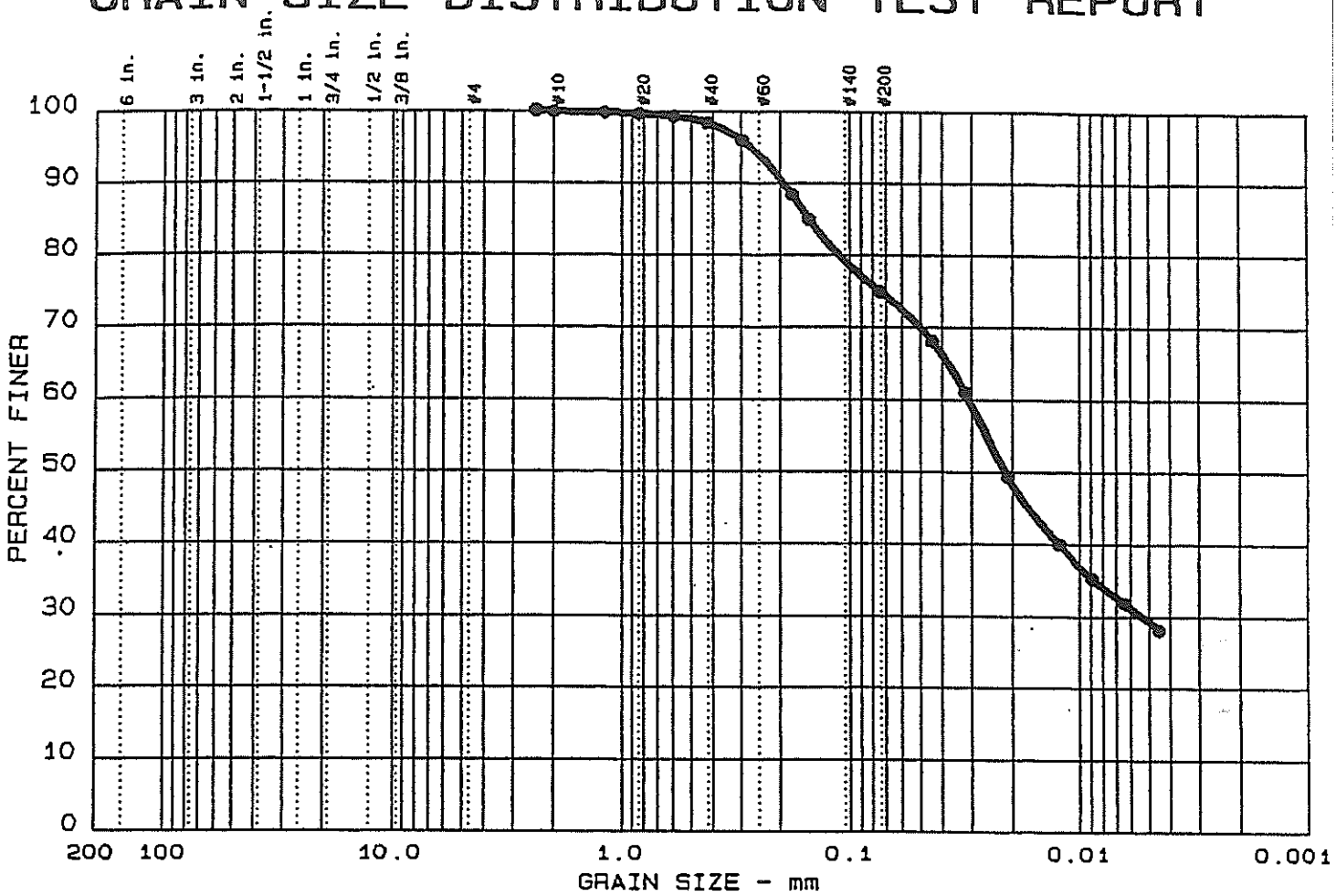
25.4 % Moisture
3.7 % Organics

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	13	0.0	0.0	25.1	45.7	29.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	32	15	0.15		0.02	0.005				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay with sand	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-310, 34'

Date: 1-13-92

Remarks:

21.4 % Moisture
2.0% Organics

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	B-311
LOCATION	Mapleton, IL	SHEET NO.	1 OF 2
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 3 1/4"	INSTALLATION	1/08/92
		SURFACE ELEV.	444.2
		BOREHOLE DIA.	7.5 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		54	W		LEAN CLAY (CL), topsoil.
						Foundry sand.
					▽	WELL-GRADED SAND, gray, 10YR 4/1, fluvial (SW).
2	CS		18		5	
3	CS		60	M	10	LEAN CLAY (CL), very dark gray, 10YR 3/1, medium stiff to very stiff [Pp=1.0-1.5], plastic.
4	CS		60		15	As above, but sandy at bottom 2 ft.
5	CS				20	SILTY CLAY (ML/CL), gray, 5Y 5/1, slightly plastic, medium stiff.
						Some clayey silt.
6	CS		0		25	No recovery.
7	CS		60	M	30	LEAN CLAY (CL), dark gray, 5Y 4/1, medium stiff [Pp=1.25], plastic.
8	CS		60		35	

GENERAL NOTES

DATE STARTED JAN 6 92

DATE COMPLETED JAN 8 92

RIG CME 55

CREW CHIEF T. Bartholomew

LOGGED R. Welch CHECKED [illegible]

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 4.0 Ft.

AT COMPLETION ▽

AFTER DRILLING

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

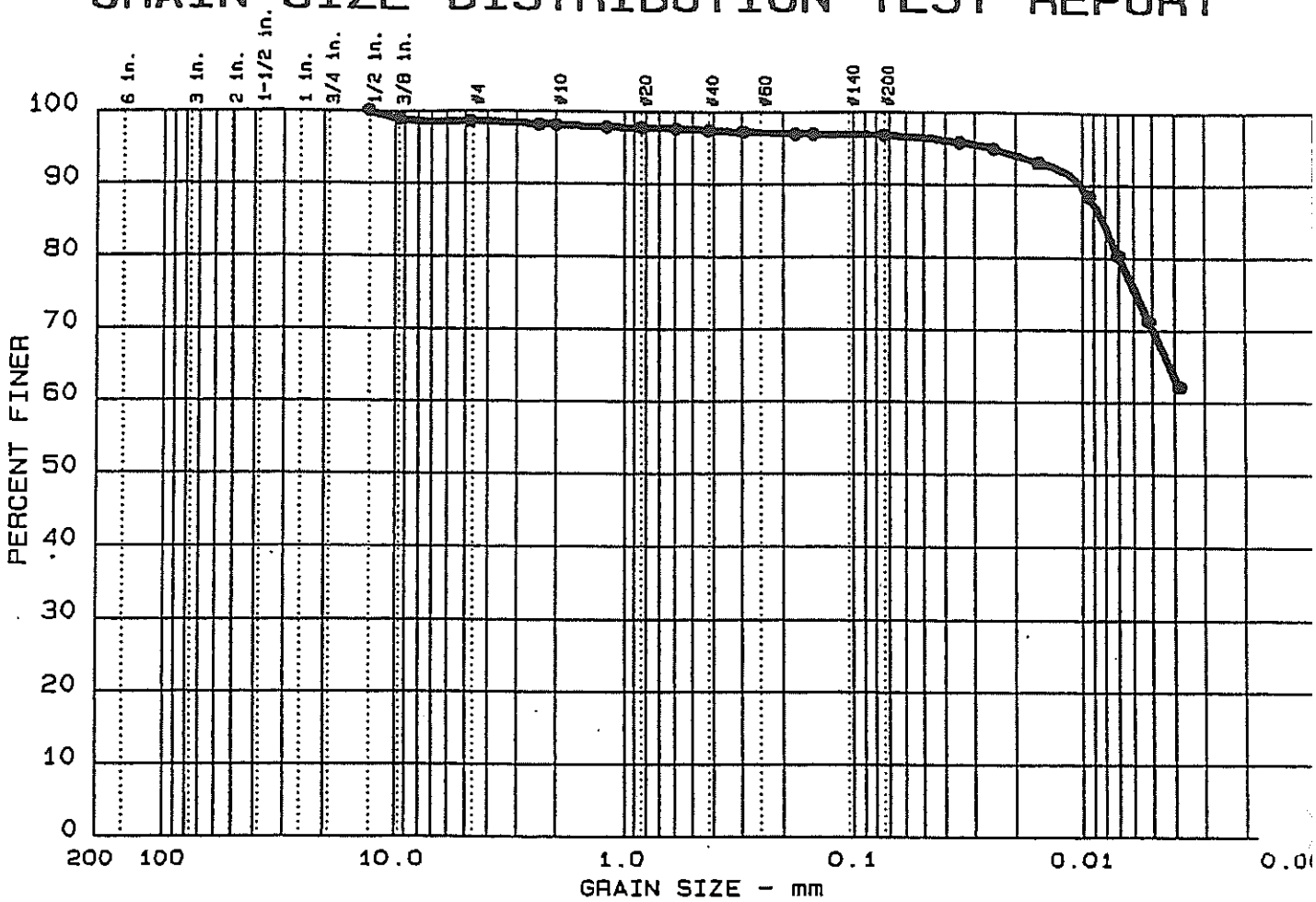
LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	B-311
LOCATION	Mapleton, IL	SHEET NO.	2 OF 2
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 3 1/4"	INSTALLATION	1/08/92
		SURFACE ELEV.	444.2
		BOREHOLE DIA.	7.5 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
9	CS		60			
10	CS		60		45	
11	CS		60		50	
12	CS		0		55	WELL-GRADED SAND (SW), dark gray, 10YR 4/1. No recovery, 55.0 - 65.0 ft. SAND, based on drilling rate and cuttings.
13	CS		0		60	
14	SS	22	6		65	SAND from washing.
15	SS	23	6			
16	SS				70	No recovery.
17	CS					SHALE, "LEAN CLAY (CL)", gray, bedrock.
18	CS				75	
					80	End Of Boring at 79.0 ft.
					85	

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	2	0.0	1.5	1.8	26.5	70.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	48	22								

MATERIAL DESCRIPTION	USCS	AASHTO
● "Lean clay"	"CL"	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B311, ST, 73-74'

Date: 2-12-92

Remarks:
15.3% Moisture

GRAIN SIZE DISTRIBUTION TEST REPORT
RMT. INC.

Figure No. _____

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B311, 73-74'
:
Visual Descript:

Date: 10-Mar-92
Tech: HJW
File: CATP7
Cell #: 8S

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.27	2.27
Sample Ht. (in)	2.33	2.33
Tare & Wet (g)	547.6	425.1
Tare & Dry (g)	484.9	374.4
Tare (g)	76.3	84.1
Sample Wt. (g)	333.9	341.0

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.75	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	15.4	17.4
WET DENS. (pcf)	134.9	137.8
DRY DENS. (pcf)	116.9	117.3
SATURATION (%)	90.3	103.6

MAXIMUM GRADIENT:	13.8
AVERAGE GRADIENT:	13.6
MAX. EFFECT. STRESS (psi):	6.2
MIN. EFFECT. STRESS (psi):	4.8
AVE. EFFECT. STRESS (psi):	5.6

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	2	14	8	6	0	95	95	14.50	3.90	97.40			
92	2	14	9	22	21	95	95	14.20	4.45	97.30	69.2	5.4E-08	
92	2	17	7	23	22	95	95	13.80	9.65	97.80	121.3	7.2E-09	
92	2	17	16	43	22	95	95	12.10	10.10	97.70	63.6	6.5E-09	
92	2	18	8	16	22	95	95	13.60	10.60	97.50	42.9	5.0E-09	
92	2	18	16	26	22	95	95	13.00	10.90	97.40	50.0	5.5E-09	
92	2	19	7	41	22	95	95	14.10	11.35	97.15	28.6	5.2E-09	
92	2	19	16	40	22	95	95	12.80	11.65	97.00	33.3	5.7E-09	
92	2	20	7	30	22	95	95	14.40	12.05	96.80	33.3	4.6E-09	
92	2	20	15	42	22	95	95	13.30	12.25	96.70	33.3	4.2E-09	
92	2	21	7	19	22	95	95	15.60	12.65	96.45	23.1	4.8E-09	
92	2	21	16	43	22	95	95	13.90	12.90	96.30	25.0	5.0E-09	
92	2	24	7	22	0	95	95	16.00	13.60	96.40			
92	2	24	9	45	22	95	95	15.35	13.65	96.30	-33.3	7.4E-09	
92	2	24	17	29	22	95	95	14.30	13.80	96.20	20.0	3.8E-09	
92	2	25	7	23	22	95	95	16.20	14.15	95.95	16.7	5.1E-09	
92	2	26	7	22	22	95	95	16.60	14.65	95.55	11.1	4.5E-09	1
92	2	27	5	55	21	95	95	16.55	15.15	95.25	25.0	4.3E-09	1
92	2	27	16	34	21	95	95	14.75	15.40	95.15	42.9	4.0E-09	1
92	2	28	8	21	22	95	95	15.70	15.75	94.85	7.7	5.0E-09	1

NOTES or COMMENTS :

Average Kv for those rows with a 1 in the Ave. column 4.5E-09 cm/sec
Termination determined by stable Kv and low flow differential 1.8E-09 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. B-312
SHEET NO. 1 OF 1

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 3 1/4"

PROJECT NO. 2185.05
INSTALLATION 12/03/91
SURFACE ELEV. 460.5
BOREHOLE DIA. 7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		48	M		POORLY GRADED SAND (SP), black 10YR 2/1, molding fragments (Foundry Sand).
2	CS		24		5	Same as above.
3	CS		42		10	Same as above.
4	CS		24	W	15	Same as above.
5	CS		24		20	POORLY GRADED SAND (SP), olive gray 5Y 4/2 (Fluvial).
6	CS		30	M	25	SILTY SAND (SM), fine, olive gray 5Y 4/2, sand with organics (grass, roots, twigs) and light colored shells.
7	CS		48		30	LEAN CLAY (CL), very dark gray 10YR 3/1, very soft to soft, plastic. Same as above, very dark gray 2.5Y N3.
8	CS		60		35	
					40	End of Boring at 40 Ft.

GENERAL NOTES

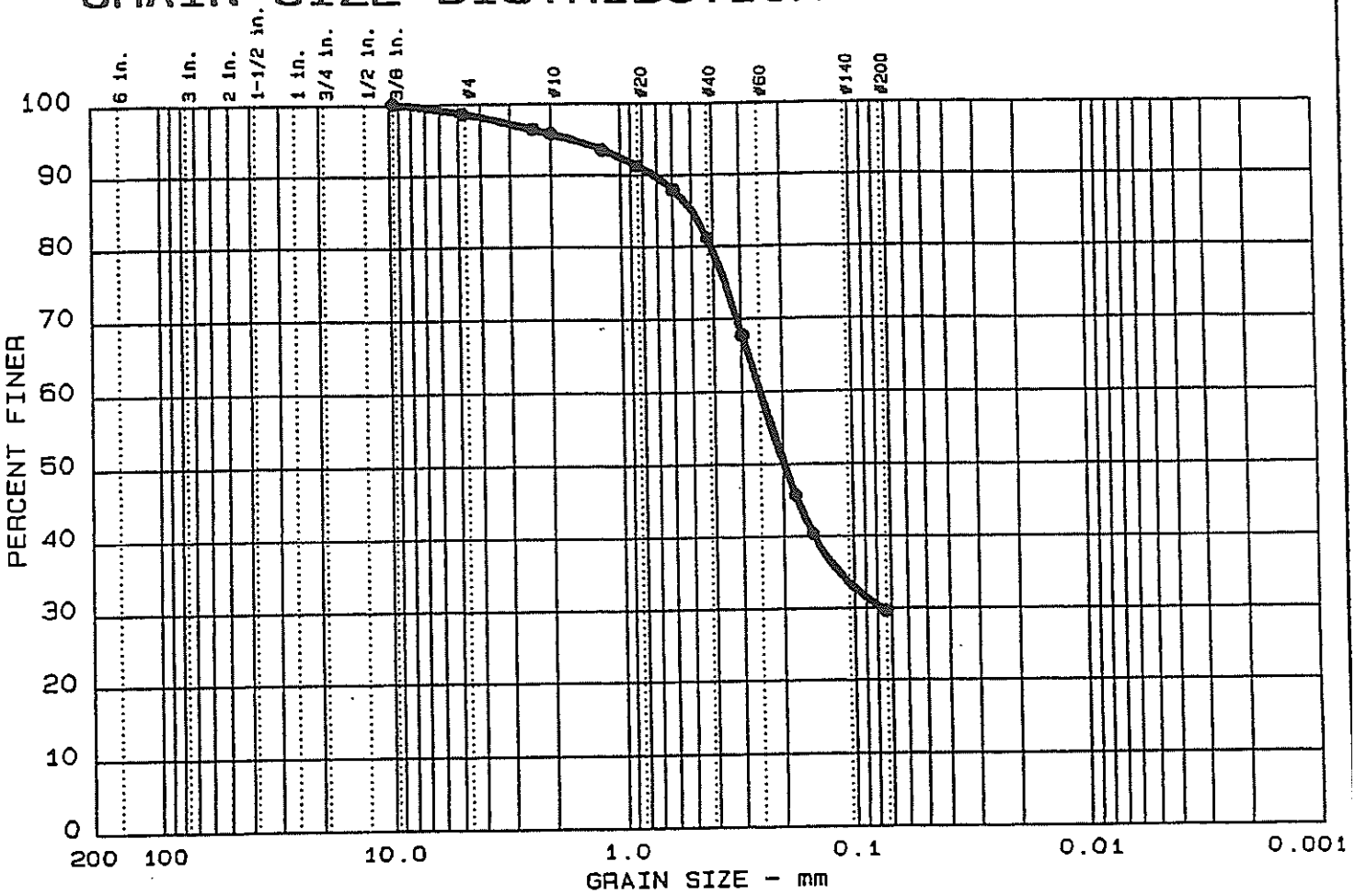
DATE STARTED DEC 3 91
DATE COMPLETED DEC 3 91
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED G. Sachs

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 18.0 Ft.
AT COMPLETION ▼
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

✓ JDK 2-21-92
TMK 2-19-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	4	0.0	1.5	69.0	29.5	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			0.49	0.25	0.20	0.077				

MATERIAL DESCRIPTION	USCS	AASHTO
● Silty Sand	SM	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B312, CS5, 26'

Date: 2-12-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. B-313
SHEET NO. 1 OF 2
PROJECT NO. 2185.05
INSTALLATION 12/09/91
SURFACE ELEV. 457.2
BOREHOLE DIA. 7 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 3 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		36	M		POORLY-GRADED SAND (SP), fine, black 10YR 2/1, foundry sand.
2	CS		30	M	5	
3	CS		48	W	∇ 10	As above, wet.
4	CS		60	M	15	LEAN CLAY (CL), dark gray 10YR 4/1, stiff, plastic.
5	CS		60	M	20	
6	CS		60	M	25	
7	CS		60	M	30	As above, with brown mottles.
8	CS		60		35	
						WELL-GRADED SAND (SW).

GENERAL NOTES

DATE STARTED DEC 9 91
DATE COMPLETED DEC 9 91
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED E. Sachs

WATER LEVEL OBSERVATIONS

WHILE DRILLING ∇ 10.0 Ft.
AT COMPLETION ∇
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

LOG OF TEST BORING

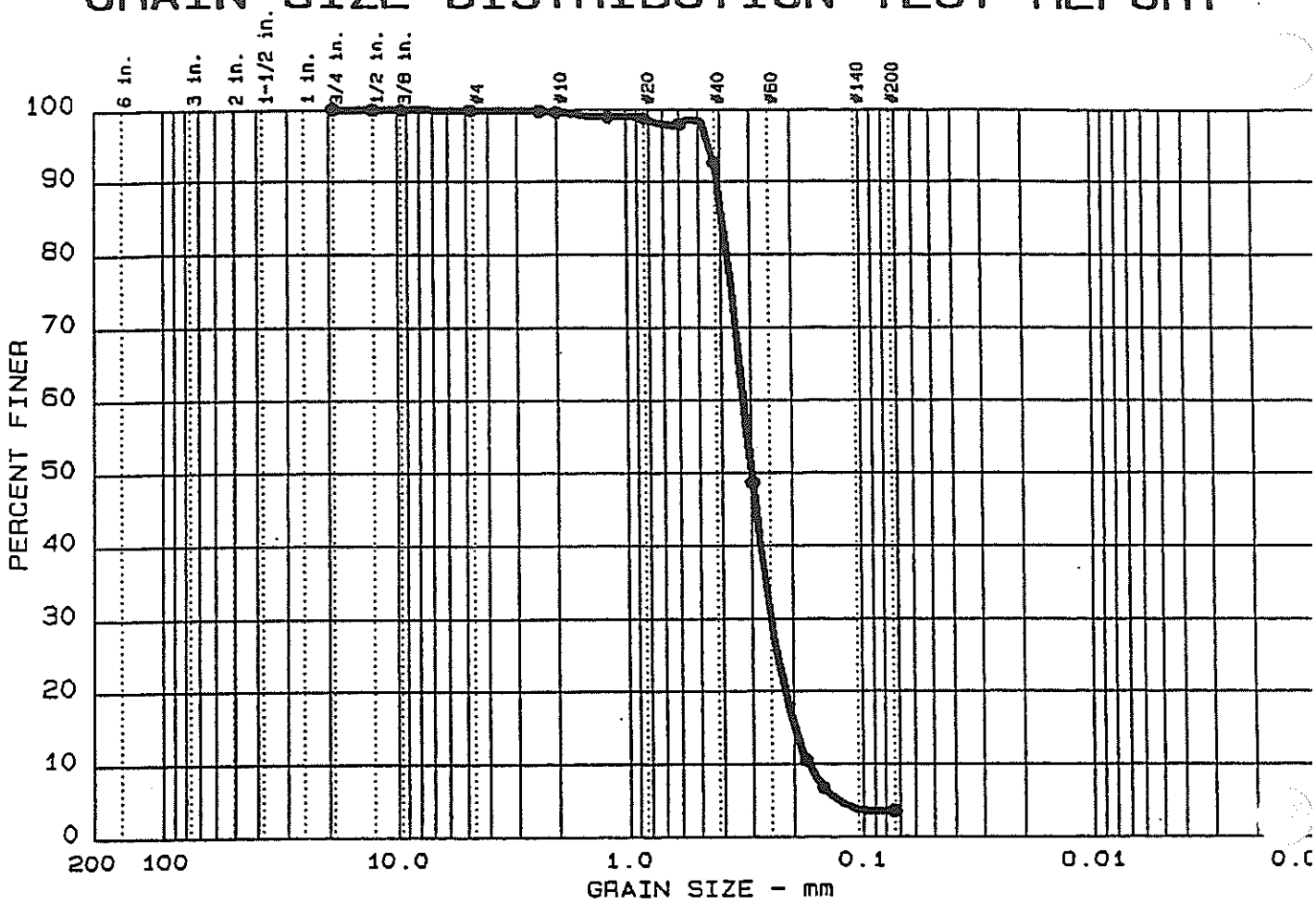
F-203 (R 01-87)

PROJECT NAME: CATERPILLAR
LOCATION: Mapleton, IL
CONTRACTOR: Midwest Eng. Svcs.
DRILLING METHOD: HSA 3 1/4"

BORING NO.: B-313
SHEET NO.: 2 OF 2
PROJECT NO.: 2185.05
INSTALLATION: 12/09/91
SURFACE ELEV.: 457.2
BOREHOLE DIA.: 7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
9	CS		60			POORLY-GRADED SAND (SW).
10	CS		0		45	
11	CS		24		50	
12	CS		36		55	
13	CS		54		60	WEATHERED SHALE, very dark gray, 7.5YR N3/.
14	CS				65	SHALE fragments.
					70	End Of Boring at 70.0 ft.
					75	
					80	
					85	

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	15	0.0	0.2	96.2	3.6	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●			0.39	0.32	0.30	0.250	0.1986	0.1730	1.12	1.9

MATERIAL DESCRIPTION	USCS	AASHTO
● Poorly graded sand	SP	

Project No.: 2185.10
Project: CATERPILLAR
◆ Location: B-313, 7'

Date: 1-13-92

Remarks:

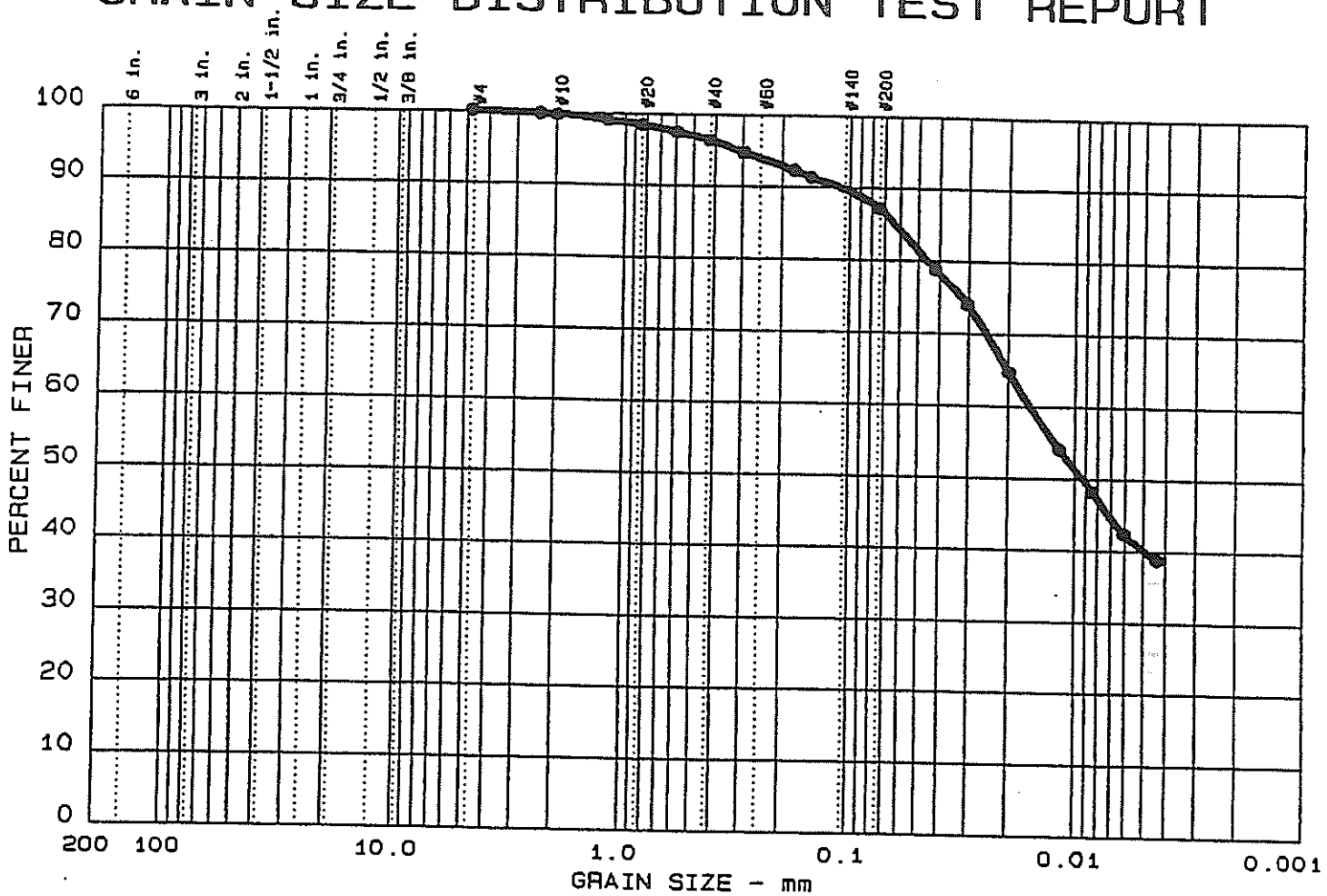
GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

✓ 2-10-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	12	0.0	0.0	12.8	47.1	40.1

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	46	24			0.01					

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-313, 33'

Date: 1-13-92

Remarks:

31.3 % Moisture
3.2 % Organics

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT. INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. B-314
SHEET NO. 1 OF 1
PROJECT NO. 2185.05
INSTALLATION 12/05/91
SURFACE ELEV. 460.5
BOREHOLE DIA. 7 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 3 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		48	M		POORLY GRADED SAND (SP), black 10YR 2/1 (Foundry Sand).
2	CS		54		5	Same as above.
3	CS		48		10	Same as above.
4	CS		60	M	15	LEAN CLAY WITH SAND (CL), yellowish brown 10YR 5/4, hard [Pp=4.25-4.75], slightly plastic. LEAN CLAY (CL), dark gray 5Y 4/1, stiff, plastic, plant material (Organic Debris).
5	CS		54		20	Same as above, 4" sand layer, [Pp=1.0-1.75].
6	CS		60		▽ 25	[Pp=0.5-1.0].
7	CS		60		30	Same as above, [Pp=1.0-1.5].
8	CS		60		35	[Pp=1.0-1.5].
					40	End of Boring at 40 Ft.

GENERAL NOTES

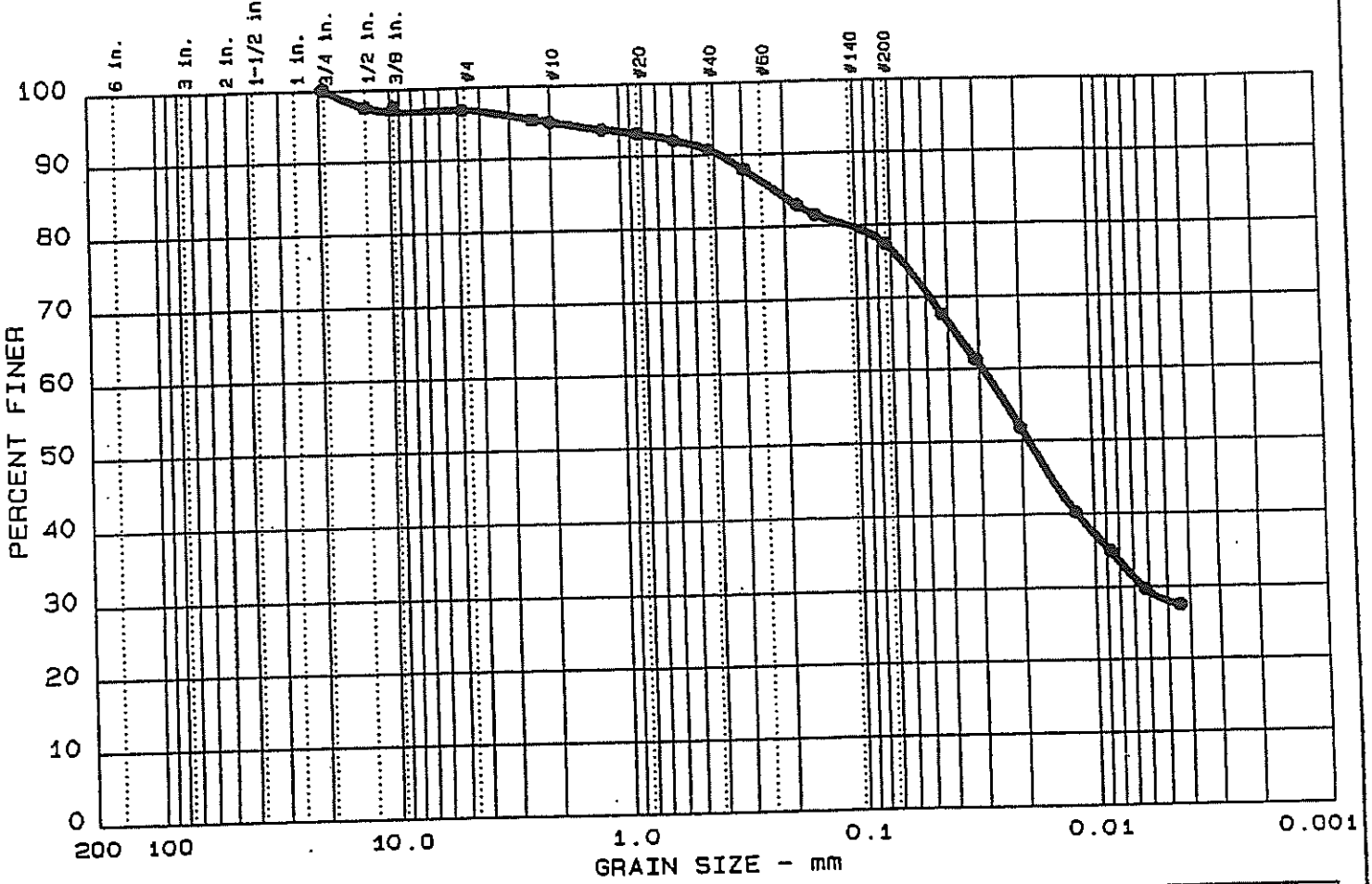
DATE STARTED DEC 5 91
DATE COMPLETED DEC 5 91
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED G Sodha

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 24.0 Ft.
AT COMPLETION ▽
AFTER DRILLING
CAVE-IN: DATE/TIME DEPTH
WATER: DATE/TIME DEPTH

JM 2-10-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	9	0.0	3.2	19.5	49.4	27.9

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	32	14	0.22		0.02	0.006				

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay with sand	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-314, 17'

Date: 1-13-92

Remarks:
15.9% Moisture

GRAIN SIZE DISTRIBUTION TEST REPORT
RMT, INC.

Figure No. ____

✓ JPH 2-12-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B-314, 17'
:
Date: 10-Feb-92
Tech: HJW
File: CATP3
Cell #: 14S

Visual Descript: LT. BROWN SILTY CLAY TRACE GRAVEL

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.19	2.19
Sample Ht. (in)	2.29	2.27
Tare & Wet (g)	411.2	376.2
Tare & Dry (g)	365.3	333.3
Tare (g)	77.1	76.7
Sample Wt. (g)	299.0	299.5

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	15.9	16.7
WET DENS. (pcf)	132.0	133.4
DRY DENS. (pcf)	113.9	114.3
SATURATION (%)	89.8	95.3

MAXIMUM GRADIENT:	ERR
AVERAGE GRADIENT:	ERR
MAX. EFFECT. STRESS (psi):	6.1
MIN. EFFECT. STRESS (psi):	4.7
AVE. EFFECT. STRESS (psi):	5.3

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	1	14	7	33	0	95	95	19.55	3.85	97.20			
92	1	14	9	38	22	95	95	19.40	4.30	96.70	-5.3	5.0E-08	
92	1	14	11	51	22	95	95	19.40	4.70	96.40	14.3	3.5E-08	
92	1	14	16	29	22	95	95	19.30	5.20	96.00	11.1	2.2E-08	
92	1	15	7	29	21	95	95	22.50	6.20	95.00	0.0	1.5E-08	
92	1	15	16	5	21	95	95	21.40	6.65	94.60	5.9	1.1E-08	
92	1	16	8	51	20	95	95	28.90	7.25	94.00	0.0	8.6E-09	
92	1	16	15	21	21	95	95	26.20	7.70	93.80	38.5	1.2E-08	
92	1	17	7	37	21	95	95	25.40	8.25	93.20	-4.3	8.4E-09	
92	1	20	7	52	21	95	95	31.40	10.74	91.30	13.4	7.5E-09	
92	1	20	16	45	21	95	95	28.40	11.05	91.10	21.6	7.3E-09	
92	1	21	8	6	21	95	95	28.40	11.50	90.80	20.0	6.2E-09	
92	1	21	16	40	22	95	95	25.60	11.80	90.60	20.0	7.5E-09	
92	1	22	8	39	22	95	95	26.50	12.30	90.20	11.1	7.3E-09	
92	1	22	17	20	22	95	95	25.30	12.50	90.00	-0.0	5.9E-09	
92	1	23	7	53	22	95	95	27.10	13.00	89.60	11.1	8.2E-09	
92	1	23	16	59	22	95	95	26.30	13.20	89.35	-11.1	6.6E-09	
92	1	24	7	58	21	95	95	30.50	13.50	89.00	-7.7	5.8E-09	
92	1	25	7	45	21	95	95	30.50	14.25	88.55	25.0	6.9E-09	
92	1	25	14	20	21	95	95	29.05	14.50	88.45	42.9	7.3E-09	

Average Kv for those rows with a 1 in the Ave. column — ERR cm/sec
Termination determined by stable Kv and low flow differential — ERR in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

✓ JPH 2/12/92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B-314, 17'
:
Visual Descript: LT. BROWN SILTY CLAY TRACE GRAVEL

Date: 12-Feb-92
Tech: HJW
File: CATP3A
Cell #: 14S

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.19	2.19
Sample Ht. (in)	2.29	2.27
Tare & Wet (g)	411.2	376.2
Tare & Dry (g)	365.3	333.3
Tare (g)	77.1	76.7
Sample Wt. (g)	299.0	299.5

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	15.9	16.7
WET DENS. (pcf)	132.0	133.4
DRY DENS. (pcf)	113.9	114.3
SATURATION (%)	89.8	95.3

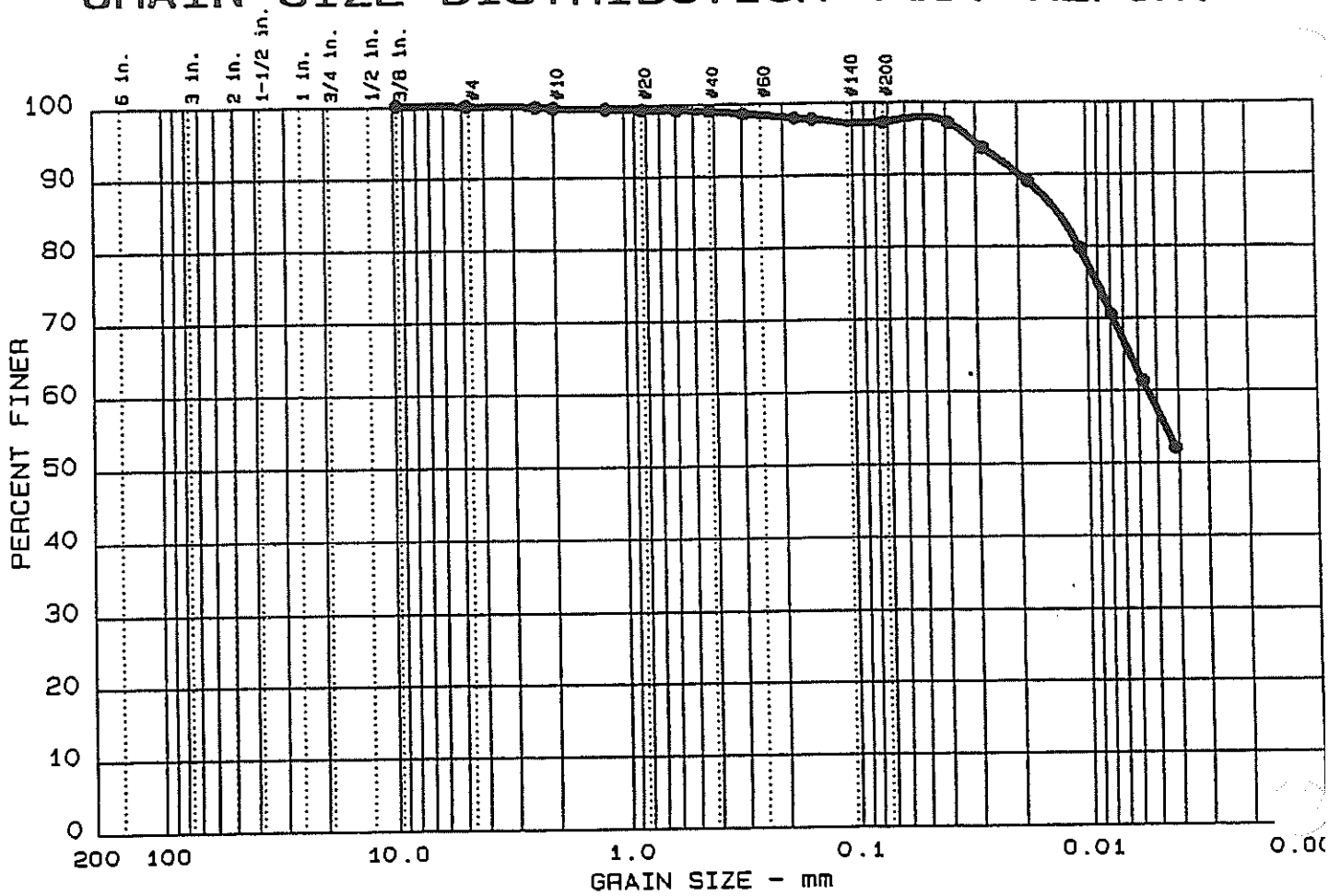
MAXIMUM GRADIENT:	11.1
AVERAGE GRADIENT:	10.9
MAX. EFFECT. STRESS (psi):	5.8
MIN. EFFECT. STRESS (psi):	4.8
AVE. EFFECT. STRESS (psi):	5.3

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	1	27	6	11	0	95	95	32.00	15.40	87.55			
92	1	27	16	16	22	95	95	29.40	15.75	87.35	27.3	7.7E-09	
92	1	28	6	26	21	95	95	30.80	16.10	87.05	7.7	6.6E-09	
92	1	28	16	25	22	95	95	30.30	16.40	86.90	33.3	6.5E-09	
92	1	29	6	19	20	95	95	31.90	16.65	86.55	-16.7	6.4E-09	
92	1	29	16	48	22	95	95	29.50	17.00	86.40	40.0	7.0E-09	
92	1	30	6	27	21	95	95	31.25	17.30	86.10	-0.0	6.5E-09	
92	1	30	16	8	22	95	95	29.60	17.60	86.00	50.0	6.0E-09	
92	1	31	7	30	22	95	95	31.00	18.00	85.60	-0.0	7.8E-09	
92	1	31	16	45	22	95	95	30.20	18.20	85.45	14.3	5.6E-09	
92	2	3	8	51	22	95	95	31.90	19.70	84.20	9.1	6.5E-09	
92	2	3	16	5	23	95	95	29.00	20.00	84.20	100.0	6.4E-09	
92	2	4	7	40	22	95	95	31.00	20.20	83.80	-33.3	6.1E-09	1
92	2	4	16	38	22	95	95	29.90	20.40	83.70	33.3	5.4E-09	1
92	2	5	7	47	21	95	95	32.50	20.70	83.30	-14.3	7.5E-09	1
92	2	6	7	40	22	95	95	33.20	21.30	82.90	20.0	6.9E-09	1

Average Kv for those rows with a 1 in the Ave. column 6.5E-09 cm/sec
Termination determined by stable Kv and low flow differential 2.5E-09 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

✓ 2-10-92

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	10	0.0	0.2	2.7	39.9	57.2

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	43	18								

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-314, 26-27'

Date: 1-13-92

Remarks:
40.1 % Moisture

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT. INC.

Figure No. _____

✓ 2-10-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B-314, 26-27'
:
Visual Descript: GRAY SILTY CLAY

Date: 24-Jan-92
Tech: HJW
File: CATP2
Cell #: 15S

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.27	2.23
Sample Ht. (in)	2.30	2.26
Tare & Wet (g)	413.9	349.3
Tare & Dry (g)	317.9	279.1
Tare (g)	78.7	77.3
Sample Wt. (g)	276.7	272.1

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	40.2	34.8
WET DENS. (pcf)	113.2	117.4
DRY DENS. (pcf)	80.8	87.1
SATURATION (%)	99.9	100.6

MAXIMUM GRADIENT:	15.6
AVERAGE GRADIENT:	12.6
MAX. EFFECT. STRESS (psi):	6.2
MIN. EFFECT. STRESS (psi):	4.7
AVE. EFFECT. STRESS (psi):	5.4

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	1	14	7	34	0	95	95	16.80	3.65	98.30			
92	1	14	9	39	22	95	95	16.60	5.35	96.75	4.6	1.6E-07	
92	1	14	11	52	22	95	95	16.50	6.95	95.20	1.6	1.5E-07	
92	1	14	16	30	22	95	95	16.30	9.90	92.30	0.9	1.4E-07	
92	1	15	7	35	21	95	95	19.40	18.00	84.40	1.3	1.4E-07	
92	1	15	16	6	21	95	95	18.30	21.40	81.00	-0.0	1.2E-07	
92	1	16	8	52	20	95	95	25.40	27.10	75.40	0.9	1.3E-07	
92	1	16	15	22	21	95	95	22.70	28.90	73.80	5.9	1.1E-07	
92	1	17	7	38	21	95	95	21.70	32.70	70.00	0.0	1.1E-07	
92	1	20	13	16	0	95	95	25.20	3.70	96.70			
92	1	20	16	46	21	95	95	23.80	5.65	95.10	9.9	1.1E-07	
92	1	21	8	8	21	95	95	23.50	12.70	88.25	1.4	1.1E-07	1
92	1	21	16	41	22	95	95	20.70	16.10	84.90	0.7	1.1E-07	1
92	1	22	8	40	22	95	95	21.35	21.65	79.40	0.5	1.1E-07	1

Average Kv for those rows with a 1 in the Ave. column 1.1E-07 cm/sec
Termination determined by stable Kv and low flow differential 4.2E-08 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	B-315
LOCATION	Mapleton, IL	SHEET NO.	1 OF 1
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 3 1/4"	INSTALLATION	12/05/91
		SURFACE ELEV.	457.7
		BOREHOLE DIA.	7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		48	M		POORLY GRADED SAND (SP), black 10YR 2/1 (Foundry Sand).
2	CS		54		5	
3	CS		54		10	Same as above.
4	CS		48		15	
5	CS		36	W	▽ 20	POORLY GRADED SAND (SP), (Fluvial).
6	CS		60	M	25	SANDY LEAN CLAY (CL), dark gray 2.5Y N4/, stiff [Pp=1.0-1.75], plastic.
7	CS		60	M	30	LEAN CLAY (CL), dark gray brown 10YR 4/2, stiff [Pp=1.5], plastic.
8	CS			M	35	LEAN CLAY (CL), gray brown 2.5Y 5/2, stiff [Pp=1.25-1.5], plastic (Lacustrine). LEAN CLAY (CL), olive gray 5Y 5/2, stiff, plastic.
					40	End of Boring at 40 Ft.

GENERAL NOTES

DATE STARTED DEC 5 91

DATE COMPLETED DEC 5 91

RIG CME 55

CREW CHIEF T. Bartholomew

LOGGED R. Welch CHECKED G. Sodner

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 19.5 Ft.

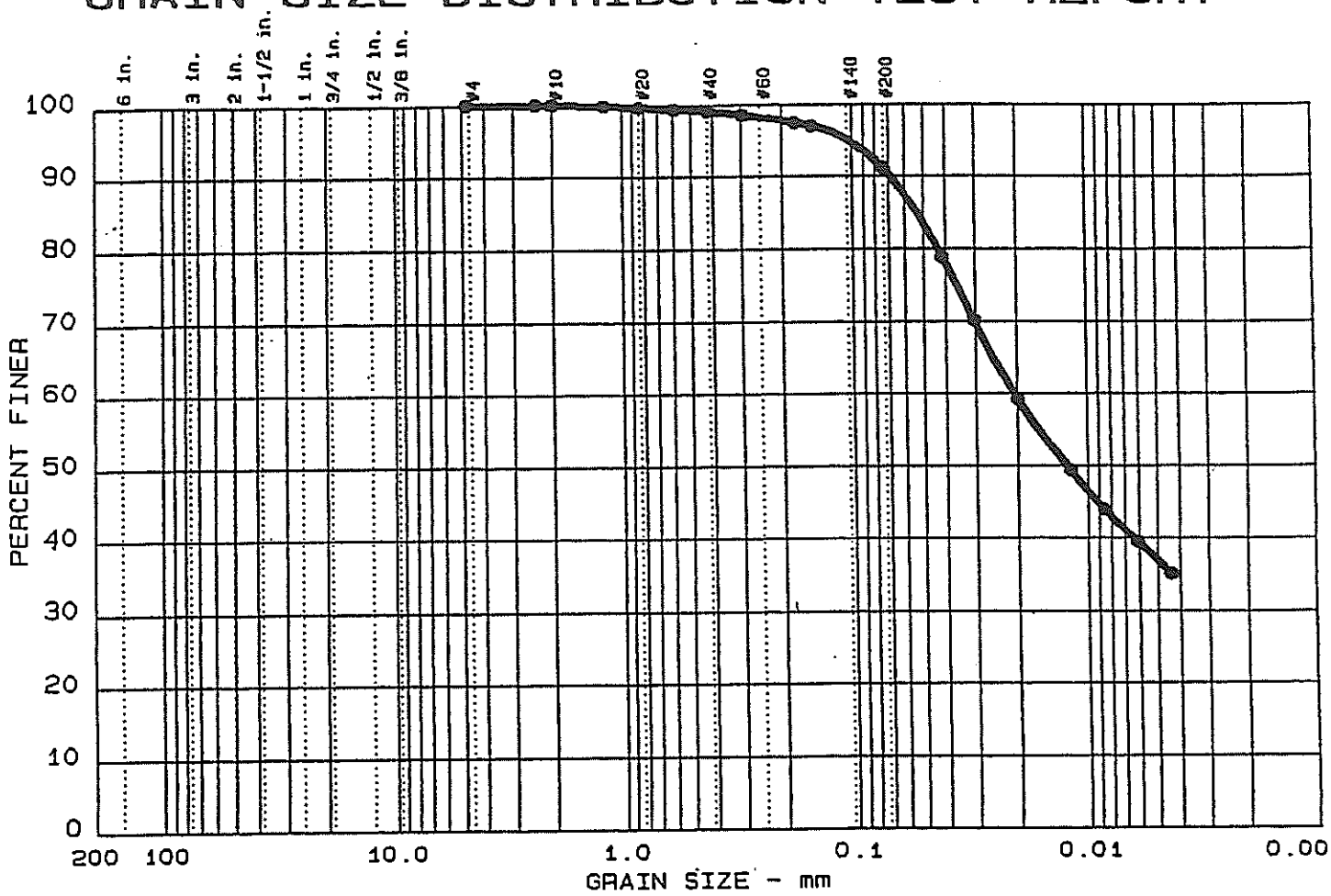
AT COMPLETION ▽

AFTER DRILLING

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	8	0.0	0.0	8.9	54.3	36.8

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	43	21			0.01					

MATERIAL DESCRIPTION	USCS	AASHTO
● Lean clay	CL	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-315, 26-27'

Date: 1-13-92

Remarks:
29.1% Moisture

GRAIN SIZE DISTRIBUTION TEST REPORT
RMT, INC.

Figure No. _____

✓ JPH 2-10-92

RMT, Inc.
Falling Head Permeability Test
(Version 1.02)

Job: CATERPILLAR
Job #: 2185.10
Sample: B-315, 26-27'
:
Visual Descript: GRAY SILTY CLAY

Date: 24-Jan-92
Tech: HJW
File: CATP4
Cell #: 13S

INPUT VALUES

	INIT.	FINAL
Sample Dia. (in)	2.25	2.23
Sample Ht. (in)	2.30	2.27
Tare & Wet (g)	464.9	360.8
Tare & Dry (g)	377.4	298.6
Tare (g)	76.7	76.4
Sample Wt. (g)	290.1	284.5

Permeant:	WATER	
Permeant Specific Gravity:	1.00	
Sample Specific Gravity:	2.70	EST.
Confining Pressure (psi):	100.0	
Burette Diameter (in):	0.250	
Burette Zero (cm):	100.0	

CALCULATED VALUES

	INIT.	FINAL
MOISTURE (%)	29.1	28.0
WET DENS. (pcf)	120.8	122.2
DRY DENS. (pcf)	93.6	95.5
SATURATION (%)	98.2	98.9

MAXIMUM GRADIENT:	7.5
AVERAGE GRADIENT:	6.9
MAX. EFFECT. STRESS (psi):	6.2
MIN. EFFECT. STRESS (psi):	4.5
AVE. EFFECT. STRESS (psi):	4.9

Date YY	MM	DD	Time HH	MM	Temp C°*	Press.(psi) BOT	TOP	Readings (cm) CHAM	BOT	TOP	Flow Dif. %	Kv ** cm/sec	Ave. 0,1
92	1	14	7	25	0	95	95	11.90	3.10	97.80			
92	1	14	9	37	22	95	95	13.30	3.60	97.20	-9.1	5.2E-08	
92	1	14	11	50	22	95	95	14.60	4.10	96.65	-4.8	5.0E-08	
92	1	14	16	28	22	95	95	17.20	5.20	95.60	2.3	5.0E-08	
92	1	15	7	28	21	95	95	27.30	8.05	92.70	-0.9	4.3E-08	
92	1	15	16	4	21	95	95	29.35	9.60	91.20	1.6	4.2E-08	
92	1	16	8	49	20	95	95	42.30	14.55	88.45	28.6	6.0E-08	
92	1	16	15	20	21	95	95	42.60	15.80	87.65	22.0	4.2E-08	
92	1	17	7	35	21	95	95	45.40	18.20	85.30	1.1	4.1E-08	
92	1	20	7	51	21	95	95	67.30	33.10	77.80	33.0	5.5E-08	
92	1	20	16	44	21	95	95	66.20	34.00	77.10	12.5	4.0E-08	
92	1	21	8	1	21	95	95	68.40	35.30	76.00	8.3	3.7E-08	1
92	1	21	16	39	22	95	95	67.20	36.10	75.30	6.7	4.3E-08	1
92	1	22	8	38	22	95	95	70.40	37.35	74.20	6.4	3.8E-08	1

Average Kv for those rows with a 1 in the Ave. column 3.9E-08 cm/sec
Termination determined by stable Kv and low flow differential 1.5E-08 in/sec
* A zero in this column starts a series of measurements
** Kv adjusted for temperature

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME	CATERPILLAR	BORING NO.	B-316
LOCATION	Mapleton, IL	SHEET NO.	1 OF 1
CONTRACTOR	Midwest Eng. Svcs.	PROJECT NO.	2185.05
DRILLING METHOD	HSA 3 1/4"	INSTALLATION	12/03/91
		SURFACE ELEV.	460.2
		BOREHOLE DIA.	7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		48	M		POORLY GRADED SAND (SP), black 10YR 2/1, molding fragments (Foundry Sand).
2	CS		54	M	5	Same as above.
3	CS		48	M	10	Same as above.
4	CS		36	M	15	Same as above.
5	CS		24	W	▽ 20	POORLY GRADED SAND WITH SILT (SP-SM), fine, olive gray 5Y 4/2, some mollusk shell fragments (Fluvial).
6	CS		60	M	25	FAT CLAY (CH), dark gray 10YR 4/1, very plastic, stiff [Pp=1.0-1.5], backwater sediments.
7	CS		60	M	30	LEAN CLAY (CL), dark gray 10YR 4/1, plastic, stiff [Pp=1.5].
8	CS		60	W	35	Same as above but dark gray brown 2.5Y 4/2. Coarse, wet, sand layer at 33.5 to 34 ft. Coarse, wet, well graded sand at 38 to 39 ft.
					40	End of Boring at 40 Ft.

GENERAL NOTES

DATE STARTED DEC 3 91

DATE COMPLETED DEC 3 91

RIG CME 55

CREW CHIEF T. Bartholomew

LOGGED R. Welch CHECKED G Soder

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 20.0 Ft.

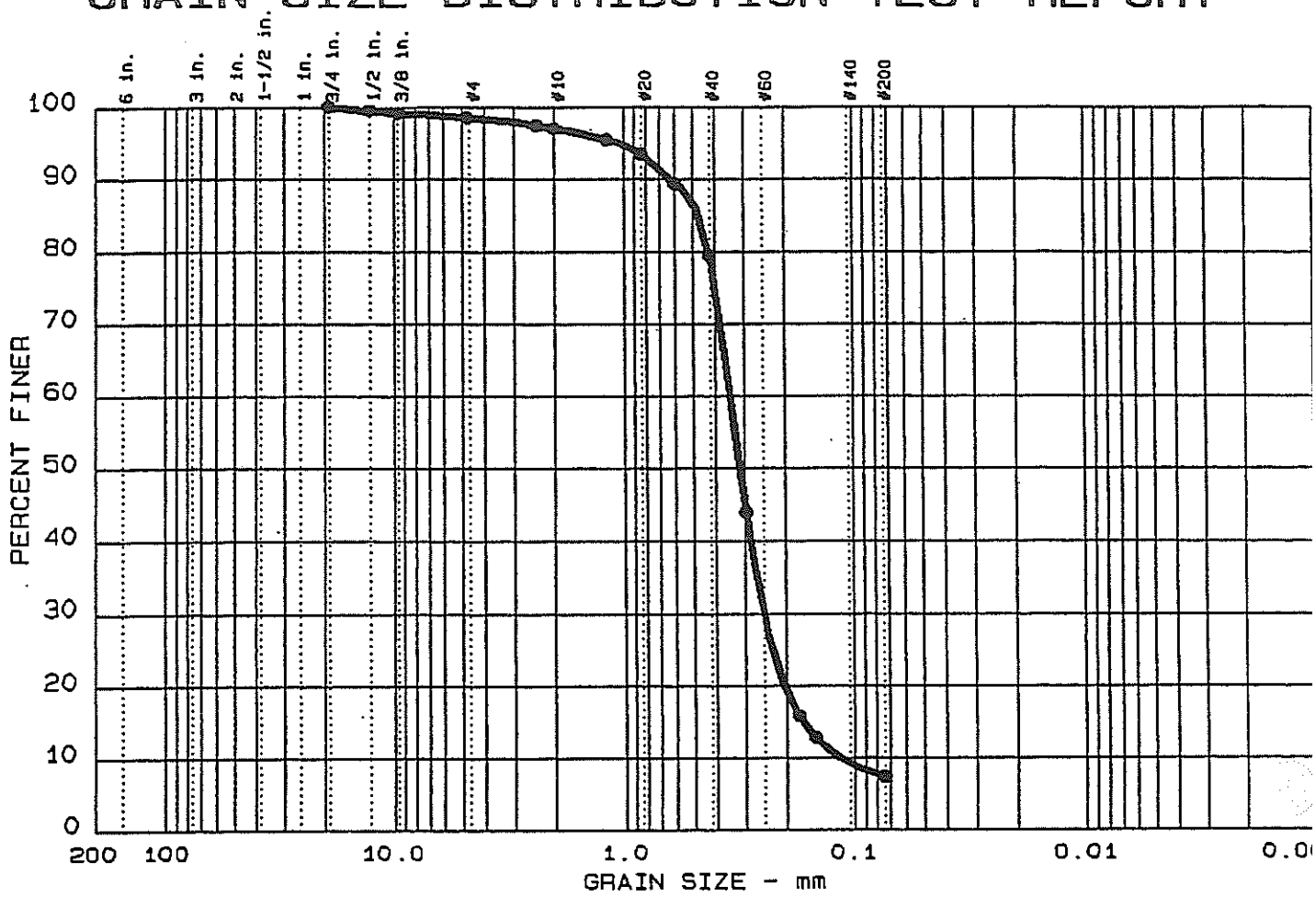
AT COMPLETION ▼

AFTER DRILLING

CAVE-IN: DATE/TIME _____ DEPTH _____

WATER: DATE/TIME _____ DEPTH _____

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	%+75mm	% GRAVEL	% SAND	% SILT	% CLAY
●	16	0.0	1.6	91.1	7.3	

	LL	PI	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
●	NP	NP	0.47	0.34	0.32	0.250	0.1692	0.1171	1.55	2.9

MATERIAL DESCRIPTION	USCS	AASHTO
● Poorly graded sand with silt	SP-SM	

Project No.: 2185.10
Project: CATERPILLAR
● Location: B-316, 23-25'

Date: 1-13-92

Remarks:

GRAIN SIZE DISTRIBUTION TEST REPORT

RMT, INC.

Figure No. _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. B-317
SHEET NO. 1 OF 2
PROJECT NO. 2185.05
INSTALLATION 12/10/91
SURFACE ELEV. 447.4
BOREHOLE DIA. 7 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 3 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		36	M		POORLY-GRADED SAND (SP), yellow brown, 10YR 5/6, (Fluvial).
						POORLY-GRADED SAND (SP), 10YR 2/1, black, foundry sand.
2	CS		42	M	5	
						POORLY-GRADED SAND (SP), yellow brown, 10YR 5/6, (Fluvial).
3	CS		12	W	▽ 10	POORLY-GRADED SAND (SP), very dark gray 10YR 3/I, (Fluvial).
4	CS			M	15	LEAN CLAY (CL), very dark gray 10YR 3/1, stiff [Pp=1.0-1.5], plastic. As above, but dark gray brown 10YR 4/2, some brown mottling, [Pp=1.0-1.25].
5	CS				20	
6	CS			M	25	SILTY CLAY (ML/CL), gray 5Y 5/1, medium stiff [Pp=0.75-1.0], plastic.
7	CS				30	
8	CS			W	35	WELL-GRADED SAND (SW), gray 10YR 5/1, fossil rich.

GENERAL NOTES

DATE STARTED DEC 10 92
DATE COMPLETED DEC 10 92
RIG CME 55
CREW CHIEF T. Bartholomew
LOGGED R. Welch CHECKED G Sodner

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽ 9.5 Ft.
AT COMPLETION ▼
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME: CATERPILLAR
LOCATION: Mapleton, IL
CONTRACTOR: Midwest Eng. Svcs.
DRILLING METHOD: HSA 3 1/4"

BORING NO.: B-317
SHEET NO. 2 OF 2
PROJECT NO.: 2185.05
INSTALLATION: 12/10/91
SURFACE ELEV.: 447.4
BOREHOLE DIA.: 7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
9	CS		24			
10	CS		36		45	
11	CS		0		50	
12	CS		25		55	
13	CS		60		60	WEATHERED SHALE, red, almost clay, determinable bedding planes.
14	CS		60		65	SHALE, soft gray.
					70	End Of Boring at 70.0 ft.
					75	
					80	
					85	

LOG OF TEST BORING

F-203 (R 01-87)

PROJECT NAME: CATERPILLAR
LOCATION: Mapleton, IL
CONTRACTOR: Midwest Eng. Svcs.
DRILLING METHOD: HSA 3 1/4"

BORING NO.: B-318
SHEET NO. 1 OF 2
PROJECT NO.: 2185.05
INSTALLATION: 12/13/91
SURFACE ELEV.: 444.0
BOREHOLE DIA.: 7 IN.

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
1	CS		60	M		POORLY-GRADED SAND (SP), brown yellow 10YR 6/6, (Fluvial).
2	CS		48	W	▽ 5	SILTY CLAY (ML/CL), dark gray brown 10YR 4/2, medium stiff [Pp=.75], plastic.
						SILTY CLAY (ML/CL), dark brown 10YR 3/3.
3	CS		48	W	10	
4	CS		60	M	15	SILTY CLAY (ML/CL), yellow brown 10YR 5/4, stiff [Pp=1.0], plastic.
5	CS		60		20	
6	CS		60		25	SILTY CLAY (ML/CL), dark gray 5Y 4/1, medium stiff [Pp=.75], plastic.
7	CS		54		30	As above, with layers of silt to very fine sand, little clay.
8	CS		0	W	35	WELL-GRADED SAND (SW), dark gray 10YR 4/1, fluvial. Blows up in augers had to wash.

GENERAL NOTES

DATE STARTED: DEC 13 91
DATE COMPLETED: DEC 13 91
RIG: CME 55
CREW CHIEF: T. Bartholomew
LOGGED: R. Welch CHECKED: [illegible]

WATER LEVEL OBSERVATIONS

WHILE DRILLING ▽: 5.0 Ft.
AT COMPLETION ▽:
AFTER DRILLING
CAVE-IN: DATE/TIME _____ DEPTH _____
WATER: DATE/TIME _____ DEPTH _____

LOG OF TEST BORING

F-203 (R 01-87)

BORING NO. B-318
SHEET NO. 2 OF 2
PROJECT NO. 2185.05
INSTALLATION 12/13/91
SURFACE ELEV. 444.0
BOREHOLE DIA. 7 IN.

PROJECT NAME CATERPILLAR
LOCATION Mapleton, IL
CONTRACTOR Midwest Eng. Svcs.
DRILLING METHOD HSA 3 1/4"

SAMPLING NOTES						VISUAL CLASSIFICATION AND GENERAL OBSERVATIONS
INTERVAL		RECOVERY		MOISTURE		
NO.	TYPE	N	IN		DEPTH	
9	CS		0			No recovery.
					45	
10	CS		60			LEAN CLAY (CL), dark gray brown, 10YR 4/2, stiff [Pp=1.75], plastic, moist.
11	CS		60		50	
12	CS		60		55	
13	CS		60		60	
						SHALE, bedrock, soft gray, determinable bedding planes, some hard fragments.
14	CS		60		65	
					70	End Of Boring at 70.0 ft.
					75	
					80	
					85	

RMT Soils Laboratory - Moisture Content Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

			by	date
Tech:	PAZ	02/12/92	QC	2/10/92
Input:	TMK	02/14/92	QA	2/18/92

BORING	SAMPLE	DEPTH	TARE	WET WT	DRY WT	% MOISTURE
G101S	SS8	14-16'	78.69	329.14	279.40	24.8
G102S	SS6	8-12'	80.05	319.67	280.60	19.5
G107	SS8	12-16'	79.34	287.20	238.80	30.4
G108	ST12	24-26'	76.54	465.50	381.31	27.6
B311	ST	73-74'	76.30	547.40	484.90	15.3
~~B304~~ G104	ST8	16-18'	77.22	489.10	386.90	33.0

RMT Soils Laboratory - Moisture Content Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

				by	date
Tech:	HJW	01/13/92	QC	JDR	1/15/92
Input:	TMK	01/15/92	QA	JCH	1/15/92

BORING	SAMPLE	DEPTH	TARE	WET WT	DRY WT	% MOISTURE
B-315		26-27'	76.72	464.85	377.40	29.1
B-314		17'	77.05	411.18	365.27	15.9
B-314		26-27'	78.73	413.89	317.92	40.1
B-309		24-26'	76.03	491.56	393.54	30.9
B-309		37-40'	76.58	585.44	531.50	11.9
B-313		33'	87.21	206.94	178.41	31.3
B-310		34'	87.18	197.94	178.42	21.4
B-310		20-21'	87.28	277.44	238.96	25.4

RMT Soils Laboratory - Organic Content Determination

JOB NAME: CATERPILLAR

JOB #: 2185.10

Tech: PAZ 02/12/92 QC

Input: TMK 02/17/92 QA

	by	date
QC	[illegible]	2/21/92
QA	[illegible]	2/21/92

BORING #	G101S	G102S	G107S	G108
SAMPLE #	SS8	SS6	SS8	ST12
DEPTH	14-16'	8-12'	12-16'	24-26'
TARE WT	16.77	17.07	18.74	17.78
WET WT+TARE	36.29	34.08	33.55	37.50
DRY WT+TARE	36.29	34.08	33.55	37.50
FIRED WT+TARE	35.70	33.65	32.89	36.86
% ORGANICS	3.0	2.5	4.5	3.2

RMT Soils Laboratory - Organic Content Determination

JOB NAME: CATERPILLAR

JOB #: 2185.10

			by	date
Tech:	HJW	01/17/92 QC	TMK	1-22-92
Input:	TMK	01/21/92 QA	JEH	1-22-92

BORING #	B-313	B-310	B-310
SAMPLE #			
DEPTH	33'	34'	20-21'
TARE WT	17.51	18.72	17.77
WET WT+TARE	36.37	36.88	38.35
DRY WT+TARE	36.37	36.88	38.35
FIRED WT+TARE	35.76	36.51	37.59
% ORGANICS	3.2 -	2.0 -	3.7 -

RMT Soils Laboratory - Atterberg Limit Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

			By	Date
Tech :	PAZ	02/12/92	QC	2/21/92
Input:	TMK	02/20/92	QA	2/21/92

BORING: G101S, SS8 DEPTH: 14-16'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.88	115.33		114.61
BLOWS	26	27		
WET WT	137.59	138.00		170.36
DRY WT	132.85	133.07		160.89
% WATER	28.1	28.0		20.5

BORING	G101S, SS8
DEPTH	14-16'
LL	28
PL	20
PI	8
CLASS	CL

BORING: G102S, SS6 DEPTH: 8-12'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.42	115.30		115.21
BLOWS	24	24		
WET WT	139.74	137.05		172.03
DRY WT	135.09	132.90		163.63
% WATER	23.5	23.5		17.3

BORING	G102S, SS6
DEPTH	8-12'
LL	23
PL	17
PI	6
CLASS	CL-ML

BORING: G107, SS8 DEPTH: 12-16'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.05	115.35		115.17
BLOWS	22	22		
WET WT	138.03	137.39		155.82
DRY WT	131.08	130.76		148.23
% WATER	42.7	42.4		23.0

BORING	G107, SS8
DEPTH	12-16'
LL	43
PL	23
PI	20
CLASS	CL

RMT Soils Laboratory - Atterberg Limit Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

				By	Date
Tech :	PAZ	02/12/92	QC	[illegible]	2/21/92
Input:	TMK	02/19/92	QA	[illegible]	2/21/92

BORING: G108, ST12 DEPTH: 24-26'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.16	115.17		116.23
BLOWS	27	27		
WET WT	137.31	137.90		164.33
DRY WT	131.99	132.44		156.34
% WATER	31.9	31.9		19.9

BORING	G108, ST12
DEPTH	24-26'
LL	32
PL	20
PI	12
CLASS	CL

BORING: B311, ST DEPTH: 73-74'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.02	115.26		115.17
BLOWS	23	24		
WET WT	140.82	139.44		151.21
DRY WT	132.44	131.58		143.76
% WATER	47.6	47.9		26.1

BORING	B311, ST
DEPTH	73-74'
LL	48
PL	26
PI	22
CLASS	CL

BORING: ~~B304~~ G104 ~~B15~~, ST8 DEPTH: 16-18'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	113.69	116.20		115.84
BLOWS	25	26		
WET WT	136.03	137.47		160.23
DRY WT	128.27	130.09		150.79
% WATER	53.2	53.4		27.0

BORING	B304, ST8
DEPTH	16-18'
LL	53
PL	27
PI	26
CLASS	CH

RMT Soils Laboratory - Atterberg Limit Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

			By	Date
Tech :	HJW	01/13/92	QC	2/7/92
Input:	TMK	02/05/92	QA	2/7/92

BORING: B-309 DEPTH: 24-26'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	116.21	114.17		116.27
BLOWS	21	22		
WET WT	141.34	138.44		167.08
DRY WT	134.52	131.84		157.48
% WATER	36.5	36.8		23.3

BORING	B-309
DEPTH	24-26'
LL	37
PL	23
PI	14
CLASS	CL

BORING: B-309 DEPTH: 37-40'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.15	115.97		116.05
BLOWS	25	26		
WET WT	136.95	141.01		167.14
DRY WT	132.13	135.52		159.36
% WATER	28.4	28.2		18.0

BORING	B-309
DEPTH	37-40'
LL	28
PL	18
PI	10
CLASS	CL

BORING: B-313 DEPTH: 33'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	114.18	115.87		116.26
BLOWS	26	27		
WET WT	137.93	138.06		156.25
DRY WT	130.43	131.08		148.99
% WATER	46.4	46.3		22.2

BORING	B-313
DEPTH	33'
LL	46
PL	22
PI	24
CLASS	CL

RMT Soils Laboratory - Atterberg Limit Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

			By	Date
Tech :	HJW	01/13/92	QC	2/7/92
Input:	TMK	02/05/92	QA	2/7/92

BORING: B-315 DEPTH: 26-27'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	114.23	115.43		115.08
BLOWS	22	22		
WET WT	136.66	139.77		159.51
DRY WT	129.86	132.42		151.58
% WATER	42.8	42.6		21.7

BORING	B-315
DEPTH	26-27'
LL	43
PL	22
PI	21
CLASS	CL

BORING: B-314 DEPTH: 17'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.67	115.30		114.75
BLOWS	24	24		
WET WT	140.51	139.05		165.70
DRY WT	134.50	133.32		157.92
% WATER	31.8	31.6		18.0

BORING	B-314
DEPTH	17'
LL	32
PL	18
PI	14
CLASS	CL

BORING: B-314 DEPTH: 26-27'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	114.68	115.91		116.07
BLOWS	22	23		
WET WT	140.16	137.40		164.49
DRY WT	132.45	130.93		154.70
% WATER	42.7	42.6		25.3

BORING	B-314
DEPTH	26-27'
LL	43
PL	25
PI	18
CLASS	CL

RMT Soils Laboratory - Atterberg Limit Determination

PROJECT: CATERPILLAR

JOB #: 2185.10

			By	Date
Tech :	HJW	01/13/92	QC	2/7/92
Input:	TMK	02/05/92	QA	2/7/92

BORING: B-310 DEPTH: 34'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	114.34	116.45		115.71
BLOWS	27	27		
WET WT	135.69	139.25		156.36
DRY WT	130.50	133.74		150.48
% WATER	32.4	32.2		16.9

BORING	B-310
DEPTH	34'
LL	32
PL	17
PI	15
CLASS	CL

BORING: B-310 DEPTH: 20-21'

	LIQUID LIMIT		OVEN LL	PLASTIC LIMIT
TARE	115.78	115.22		114.41
BLOWS	23	23		
WET WT	137.88	138.24		156.56
DRY WT	131.88	132.00		148.46
% WATER	36.9	36.8		23.8

BORING	B-310
DEPTH	20-21'
LL	37
PL	24
PI	13
CLASS	CL

Illinois Environmental Prc .ction Agency .ll Completion Report

Site #: 1438050004 County Peoria Well # +G1015

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 4984.03 Easting 4454.12

Drilling Contractor: Midwest Engineering Services Inc. Date Drilled Start: 12-17-91

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 12-17-91

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Chips

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 1 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~ Pellet): Pure Gold

Amount of bentonite: # of Bags 0.5 lbs. per bag 50

Type of Sand Pack: #30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 7.5 lbs. per bag 50

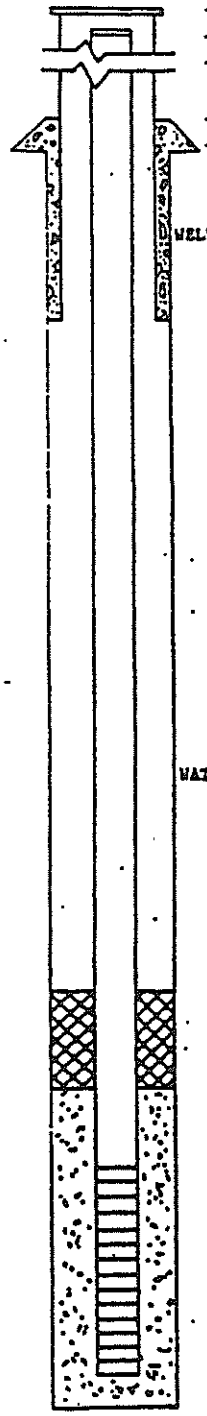
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	10 ft
Protective casing length	4 ft
Screen length	10 ft
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	30 ft
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ ____ MSL Top of Protective Casing

460 . 52 MSL Top of Riser Pipe

2 . 1 ft. Casing Stickup

458 . 4 MSL Ground Surface

457 . 4 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

BAILING, PUMPING, SURGING, COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 30 gal. ADDED None

DURATION OR VOLUME PUMPED: 45 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/OPAQUE

AFTER DEVELOPMENT CLEAR/TURBID/OPAQUE

ODOR: YES or NO

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT ____ FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME Feb. 4, 1992 DEPTH 11.8 FT

3/16/92 11.5

455 . 4 ft. Top of Seal

2 . 5 ft. Total Seal Interval

452 . 9 ft. Top of Sand

450 . 9 ft. Top of Screen

____ 10 ft. Total Screen Interval

440 . 9 ft. Bottom of Screen

440 . 4 ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2628

Douglas E. Mullen

Illinois Environmental Prot. .ion Agency

W. . Completion Report

Site #: 1438050004 County Peoria Well # TG102 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 5162.54 Easting 6279.341

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-8-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-8-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Chips

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 1 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~ Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

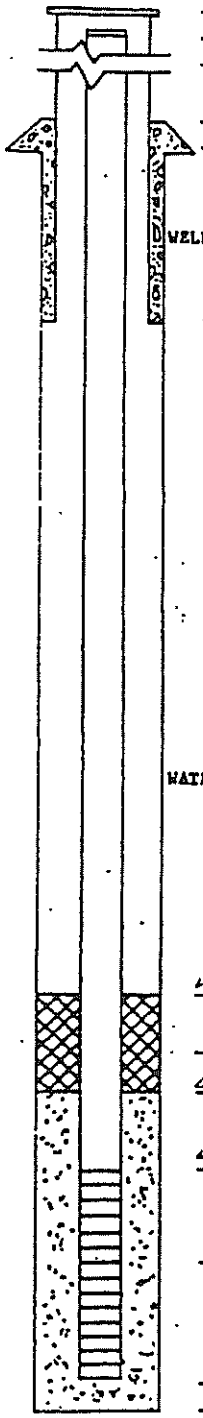
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	7.6 ft
Protective casing length	4 ft
Screen length	10 ft
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	17.6 ft
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
D of riser pipe (in)	2 inches



Elevations — .01 ft.

449.59 MSL Top of Protective Casing
MSL Top of Riser Pipe
7.6 ft. Casing Stickup

447.0 MSL Ground Surface
446.0 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

BAILING, PUMPING, SURGING, COMPRESSED AIR

OTHER

APPROXIMATE WATER VOLUME:

REMOVED 30gal. ADDED None

DURATION OR VOLUME PUMPED: 45 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/OPAQUE

AFTER DEVELOPMENT CLEAR/TURBID/OPAQUE

ODOR: YES or NO

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT: 8.2 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 6.2 FT

446.0 ft. Top of Seal

2.0 ft. Total Seal Interval

444.0 ft. Top of Sand

442.0 ft. Top of Screen

10.0 ft. Total Screen Interval

432.0 ft. Bottom of Screen
432.0 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2678

Douglas E. Mullen

Illinois Environmental Prot. ion Agency — W. Completion Report

Site #: 1438050004 County Peoria Well # +G103S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 4497.28 Easting 6276.93

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-8-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-8-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite Chips

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 2 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~ Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

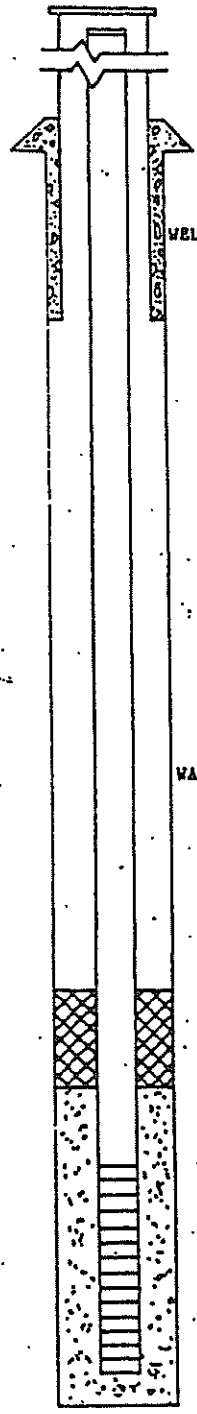
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	12 ft.
Protective casing length	4 ft.
Screen length	10 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	20 ft.
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ MSL Top of Protective Casing

450.07 MSL Top of Riser Pipe

2.3 ft. Casing Stickup

447.8 MSL Ground Surface

445.8 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

BAILING, PUMPING, SURGING, COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 30gal. ADDED None

DURATION OR VOLUME PUMPED: 45 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/OPAQUE

AFTER DEVELOPMENT CLEAR/TURBID/OPAQUE

ODOR: YES or NO

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 8.2 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME Before development 3/16/92 DEPTH 6.4 / 7.6 FT

441.8 ft. Top of Seal

2.0 ft. Total Seal Interval

439.8 ft. Top of Sand

437.8 ft. Top of Screen

10.0 ft. Total Screen Interval

427.8 ft. Bottom of Screen

427.8 ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates, Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Prot .on Agency — W Completion Report

Site #: 1438050004 County Peoria Well # +G103D

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 4569.51 Easting 6279.58

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 12-20-91

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 12-20-91

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite slurry

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 3 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Very thick slurry

Amount of bentonite: # of Bags – lbs. per bag –

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 4 lbs. per bag 50

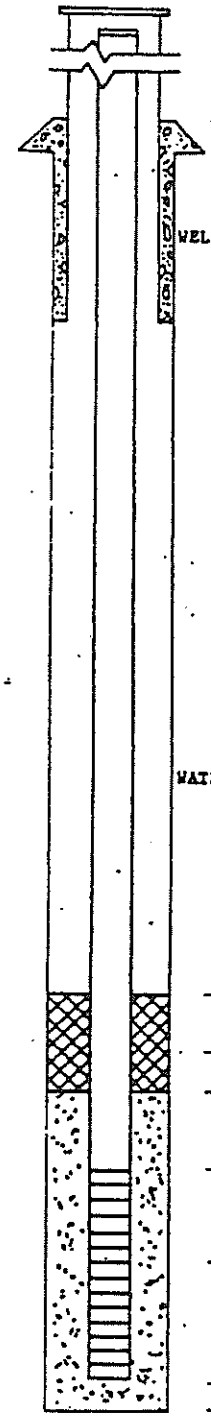
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	–			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	–			
Protective casing	–			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	33.5 ft
Protective casing length	4 ft
Screen length	5 ft
Bottom of screen to end cap	–
Top of screen to first joint	–
Total length of casing	38.5 ft.
Screen slot size	0.010 inches
% of openings in screen	–
Diameter of borehole (in)	9 inches
f riser pipe (in)	2 inches



Elevations — .01 ft.

____ MSL Top of Protective Casing
450.66 MSL Top of Riser Pipe
2.5 ft. Casing Stickup

448.2 MSL Ground Surface
446.2 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING) COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 50 gal. ADDED None

DURATION OR VOLUME PUMPED: 75 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/(OPAQUE)

AFTER DEVELOPMENT CLEAR/TURBID/(OPAQUE)

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 28.3 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 11.6 FT

421.2 ft. Top of Seal

2.0 ft. Total Seal Interval

419.2 ft. Top of Sand

417.2 ft. Top of Screen

5.0 ft. Total Screen Interval

412.2 ft. Bottom of Screen

410.2 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates, Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Prot .ion Agency — W . Completion Report

Site #: 1438050004 County Peoria Well # + G104 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3755.84 Easting 6300.99

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-10-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-10-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite pellets

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags — lbs. per bag —

Type of Bentonite Seal (~~Granular~~ Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

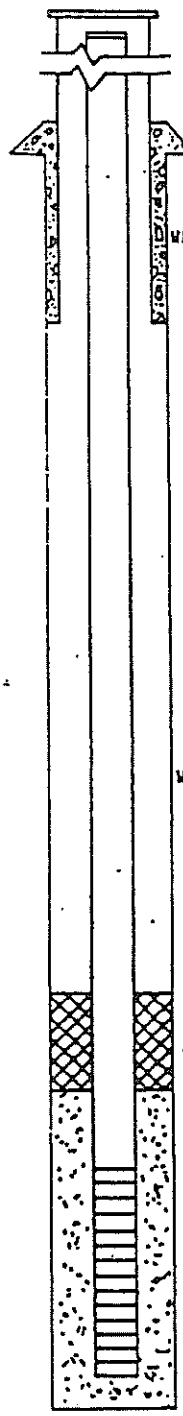
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	7.5 ft.
Protective casing length	4 ft.
Screen length	10 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	15 ft.
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

447.57 MSL Top of Protective Casing
447.57 MSL Top of Riser Pipe
2.5 ft. Casing Stickup

445.1 MSL Ground Surface
443.1 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING), COMPRESSED AIR

OTHER

APPROXIMATE WATER VOLUME:

REMOVED 30 gal. ADDED None

DURATION OR VOLUME PUMPED: 40 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/(TURBID)/OPAQUE

AFTER DEVELOPMENT CLEAR/(TURBID)/OPAQUE

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 9.4 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME Before development 3/16/92 DEPTH 6.1 / 7.1 FT

443.1 ft. Top of Seal

2.0 ft. Total Seal Interval

442.1 ft. Top of Sand

440.1 ft. Top of Screen

10.0 ft. Total Screen Interval

430.1 ft. Bottom of Screen
430.1 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates, Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Prote .on Agency — We . Completion Report

Site #: 1438050004 County Peoria Well # + G104D

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3762.03 Easting 6300.02

lling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-10-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-10-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite slurry

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 3 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~, Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 4 lbs. per bag 50

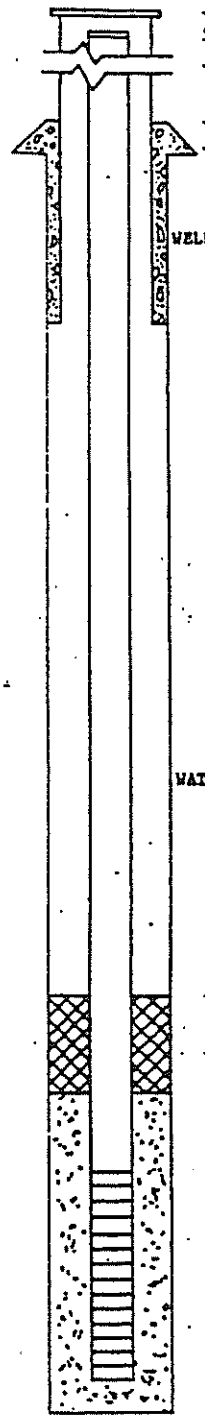
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	43 ft.
Protective casing length	4 ft.
Screen length	5 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	48 ft.
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ ____ MSL Top of Protective Casing
447 . 36 MSL Top of Riser Pipe
2 . 1 ft. Casing Stickup

445 . 3 MSL Ground Surface
443 . 3 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING) COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 60 gal. ADDED None

DURATION OR VOLUME PUMPED: 90 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/(TURBID)/OPAQUE

AFTER DEVELOPMENT CLEAR/(TURBID)/OPAQUE

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 19.5 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME Before development 3/12/92 DEPTH 11.2 / 9.6 FT

407 . 3 ft. Top of Seal

2 . 0 ft. Total Seal Interval

405 . 3 ft. Top of Sand

403 . 3 ft. Top of Screen

5 . 0 ft. Total Screen Interval

398 . 3 ft. Bottom of Screen

397 . 3 ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates, Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Prot. .ion Agency — W. Completion Report

Site #: 1438050004 County Peoria Well # G105 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3352.31 Easting 5710.69

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-13-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-13-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite chips

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 1 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~, Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: #30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

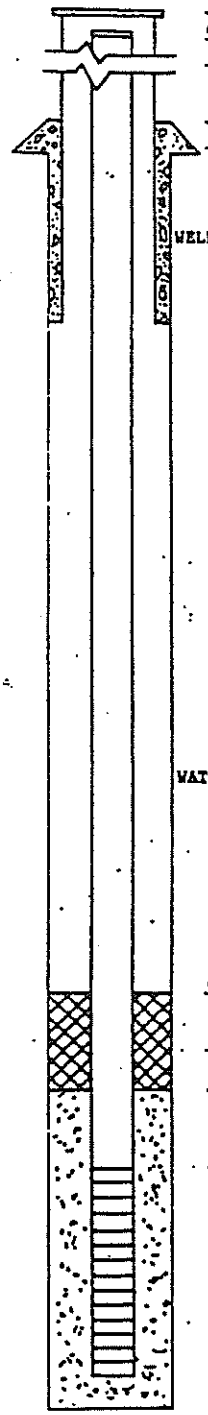
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	10 ft.
Protective casing length	4 ft.
Screen length	10 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	20.5 ft.
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ ____ MSL Top of Protective Casing

452 . 40 MSL Top of Riser Pipe

3 . 5 ft. Casing Stickup

449 . 0 MSL Ground Surface

447 . 0 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING) COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 9 gal. ADDED None

DURATION OR VOLUME PUMPED: 30 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/(TURBID)/(OPAQUE)

AFTER DEVELOPMENT CLEAR/(TURBID)/OPAQUE

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? ____ FT. OR (DRY)

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 12.4 FT

446 . 0 ft. Top of Seal

2 . 0 ft. Total Seal Interval

444 . 0 ft. Top of Sand

442 . 0 ft. Top of Screen

10 . 0 ft. Total Screen Interval

432 . 0 ft. Bottom of Screen

432 . 0 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2678

Douglas E. Mullen

Illinois Environmental Pro. .ion Agency — Completion Report

Site #: 1438050004 County: Peoria Well #: G 106 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3152.46 Easting 5001.47

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 12-18-91

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 12-18-91

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite chips

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 1 lbs. per bag 50

Type of Bentonite Seal (~~Granular~~, Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6.5 lbs. per bag 50

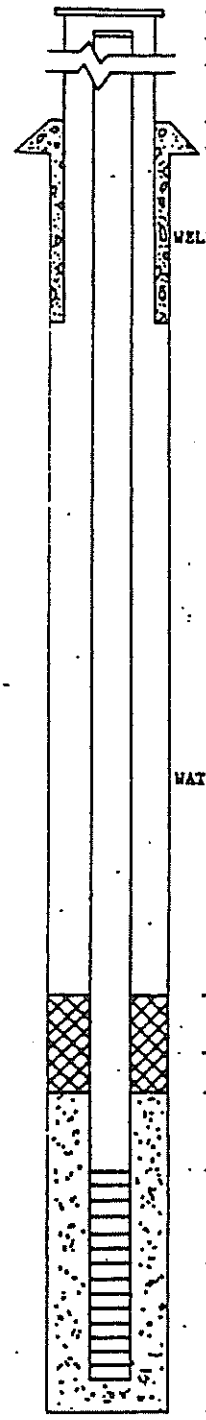
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	8 ft.
Protective casing length	4 ft
Screen length	10 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	8 ft
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ ____ MSL Top of Protective Casing

448 . 26 MSL Top of Riser Pipe

3 . 0 ft. Casing Stickup

445 . 3 MSL Ground Surface

444 . 3 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING), PUMPING, (SURGING), COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 30 gal. ADDED None

DURATION OR VOLUME PUMPED: 45 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/(TURBID)/(OPAQUE)

AFTER DEVELOPMENT CLEAR/(TURBID)/(OPAQUE)

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT: 8.2 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 9.4 FT

444 . 3 ft. Top of Seal

2 . 0 ft. Total Seal Interval

442 . 3 ft. Top of Sand

440 . 3 ft. Top of Screen

10 . 0 ft. Total Screen Interval

430 . 3 ft. Bottom of Screen

430 . 3 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates, Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Prot. .ion Agency

W... Completion Report

Site #: 1438050004 County Peoria Well # G106D

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3141.35 Easting 5003 11

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 12-18-91

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 12-18-91

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite slurry

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 5 lbs. per bag 50

Type of Bentonite Seal ~~(Granular, Pellet)~~: Very thick slurry

Amount of bentonite: # of Bags – lbs. per bag –

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 4 lbs. per bag 50

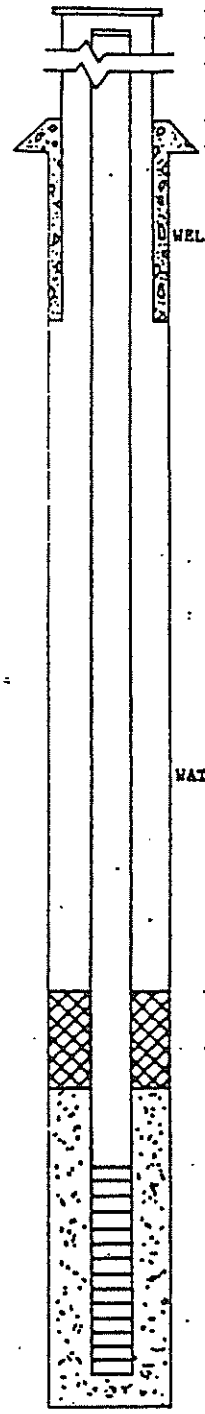
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	–			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	–			
Protective casing	–			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	41.6 ft
Protective casing length	4 ft.
Screen length	5 ft
Bottom of screen to end cap	–
Top of screen to first joint	–
Total length of casing	46.6 ft
Screen slot size	0.010 inches
% of openings in screen	–
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations – .01 ft.

____ MSL Top of Protective Casing

448.24 MSL Top of Riser Pipe

3.6 ft. Casing Stickup

445.6 MSL Ground Surface

444.6 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING), PUMPING, (SURGING), COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 60 gal. ADDED ____

DURATION OR VOLUME PUMPED: 90 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID (OPAQUE)

AFTER DEVELOPMENT CLEAR/TURBID (OPAQUE)

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 12.2 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 10.5 FT

410.6 ft. Top of Seal

2.0 ft. Total Seal Interval

408.6 ft. Top of Sand

406.6 ft. Top of Screen

5.0 ft. Total Screen Interval

401.6 ft. Bottom of Screen

400.6 ft. Bottom of Borehole

Completed by: B Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2628

Douglas E. Mullen

Illinois Environmental Prot. .ion Agency — W. Completion Report

Site #: 1438050004 County: Peoria Well #: G107 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 2992.10 Easting 4369.21

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 12-17-91

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 12-17-91

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite pellets

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags — lbs. per bag —

Type of Bentonite Seal (~~Granular~~, Pellet): Volclay

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

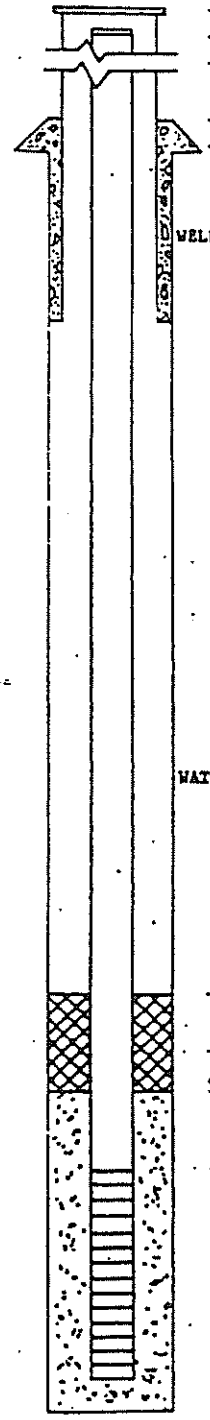
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	Type	Type
Riser coupling joint	—		G107S REPLACED BY R107S SEE ATTACH LOG	
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			

Measurements

to .01 ft. (where applicable)

Riser pipe length	8 ft.
Protective casing length	4 ft.
Screen length	10 ft.
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	18 ft.
Screen slot size	0.010 inches
% of openings in screen	—
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

—	MSL Top of Protective Casing
447.36	MSL Top of Riser Pipe
2.9	ft. Casing Stickup
444.5	MSL Ground Surface
443.5	ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING) COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 30 gal. ADDED ____

DURATION OR VOLUME PUMPED: 40 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/(OPAQUE)

AFTER DEVELOPMENT CLEAR/TURBID/(OPAQUE)

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 6.5 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 3/16/92 DEPTH 7.4 FT

443.5	ft. Top of Seal
2.0	ft. Total Seal Interval
441.5	ft. Top of Sand
439.5	ft. Top of Screen
10.0	ft. Total Screen Interval
429.5	ft. Bottom of Screen
429.0	ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2678

Douglas E. Mullen

Illinois Environmental Prote. .ion Agency

We . Completion Report

Site #: 1438050004 County Peoria Well # G 108 S

Site Name: Caterpillar, Inc. Mapleton Plant Grid Coordinate: Northing 3854.16 Easting 3849.06

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start: 1-14-92

Driller: T. Bartholemew Geologist: R. Welch (RMT, Inc.) Date Completed: 1-14-92

Drilling Method: Hollow-stem augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Concrete

Type of Annular Sealant: Bentonite slurry

Amount of cement: # of bags ____ lbs. per bag ____

Amount of bentonite: # of bags 35 lbs. per bag 50

Type of Bentonite Seal (Granular, Pellet): Very thick slurry

Amount of bentonite: # of Bags – lbs. per bag –

Type of Sand Pack: # 30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 6 lbs. per bag 50

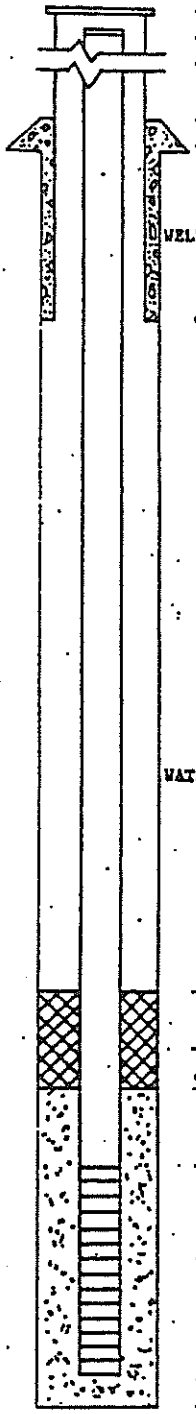
Well Construction Materials

	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	–			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	–			
Protective casing	–			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	30 ft.
Protective casing length	4 ft
Screen length	10 ft.
Bottom of screen to end cap	–
Top of screen to first joint	–
Total length of casing	40 ft.
Screen slot size	0.010 inches
% of openings in screen	–
Diameter of borehole (in)	9 inches
ID of riser pipe (in)	2 inches



Elevations — .01 ft.

____ ____ MSL Top of Protective Casing

464 . 04 MSL Top of Riser Pipe

2 . 9 ft. Casing Stickup

461 . 1 MSL Ground Surface

460 . 1 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

(BAILING) PUMPING, (SURGING) COMPRESSED AIR

OTHER ____

APPROXIMATE WATER VOLUME:

REMOVED 45 gal. ADDED ____

DURATION OR VOLUME PUMPED: 60 min.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/(TURBID)/OPAQUE

AFTER DEVELOPMENT CLEAR/(TURBID)/OPAQUE

ODOR: YES or (NO)

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT? 27.9 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME Before development 3/16/92 DEPTH 23.9 FT 23.9

438 . 2 ft. Top of Seal

2 . 0 ft. Total Seal Interval

436 . 2 ft. Top of Sand

434 . 1 ft. Top of Screen

10 . 0 ft. Total Screen Interval

424 . 1 ft. Bottom of Screen

424 . 1 ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates Douglas E. Mullen Ill. registration # 2628

Illinois Environmental Protection Agency

Well Completion Report

Site #: 1438050004 County: Peoria Well #: P109S

Site Name: Caterpillar, Inc., Mapleton Plant Grid Coordinate: Northing 4649.20 Easting 4088.58

Drilling Contractor: Midwest Engineering Services, Inc. Date Drilled Start:

Driller: T. Bartholomew Geologist: R. Welch (RMT, Inc.) Date Completed 6-29-92

Drilling Method: Hollow-stem Augers Drilling Fluids (type): None

Annular Space Details

Type of Surface Seal: Bentonite Chips - Med.

Type of Annular Sealant: Bentonite Chips - Med.

Amount of cement: # of bags — lbs. per bag —

Amount of bentonite: # of bags — lbs. per bag —

Type of Bentonite Seal (Granular, Pellet): American Colloid Co. - Pure Gold Bentonite Chips

Amount of bentonite: # of Bags 1 lbs. per bag 50

Type of Sand Pack: #30

Source of Sand: "Red Flint"

Amount of Sand: # of bags 4 lbs. per bag 50

Well Construction Materials

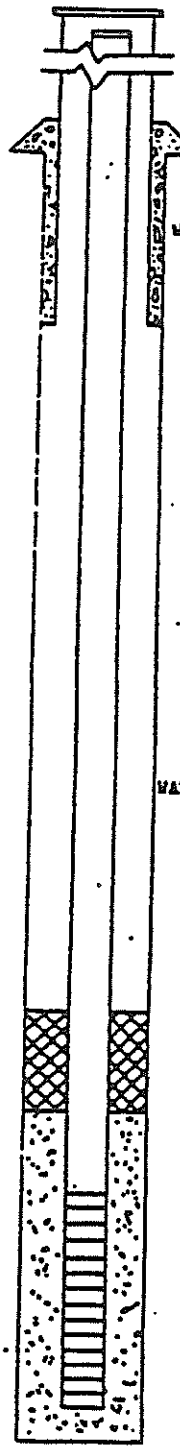
	Stainless Steel Specify Type	Teflon Specify Type	PVC Specify Type	Other Specify Type
Riser coupling joint	—			
Riser pipe above w.t.	304			
Riser pipe below w.t.	304			
Screen	304			
Coupling joint screen to riser	—			
Protective casing	—			Steel

Measurements

to .01 ft. (where applicable)

Riser pipe length	10 feet
Protective casing length	4 feet
Screen length	10 feet
Bottom of screen to end cap	—
Top of screen to first joint	—
Total length of casing	20 feet
Screen slot size	0.010 inches
# of openings in screen	—
Diameter of borehole (in)	9 inches
D of riser pipe (in)	2 inches

Elevations — .01 ft.



452.09 MSL Top of Protective Casing

~2.0 MSL Top of Riser Pipe (ft. Casing Stickup)

~450.0 MSL Ground Surface

449.0 ft. Top of annular sealant

WELL DEVELOPMENT

METHODS

BAILING PUMPING, SURGING COMPRESSED AIR

OTHER

APPROXIMATE WATER VOLUME:

REMOVED 45 gal. ADDED

DURATION OR VOLUME PUMPED: 1 hr.

WATER CLARITY:

BEFORE DEVELOPMENT CLEAR/TURBID/OPAQUE

AFTER DEVELOPMENT CLEAR/TURBID/OPAQUE

ODOR: YES or NO

WATER LEVEL SUMMARY

DEPTH FROM TOP OF CASING AFTER DEVELOPMENT: 12.05 FT. OR DRY

OTHER MEASUREMENTS (T.O.C.):

DATE/TIME 6-30-92 DEPTH 9.94 FT.

447.0 ft. Top of Seal

2.0 ft. Total Seal Interval

445.5 ft. Top of Sand

443.0 ft. Top of Screen

10.0 ft. Total Screen Interval

433.0 ft. Bottom of Screen

433.0 ft. Bottom of Borehole

Completed by: B. Socha (RMT, Inc.) Surveyed by: Daily + Associates Ill. registration # 2628

Douglas E. Mullen

APPENDIX C

TEST WELL STRATIGRAPHIC LOG

February 10, 1965
GEJaeger:mcw

MEMO TO FILE

1330J Client-supplied Documents

Foundry Site
Test Wells

Log of Test Well -- 37 + 50 E and 38 + 00 N

0 - 9'	Brown soft clay
9 - 10'	Coarse gravel and driftwood
10 - 35'	Gray clay
35 - 40'	Sand & clay (50%) 1-1/2" mud loss 10 lb.
40 - 41'	Lime ledge or boulder
41 - 61'	Blue shale, few lime ledges
61 - 75'	Very hard black shale - 4 min/ft.
75 - 77'	Black lime
77 - 80'	Coal
80 - 93'	Gray shale
93 - 95'	Gray sandstone - hard
95 - 110'	Gray shale, few streaks of coal
110 - 114'	Coal
114 - 130'	Gray shale, few lime lenes
130 - 138'	Coal
138 - 155'	Gray shale
155 - 163'	White shale, few sandstone lenes
163 - 175'	Sandstone 2 min./ft.
175 - 190'	Shale with sandstone lenes
190 - 205'	Shale
205 - 208'	Coal with some shale
208 - 220'	Shale
220 - 239'	Light and dark shale
239 - 255'	Lime
255 - 260'	Limestone
260 - 290'	Silty, dirty, sandstone
290 - 310'	Sandy gray shale

(final depth)

APPENDIX D

CRA SOIL AND GROUNDWATER SAMPLING PROCEDURES

APPENDIX D
SOIL AND GROUNDWATER SAMPLING PROCEDURES

D.1 EQUIPMENT DECONTAMINATION

Before initiating drilling/sampling at each location, downhole drilling equipment was decontaminated to prevent potential cross-contamination. Decontamination was accomplished by flushing and wiping the components to remove all visible sediments followed by steam cleaning or high pressure washing with potable water (using a brush if necessary) to remove particulate matter and surface films.

Decontamination of sampling equipment was performed as follows:

i) washed with potable water and Alconox™ using a brush, as necessary, to remove all visible foreign matter

ii) rinsed thoroughly with distilled water

iii) inspected following final rinse to verify that it was free of soil and other solid material that could contribute to possible cross-contamination

iii) allowed to air dry on a clean plastic sheet or aluminum foil as long as possible

Soil sampling equipment was decontaminated before field use and after each sample was collected to prevent potential cross-contamination between samples.

D.2 SOIL SAMPLING USING DIRECT-PUSH TECHNOLOGY

Soil borings were advanced using a direct-push technology rig (DPT) equipped with a 4-foot long core sampler (i.e., Geoprobe® or similar). Soil samples were collected in 1-inch diameter acetate liners. One soil sample was obtained for laboratory analysis from each 2-foot interval, until the underlying clay unit was contacted, resulting in collection of 2 to 5 individual soil samples from each soil boring.

Soil sample collection procedures are summarized below:

i) A new pair of disposable nitrile gloves were donned for handling each sample.

ii) Prior to use at each sampling location, sampling equipment was decontaminated as described in the previous section.

iii) The DPT sampler was equipped with a 4-foot long core sampler fitted with a clean acetate liner.

iv) The core sampler was advanced through the target interval and the core sampler was retrieved and the acetate liner removed and cut lengthwise to expose the soil sample.

v) The core run was examined and described by the sampling technician, described in accordance with the Unified Soil Classification System (USCS), and examined for evidence of visual impact. Field observations were recorded in the field log or on data sheets.

vi) The soil sample were collected from each 2-foot interval above the underlying clay layer, placed in a laboratory-supplied containers, labeled, and stored in a cooler containing ice.

vii) The procedure described in Items (i) and (vi) above was repeated until the top of the underlying clay unit was encountered.

viii) Upon completion of the sampling activities, the borehole was backfilled with soil cuttings or a mixture of borehole cuttings and bentonite chips.

D.3 MONITORING WELL INSTALLATION

Hollow stem auger (HSA) drilling techniques were used to install groundwater monitoring wells. The HSA rig was equipped with 4.25-inch inside diameter HSAs and continuous split-spoon samples were collected during borehole advancement for stratigraphic description.

Specific installation protocols for the monitoring wells and piezometers are described below:

i) The borehole was advanced to the target depth.

ii) A nominal 2-inch diameter (No. 010 slot) schedule 40 polyvinyl chloride (PVC) pre-packed well screen, 10 feet in length, attached to a sufficient length of 2-inch diameter schedule 40 PVC riser pipe to extend to the surface was placed into the borehole.

iii) A filter sand pack consisting of silica sand will be installed to a minimum height of 2 feet above the top of the screen as the HSAs were removed from the borehole.

iv) The borehole annulus was sealed to within 2 feet of the surface using pure bentonite grout.

vi) A protective cover was installed over the well head and cemented into place and the well head was fitted with a water-tight, lockable cap.

D.4 MONITORING WELL DEVELOPMENT PROTOCOLS

In order to establish good hydraulic communication with the water bearing unit and reduce the volume of sediment in the monitoring well, development was conducted in accordance with the procedure outlined below:

i) Monitoring wells were surged using a precleaned surge block.

ii) Water was purged from the monitoring well using a peristaltic pump.

iii) Groundwater was collected at regular intervals, and the pH, temperature, and conductivity was measured using field instruments. These instruments were calibrated according to the manufacturer's specifications. Additionally, observations such as color and turbidity of the purged water were recorded.

iv) Development continued until the water in the well was clear or the well was purged dry.

D.5 GROUNDWATER SAMPLING PROTOCOLS

Groundwater samples were collected f in accordance with the protocols specified below:

i) A new pair of disposable nitrile gloves (or equivalent) will be used for each sample.

ii) The depth to water in each well was measured to the nearest 0.01 foot using an electronic water level meter.

iii) Prior to sampling, each well was purged using a peristaltic pump.

iv) Groundwater samples were pumped directly into laboratory-supplied containers, labeled, capped, and placed in a cooler containing ice pending shipment to the project laboratory.

APPENDIX E

CRA SOIL BORING STRATIGRAPHIC LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-1
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.2					
	SP-SAND, fine, brown/black, dry			1GP			
	CL-CLAY, low plasticity, brown, dry	457.2					
2.5			NATIVE CUTTINGS	2GP			
	SP-SAND, fine, black, dry	455.2					
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	– water table	451.2					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-2
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.0					
	SW-SAND, some fine gravel, fine to medium, light brown, dry			1GP			
	SP-SAND, fine, black, dry	457.0					
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
				4GP			
7.5	SP-SAND, coarse, white, moist	451.5					
	- water table	451.0					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-3
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.2					
	TOPSOIL and GRAVEL						
	SP-SAND, fine, brown, dry	458.2		1GP			
	GW-GRAVEL, coarse, gray, dry	457.2					
2.5							
	SW-SAND, some fine gravel, medium to fine, brown, dry	456.2	NATIVE CUTTINGS	2GP			
5.0	SP-SAND, fine to medium, brown with several small (3-inches) layers of clay, dry	454.2	1.25" Ø GEOPROBE	3GP			
7.5				4GP			
	CL-CLAY, trace fine sand, trace fine gravel, medium plasticity, damp	450.2					
10.0	- water table			5GP			
12.5				6GP			
	END OF HOLE @ 13.0ft BGS	446.2					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-4
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.8					
	SP-SAND, fine, black, dry			1GP			
2.5			NATIVE CUTTINGS	2GP			
	CL-CLAY, trace fine sand, gray/brown, dry	455.3					
5.0				3GP			
	SW-SAND, trace fine gravel, fine to medium, gray, dry	452.6	1.25" Ø GEOPROBE				
7.5				4GP			
				5GP			
10.0	- water table			6GP			
	END OF HOLE @ 12.0ft BGS	446.8					
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-5
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	461.9					
	SP-SAND, trace fine gravel, fine, black, dry			1GP			
	SP-SAND, fine, black, dry	459.9					
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	- water table			5GP			
10.0	END OF HOLE @ 10.0ft BGS	451.9					
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-6
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.7					
	TOPSOIL						
	CL-CLAY, brown, dry	457.7		1GP			
	SP-SAND, fine, black, dry	456.7					
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	- water table	450.7					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-7
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.9					
	SP-SAND, fine, black, dry			1GP			
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	– water table	450.9					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE: REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-8
DATE COMPLETED: DECEMBER 1, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.2					
	CL-CLAY, some medium to coarse gravel, brown, dry			1GP			
2.5							
	SP-SAND, fine, gray/black, dry	456.2	NATIVE CUTTINGS	2GP			
5.0							
			1.25" Ø GEOPROBE	3GP			
7.5							
	- water table			4GP			
	END OF HOLE @ 9.0ft BGS	450.2					
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-9
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.4					
	CL-CLAY, trace fine gravel, trace fine sand/brown, dry			1GP			
2.5	SP-SAND, fine, dark red/black, dry	455.9	NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	END OF HOLE @ 8.0ft BGS	450.4					
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-10
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	483.2					
	GW-GRAVEL, some medium to fine sand, fine to medium, gray/brown, dry						
	SP-SAND, fine, black, dry	482.2		1GP			
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	- water table	455.2					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-11
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	462.5					
	CL-CLAY, some medium gravel, brown, dry			1GP			
2.5							
	SP-SAND, fine, black, dry	459.5	NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	- water table			5GP			
10.0				6GP			
	END OF HOLE @ 11.0ft BGS	451.5					
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-12
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.3					
	SP-SAND, fine, dark brown, dry			1GP			
2.5	- black		NATIVE CUTTINGS	2GP			
5.0	CL-CLAY, trace fine sand, brown, dry	454.3		3GP			
	- no sand		1.25" Ø GEOPROBE	4GP			
7.5	- water table	451.3					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-13
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	461.5					
	CL-CLAY with some fine sand, trace fine gravel, brown, dry						
	SP-SAND, fine, black	460.5		1GP			
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
			1.25" Ø GEOPROBE				
7.5				4GP			
	- water table	453.5					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-14
DATE COMPLETED: DECEMBER 2, 1998
DRILLING METHOD: 3 1/4" HSA/GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: JEFF FLAMINIO

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.2					
	CL-CLAY, low plasticity, brown, dry			1GP			
2.5			NATIVE CUTTINGS	2GP			
5.0				3GP			
	- some fine sand		1.25" Ø GEOPROBE				
7.5				4GP			
				5GP			
10.0	- water table	448.2					
	END OF HOLE @ 10.0ft BGS						
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-15
DATE COMPLETED: FEBRUARY 23, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: RANDY RADKE

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.9					
	SP-SAND, medium dense, fine to medium grained, black, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	– wet	450.9					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-16
DATE COMPLETED: FEBRUARY 23, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: RANDY RADKE

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	461.9					
	SP-SAND, medium dense, fine to medium grained, black, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet	453.9					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-17
DATE COMPLETED: FEBRUARY 23, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: RANDY RADKE

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	458.8					
	CL-CLAY, trace fine gravel, low plasticity, brown, dry			1GP			N/A
	– some fine sand, trace fine gravel, gray						
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	– wet	450.8					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-18
DATE COMPLETED: FEBRUARY 23, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: RANDY RADKE

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	459.0					
	CL-CLAY, some fine sand, low plasticity, brown, dry			1GP			N/A
2.5							
	SP-SAND, medium dense, fine to medium grained, black, dry	458.0	BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0	- gray		1.25" Ø GEOPROBE	3GP			N/A
	CL-CLAY, trace fine gravel, low plasticity, brown to gray	452.0		4GP			N/A
7.5	- wet	451.0					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-19
DATE COMPLETED: FEBRUARY 23, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: RANDY RADKE

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	GROUND SURFACE	457.8					
	SP-SAND, medium dense, fine to medium grained, black, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet	449.8					
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 5600E, 5100N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-20
DATE COMPLETED: SEPTEMBER 13, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry						
	SP-SAND, fine, black, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet			5GP			N/A
10.0	END OF HOLE @ 10.0ft BGS						
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 5900E, 5200N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-21
DATE COMPLETED: SEPTEMBER 13, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry						
	SP-SAND, fine, black, dry			1GP			N/A
-2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
-5.0				3GP			N/A
			1.25" Ø GEOPROBE				
-7.5				4GP			N/A
	- wet			5GP			N/A
-10.0	END OF HOLE @ 10.0ft BGS						
-12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4400E, 5700N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-22
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE	4GP			N/A
7.5	- wet						
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4400E, 6000N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-23
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet						
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4400E, 6200N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-24
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet						
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4200E, 5700N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-25
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5	SP-SAND, fine, black, dry		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5	- wet			4GP			N/A
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4000E, 5100N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-26
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0	SP-SAND, fine, black, dry			3GP			N/A
			1.25" Ø GEOPROBE	4GP			N/A
7.5	- wet END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3700E, 5509N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-27
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
	SP-SAND, fine, black, dry						
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet						
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3700E, 5700N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-28
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	SC-CLAY, some fine sand, trace fine gravel, brown, dry			1GP			N/A
2.5	SP-SAND, fine, brown, dry		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0	SC-SAND, some clay, fine, brown, dry			3GP			N/A
	SP-SAND, fine, black, dry		1.25" Ø GEOPROBE	4GP			N/A
7.5	- wet			5GP			N/A
10.0	END OF HOLE @ 10.0ft BGS						
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3600E, 5600N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-29
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	SC-CLAY, some fine sand, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
	SP-SAND, fine, red/black, dry						
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5				4GP			N/A
	- wet			5GP			N/A
10.0	END OF HOLE @ 10.0ft BGS						
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3725E, 5600N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-30
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	SC-CLAY, some fine sand, trace fine gravel, brown, dry			1GP			N/A
2.5			BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
	SP-SAND, fine, black, dry						
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
				4GP			N/A
7.5	- wet						
	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3600E, 5800N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-31
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	SC-CLAY, some fine sand, trace fine gravel, brown, dry			1GP			N/A
2.5	SP-SAND, fine, black, dry		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
7.5	- wet END OF HOLE @ 8.0ft BGS			4GP			N/A
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3700E, 5900N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-32
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5	SP-SAND, fine, black,dry		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0				3GP			N/A
			1.25" Ø GEOPROBE				
	- wet			4GP			N/A
7.5	END OF HOLE @ 8.0ft BGS						
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 3800E, 5800N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-33
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, trace fine gravel, brown, dry			1GP			N/A
2.5	SP-SAND, fine, black,dry		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0			1.25" Ø GEOPROBE	3GP			N/A
	- wet END OF HOLE @ 6.0ft BGS						
7.5							
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: 4000E, 5800N
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: B-34
DATE COMPLETED: SEPTEMBER 14, 1999
DRILLING METHOD: GEOPROBE
CRA SUPERVISOR: JOHN HARGENS
DRILLER: DAVID MORRIS

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	CL-CLAY, some fine sand, dark brown, dry			1GP			N/A
2.5	SP-SAND, fine, black		BENTONITE CHIPS AND SOIL CUTTINGS	2GP			N/A
5.0			1.25" Ø GEOPROBE	3GP			N/A
	- wet END OF HOLE @ 6.0ft BGS						
7.5							
10.0							
12.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: SB-99A
DATE COMPLETED: NOVEMBER 15, 1999
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: WALT POCHRON
DRILLER: RANDY RADKEY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOPSOIL AND VEGETATION						
	CL-CLAY, little silt, trace of gravel, hard, slightly moist, brown (FILL)			1SS		48	
	- 4" gravel seam						
2.5	SP-SAND, fine to medium grained, dense, dark brown to black, moist (FILL)			2SS		84	
	- sand becomes brown to tan in color to 4.2'		BENTONITE				
	- trace slag						
5.0				3SS		63	
	- occasional brown sand seams or pockets		8" ø BOREHOLE				
7.5				4SS		29	
				5SS		53	
10.0							
	- wet gravel seam						
	- sand becomes wet			6SS		26	
	- saturated						
12.5				7SS		29	
15.0				8SS		14	
				9SS		23	
17.5	SW-SAND, fine to coarse grained, little silt and gravel, gray to brown, saturated (NATIVE)						
	CL-CLAY, some silt, stiff, moderate plasticity, greenish gray, moist to wet			10SS		10	
20.0	END OF HOLE @ 20.0ft BGS						
22.5							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: SB-1
DATE COMPLETED: NOVEMBER 18, 1999
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: WALT POCHRON
DRILLER: RANDY RADKEY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	SAMPLE PID (ppm)
	TOPSOIL AND VEGETATION						
	GRAVEL						
	SP-SAND, trace of silt and slag, loose, black, slightly moist (FILL)			1SS		18	
2.5	- yellow staining						
	SP-SAND, trace of gravel, fine to medium grained, grayish brown, moist (FILL)		BENTONITE	2SS		6	
5.0	SP-SAND, trace of silt and slag, loose black, moist (FILL)		8" Ø BOREHOLE	3SS		8	
7.5	CL-CLAY, little silt, firm, wet, greenish gray			4SS		2	
				5SS		4	
	END OF HOLE @ 10.0ft BGS						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-35
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	Fill, clay, trace fine grained gravel, brown, damp						
2	FILL, sand, fine grained, black	2.0		1	P/S		
4	- wet at 4.0ft BGS		Backfilled with cuttings and bentonite chips				
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 4/7/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-36
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
2	FILL, clay, trace fine grained gravel, brown	2.5		1	P/S		
4	FILL, sand, fine grained, black - wet at 4.0ft BGS		Backfilled with cuttings and bentonite chips				
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 4/7/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-37
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel and silt, brown			1	P/S		
2							
	FILL, sand, fine grained, black	3.0					
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
	CL CLAY, trace gravel, brown	7.5					
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-40
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace fine grained gravel, brown			1	P/S		
2		2.5					
	FILL, sand, fine grained, black, damp		Backfilled with cuttings and bentonite chips				
4		4.5					
	FILL, slag	4.7					
	CL CLAY, silty, trace fine grained gravel, brown			2	P/S		
6							
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-41
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace fine gravel, brown			1	P/S		
2							
	FILL, sand, fine grained, black, damp	3.5	Backfilled with cuttings and bentonite chips				
4							
6				2	P/S		
	CL CLAY, silty, trace fine grained gravel, brown, damp	7.0					
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-42
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, some fine grained sand, trace gravel and silt, brown		Backfilled with cuttings and bentonite chips	1	P/S		
2							
4				2	P/S		
6	FILL, sand, fine grained, brown	6.0					
	- wet at 7.0ft BGS	7.0	∇				
	END OF BOREHOLE @ 7.0ft BGS						
	Refusal at 7.0ft BGS						
8							
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-43
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, some fine grained sand, trace gravel and silt, brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
	FILL, sand, fine grained, brown	4.5					
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-44
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, some gravel, trace silt, brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6	- brown gray, wet at 6.5ft BGS			2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-45
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, some gravel, trace silt, brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- gray at 7.5ft BGS						
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-46
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, trace fine grained gravel, brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6	- damp at 6.0ft BGS			2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-47
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, some silt, trace fine grained gravel, gray/brown, dry			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6	- no silt at 6.0ft BGS			2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-48
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, trace fine grained gravel, brown						
2	- silty from 2.0 to 3.0ft BGS			1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- damp at 7.0ft BGS						
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-49
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, some silt, trace fine grained gravel, brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 4/7/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-50
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, trace fine grained gravel, brown						
2	- silty from 2.0 to 3.0ft BGS			1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- damp at 7.0ft BGS						
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-51
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace fine grained gravel. brown			1	P/S		
2		2.5					
	FILL, sand, fine grained, black, damp						
4							
6			Backfilled with cuttings and bentonite chips	2	P/S		
	- wet at 7.0ft BGS						
8							
10				3	P/S		
12	END OF BOREHOLE @ 12.0ft BGS	12.0					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 4/7/05
CHEMICAL ANALYSIS ◯

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Harriss Drilling

HOLE DESIGNATION: B-52
DATE COMPLETED: April 7, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	CL CLAY, trace fine grained gravel and fine grained sand, brown						
2	- no sand at 2.0ft BGS			1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-53
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
2	FILL, silt/clay, trace gravel, brown		1	P/S		
	FILL, sand, fine grained, gray	3.5				
4						
6	CL CLAY, trace gravel, brown	6.0	2	P/S		
	- wet at 7.5ft BGS					
8	END OF BOREHOLE @ 8.0ft BGS	8.0				
10						
12						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-54
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, silt/clay, trace gravel, brown						
2	FILL, sand, fine grained, black	2.0		1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-55
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay/gravel, brown						
	FILL, sand, fine grained, black	1.0					
2				1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-56
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, brown	1.5					
2	FILL, sand, fine grained, black			1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC LOG
(OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-57
DATE COMPLETED: March 2, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, brown					
	FILL, sand, fine grained, black	1.0				
2			1	P/S		
4						
	- red and yellow from 5.0 to 6.0ft BGS					
6			2	P/S		
	- wet at 7.0ft BGS					
8	END OF BOREHOLE @ 8.0ft BGS	8.0				
10						
12						

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/2/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-58
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, brown						
	FILL, sand, fine grained, black and brown	1.0					
2	CL CLAY, trace gravel, gray brown	2.0		1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-59
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, dark brown	1.5					
2	FILL, sand, fine grained, black			1	P/S		
4			Backfilled with cuttings and bentonite chips				
	CL CLAY, some sand, gray	5.0					
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-60
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, brown						
	FILL, sand, fine grained, black	1.0					
2				1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/1/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-61
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, light brown						
	FILL, sand, fine grained, black	1.0					
2				1	P/S		
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS		∇				
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/1/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-62
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
2	FILL, clay, fine grained sand, black brown			1	P/S		
4							
	FILL, sand, fine grained, brown	5.5					
6			Backfilled with cuttings and bentonite chips	2	P/S		
8							
10	- wet at 10.0ft BGS		∇	3	P/S		
12	END OF BOREHOLE @ 12.0ft BGS	12.0					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/1/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-63
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, dark gray	1.5					
2	FILL, sand, fine grained, black	3.5		1	P/S		
4	CL CLAY, trace gravel, brown		Backfilled with cuttings and bentonite chips				
6				2	P/S		
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-64
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, gravel, brown						
	FILL, sand, fine grained, brown	1.0					
2				1	P/S		
4							
	- black at 5.5ft BGS						
6			Backfilled with cuttings and bentonite chips	2	P/S		
8	CL CLAY, trace gravel, gray brown	8.0					
10				3	P/S		
12	END OF BOREHOLE @ 12.0ft BGS	12.0					

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-65
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, brown			1	P/S		
2							
4	FILL, sand, fine grained, brown	4.0	Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- wet at 7.0ft BGS						
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ∇ 3/1/05
CHEMICAL ANALYSIS ⬭

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: Caterpillar-Mapleton
PROJECT NUMBER: 013307
CLIENT: Caterpillar Inc.
LOCATION: Mapleton, Illinois
DRILLING CONTRACTOR: Terra-Trace

HOLE DESIGNATION: B-66
DATE COMPLETED: March 1, 2005
DRILLING METHOD: Geoprobe
FIELD PERSONNEL: J. Hargens

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (ft)	SAMPLE 'N' VALUE
	FILL, clay, trace gravel, gray brown			1	P/S		
2							
4			Backfilled with cuttings and bentonite chips				
6				2	P/S		
	- damp at 7.0ft BGS						
8	END OF BOREHOLE @ 8.0ft BGS	8.0					
10							
12							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS

APPENDIX F

CRA MONITORING WELL
STRATIGRAPHIC AND INSTRUMENTATION LOGS

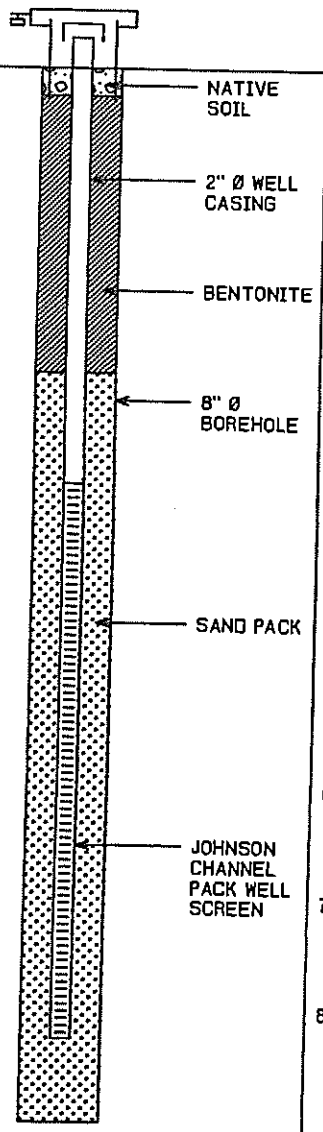
STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: MW-99A
DATE COMPLETED: NOVEMBER 15, 1999
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: WALT POCHRON
DRILLER: RANDY RADKEY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL
	GRAVEL (FILL)	
2.5		
	CL-CLAY, little silt and gravel, stiff, gray, slightly moist	
5.0		
	SP-SAND, trace of silt, fine to medium grained, medium dense, brown, moist (NATIVE)	
	- as above with trace of coarse grains and dense	
7.5		
10.0		
	- saturated, sand becomes gray in color and fine to medium grained, little coarse grained (NATIVE)	
12.5		
15.0		
	CL-CLAY, some silt, firm, moderate plasticity, greenish gray, wet	
17.5		
	END OF HOLE @ 19.0ft BGS	
20.0		
22.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened Interval:
7.5 to 17.5ft BGS
Length: 10.0ft
Diameter: 2"
Slot Size: #8
Material: PVC
Sand Pack:
5.5 to 19.0ft BGS
Material: Sand #30

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS		43	
2SS		13	
3SS		28	
4SS		40	
5SS		38	
6SS		30	
7SS		6	
8SS		23	

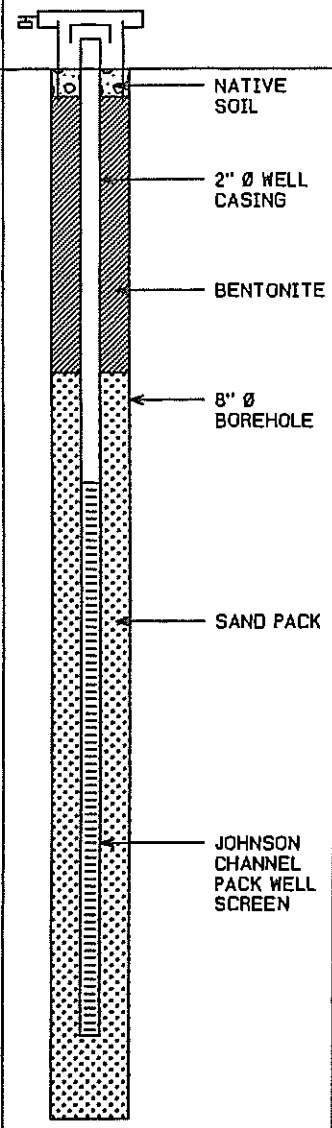
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ⊻ STATIC WATER LEVEL ⊻

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: MW-99B
DATE COMPLETED: NOVEMBER 16, 1999
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: WALT POCHRON
DRILLER: RANDY RADKEY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL	MONITOR INSTALLATION	SAMPLE NUMBER	SAMPLE STATE	SAMPLE 'N' VALUE	PID (ppm)
	TOPSOIL						
	SP-SAND, fine to medium grained, dense, black to dark brown, slightly moist (FILL)			1SS		30	
-2.5	- trace of silt, occational yellow or orange pockets of sand			2SS		>50	
-5.0				3SS		40	
	- as above with trace of slag metal fragments			4SS		40	
-7.5	- medium dense, moist			5SS		18	
-10.0	- wet			6SS		5	
	CL-CLAY, some silt, trace of sand, firm, moderate plasticity, greenish gray, wet						
-12.5	- 3" saturated sand seam at 11.7 feet			7SS		15	
	- as above but silty						
-15.0				8SS		12	
-17.5				9SS		12	
	END OF HOLE @ 19.0ft BGS						
-20.0							
-22.5							



SCREEN DETAILS
Screened interval:
7.0 to 17.0ft BGS
Length: 10.0ft
Diameter: 2"
Slot Size: #8
Material: PVC
Sand Pack:
5.0 to 19.0ft BGS
Material: Sand #30

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▽

STRATIGRAPHIC AND INSTRUMENTATION LOG
(OVERBURDEN)

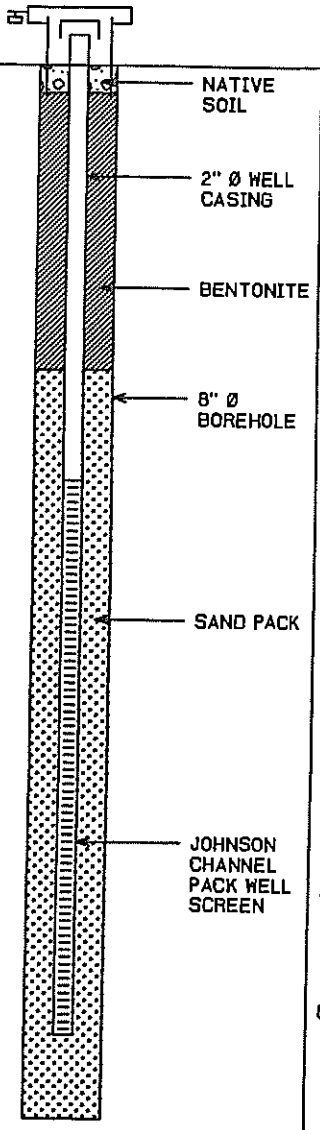
(CL-38)
Page 1 of 1

PROJECT NAME: CATERPILLAR MAPLETON
PROJECT NUMBER: 13307
CLIENT: CATERPILLAR INC.
LOCATION: MAPLETON, ILLINOIS
DRILLING CONTRACTOR: BOART LONGYEAR

HOLE DESIGNATION: MW-99C
DATE COMPLETED: NOVEMBER 16, 1999
DRILLING METHOD: 4 1/4" HSA
CRA SUPERVISOR: WALT POCHRON
DRILLER: RANDY RADKEY

DEPTH ft. BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft. AMSL
	GRAVEL (rail spur bedding material)	
2.5	SC-SAND, some clay, little silt and gravel, hard, dry brown (NATIVE)	
5.0	SP-SAND, fine to medium grained, dense, moist, brownish gray color (NATIVE) - as above with trace of coarse grains	
7.5		
10.0	- sand becomes wet - sand becomes saturated	
12.5		
15.0	SW-SAND, fine to coarse grained, trace of gravel, gray, saturated (NATIVE)	
17.5	- 3" seam with some clay	
20.0	END OF HOLE @ 19.0ft BGS	
22.5		

MONITOR INSTALLATION



SCREEN DETAILS
Screened interval:
7.0 to 17.0ft BGS
Length: 10.0ft
Diameter: 2"
Slot Size: #8
Material: PVC
Sand Pack:
5.0 to 19.0ft BGS
Material: Sand #30

SAMPLE NUMBER	STATE	'N' VALUE	PID (ppm)
1SS	X	40	
2SS	X	36	
3SS	X	30	
4SS	X	20	
5SS	X	31	
6SS	X	21	
7SS	X	3	
8SS	X	20	

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE
WATER FOUND ▽ STATIC WATER LEVEL ▼

APPENDIX G

DATA VALIDATION MEMORANDA

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631

TELEPHONE: (773) 380-9999
FACSIMILE: (773) 380-6421

MEMORANDUM

TO: Bruce Clegg

REF. NO.: 13307

C.C.: Steve Wanner

FROM: Steve Day/lo/2

DATE: July 6, 1999

RE: **Data Quality Assessment and Validation for the Soil Samples Collected from the Caterpillar Inc. Facility in Mapleton, Illinois**

The following details an analytical data quality assessment and validation for the soil samples collected from the Caterpillar Inc. Facility in Mapleton, Illinois during December 1998 and February 1999. The samples identified in Table 1 were analyzed for polychlorinated biphenyls (PCBs) by Quanterra, Inc. of North Canton, Ohio. The samples were analyzed using Method 8082 from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, 3rd Edition with Updates I through III, 1986). The quality assurance criteria used to assess the data were established by the method[1].

Holding Time Period

The holding time period for the analyses follows:

PCBs
- 14 days from sample collection to extraction
- 40 days from extraction to completion of analysis

All samples were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of the samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. The method blank sample data were acceptable.

Surrogate Compound Analyses

Individual sample performance for the analyses was monitored by evaluating surrogate compound percent recovery data. Many samples required dilutions as a result of elevated PCB concentrations, and the surrogate compounds were diluted below the detectable range of the instrument. Qualification of the sample data in these instances was deemed unnecessary. The surrogate compound percent recovery data for the remaining samples were acceptable.

[1]Application of quality assurance criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994.

Duplicate Laboratory Control Sample Analyses

Duplicate laboratory control sample percent recovery and relative percent difference (RPD) data were examined to assess the accuracy and precision of the analyses. The Aroclor 1016 percent recovery and RPD data for one duplicate laboratory control sample set violated the acceptance criteria. As a result, the Aroclor 1016 data for sample S-120198-JH-029 should be qualified as estimated (J). The remaining duplicate laboratory control sample data were acceptable.

Compound Identification and Quantitation

The raw data for all samples were reviewed to ensure that the reported compounds were identified correctly. It was noted in the raw data package that the PCBs detected in many samples were degraded (weathered), and several samples likely contained more than one Aroclor. Identification of specific Aroclors in these cases is difficult and is based primarily on the judgement of the laboratory analyst. The analyst's interpretation of the reported Aroclors was deemed acceptable.

One sample from each laboratory report was recalculated from the raw data to ensure that the results were calculated correctly. The data reported by the laboratory for the selected samples were found to be correct.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use with the qualification noted.

Attachments

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
CATERPILLAR INC. FACILITY
MAPLETON, ILLINOIS

Sample ID	*Sample Location*	*Sample Depth (ft. BGS)* [1]
S-120198-JH-032	B-1	1.75/2.00
S-120198-JH-033	B-1	3.75/4.00
S-120198-JH-034	B-1	5.75/6.00
S-120198-JH-035	B-1	7.75/8.00
S-120198-JH-015	B-2	1.75/2.00
S-120198-JH-016	B-2	3.75/4.00
S-120198-JH-017	B-2	5.75/6.00
S-120198-JH-018	B-2	7.75/8.00
S-120198-JH-001	B-3	1.75/2.00
S-120198-JH-002	B-3	4.45/4.70
S-120198-JH-003	B-3	6.75/7.00
S-120198-JH-004	B-3	8.75/9.00
S-120198-JH-005	B-3	10.75/11.00
S-120198-JH-006	B-4	1.75/2.00
S-120198-JH-007	B-4	3.75/4.00
S-120198-JH-008	B-4	5.75/6.00
S-120198-JH-009	B-4	7.75/8.00
S-120198-JH-010	B-4	9.75/10.00
S-120198-JH-011	B-5	1.75/2.00
S-120198-JH-012	B-5	3.75/4.00
S-120198-JH-013	B-5	5.75/6.00
S-120198-JH-014	B-5	7.75/8.00
S-120198-JH-019	B-6	1.75/2.00
S-120198-JH-020	B-6	3.75/4.00
S-120198-JH-021	B-6	5.75/6.00
S-120198-JH-022	B-6	7.75/8.00
S-120198-JH-023	B-7	1.75/2.00
S-120198-JH-024	B-7	3.75/4.00
S-120198-JH-025	B-7	5.75/6.00
S-120198-JH-026	B-7	7.75/8.00

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
CATERPILLAR INC. FACILITY
MAPLETON, ILLINOIS

Sample ID	*Sample Location*	*Sample Depth (ft. BGS)* [1]
S-120198-JH-027	B-8	1.75/2.00
S-120198-JH-028	B-8	3.45/3.70
S-120198-JH-029	B-8	4.75/5.00
S-120198-JH-030	B-8	6.75/7.00
S-120198-JH-031	B-8	7.75/8.00
S-120298-JH-058	B-9	1.75/2.00
S-120298-JH-059	B-9	3.75/4.00
S-120298-JH-060	B-9	5.75/6.00
S-120298-JH-061	B-9	7.75/8.00
S-120298-JH-036	B-10	1.75/2.00
S-120298-JH-037	B-10	3.75/4.00
S-120298-JH-038	B-10	5.75/6.00
S-120298-JH-039	B-10	7.75/8.00
S-120298-JH-053	B-11	1.75/2.00
S-120298-JH-054	B-11	3.75/4.00
S-120298-JH-055	B-11	5.75/6.00
S-120298-JH-056	B-11	7.75/8.00
S-120298-JH-057	B-11	8.75/9.00
S-120298-JH-049	B-12	1.75/2.00
S-120298-JH-050	B-12	3.75/4.00
S-120298-JH-051	B-12	5.75/6.00
S-120298-JH-052	B-12	7.75/8.00
S-120298-JH-040	B-13	1.75/2.00
S-120298-JH-041	B-13	3.75/4.00
S-120298-JH-042	B-13	5.75/6.00
S-120298-JH-043	B-13	7.75/8.00
S-120298-JH-044	B-14	1.75/2.00
S-120298-JH-045	B-14	3.75/4.00
S-120298-JH-046	B-14	5.75/6.00
S-120298-JH-047	B-14	7.75/8.00
S-120298-JH-048	B-14	9.75/10.00

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
CATERPILLAR INC. FACILITY
MAPLETON, ILLINOIS

Sample ID	*Sample Location*	*Sample Depth (ft. BGS)* [1]
S-022399-JH-062	B-18	0.0/2.0
S-022399-JH-063	B-18	2.0/4.0
S-022399-JH-064	B-18	4.0/6.0
S-022399-JH-065	B-18	6.0/8.0
S-022399-JH-066	B-19	0.0/2.0
S-022399-JH-067	B-19	2.0/4.0
S-022399-JH-068	B-19	4.0/6.0
S-022399-JH-069	B-19	6.0/8.0
S-022399-JH-070	B-16	0.0/2.0
S-022399-JH-071	B-16	2.0/4.0
S-022399-JH-072	B-16	4.0/6.0
S-022399-JH-073	B-16	6.0/8.0
S-022399-JH-074	B-17	0.0/2.0
S-022399-JH-075	B-17	2.0/4.0
S-022399-JH-076	B-17	4.0/6.0
S-022399-JH-077	B-17	6.0/8.0
S-022399-JH-078	B-15	0.0/2.0
S-022399-JH-079	B-15	2.0/4.0
S-022399-JH-080	B-15	4.0/6.0
S-022399-JH-081	B-15	6.0/8.0

[1] ft. BGS - Feet below ground surface

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631

TELEPHONE: (773) 380-9933
FACSIMILE: (773) 380-6421

MEMORANDUM

TO: Steve Wanner

REF. NO.: 13307

FROM: Steve Castagneri/lo/5

DATE: December 16, 1999

RE: Data Quality Assessment and Validation for the Samples Collected from the Caterpillar Inc. facility in Mapleton, Illinois

The following details a data quality assessment and validation for the soil samples collected September 13, 1999 and September 14, 1999 from the Caterpillar Inc. facility in Mapleton, Illinois. The samples identified in Table 1 were analyzed for polychlorinated biphenyls (PCBs) by Quanterra Incorporated of North Canton, Ohio using method 8082 from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, 3rd Edition). The quality assurance criteria used to assess the data were established by the methods[1].

Holding Time Periods

The holding time period follows:

PCBs
- 14 days from sample collection to extraction
- 40 days from extraction to completion of analysis

The samples were prepared and analyzed within the required holding time period.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. Target analytes were not detected in the method blank samples.

Surrogate Compound Analyses

Individual sample performance for the PCB analyses was monitored by assessing surrogate compound percent recovery data. The surrogate compound percent recovery data were acceptable.

Blank Spike Sample Analyses

Blank spike samples were analyzed to monitor the accuracy of the laboratory preparation and analysis methods. The LCS percent recovery acceptance criteria were met.

[1] Application of quality assurance criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and relative percent differences (RPDs) were determined. The Aroclor 1016 MS/MSD percent recovery in one sample (S-091499-JH-126) exceeded the acceptance criteria. However, this Aroclor was not detected in the associated sample, and data qualification was deemed unnecessary.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use without qualification.

Attachments

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
CATERPILLAR MAPLETON SITE
MAPLETON, ILLINOIS

Sample ID

S-091399-JH-082
S-091399-JH-083
S-091399-JH-084
S-091399-JH-085
S-091399-JH-086
S-091399-JH-087
S-091399-JH-088
S-091399-JH-089
S-091499-JH-090
S-091499-JH-091
S-091499-JH-092
S-091499-JH-093
S-091499-JH-094
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S-091499-JH-103
S-091499-JH-104
S-091499-JH-105
S-091499-JH-106
S-091499-JH-107
S-091499-JH-108
S-091499-JH-109
S-091499-JH-110
S-091499-JH-111
S-091499-JH-112
S-091499-JH-113
S-091499-JH-114
S-091499-JH-115
S-091499-JH-116
S-091499-JH-117
S-091499-JH-118
S-091499-JH-119
S-091499-JH-120
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S-091499-JH-133
S-091499-JH-134
S-091499-JH-135
S-091499-JH-136
S-091499-JH-137
S-091499-JH-138
S-091499-JH-139
S-091499-JH-140

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631

TELEPHONE: (773) 380-9933
FACSIMILE: (773) 380-6421

MEMORANDUM

TO: Steve Wanner

REF. NO.: 13307

FROM: Steve Castagneri/lo/6 SC

DATE: February 1, 2000

C.C.: Steve Day

RE: **Data Quality Assessment and Validation for the Samples Collected from the Caterpillar Inc. facility in Mapleton, Illinois**

The following details a data quality assessment and validation for the water samples collected December 16, 1999 from the Caterpillar Inc. facility in Mapleton, Illinois. The samples identified as GW-121699-WP-001, GW-121699-WP-002 and GW-121699-WP-003 were analyzed for polychlorinated biphenyls (PCBs) by Quanterra Incorporated of North Canton, Ohio using method 8082 from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, 3rd Edition). The quality assurance criteria used to assess the data were established by the methods[1].

Holding Time Period

The holding time period follows: PCBs, 7 days from sample collection to extraction, 40 days from extraction to completion of analysis. The samples were prepared and analyzed within the required holding time period.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. Target analytes were not detected in the method blank sample.

Surrogate Compound Analyses

Individual sample performance for the PCB analysis was monitored by assessing surrogate compound percent recovery data. The surrogate compound percent recovery data were acceptable.

Laboratory Control Sample Analyses

Laboratory control sample (LCS) analyses were performed to monitor the accuracy of the laboratory preparation and analysis methods. The LCS percent recovery acceptance criteria were met.

[1] Application of quality assurance criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Sample Analyses

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and relative percent differences (RPDs) were determined. The MS/MSD percent recovery and RPD acceptance criteria were met.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use without qualification.

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631

TELEPHONE: (773) 380-9933
FACSIMILE: (773) 380-6421

MEMORANDUM

TO: Steve Wanner

REF. NO.: 13307

FROM: Steve Castagneri/lo/7 SC

DATE: January 31, 2000

C.C.: Steve Day

RE: **Data Quality Assessment and Validation for the Samples Collected from the Caterpillar Inc. facility in Mapleton, Illinois**

The following details a data quality assessment and validation for the water sample collected January 6, 2000 from the Caterpillar Inc. facility in Mapleton, Illinois. The sample identified as GW-010600-JH-001 was analyzed for polychlorinated biphenyls (PCBs) by Quanterra Incorporated of North Canton, Ohio using method 8082 from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, 3rd Edition). The quality assurance criteria used to assess the data were established by the method[1].

Holding Time Period

The holding time period follows: PCBs, 7 days from sample collection to extraction, 40 days from extraction to completion of analysis. The sample was prepared and analyzed within the required holding time period.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. Target analytes were not detected in the method blank sample.

Surrogate Compound Analyses

Individual sample performance for the PCB analysis was monitored by assessing surrogate compound percent recovery data. The surrogate compound percent recovery data were acceptable.

Laboratory Control Sample Analyses

Laboratory control sample (LCS) analyses were performed to monitor the accuracy of the laboratory preparation and analysis methods. The LCS percent recovery acceptance criteria were met.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and are suitable for their intended use without qualification.

[1] Application of quality assurance criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994.

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631

TELEPHONE: (773) 380-9933
FACSIMILE: (773) 380-6421

MEMORANDUM

TO: Steve Wanner

REF. NO.: 13307

FROM: Steve Castagneri/lo/9 SC

DATE: March 10, 2000

C.C.: Steve Day

RE: **Data Quality Assessment and Validation for the Soil Samples Collected from the Caterpillar Inc. Facility in Mapleton, Illinois**

The following details a data quality assessment and validation for the soil samples collected February 11, 2000 from the Caterpillar Inc. facility in Mapleton, Illinois. The samples identified in Table 1 were analyzed for polychlorinated biphenyls (PCBs) and a select list of metals (arsenic, barium, cadmium, chromium, lead, selenium) by Severn Trent Laboratories (formerly Quanterra Incorporated) of North Canton, Ohio. The methods used to analyze the samples were 8082 (PCBs) and 6010B (metals) from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA SW-846, 3rd Edition). The quality assurance criteria used to assess the data were established by the methods[1].

Holding Time Periods

The holding time periods follow:

PCBs - -14 days from sample collection to extraction;
-40 days from extraction to completion of analysis

Metals - -180 days from sample collection to completion of analysis

The samples were prepared and analyzed within the required holding time periods.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. Target analytes were not detected in the method blank samples.

Surrogate Compound Analyses

Individual sample performance for the PCB analyses was monitored by assessing surrogate compound percent recovery data. The surrogate compound percent recovery data were acceptable.

[1] Application of quality assurance criteria was consistent with the relevant criteria in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94-013, February 1994.

Laboratory Control Sample Analyses - Metals

Laboratory control sample (LCS) analyses were performed to monitor the accuracy of the laboratory preparation and analysis methods. The LCS percent recovery acceptance criteria were met.

Duplicate Laboratory Control Sample Analyses - PCBs

To assess the accuracy and precision of the laboratory preparation and analysis methods for the PCB analyses, duplicate LCS percent recoveries and relative percent differences (RPDs) were determined. The duplicate LCS percent recovery and RPD data were acceptable.

Overall Assessment

The data were found to exhibit acceptable levels of precision and accuracy and are suitable for their intended use without qualification.

Attachment

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
CATERPILLAR INC. FACILITY
MAPLETON, ILLINOIS

Sample ID
S-021100-JH-001
S-021100-JH-002
S-021100-JH-003
S-021100-JH-004
S-021100-JH-005
S-021100-JH-006
S-021100-JH-007
S-021100-JH-008
S-021100-JH-009
S-021100-JH-010

APPENDIX H

LABORATORY REPORTS
CRA INVESTIGATIVE SAMPLES

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
330 497-0772 Fax

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR

Lot #: A8L020132

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Amy L. McCormick
Project Manager

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CASE NARRATIVE

CASE NARRATIVE

The following report contains the analytical results for thirty-five solid samples submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar Site, project number 13307. The samples were received December 2, 1998, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Results were provided by facsimile transmission to Steve Day on December 18 and to Steve Wanner on December 22 and 23, 1998. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

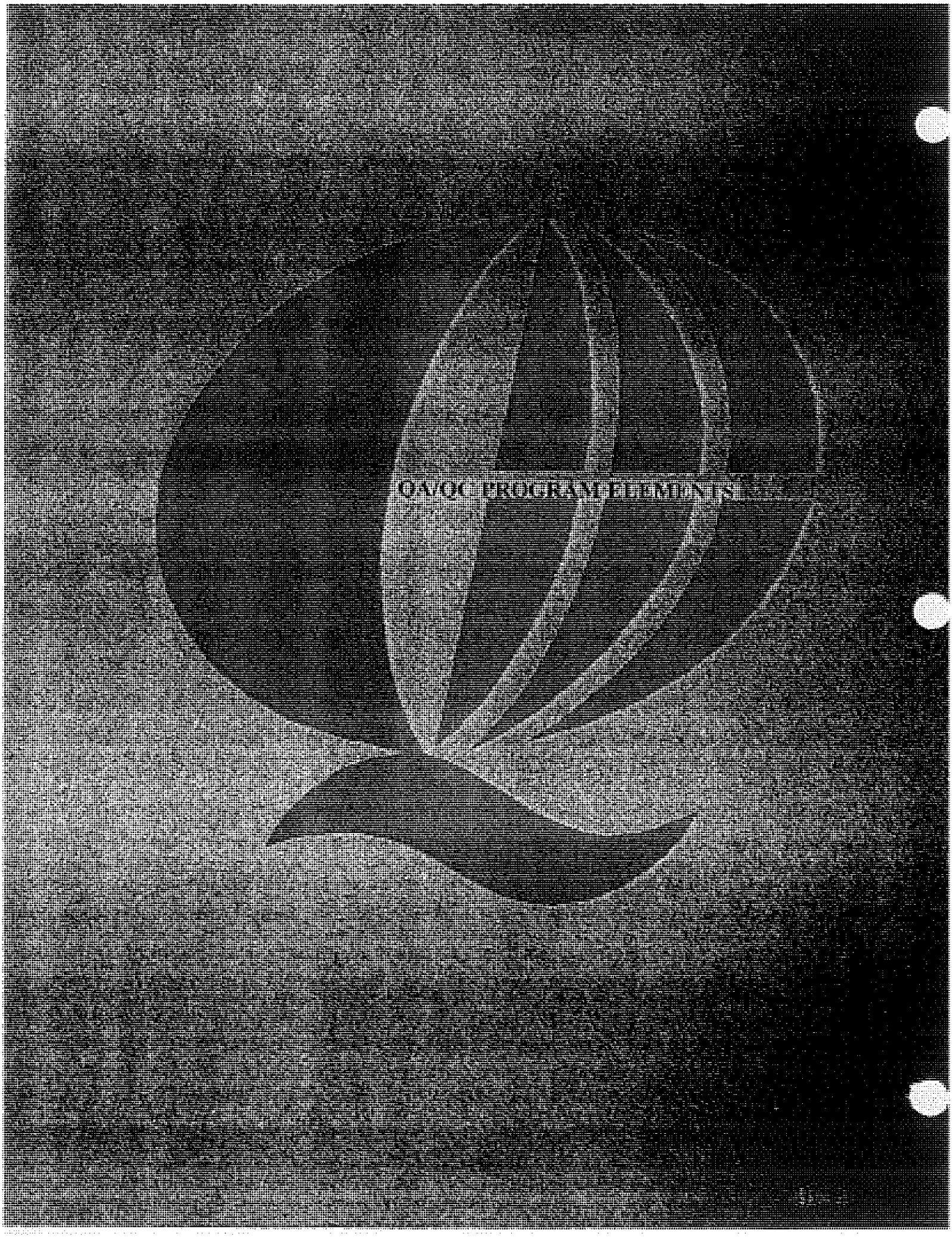
Supplemental QC Information

GC Semivolatiles

The laboratory control sample/laboratory control sample duplicate associated with batch 8336232 exhibited percent recoveries and relative percent difference (RPD) data outside acceptance limits. Insufficient sample volume was available to perform requested matrix spikes/matrix spike duplicates or corrective action.

Sample JH-033 had elevated reporting limits due to matrix interference.

OAVOC PROGRAM ELEMENTS



QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

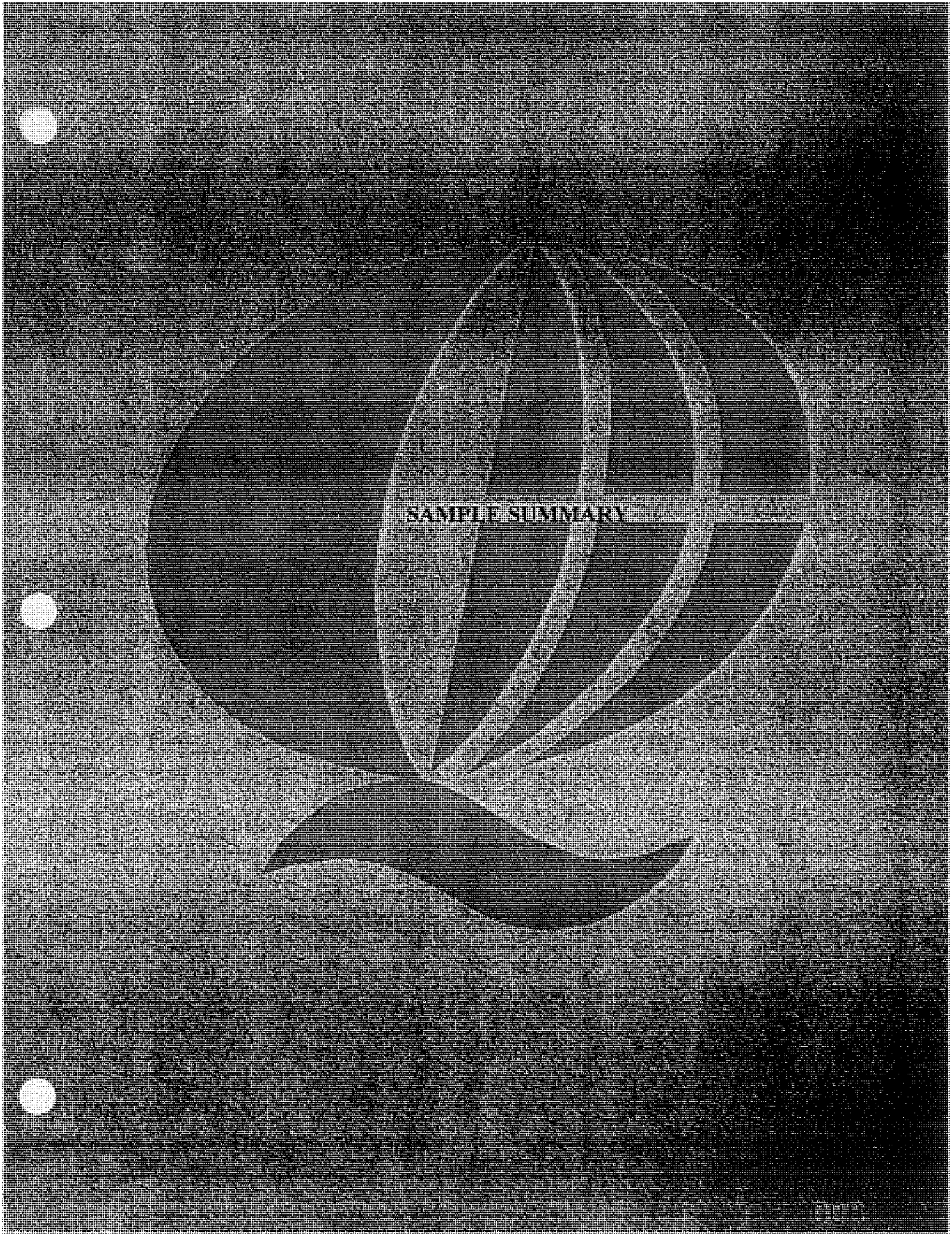
In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.



SAMPLE SUMMARY

SAMPLE SUMMARY

A8L020132

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CNW60	001	S-120198-JH-001	12/01/98	
CNW64	002	S-120198-JH-002	12/01/98	
CNW65	003	S-120198-JH-003	12/01/98	
CNW66	004	S-120198-JH-004	12/01/98	
CNW67	005	S-120198-JH-005	12/01/98	
CNW68	006	S-120198-JH-006	12/01/98	
CNW69	007	S-120198-JH-007	12/01/98	
CNW6A	008	S-120198-JH-008	12/01/98	
CNW6C	009	S-120198-JH-009	12/01/98	
CNW6D	010	S-120198-JH-010	12/01/98	
CNW6E	011	S-120198-JH-011	12/01/98	
CNW6F	012	S-120198-JH-012	12/01/98	
CNW6G	013	S-120198-JH-013	12/01/98	
CNW6H	014	S-120198-JH-014	12/01/98	
CNW6J	015	S-120198-JH-015	12/01/98	
CNW6L	016	S-120198-JH-016	12/01/98	
CNW6M	017	S-120198-JH-017	12/01/98	
CNW6N	018	S-120198-JH-018	12/01/98	
CNW6P	019	S-120198-JH-019	12/01/98	
CNW6Q	020	S-120198-JH-020	12/01/98	
CNW6R	021	S-120198-JH-021	12/01/98	
CNW6T	022	S-120198-JH-022	12/01/98	
CNW6V	023	S-120198-JH-023	12/01/98	
CNW6W	024	S-120198-JH-024	12/01/98	
CNW6X	025	S-120198-JH-025	12/01/98	
CNW71	026	S-120198-JH-026	12/01/98	
CNW73	027	S-120198-JH-027	12/01/98	
CNW74	028	S-120198-JH-028	12/01/98	
CNW76	029	S-120198-JH-029	12/01/98	
CNW78	030	S-120198-JH-030	12/01/98	
CNW7A	031	S-120198-JH-031	12/01/98	
CNW7C	032	S-120198-JH-032	12/01/98	
CNW7E	033	S-120198-JH-033	12/01/98	
CNW7G	034	S-120198-JH-034	12/01/98	
CNW7H	035	S-120198-JH-035	12/01/98	

(Continued on next page)

SAMPLE SUMMARY

A8L020132

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A8L020132

PARAMETER	ANALYTICAL METHOD
PCBs	SW846 8082
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

POLYCHLORINATED BIPHENYLS
QC SUMMARY DATA

SW846 8082 SURROGATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN QESSDG:

Lot #: A8L020132

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-120198-JH-008	77	79	00
02	S-120198-JH-009	104D	112D	00
03	S-120198-JH-010	81	93	00
04	S-120198-JH-011	88	93	00
05	S-120198-JH-012	100D	402D	01
06	S-120198-JH-013	109D	127D	00
07	S-120198-JH-014	408D	135D	01
08	S-120198-JH-015	95	108	00
09	S-120198-JH-016	55	108	00
10	S-120198-JH-017	201D	117D	02
11	S-120198-JH-018	56 D	131D	00
12	S-120198-JH-019	114D	143D	01
13	S-120198-JH-020	102D	136D	00
14	S-120198-JH-021	105D	227D	01
15	S-120198-JH-022	186D	122D	01
16	S-120198-JH-023	189D	313D	02
17	S-120198-JH-024	892D	154D	02
18	S-120198-JH-025	256D	113D	01
19	S-120198-JH-001	104D	226D	01
20	S-120198-JH-002	90 D	125D	00
21	S-120198-JH-003	91	110	00
22	S-120198-JH-004	45	106	00
23	S-120198-JH-005	81	92	00
24	S-120198-JH-006	204D	218D	02
25	S-120198-JH-007	93	99	00
26	S-120198-JH-031	104D	143D	02
27	S-120198-JH-032	106D	117D	00

Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN QESSDG:

Lot #: A8L020132

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-120198-JH-033	88 D	105D	00
02	S-120198-JH-034	229D	146D	02
03	S-120198-JH-035	132D	147D	02
04	S-120198-JH-026	208D	0.0D	02
05	S-120198-JH-027	86 D	181D	01
06	S-120198-JH-028	136D	155D	02
07	S-120198-JH-029	119D	0.0D	02
08	S-120198-JH-030	233D	155D	02
09	METHOD BLK. CNWD6101	79	96	00
10	METHOD BLK. CP07R101	89	94	00
11	LCS CNWD6103	55	77	00
12	LCS CP07R102	94	107	00
13	LCSD CNWD6104	93	103	00
14	LCSD CP07R103	86	92	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-129)
SRG02	= Decachlorobiphenyl	(10-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L020000 WO #: CNWD6103
BATCH: 8336232

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1260	330	200	59	59 - 129	
Aroclor 1016	330	130	40*	60 - 133	a

NOTES(S):

a Spiked analyte recovery is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 1 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L020000 WO #: CNWD6104
BATCH: 8336232

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	280	83	60- 133	p
Aroclor 1260	330	300	90	59- 129	p

NOTES(S):

p Relative percent difference (RPD) is outside stated control limits.

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L040000 WO #: CP07R102
BATCH: 8338112

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	270	81	60 - 133	
Aroclor 1260	330	310	92	59 - 129	

NOTES(S):

* Values outside of QC limits

Surr Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L040000 WO #: CP07R103
BATCH: 8338112

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	260	77	60- 133	
Aroclor 1260	330	280	84	59- 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

CNWD6101

SW846 8082 METHOD BLANK SUMMARY

Lab Name: QUANTERRA

Lab Code: QESCAN

SDG Number:

Lab File ID: 096f0101.

Lot Number: A8L020132

Matrix: SOLID

Extraction Method: 3550

Date Extracted: 12/03/98

Date Analyzed(1): 12/19/98

Date Analyzed(2): N/A

Time Analyzed(1): 00:34

Time Analyzed(2): N/A

Instrument ID(1): K

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	CHECK SAMPLE	CNWD6103 C	12/22/98	N/A
02	DUPLICATE CHECK	CNWD6104 L	12/19/98	N/A
03	S-120198-JH-008	CNW6A101	12/18/98	N/A
04	S-120198-JH-009	CNW6C101	12/18/98	N/A
05	S-120198-JH-010	CNW6D101	12/18/98	N/A
06	S-120198-JH-011	CNW6E101	12/18/98	N/A
07	S-120198-JH-012	CNW6F101	12/18/98	N/A
08	S-120198-JH-013	CNW6G101	12/18/98	N/A
09	S-120198-JH-015	CNW6J101	12/18/98	N/A
10	S-120198-JH-016	CNW6L101	12/18/98	N/A
11	S-120198-JH-017	CNW6M101	12/21/98	N/A
12	S-120198-JH-018	CNW6N101	12/18/98	N/A
13	S-120198-JH-019	CNW6P101	12/18/98	N/A
14	S-120198-JH-020	CNW6Q101	12/18/98	N/A
15	S-120198-JH-021	CNW6R101	12/19/98	N/A
16	S-120198-JH-001	CNW60101	12/18/98	N/A
17	S-120198-JH-002	CNW64101	12/18/98	N/A
18	S-120198-JH-003	CNW65101	12/18/98	N/A
19	S-120198-JH-004	CNW66101	12/18/98	N/A
20	S-120198-JH-005	CNW67101	12/18/98	N/A
21	S-120198-JH-006	CNW68101	12/18/98	N/A
22	S-120198-JH-007	CNW69101	12/18/98	N/A

COMMENTS:

FORM IV

BLANK WORKORDER NO.

CP07R101

SW846 8082 METHOD BLANK SUMMARY

Lab Name: QUANTERRA

Lab Code: QESCAN

SDG Number:

Lab File ID: 040f0101.

Lot Number: A8L020132

Matrix: SOLID

Extraction Method: 3550

Date Extracted: 12/04/98

Date Analyzed(1): 12/17/98

Date Analyzed(2): N/A

Time Analyzed(1): 08:20

Time Analyzed(2): N/A

Instrument ID(1): K

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-120198-JH-014	CNW6H101	12/17/98	N/A
02	S-120198-JH-022	CNW6T101	12/17/98	N/A
03	S-120198-JH-023	CNW6V101	12/17/98	N/A
04	S-120198-JH-024	CNW6W101	12/17/98	N/A
05	S-120198-JH-025	CNW6X101	12/17/98	N/A
06	S-120198-JH-031	CNW7A101	12/17/98	N/A
07	S-120198-JH-032	CNW7C101	12/17/98	N/A
08	S-120198-JH-033	CNW7E101	12/17/98	N/A
09	S-120198-JH-034	CNW7G101	12/17/98	N/A
10	S-120198-JH-035	CNW7H101	12/17/98	N/A
11	S-120198-JH-026	CNW71101	12/17/98	N/A
12	S-120198-JH-027	CNW73101	12/17/98	N/A
13	S-120198-JH-028	CNW74101	12/17/98	N/A
14	S-120198-JH-029	CNW76101	12/17/98	N/A
15	S-120198-JH-030	CNW78101	12/17/98	N/A
16	CHECK SAMPLE	CP07R102 C	12/17/98	N/A
17	DUPLICATE CHECK	CP07R103 L	12/17/98	N/A
18				
19				
20				

COMMENTS:

FORM IV

POLYCHLORINATED BIPHENYLS SAMPLE DATA

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 001

Sample WT/Vol: 30.02 / g
Work Order: CNW60101
Dilution factor: 10
Moisture %:6.8

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-001

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	350	U
12672-29-6	**Aroclor 1248**	**2400**	
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/070f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/070f0101.d
Lab Smp Id: CNW60101 Client Smp ID: S-120198-JH-001
Inj Date : 18-DEC-1998 15:28
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW60101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	3427	0.00209	6.960	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.800	0.002	4252	0.13722	457.1	80.00- 120.00	26.98(M)
5.345	5.343	0.002	12595	0.23316	776.7	128.06- 213.44	79.91
6.103	6.102	0.001	29795	0.35540	1184	204.62- 341.03	189.03
6.438	6.440	-0.002	12611	0.36837	1227	83.61- 139.35	80.01
6.637	6.638	-0.001	31738	0.89128	2969	84.33- 140.55	201.36
Average of Peak Concentrations =					1323		
6 AROCLOR-1248					CAS #: 12672-29-6		
5.345	5.338	0.007	12595	0.52078	1735	80.00- 120.00	23.77(M)
6.103	6.102	0.001	29795	0.73193	2438	137.72- 229.53	56.22
7.042	7.042	0.000	45676	0.79871	2660	181.30- 302.17	86.18

pattern best fits 1248

Data File: /chem/can/gcs/a2hpk.i/81217a.b/070f0101.d
Report Date: 21-Dec-1998 10:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
9.023	9.025	-0.002	21692	0.65498	2182	108.43- 180.71	40.93
9.585	9.590	-0.005	13239	0.58849	1960	78.36- 130.60	24.98
Average of Peak Concentrations =					2195		
$ 9 DCB					CAS #: 2051-24-3		
15.107	15.097	0.010	5971	0.00453	15.08	80.00- 120.00	100.00(R)

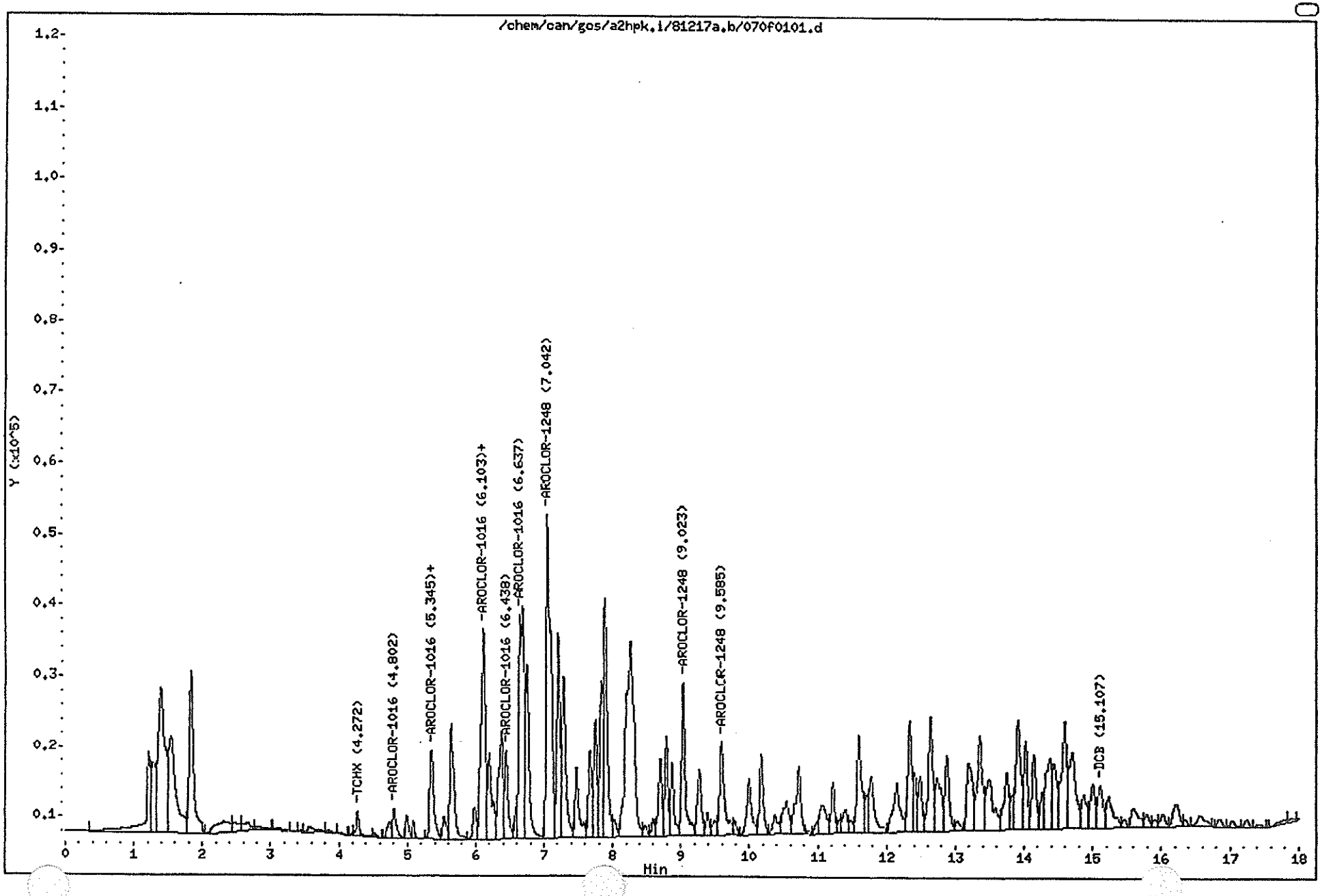
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gos/a2hpk.i/81217a.b/070f0101.d
Date : 18-DEC-1998 15:28
Client ID: S-120198-JH-001
Sample Info: CNW60101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



024

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 002

Sample WT/Vol: 30.02 / g
Work Order: CNW64101
Dilution factor: 10
Moisture %:11

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-002

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	370	U
11104-28-2	Aroclor 1221	370	U
11141-16-5	Aroclor 1232	370	U
53469-21-9	**Aroclor 1242**	**1800**	
12672-29-6	Aroclor 1248	370	U
11097-69-1	Aroclor 1254	370	U
11096-82-5	Aroclor 1260	370	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/071f0101.d
Report Date: 23-Dec-1998 12:19

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/071f0101.d
Lab Smp Id: CNW64101 Client Smp ID: S-120198-JH-002
Inj Date : 18-DEC-1998 15:49
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW64101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	2954	0.00180	6.000	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.802	4.800	0.002	6941	0.26091	869.1	80.00- 120.00	26.73(M)
5.345	5.343	0.002	22449	0.50115	1669	122.23- 203.72	86.45
6.102	6.102	0.000	43677	0.65524	2183	193.45- 322.42	168.19
6.328	6.328	0.000	14717	0.39073	1302	108.22- 180.37	56.67
6.440	6.440	0.000	15377	0.57391	1912	79.59- 132.66	59.21
Average of Peak Concentrations =					1587		
6 AROCLOR-1248					CAS #: 12672-29-6		
5.345	5.338	0.007	22449	0.92823	3092	80.00- 120.00	24.23(M)
6.102	6.102	0.000	43677	1.07295	3574	137.72- 229.53	47.14
7.042	7.042	0.000	26695	0.46680	1555	181.30- 302.17	28.81

Data File: /chem/can/gcs/a2hpk.i/81217a.b/071f0101.d
Report Date: 23-Dec-1998 12:19

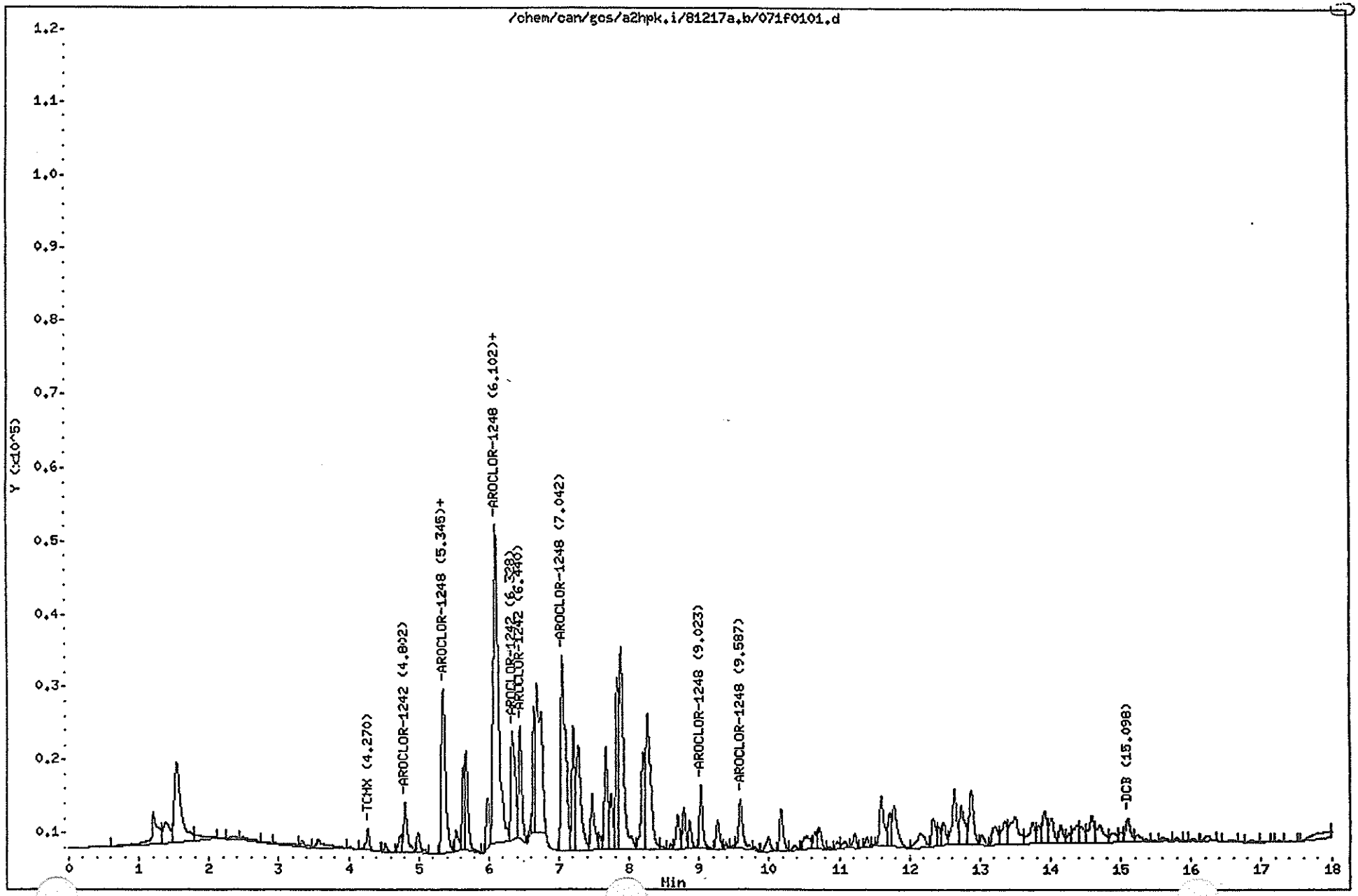
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
9.023	9.025	-0.002	8690	0.26239	874.0	108.43- 180.71	9.38
9.587	9.590	-0.003	6698	0.29773	991.8	78.36- 130.60	7.23
Average of Peak Concentrations =					2017		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	3299	0.00250	8.334	80.00- 120.00	100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gos/a2hpk.i/81217a.b/071f0101.d
Date : 18-DEC-1998 15:49
Client ID: S-120198-JH-002
Sample Info: CNW64101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



028

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 003

Sample WT/Vol: 30.07 / g
Work Order: CNW65101
Dilution factor: 1
Moisture %:8.9

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-003

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	**Aroclor 1248**	**480**	
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/072f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/072f0101.d
Lab Smp Id: CNW65101 Client Smp ID: S-120198-JH-003
Inj Date : 18-DEC-1998 16:10
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW65101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.070	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	29787	0.01816	6.040	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.345	5.338	0.007	22073	0.91268	303.5	80.00- 120.00	23.64(M)
6.100	6.102	-0.002	69132	1.69827	564.8	137.72- 229.53	74.04
7.040	7.042	-0.002	68811	1.20326	400.2	181.30- 302.17	73.69
9.022	9.025	-0.003	41948	1.26660	421.2	108.43- 180.71	44.93
9.583	9.590	-0.007	33961	1.50960	502.0	78.36- 130.60	36.37
Average of Peak Concentrations =					438.3		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	29053	0.02203	7.328	80.00- 120.00	100.00

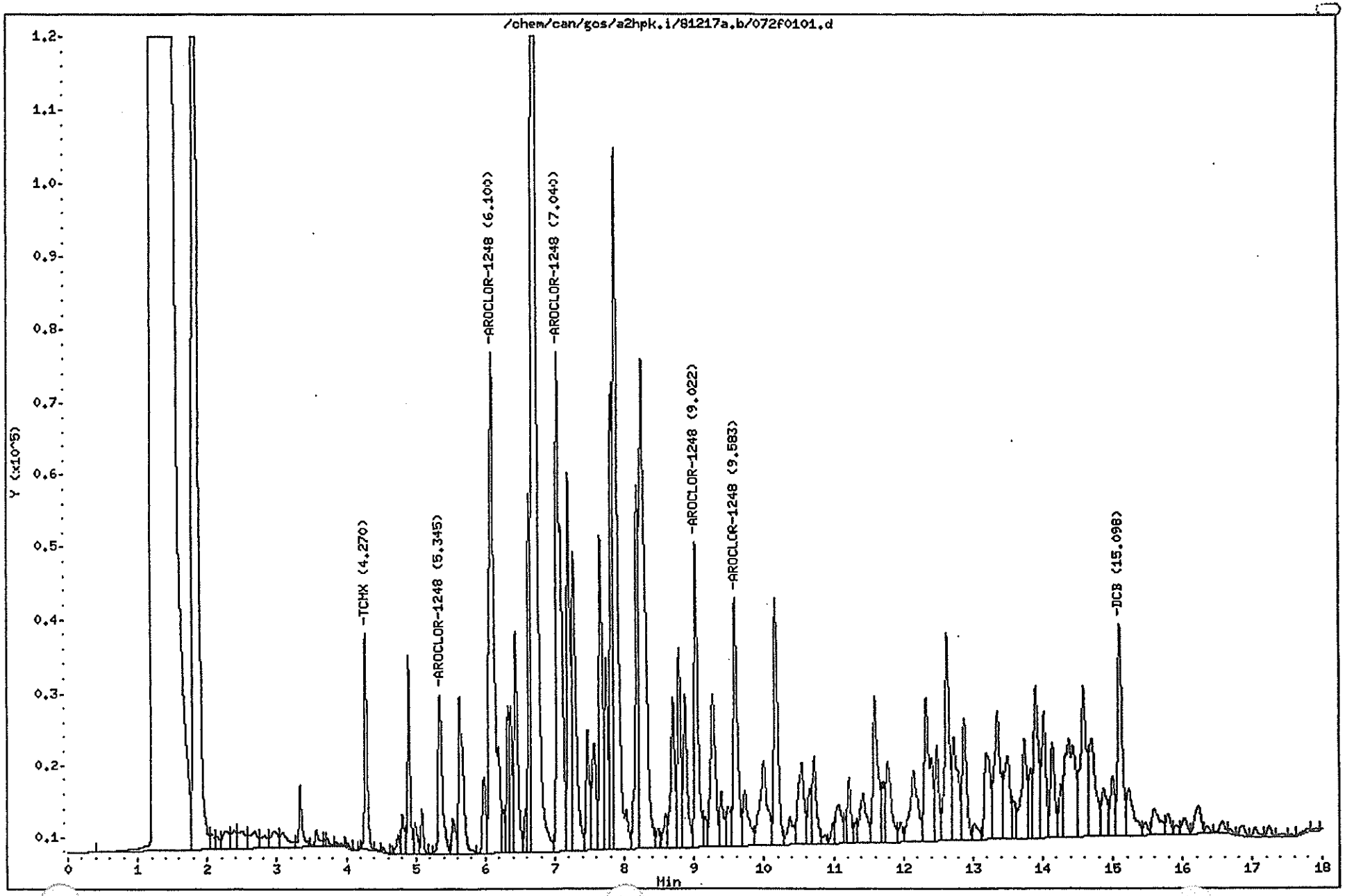
Data File: /chem/can/gcs/a2hpk.i/81217a.b/072f0101.d
Report Date: 21-Dec-1998 10:29

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gos/a2hpk.i/81217a.b/072f0101.d
Date : 18-DEC-1998 16:10
Client ID: S-120198-JH-003
Sample Info: CNW65101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 004

Sample WT/Vol: 30 / g
Work Order: CNW66101
Dilution factor: 1
Moisture %:2.3

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-004

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34	U
11104-28-2	Aroclor 1221	34	U
11141-16-5	Aroclor 1232	34	U
53469-21-9	Aroclor 1242	34	U
12672-29-6	Aroclor 1248	34	U
11097-69-1	Aroclor 1254	34	U
11096-82-5	Aroclor 1260	34	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/073f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/073f0101.d
Lab Smp Id: CNW66101 Client Smp ID: S-120198-JH-004
Inj Date : 18-DEC-1998 16:31
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW66101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

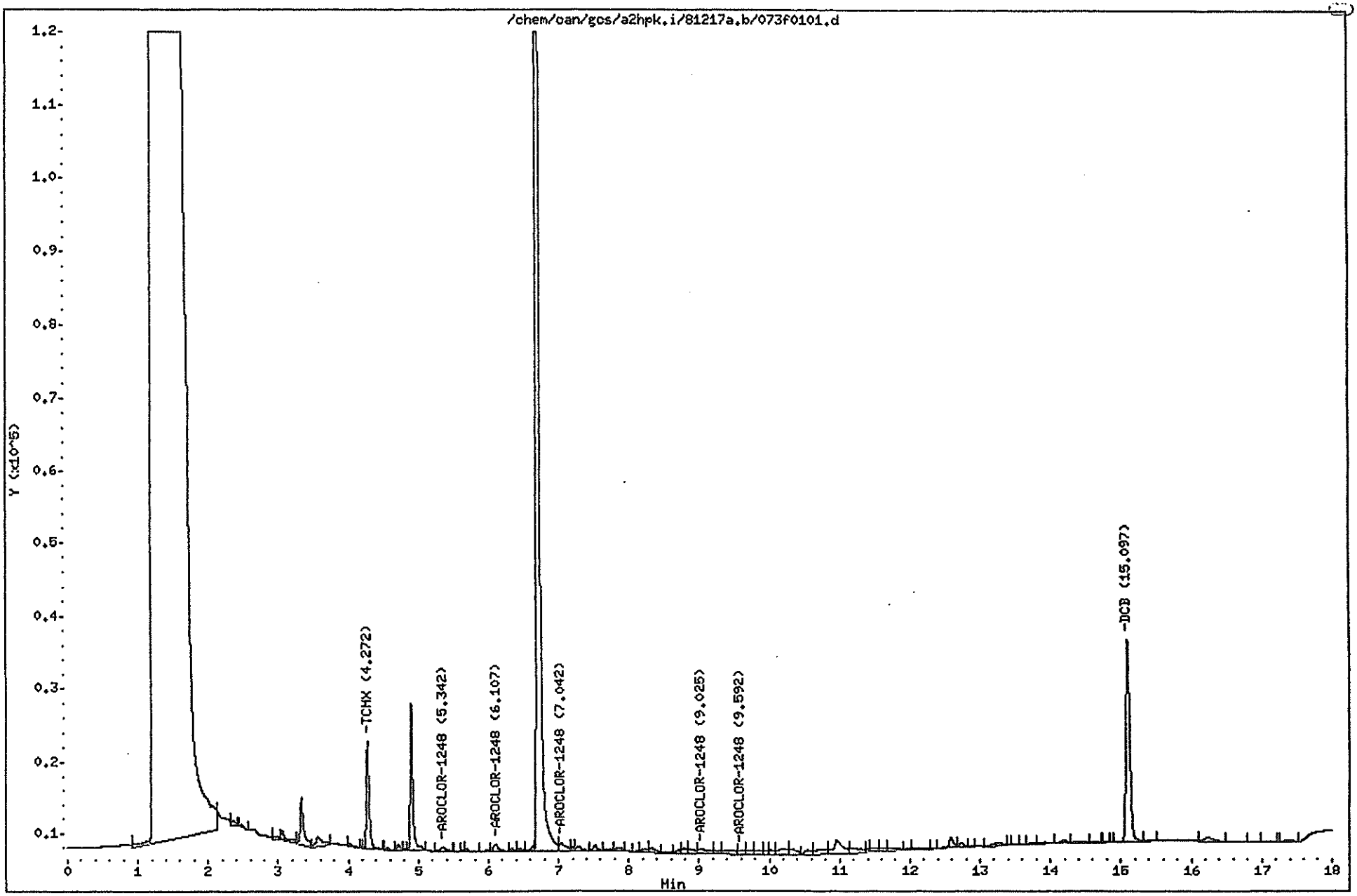
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	14869	0.00907	3.022	80.00- 120.00	100.00(R)
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	27893	0.02115	7.051	80.00- 120.00	100.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

File: /chem/oan/gos/a2hpk.i/81217a.b/073f0101.d
Date : 18-DEC-1998 16:31
Client ID: S-120198-JH-004
Sample Info: CHW66101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 005

Sample WT/Vol: 30.17 / g
Work Order: CNW67101
Dilution factor: 1
Moisture %:24

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-005

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	43	U
11104-28-2	Aroclor 1221	43	U
11141-16-5	Aroclor 1232	43	U
53469-21-9	Aroclor 1242	43	U
12672-29-6	Aroclor 1248	43	U
11097-69-1	Aroclor 1254	43	U
11096-82-5	Aroclor 1260	43	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/074f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/074f0101.d
Lab Smp Id: CNW67101 Client Smp ID: S-120198-JH-005
Inj Date : 18-DEC-1998 16:52
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW67101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

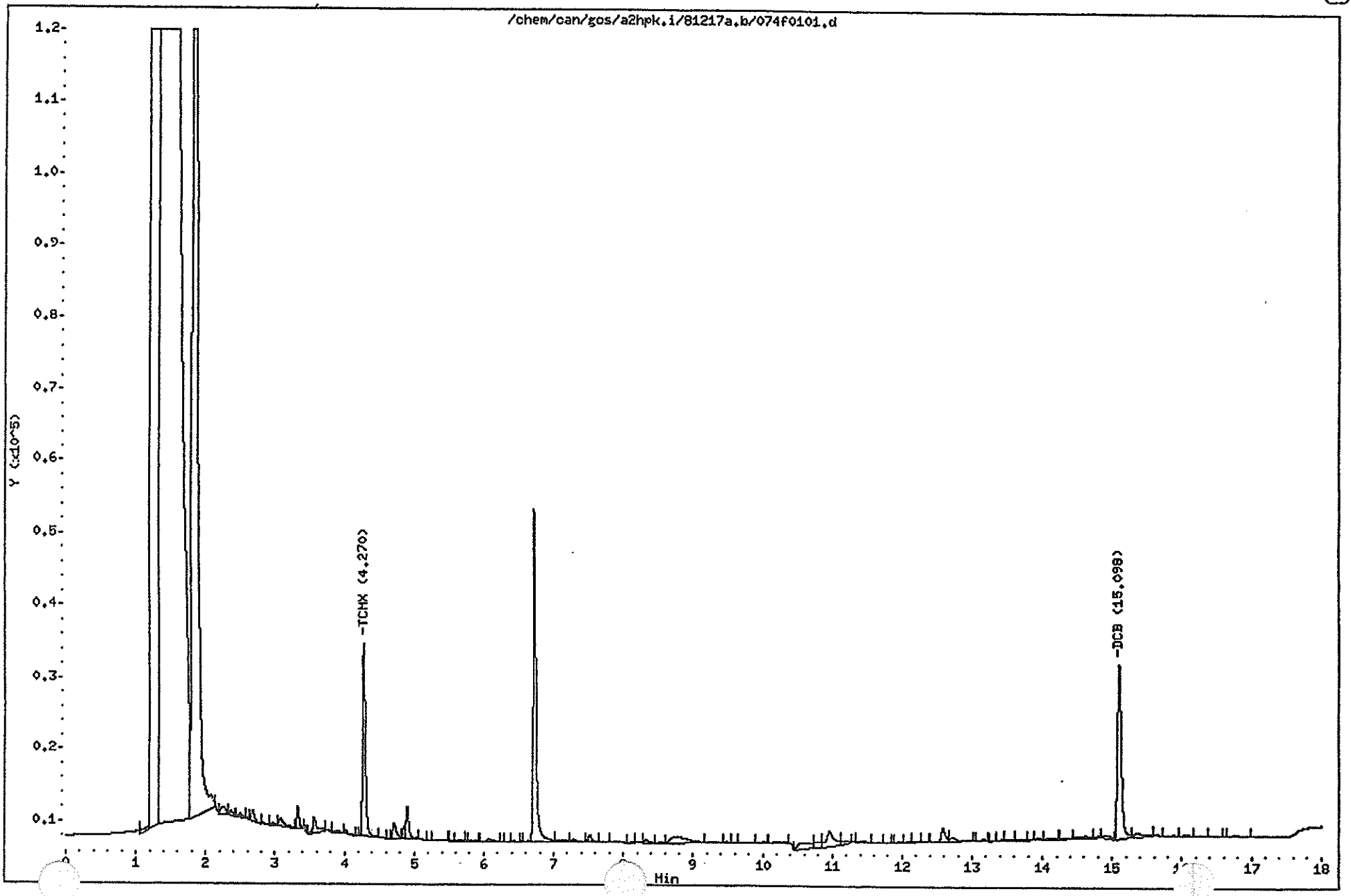
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	26705	0.01628	5.397	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	24356	0.01847	6.123	80.00- 120.00	100.00

Data File: /chem/can/gos/a2hpk.i/81217a.b/074f0101.d
Date : 18-DEC-1998 16:52
Client ID: S-120198-JH-005
Sample Info: CNW67101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 006

Sample WT/Vol: 30.09 / g
Work Order: CNW68101
Dilution factor: 10
Moisture %:8.7

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-006

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	360	U
11104-28-2	Aroclor 1221	360	U
11141-16-5	Aroclor 1232	360	U
53469-21-9	Aroclor 1242	3400	
12672-29-6	Aroclor 1248	360	U
11097-69-1	Aroclor 1254	360	U
11096-82-5	Aroclor 1260	360	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/075f0101.d
Report Date: 23-Dec-1998 12:19

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/075f0101.d
Lab Smp Id: CNW68101 Client Smp ID: S-120198-JH-006
Inj Date : 18-DEC-1998 17:13
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW68101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	6689	0.00408	13.55	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.800	4.800	0.000	20822	0.78268	2601	80.00- 120.00	28.03(M)
5.343	5.343	0.000	38940	0.86929	2889	122.23- 203.72	52.42
6.100	6.102	-0.002	51756	0.77644	2580	193.45- 322.42	69.67
6.325	6.328	-0.003	35886	0.95276	3166	108.22- 180.37	48.31
6.437	6.440	-0.003	34239	1.27789	4247	79.59- 132.66	46.09
Average of Peak Concentrations =					3097		
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	38940	1.61010	5351	80.00- 120.00	18.56(M)
6.100	6.102	-0.002	51756	1.27142	4225	137.72- 229.53	24.67
7.042	7.042	0.000	37634	0.65808	2187	181.30- 302.17	17.94

Data File: /chem/can/gcs/a2hpk.i/81217a.b/075f0101.d
Report Date: 23-Dec-1998 12:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
9.023	9.025	-0.002	10171	0.30711	1021	108.43- 180.71	4.85
9.577	9.590	-0.013	14026	0.62347	2072	78.36- 130.60	6.69
Average of Peak Concentrations =					2971		
$ 9 DCB					CAS #: 2051-24-3		
15.110	15.097	0.013	5760	0.00437	14.52	80.00- 120.00	100.00(R)

QC Flag Legend

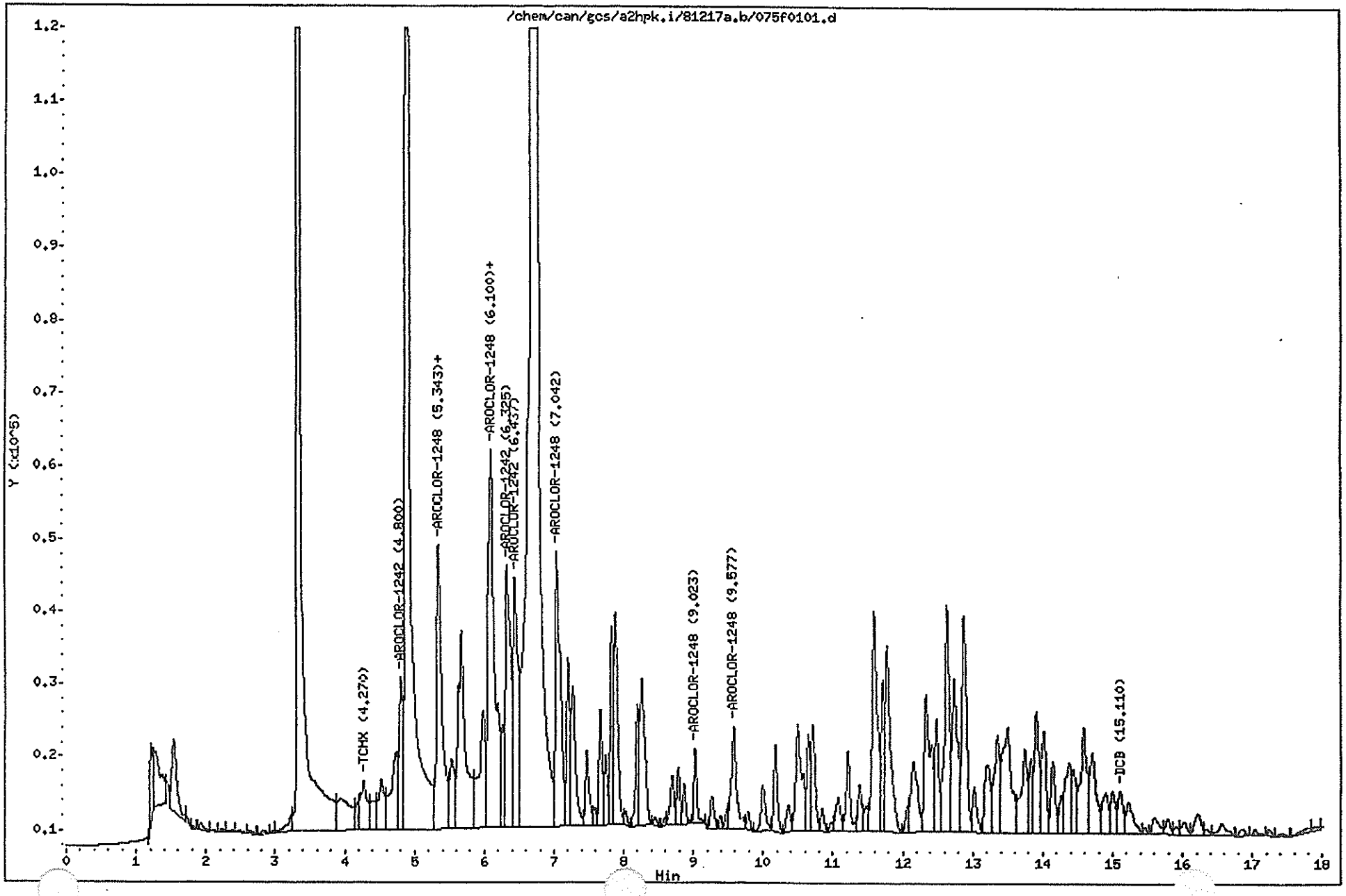
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81217a.b/075f0101.d
Date : 18-DEC-1998 17:13
Client ID: S-120198-JH-006
Sample Info: CHW68101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

042



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 007

Sample WT/Vol: 30.18 / g
Work Order: CNW69101
Dilution factor: 1
Moisture %:8.2

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-007

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/076f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/076f0101.d
Lab Smp Id: CNW69101 Client Smp ID: S-120198-JH-007
Inj Date : 18-DEC-1998 17:34
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW69101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

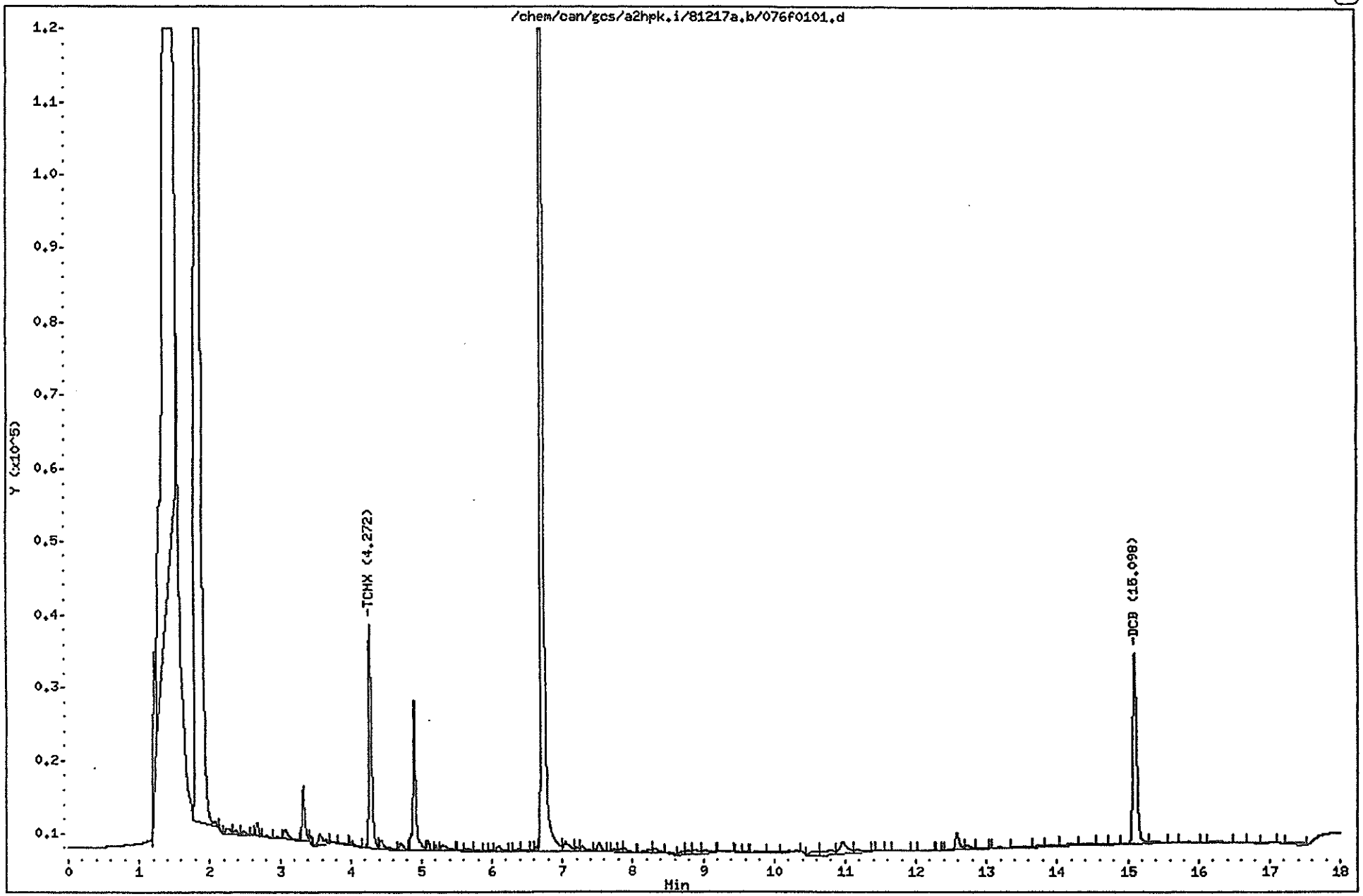
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.180	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	30552	0.01863	6.172	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	26195	0.01987	6.583	80.00- 120.00	100.00

File: /chem/can/gcs/a2hpk.i/81217a.b/076f0101.d
Date : 18-DEC-1998 17:34
Client ID: S-120198-JH-007
Sample Info: CHW69101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

045



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 008

Sample WT/Vol: 30.16 / g
Work Order: CNW6A101
Dilution factor: 1
Moisture %:9.4

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-008

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

046

Data File: /chem/can/gcs/a2hpk.i/81217a.b/077f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/077f0101.d
Lab Smp Id: CNW6A101 Client Smp ID: S-120198-JH-008
Inj Date : 18-DEC-1998 17:55
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6A101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.160	initial volume

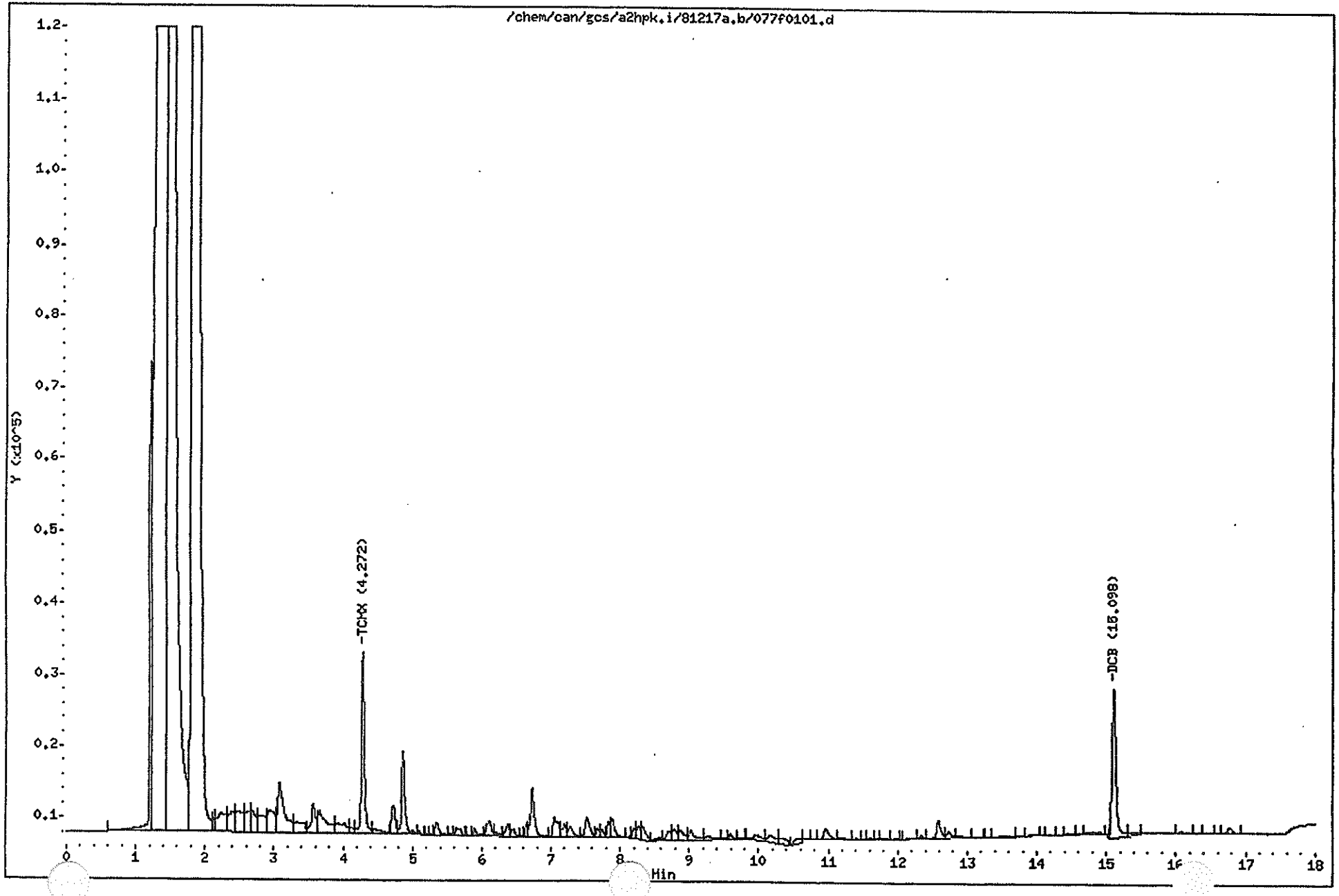
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	25129	0.01532	5.080	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	20808	0.01578	5.232	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/077f0101.d
Date : 18-DEC-1998 17:55
Client ID: S-120198-JH-008
Sample Info: CNW6A101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

048



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name: QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: A8L020132 009

Sample WT/Vol: 30.01 / g
Work Order: CNW6C101
Dilution factor: 10
Moisture %: 8.3

Date Received: 12/02/98
Date Extracted: 12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-009

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	360	U
11104-28-2	Aroclor 1221	360	U
11141-16-5	Aroclor 1232	360	U
53469-21-9	Aroclor 1242	360	U
12672-29-6	**Aroclor 1248**	**1200**	
11097-69-1	Aroclor 1254	360	U
11096-82-5	Aroclor 1260	360	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/078f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/078f0101.d
Lab Smp Id: CNW6C101 Client Smp ID: S-120198-JH-009
Inj Date : 18-DEC-1998 18:16
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6C101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	3405	0.00208	6.918	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	18197	0.75241	2507	80.00- 120.00	24.31(M)
6.102	6.102	0.000	16482	0.40489	1349	137.72- 229.53	22.02
7.042	7.042	0.000	15325	0.26798	893.0	181.30- 302.17	20.48
9.023	9.025	-0.002	5106	0.15417	513.7	108.43- 180.71	6.82
9.507	9.590	-0.003	3024	0.13442	447.9	78.36- 130.60	4.04
Average of Peak Concentrations =					1142		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	2952	0.00224	7.460	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/078f0101.d
Report Date: 21-Dec-1998 10:30

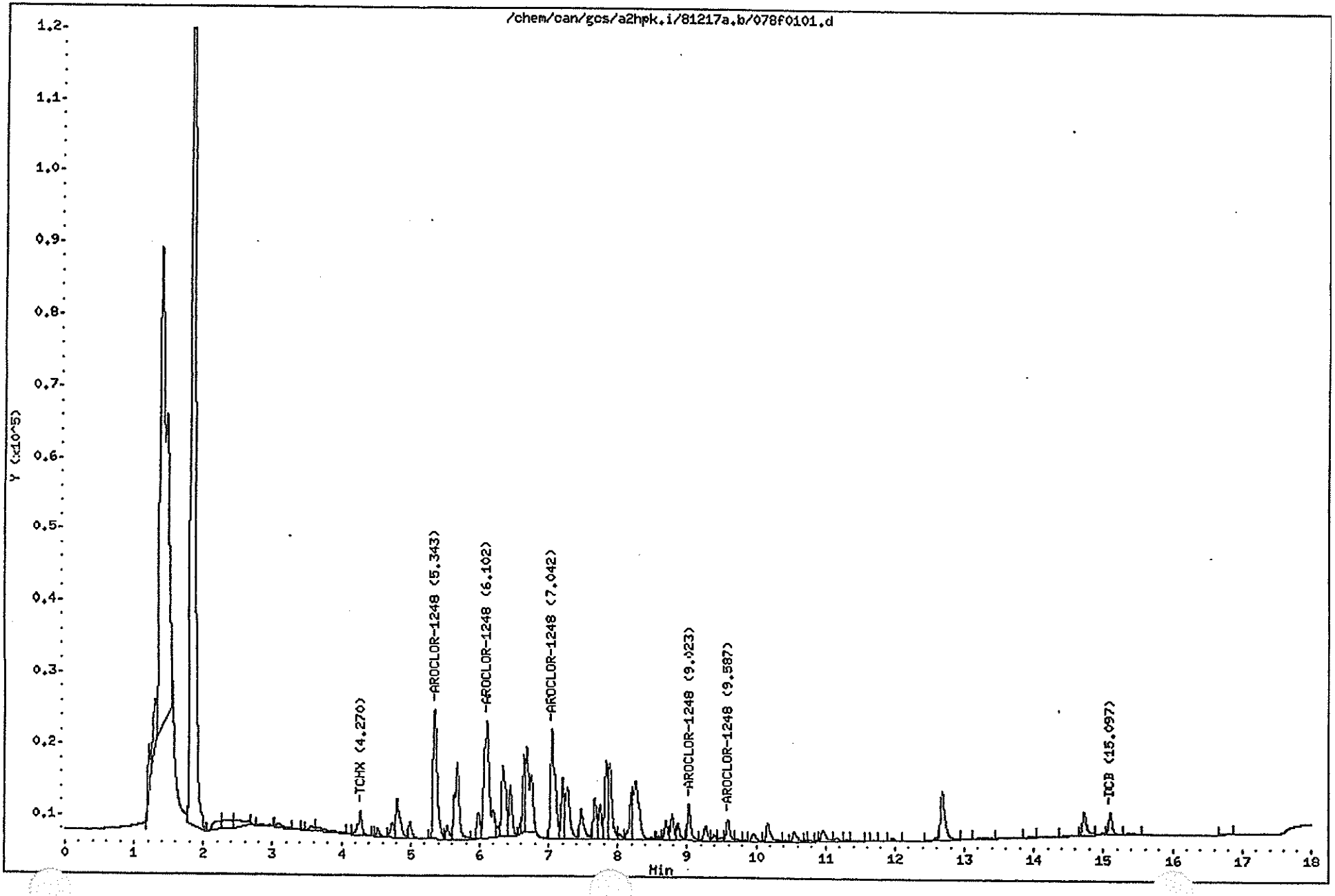
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81217a.b/078f0101.d
Date : 18-DEC-1998 18:16
Client ID: S-120198-JH-009
Sample Info: CNW6C101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



250

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 010

Sample WT/Vol: 30.12 / g
Work Order: CNW6D101
Dilution factor: 1
Moisture %:7.8

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-010

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/082f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

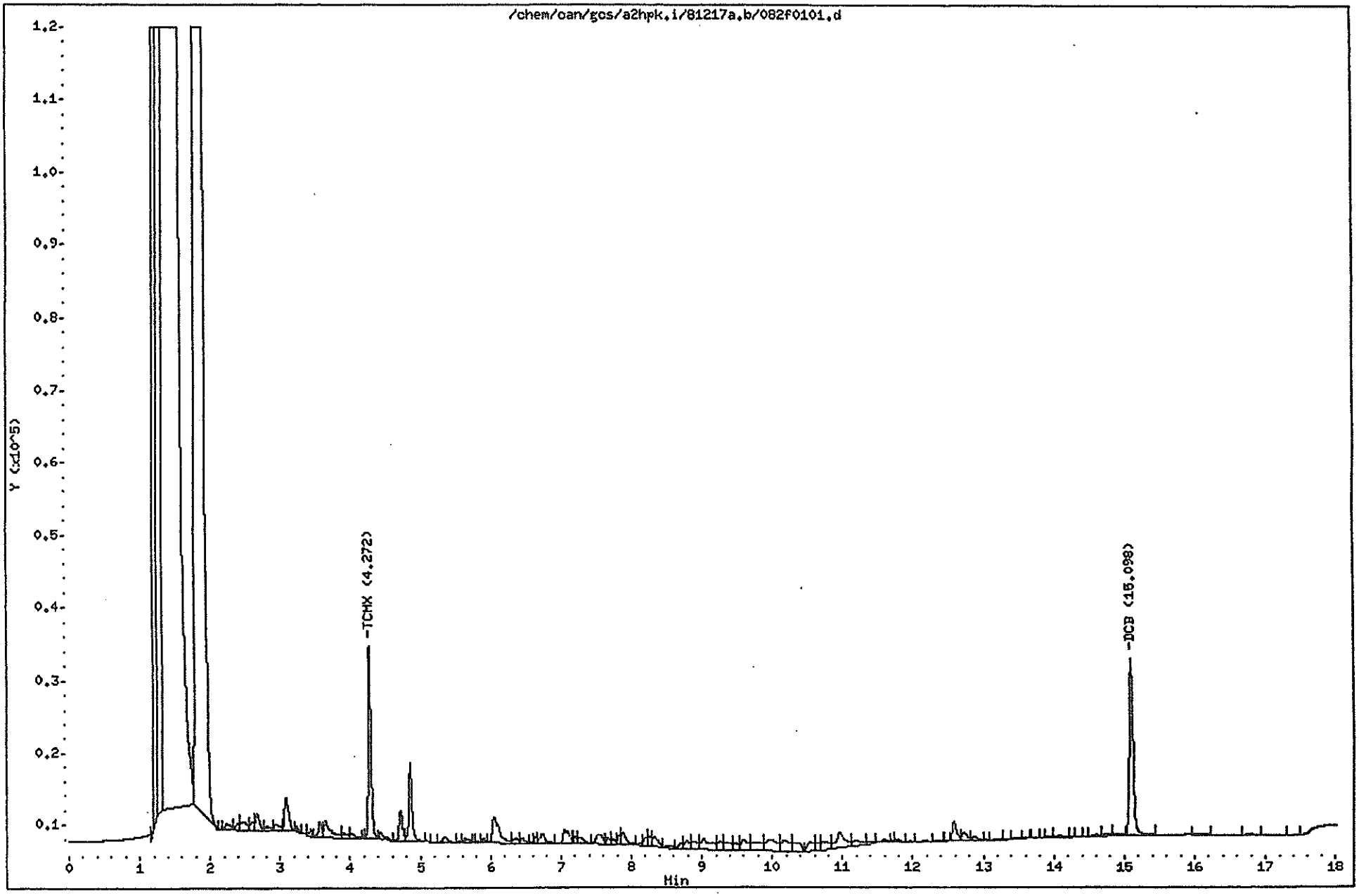
Data file : /chem/can/gcs/a2hpk.i/81217a.b/082f0101.d
Lab Smp Id: CNW6D101 Client Smp ID: S-120198-JH-010
Inj Date : 18-DEC-1998 19:40
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6D101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.120	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	26535	0.01618	5.372	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	24474	0.01856	6.162	80.00- 120.00	100.00

File: /chem/oan/gcs/a2hpk.i/81217a.b/082f0101.d
Date : 18-DEC-1998 19:40
Client ID: S-120198-JH-010 Instrument: a2hpk.i
Sample Info: CNW6D101
Volume Injected (uL): 1.0 Operator: 1808
Column phase: RTX-CLP PESTICIDES Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 011

Sample WT/Vol: 30.06 / g
Work Order: CNW6E101
Dilution factor: 1
Moisture %:3.2

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-011

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34	U
11104-28-2	Aroclor 1221	34	U
11141-16-5	Aroclor 1232	34	U
53469-21-9	Aroclor 1242	34	U
12672-29-6	**Aroclor 1248**	**220**	
11097-69-1	Aroclor 1254	34	U
11096-82-5	Aroclor 1260	34	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/083f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/083f0101.d
Lab Smp Id: CNW6E101 Client Smp ID: S-120198-JH-011
Inj Date : 18-DEC-1998 20:01
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6E101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

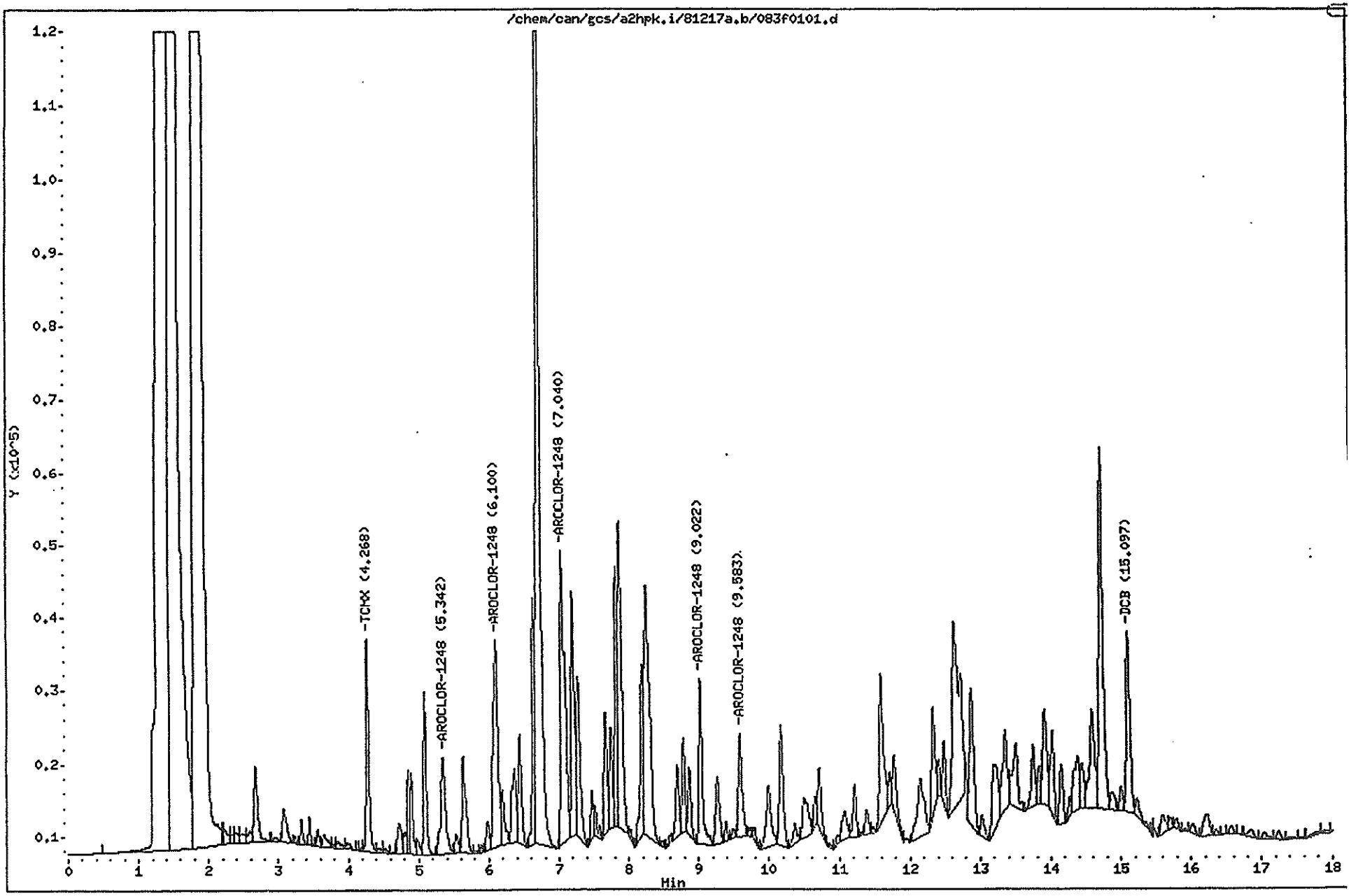
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.268	4.270	-0.002	28943	0.01765	5.871	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.342	5.338	0.004	13390	0.55365	184.2	80.00- 120.00	100.00
6.100	6.102	-0.002	28245	0.69386	230.8	137.72- 229.53	210.94
7.040	7.042	-0.002	40421	0.70682	235.1	181.30- 302.17	301.87
9.022	9.025	-0.003	22353	0.67494	224.5	108.43- 180.71	166.94
9.583	9.590	-0.007	14044	0.62427	207.7	78.36- 130.60	104.88
Average of Peak Concentrations =					216.5		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	24475	0.01856	6.175	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/083f0101.d
Date : 18-DEC-1998 20:01
Client ID: S-120198-JH-011
Sample Info: CHW6E101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 012

Sample WT/Vol: 30.08 / g
Work Order: CNW6F101
Dilution factor: 10
Moisture %:6.9

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-012

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	350	U
12672-29-6	**Aroclor 1248**	**3300**	
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/084f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/084f0101.d
Lab Smp Id: CNW6F101 Client Smp ID: S-120198-JH-012
Inj Date : 18-DEC-1998 20:22
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6F101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.268	4.270	-0.002	3267	0.00199	6.622	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	30799	1.27349	4234	80.00- 120.00	22.32 (M)
6.100	6.102	-0.002	58982	1.44893	4817	137.72- 229.53	42.74
7.040	7.042	-0.002	31920	0.55817	1856	181.30- 302.17	23.13
9.022	9.025	-0.003	11167	0.33718	1121	108.43- 180.71	8.09
9.570	9.590	-0.020	23081	1.02597	3411	78.36- 130.60	16.73
Average of Peak Concentrations =					3088		
$ 9 DCB					CAS #: 2051-24-3		
15.115	15.097	0.018	10607	0.00804	26.74	80.00- 120.00	100.00 (R)

Data File: /chem/can/gcs/a2hpk.i/81217a.b/084f0101.d
Report Date: 21-Dec-1998 10:30

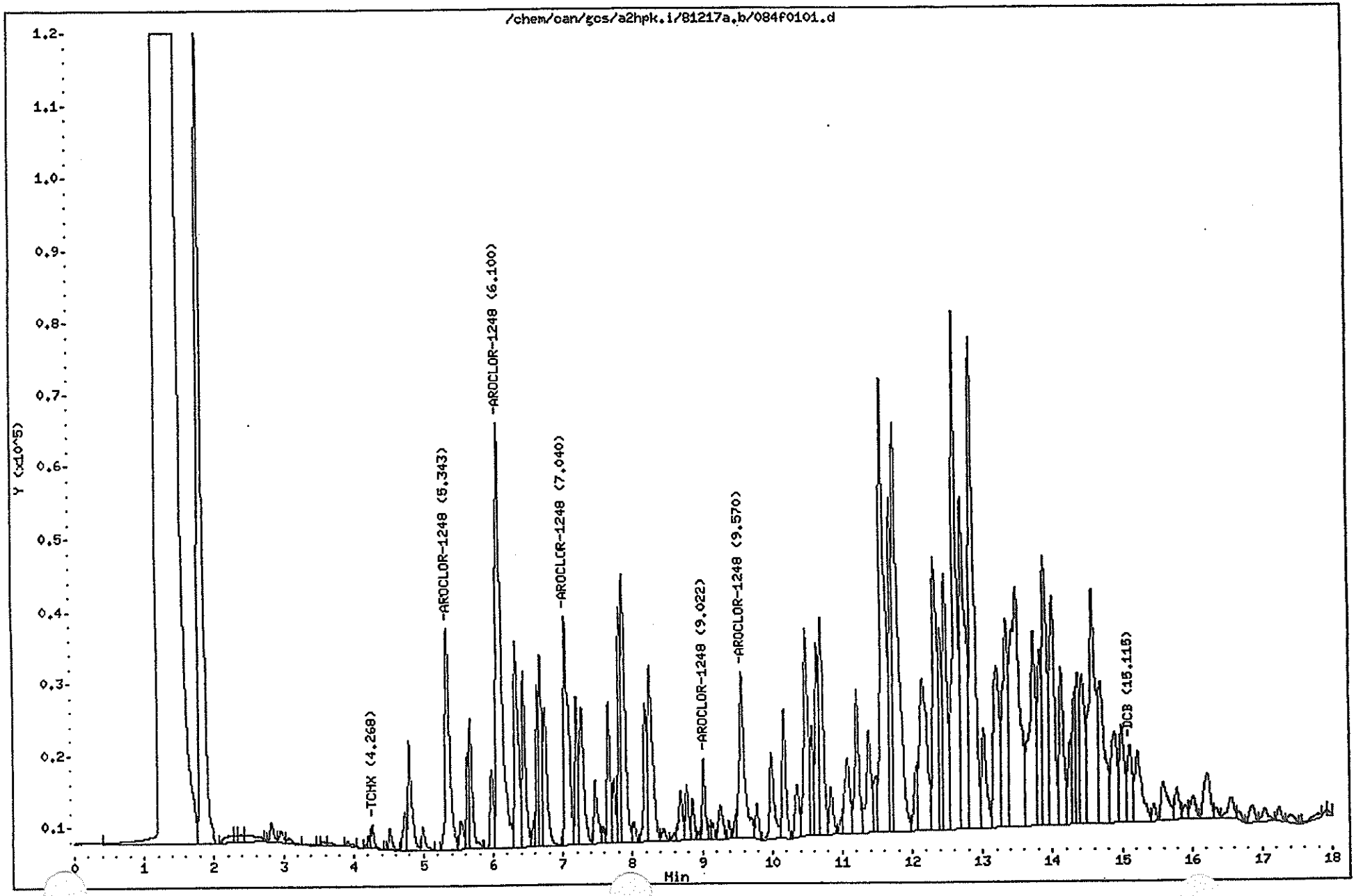
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81217a.b/084f0101.d
Date : 18-DEC-1998 20:22
Client ID: S-120198-JH-012
Sample Info: CNW6F101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 013

Sample WT/Vol: 30.04 / g
Work Order: CNW6G101
Dilution factor: 10
Moisture %:6.1

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-013

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	350	U
12672-29-6	**Aroclor 1248**	**1400**	
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/085f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/085f0101.d
Lab Smp Id: CNW6G101 Client Smp ID: S-120198-JH-013
Inj Date : 18-DEC-1998 20:43
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6G101,10 ,
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	3579	0.00218	7.264	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	17737	0.73339	2441	80.00- 120.00	24.25(M)
6.103	6.102	0.001	18196	0.44700	1488	137.72- 229.53	24.88
7.042	7.042	0.000	18971	0.33174	1104	181.30- 302.17	25.94
9.025	9.025	0.000	6726	0.20309	676.0	108.43- 180.71	9.20
9.587	9.590	-0.003	4289	0.19065	634.6	78.36- 130.60	5.86
Average of Peak Concentrations =					1269		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	3362	0.00255	8.488	80.00- 120.00	100.00

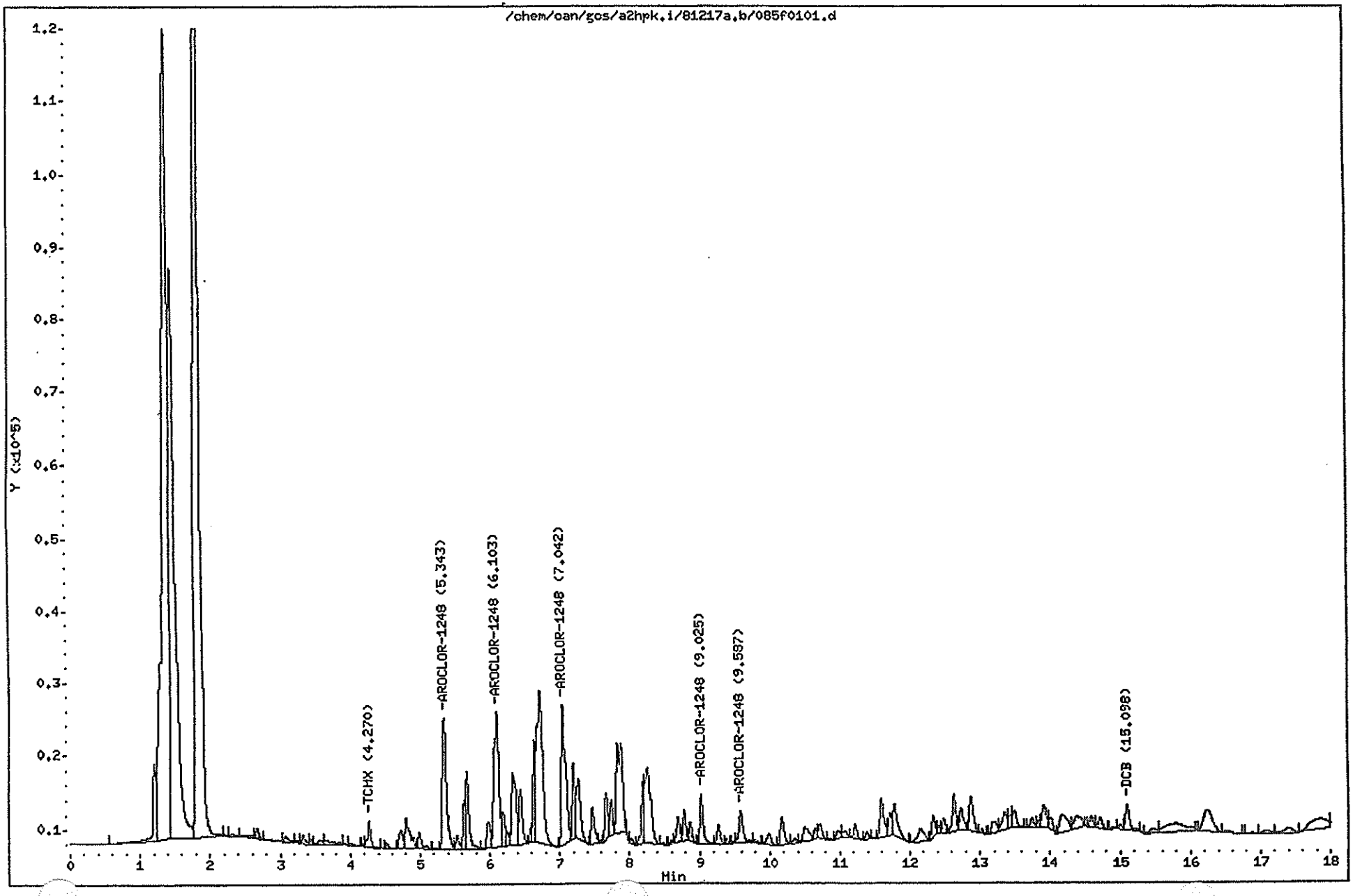
Data File: /chem/can/gcs/a2hpk.i/81217a.b/085f0101.d
Report Date: 21-Dec-1998 10:30

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81217a.b/085f0101.d
Date : 18-DEC-1998 20:43
Client ID: S-120198-JH-013
Sample Info: CHW6G101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 014

Sample WT/Vol: 30 / g
Work Order: CNW6H101
Dilution factor: 100
Moisture %:13

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-014

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3800	U
11104-28-2	Aroclor 1221	3800	U
11141-16-5	Aroclor 1232	3800	U
53469-21-9	**Aroclor 1242**	**21000**	
12672-29-6	Aroclor 1248	3800	U
11097-69-1	Aroclor 1254	3800	U
11096-82-5	Aroclor 1260	3800	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/022f0101.d
Report Date: 22-Dec-1998 14:48

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/022f0101.d
Lab Smp Id: CNW6H101 Client Smp ID: S-120198-JH-014
Inj Date : 17-DEC-1998 02:01
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6H101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.230	4.272	-0.042	1339	0.000816	27.21	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.802	4.802	0.000	12412	0.46656	15550	80.00- 120.00	29.55(M)
5.347	5.347	0.000	24499	0.54691	18230	116.22- 193.70	58.32
6.103	6.103	0.000	36772	0.55165	18390	190.61- 317.68	87.54
6.330	6.330	0.000	21006	0.55770	18590	107.39- 178.98	50.01
6.442	6.442	0.000	15804	0.58985	19660	79.45- 132.42	37.62
Average of Peak Concentrations =					18080		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	356	0.00027	9.000	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/022f0101.d
Report Date: 22-Dec-1998 14:48

QC Flag Legend

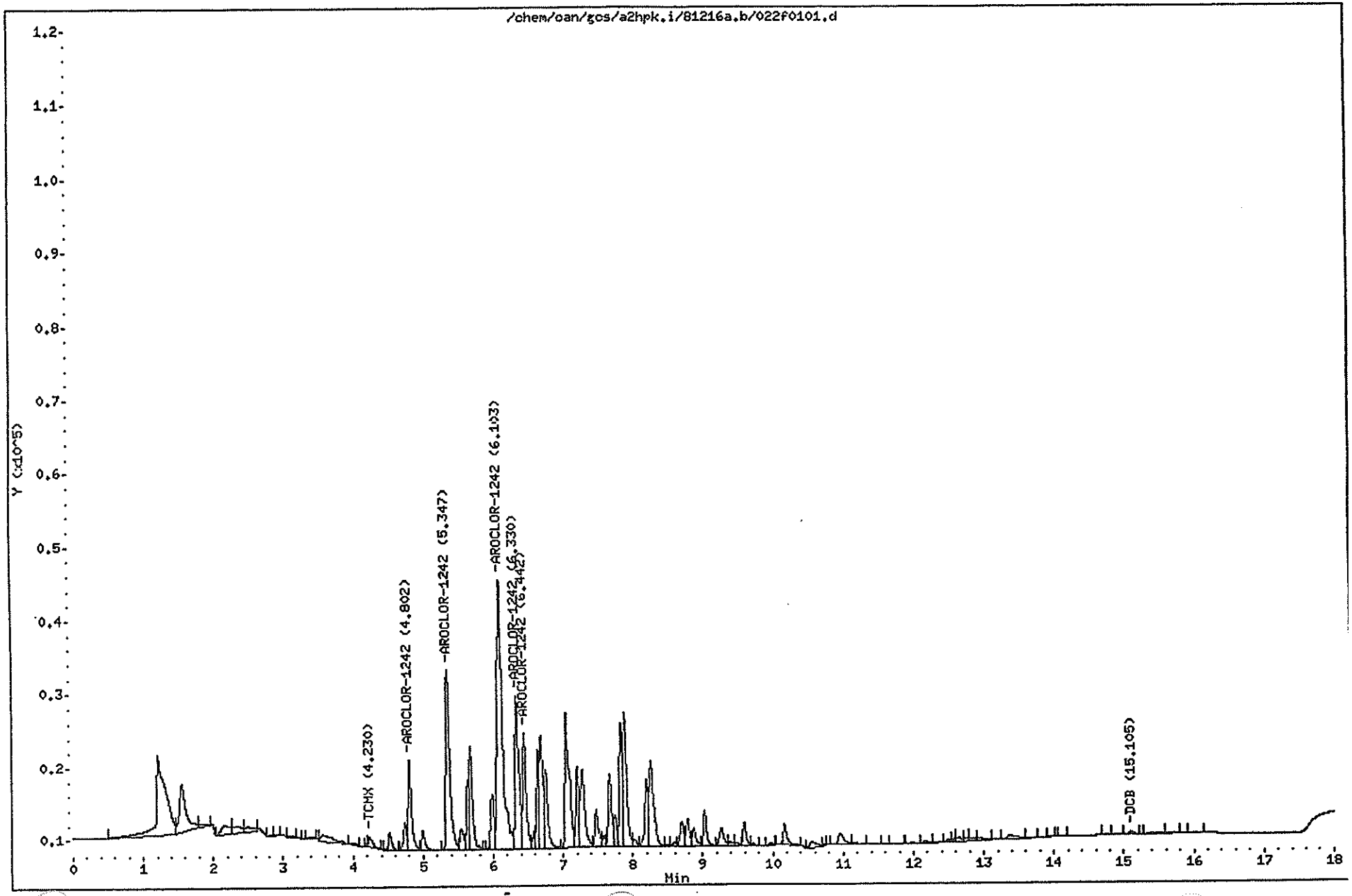
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81216a.b/022f0101.d
Date : 17-DEC-1998 02:01
Client ID: S-120198-JH-014
Sample Info: CNW6H101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

070



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 015

Sample WT/Vol: 30.01 / g
Work Order: CNW6J101
Dilution factor: 1
Moisture %:6.6

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-015

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	35	U
11104-28-2	Aroclor 1221	35	U
11141-16-5	Aroclor 1232	35	U
53469-21-9	Aroclor 1242	35	U
12672-29-6	Aroclor 1248	35	U
11097-69-1	Aroclor 1254	35	U
11096-82-5	Aroclor 1260	35	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/086f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/086f0101.d
Lab.Smp Id: CNW6J101 Client Smp ID: S-120198-JH-015
Inj Date : 18-DEC-1998 21:04
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6J101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

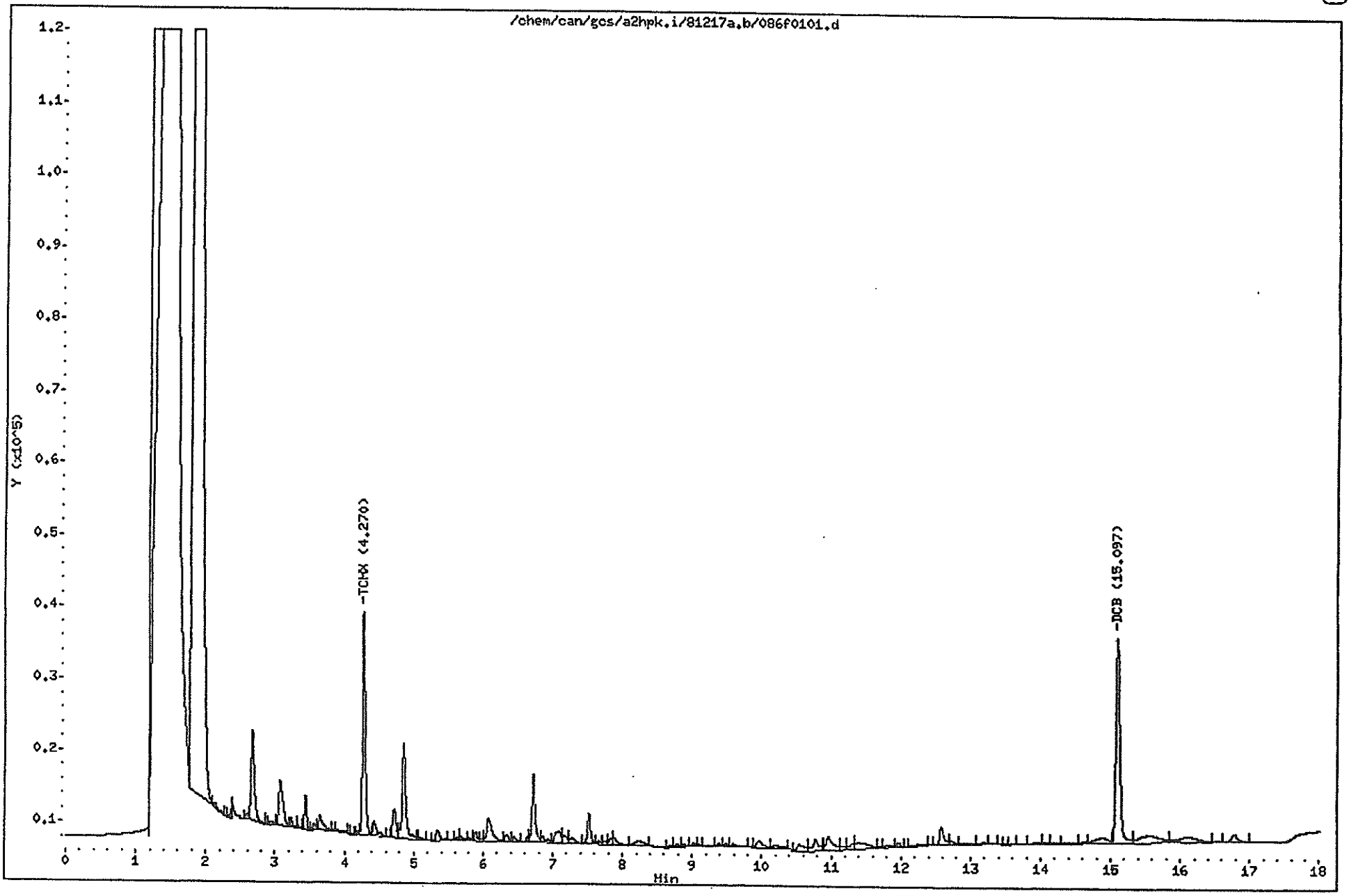
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	31090	0.01896	6.317	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	28599	0.02169	7.228	80.00- 120.00	100.00

File: /chem/can/gcs/a2hpk.i/81217a.b/086f0101.d
Date : 18-DEC-1998 21:04
Client ID: S-120198-JH-015
Sample Info: CNW6J101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

073



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 016

Sample WT/Vol: 30.11 / g
Work Order: CNW6L101
Dilution factor: 1
Moisture %:7.8

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-016

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/087f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/087f0101.d
Lab Smp Id: CNW6L101 Client Smp ID: S-120198-JH-016
Inj Date : 18-DEC-1998 21:25
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6L101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

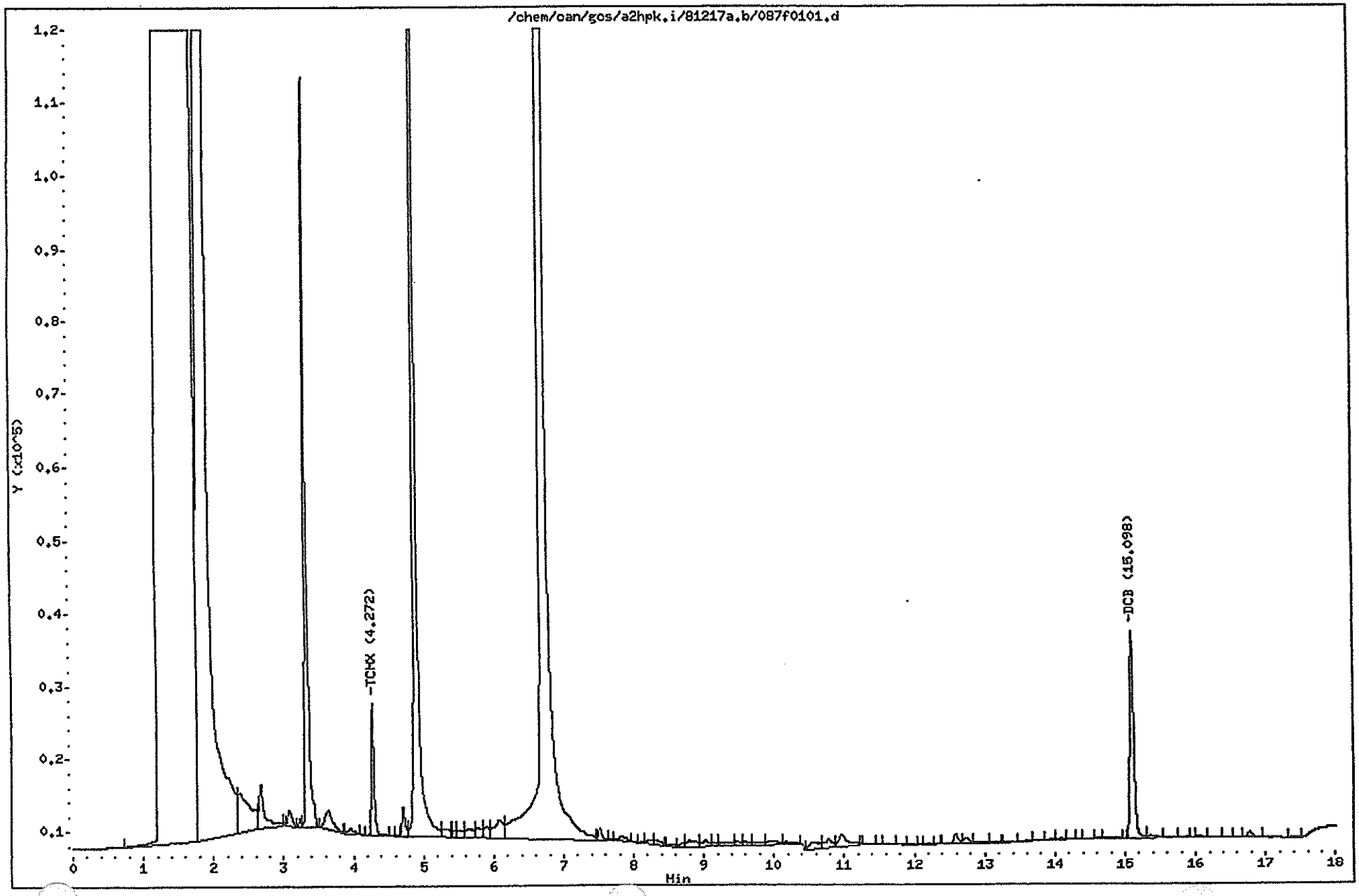
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	18121	0.01105	3.670	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	28589	0.02168	7.201	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/087f0101.d
Date : 18-DEC-1998 21:25
Client ID: S-120198-JH-016
Sample Info: CNW6L101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 017

Sample WT/Vol: 30.01 / g
Work Order: CNW6M101
Dilution factor: 2000
Moisture %:12

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/21/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-017

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	75000	U
11104-28-2	Aroclor 1221	75000	U
11141-16-5	Aroclor 1232	75000	U
53469-21-9	**Aroclor 1242**	**570000**	
12672-29-6	Aroclor 1248	75000	U
11097-69-1	Aroclor 1254	75000	U
11096-82-5	Aroclor 1260	75000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81220a.b/079f0101.d
Report Date: 23-Dec-1998 14:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/079f0101.d
Lab Smp Id: CNW6M101 — Client Smp ID: S-120198-JH-017
Inj Date : 21-DEC-1998 10:54
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNW6M101,2000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a — Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 — Cal File: 013f0101.d
Als bottle: 1
Dil Factor: 2000.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	2000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.235	4.275	-0.040	3298	0.00201	1340	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.800	0.003	23244	0.87373	582300	80.00- 120.00	26.64(M)
5.353	5.343	0.010	33213	0.74144	494100	122.23- 203.72	38.07
6.108	6.102	0.006	54825	0.82248	548100	193.45- 322.42	62.84
6.335	6.328	0.007	20796	0.55213	368000	108.22- 180.37	23.84
6.447	6.440	0.007	21099	0.78747	524800	79.59- 132.66	24.18
Average of Peak Concentrations =					503500		
$ 9 DCB					CAS #: 2051-24-3		
15.007	15.107	-0.100	154	0.000117	77.84	80.00- 120.00	100.00(R)

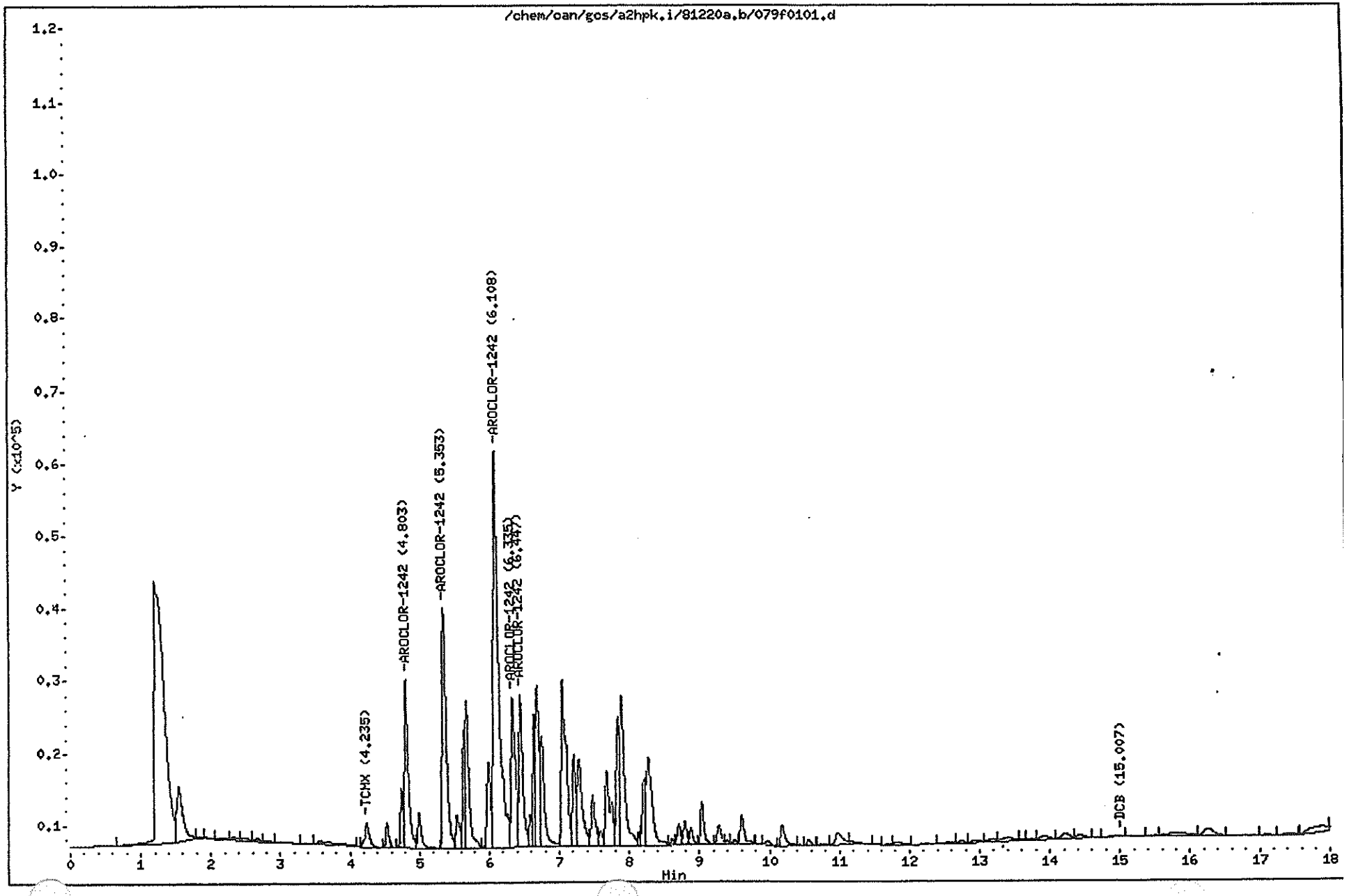
Data File: /chem/can/gcs/a2hpk.i/81220a.b/079f0101.d
Report Date: 23-Dec-1998 14:00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gos/a2hpk.i/81220a.b/079f0101.d
Date : 21-DEC-1998 10:54
Client ID: S-120198-JH-017
Sample Info: CNW6H101,2000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 018

Sample WT/Vol: 30.08 / g
Work Order: CNW6N101
Dilution factor: 10
Moisture %:16

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-018

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	390	U
11104-28-2	Aroclor 1221	390	U
11141-16-5	Aroclor 1232	390	U
53469-21-9	Aroclor 1242	1200	
12672-29-6	Aroclor 1248	390	U
11097-69-1	Aroclor 1254	390	U
11096-82-5	Aroclor 1260	390	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/089f0101.d
Report Date: 23-Dec-1998 12:19

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/089f0101.d
Lab Smp Id: CNW6N101 Client Smp ID: S-120198-JH-018
Inj Date : 18-DEC-1998 22:07
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6N101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	1829	0.00112	3.707	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.898	4.800	0.098	15660	0.58865	1957	80.00- 120.00	37.02(M)
5.345	5.343	0.002	10214	0.22802	758.0	122.23- 203.72	24.14
6.103	6.102	0.001	17048	0.25575	850.2	193.45- 322.42	40.30
6.330	6.328	0.002	9078	0.24102	801.2	108.22- 180.37	21.46
6.440	6.440	0.000	6950	0.25939	862.3	79.59- 132.66	16.43
Average of Peak Concentrations =					1046		
6 AROCLOR-1248					CAS #: 12672-29-6		
5.345	5.338	0.007	10214	0.42233	1404	80.00- 120.00	24.82(M)
6.103	6.102	0.001	17048	0.41879	1392	137.72- 229.53	41.42
7.043	7.042	0.001	9853	0.17229	572.8	181.30- 302.17	23.94

Data File: /chem/can/gcs/a2hpk.i/81217a.b/089f0101.d
Report Date: 23-Dec-1998 12:19

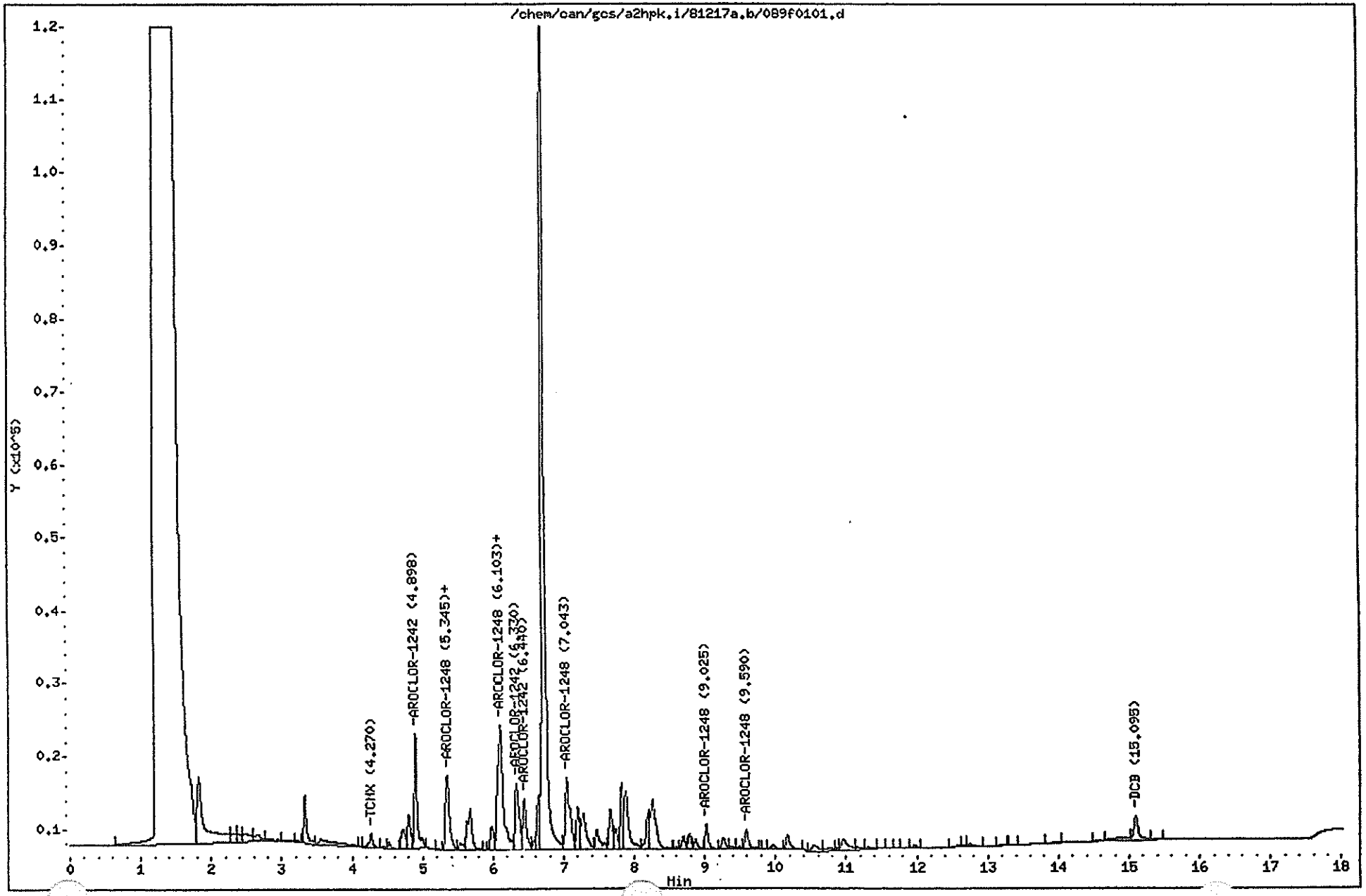
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
9.025	9.025	0.000	3377	0.10197	339.0	108.43- 180.71	8.21
9.590	9.590	0.000	2567	0.11411	379.3	78.36- 130.60	6.24
Average of Peak Concentrations =					817.5		
$ 9 DCB					CAS #: 2051-24-3		
15.095	15.097	-0.002	3451	0.00262	8.701	80.00- 120.00	100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81217a.b/089f0101.d
Date : 18-DEC-1998 22:07
Client ID: S-120198-JH-018
Sample Info: CNW6N101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 019

Sample WT/Vol: 29.1 / g
Work Order: CNW6P101
Dilution factor: 10
Moisture %:69

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-019

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	1100	U
11104-28-2	Aroclor 1221	1100	U
11141-16-5	Aroclor 1232	1100	U
53469-21-9	Aroclor 1242	6700	
12672-29-6	Aroclor 1248	1100	U
11097-69-1	Aroclor 1254	1100	U
11096-82-5	Aroclor 1260	1100	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/090f0101.d
Report Date: 23-Dec-1998 12:19

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/090f0101.d
Lab Smp Id: CNW6P101 Client Smp ID: S-120198-JH-019
Inj Date : 18-DEC-1998 22:28
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6P101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	29.100	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	3755	0.00229	7.868	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.800	4.800	0.000	14628	0.54986	1890	80.00- 120.00	29.94 (M)
5.350	5.343	0.007	24878	0.55537	1908	122.23- 203.72	50.91
6.103	6.102	0.001	52819	0.79239	2723	193.45- 322.42	108.10
6.330	6.328	0.002	12708	0.33739	1159	108.22- 180.37	26.01
6.440	6.440	0.000	20377	0.76052	2613	79.59- 132.66	41.70
Average of Peak Concentrations =					2059		
6 AROCLOR-1248					CAS #: 12672-29-6		
5.350	5.338	0.012	24878	1.02866	3535	80.00- 120.00	24.72 (M)
6.103	6.102	0.001	52819	1.29753	4459	137.72- 229.53	52.49
7.042	7.042	0.000	25590	0.44748	1538	181.30- 302.17	25.43

Data File: /chem/can/gcs/a2hpk.i/81217a.b/090f0101.d
Report Date: 23-Dec-1998 12:19

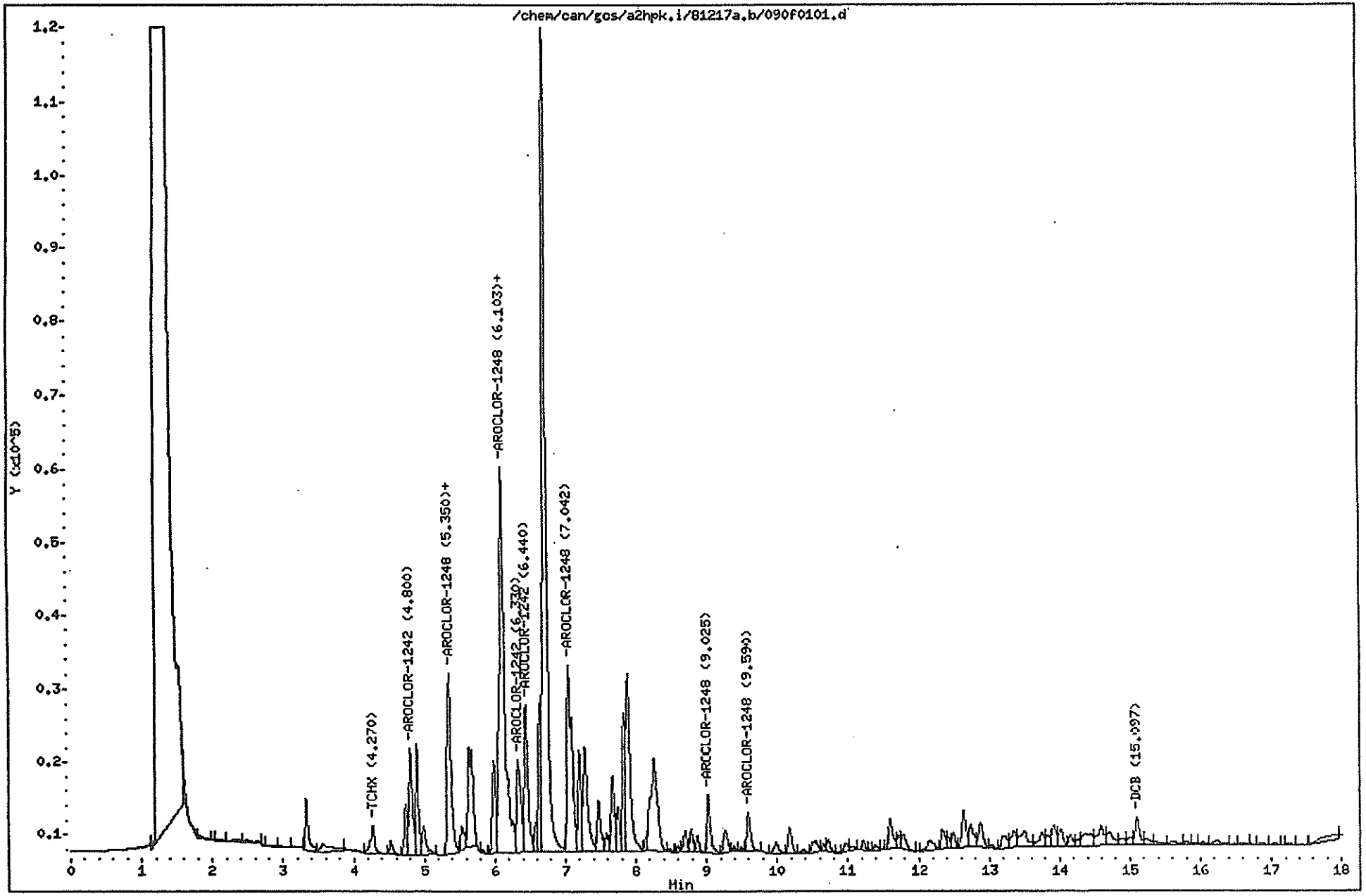
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
9.025	9.025	0.000	7904	0.23866	820.1	108.43- 180.71	7.85
9.590	9.590	0.000	5212	0.23168	796.1	78.36- 130.60	5.18
Average of Peak Concentrations =					2230		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	3776	0.00286	9.841	80.00- 120.00	100.00

QC Flag Legend

M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81217a.b/090f0101.d
Date: 18-DEC-1998 22:28
Client ID: S-120198-JH-019
Sample Info: CN96P101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



080

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 020

Sample WT/Vol: 30.11 / g
Work Order: CNW6Q101
Dilution factor: 10
Moisture %:7.3

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/18/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-020

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	360	U
11104-28-2	Aroclor 1221	360	U
11141-16-5	Aroclor 1232	360	U
53469-21-9	Aroclor 1242	360	U
12672-29-6	**Aroclor 1248**	**1500**	
11097-69-1	Aroclor 1254	360	U
11096-82-5	Aroclor 1260	360	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/091f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/091f0101.d
Lab Smp Id: CNW6Q101 Client Smp ID: S-120198-JH-020
Inj Date : 18-DEC-1998 22:49
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6Q101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	3340	0.00204	6.764	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.347	5.338	0.009	11360	0.46972	1560	80.00- 120.00	24.85(M)
6.103	6.102	0.001	24680	0.60628	2014	137.72- 229.53	53.99
7.042	7.042	0.000	25706	0.44951	1493	181.30- 302.17	56.23
9.023	9.025	-0.002	9604	0.28999	963.1	108.43- 180.71	21.01
9.587	9.590	-0.003	5695	0.25315	840.7	78.36- 130.60	12.46
Average of Peak Concentrations =					1374		
$ 9 DCB					CAS #: 2051-24-3		
15.095	15.097	-0.002	3581	0.00272	9.020	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/091f0101.d
Report Date: 21-Dec-1998 10:30

QC Flag Legend

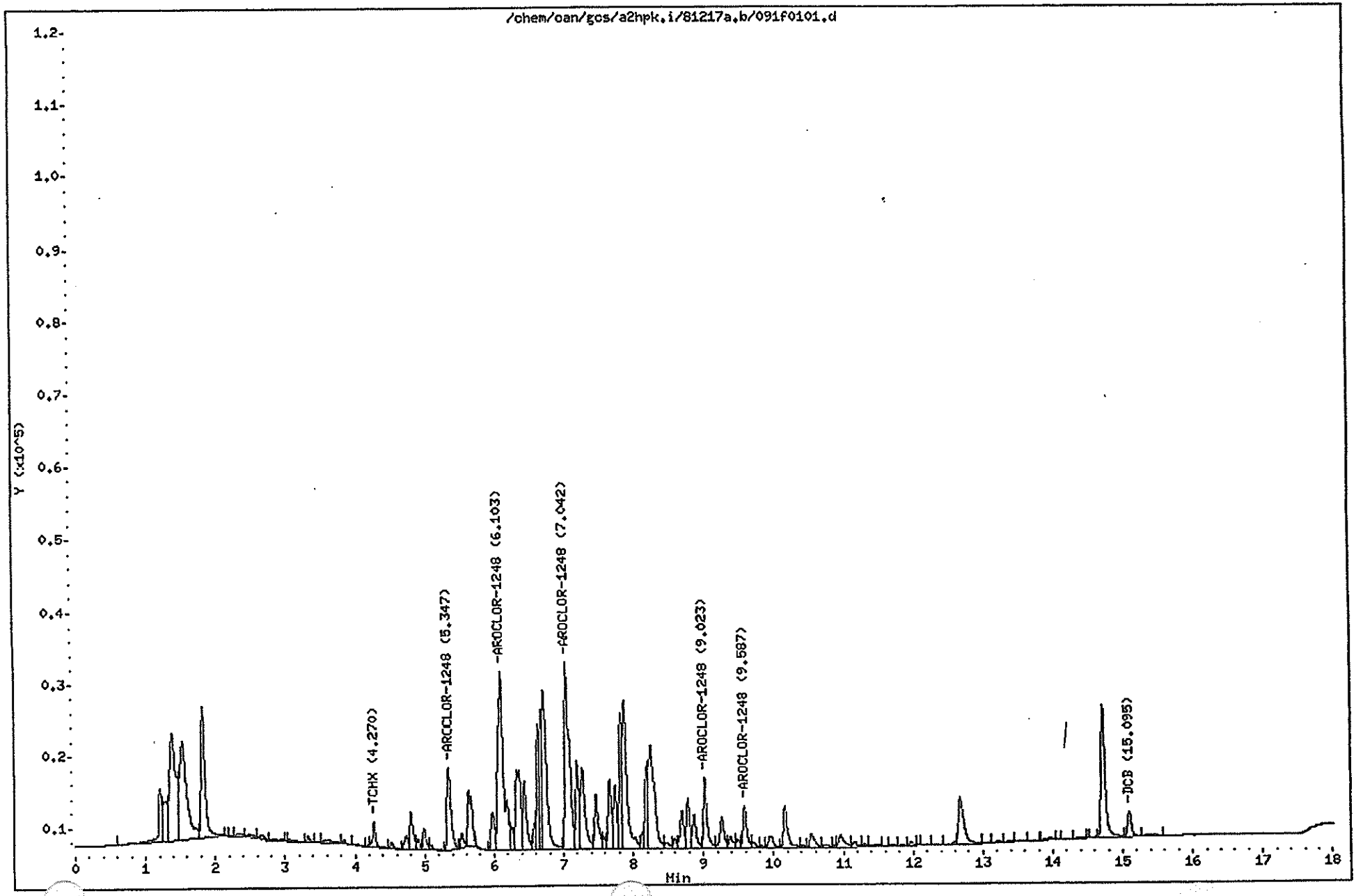
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81217a.b/091f0101.d
Date : 18-DEC-1998 22:49
Client ID: S-120198-JH-020
Sample Info: CNW6Q101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

092



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 021

Sample WT/Vol: 30.05 / g
Work Order: CNW6R101
Dilution factor: 10
Moisture %:6.8

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/19/98

QC Batch: 8336232

Client Sample Id: S-120198-JH-021

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	350	U
12672-29-6	**Aroclor 1248**	**1800**	
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/095f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/095f0101.d
Lab Smp Id: CNW6R101 — Client Smp ID: S-120198-JH-021
Inj Date : 19-DEC-1998 00:13
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNW6R101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.268	4.270	-0.002	3428	0.00209	6.956	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	22110	0.91421	3042	80.00- 120.00	23.92(M)
6.102	6.102	0.000	26342	0.64711	2153	137.72- 229.53	28.50
7.042	7.042	0.000	23454	0.41013	1365	181.30- 302.17	25.38
9.023	9.025	-0.002	7079	0.21375	711.3	108.43- 180.71	7.66
9.587	9.590	-0.003	6013	0.26728	889.5	78.36- 130.60	6.51
Average of Peak Concentrations =					1632		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.097	0.008	5997	0.00455	15.14	80.00- 120.00	100.00(R)

Data File: /chem/can/gcs/a2hpk.i/81217a.b/095f0101.d
Report Date: 21-Dec-1998 10:30

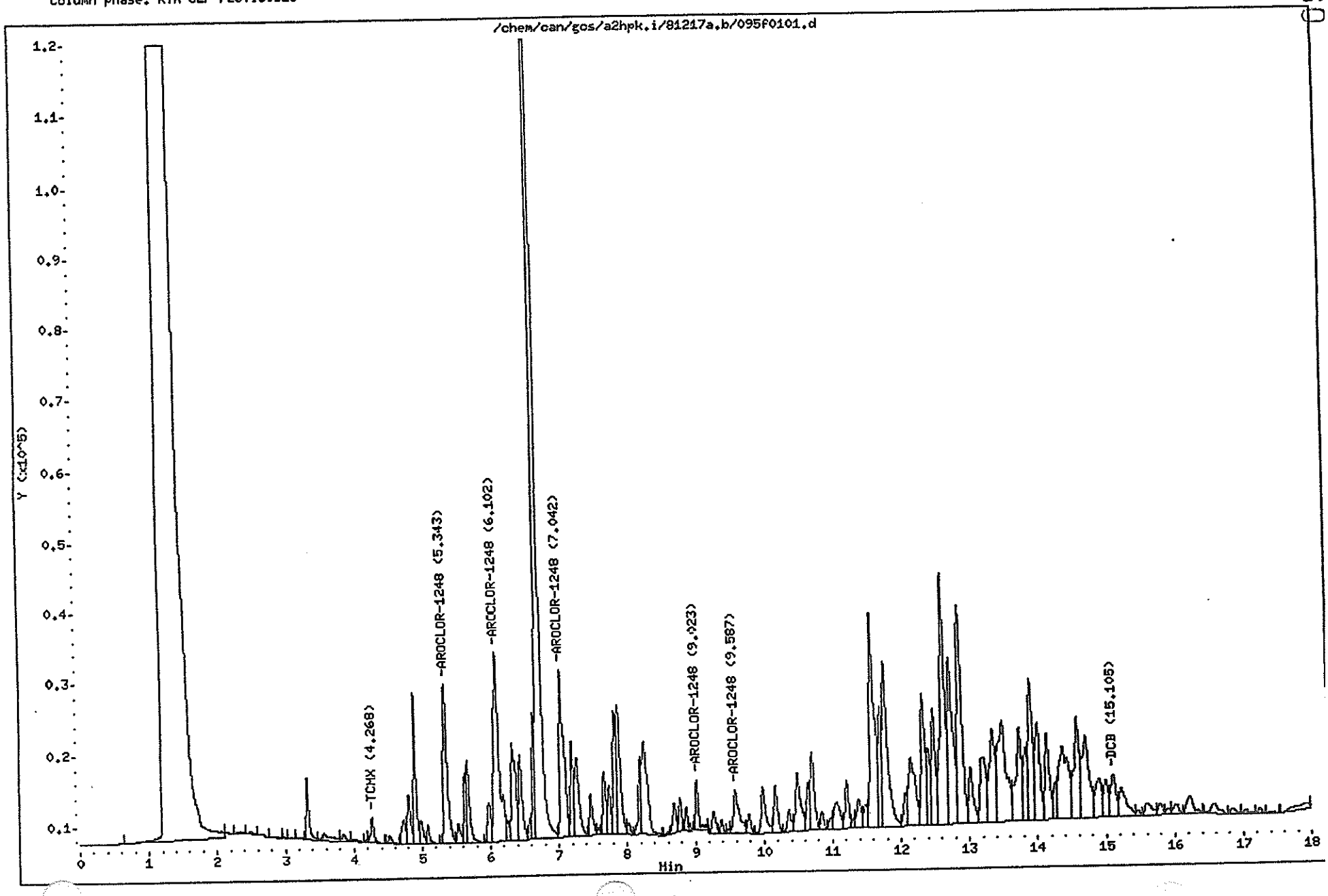
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81217a.b/095f0101.d
Date : 19-DEC-1998 00:13
Client ID: S-120198-JH-021
Sample Info: CNW6R101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 022

Sample WT/Vol: 30 / g
Work Order: CNW6T101
Dilution factor: 100
Moisture %:14

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-022

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3800	U
11104-28-2	Aroclor 1221	3800	U
11141-16-5	Aroclor 1232	3800	U
53469-21-9	**Aroclor 1242**	**57000**	
12672-29-6	Aroclor 1248	3800	U
11097-69-1	Aroclor 1254	3800	U
11096-82-5	Aroclor 1260	3800	U

FORM I

ata File: /chem/can/gcs/a2hpk.i/81216a.b/023f0101.d
Report Date: 22-Dec-1998 14:48

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/023f0101.d
Lab Smp Id: CNW6T101 Client Smp ID: S-120198-JH-022
Inj Date : 17-DEC-1998 02:22
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6T101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.230	4.272	-0.042	6086	0.00371	123.7	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.798	4.802	-0.004	53639	2.01625	67210	80.00- 120.00	28.45(M)
5.350	5.347	0.003	74431	1.66159	55390	116.22- 193.70	39.48
6.067	6.103	-0.036	86653	1.29997	43330	190.61- 317.68	45.97
6.332	6.330	0.002	16669	0.44256	14750	107.39- 178.98	8.84
6.440	6.442	-0.002	51443	1.91999	64000	79.45- 132.42	27.29
Average of Peak Concentrations =					48940		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	323	0.000245	8.166	80.00- 120.00	100.00

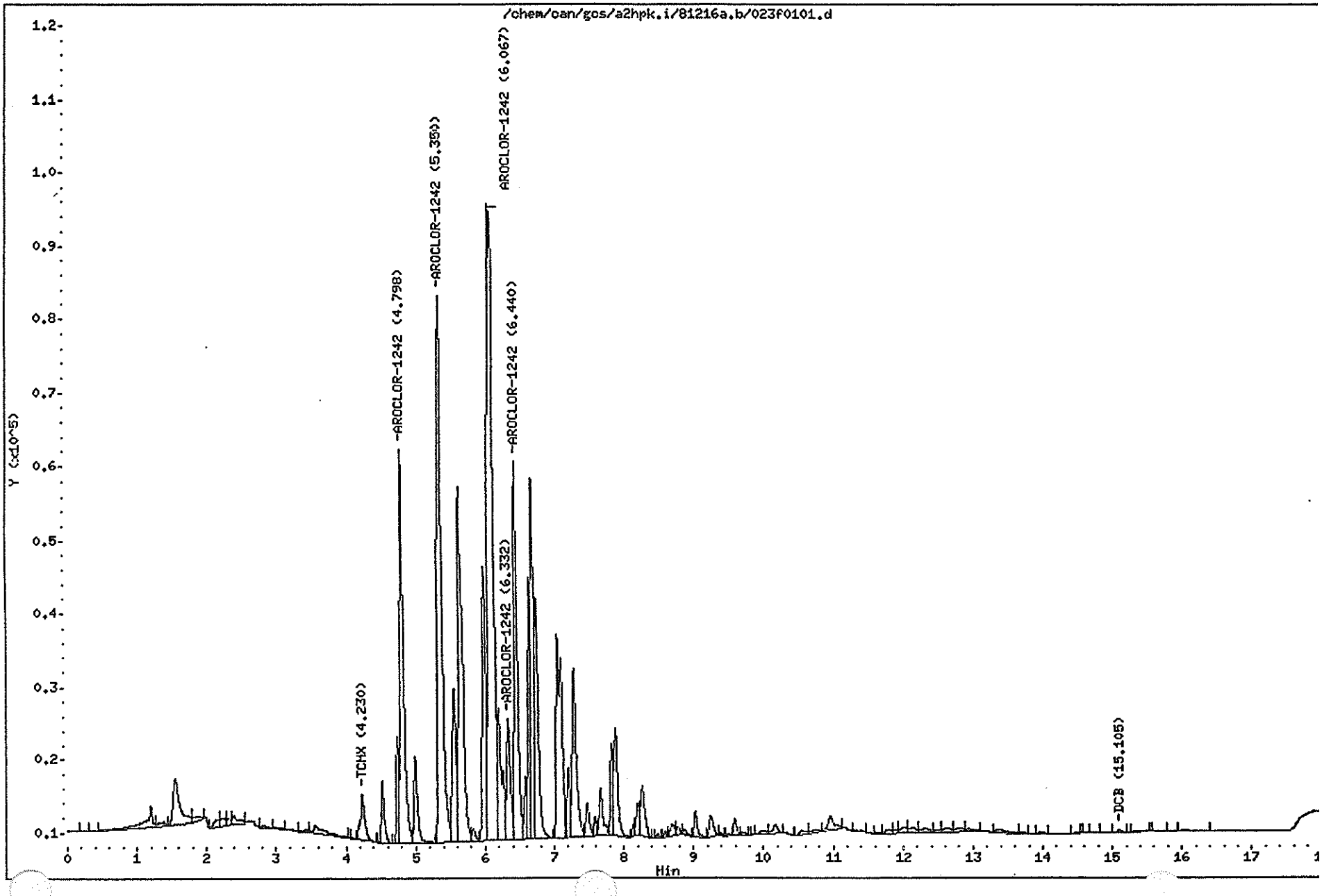
Data File: /chem/can/gcs/a2hpk.i/81216a.b/023f0101.d
Report Date: 22-Dec-1998 14:48

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81216a.b/023f0101.d
Date : 17-DEC-1998 02:22
Client ID: S-120198-JH-022
Sample Info: CNW6T101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 023

Sample WT/Vol: 30 / g
Work Order: CNW6V101
Dilution factor: 100
Moisture %:11

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-023

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	**Aroclor 1242**	**14000**	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/024f0101.d
Report Date: 22-Dec-1998 14:48

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/024f0101.d
Lab Smp Id: CNW6V101 Client Smp ID: S-120198-JH-023
Inj Date : 17-DEC-1998 02:43
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6V101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	619	0.000377	12.58	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.898	4.802	0.096	10314	0.38770	12920	80.00- 120.00	43.30(M)
5.348	5.347	0.001	14607	0.32608	10870	116.22- 193.70	61.32
6.105	6.103	0.002	25530	0.38300	12770	190.61- 317.68	107.17
6.332	6.330	0.002	13117	0.34825	11610	107.39- 178.98	55.06
6.442	6.442	0.000	10557	0.39401	13130	79.45- 132.42	44.32
Average of Peak Concentrations =					12260		
$ 9 DCB					CAS #: 2051-24-3		
15.102	15.105	-0.003	826	0.000626	20.88	80.00- 120.00	100.00(R)

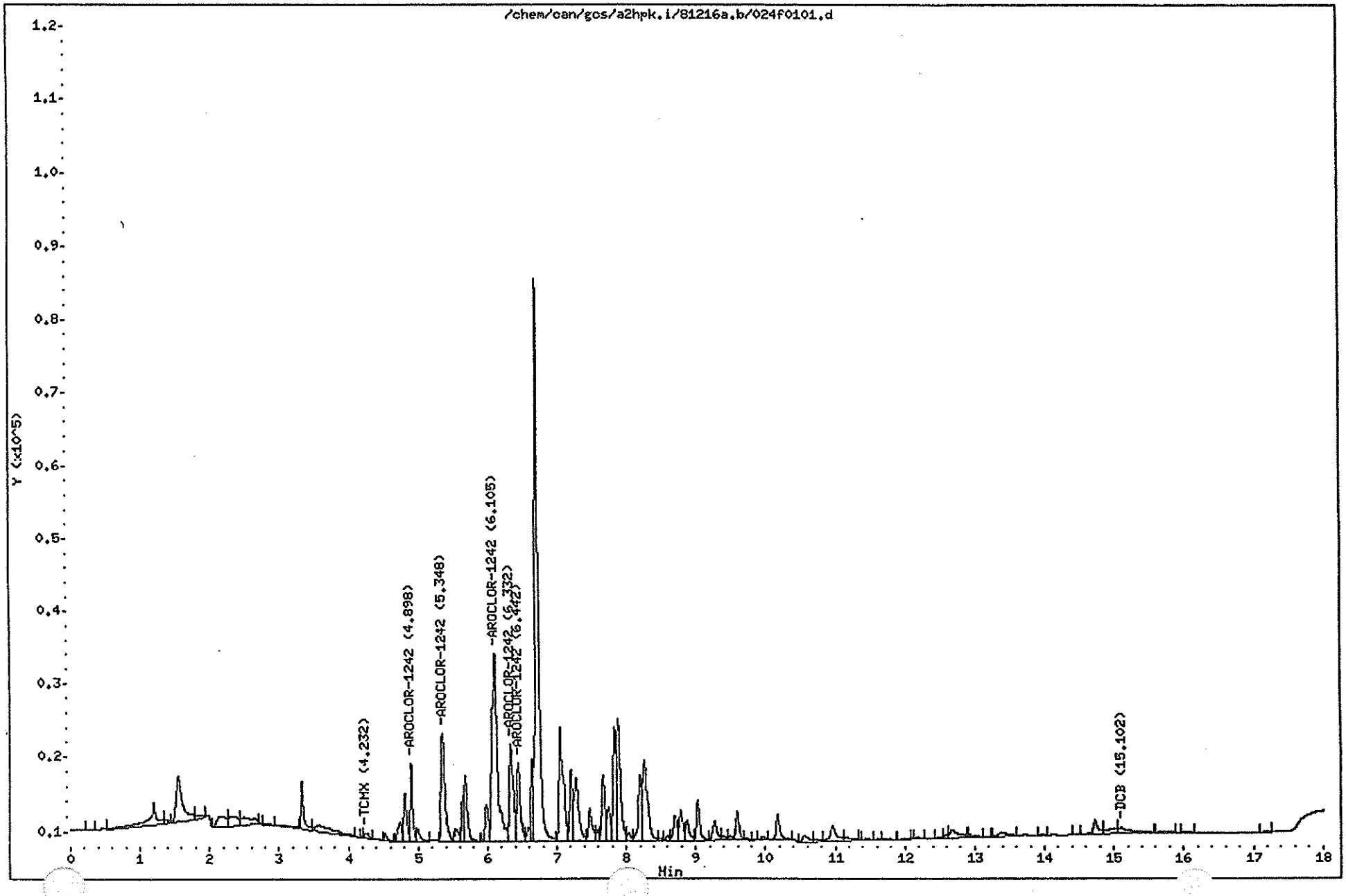
Data File: /chem/can/gcs/a2hpk.i/81216a.b/024f0101.d
Report Date: 22-Dec-1998 14:48

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gos/a2hpk.i/81216a.b/024f0101.d
Date : 17-DEC-1998 02:43
Client ID: S-120198-JH-023
Sample Info: CNW6V101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 024

Sample WT/Vol: 30 / g
Work Order: CNW6W101
Dilution factor: 1000
Moisture %:2.7

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-024

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	34000	U
11104-28-2	Aroclor 1221	34000	U
11141-16-5	Aroclor 1232	34000	U
53469-21-9	**Aroclor 1242**	**260000**	
12672-29-6	Aroclor 1248	34000	U
11097-69-1	Aroclor 1254	34000	U
11096-82-5	Aroclor 1260	34000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/025f0101.d
Report Date: 22-Dec-1998 14:48

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/025f0101.d
Lab Smp Id: CNW6W101 — Client Smp ID: S-120198-JH-024
Inj Date : 17-DEC-1998 03:04
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNW6W101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1000.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	2925	0.00178	594.5	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.802	4.802	0.000	18939	0.71190	237300	80.00- 120.00	28.79(M)
5.353	5.347	0.006	39132	0.87358	291200	116.22- 193.70	59.48
6.105	6.103	0.002	72705	1.09072	363600	190.61- 317.68	110.51
6.333	6.330	0.003	7079	0.18794	62650	107.39- 178.98	10.76
6.443	6.442	0.001	25009	0.93340	311100	79.45- 132.42	38.01
Average of Peak Concentrations =					253200		
$ 9 DCB					CAS #: 2051-24-3		
15.012	15.105	-0.093	406	0.000308	102.6	80.00- 120.00	100.00(R)

Data File: /chem/can/gcs/a2hpk.i/81216a.b/025f0101.d
Report Date: 22-Dec-1998 14:48

QC Flag Legend

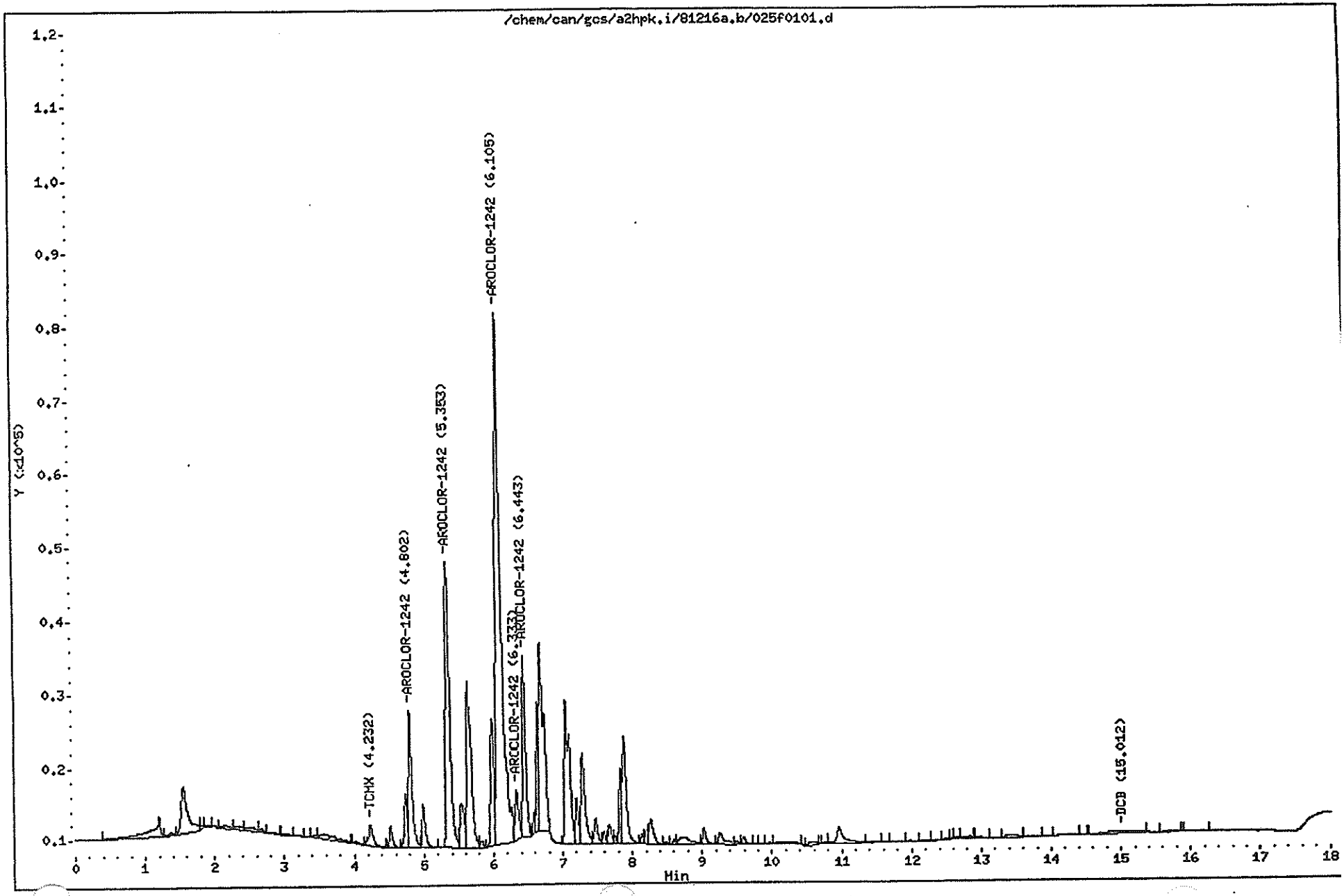
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81216a.b/025f0101.d
Date : 17-DEC-1998 03:04
Client ID: S-120198-JH-024
Sample Info: CNW6W101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

108



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 025

Sample WT/Vol: 30 / g
Work Order: CNW6X101
Dilution factor: 100
Moisture %:13

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-025

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3800	U
11104-28-2	Aroclor 1221	3800	U
11141-16-5	Aroclor 1232	3800	U
53469-21-9	**Aroclor 1242**	**17000**	
12672-29-6	Aroclor 1248	3800	U
11097-69-1	Aroclor 1254	3800	U
11096-82-5	Aroclor 1260	3800	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/026f0101.d
Report Date: 22-Dec-1998 14:49

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/026f0101.d
Lab Smp Id: CNW6X101 Client Smp ID: S-120198-JH-025
Inj Date : 17-DEC-1998 03:25
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW6X101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	841	0.000513	17.09	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.802	0.001	9900	0.37213	12400	80.00- 120.00	29.38(M)
5.348	5.347	0.001	17516	0.39102	13030	116.22- 193.70	51.98
6.105	6.103	0.002	32747	0.49127	16380	190.61- 317.68	97.17
6.332	6.330	0.002	18595	0.49369	16460	107.39- 178.98	55.18
6.443	6.442	0.001	14320	0.53446	17820	79.45- 132.42	42.49
Average of Peak Concentrations =					15220		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	298	0.000226	7.534	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/026f0101.d
Report Date: 22-Dec-1998 14:49

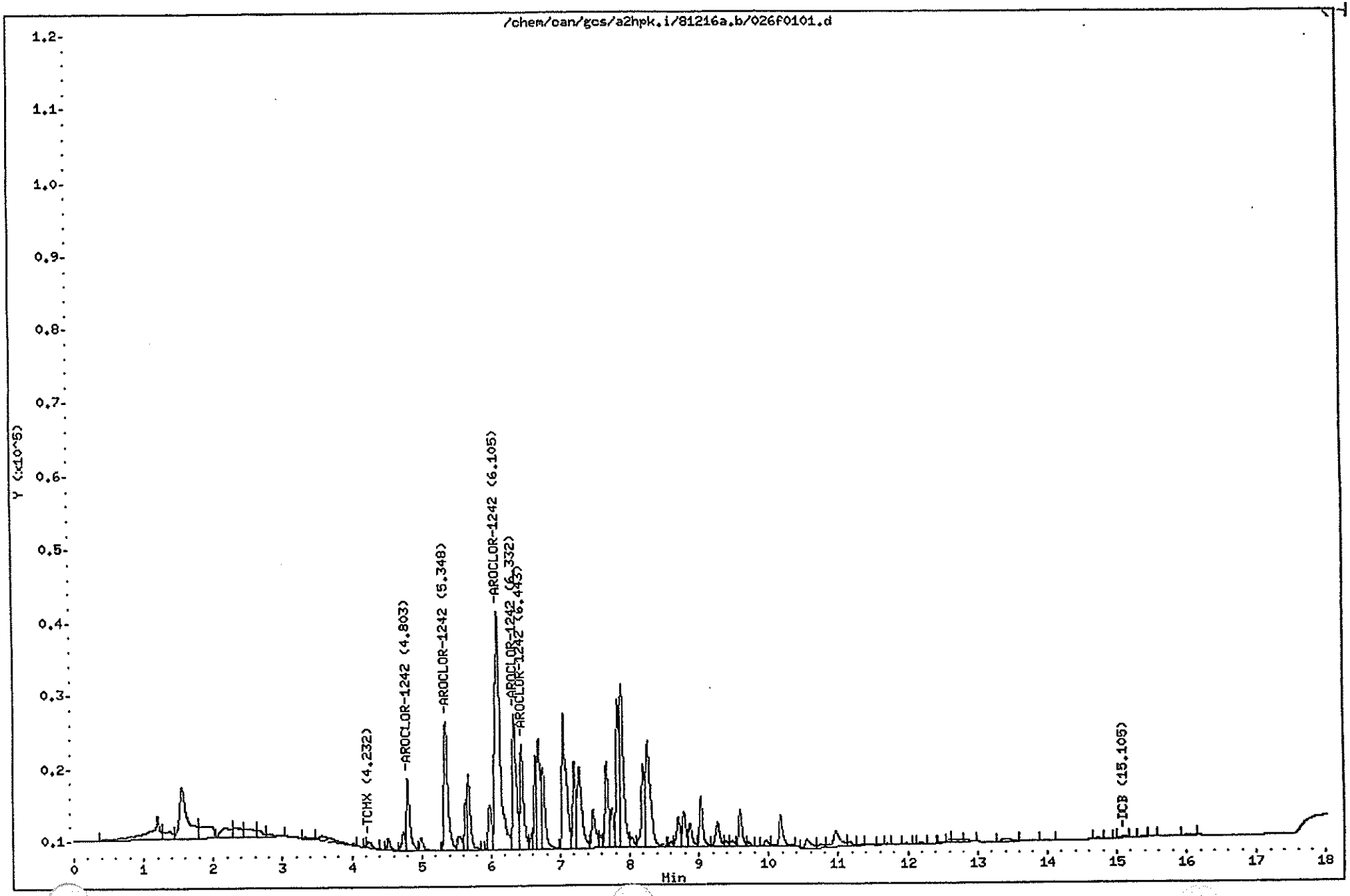
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81216a.b/026f0101.d
Date : 17-DEC-1998 03:25
Client ID: S-120198-JH-025
Sample Info: CNW6X101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 026

Sample WT/Vol: 30 / g
Work Order: CNW71101
Dilution factor: 1000
Moisture %:15

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-026

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39000	U
11104-28-2	Aroclor 1221	39000	U
11141-16-5	Aroclor 1232	39000	U
53469-21-9	**Aroclor 1242**	**92000**	
12672-29-6	Aroclor 1248	39000	U
11097-69-1	Aroclor 1254	39000	U
11096-82-5	Aroclor 1260	39000	U

FORM I

ata File: /chem/can/gcs/a2hpk.i/81216a.b/035f0101.d
eport Date: 22-Dec-1998 14:50

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/035f0101.d
Lab Smp Id: CNW71101 Client Smp ID: S-120198-JH-026
Inj Date : 17-DEC-1998 06:34
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW71101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	681	0.000415	138.4	80.00- 120.00	100.00(R)
S AROCLOR-1242					CAS #: 53469-21-9		
4.738	4.802	-0.064	1465	0.21136	70450	80.00- 120.00	34.20(M)
5.347	5.347	0.000	10736	0.23967	79890	116.22- 193.70	250.67
6.107	6.103	0.004	15434	0.23154	77180	190.61- 317.68	360.35
6.333	6.330	0.003	9089	0.24131	80440	107.39- 178.98	212.21
6.443	6.442	0.001	6471	0.24151	80500	79.45- 132.42	151.09
Average of Peak Concentrations =					77690		

Data File: /chem/can/gcs/a2hpk.i/81216a.b/035f0101.d
Report Date: 22-Dec-1998 14:50

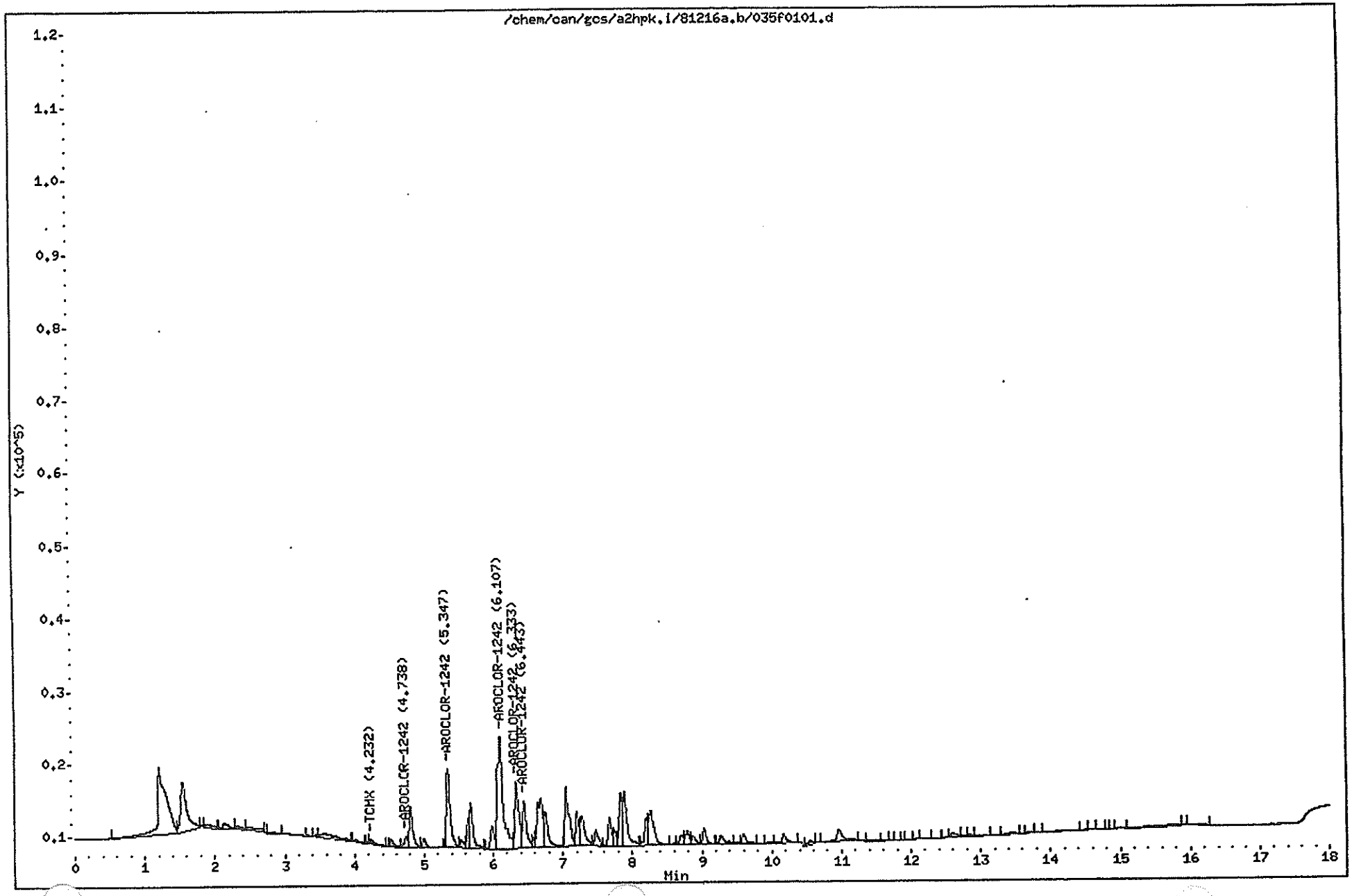
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81216a.b/035f0101.d
Date : 17-DEC-1998 06:34
Client ID: S-120198-JH-026
Sample Info: CNW71101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 027

Sample WT/Vol: 30 / g
Work Order: CNW73101
Dilution factor: 50
Moisture %:9.1

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-027

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	1800	U
11104-28-2	Aroclor 1221	1800	U
11141-16-5	Aroclor 1232	1800	U
53469-21-9	Aroclor 1242	1800	U
12672-29-6	**Aroclor 1248**	**6100**	
11097-69-1	Aroclor 1254	1800	U
11096-82-5	Aroclor 1260	1800	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/019f0101.d
Report Date: 22-Dec-1998 14:46

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/019f0101.d
Lab Smp Id: CNW73101 Client Smp ID: S-120198-JH-027
Inj Date : 17-DEC-1998 21:36
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW73101,50
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	566	0.000345	5.752	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.633	5.338	0.295	2324	0.09609	1602	80.00- 120.00	22.14 (M)
6.108	6.102	0.006	9485	0.23300	3883	137.72- 229.53	90.36
7.043	7.042	0.001	24525	0.42885	7148	181.30- 302.17	233.64
9.027	9.025	0.002	15087	0.45554	7592	108.43- 180.71	143.73
9.590	9.590	0.000	10252	0.45571	7595	78.36- 130.60	97.67
Average of Peak Concentrations =					5564		
$ 9 DCB					CAS #: 2051-24-3		
15.120	15.097	0.023	956	0.000725	12.08	80.00- 120.00	100.00 (R)

Data File: /chem/can/gcs/a2hpk.i/81217a.b/019f0101.d
Report Date: 22-Dec-1998 14:46

QC Flag Legend

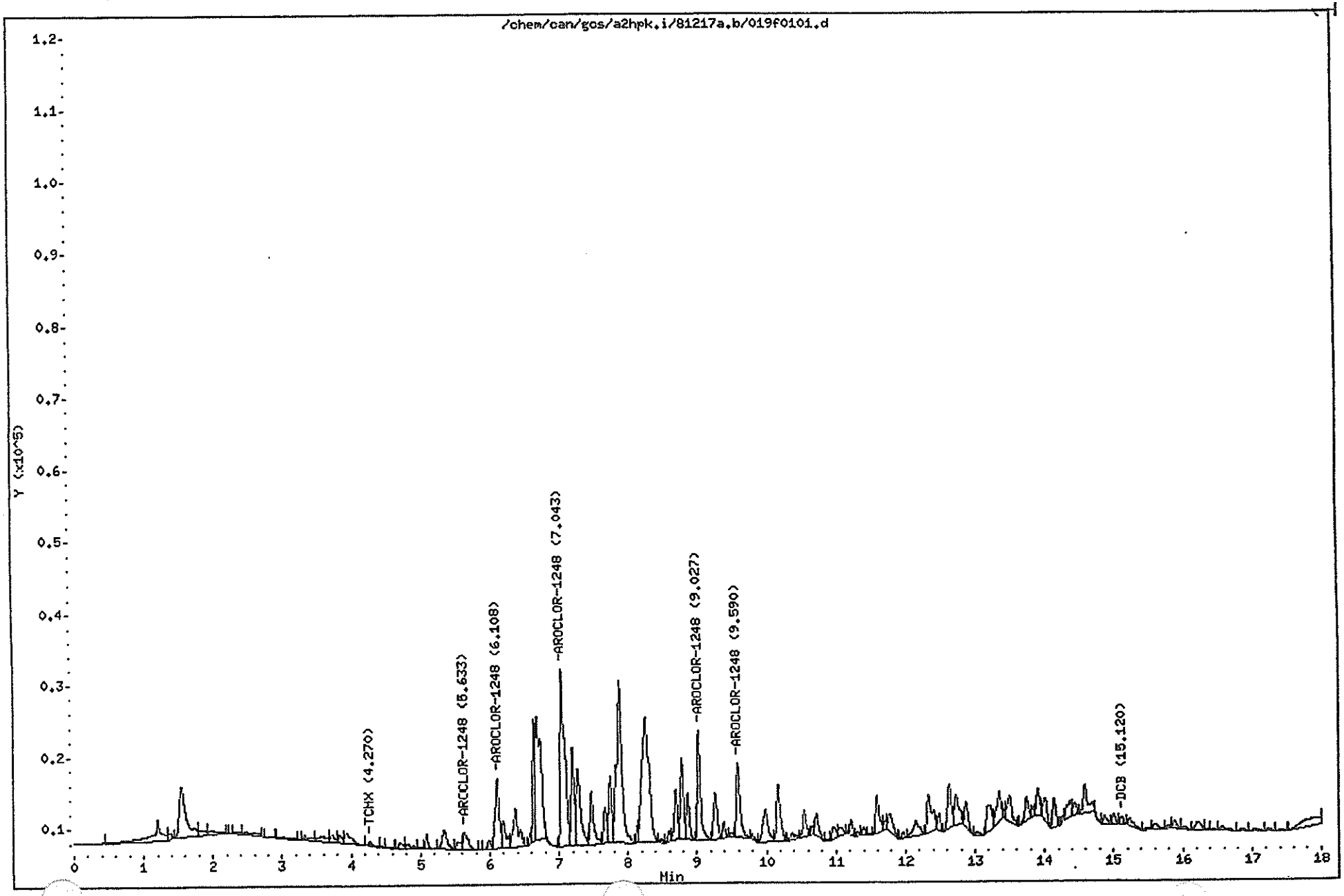
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81217a.b/019f0101.d
Date : 17-DEC-1998 21:36
Client ID: S-120198-JH-027
Sample Info: CNW73101,50
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

120



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 028

Sample WT/Vol: 30 / g
Work Order: CNW74101
Dilution factor: 100
Moisture %:10

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-028

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	**Aroclor 1242**	**6800**	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/037f0101.d
Report Date: 22-Dec-1998 14:50

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/037f0101.d
Lab Smp Id: CNW74101 Client Smp ID: S-120198-JH-028
Inj Date : 17-DEC-1998 07:16
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW74101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	446	0.000272	9.065	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.802	0.001	3800	0.14284	4761	80.00- 120.00	29.79(M)
5.350	5.347	0.003	8899	0.19866	6622	116.22- 193.70	69.76
6.107	6.103	0.004	14980	0.22473	7491	190.61- 317.68	117.43
6.333	6.330	0.003	5635	0.14961	4987	107.39- 178.98	44.17
6.443	6.442	0.001	5475	0.20434	6811	79.45- 132.42	42.92
Average of Peak Concentrations =					6134		
$ 9 DCB					CAS #: 2051-24-3		
15.110	15.105	0.005	408	0.000309	10.31	80.00- 120.00	100.00

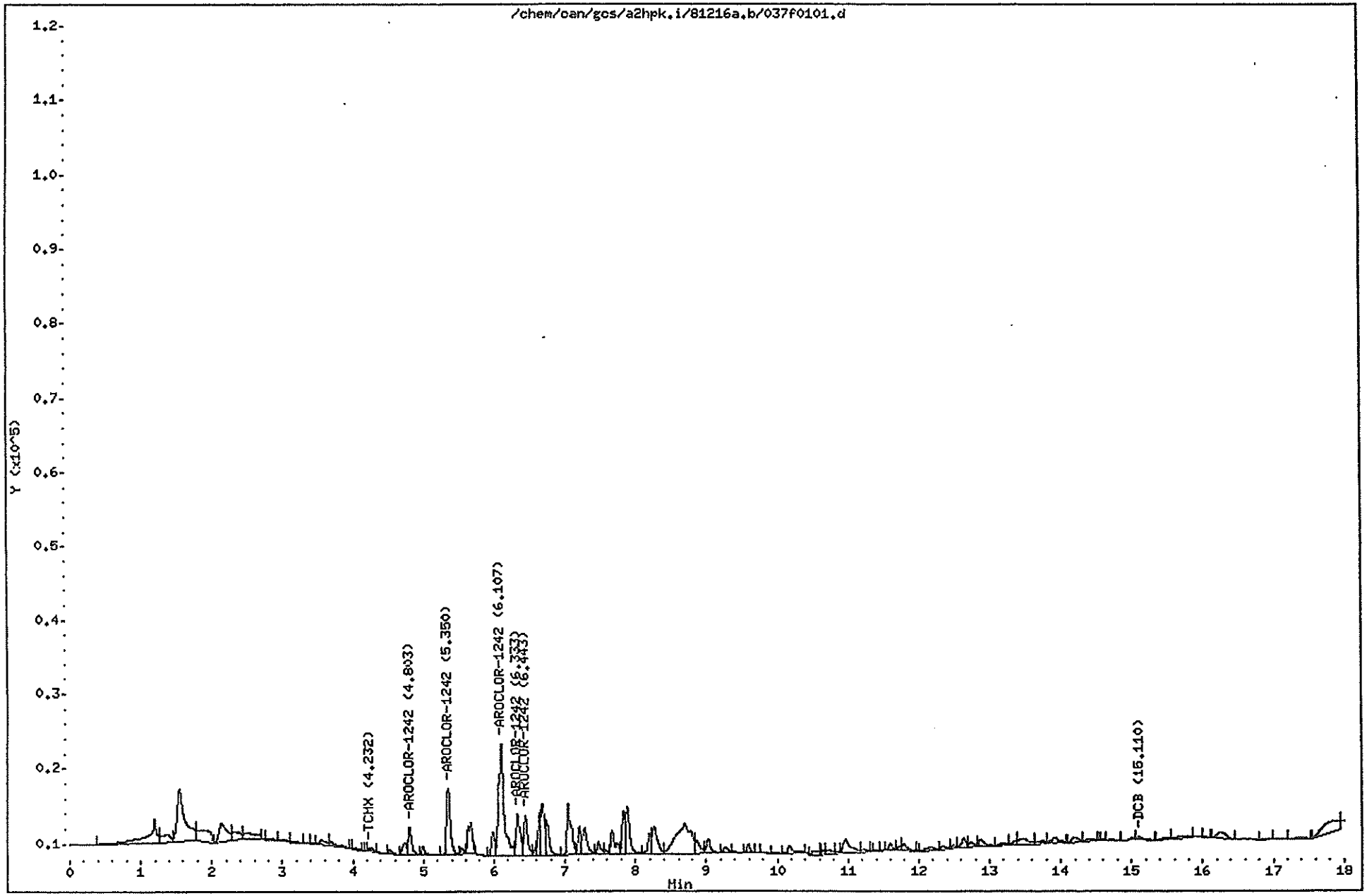
Data File: /chem/can/gcs/a2hpk.i/81216a.b/037f0101.d
Report Date: 22-Dec-1998 14:50

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hpk.i/81216a.b/037f0101.d
Date : 17-DEC-1998 07:16
Client ID: S-120198-JH-028
Sample Info: CNW74101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 029

Sample WT/Vol: 30 / g
Work Order: CNW76101
Dilution factor: 1000
Moisture %:8.9

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-029

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**120000**	
11104-28-2	Aroclor 1221	36000	U
11141-16-5	Aroclor 1232	36000	U
53469-21-9	Aroclor 1242	36000	U
12672-29-6	Aroclor 1248	36000	U
11097-69-1	Aroclor 1254	36000	U
11096-82-5	Aroclor 1260	36000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/038f0101.d
Report Date: 17-Dec-1998 13:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/038f0101.d
Lab Smp Id: CNW76101 Client Smp ID: S-120198-JH-029
Inj Date : 17-DEC-1998 07:37
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW76101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	3903	0.00238	793.3	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	8109	0.26169	87230	80.00- 120.00	28.53(M)
5.357	5.347	0.010	18034	0.33385	111300	125.29- 208.81	63.44
6.105	6.105	0.000	36622	0.43683	145600	207.30- 345.49	128.83
6.687	6.642	0.045	11156	0.31329	104400	81.88- 136.47	39.25
Average of Peak Concentrations =					112100		

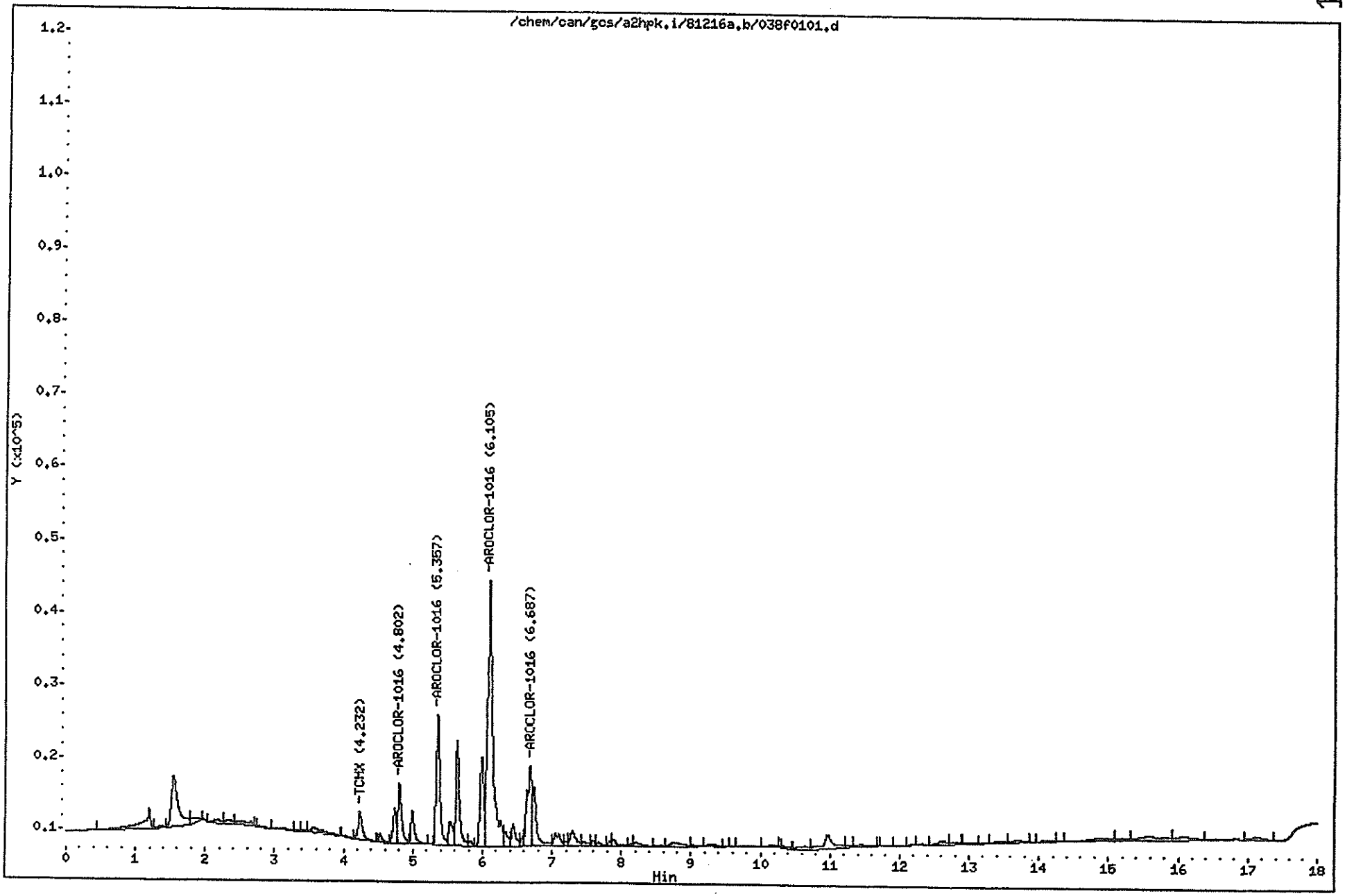
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/oan/gos/a2hpk.i/81216a.b/038f0101.d
Date : 17-DEC-1998 07:37
Client ID: S-120198-JH-029
Sample Info: CNW76101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 030

Sample WT/Vol: 30 / g
Work Order: CNW78101
Dilution factor: 1000
Moisture %:12

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-030

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38000	U
11104-28-2	Aroclor 1221	38000	U
11141-16-5	Aroclor 1232	38000	U
53469-21-9	**Aroclor 1242**	**130000**	
12672-29-6	Aroclor 1248	38000	U
11097-69-1	Aroclor 1254	38000	U
11096-82-5	Aroclor 1260	38000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/039f0101.d
Report Date: 22-Dec-1998 14:50

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/039f0101.d
Lab Smp Id: CNW78101 Client Smp ID: S-120198-JH-030
Inj Date : 17-DEC-1998 07:58
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW78101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	763	0.000465	155.1	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.802	0.001	8441	0.31729	105800	80.00- 120.00	29.17(M)
5.348	5.347	0.001	13700	0.30584	101900	116.22- 193.70	47.34
6.107	6.103	0.004	22898	0.34352	114500	190.61- 317.68	79.13
6.333	6.330	0.003	12811	0.34013	113400	107.39- 178.98	44.27
6.443	6.442	0.001	9285	0.34654	115500	79.45- 132.42	32.09
Average of Peak Concentrations =					110200		
$ 9 DCB					CAS #: 2051-24-3		
15.115	15.105	0.010	41	<0.0	10.36	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/039f0101.d
Report Date: 22-Dec-1998 14:50

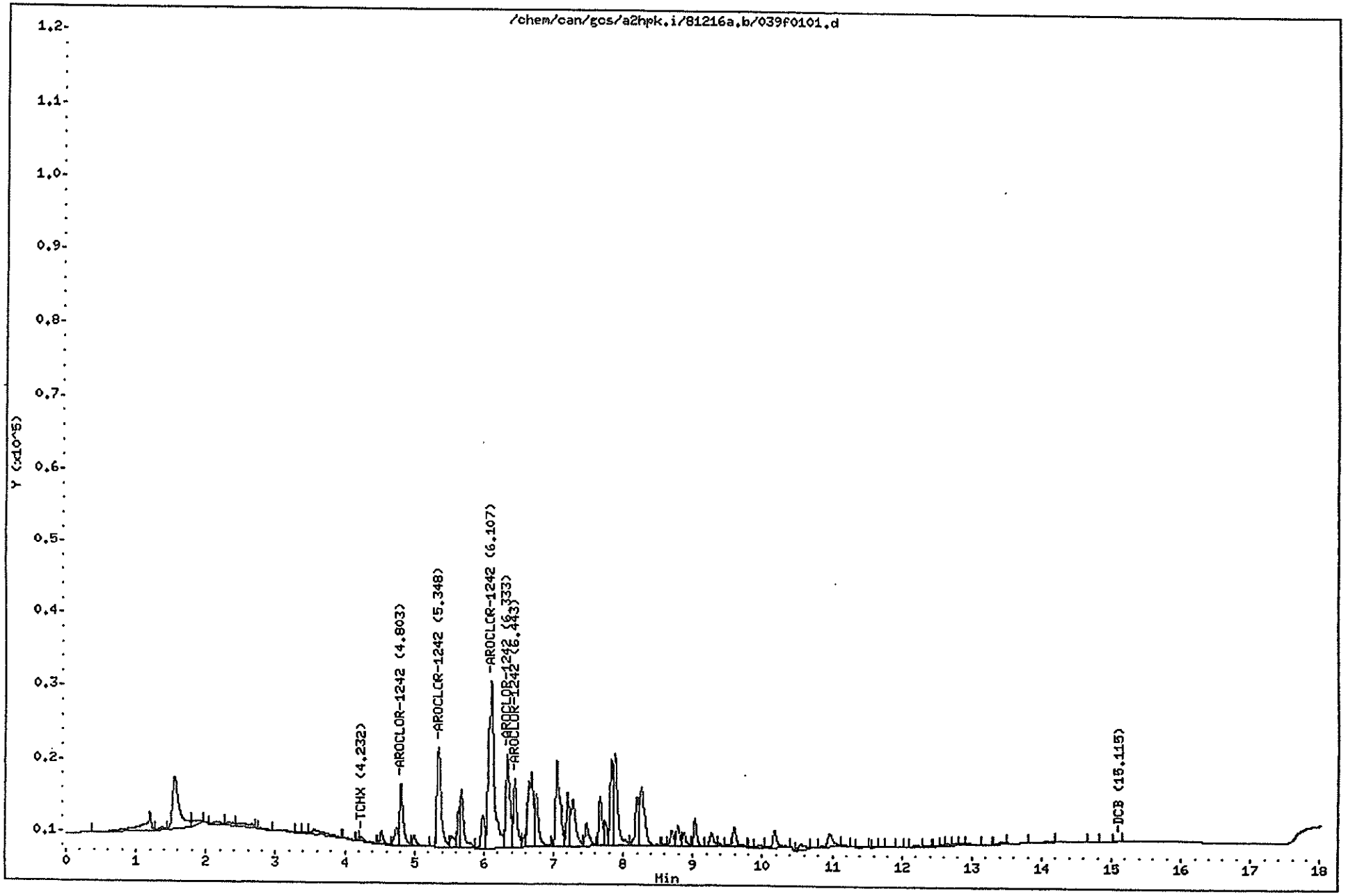
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81216a.b/039f0101.d
Date : 17-DEC-1998 07:58
Client ID: S-120198-JH-030
Sample Info: CHW78101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name: QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: A8L020132 031

Sample WT/Vol: 30 / g
Work Order: CNW7A101
Dilution factor: 100
Moisture %: 9.6

Date Received: 12/02/98
Date Extracted: 12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-031

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	Aroclor 1242	35000	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/027f0101.d
Report Date: 22-Dec-1998 14:49

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/027f0101.d
Lab Smp Id: CNW7A101 Client Smp ID: S-120198-JH-031
Inj Date : 17-DEC-1998 03:46
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW7A101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	3420	0.00209	69.51	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.800	4.802	-0.002	18693	0.70266	23420	80.00- 120.00	27.90(M)
5.352	5.347	0.005	44817	1.00049	33350	116.22- 193.70	66.90
6.103	6.103	0.000	95462	1.43212	47740	190.61- 317.68	142.50
6.332	6.330	0.002	17500	0.46462	15490	107.39- 178.98	26.12
6.442	6.442	0.000	29120	1.08683	36230	79.45- 132.42	43.47
Average of Peak Concentrations =					31240		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	376	0.000285	9.505	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/027f0101.d
Report Date: 22-Dec-1998 14:49

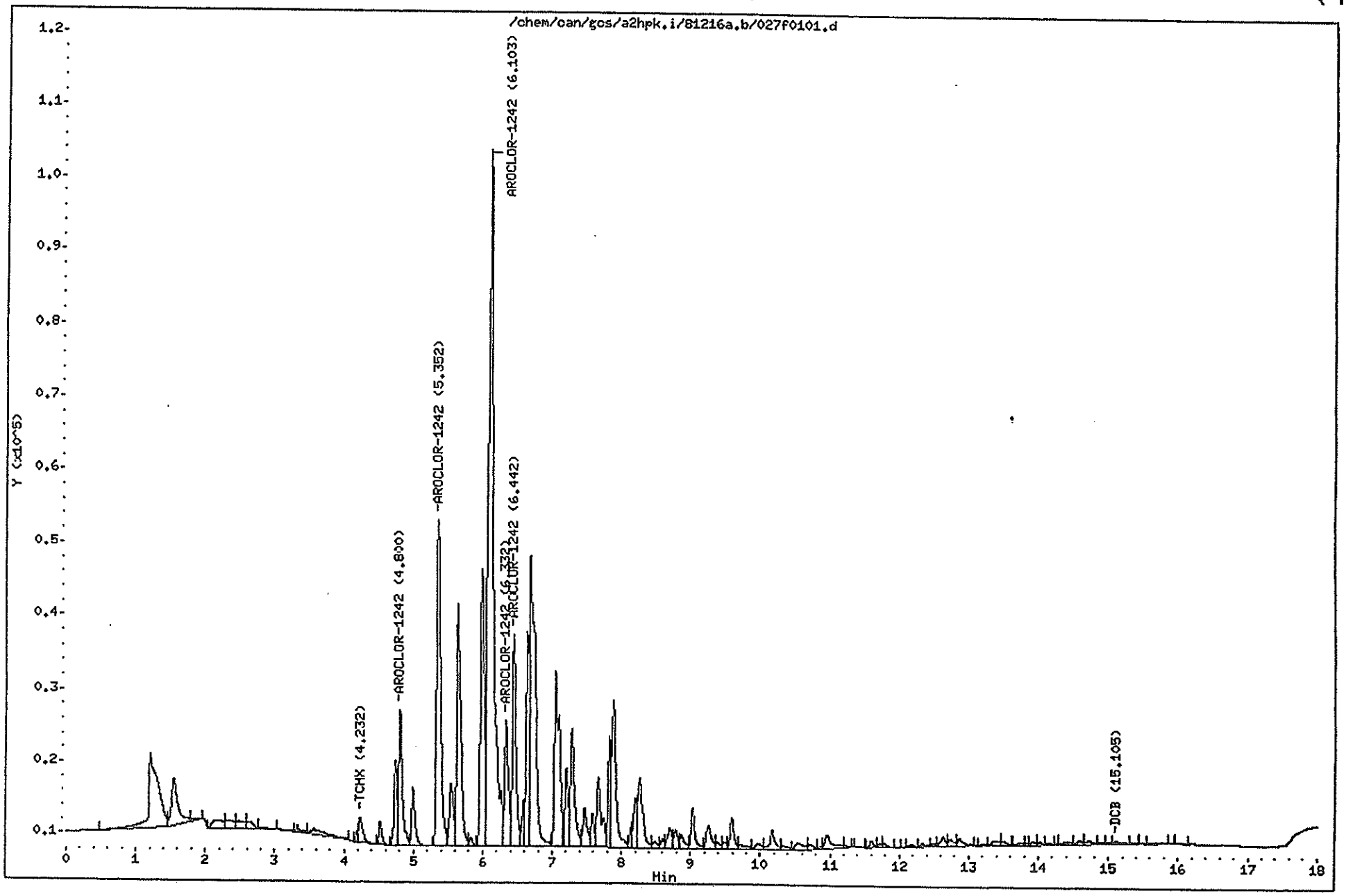
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81216a.b/027f0101.d
Date : 17-DEC-1998 03:46
Client ID: S-120198-JH-031
Sample Info: CNW7A101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 032

Sample WT/Vol: 30 / g
Work Order: CNW7C101
Dilution factor: 10
Moisture %:9.7

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-032

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	370	U
11104-28-2	Aroclor 1221	370	U
11141-16-5	Aroclor 1232	370	U
53469-21-9	Aroclor 1242	1000	
12672-29-6	Aroclor 1248	370	U
11097-69-1	Aroclor 1254	370	U
11096-82-5	Aroclor 1260	370	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/031f0101.d
Report Date: 22-Dec-1998 14:49

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/031f0101.d
Lab Smp Id: CNW7C101 Client Smp ID: S-120198-JH-032
Inj Date : 17-DEC-1998 05:10
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW7C101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	3479	0.00212	7.071	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.898	4.802	0.096	17784	0.66849	2228	80.00- 120.00	40.56(M)
5.348	5.347	0.001	7475	0.16687	556.2	116.22- 193.70	17.05
6.107	6.103	0.004	15171	0.22759	758.6	190.61- 317.68	34.60
6.332	6.330	0.002	4838	0.12845	428.2	107.39- 178.98	11.04
6.443	6.442	0.001	5353	0.19979	666.0	79.45- 132.42	12.21
Average of Peak Concentrations =					927.4		
7 AROCLOR-1254					CAS #: 11097-69-1		
9.028	9.027	0.001	3116	0.03211	107.0	200.11- 333.51	18.28
9.585	9.588	-0.003	3386	0.04850	161.7	146.07- 243.45	19.87
9.998	9.967	0.031	2224	0.04048	134.9	109.33- 182.22	13.05

Data File: /chem/can/gcs/a2hpk.i/81216a.b/031f0101.d
Report Date: 22-Dec-1998 14:49

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
7 AROCLOR-1254 (continued)							
10.500	10.547	-0.047	3958	0.05030	167.7	155.51- 259.19	23.22
Average of Peak Concentrations =					142.8		
8 AROCLOR-1260					CAS #: 11096-82-5		
$ 9 DCB					CAS #: 2051-24-3		
15.107	15.105	0.002	3086	0.00234	7.802	80.00- 120.00	100.00

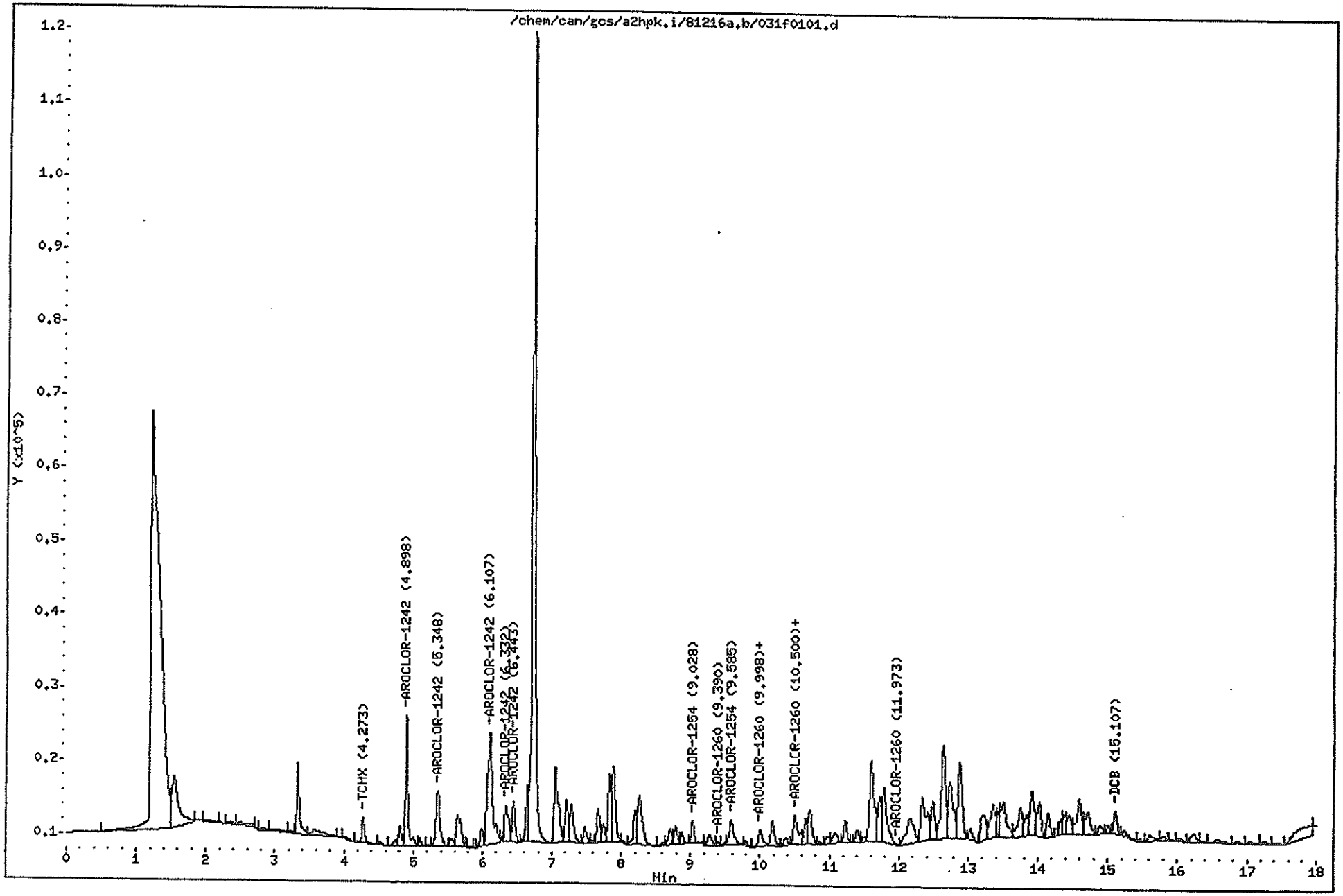
QC Flag Legend

M - Compound response manually integrated.

:a File: /chem/can/gos/a2hpk.i/81216a.b/031f0101.d
Date : 17-DEC-1998 05:10
Client ID: S-120198-JH-032
Sample Info: CNW7C101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 033

Sample WT/Vol: 30 / g
Work Order: CNW7E101
Dilution factor: 5
Moisture %:16

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-033

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	200	U
11104-28-2	Aroclor 1221	200	U
11141-16-5	Aroclor 1232	200	U
53469-21-9	Aroclor 1242	200	U
12672-29-6	Aroclor 1248	200	U
11097-69-1	Aroclor 1254	200	U
11096-82-5	Aroclor 1260	200	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/018f0101.d
Report Date: 21-Dec-1998 07:11

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/018f0101.d
Lab Smp Id: CNW7E101 Client Smp ID: S-120198-JH-033
Inj Date : 17-DEC-1998 21:15
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW7E101,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 18-Dec-1998 09:32 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	5.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	5743	0.00350	5.836	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.798	0.004	821	0.02649	44.16	80.00- 120.00	31.56(M)
5.348	5.343	0.005	1485	0.02749	45.82	125.98- 209.97	57.09
6.108	6.100	0.008	3062	0.03652	60.87	205.34- 342.23	117.72
6.445	6.438	0.007	1461	0.04268	71.13	84.04- 140.07	56.17
Average of Peak Concentrations =					55.49		
7 AROCLOR-1254					CAS #: 11097-69-1		
6.643	6.642	0.001	1706	0.04245	70.75	80.00- 120.00	21.40(M)
9.027	9.027	0.000	939	0.00968	16.12	187.57- 312.62	11.70
9.583	9.592	-0.009	852	0.01220	20.34	138.45- 230.75	10.69
9.997	9.968	0.029	440	0.00801	13.35	105.54- 175.89	5.52

ND < RL

ND < RL

Data File: /chem/can/gcs/a2hpk.i/81217a.b/018f0101.d
Report Date: 21-Dec-1998 07:11

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
7 AROCLOR-1254 (continued)							
10.503	10.548	-0.045	717	0.00911	15.19	151.19- 251.98	8.99
Average of Peak Concentrations =					27.15		
$ 9 DCB					CAS #: 2051-24-3		
15.100	15.097	0.003	5559	0.00422	7.027	80.00- 120.00	100.00

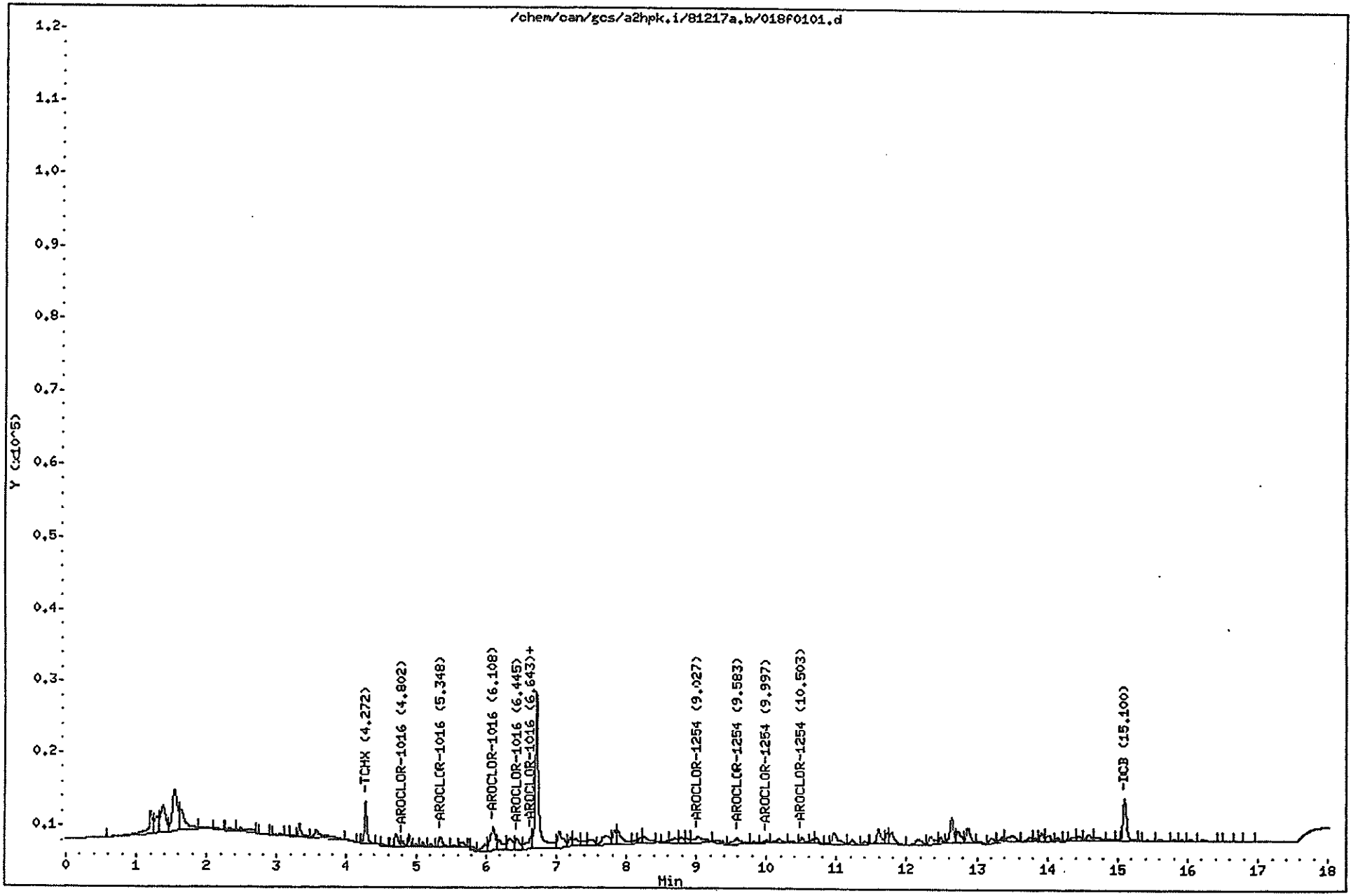
QC Flag Legend

M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81217a.b/018f0101.d
Date : 17-DEC-1998 21:15
Client ID: S-120198-JH-033
Sample Info: CNW7E101,5
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

143



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 034

Sample WT/Vol: 30 / g
Work Order: CNW7G101
Dilution factor: 100
Moisture %:15

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-034

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3900	U
11104-28-2	Aroclor 1221	3900	U
11141-16-5	Aroclor 1232	3900	U
53469-21-9	**Aroclor 1242**	**64000**	
12672-29-6	Aroclor 1248	3900	U
11097-69-1	Aroclor 1254	3900	U
11096-82-5	Aroclor 1260	3900	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/033f0101.d
Report Date: 22-Dec-1998 14:49

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/033f0101.d
Lab Smp Id: CNW7G101 Client Smp ID: S-120198-JH-034
Inj Date : 17-DEC-1998 05:52
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW7G101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.230	4.272	-0.042	7527	0.00459	153.0	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.798	4.802	-0.004	60285	2.26607	75540	80.00- 120.00	28.54(M)
5.353	5.347	0.006	71246	1.59049	53020	116.22- 193.70	33.73
6.103	6.103	0.000	138000	2.07027	69010	190.61- 317.68	65.33
6.330	6.330	0.000	24103	0.63993	21330	107.39- 178.98	11.41
6.440	6.442	-0.002	43978	1.64137	54710	79.45- 132.42	20.82
Average of Peak Concentrations =					54720		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	384	0.000291	9.708	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/033f0101.d
Report Date: 22-Dec-1998 14:49

QC Flag Legend

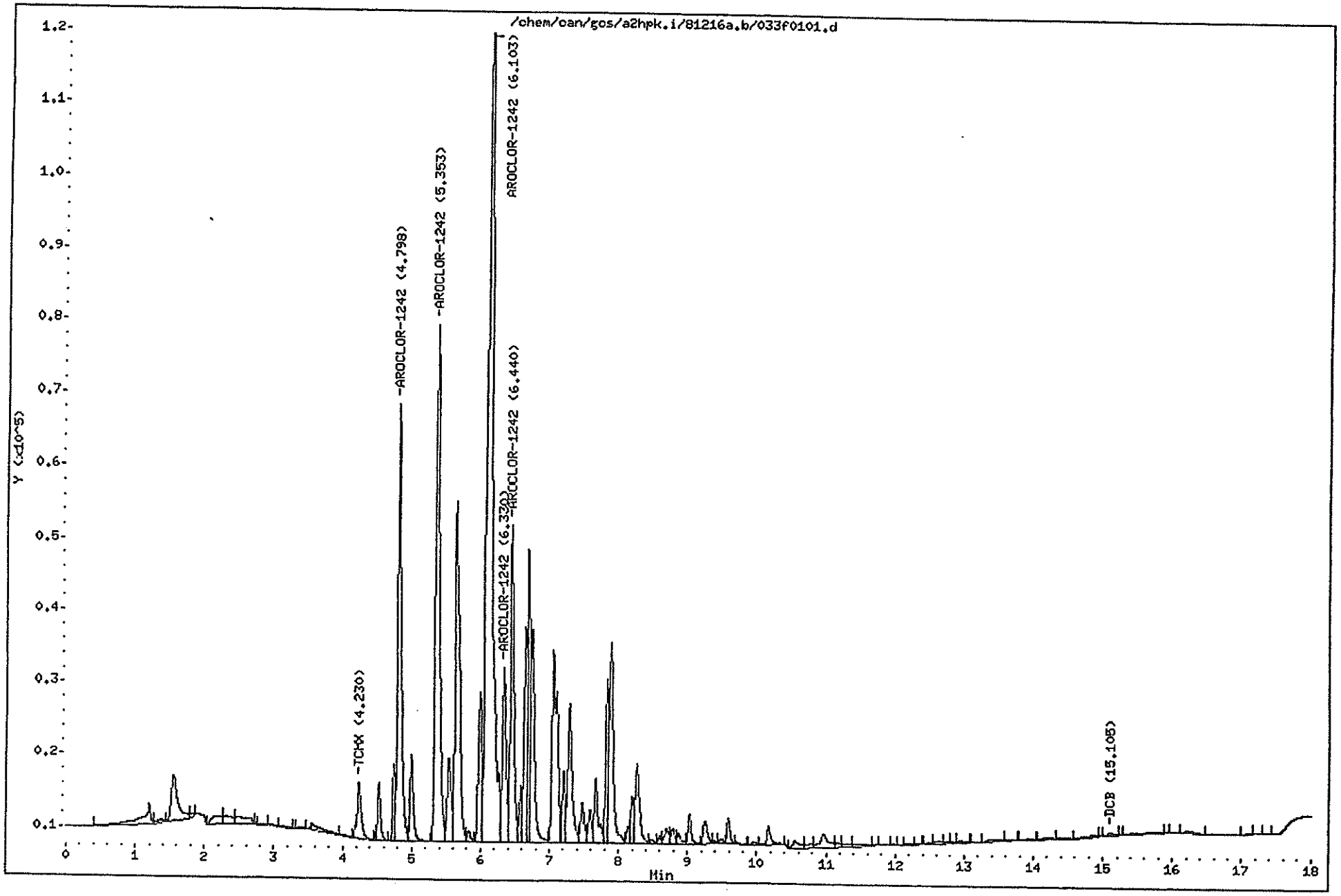
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gos/a2hpk.i/81216a.b/033f0101.d
Date : 17-DEC-1998 05:52
Client ID: S-120198-JH-034
Sample Info: CNW7G101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

147



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020132 035

Sample WT/Vol: 30 / g
Work Order: CNW7H101
Dilution factor: 100
Moisture %:23

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120198-JH-035

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	4300	U
11104-28-2	Aroclor 1221	4300	U
11141-16-5	Aroclor 1232	4300	U
53469-21-9	Aroclor 1242	39000	
12672-29-6	Aroclor 1248	4300	U
11097-69-1	Aroclor 1254	4300	U
11096-82-5	Aroclor 1260	4300	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/034f0101.d
Report Date: 22-Dec-1998 14:49

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/034f0101.d
Lab Smp Id: CNW7H101 Client Smp ID: S-120198-JH-035
Inj Date : 17-DEC-1998 06:13
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNW7H101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.230	4.272	-0.042	4324	0.00264	87.88	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.800	4.802	-0.002	31817	1.19598	39860	80.00- 120.00	28.81(M)
5.353	5.347	0.006	39761	0.88762	29590	116.22- 193.70	36.00
6.103	6.103	0.000	76496	1.14759	38250	190.61- 317.68	69.26
6.332	6.330	0.002	14830	0.39373	13120	107.39- 178.98	13.43
6.442	6.442	0.000	24448	0.91246	30420	79.45- 132.42	22.13
Average of Peak Concentrations =					30250		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	388	0.000294	9.809	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/034f0101.d
Report Date: 22-Dec-1998 14:49

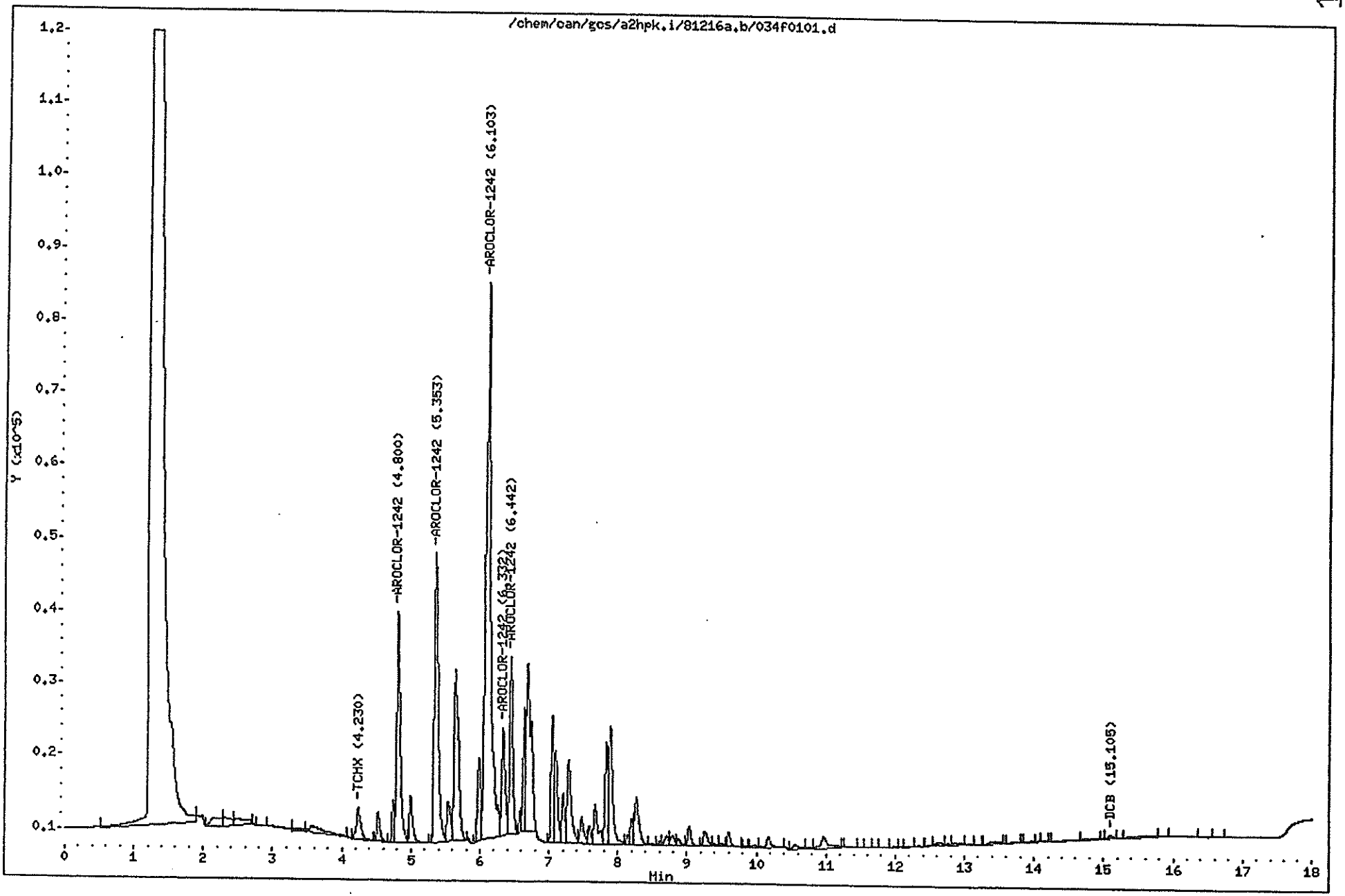
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81216a.b/034f0101.d
Date : 17-DEC-1998 06:13
Client ID: S-120198-JH-035
Sample Info: CNW7H101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
STANDARD DATA

Report Date : 03-Nov-1998 07:26

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-1998 19:12
End Cal Date : 03-NOV-1998 03:35
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Cal Date : 03-Nov-1998 07:23 a
Curve Type : Average

Calibration File Names:
Level 1: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Level 2: /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Level 3: /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Level 4: /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Level 5: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221(1)	21460	20730	20190	17924	16131	19287	11.430
(2)	16100	15495	14828	12623	11417	14093	14.128
(3)	54310	50655	46518	39154	34580	45044	18.025
3 AROCLOR-1016(1)	36790	34585	30874	27590	25098	30988	15.548
(2)	68020	62015	53172	46229	40652	54018	20.698 <-
(3)	95450	91205	84420	77017	71084	83835	11.908 <-
(4)	37260	36240	34612	32368	30694	34235	7.910 <-
(5)	44370	40335	35072	30878	27392	35609	19.318 <-
4 AROCLOR-1232(1)	14570	13965	13636	12490	11190	13170	10.180
(2)	44780	41635	38238	33204	28606	37292	17.378
(3)	31460	29150	26666	23094	19667	26007	18.109
(4)	40820	39330	39264	35707	32122	37448	9.404
(5)	24030	22405	22566	20457	18176	21527	10.513
5 AROCLOR-1242(1)	31840	30125	27060	23943	20048	26603	17.838
(2)	56560	52325	45014	38604	31472	44795	22.628 <-
(3)	75200	73520	68926	62323	53320	66658	13.457 <-
(4)	42720	41435	39098	35261	29812	37665	13.876 <-
(5)	27900	27675	28504	26690	23198	26793	7.888 <-
6 AROCLOR-1248(1)	29320	27330	25062	20952	18260	24185	18.788
(2)	44030	42975	43582	38093	34856	40707	9.942
(3)	67850	63805	60072	50051	44158	57187	17.189
(4)	37480	34790	34958	30333	28032	33119	11.579
(5)	24310	23460	24076	20988	19650	22497	9.189
7 AROCLOR-1254(1)	50240	45555	41024	34541	29584	40189	20.627 <-
(2)	112520	106390	100994	87149	78194	97050	14.533 <-
(3)	79920	75180	73302	63530	57108	69808	13.285 <-
(4)	65830	60935	56698	48419	42828	54942	16.948 <-
(5)	91290	84715	81994	71097	64358	78691	13.761 <-

Report Date : 03-Nov-1998 07:26

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-1998 19:12
End Cal Date : 03-NOV-1998 03:35
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Cal Date : 03-Nov-1998 07:23 a
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	___ RRF	% RSD	
8 AROCLOR-1260(1)	41870	38700	34348	30809	28066	34759	16.190	
(2)	99700	91190	76716	67402	60600	79122	20.529	<-
(3)	114350	105660	90302	79608	72222	92428	18.994	<-
(4)	105850	95095	89990	82641	76873	90890	12.977	<-
(5)	146110	136360	125742	116497	111328	127207	11.187	<-
10 AROCLOR-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
11 AROCLOR-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	1809400	1745600	1665280	1571180	1408790	1640050	9.577	
$ 9 DCB	1493200	1454700	1321880	1224460	1098450	1318538	12.366	

Report Date: 05-Nov-1998 17:03

Calibration History

Method : /chem/can/gcs/a2hpk.i/81102a.b/kfpcbIII.m
Start Cal Date: 21-SEP-1998 13:45
End Cal Date : 13-OCT-1998 18:00

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.1000		
13-OCT-1998 16:15	AR1262	012f0101.d
23-SEP-1998 11:27	AR1232	013f0101.d
23-SEP-1998 09:42	AR1242	008f0101.d
21-SEP-1998 17:15	AR1248	013f0101.d
21-SEP-1998 15:30	AR2154	008f0101.d
21-SEP-1998 13:45	AR1660td	003f0101.d

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 0.2000		
13-OCT-1998 16:36	AR1262	013f0101.d
23-SEP-1998 11:48	AR1232	014f0101.d
23-SEP-1998 10:03	AR1242	009f0101.d
21-SEP-1998 17:36	AR1248	014f0101.d
21-SEP-1998 15:51	AR2154	009f0101.d
21-SEP-1998 14:06	AR1660td	004f0101.d

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 0.5000		
13-OCT-1998 16:57	AR1262	014f0101.d
13-OCT-1998 18:00	AR1268	017f0101.d
23-SEP-1998 12:09	AR1232	015f0101.d
23-SEP-1998 10:24	AR1242	010f0101.d
21-SEP-1998 17:57	AR1248	015f0101.d
21-SEP-1998 16:12	AR2154	010f0101.d
21-SEP-1998 14:27	AR1660td	005f0101.d

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 1.000		
13-OCT-1998 17:18	AR1262	015f0101.d
23-SEP-1998 12:30	AR1232	016f0101.d
23-SEP-1998 10:45	AR1242	011f0101.d
21-SEP-1998 18:18	AR1248	016f0101.d
21-SEP-1998 16:33	AR2154	011f0101.d
21-SEP-1998 14:48	AR1660td	006f0101.d

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 2.000		
13-OCT-1998 17:39	AR1262	016f0101.d
23-SEP-1998 12:51	AR1232	017f0101.d
23-SEP-1998 11:06	AR1242	012f0101.d
21-SEP-1998 18:39	AR1248	017f0101.d

21-SEP-1998 15:09	AR1660td	007f0101.d

Continuing Calibration

02-NOV-1998 14:10	AR1660td	017f0101.d
02-NOV-1998 10:09	AR1232	007f0101.d
02-NOV-1998 09:48	AR1242	006f0101.d
02-NOV-1998 09:27	AR1248	005f0101.d
02-NOV-1998 09:06	AR2154	004f0101.d
02-NOV-1998 13:18	AR1660td	016f0101.d
02-NOV-1998 08:45	AR1660td	003f0101.d

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Lab Smp Id: 1660 C064
Inj Date : 02-NOV-1998 19:12
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C064,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 19:12 Cal File: 011f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

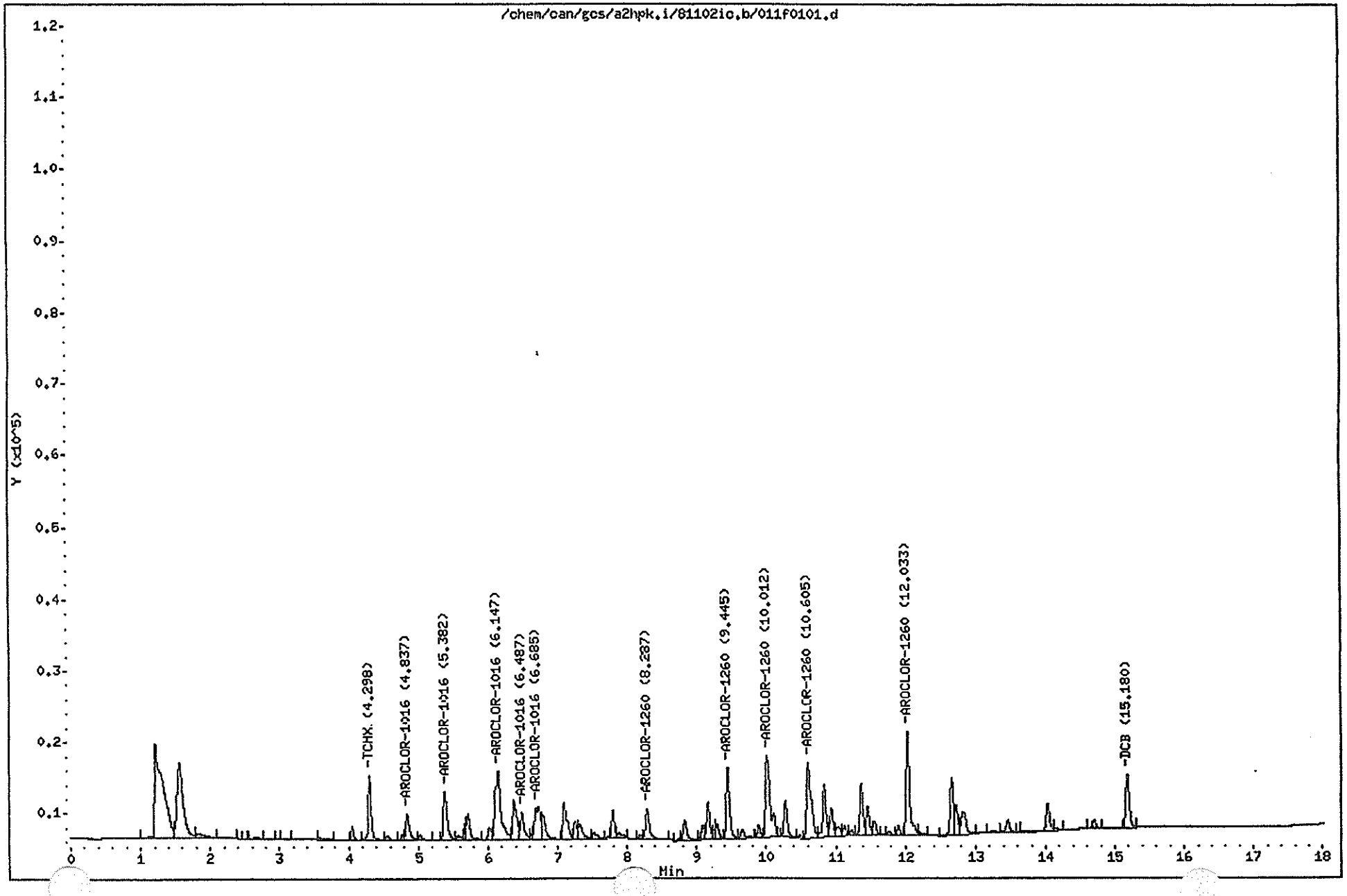
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	9047	0.00500	0.005000	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.837	4.828	0.009	3679	0.10000	0.1000	75.00- 125.00	100.00
5.382	5.380	0.002	6802	0.10000	0.1000	129.17- 215.28	184.89
6.147	6.138	0.009	9545	0.10000	0.1000	205.08- 341.79	259.45
6.487	6.480	0.007	3726	0.10000	0.1000	84.08- 140.13	101.28
6.685	6.680	0.005	4437	0.10000	0.1000	85.20- 142.00	120.60
Average of Peak Amounts =					0.1		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.287	8.282	0.005	4187	0.10000	0.1000	75.00- 125.00	100.00
9.445	9.440	0.005	9970	0.10000	0.1000	167.51- 279.19	238.12
10.012	10.007	0.005	11435	0.10000	0.1000	197.18- 328.63	273.11
10.605	10.600	0.005	10585	0.10000	0.1000	196.50- 327.49	252.81
12.033	12.030	0.003	14611	0.10000	0.1000	274.56- 457.60	348.96
Average of Peak Amounts =					0.1		
$ 9 DCB					CAS #: 2051-24-3		
15.180	15.177	0.003	7466	0.00500	0.005000	75.00- 125.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Date : 02-NOV-1998 19:12
Client ID:
Sample Info: 1660 C064,,1,1

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/012f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/012f0101.d
Lab Smp Id: 1660 C065
Inj Date : 02-NOV-1998 19:33
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C065,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 19:33 Cal File: 012f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

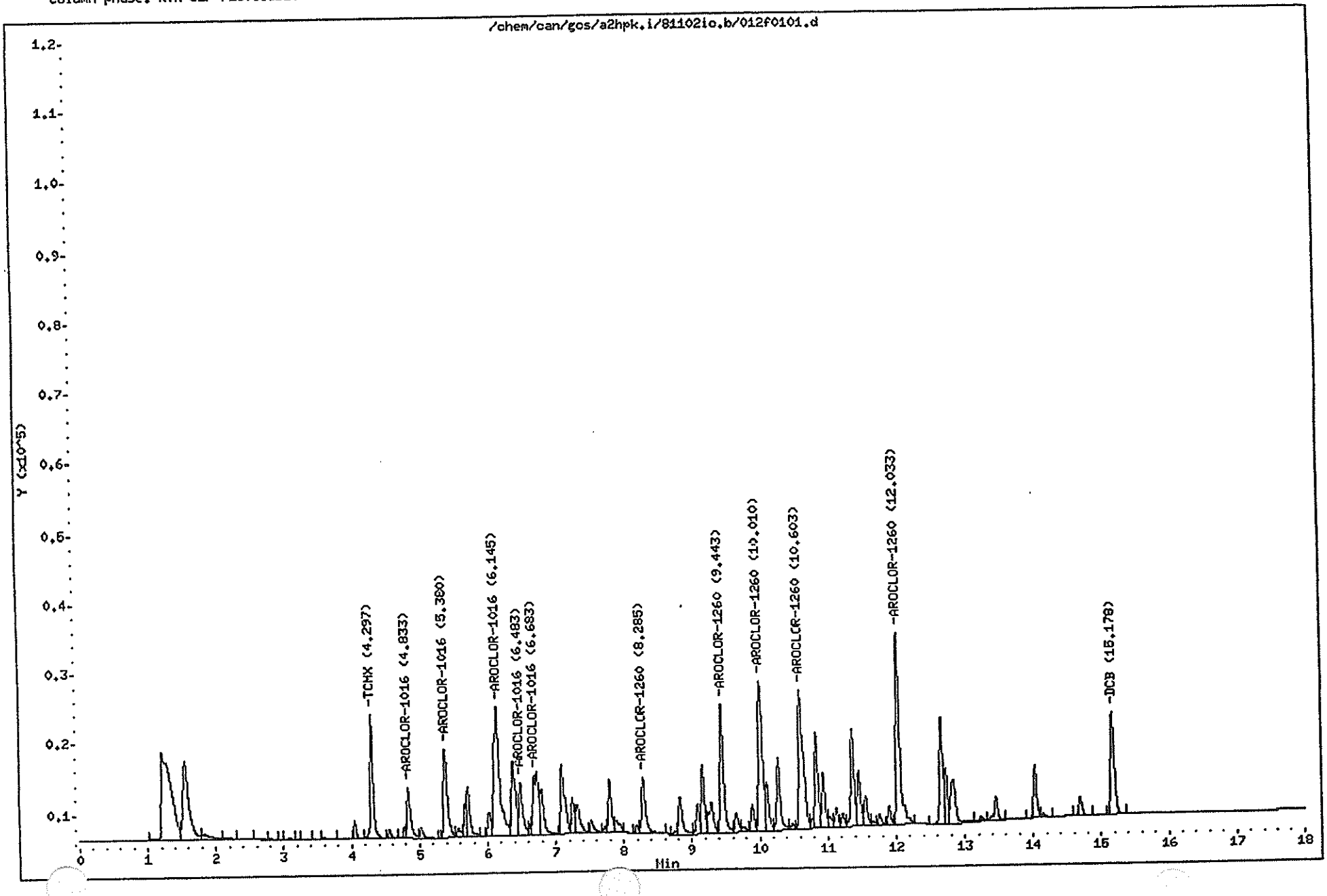
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.297	0.000	17456	0.01000	0.009820	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.833	4.828	0.005	6917	0.20000	0.1938	75.00- 125.00	100.00
5.380	5.380	0.000	12403	0.20000	0.1908	129.17- 215.28	179.31
6.145	6.138	0.007	18241	0.20000	0.1954	205.08- 341.79	263.71
6.483	6.480	0.003	7248	0.20000	0.1972	84.08- 140.13	104.79
6.683	6.680	0.003	8067	0.20000	0.1905	85.20- 142.00	116.63
Average of Peak Amounts =					0.194		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.285	8.282	0.003	7740	0.20000	0.1921	75.00- 125.00	100.00
9.443	9.440	0.003	18238	0.20000	0.1911	167.51- 279.19	235.63
10.010	10.007	0.003	21132	0.20000	0.1921	197.18- 328.63	273.02
10.603	10.600	0.003	19819	0.20000	0.1934	196.50- 327.49	256.06
12.033	12.030	0.003	27272	0.20000	0.1931	274.56- 457.60	352.35
Average of Peak Amounts =					0.192		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	14547	0.01000	0.009869	75.00- 125.00	100.00

Data File: /chem/can/gos/a2hpk.i/81102io.b/012f0101.d
Date : 02-NOV-1998 19:33
Client ID:
Sample Info: 1660 C065,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/013f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/013f0101.d
Lab Smp Id: 1660 C066
Inj Date : 02-NOV-1998 19:54
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C066,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 19:54 Cal File: 013f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

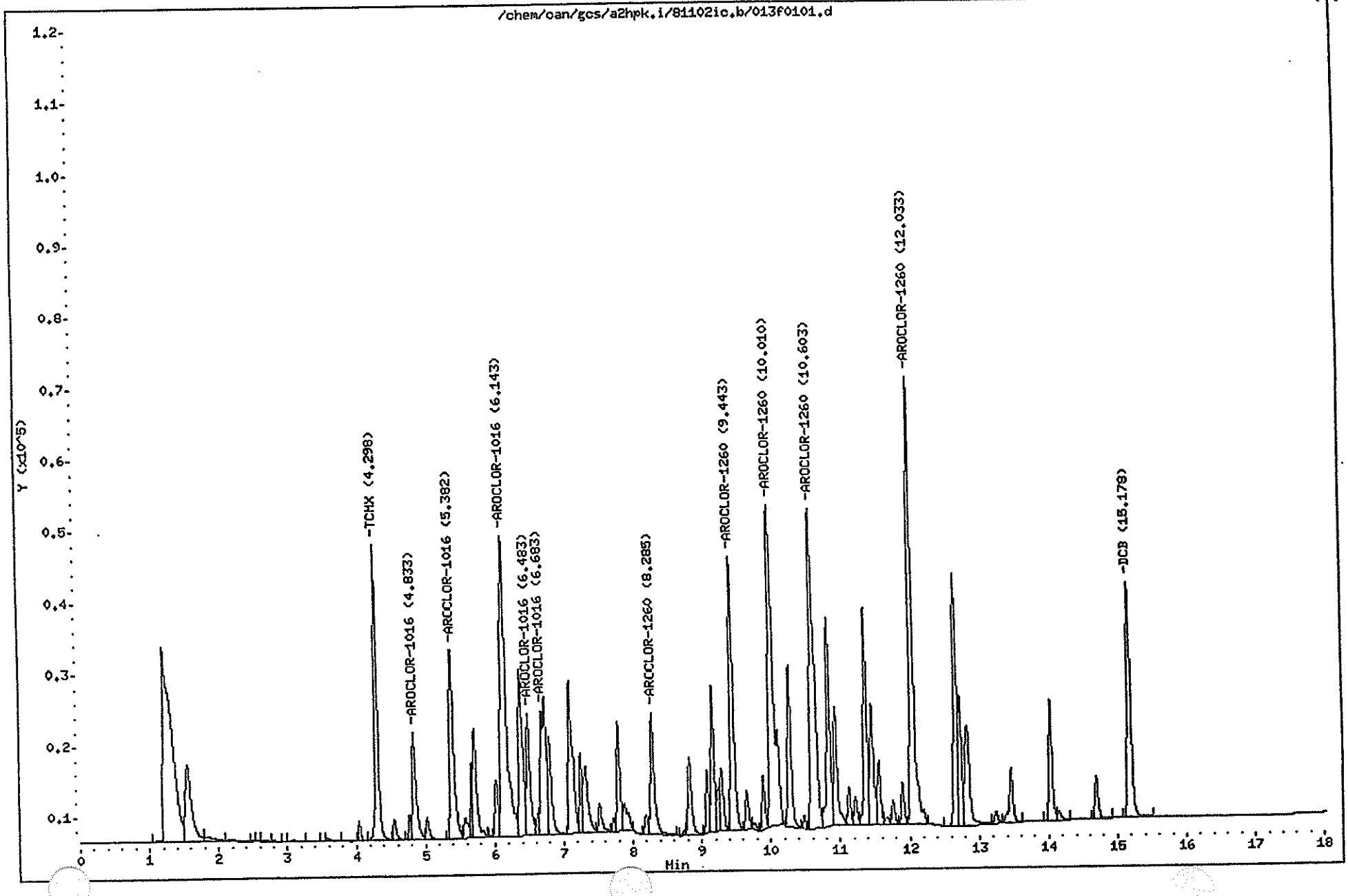
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	41632	0.02500	0.02392	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.833	4.828	0.005	15437	0.50000	0.4529	75.00- 125.00	100.00
5.382	5.380	0.002	26586	0.50000	0.4353	129.17- 215.28	172.22
6.143	6.138	0.005	42210	0.50000	0.4671	205.08- 341.79	273.43
6.483	6.480	0.003	17306	0.50000	0.4802	84.08- 140.13	112.11
6.683	6.680	0.003	17536	0.50000	0.4392	85.20- 142.00	113.60
Average of Peak Amounts =					0.455		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.285	8.282	0.003	17174	0.50000	0.4483	75.00- 125.00	100.00
9.443	9.440	0.003	38358	0.50000	0.4300	167.51- 279.19	223.35
10.010	10.007	0.003	45151	0.50000	0.4365	197.18- 328.63	262.90
10.603	10.600	0.003	44995	0.50000	0.4577	196.50- 327.49	261.99
12.033	12.030	0.003	62871	0.50000	0.4620	274.56- 457.60	366.08
Average of Peak Amounts =					0.447		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	33047	0.02500	0.02322	75.00- 125.00	100.00

Data File: /chem/oan/gcs/a2hpk.i/81102ic.b/013f0101.d
Date : 02-NOV-1998 19:54
Client ID:
Sample Info: 1660 C066,,1,3

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/014f0101.d
Lab Smp Id: 1660 C067
Inj Date : 02-NOV-1998 20:15
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C067,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:15 Cal File: 014f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

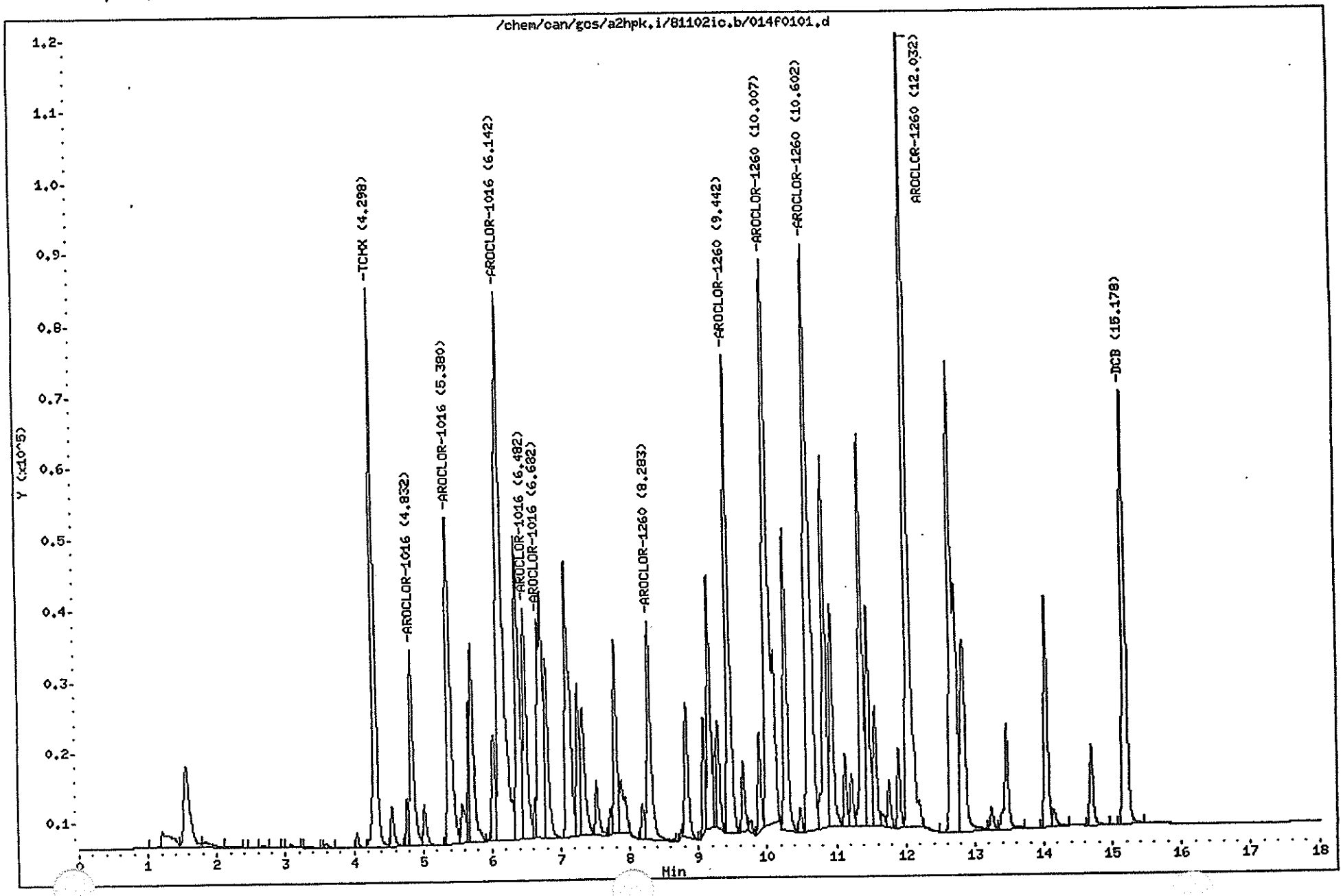
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	78559	0.05000	0.04627	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.832	4.828	0.004	27590	1.00000	0.8500	75.00- 125.00	100.00
5.380	5.380	0.000	46229	1.00000	0.8060	129.17- 215.28	167.56
6.142	6.138	0.004	77017	1.00000	0.8850	205.08- 341.79	279.15
6.482	6.480	0.002	32368	1.00000	0.9216	84.08- 140.13	117.32
6.682	6.680	0.002	30878	1.00000	0.8198	85.20- 142.00	111.92
Average of Peak Amounts =					0.856		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.283	8.282	0.001	30809	1.00000	0.8457	75.00- 125.00	100.00
9.442	9.440	0.002	67402	1.00000	0.8048	167.51- 279.19	218.77
10.007	10.007	0.000	79608	1.00000	0.8166	197.18- 328.63	258.39
10.602	10.600	0.002	82641	1.00000	0.8755	196.50- 327.49	268.24
12.032	12.030	0.002	116497	1.00000	0.8881	274.56- 457.60	378.13
Average of Peak Amounts =					0.846		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	61223	0.05000	0.04457	75.00- 125.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/014f0101.d
Date : 02-NOV-1998 20:15
Client ID:
Sample Info: 1660 C067,,1,4

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/015f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/015f0101.d
Lab Smp Id: 1660 C068
Inj Date : 02-NOV-1998 20:36
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C068,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:36 Cal File: 015f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

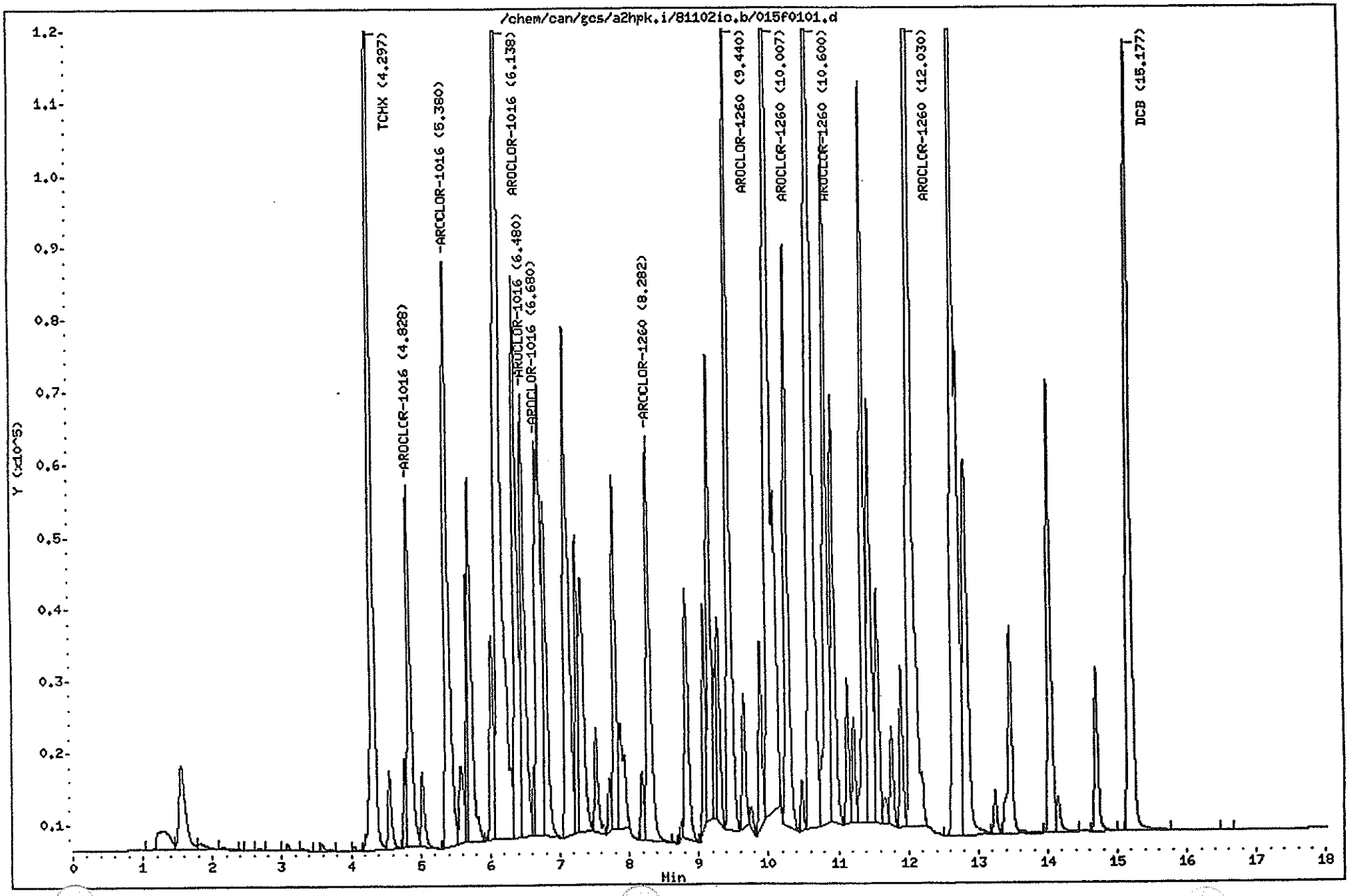
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.297	0.000	140879	0.10000	0.08590	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.828	4.828	0.000	50197	2.00000	1.620	75.00- 125.00	100.00
5.380	5.380	0.000	81304	2.00000	1.505	129.17- 215.28	161.97
6.138	6.138	0.000	142169	2.00000	1.696	205.08- 341.79	283.22
6.480	6.480	0.000	61389	2.00000	1.793	84.08- 140.13	122.30
6.680	6.680	0.000	54783	2.00000	1.538	85.20- 142.00	109.14
Average of Peak Amounts =					1.63		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.282	8.282	0.000	56132	2.00000	1.615	75.00- 125.00	100.00
9.440	9.440	0.000	121200	2.00000	1.532	167.51- 279.19	215.92
10.007	10.007	0.000	144445	2.00000	1.563	197.18- 328.63	257.33
10.600	10.600	0.000	153746	2.00000	1.692	196.50- 327.49	273.90
12.030	12.030	0.000	222656	2.00000	1.750	274.56- 457.60	396.67
Average of Peak Amounts =					1.63		
$ 9 DCB					CAS #: 2051-24-3		
15.177	15.177	0.000	109845	0.10000	0.08331	75.00- 125.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81102io.b/015f0101.d
Date : 02-NOV-1998 20:36
Client ID:
Sample Info: 1660 C068,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Lab Smp Id: 2154 C059
Inj Date : 02-NOV-1998 20:57
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C059,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:57 Cal File: 016f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

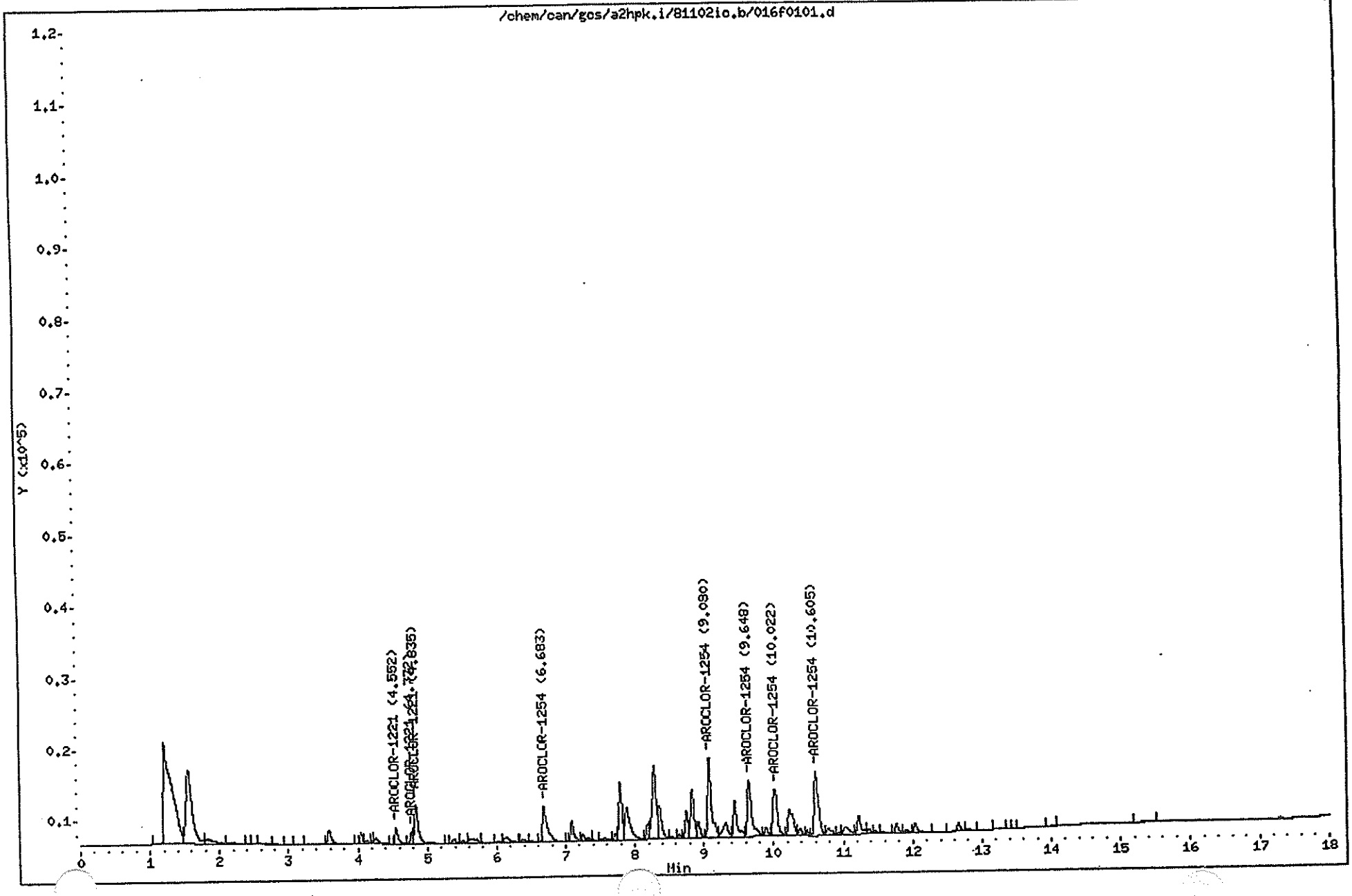
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.683	6.680	0.003	5024	0.10000	0.1000	75.00- 125.00	100.00
9.080	9.077	0.003	11252	0.10000	0.1000	184.64- 307.73	223.96
9.648	9.640	0.008	7992	0.10000	0.1000	134.01- 223.35	159.08
10.022	10.022	0.000	6583	0.10000	0.1000	103.66- 172.76	131.03
10.605	10.602	0.003	9129	0.10000	0.1000	149.90- 249.84	181.71
Average of Peak Amounts =					0.1		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.552	4.547	0.005	2146	0.10000	0.1000	75.00- 125.00	100.00
4.772	4.765	0.007	1610	0.10000	0.1000	55.08- 91.80	75.02
4.835	4.828	0.007	5431	0.10000	0.1000	172.80- 288.00	253.08
Average of Peak Amounts =					0.1		

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Date : 02-NOV-1998 20:57
Client ID:
Sample Info: 2154 C059,,1,1

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/017f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/017f0101.d
Lab Smp Id: 2154 C060
Inj Date : 02-NOV-1998 21:18
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C060,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 21:18 Cal File: 017f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.683	6.680	0.003	9111	0.20000	0.1902	75.00- 125.00	100.00
9.080	9.077	0.003	21278	0.20000	0.1944	184.64- 307.73	233.54
9.648	9.640	0.008	15036	0.20000	0.1939	134.01- 223.35	165.03
10.022	10.022	0.000	12187	0.20000	0.1923	103.66- 172.76	133.76
10.603	10.602	0.001	16943	0.20000	0.1925	149.90- 249.84	185.96
Average of Peak Amounts =					0.193		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.550	4.547	0.003	4146	0.20000	0.1965	75.00- 125.00	100.00
4.770	4.765	0.005	3099	0.20000	0.1962	55.08- 91.80	74.75
4.833	4.828	0.005	10131	0.20000	0.1930	172.80- 288.00	244.36
Average of Peak Amounts =					0.195		

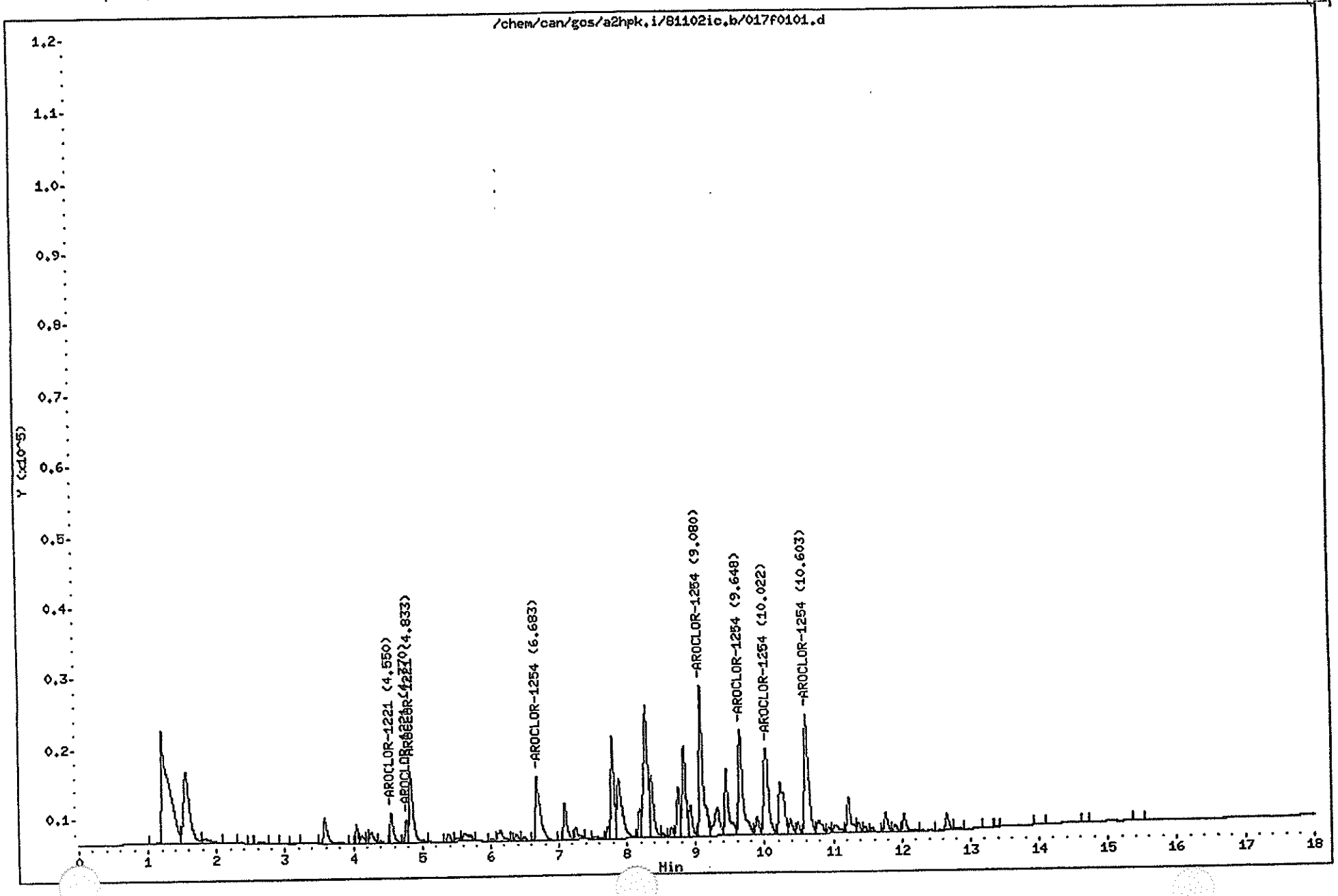
Data File: /chem/can/gos/a2hpk.i/81102ic.b/017f0101.d
Date : 02-NOV-1998 21:18
Client ID:
Sample Info: 2154 C060,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

017



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/018f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/018f0101.d
Lab Smp Id: 2154 C061
Inj Date : 02-NOV-1998 21:39
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C061,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 21:39 Cal File: 018f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.682	6.680	0.002	20512	0.50000	0.4498	75.00- 125.00	100.00
9.078	9.077	0.001	50497	0.50000	0.4736	184.64- 307.73	246.18
9.643	9.640	0.003	36651	0.50000	0.4814	134.01- 223.35	178.68
10.022	10.022	0.000	28349	0.50000	0.4636	103.66- 172.76	138.21
10.602	10.602	0.000	40997	0.50000	0.4767	149.90- 249.84	199.87
Average of Peak Amounts =					0.469		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.547	0.001	10095	0.50000	0.4855	75.00- 125.00	100.00
4.768	4.765	0.003	7414	0.50000	0.4791	55.08- 91.80	73.44
4.830	4.828	0.002	23259	0.50000	0.4606	172.80- 288.00	230.40
Average of Peak Amounts =					0.475		

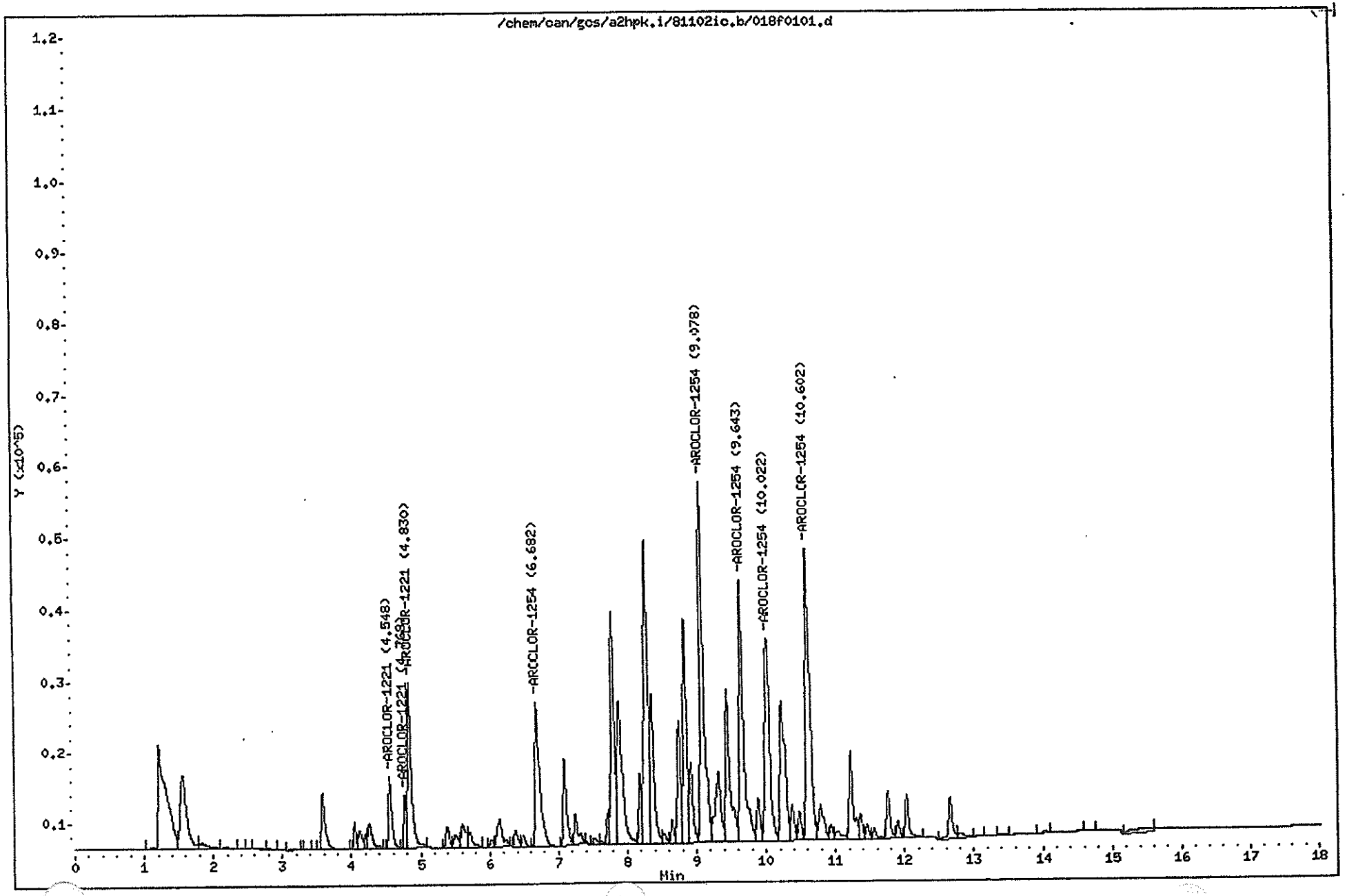
Data File: /chem/oan/gcs/a2hpk.i/81102ic.b/018f0101.d
Date : 02-NOV-1998 21:39
Client ID:
Sample Info: 2154 C061,,1,3

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES

172



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/019f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/019f0101.d
Lab Smp Id: 2154 C062
Inj Date : 02-NOV-1998 22:00
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C062,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:00 Cal File: 019f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

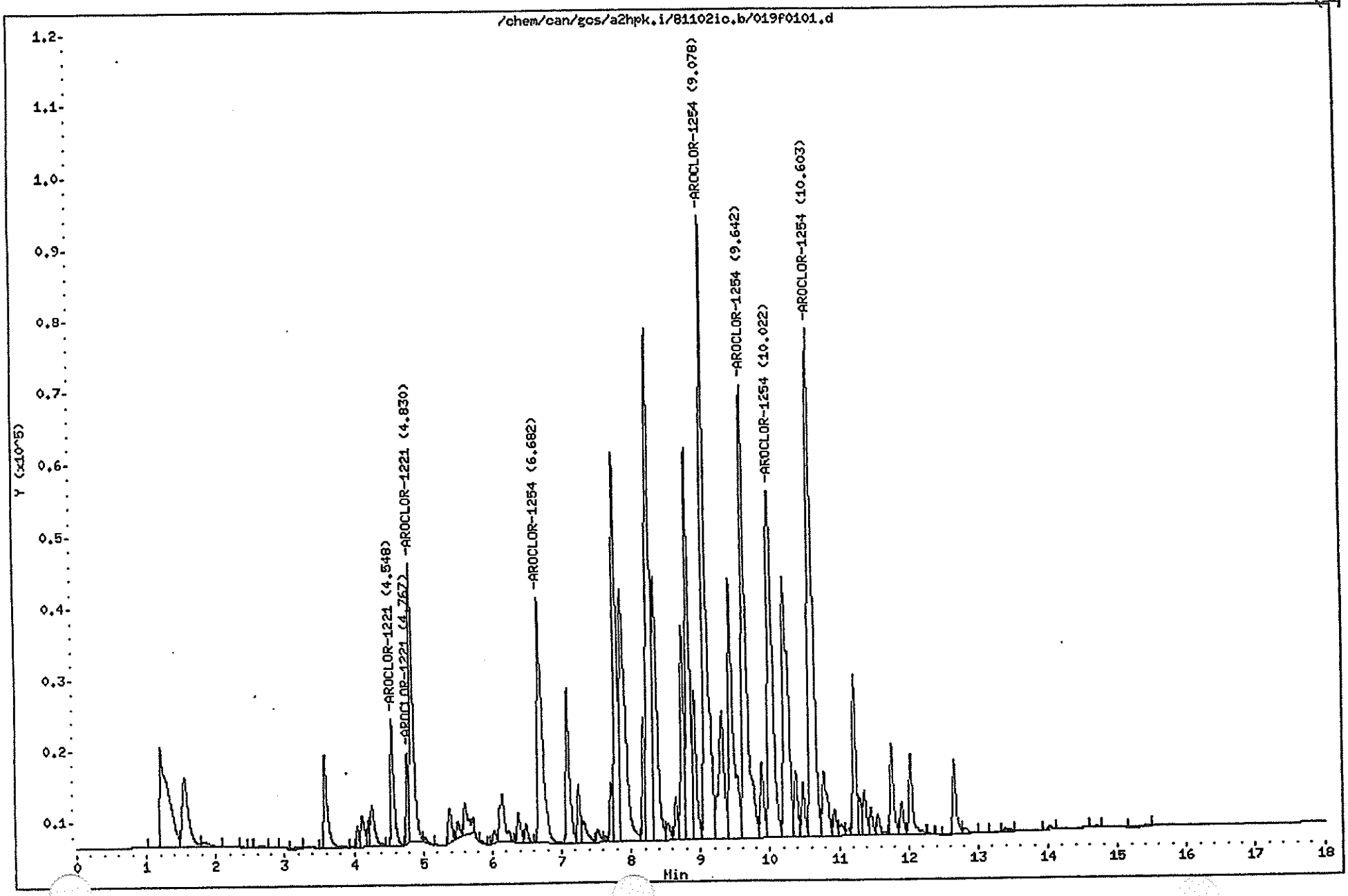
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.682	6.680	0.002	34541	1.00000	0.8063	75.00- 125.00	100.00
9.078	9.077	0.001	87149	1.00000	0.8564	184.64- 307.73	252.31
9.642	9.640	0.002	63530	1.00000	0.8705	134.01- 223.35	183.93
10.022	10.022	0.000	48419	1.00000	0.8352	103.66- 172.76	140.18
10.603	10.602	0.001	71097	1.00000	0.8641	149.90- 249.84	205.83
Average of Peak Amounts =					0.847		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.547	0.001	17924	1.00000	0.8928	75.00- 125.00	100.00
4.767	4.765	0.002	12623	1.00000	0.8551	55.08- 91.80	70.43
4.830	4.828	0.002	39154	1.00000	0.8215	172.80- 288.00	218.44
Average of Peak Amounts =					0.856		

Data File: /chem/can/gcs/a2hpk.i/81102io.b/019f0101.d
Date : 02-NOV-1998 22:00
Client ID:
Sample Info: 2154 C062,,1,4

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/020f0101.d
Lab Smp Id: 2154 C063
Inj Date : 02-NOV-1998 22:21
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C063,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:21 Cal File: 020f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

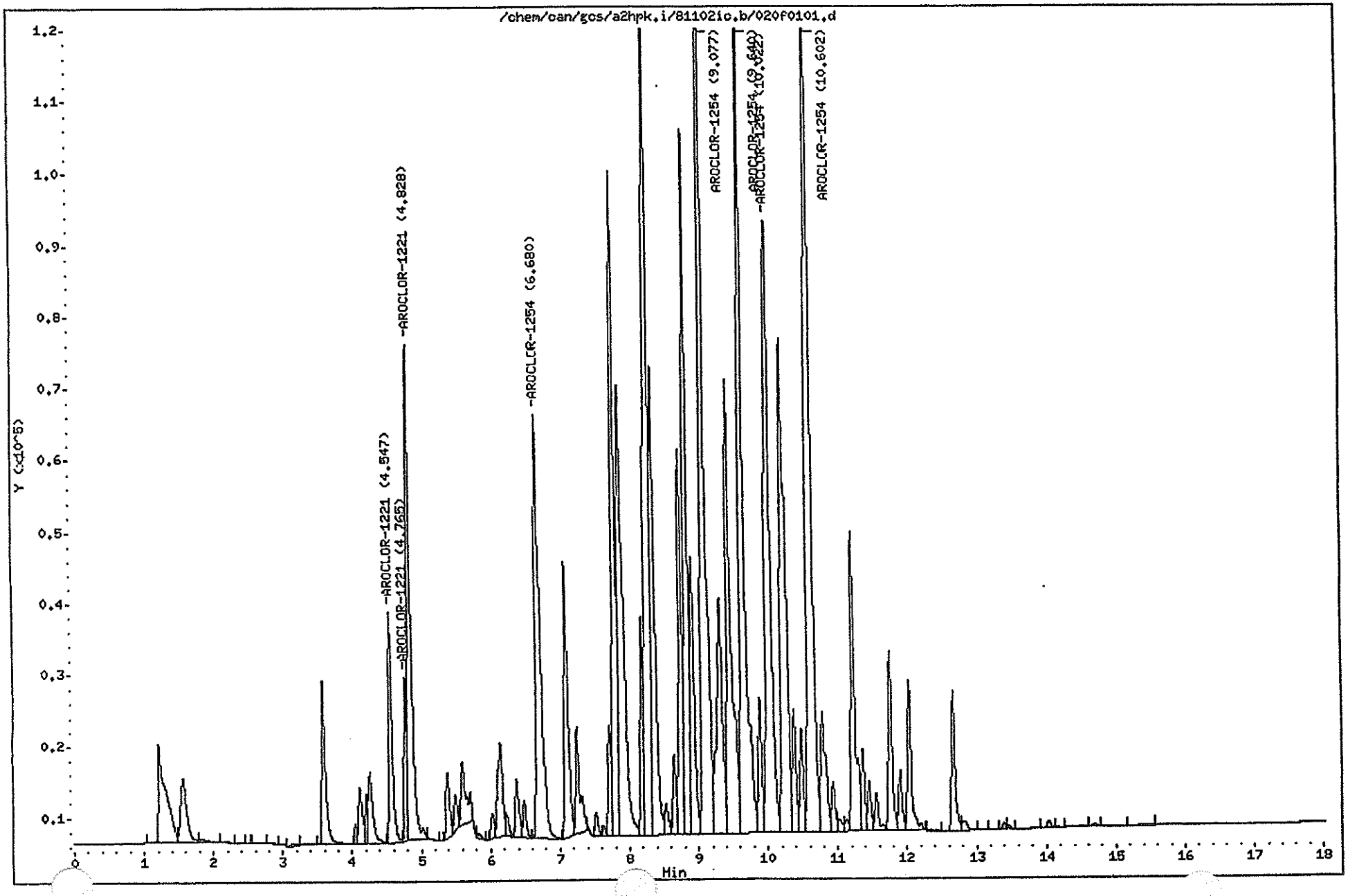
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.680	6.680	0.000	59167	2.00000	1.472	75.00- 125.00	100.00
9.077	9.077	0.000	156389	2.00000	1.611	184.64- 307.73	264.32
9.640	9.640	0.000	114215	2.00000	1.636	134.01- 223.35	193.04
10.022	10.022	0.000	85657	2.00000	1.559	103.66- 172.76	144.77
10.602	10.602	0.000	128716	2.00000	1.636	149.90- 249.84	217.55
Average of Peak Amounts =					1.58		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.547	4.547	0.000	32262	2.00000	1.673	75.00- 125.00	100.00
4.765	4.765	0.000	22834	2.00000	1.620	55.08- 91.80	70.78
4.828	4.828	0.000	69161	2.00000	1.535	172.80- 288.00	214.37
Average of Peak Amounts =					1.61		

Data File: /chem/can/gcs/a2hpk.i/811021c.b/020f0101.d
Date : 02-NOV-1998 22:21
Client ID:
Sample Info: 2154 C063,,1,5

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



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Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/021f0101.d
Lab Smp Id: 1248 C054
Inj Date : 02-NOV-1998 22:42
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C054,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:42 Cal File: 021f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

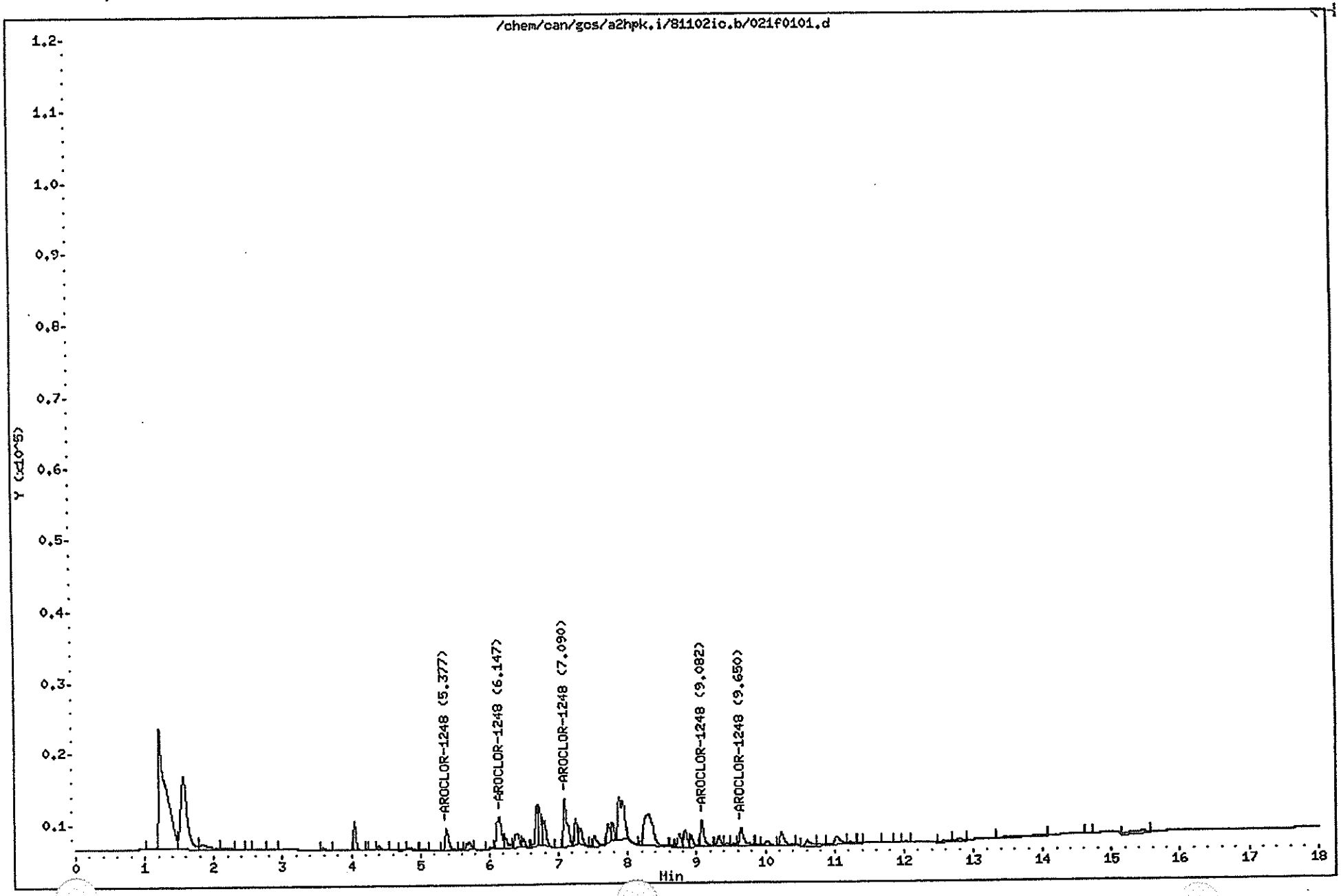
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.377	5.375	0.002	2932	0.10000	0.1000	75.00- 125.00	100.00
6.147	6.140	0.007	4403	0.10000	0.1000	130.42- 217.37	150.17
7.090	7.087	0.003	6785	0.10000	0.1000	179.77- 299.62	231.41
9.082	9.078	0.004	3748	0.10000	0.1000	104.61- 174.36	127.83
9.650	9.643	0.007	2431	0.10000	0.1000	72.05- 120.08	82.91
Average of Peak Amounts =					0.1		

Data File: /chem/can/gcs/a2hpk.i/81102io.b/021f0101.d
Date : 02-NOV-1998 22:42
Client ID:
Sample Info: 1248 C054,,1,1

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/022f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/022f0101.d
Lab Smp Id: 1248 C055
Inj Date : 02-NOV-1998 23:03
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C055,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:03 Cal File: 022f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

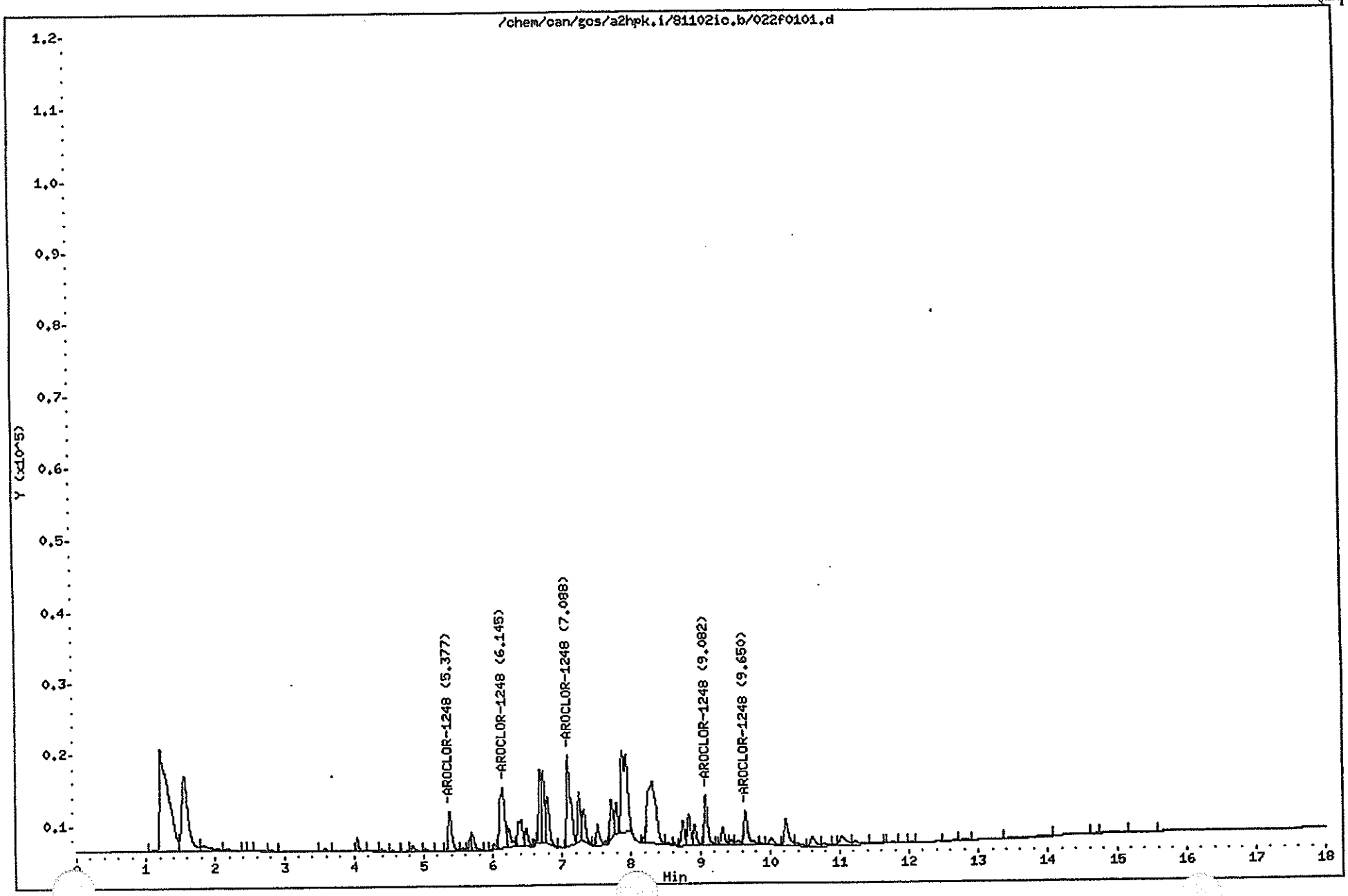
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.377	5.375	0.002	5466	0.20000	0.1930	75.00- 125.00	100.00
6.145	6.140	0.005	8595	0.20000	0.1976	130.42- 217.37	157.24
7.088	7.087	0.001	12761	0.20000	0.1938	179.77- 299.62	233.46
9.082	9.078	0.004	6958	0.20000	0.1926	104.61- 174.36	127.30
9.650	9.643	0.007	4692	0.20000	0.1964	72.05- 120.08	85.84
Average of Peak Amounts =					0.195		

Data File: /chem/oan/gos/a2hpk.i/81102io.b/022f0101.d
Date : 02-NOV-1998 23:03
Client ID:
Sample Info: 1248 C055,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/023f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/023f0101.d
Lab Smp Id: 1248 C056
Inj Date : 02-NOV-1998 23:24
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C056,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:24 Cal File: 023f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

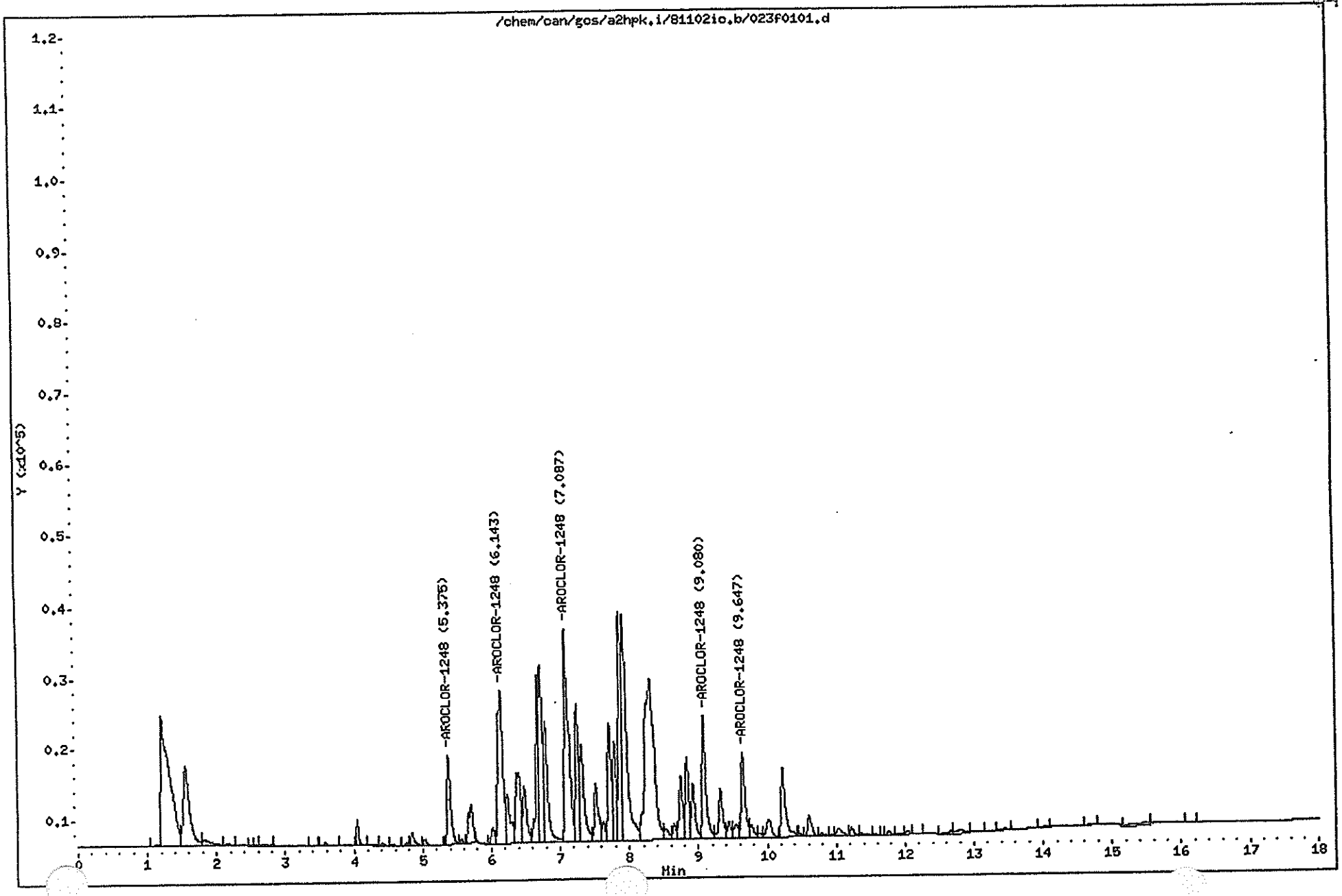
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.375	0.000	12531	0.50000	0.4601	75.00- 125.00	100.00
6.143	6.140	0.003	21791	0.50000	0.5006	130.42- 217.37	173.90
7.087	7.087	0.000	30036	0.50000	0.4700	179.77- 299.62	239.69
9.080	9.078	0.002	17479	0.50000	0.4890	104.61- 174.36	139.49
9.647	9.643	0.004	12038	0.50000	0.5026	72.05- 120.08	96.07
Average of Peak Amounts =					0.484		

Data File: /chem/can/gos/a2hpk.i/81102io.b/023f0101.d
Date : 02-NOV-1998 23:24
Client ID:
Sample Info: 1248 C056,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/024f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/024f0101.d
Lab Smp Id: 1248 C057
Inj Date : 02-NOV-1998 23:45
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C057,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:45 Cal File: 024f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

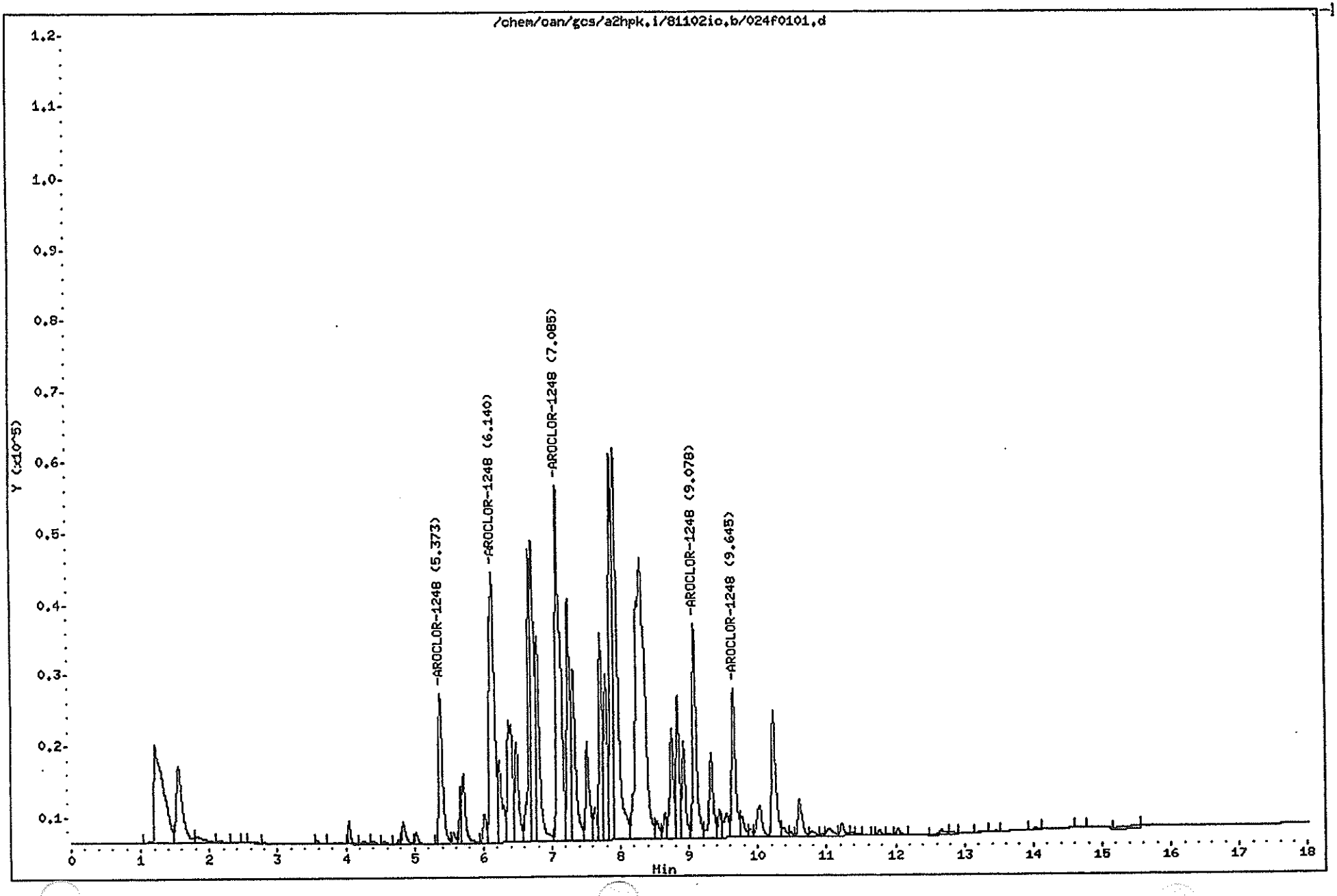
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.373	5.375	-0.002	20952	1.00000	0.8163	75.00- 125.00	100.00
6.140	6.140	0.000	38093	1.00000	0.9033	130.42- 217.37	181.81
7.085	7.087	-0.002	50051	1.00000	0.8280	179.77- 299.62	238.88
9.078	9.078	0.000	30333	1.00000	0.8820	104.61- 174.36	144.77
9.645	9.643	0.002	20988	1.00000	0.9043	72.05- 120.08	100.17
Average of Peak Amounts =					0.867		

Data File: /chem/oan/gcs/a2hpk.i/81102io.b/024f0101.d
Date : 02-NOV-1998 23:45
Client ID:
Sample Info: 1248 C057,,1,4

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Lab Smp Id: 1248 C058
Inj Date : 03-NOV-1998 00:06
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C058,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:06 Cal File: 025f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

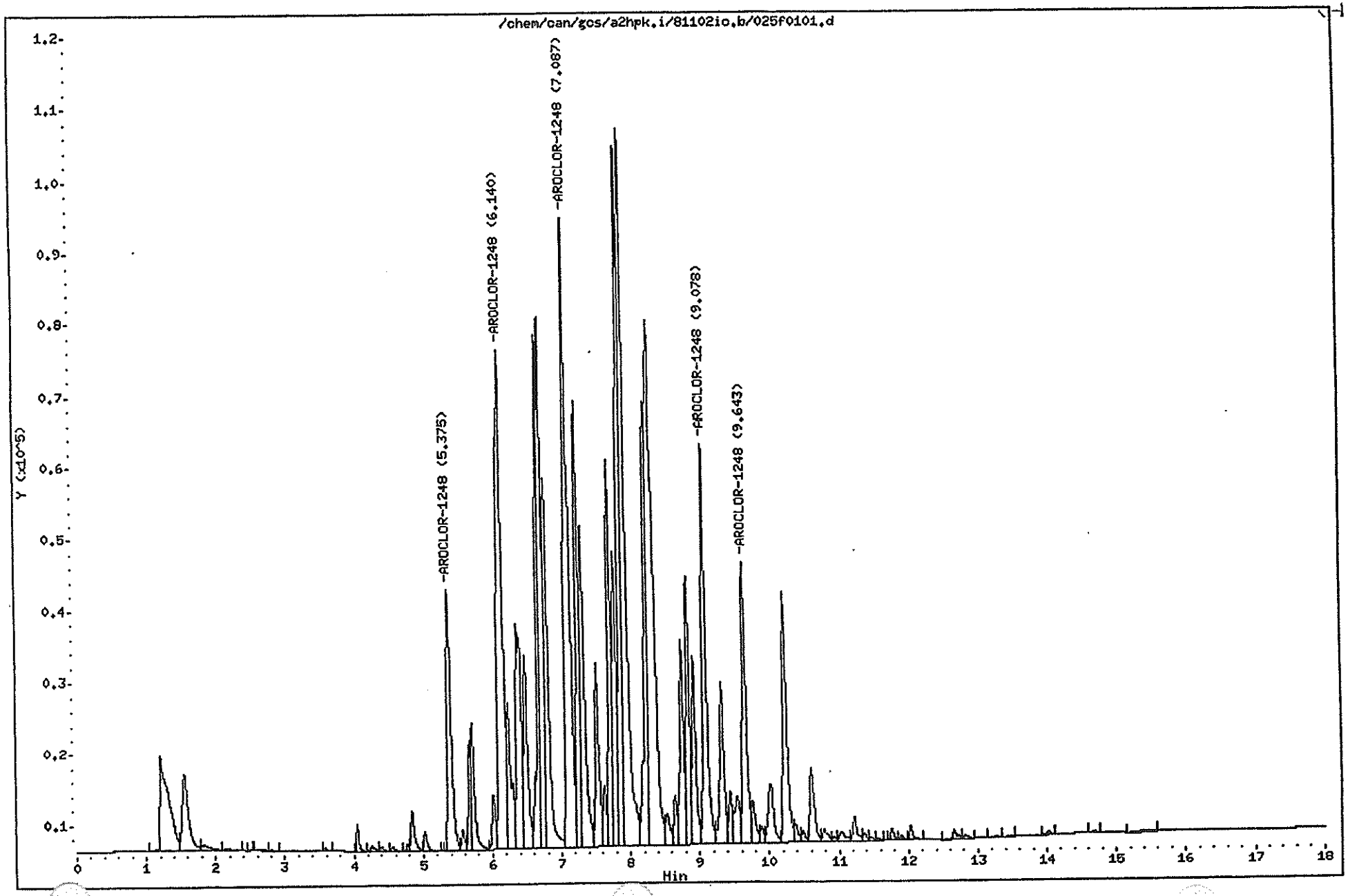
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.375	0.000	36520	2.00000	1.510	75.00- 125.00	100.00
6.140	6.140	0.000	69713	2.00000	1.712	130.42- 217.37	190.89
7.087	7.087	0.000	88316	2.00000	1.544	179.77- 299.62	241.83
9.078	9.078	0.000	56065	2.00000	1.693	104.61- 174.36	153.52
9.643	9.643	0.000	39299	2.00000	1.747	72.05- 120.08	107.61
Average of Peak Amounts =					1.64		

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Date : 03-NOV-1998 00:06
Client ID:
Sample Info: 1248 C058,,1,5

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



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Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/026f0101.d
Lab Smp Id: 1242 C049
Inj Date : 03-NOV-1998 00:27
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C049,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:27 Cal File: 026f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.835	4.828	0.007	3184	0.10000	0.1000	75.00- 125.00	100.00
5.378	5.378	0.000	5656	0.10000	0.1000	124.76- 207.94	177.64
6.147	6.138	0.009	7520	0.10000	0.1000	191.04- 318.39	236.18
6.375	6.367	0.008	4272	0.10000	0.1000	108.36- 180.61	134.17
6.485	6.480	0.005	2790	0.10000	0.1000	79.00- 131.67	87.63

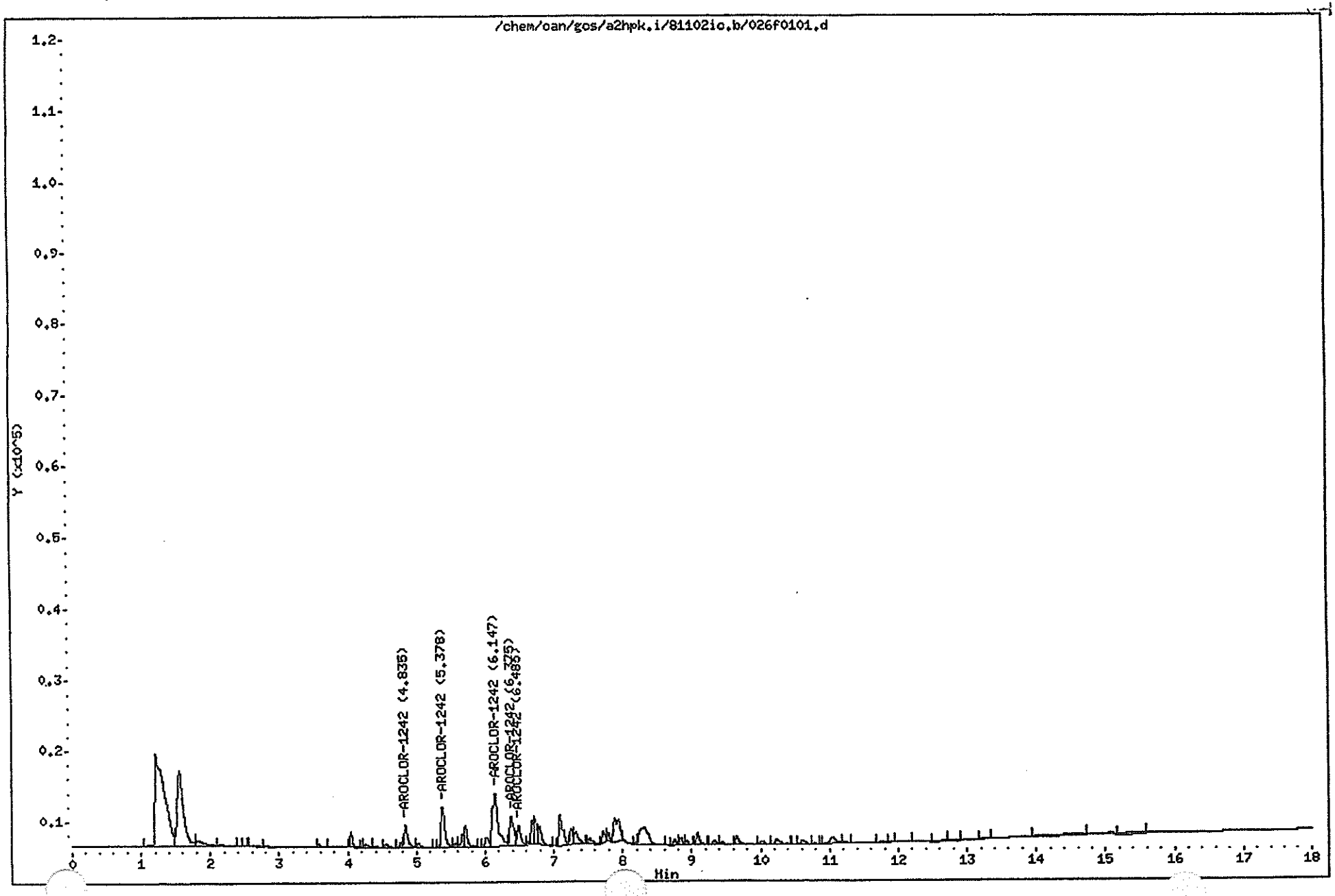
Average of Peak Amounts = 0.1

Data File: /chem/oan/gos/a2hpk.i/81102io.b/026f0101.d
Date : 03-NOV-1998 00:27
Client ID:
Sample Info: 1242 C049,,1,1

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/027f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/027f0101.d
Lab Smp Id: 1242 C050
Inj Date : 03-NOV-1998 00:48
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C050,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:48 Cal File: 027f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

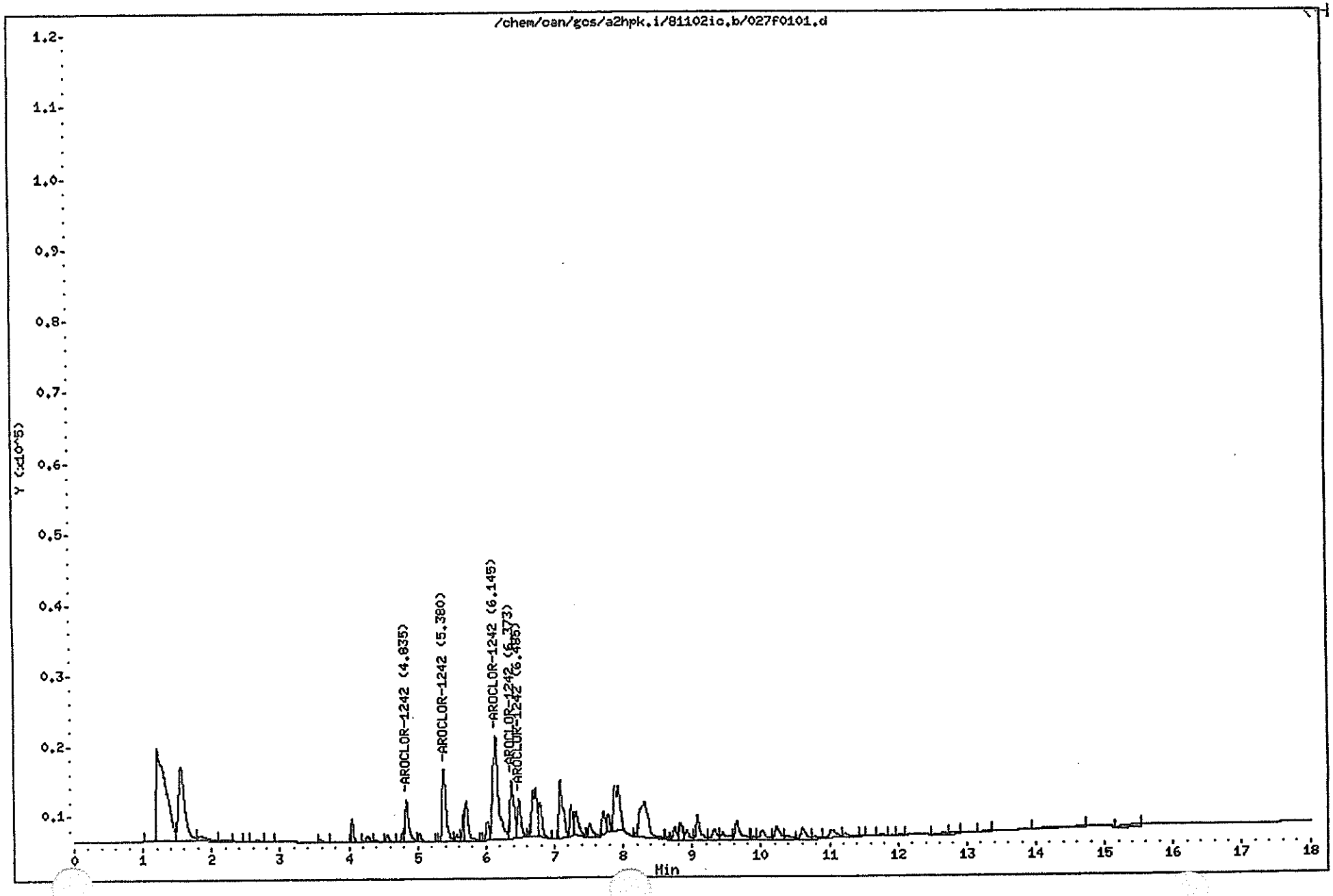
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.835	4.828	0.007	6025	0.20000	0.1945	75.00- 125.00	100.00
5.380	5.378	0.002	10465	0.20000	0.1922	124.76- 207.94	173.69
6.145	6.138	0.007	14704	0.20000	0.1977	191.04- 318.39	244.05
6.373	6.367	0.006	8287	0.20000	0.1969	108.36- 180.61	137.54
6.485	6.480	0.005	5535	0.20000	0.1992	79.00- 131.67	91.87
		Average of Peak Amounts =			0.196		

Data File: /chem/oan/gcs/a2hpk.i/81102ic.b/027f0101.d
Date : 03-NOV-1998 00:48
Client ID:
Sample Info: 1242 C050,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/028f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/028f0101.d
Lab Smp Id: 1242 C051
Inj Date : 03-NOV-1998 01:09
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C051,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:09 Cal File: 028f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

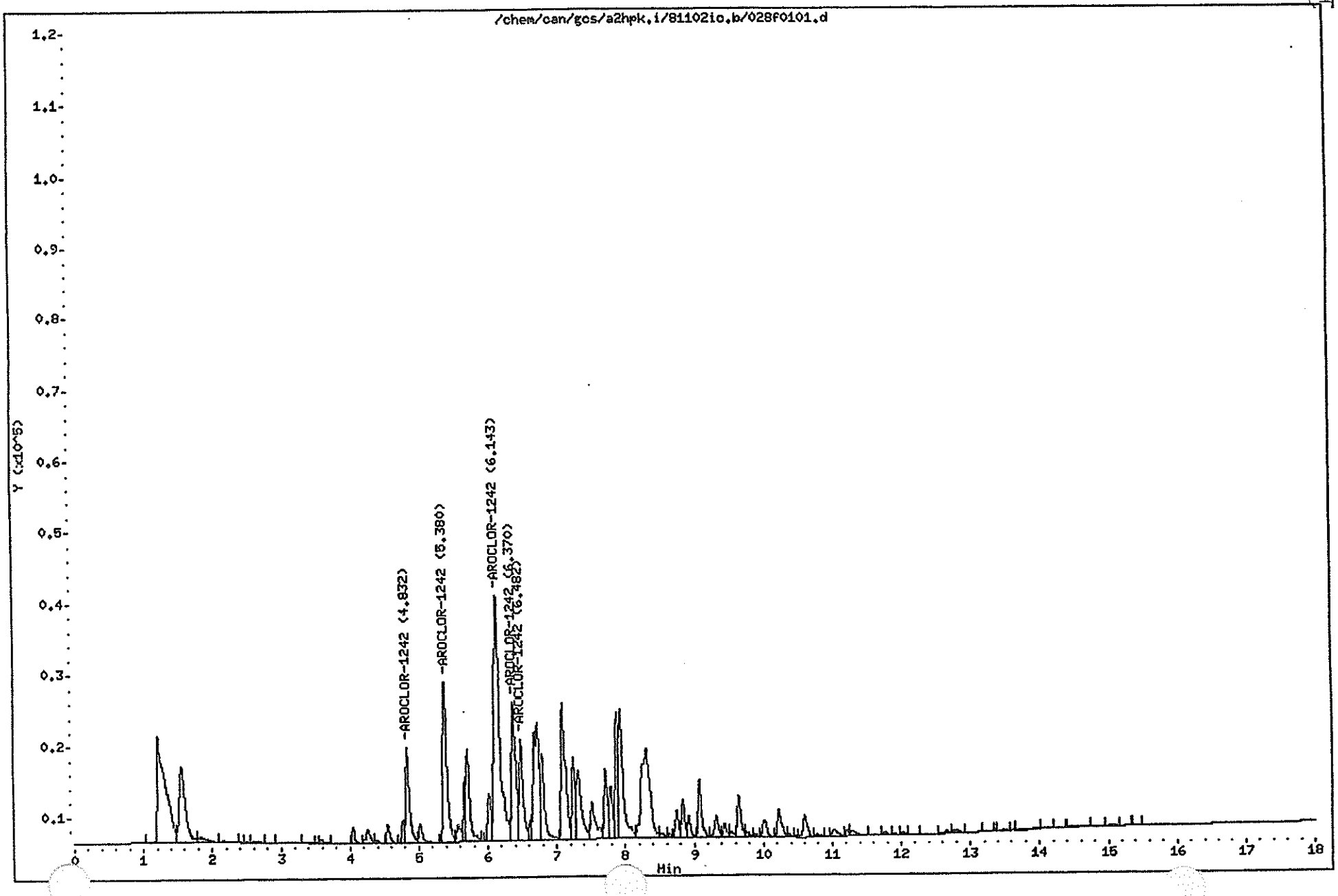
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.832	4.828	0.004	13530	0.50000	0.4559	75.00- 125.00	100.00
5.380	5.378	0.002	22507	0.50000	0.4387	124.76- 207.94	166.35
6.143	6.138	0.005	34463	0.50000	0.4750	191.04- 318.39	254.72
6.370	6.367	0.003	19549	0.50000	0.4758	108.36- 180.61	144.49
6.482	6.480	0.002	14252	0.50000	0.5085	79.00- 131.67	105.34
Average of Peak Amounts =					0.471		

Data File: /chem/can/gcs/a2hpk.i/81102io.b/028f0101.d
Date : 03-NOV-1998 01:09
Client ID:
Sample Info: 1242 C051,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Lab Smp Id: 1242 C052
Inj Date : 03-NOV-1998 01:29
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C052,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:29 Cal File: 029f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

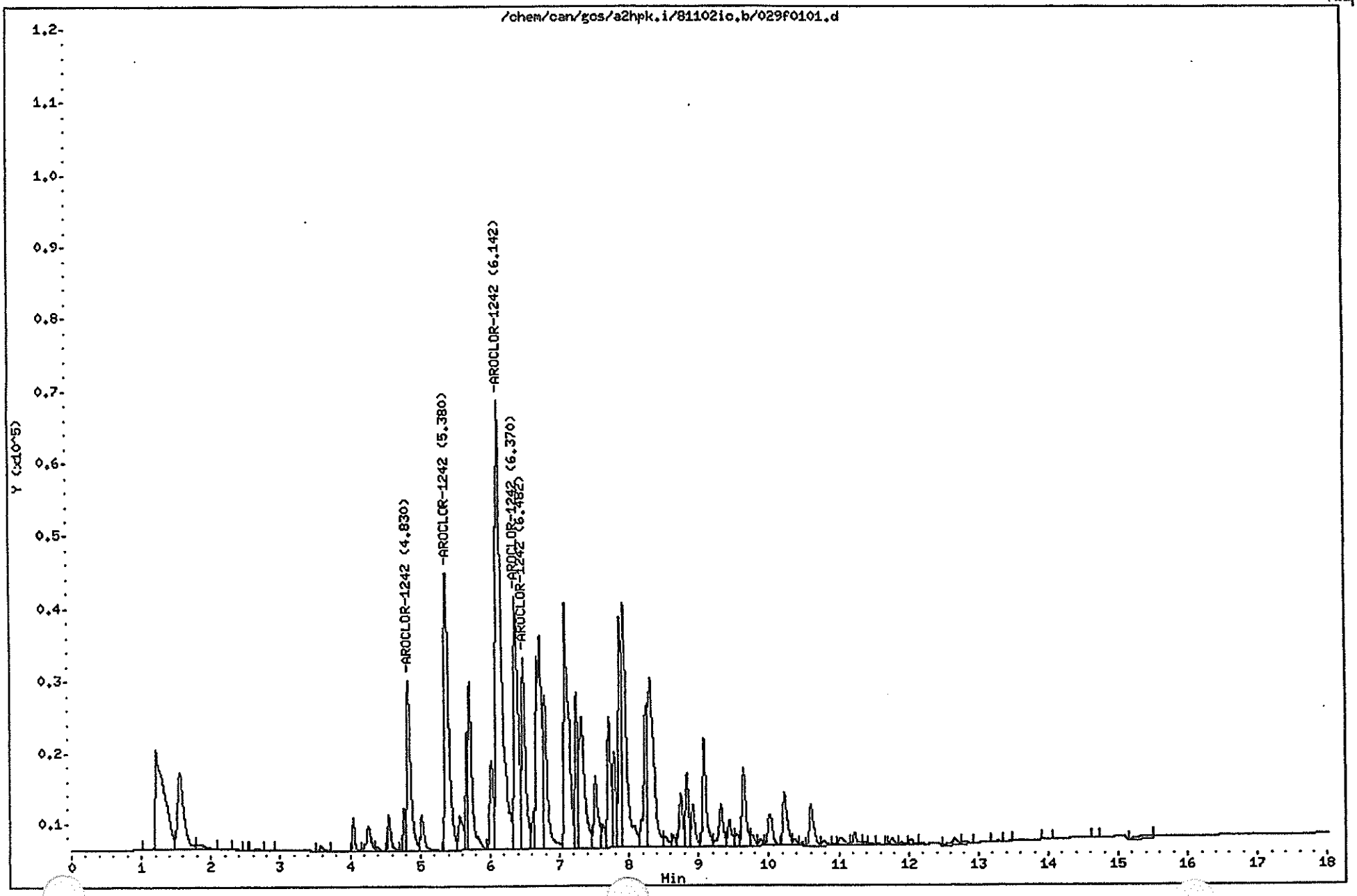
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.830	4.828	0.002	23943	1.00000	0.8478	75.00- 125.00	100.00
5.380	5.378	0.002	38604	1.00000	0.8021	124.76- 207.94	161.23
6.142	6.138	0.004	62323	1.00000	0.8904	191.04- 318.39	260.30
6.370	6.367	0.003	35261	1.00000	0.8898	108.36- 180.61	147.27
6.482	6.480	0.002	26690	1.00000	0.9638	79.00- 131.67	111.47
Average of Peak Amounts =					0.879		

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Date : 03-NOV-1998 01:29
Client ID:
Sample Info: 1242 C052,,1,4

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Lab Smp Id: 1242 C053
Inj Date : 03-NOV-1998 01:50
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C053,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:50 Cal File: 030f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

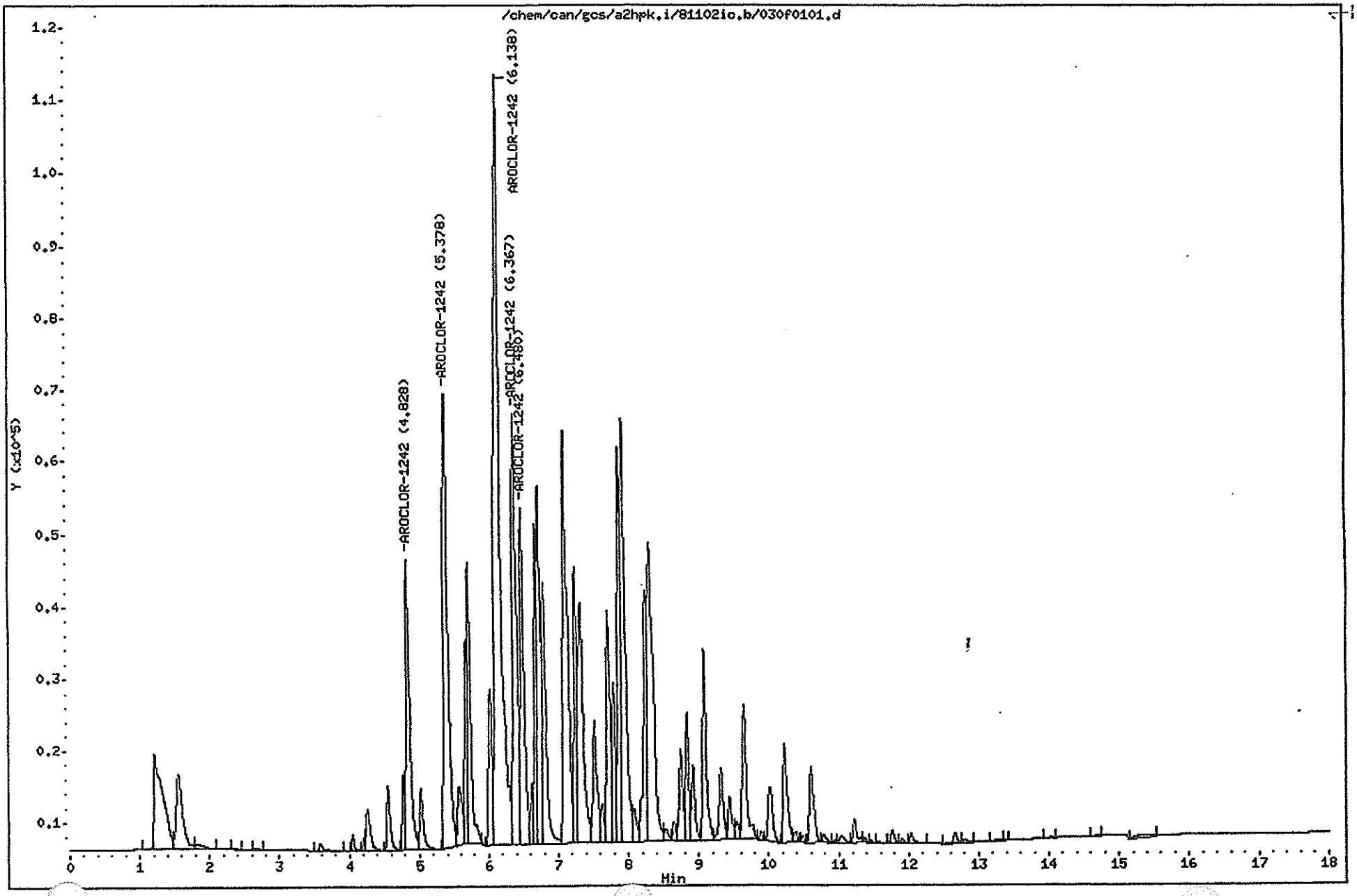
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.828	4.828	0.000	40097	2.00000	1.507	75.00- 125.00	100.00
5.378	5.378	0.000	62945	2.00000	1.405	124.76- 207.94	156.98
6.138	6.138	0.000	106641	2.00000	1.600	191.04- 318.39	265.96
6.367	6.367	0.000	59625	2.00000	1.583	108.36- 180.61	148.70
6.480	6.480	0.000	46396	2.00000	1.732	79.00- 131.67	115.71
Average of Peak Amounts =					1.57		

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Date : 03-NOV-1998 01:50
Client ID:
Sample Info: 1242 C053,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Lab Smp Id: 1232 C044
Inj Date : 03-NOV-1998 02:11
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C044,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:11 Cal File: 031f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.547	0.003	1457	0.10000	0.1000	75.00- 125.00	100.00
4.835	4.827	0.008	4478	0.10000	0.1000	210.31- 350.52	307.34
5.380	5.378	0.002	3146	0.10000	0.1000	146.67- 244.44	215.92
6.148	6.140	0.008	4082	0.10000	0.1000	215.96- 359.93	280.16
6.375	6.368	0.007	2403	0.10000	0.1000	124.12- 206.86	164.93

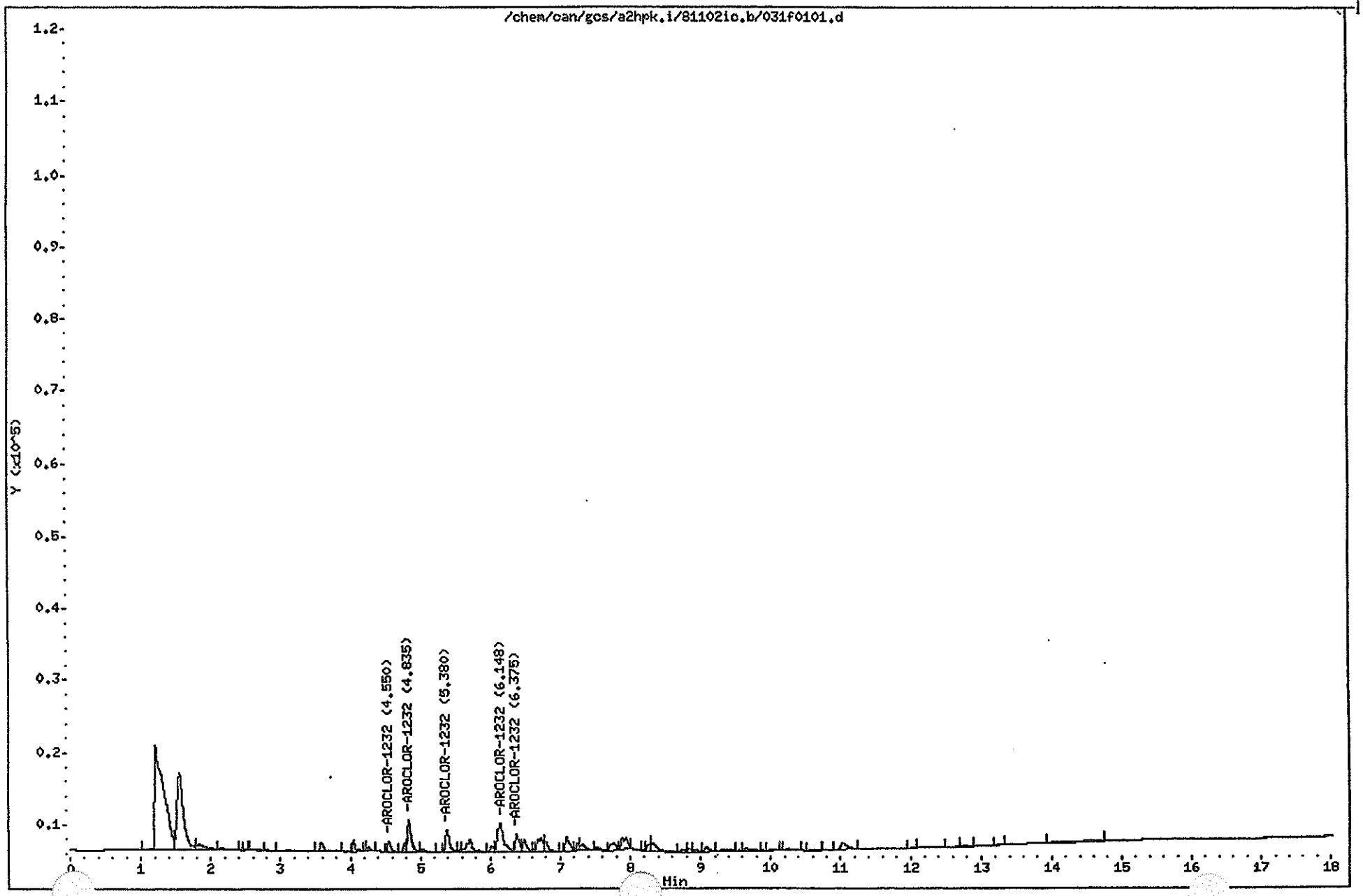
Average of Peak Amounts = 0.1

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Date : 03-NOV-1998 02:11
Client ID:
Sample Info: 1232 C044,,1,1

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Lab Smp Id: 1232 C045
Inj Date : 03-NOV-1998 02:33
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C045,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:33 Cal File: 032f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

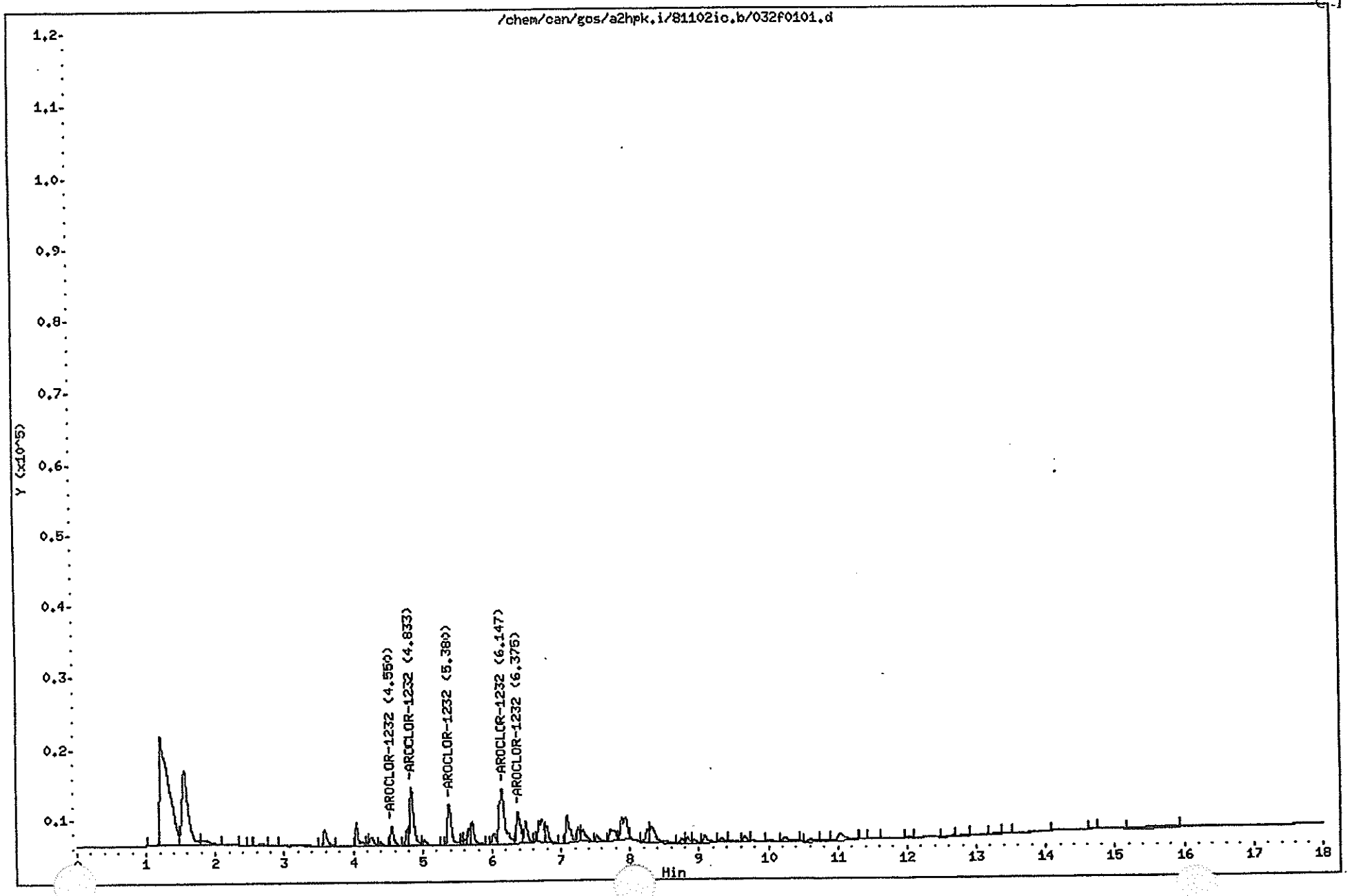
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.547	0.003	2793	0.20000	0.1958	75.00- 125.00	100.00
4.833	4.827	0.006	8327	0.20000	0.1927	210.31- 350.52	298.14
5.380	5.378	0.002	5830	0.20000	0.1924	146.67- 244.44	208.74
6.147	6.140	0.007	7866	0.20000	0.1963	215.96- 359.93	281.63
6.375	6.368	0.007	4481	0.20000	0.1930	124.12- 206.86	160.44
Average of Peak Amounts =					0.194		

Data File: /chem/can/gos/a2hpk.i/81102ic.b/032f0101.d
Date : 03-NOV-1998 02:33
Client ID:
Sample Info: 1232 C045,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Lab Smp Id: 1232 C046
Inj Date : 03-NOV-1998 02:53
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C046,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:53 Cal File: 033f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.548	4.547	0.001	6818	0.50000	0.4850	75.00- 125.00	100.00
4.830	4.827	0.003	19119	0.50000	0.4601	210.31- 350.52	280.42
5.380	5.378	0.002	13333	0.50000	0.4583	146.67- 244.44	195.56
6.145	6.140	0.005	19632	0.50000	0.4932	215.96- 359.93	287.94
6.372	6.368	0.004	11283	0.50000	0.4906	124.12- 206.86	165.49

Average of Peak Amounts = 0.477

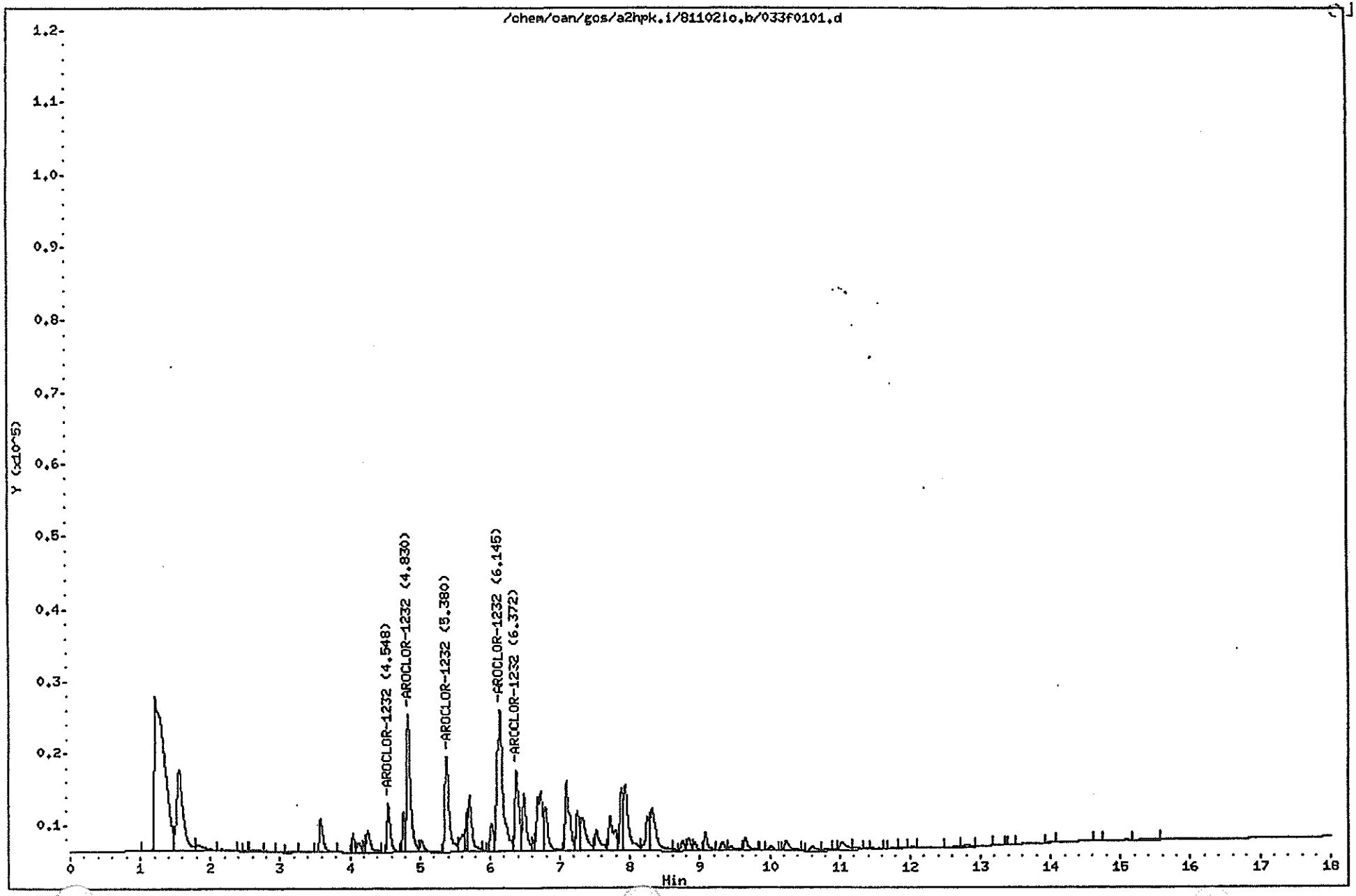
Data File: /chem/oan/gos/a2hpk.i/81102io.b/033f0101.d
Date : 03-NOV-1998 02:53
Client ID:
Sample Info: 1232 C046,,1,3

Instrument: a2hpk.i

Operator: 001803

Column phase: RTX-CLP PESTICIDES

Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Lab Smp Id: 1232 C047
Inj Date : 03-NOV-1998 03:14
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C047,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 03:14 Cal File: 034f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.548	4.547	0.001	12490	1.00000	0.9140	75.00- 125.00	100.00
4.830	4.827	0.003	33204	1.00000	0.8414	210.31- 350.52	265.84
5.380	5.378	0.002	23094	1.00000	0.8370	146.67- 244.44	184.90
6.143	6.140	0.003	35707	1.00000	0.9208	215.96- 359.93	285.88
6.370	6.368	0.002	20457	1.00000	0.9147	124.12- 206.86	163.79

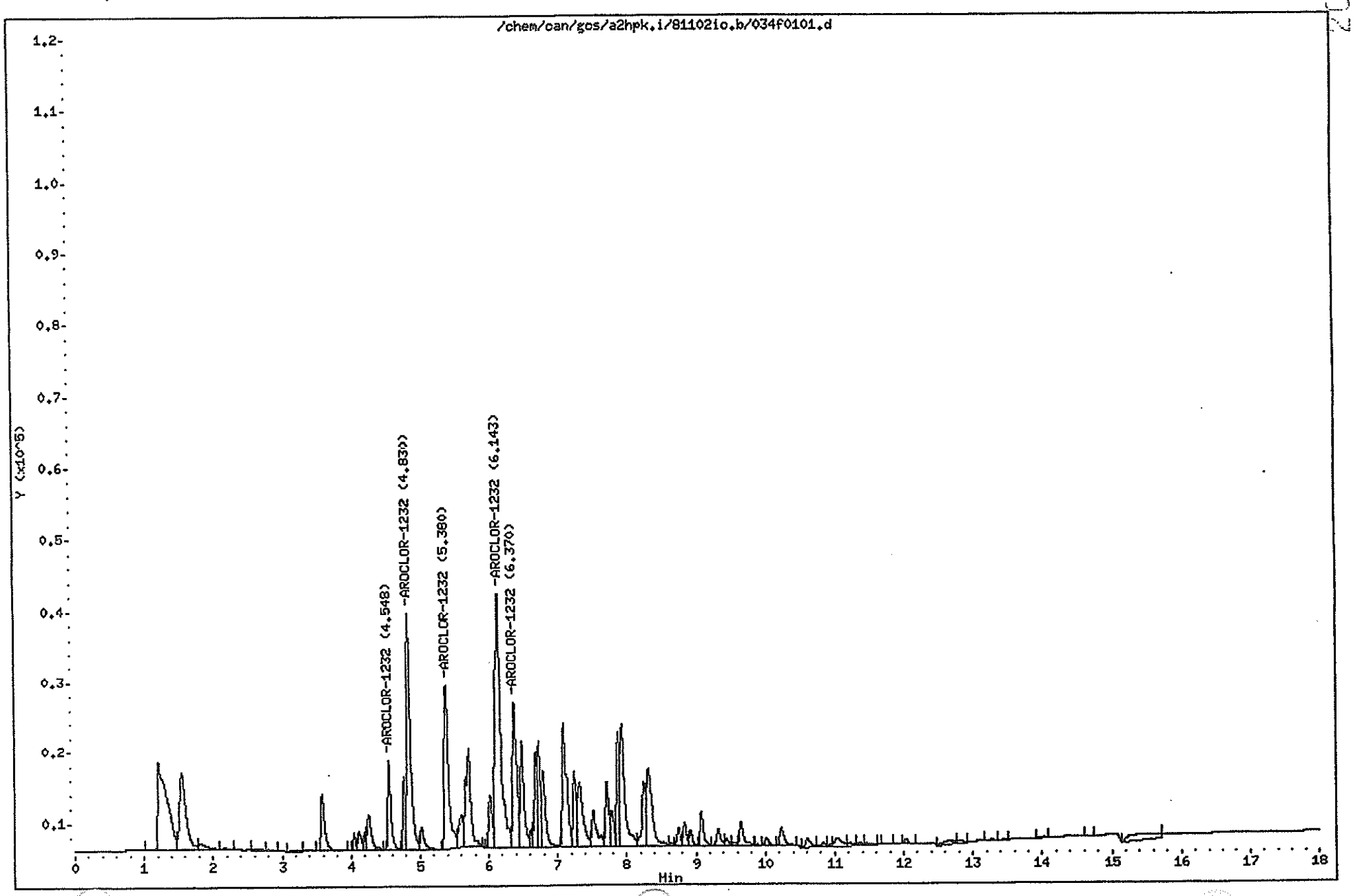
Average of Peak Amounts = 0.886

Data File: /chem/can/gos/a2hpk.i/811021c.b/034f0101.d
Date : 03-NOV-1998 03:14
Client ID:
Sample Info: 1232 C047,,1,4

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Lab Smp Id: 1232 C048
Inj Date : 03-NOV-1998 03:35
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C048,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 03:35 Cal File: 035f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

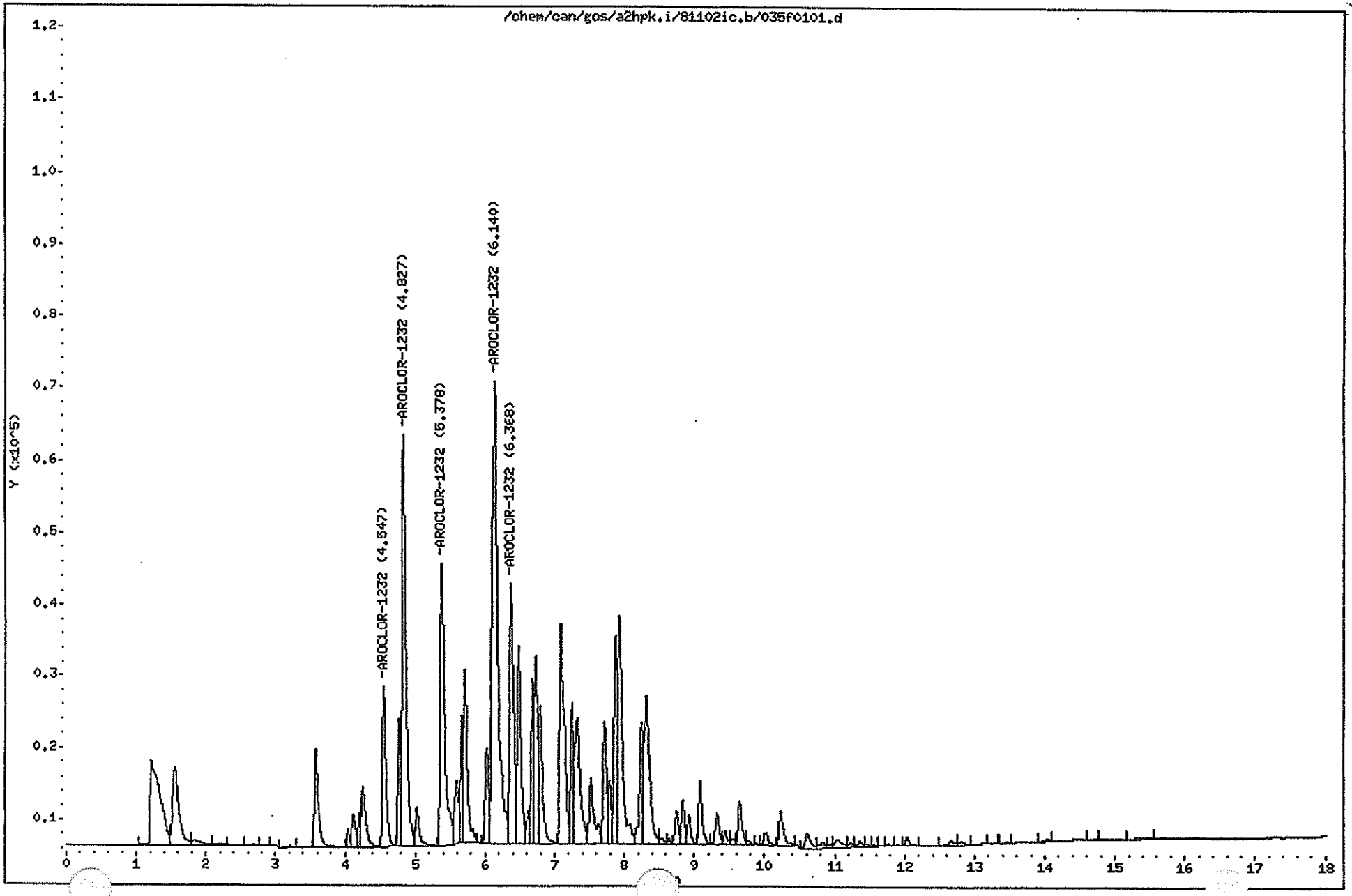
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.547	4.547	0.000	22381	2.00000	1.699	75.00- 125.00	100.00
4.827	4.827	0.000	57211	2.00000	1.534	210.31- 350.52	255.62
5.378	5.378	0.000	39334	2.00000	1.512	146.67- 244.44	175.75
6.140	6.140	0.000	64243	2.00000	1.716	215.96- 359.93	287.04
6.368	6.368	0.000	36353	2.00000	1.689	124.12- 206.86	162.43
Average of Peak Amounts =					1.63		

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Date : 03-NOV-1998 03:35
Client ID:
Sample Info: 1232 C048,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L020J

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.27 S2 : 15.11

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/16/98	2106	4.27	15.11
02		2154 C061	12/16/98	2127		
03		1248 C056	12/16/98	2148		
04		1242 C051	12/16/98	2209		
05		1232 C046	12/16/98	2230		
06	S-120198-JH-	CNW6H101	12/17/98	0201	4.23	15.11
07	S-120198-JH-	CNW6T101	12/17/98	0222	4.23	15.11
08	S-120198-JH-	CNW6V101	12/17/98	0243	4.23	15.10
09	S-120198-JH-	CNW6W101	12/17/98	0304	4.23	15.01
10	S-120198-JH-	CNW6X101	12/17/98	0325	4.23	15.11
11	S-120198-JH-	CNW7A101	12/17/98	0346	4.23	15.11
12		1660 C110	12/17/98	0428	4.27	15.1
13	S-120198-JH-	CNW7C101	12/17/98	0510	4.27	15.1
14	S-120198-JH-	CNW7G101	12/17/98	0552	4.23	15.11
15	S-120198-JH-	CNW7H101	12/17/98	0613	4.23	15.11
16	S-120198-JH-	CNW71101	12/17/98	0634	4.23	
17	S-120198-JH-	CNW74101	12/17/98	0716	4.23	15.11
18	S-120198-JH-	CNW76101	12/17/98	0737	4.23	
19	S-120198-JH-	CNW78101	12/17/98	0758	4.23	15.12
20	CPO7RBLK	CP07R101	12/17/98	0820	4.27	15.11
21		1660 C110	12/17/98	0902	4.27	15.11
22	CPO7RCHK	CP07R102	12/17/98	0944	4.27	15.11
23	CPO7RCHKDUP	CP07R103	12/17/98	1005	4.27	15.10
24		1660 C110	12/17/98	1150	4.27	15.10
25						
26						
27						
28						
29						
30						
31						
32						

		QC LIMITS
S1	= TCMX	(+/- 0.10 MINUTES)
S2	= DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Data File: /chem/can/gcs/a2hpk.i/81216a.b/008f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 008f0101.d
Analysis Type: NONE

Injection Date: 16-DEC-1998 21:06
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.

COMPOUND	%D
TCMX	1.2
AROCLOR-1016	3.9
AROCLOR-1260	1.0
DCB	0.1

The average of %D's in the continuing calibration is 1.6

Data File: /chem/can/gcs/a2hpk.i/81216a.b/008f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/008f0101.d
Lab Smp Id: 1660 C110
Inj Date : 16-DEC-1998 21:06
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

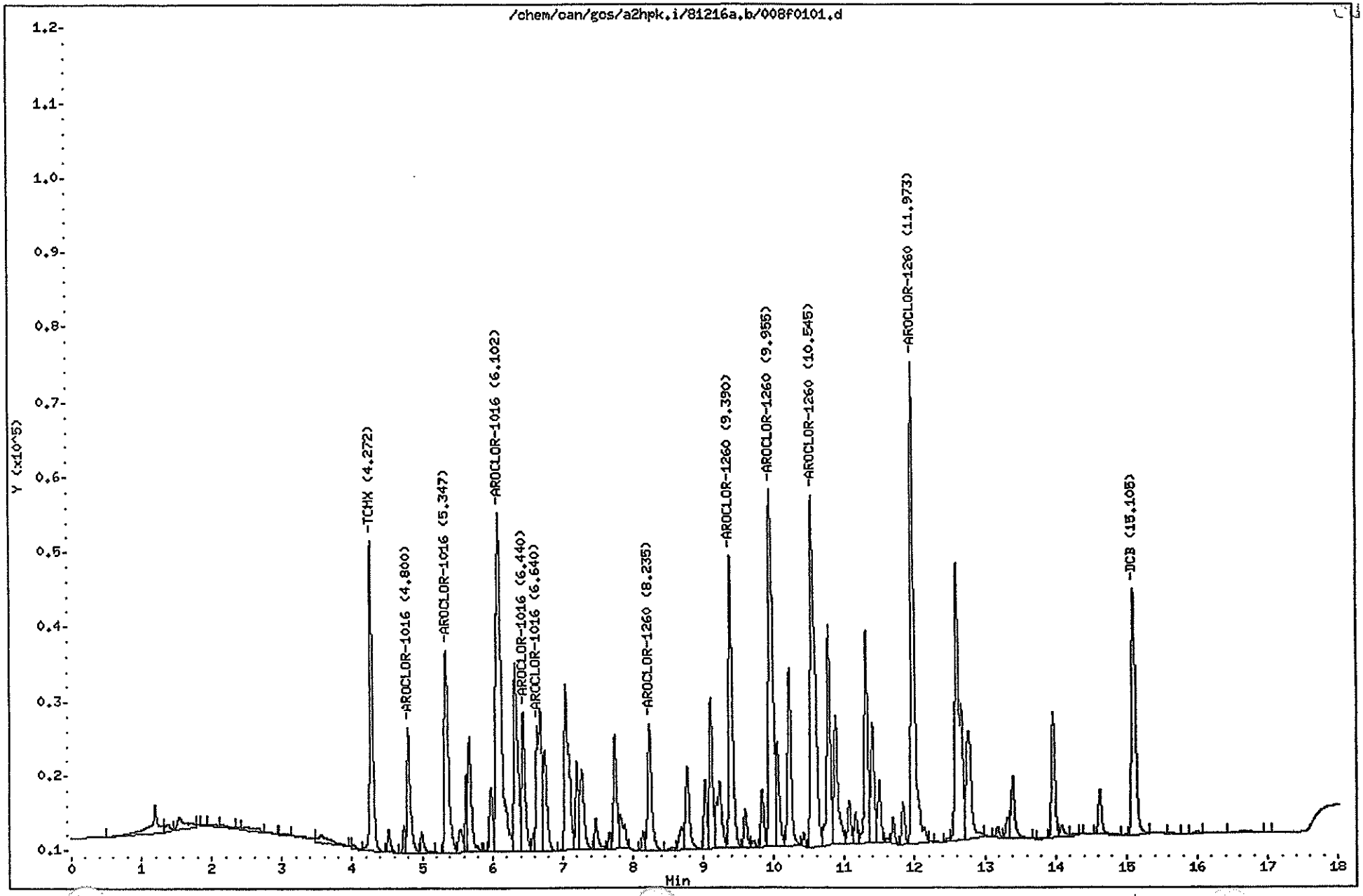
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	41488	0.02500	0.02530	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.802	-0.002	16792	0.50000	0.5419	80.00- 120.00	100.00
5.347	5.347	0.000	26934	0.50000	0.4986	125.29- 208.81	160.40
6.102	6.105	-0.003	45461	0.50000	0.5423	207.30- 345.49	270.73
6.440	6.442	-0.002	18694	0.50000	0.5460	84.66- 141.09	111.33
6.640	6.642	-0.002	16731	0.50000	0.4698	81.88- 136.47	99.64
Average of Peak Amounts =					0.52		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	17092	0.50000	0.4917	80.00- 120.00	100.00
9.390	9.390	0.000	39071	0.50000	0.4938	166.19- 276.99	228.59
9.955	9.955	0.000	47729	0.50000	0.5164	196.82- 328.04	279.25
10.545	10.547	-0.002	47092	0.50000	0.5181	201.36- 335.60	275.52
11.973	11.973	0.000	64343	0.50000	0.5058	281.46- 469.10	376.45
Average of Peak Amounts =					0.505		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	32936	0.02500	0.02498	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/008f0101.d
Date : 16-DEC-1998 21:06
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

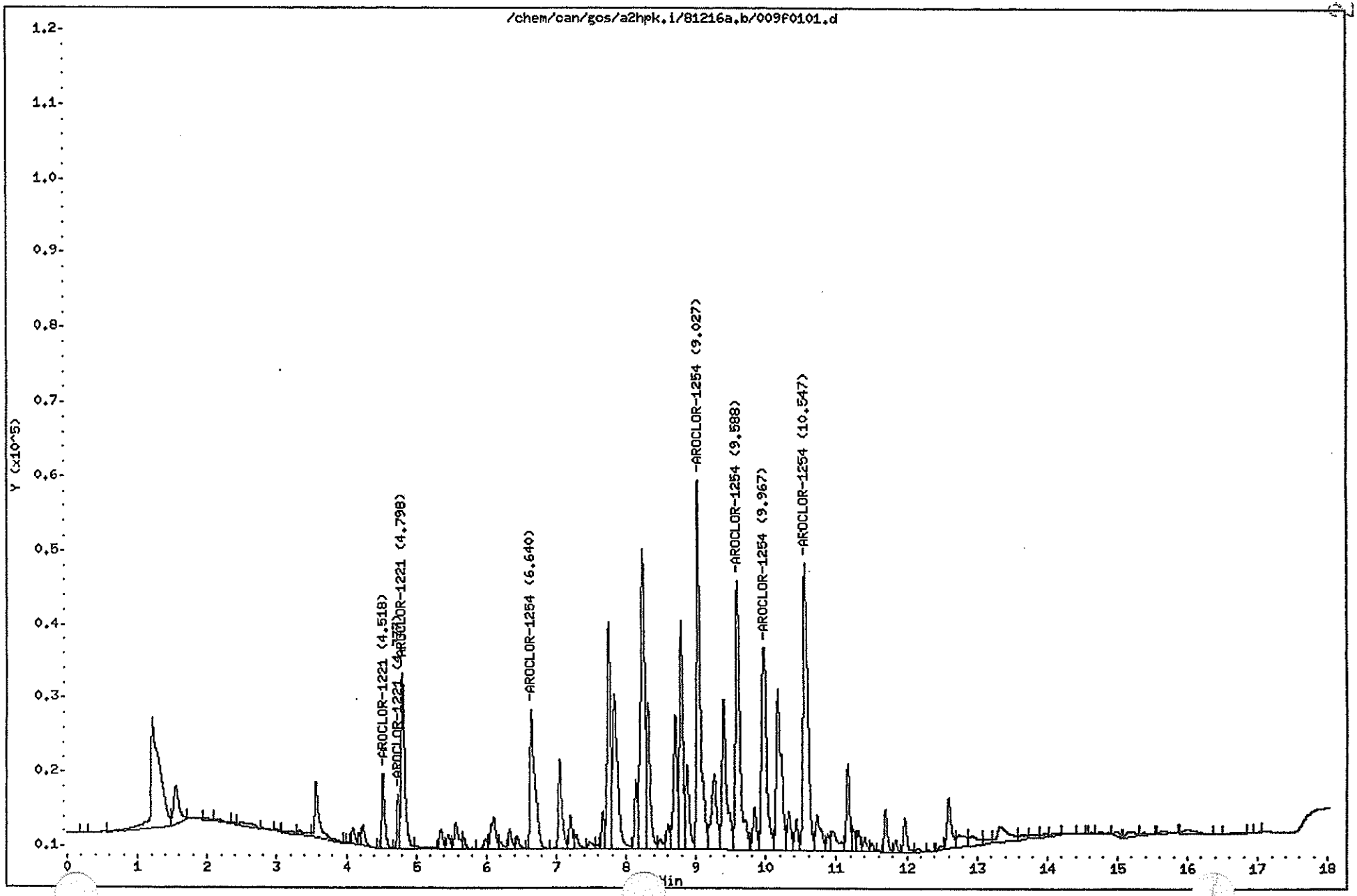
Data file : /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Lab Smp Id: 2154 C061
Inj Date : 16-DEC-1998 21:27
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.640	6.640	0.000	18672	0.50000	0.4646	80.00- 120.00	100.00
9.027	9.027	0.000	49819	0.50000	0.5133	200.11- 333.51	266.81
9.588	9.588	0.000	36366	0.50000	0.5209	146.07- 243.45	194.76
9.967	9.967	0.000	27220	0.50000	0.4954	109.33- 182.22	145.78
10.547	10.547	0.000	38717	0.50000	0.4920	155.51- 259.19	207.35
Average of Peak Amounts =					0.497		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.518	4.518	0.000	10011	0.50000	0.5190	80.00- 120.00	100.00
4.737	4.737	0.000	7195	0.50000	0.5106	53.90- 89.84	71.87
4.798	4.798	0.000	23635	0.50000	0.5247	177.07- 295.11	236.09
Average of Peak Amounts =					0.518		

Data File: /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Date : 16-DEC-1998 21:27
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column phase: RTX-CLP PESTICIDES
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
Lab Smp Id: 1248 C056
Inj Date : 16-DEC-1998 21:48
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

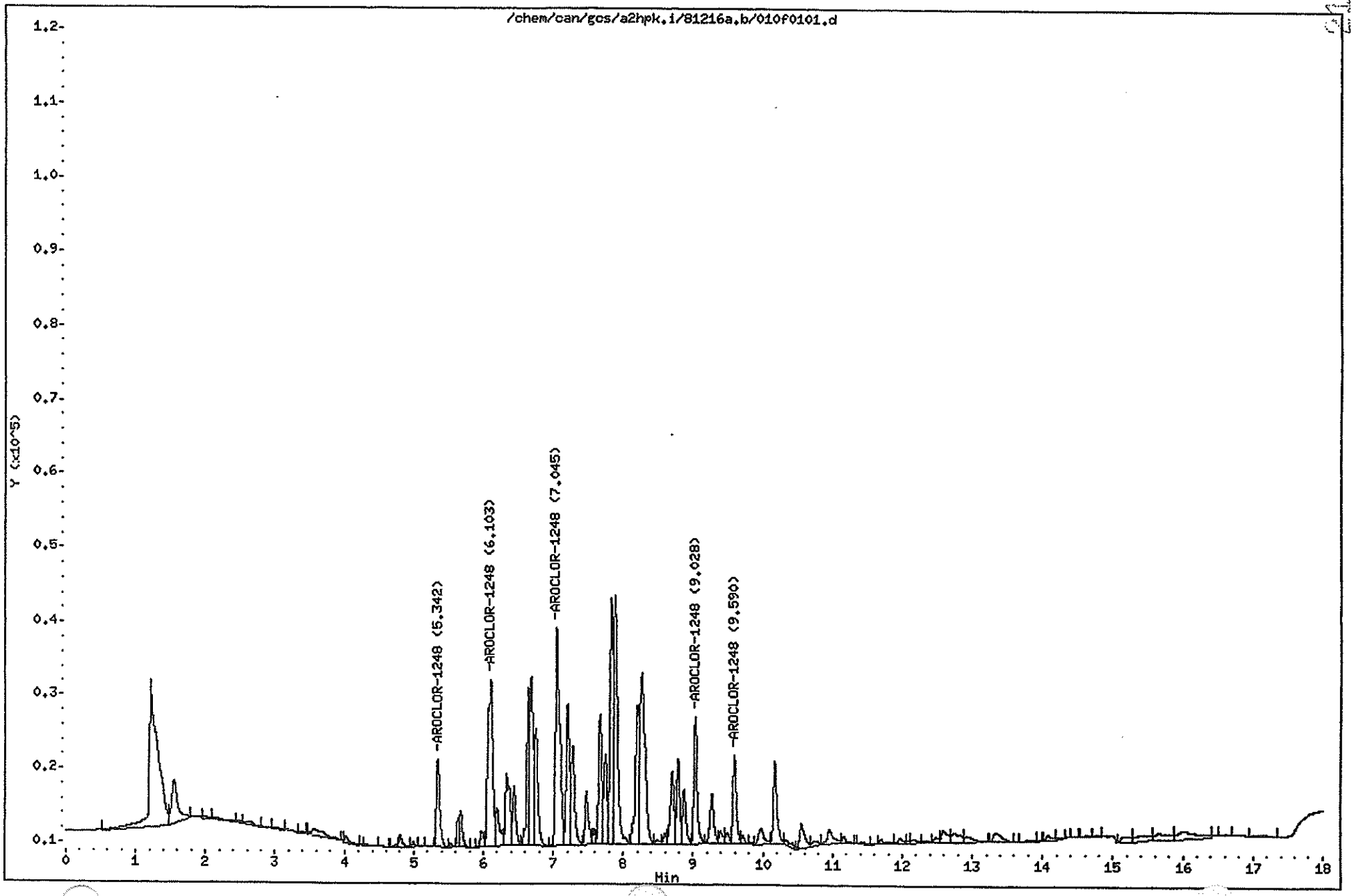
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.342	5.342	0.000	11718	0.50000	0.4845	80.00- 120.00	100.00
6.103	6.103	0.000	22570	0.50000	0.5544	144.46- 240.76	192.61
7.045	7.045	0.000	29502	0.50000	0.5159	188.82- 314.71	251.77
9.028	9.028	0.000	17203	0.50000	0.5194	110.11- 183.51	146.81
9.590	9.590	0.000	11829	0.50000	0.5258	75.71- 126.18	100.95
Average of Peak Amounts =					0.52		

Data File: /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
Date : 16-DEC-1998 21:48
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/011f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/011f0101.d
Lab Smp Id: 1242 C051
Inj Date : 16-DEC-1998 22:09
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

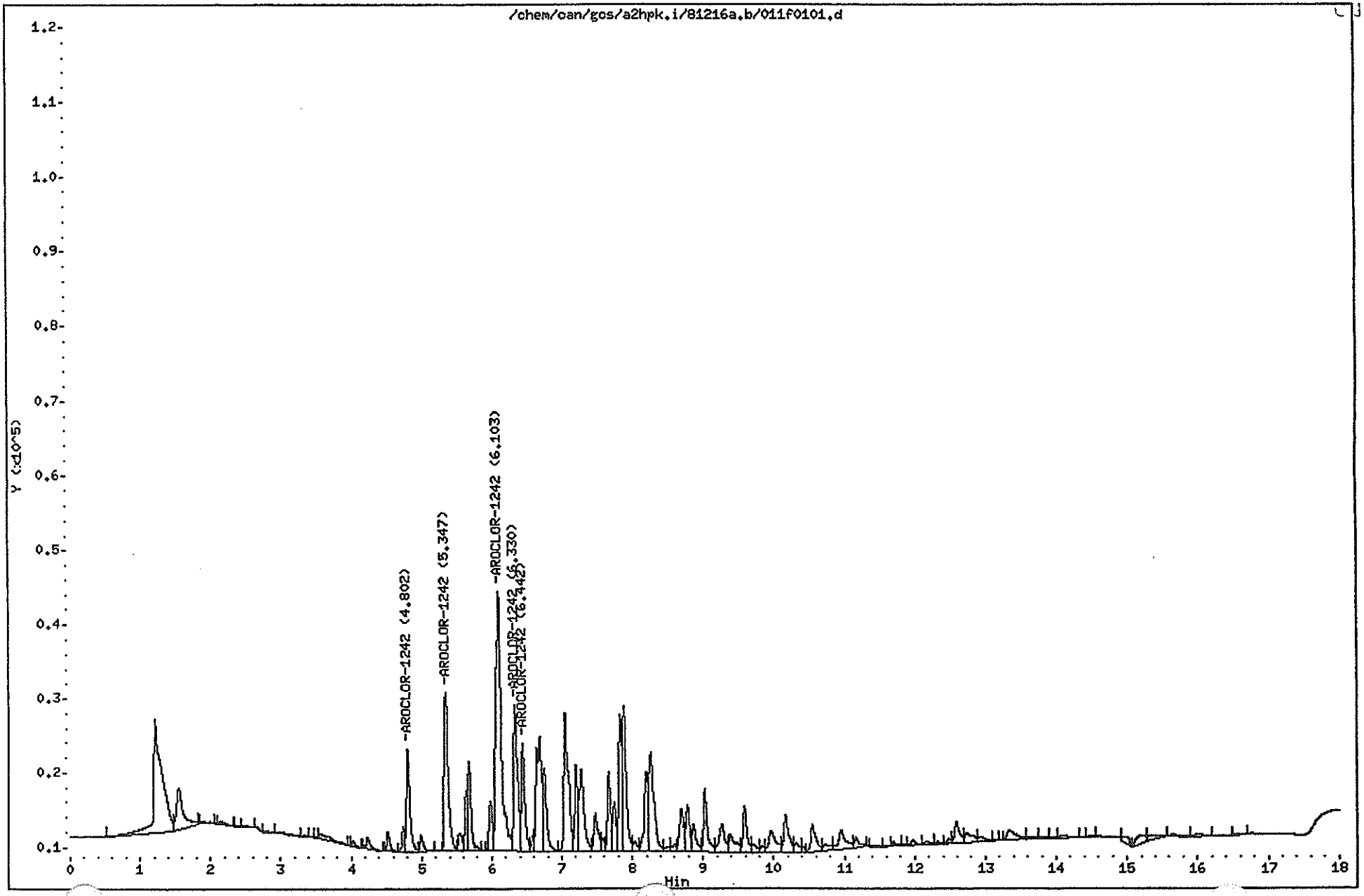
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.802	4.802	0.000	13689	0.50000	0.5146	80.00- 120.00	100.00
5.347	5.347	0.000	21213	0.50000	0.4736	116.22- 193.70	154.96
6.103	6.103	0.000	34790	0.50000	0.5219	190.61- 317.68	254.15
6.330	6.330	0.000	19600	0.50000	0.5204	107.39- 178.98	143.18
6.442	6.442	0.000	14502	0.50000	0.5412	79.45- 132.42	105.94
Average of Peak Amounts =					0.514		

Data File: /chem/can/gcs/a2hpk.i/81216a.b/011f0101.d
Date : 16-DEC-1998 22:09
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/012f0101.d
Lab Smp Id: 1232 C046
Inj Date : 16-DEC-1998 22:30
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.520	4.520	0.000	6865	0.50000	0.5212	80.00- 120.00	100.00
4.800	4.800	0.000	19697	0.50000	0.5282	215.19- 358.65	286.92
5.347	5.347	0.000	12523	0.50000	0.4815	136.81- 228.02	182.42
6.105	6.105	0.000	20412	0.50000	0.5451	223.00- 371.67	297.33
6.330	6.330	0.000	11596	0.50000	0.5387	126.69- 211.14	168.91
Average of Peak Amounts =					0.523		

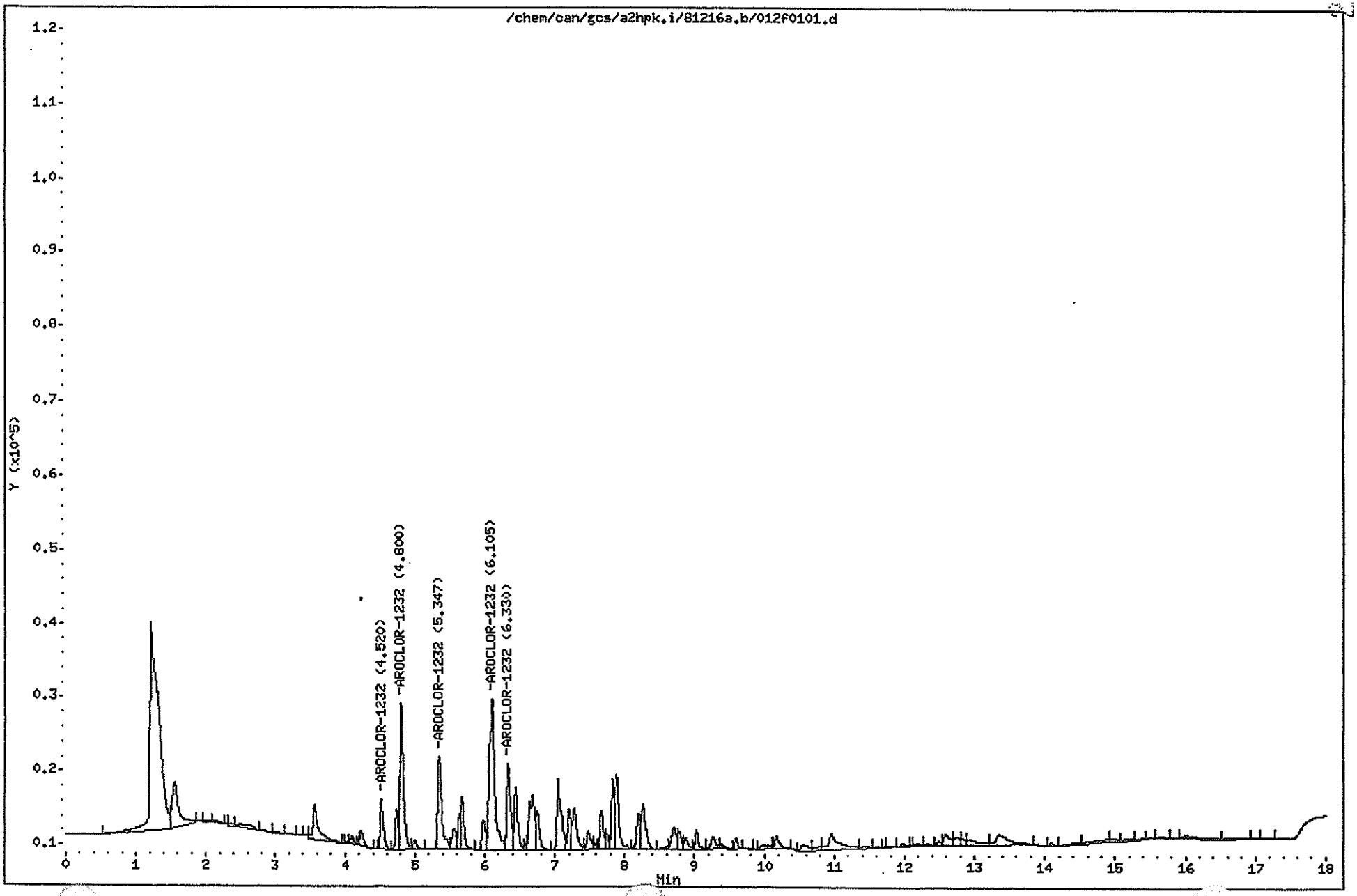
Data File: /chem/oan/gcs/a2hpk.i/81216a.b/012f0101.d
Date : 16-DEC-1998 22:30
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808

Column phase: RTX-CLP PESTICIDES

Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 029f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 04:28
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII

COMPOUND	%D
TCMX	3.8
AROCLOR-1016	6.7
AROCLOR-1260	4.5
DCB	2.0

The average of %D's in the continuing calibration is 4.3

Data File: /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Report Date: 17-Dec-1998 13:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 04:28
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

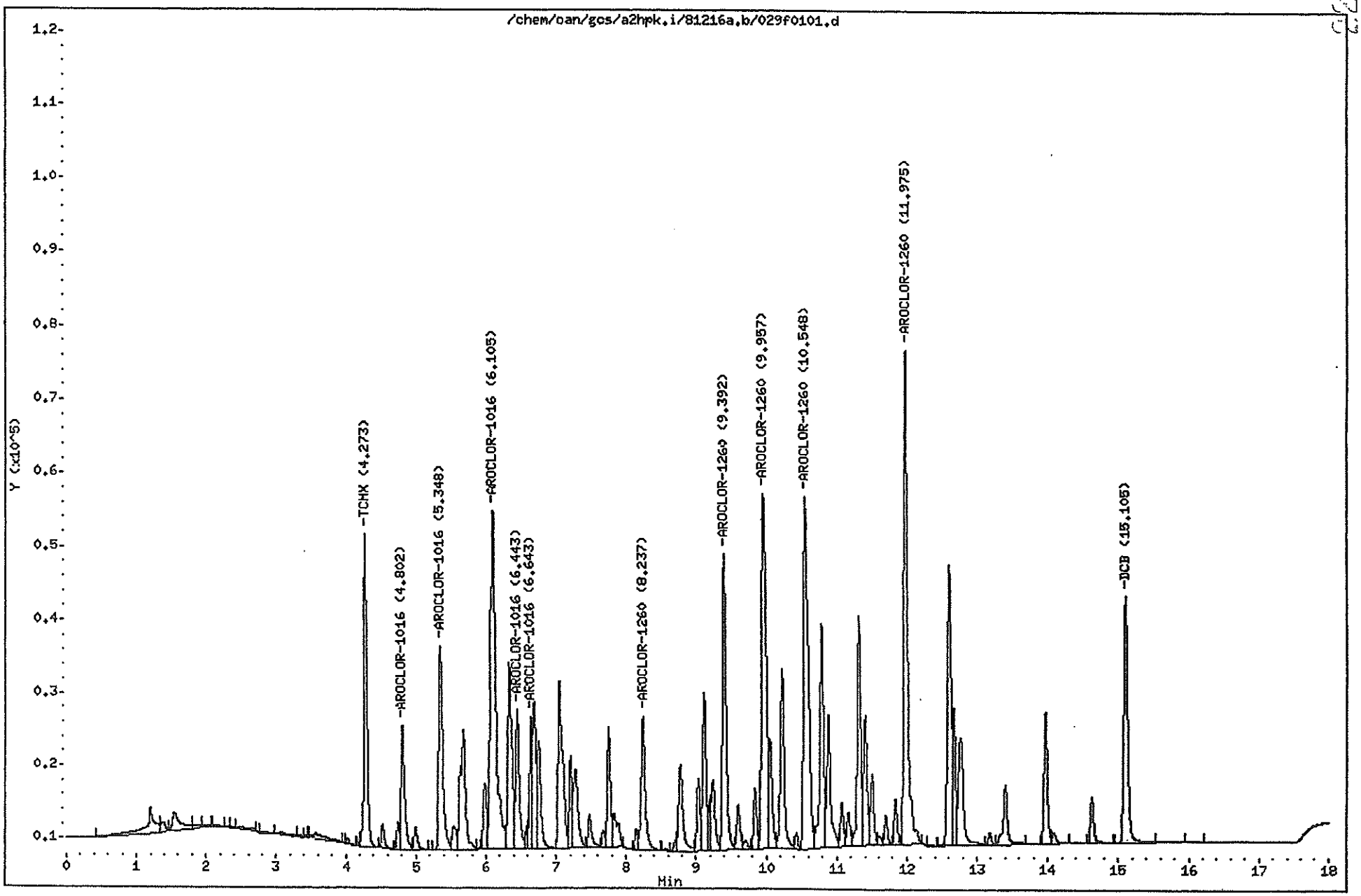
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	42579	0.02500	0.02596	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	16807	0.50000	0.5424	80.00- 120.00	100.00
5.348	5.347	0.001	27866	0.50000	0.5159	125.29- 208.81	165.80
6.105	6.105	0.000	46100	0.50000	0.5499	207.30- 345.49	274.29
6.443	6.442	0.001	19002	0.50000	0.5550	84.66- 141.09	113.06
6.643	6.642	0.001	17970	0.50000	0.5046	81.88- 136.47	106.92
Average of Peak Amounts =					0.534		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.237	8.237	0.000	18017	0.50000	0.5183	80.00- 120.00	100.00
9.392	9.390	0.002	40407	0.50000	0.5107	166.19- 276.99	224.27
9.957	9.955	0.002	48437	0.50000	0.5240	196.82- 328.04	268.84
10.548	10.547	0.001	48061	0.50000	0.5288	201.36- 335.60	266.75
11.975	11.973	0.002	67403	0.50000	0.5299	281.46- 469.10	374.11
Average of Peak Amounts =					0.522		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	33618	0.02500	0.02550	80.00- 120.00	100.00

Da[illegible]le: /chem/oan/gcs/a2hpk.i/81216a.b/029f0101.d
Date : 17-DEC-1998 04:28
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 042f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 09:02
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.

COMPOUND	%D
TCMX	5.8
AROCLOR-1016	9.1
AROCLOR-1260	7.7
DCB	0.6

The average of %D's in the continuing calibration is 5.8

Data File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 09:02
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

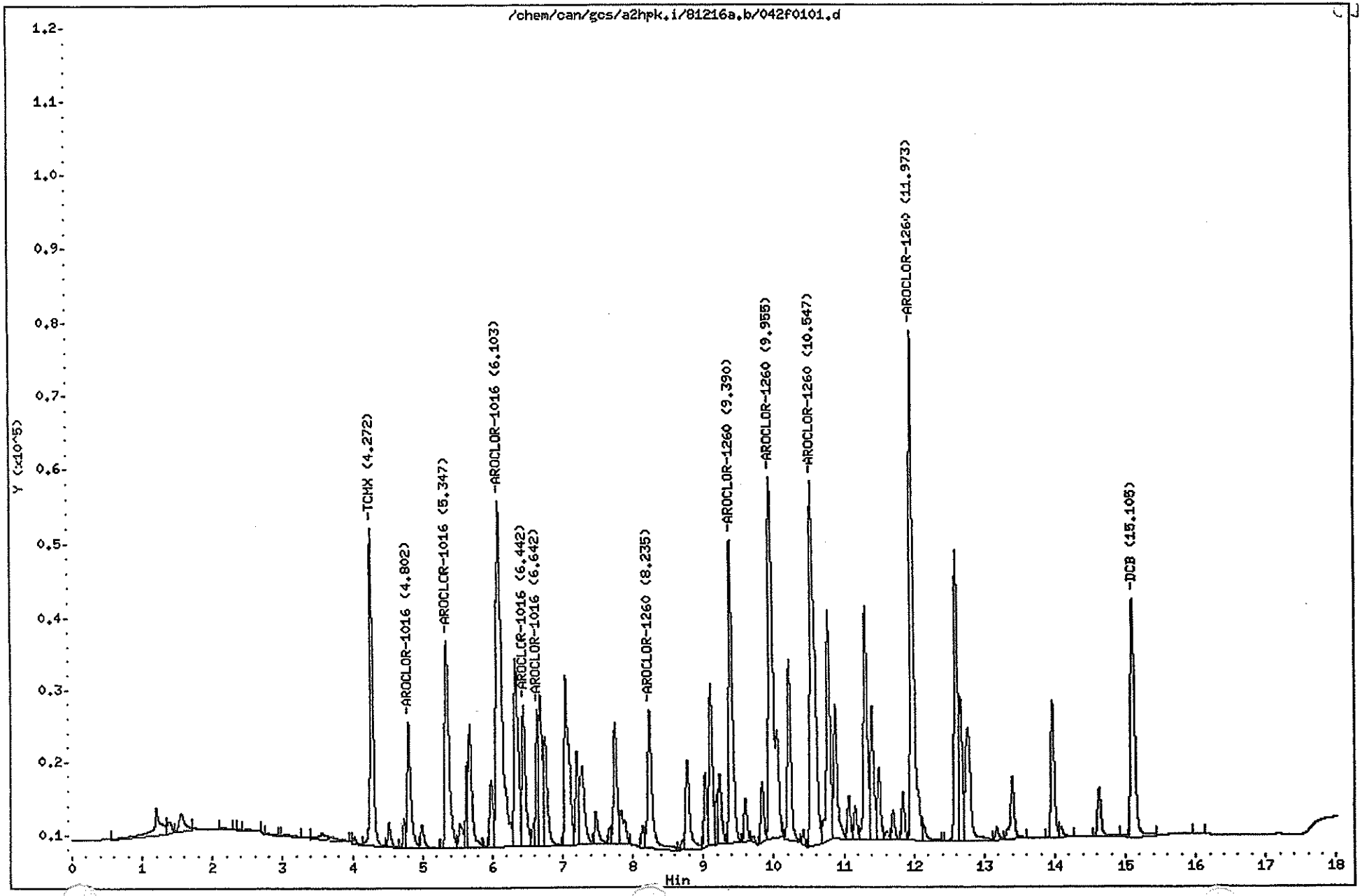
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	43375	0.02500	0.02645	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	17122	0.50000	0.5525	80.00- 120.00	100.00
5.347	5.347	0.000	28545	0.50000	0.5284	125.29- 208.81	166.72
6.103	6.105	-0.002	47226	0.50000	0.5633	207.30- 345.49	275.82
6.442	6.442	0.000	19280	0.50000	0.5632	84.66- 141.09	112.60
6.642	6.642	0.000	18552	0.50000	0.5210	81.88- 136.47	108.35
Average of Peak Amounts =					0.546		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	18872	0.50000	0.5429	80.00- 120.00	100.00
9.390	9.390	0.000	41327	0.50000	0.5223	166.19- 276.99	218.99
9.955	9.955	0.000	49289	0.50000	0.5333	196.82- 328.04	261.18
10.547	10.547	0.000	49639	0.50000	0.5461	201.36- 335.60	263.03
11.973	11.973	0.000	69561	0.50000	0.5468	281.46- 469.10	368.59
Average of Peak Amounts =					0.538		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	32756	0.02500	0.02484	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Date : 17-DEC-1998 09:02
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 050f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 11:50
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII

COMPOUND	%D
TCMX	1.3
AROCLOR-1016	2.4
AROCLOR-1260	0.7
DCB	5.4

The average of %D's in the continuing calibration is 2.4

Data File: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Report Date: 17-Dec-1998 13:23

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 11:50
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

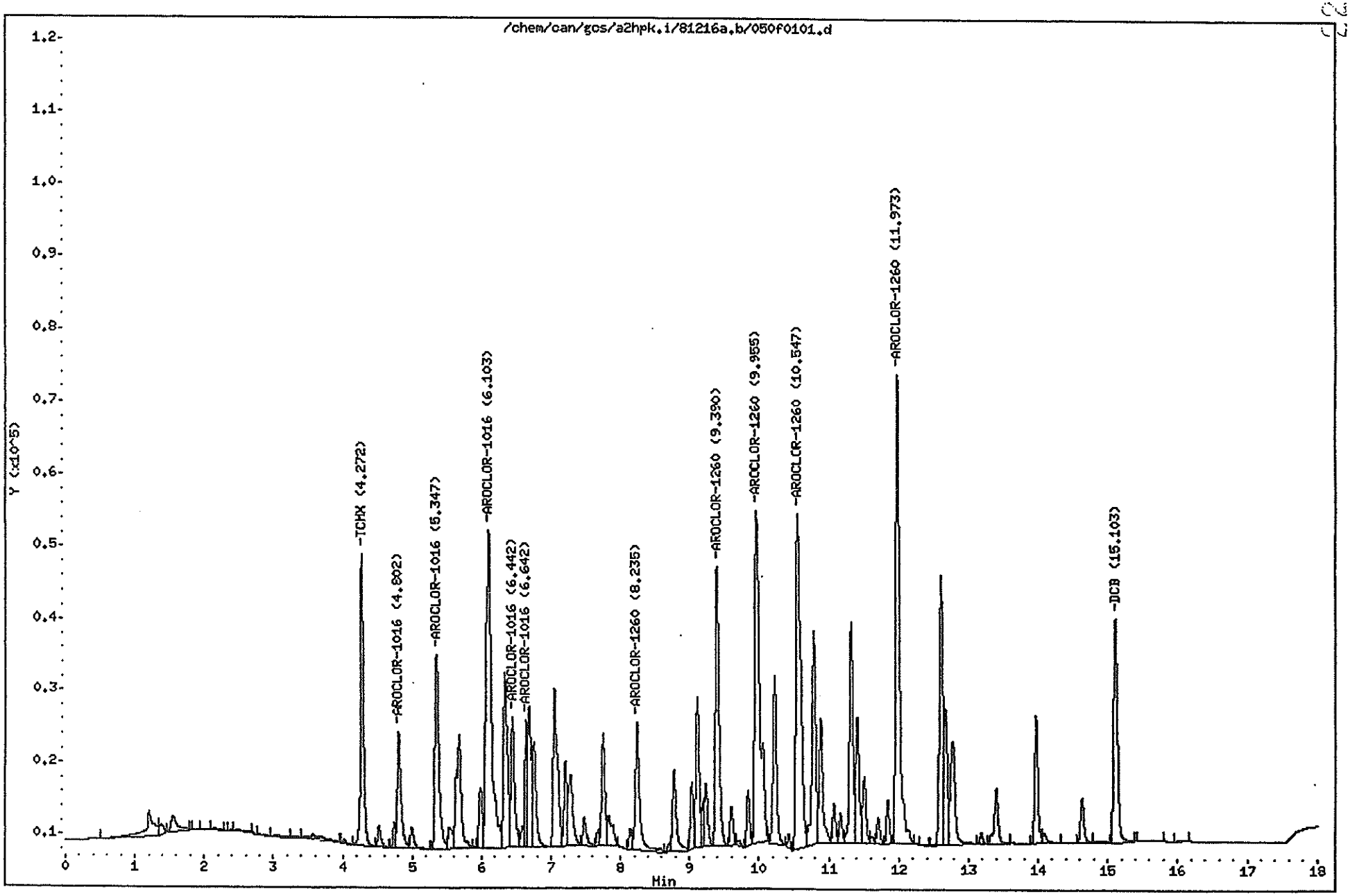
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	40484	0.02500	0.02468	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	15980	0.50000	0.5157	80.00- 120.00	100.00
5.347	5.347	0.000	26981	0.50000	0.4995	125.29- 208.81	168.84
6.103	6.105	-0.002	44175	0.50000	0.5269	207.30- 345.49	276.44
6.442	6.442	0.000	17970	0.50000	0.5249	84.66- 141.09	112.45
6.642	6.642	0.000	17523	0.50000	0.4921	81.88- 136.47	109.66
Average of Peak Amounts =					0.512		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	17644	0.50000	0.5076	80.00- 120.00	100.00
9.390	9.390	0.000	38631	0.50000	0.4882	166.19- 276.99	218.95
9.955	9.955	0.000	46095	0.50000	0.4987	196.82- 328.04	261.25
10.547	10.547	0.000	46491	0.50000	0.5115	201.36- 335.60	263.49
11.973	11.973	0.000	64969	0.50000	0.5107	281.46- 469.10	368.22
Average of Peak Amounts =					0.503		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.105	-0.002	31168	0.02500	0.02364	80.00- 120.00	100.00

Da[illegible]e: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Date : 17-DEC-1998 11:50
Client ID:
Sample Info: 1660 C110,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L020132

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.27 S2 : 15.10

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/17/98	1620	4.27	15.10
02		2154 C061	12/17/98	1641		
03		1248 C056	12/17/98	1703		
04		1242 C051	12/17/98	1724		
05		1232 C046	12/17/98	1745		
06	S-120198-JH-	CNW7E101	12/17/98	2115	4.27	15.10
07	S-120198-JH-	CNW73101	12/17/98	2136	4.27	15.12
08		1660 C110	12/17/98	2342	4.27	15.10
09		1660 C110	12/18/98	1322	4.27	15.10
10		2154 C061	12/18/98	1343		
11		1248 C056	12/18/98	1404		
12		1242 C051	12/18/98	1425		
13		1232 C046	12/18/98	1446		
14	S-120198-JH-	CNW60101	12/18/98	1528	4.27	15.11
15	S-120198-JH-	CNW64101	12/18/98	1549	4.27	15.10
16	S-120198-JH-	CNW65101	12/18/98	1610	4.27	15.10
17	S-120198-JH-	CNW66101	12/18/98	1631	4.27	15.10
18	S-120198-JH-	CNW67101	12/18/98	1652	4.27	15.10
19	S-120198-JH-	CNW68101	12/18/98	1713	4.27	15.11
20	S-120198-JH-	CNW69101	12/18/98	1734	4.27	15.10
21	S-120198-JH-	CNW6A101	12/18/98	1755	4.27	15.10
22	S-120198-JH-	CNW6C101	12/18/98	1816	4.27	15.10
23		1660 C110	12/18/98	1858	4.27	15.10
24	S-120198-JH-	CNW6D101	12/18/98	1940	4.27	15.10
25	S-120198-JH-	CNW6E101	12/18/98	2001	4.27	15.10
26	S-120198-JH-	CNW6F101	12/18/98	2022	4.27	15.12
27	S-120198-JH-	CNW6G101	12/18/98	2043	4.27	15.10
28	S-120198-JH-	CNW6J101	12/18/98	2104	4.27	15.10
29	S-120198-JH-	CNW6L101	12/18/98	2125	4.27	15.10
30	S-120198-JH-	CNW6N101	12/18/98	2207	4.27	15.10
31	S-120198-JH-	CNW6P101	12/18/98	2228	4.27	15.10
32	S-120198-JH-	CNW6Q101	12/18/98	2249	4.27	15.10

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L0201

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.27 S2 : 15.10

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/18/98	2331	4.27	15.10
02	S-120198-JH-	CNW6R101	12/19/98	0013	4.27	15.11
03	CNWD6BLK	CNWD6101	12/19/98	0034	4.27	15.10
04	CNWD6CHKDUP	CNWD6104	12/19/98	0055	4.27	15.10
05		1660 C110	12/19/98	0137	4.27	15.10
06						
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31						
32						

		QC LIMITS
S1	= TCMX	(+/- 0.10 MINUTES)
S2	= DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Report Date: 12/18/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 004f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 16:20
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.

COMPOUND	%D
TCMX	0.6
AROCLOR-1016	3.6
AROCLOR-1260	1.9
DCB	1.1

The average of %D's in the continuing calibration is 1.8

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 16:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

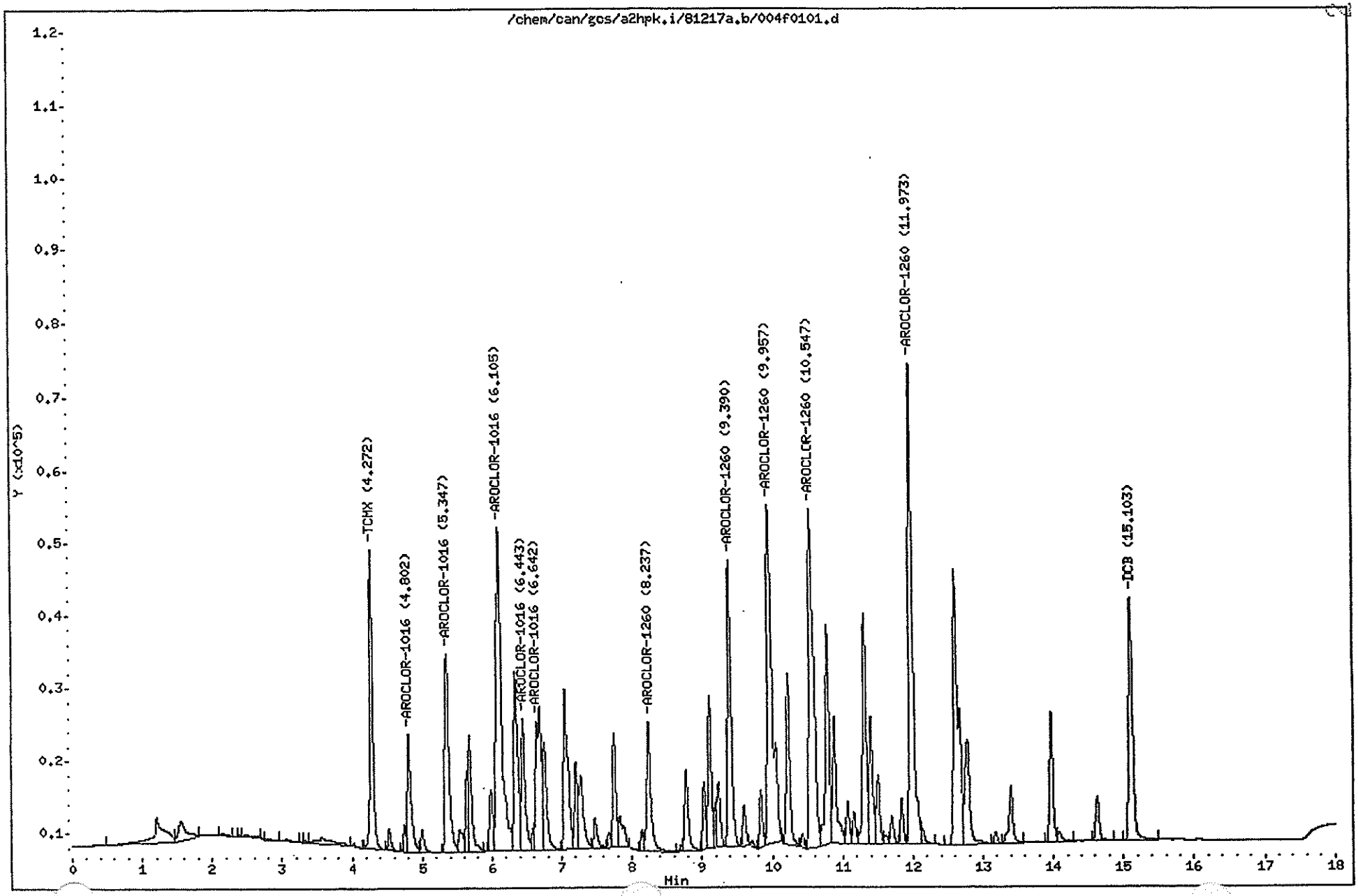
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	41244	0.02500	0.02515	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.800	0.002	16264	0.50000	0.5248	80.00- 120.00	100.00
5.347	5.343	0.004	27263	0.50000	0.5047	128.06- 213.44	167.63
6.105	6.102	0.003	44542	0.50000	0.5313	204.62- 341.03	273.87
6.443	6.440	0.003	18116	0.50000	0.5292	83.61- 139.35	111.39
6.642	6.638	0.004	17794	0.50000	0.4997	84.33- 140.55	109.41
Average of Peak Amounts =					0.518		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.237	8.233	0.004	17734	0.50000	0.5102	80.00- 120.00	100.00
9.390	9.385	0.005	39356	0.50000	0.4974	164.71- 274.51	221.92
9.957	9.952	0.005	46768	0.50000	0.5060	194.93- 324.88	263.72
10.547	10.542	0.005	46824	0.50000	0.5152	195.72- 326.20	264.04
11.973	11.968	0.005	66120	0.50000	0.5198	277.41- 462.34	372.84
Average of Peak Amounts =					0.51		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.097	0.006	33318	0.02500	0.02527	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Date : 17-DEC-1998 16:20
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Lab Smp Id: 2154 C061
Inj Date : 17-DEC-1998 16:41
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

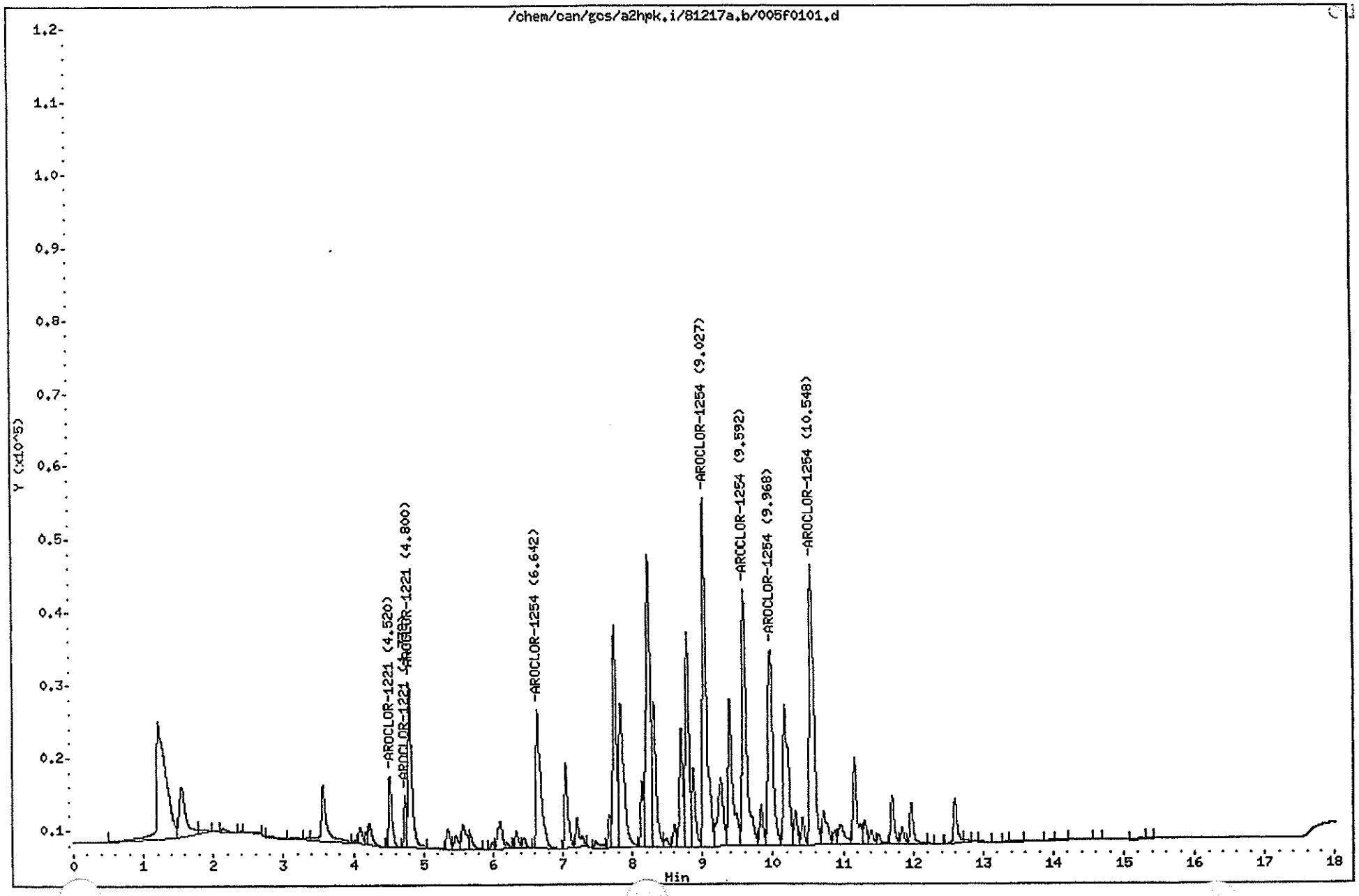
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.642	6.638	0.004	19060	0.50000	0.4743	80.00- 120.00	100.00
9.027	9.023	0.004	47669	0.50000	0.4912	183.65- 306.08	250.10
9.592	9.588	0.004	35184	0.50000	0.5040	134.94- 224.90	184.60
9.968	9.965	0.003	26820	0.50000	0.4882	104.37- 173.96	140.71
10.548	10.543	0.005	38422	0.50000	0.4883	148.01- 246.69	201.58
Average of Peak Amounts =					0.489		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.520	4.518	0.002	9770	0.50000	0.5066	80.00- 120.00	100.00
4.738	4.737	0.001	6997	0.50000	0.4965	54.30- 90.51	71.62
4.800	4.798	0.002	22530	0.50000	0.5002	172.76- 287.93	230.60
Average of Peak Amounts =					0.501		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Date : 17-DEC-1998 16:41
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Lab Smp Id: 1248 C056
Inj Date : 17-DEC-1998 17:03
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

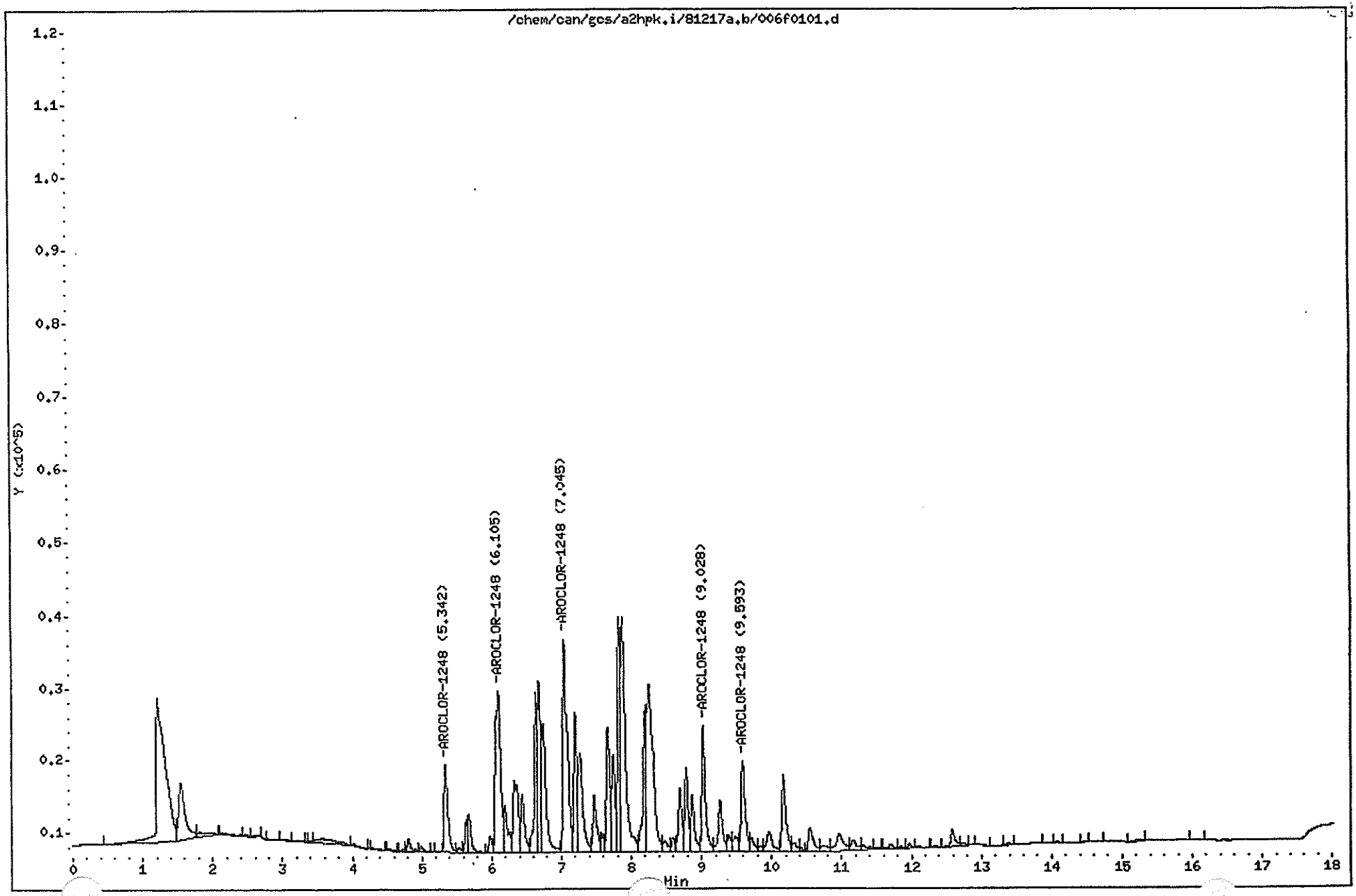
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.342	5.338	0.004	12087	0.50000	0.4998	80.00- 120.00	100.00
6.105	6.102	0.003	22306	0.50000	0.5480	137.72- 229.53	184.55
7.045	7.042	0.003	29366	0.50000	0.5135	181.30- 302.17	242.96
9.028	9.025	0.003	17365	0.50000	0.5243	108.43- 180.71	143.67
9.593	9.590	0.003	12471	0.50000	0.5543	78.36- 130.60	103.18
Average of Peak Amounts =					0.528		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Date : 17-DEC-1998 17:03
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Lab Smp Id: 1242 C051
Inj Date : 17-DEC-1998 17:24
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

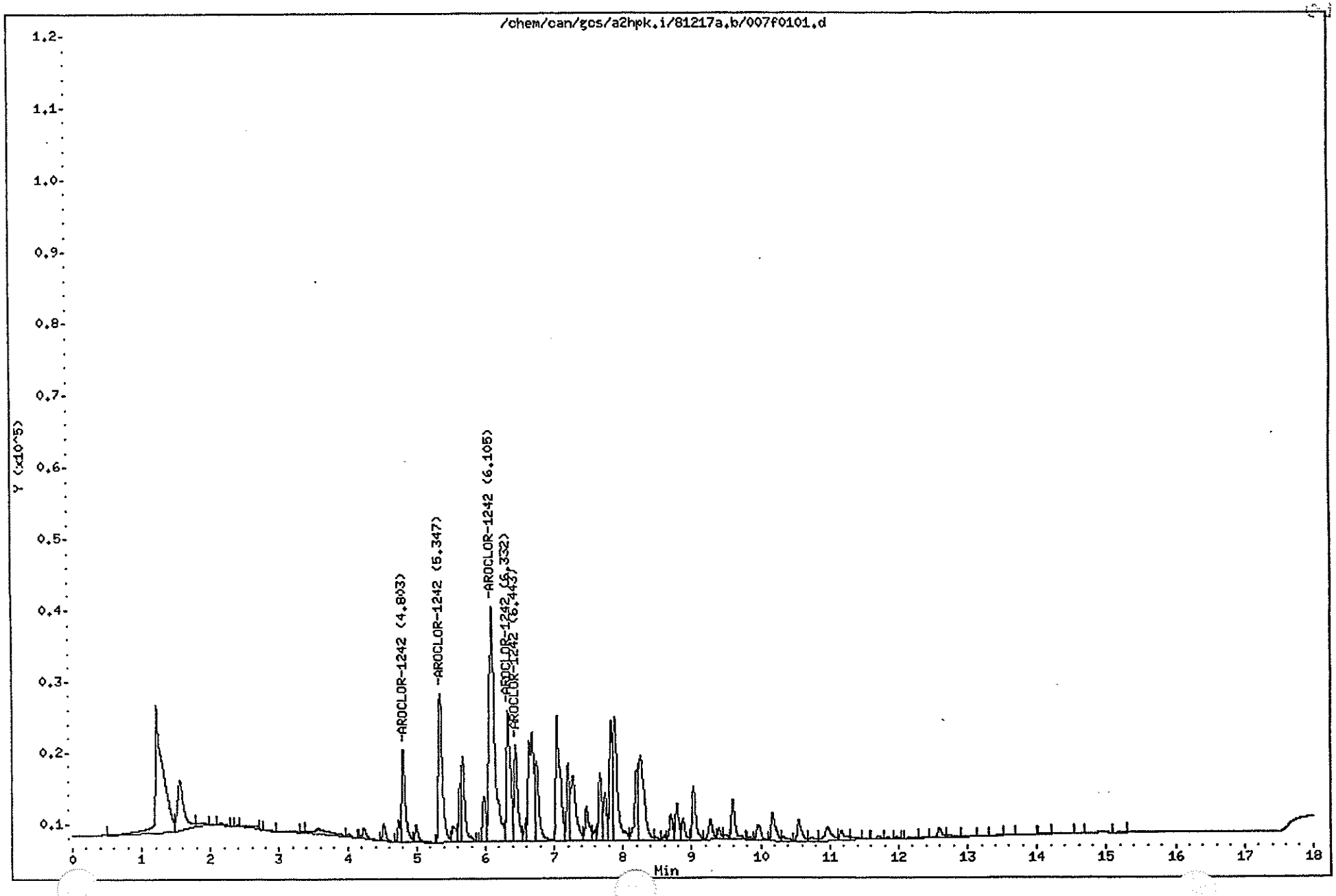
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.800	0.003	12807	0.50000	0.4814	80.00- 120.00	100.00
5.347	5.343	0.004	20849	0.50000	0.4654	122.23- 203.72	162.79
6.105	6.102	0.003	32922	0.50000	0.4939	193.45- 322.42	257.06
6.332	6.328	0.004	18392	0.50000	0.4883	108.22- 180.37	143.61
6.443	6.440	0.003	13540	0.50000	0.5053	79.59- 132.66	105.72
Average of Peak Amounts =					0.487		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Date : 17-DEC-1998 17:24
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/008f0101.d
Lab Smp Id: 1232 C046
Inj Date : 17-DEC-1998 17:45
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

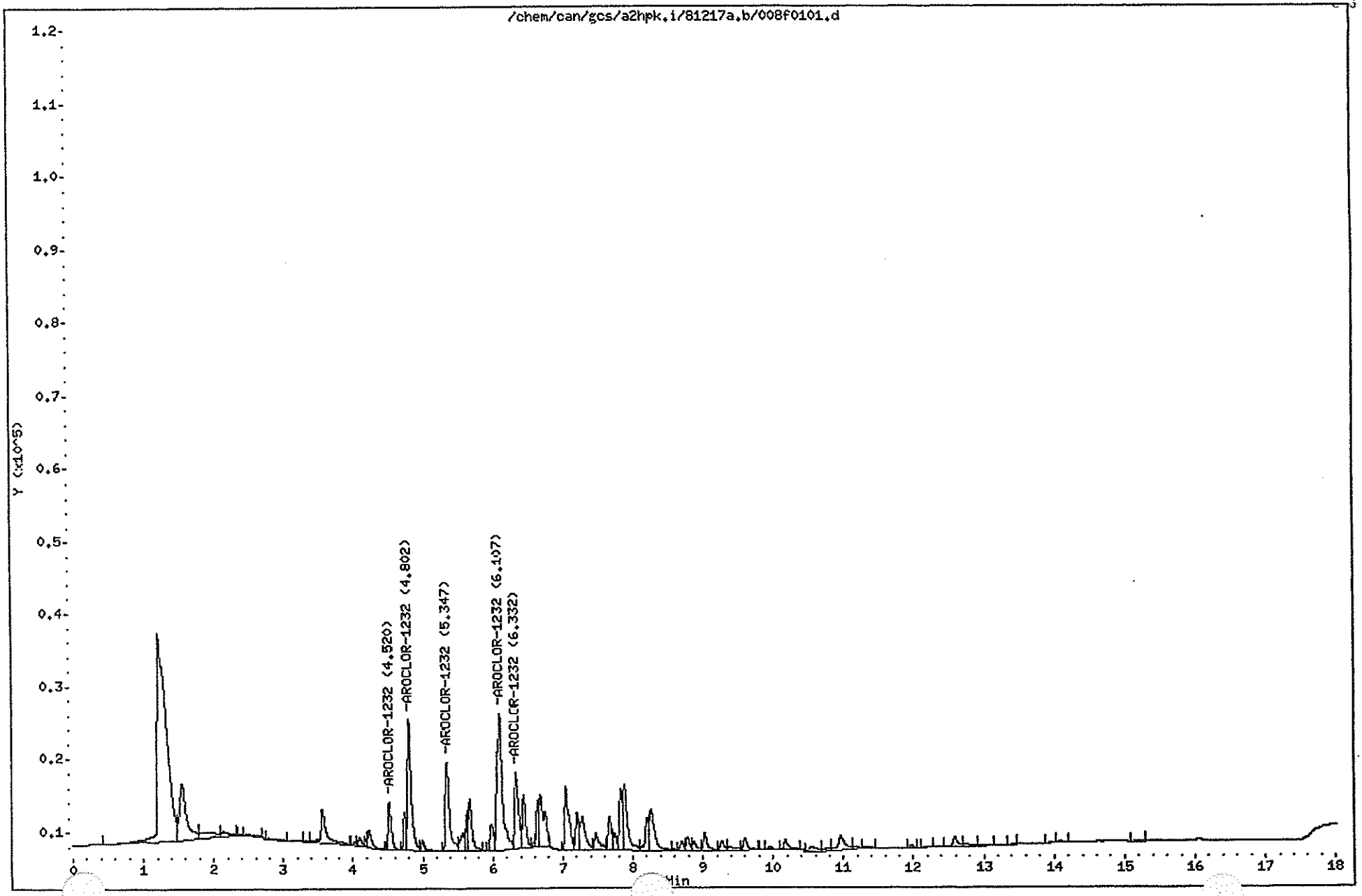
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.520	4.518	0.002	6357	0.50000	0.4827	80.00- 120.00	100.00
4.802	4.800	0.002	17976	0.50000	0.4820	211.13- 351.88	282.77
5.347	5.345	0.002	12113	0.50000	0.4658	144.23- 240.39	190.55
6.107	6.103	0.004	18665	0.50000	0.4984	220.77- 367.94	293.61
6.332	6.330	0.002	10362	0.50000	0.4814	121.89- 203.14	163.00
Average of Peak Amounts =					0.482		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/008f0101.d
Date : 17-DEC-1998 17:45
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d P
Report Date: 12/18/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 025f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 23:42
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbII

COMPOUND	%D
TCMX	2.8
AROCLOR-1016	4.9
AROCLOR-1260	3.9
DCB	3.7

The average of %D's in the continuing calibration is 3.8

Data File: /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 23:42
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

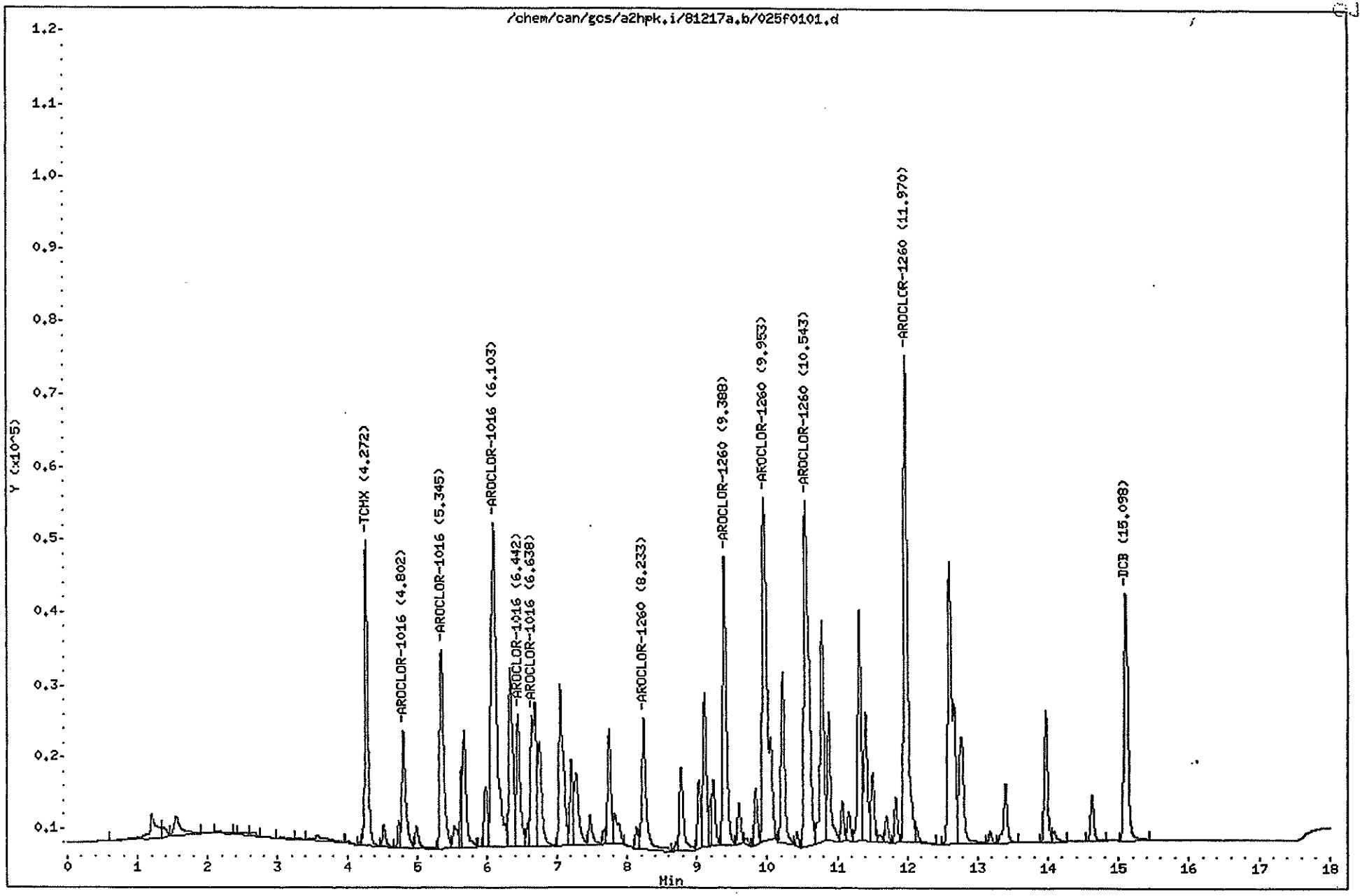
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	42138	0.02500	0.02569	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.800	0.002	16404	0.50000	0.5294	80.00- 120.00	100.00
5.345	5.343	0.002	27634	0.50000	0.5116	128.06- 213.44	168.46
6.103	6.102	0.001	44889	0.50000	0.5354	204.62- 341.03	273.65
6.442	6.440	0.002	18332	0.50000	0.5355	83.61- 139.35	111.75
6.638	6.638	0.000	18205	0.50000	0.5112	84.33- 140.55	110.98
Average of Peak Amounts =					0.525		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.233	8.233	0.000	18159	0.50000	0.5224	80.00- 120.00	100.00
9.388	9.385	0.003	39911	0.50000	0.5044	164.71- 274.51	219.79
9.953	9.952	0.001	47543	0.50000	0.5144	194.93- 324.88	261.82
10.543	10.542	0.001	47928	0.50000	0.5273	195.72- 326.20	263.94
11.970	11.968	0.002	67240	0.50000	0.5286	277.41- 462.34	370.28
Average of Peak Amounts =					0.519		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	34171	0.02500	0.02592	80.00- 120.00	100.00

Da .le: /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Date : 17-DEC-1998 23:42
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/064f0101.d
Report Date: 12/21/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 064f0101.d
Analysis Type: NONE

Injection Date: 18-DEC-1998 13:22
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.

COMPOUND	%D
TCMX	5.1
AROCLOR-1016	6.2
AROCLOR-1260	2.6
DCB	2.9

The average of %D's in the continuing calibration is 4.2

Data File: /chem/can/gcs/a2hpk.i/81217a.b/064f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/064f0101.d
Lab Smp Id: 1660 C110
Inj Date : 18-DEC-1998 13:22
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

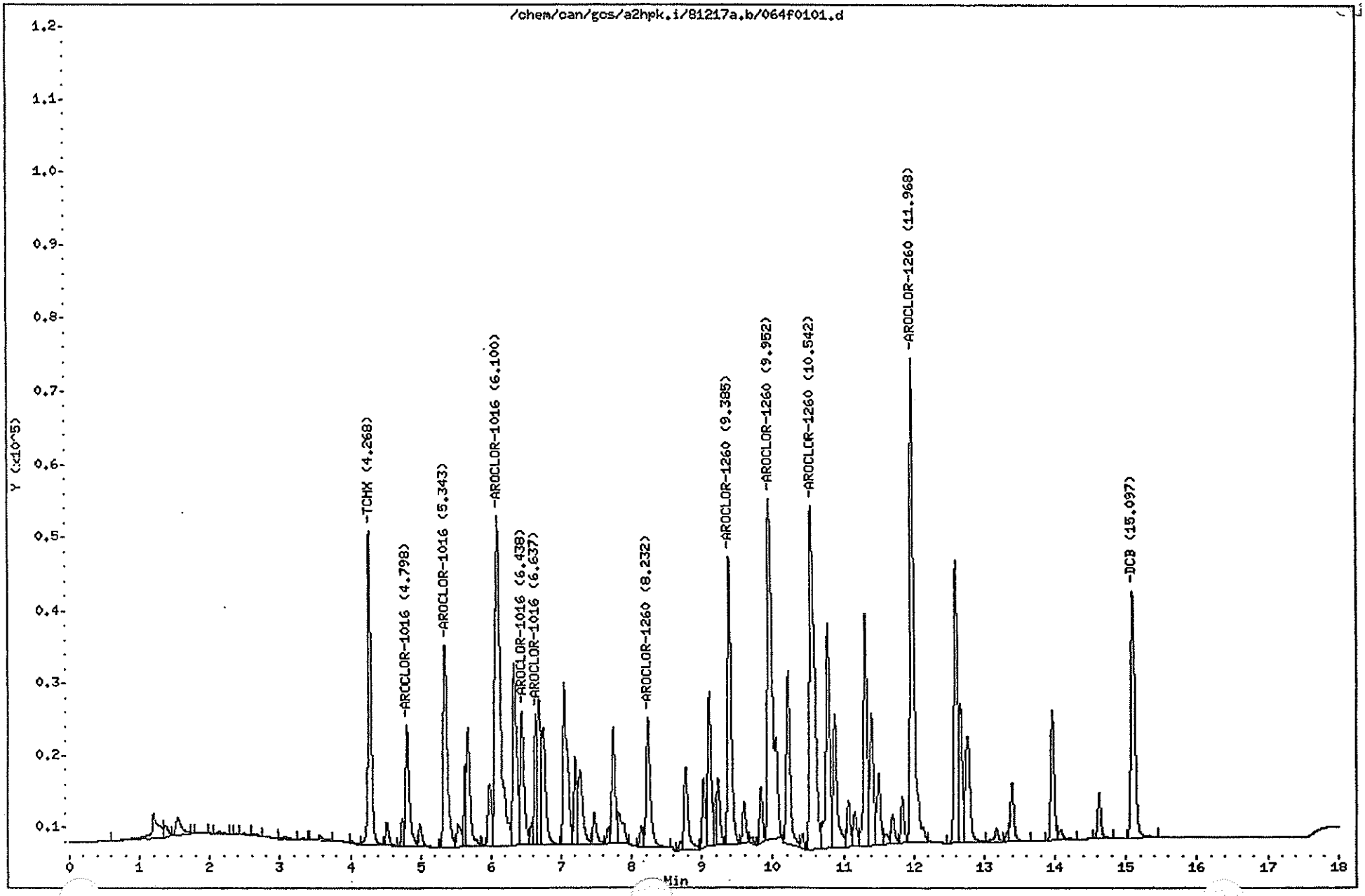
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.268	4.270	-0.002	43108	0.02500	0.02628	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.798	4.800	-0.002	16720	0.50000	0.5396	80.00- 120.00	100.00
5.343	5.343	0.000	28020	0.50000	0.5187	128.06- 213.44	167.58
6.100	6.102	-0.002	45503	0.50000	0.5428	204.62- 341.03	272.15
6.438	6.440	-0.002	18617	0.50000	0.5438	83.61- 139.35	111.35
6.637	6.638	-0.001	18199	0.50000	0.5111	84.33- 140.55	108.85
Average of Peak Amounts =					0.531		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.232	8.233	-0.001	17898	0.50000	0.5149	80.00- 120.00	100.00
9.385	9.385	0.000	39552	0.50000	0.4999	164.71- 274.51	220.99
9.952	9.952	0.000	46844	0.50000	0.5068	194.93- 324.88	261.73
10.542	10.542	0.000	47286	0.50000	0.5202	195.72- 326.20	264.20
11.968	11.968	0.000	66535	0.50000	0.5230	277.41- 462.34	371.75
Average of Peak Amounts =					0.513		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	33916	0.02500	0.02572	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/064f0101.d
Date : 18-DEC-1998 13:22
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/065f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/065f0101.d
Lab Smp Id: 2154 C061
Inj Date : 18-DEC-1998 13:43
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

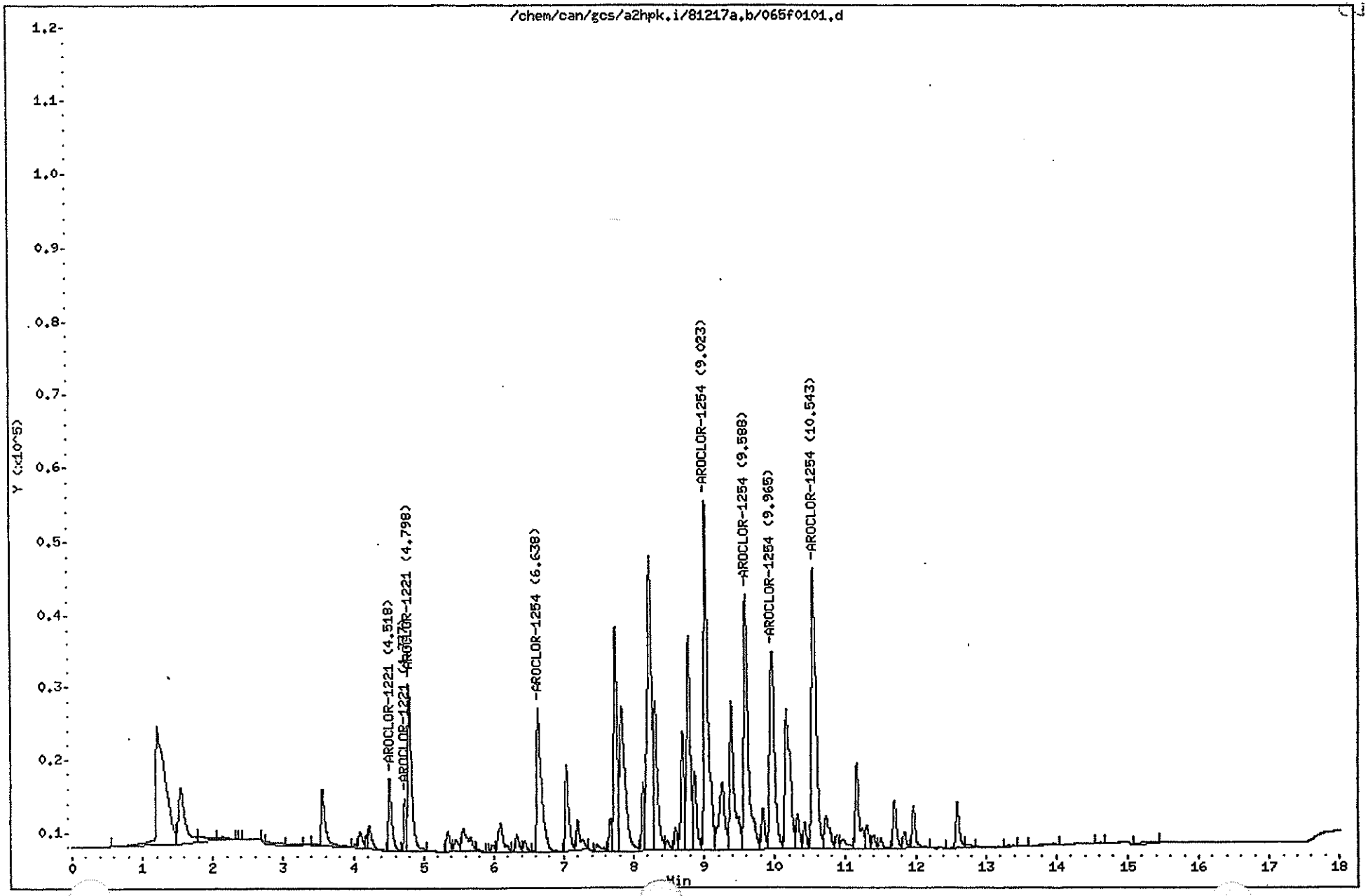
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.638	6.638	0.000	19546	0.50000	0.4864	80.00- 120.00	100.00
9.023	9.023	0.000	47861	0.50000	0.4932	183.65- 306.08	244.86
9.588	9.588	0.000	35167	0.50000	0.5038	134.94- 224.90	179.92
9.965	9.965	0.000	27201	0.50000	0.4951	104.37- 173.96	139.16
10.543	10.543	0.000	38574	0.50000	0.4902	148.01- 246.69	197.35
Average of Peak Amounts =					0.494		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.518	4.518	0.000	9853	0.50000	0.5109	80.00- 120.00	100.00
4.737	4.737	0.000	7134	0.50000	0.5062	54.30- 90.51	72.40
4.798	4.798	0.000	22696	0.50000	0.5039	172.76- 287.93	230.35
Average of Peak Amounts =					0.507		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/065f0101.d
Date : 18-DEC-1998 13:43
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/066f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/066f0101.d
Lab Smp Id: 1248 C056
Inj Date : 18-DEC-1998 14:04
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.338	5.338	0.000	12361	0.50000	0.5111	80.00- 120.00	100.00
6.102	6.102	0.000	22698	0.50000	0.5576	137.72- 229.53	183.63
7.042	7.042	0.000	29881	0.50000	0.5225	181.30- 302.17	241.74
9.025	9.025	0.000	17870	0.50000	0.5396	108.43- 180.71	144.57
9.590	9.590	0.000	12915	0.50000	0.5741	78.36- 130.60	104.48

Average of Peak Amounts = 0.541

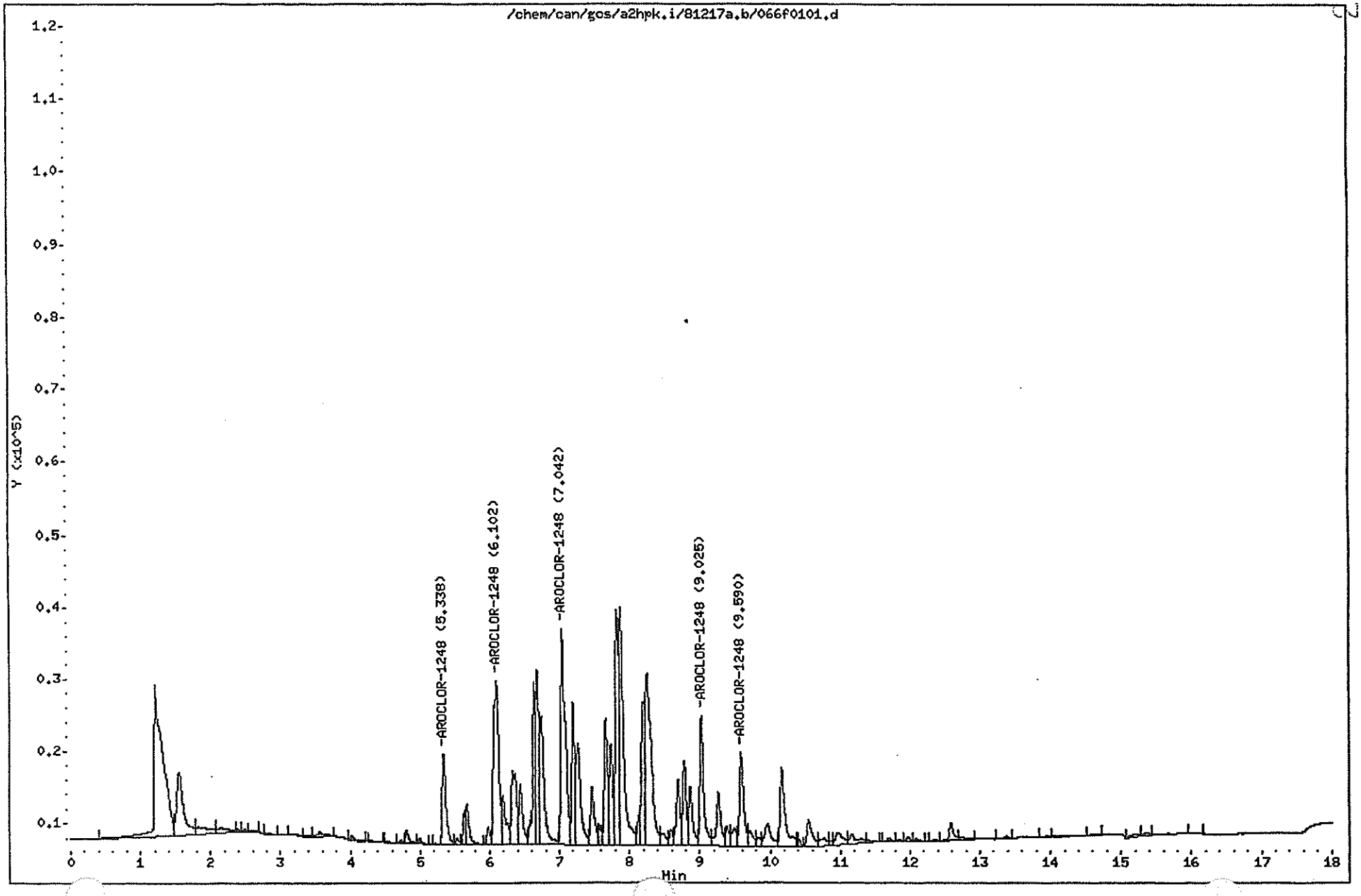
Data File: /chem/can/gcs/a2hpk.i/81217a.b/066f0101.d
Date : 18-DEC-1998 14:04
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808

Column phase: RTX-CLP PESTICIDES

Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81217a.b/067f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/067f0101.d
Lab Smp Id: 1242 C051
Inj Date : 18-DEC-1998 14:25
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

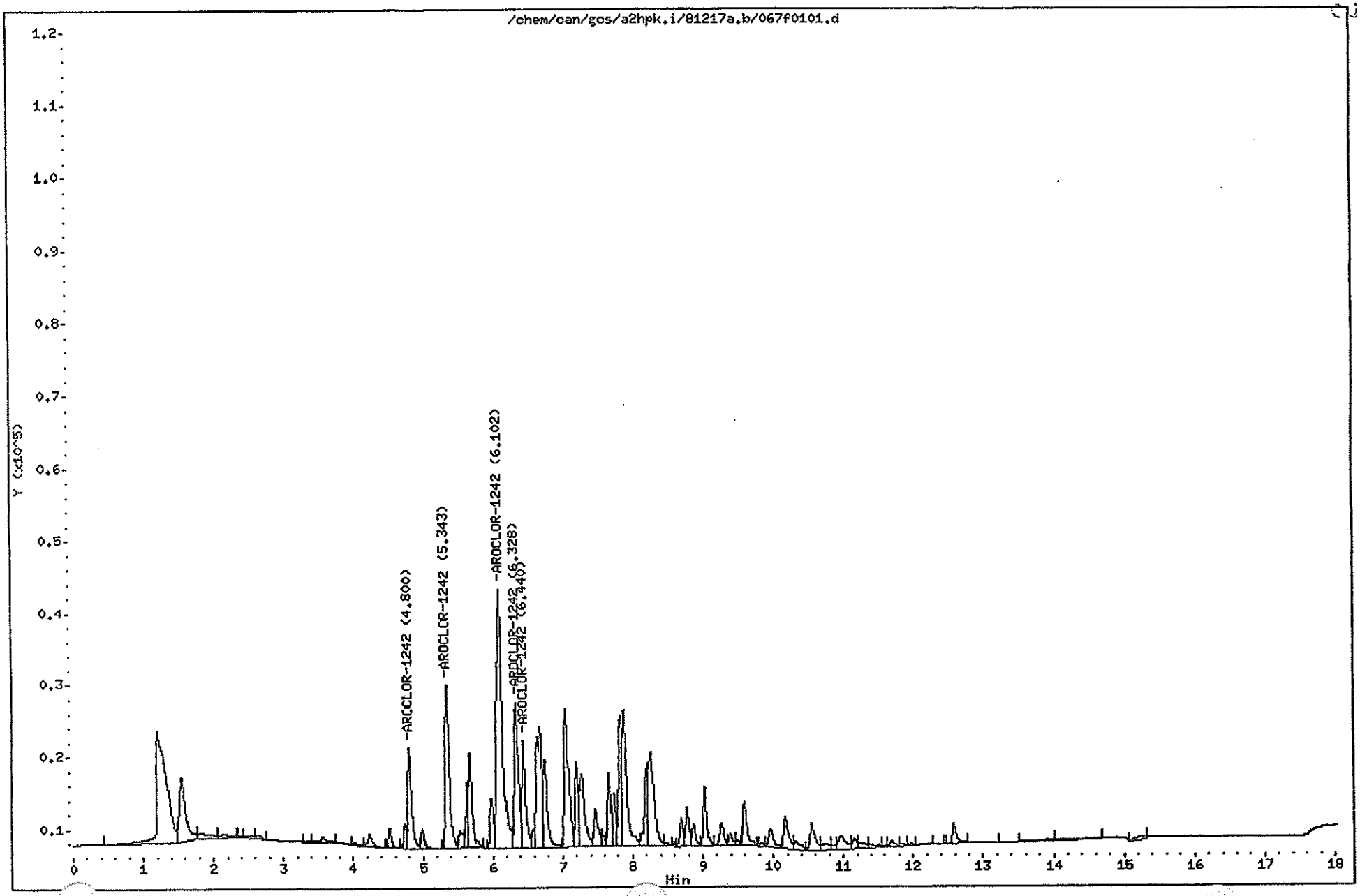
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.800	4.800	0.000	13876	0.50000	0.5216	80.00- 120.00	100.00
5.343	5.343	0.000	22614	0.50000	0.5048	122.23- 203.72	162.97
6.102	6.102	0.000	35791	0.50000	0.5369	193.45- 322.42	257.93
6.328	6.328	0.000	20023	0.50000	0.5316	108.22- 180.37	144.30
6.440	6.440	0.000	14726	0.50000	0.5496	79.59- 132.66	106.13
Average of Peak Amounts =					0.529		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/067f0101.d
Date : 18-DEC-1998 14:25
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/068f0101.d
Report Date: 21-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/068f0101.d
Lab Smp Id: 1232 C046
Inj Date : 18-DEC-1998 14:46
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

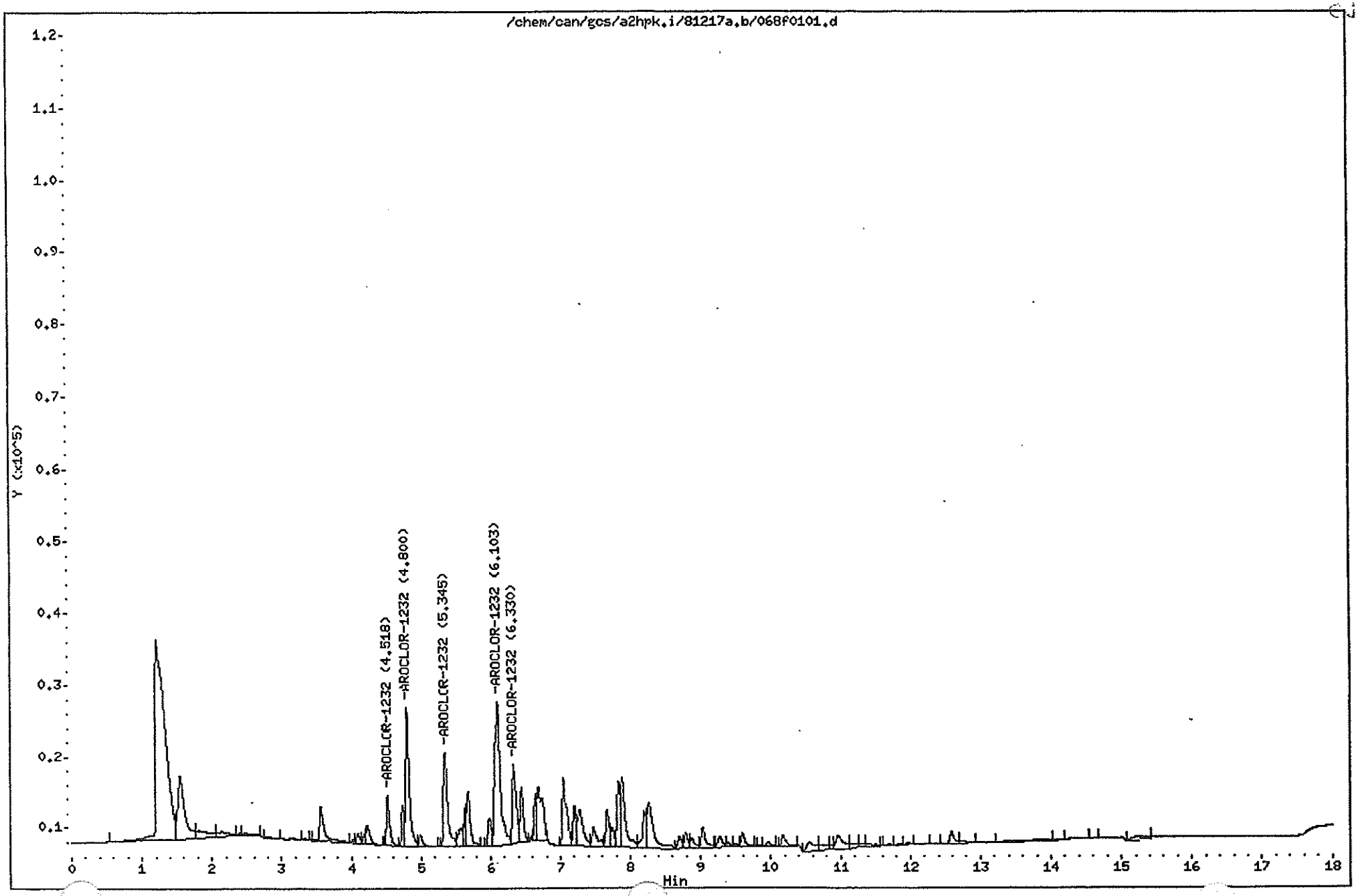
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.518	4.518	0.000	6856	0.50000	0.5206	80.00- 120.00	100.00
4.800	4.800	0.000	19300	0.50000	0.5175	211.13- 351.88	281.51
5.345	5.345	0.000	13185	0.50000	0.5070	144.23- 240.39	192.31
6.103	6.103	0.000	20181	0.50000	0.5389	220.77- 367.94	294.36
6.330	6.330	0.000	11142	0.50000	0.5176	121.89- 203.14	162.51
Average of Peak Amounts =					0.52		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/068f0101.d
Date : 18-DEC-1998 14:46
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/080f0101.d
Report Date: 12/21/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 080f0101.d
Analysis Type: NONE

Injection Date: 18-DEC-1998 18:58
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbII

COMPOUND	%D
TCMX	4.7
AROCLOR-1016	6.3
AROCLOR-1260	5.2
DCB	5.2

The average of %D's in the continuing calibration is 5.3

Data File: /chem/can/gcs/a2hpk.i/81217a.b/080f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/080f0101.d
Lab Smp Id: 1660 C110
Inj Date : 18-DEC-1998 18:58
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

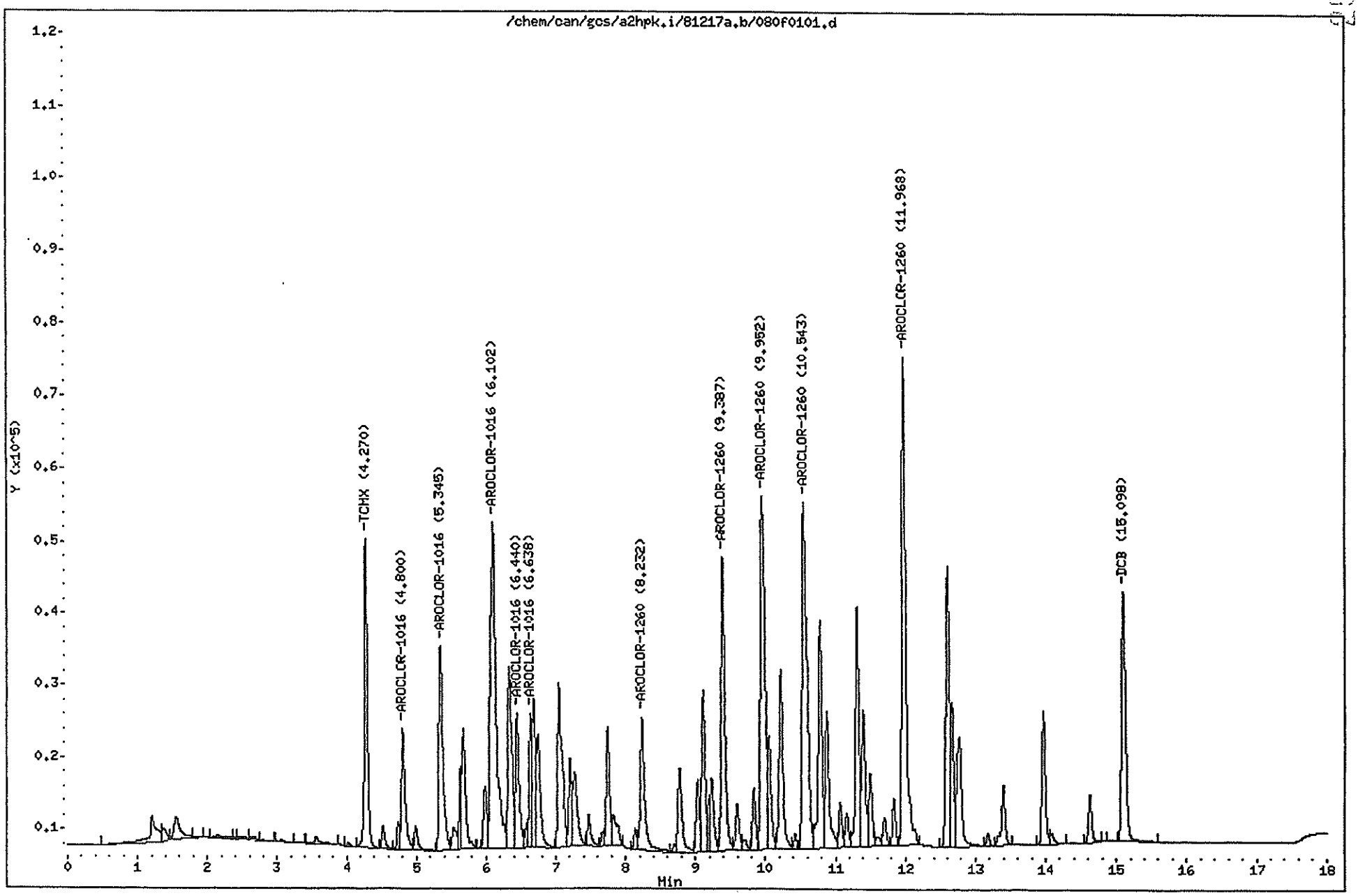
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	42909	0.02500	0.02616	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.800	0.000	16594	0.50000	0.5355	80.00- 120.00	100.00
5.345	5.343	0.002	28118	0.50000	0.5205	128.06- 213.44	169.45
6.102	6.102	0.000	45168	0.50000	0.5388	204.62- 341.03	272.19
6.440	6.440	0.000	18615	0.50000	0.5437	83.61- 139.35	112.18
6.638	6.638	0.000	18490	0.50000	0.5192	84.33- 140.55	111.43
Average of Peak Amounts =					0.532		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.232	8.233	-0.001	18268	0.50000	0.5256	80.00- 120.00	100.00
9.387	9.385	0.002	40837	0.50000	0.5161	164.71- 274.51	223.54
9.952	9.952	0.000	48941	0.50000	0.5295	194.93- 324.88	267.91
10.543	10.542	0.001	48032	0.50000	0.5285	195.72- 326.20	262.93
11.968	11.968	0.000	67578	0.50000	0.5312	277.41- 462.34	369.93
Average of Peak Amounts =					0.526		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	34671	0.02500	0.02630	80.00- 120.00	100.00

Da\ ie: /chem/can/gcs/a2hpk.i/81217a.b/080f0101.d
Date : 18-DEC-1998 18:58
Client ID:
Sample Info: 1660 C110,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81217a.b/093f0101.d
Report Date: 12/21/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 093f0101.d
Analysis Type: NONE

Injection Date: 18-DEC-1998 23:31
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII

COMPOUND	%D
TCMX	5.8
AROCLOR-1016	7.2
AROCLOR-1260	6.6
DCB	5.3

The average of %D's in the continuing calibration is 6.2

Data File: /chem/can/gcs/a2hpk.i/81217a.b/093f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/093f0101.d
Lab Smp Id: 1660 C110
Inj Date : 18-DEC-1998 23:31
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

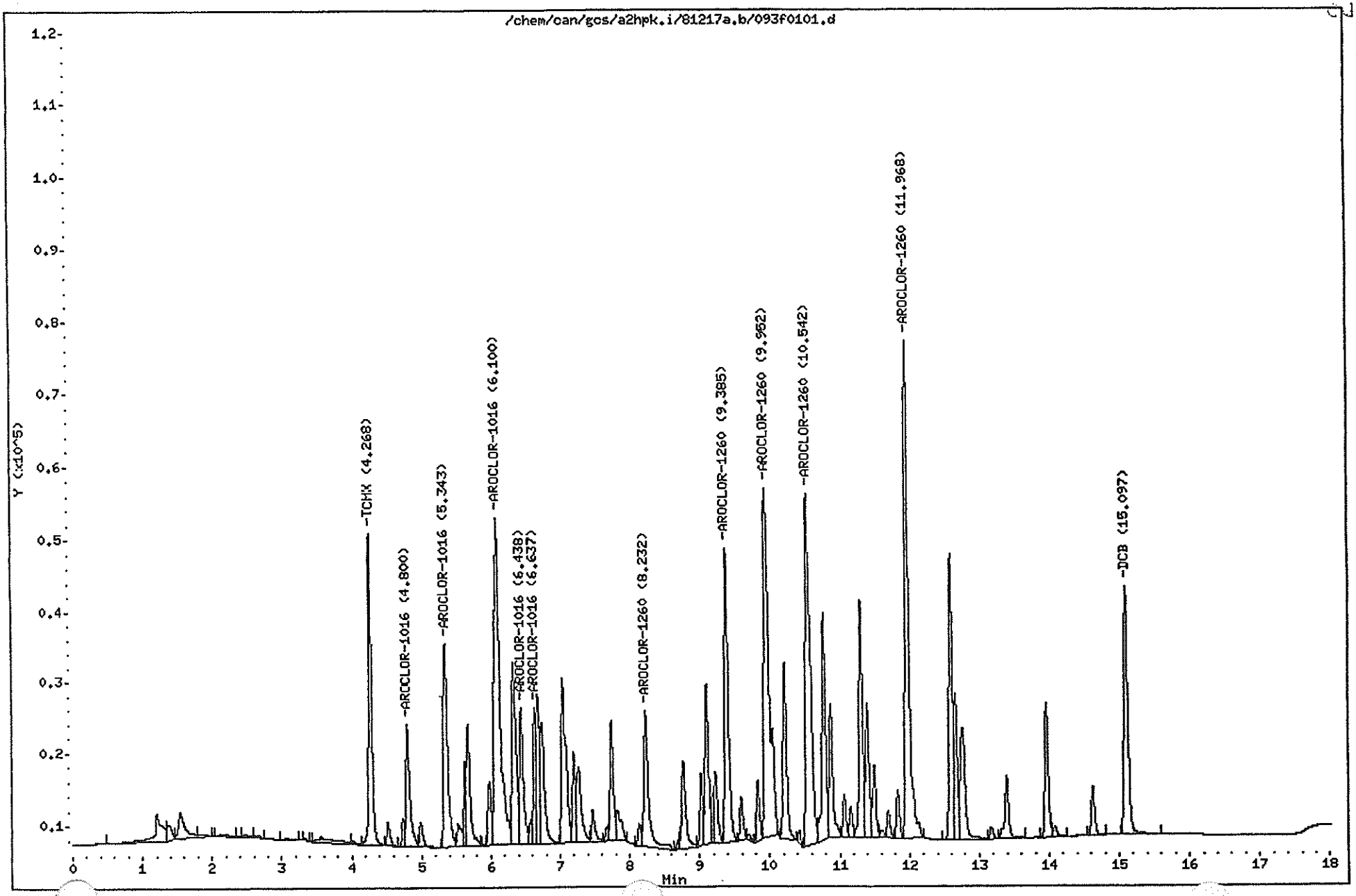
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.268	4.270	-0.002	43366	0.02500	0.02644	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.800	0.000	16713	0.50000	0.5393	80.00- 120.00	100.00
5.343	5.343	0.000	28345	0.50000	0.5247	128.06- 213.44	169.60
6.100	6.102	-0.002	45514	0.50000	0.5429	204.62- 341.03	272.33
6.438	6.440	-0.002	18747	0.50000	0.5476	83.61- 139.35	112.17
6.637	6.638	-0.001	18711	0.50000	0.5254	84.33- 140.55	111.95
Average of Peak Amounts =					0.536		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.232	8.233	-0.001	18759	0.50000	0.5397	80.00- 120.00	100.00
9.385	9.385	0.000	41095	0.50000	0.5194	164.71- 274.51	219.07
9.952	9.952	0.000	48606	0.50000	0.5259	194.93- 324.88	259.11
10.542	10.542	0.000	48913	0.50000	0.5382	195.72- 326.20	260.74
11.968	11.968	0.000	69006	0.50000	0.5425	277.41- 462.34	367.86
Average of Peak Amounts =					0.533		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	34699	0.02500	0.02632	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/093f0101.d
Date : 18-DEC-1998 23:31
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/099f0101.d
Report Date: 12/21/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 099f0101.d
Analysis Type: NONE

Injection Date: 19-DEC-1998 01:37
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII

COMPOUND	%D
TCMX	1.6
AROCLOR-1016	0.0
AROCLOR-1260	0.8
DCB	0.3

The average of %D's in the continuing calibration is 0.7

Data File: /chem/can/gcs/a2hpk.i/81217a.b/099f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/099f0101.d
Lab Smp Id: 1660 C110
Inj Date : 19-DEC-1998 01:37
Operator : 1808
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a
Cal Date : 17-DEC-1998 00:15
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 017f0101.d
Continuing Calibration Sample

Compound Sublist: AR1660td.sub
Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	40360	0.02500	0.02461	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.800	0.000	15590	0.50000	0.5031	80.00- 120.00	100.00
5.343	5.343	0.000	26578	0.50000	0.4920	128.06- 213.44	170.48
6.102	6.102	0.000	42344	0.50000	0.5051	204.62- 341.03	271.61
6.440	6.440	0.000	17370	0.50000	0.5074	83.61- 139.35	111.42
6.637	6.638	-0.001	17503	0.50000	0.4915	84.33- 140.55	112.27
Average of Peak Amounts =					0.5		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.232	8.233	-0.001	17386	0.50000	0.5002	80.00- 120.00	100.00
9.385	9.385	0.000	38167	0.50000	0.4824	164.71- 274.51	219.53
9.950	9.952	-0.002	45456	0.50000	0.4918	194.93- 324.88	261.45
10.542	10.542	0.000	45467	0.50000	0.5002	195.72- 326.20	261.52
11.968	11.968	0.000	64215	0.50000	0.5048	277.41- 462.34	369.35
Average of Peak Amounts =					0.496		
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	32874	0.02500	0.02493	80.00- 120.00	100.00

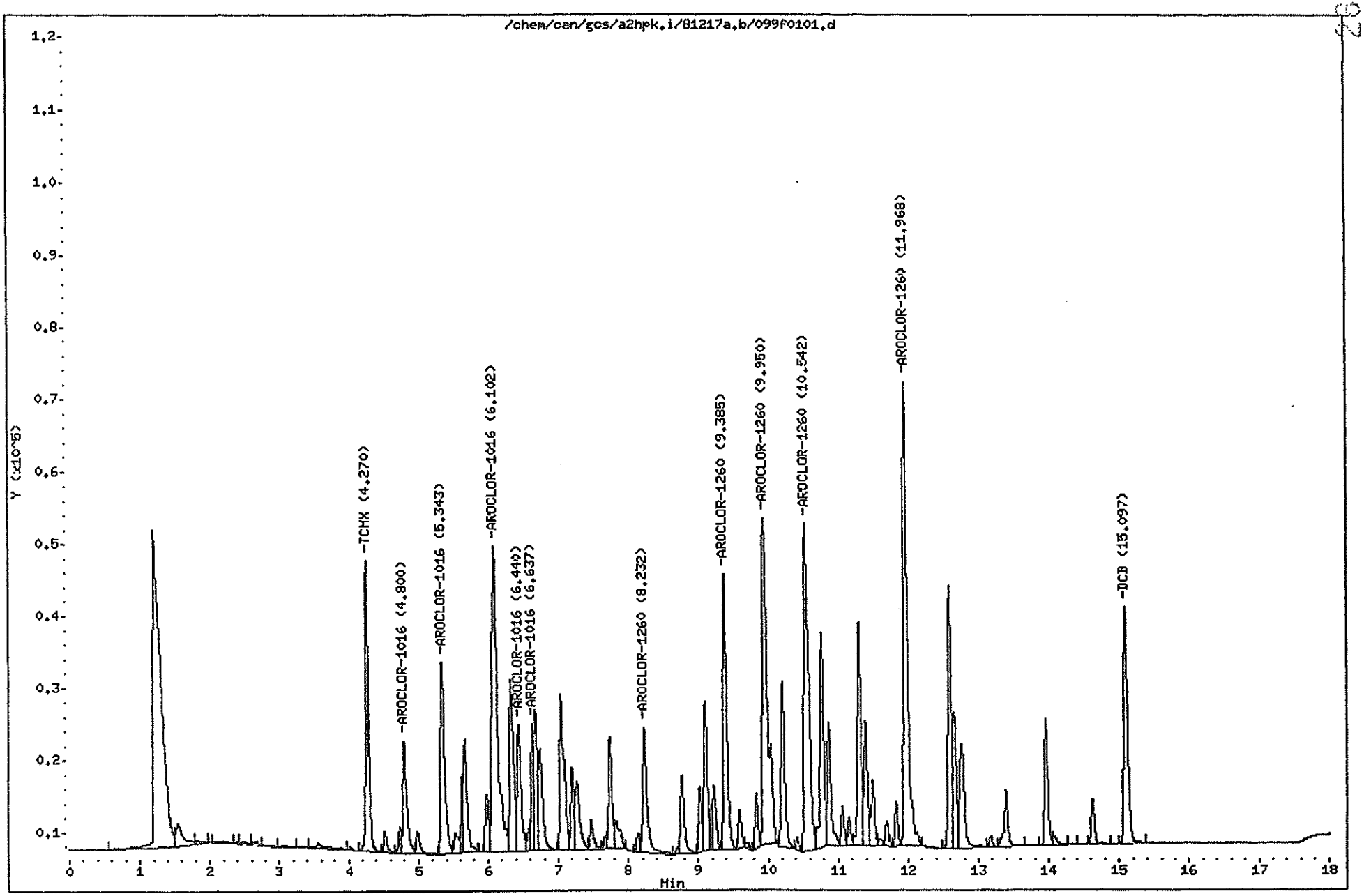
Dat e: /chem/can/gcs/a2hpk.i/81217a.b/099f0101.d
Date : 19-DEC-1998 01:37
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808

Column phase: RTX-CLP PESTICIDES

Column diameter: 0.32



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L020132

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.28 S2 : 15.11

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/21/98	0539	4.27	15.10
02		2154 C061	12/21/98	0600		
03		1248 C056	12/21/98	0621		
04		1242 C051	12/21/98	0642		
05		1232 C046	12/21/98	0703		
06	S-120198-JH-	CNW6M101	12/21/98	1054	4.24	15.01
07		1660 C110	12/21/98	1115	4.28	15.11
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	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Data File: /chem/can/gcs/a2hpk.i/81220a.b/064f0101.d
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 064f0101.d
Analysis Type: NONE

Injection Date: 21-DEC-1998 05:39
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII

COMPOUND	%D
TCMX	2.6
AROCLOR-1016	2.7
AROCLOR-1260	4.7
DCB	6.8

The average of %D's in the continuing calibration is 4.2

Data File: /chem/can/gcs/a2hpk.i/81220a.b/064f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/064f0101.d
Lab Smp Id: 1660 C110
Inj Date : 21-DEC-1998 05:39
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.275	-0.002	42072	0.02500	0.02565	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.803	4.805	-0.002	16304	0.50000	0.5261	80.00- 120.00	100.00
5.348	5.350	-0.002	27622	0.50000	0.5114	127.62- 212.70	169.42
6.107	6.108	-0.001	44143	0.50000	0.5265	204.54- 340.90	270.75
6.445	6.447	-0.002	17641	0.50000	0.5153	83.69- 139.49	108.20
6.642	6.643	-0.001	17405	0.50000	0.4888	83.98- 139.97	106.75
Average of Peak Amounts =					0.514		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.238	8.238	0.000	18074	0.50000	0.5200	80.00- 120.00	100.00
9.392	9.393	-0.001	40639	0.50000	0.5136	166.62- 277.69	224.85
9.957	9.958	-0.001	48468	0.50000	0.5244	197.70- 329.51	268.16
10.548	10.550	-0.002	47881	0.50000	0.5268	199.02- 331.69	264.92
11.973	11.977	-0.004	67614	0.50000	0.5315	281.42- 469.03	374.10
Average of Peak Amounts =					0.523		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.107	-0.004	35219	0.02500	0.02671	80.00- 120.00	21.48 (M)

Data File: /chem/can/gcs/a2hpk.i/81220a.b/064f0101.d
Report Date: 24-Dec-1998 07:56

QC Flag Legend

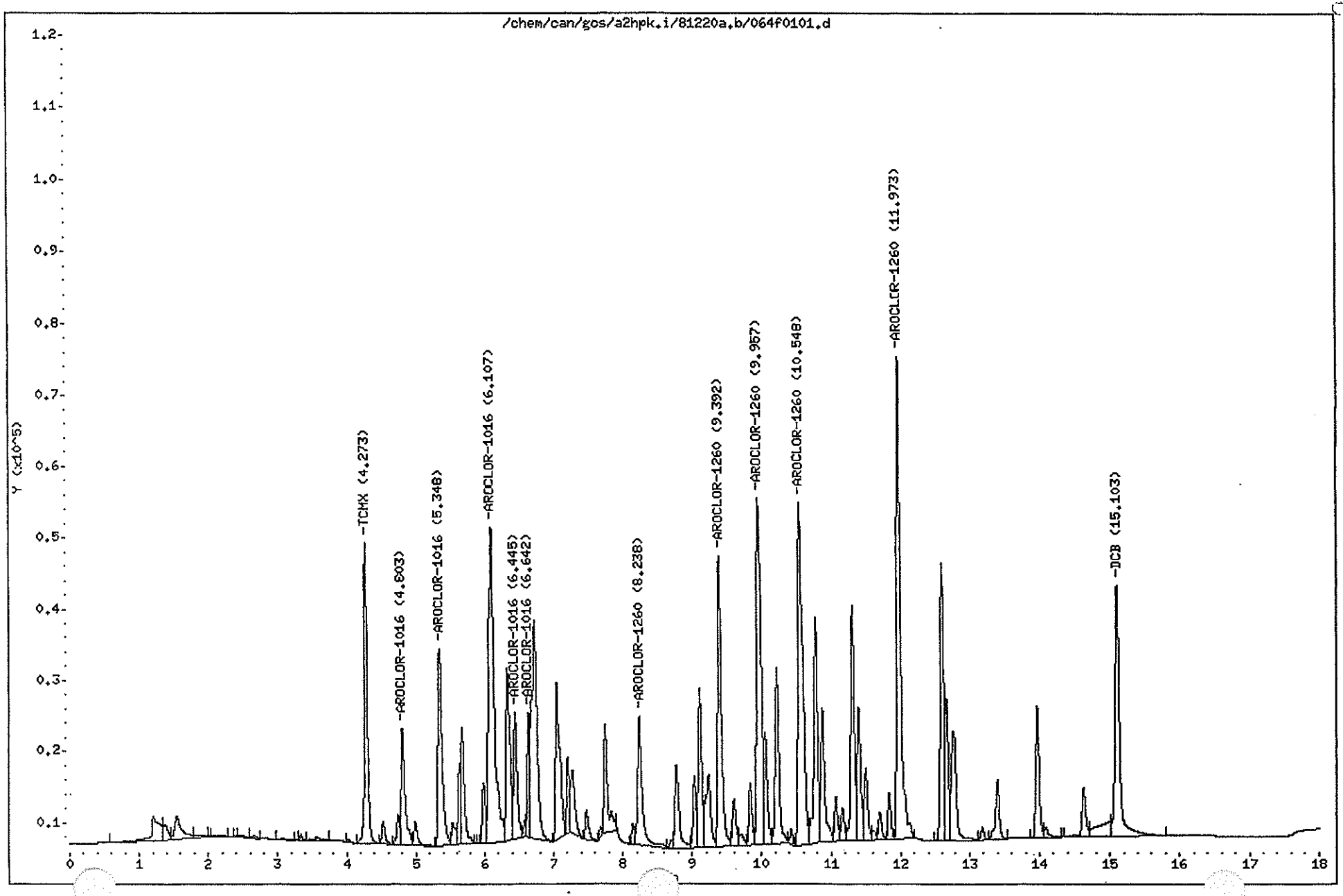
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81220a.b/064f0101.d
Date : 21-DEC-1998 05:39
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81220a.b/065f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/065f0101.d
Lab Smp Id: 2154 C061
Inj Date : 21-DEC-1998 06:00
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

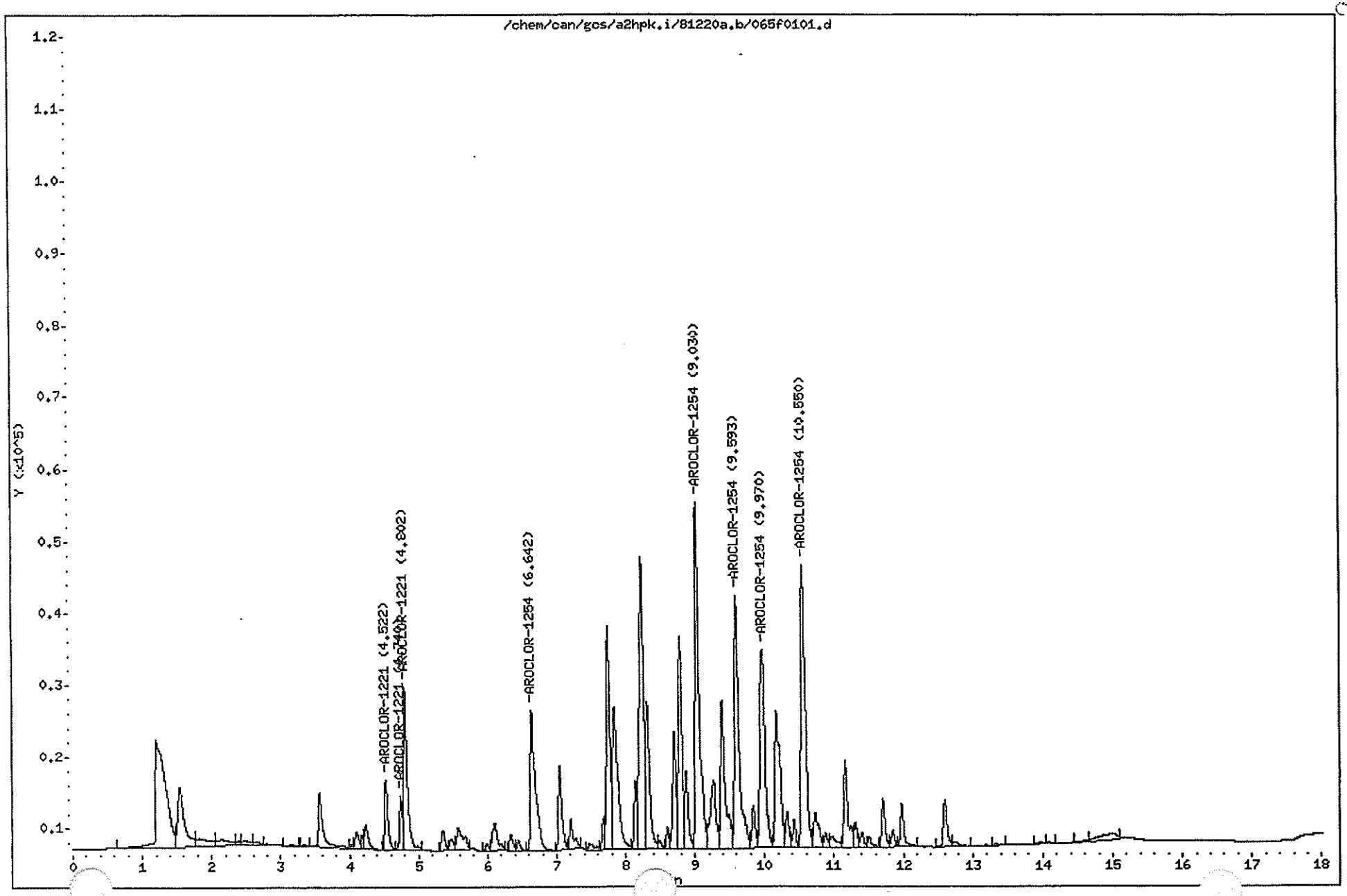
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.642	6.638	0.004	19554	0.50000	0.4866	80.00- 120.00	100.00
9.030	9.023	0.007	48219	0.50000	0.4968	183.65- 306.08	246.59
9.593	9.588	0.005	35268	0.50000	0.5052	134.94- 224.90	180.36
9.970	9.965	0.005	27677	0.50000	0.5037	104.37- 173.96	141.54
10.550	10.543	0.007	39246	0.50000	0.4987	148.01- 246.69	200.71
Average of Peak Amounts =					0.498		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.522	4.518	0.004	9736	0.50000	0.5048	80.00- 120.00	100.00
4.740	4.737	0.003	7250	0.50000	0.5144	54.30- 90.51	74.47
4.802	4.798	0.004	22513	0.50000	0.4998	172.76- 287.93	231.23
Average of Peak Amounts =					0.506		

Data File: /chem/can/gcs/a2hpk.i/81220a.b/065f0101.d
Date : 21-DEC-1998 06:00
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



0120

Data File: /chem/can/gcs/a2hpk.i/81220a.b/066f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/066f0101.d
Lab Smp Id: 1248 C056
Inj Date : 21-DEC-1998 06:21
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.343	5.338	0.005	12377	0.50000	0.5118	80.00- 120.00	100.00
6.107	6.102	0.005	22322	0.50000	0.5484	137.72- 229.53	180.35
7.047	7.042	0.005	29977	0.50000	0.5242	181.30- 302.17	242.20
9.030	9.025	0.005	17770	0.50000	0.5366	108.43- 180.71	143.57
9.597	9.590	0.007	12752	0.50000	0.5668	78.36- 130.60	103.03

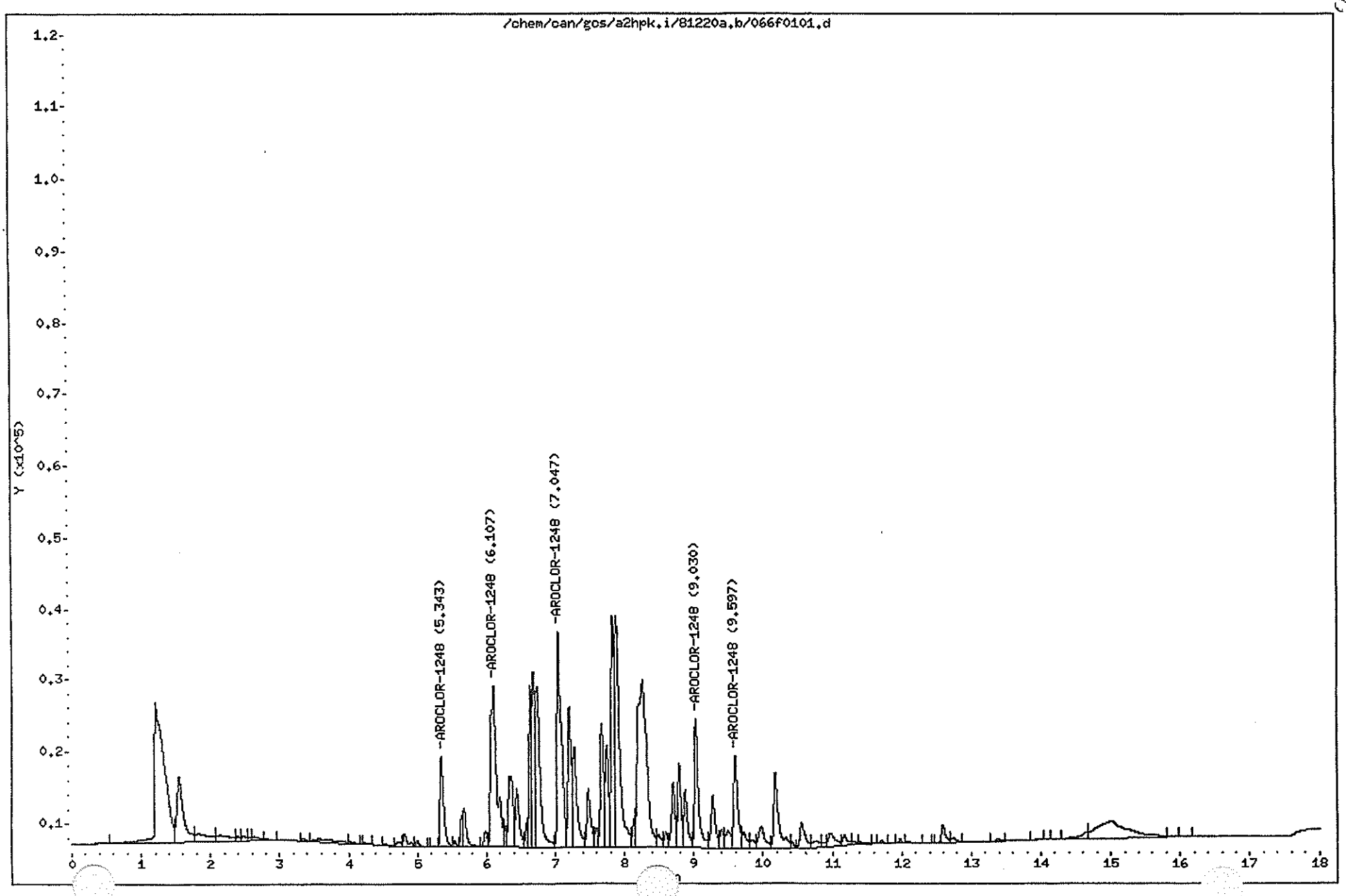
Average of Peak Amounts = 0.538

Data File: /chem/can/gcs/a2hpk.i/81220a.b/066f0101.d
Date : 21-DEC-1998 06:21
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81220a.b/067f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/067f0101.d
Lab Smp Id: 1242 C051
Inj Date : 21-DEC-1998 06:42
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

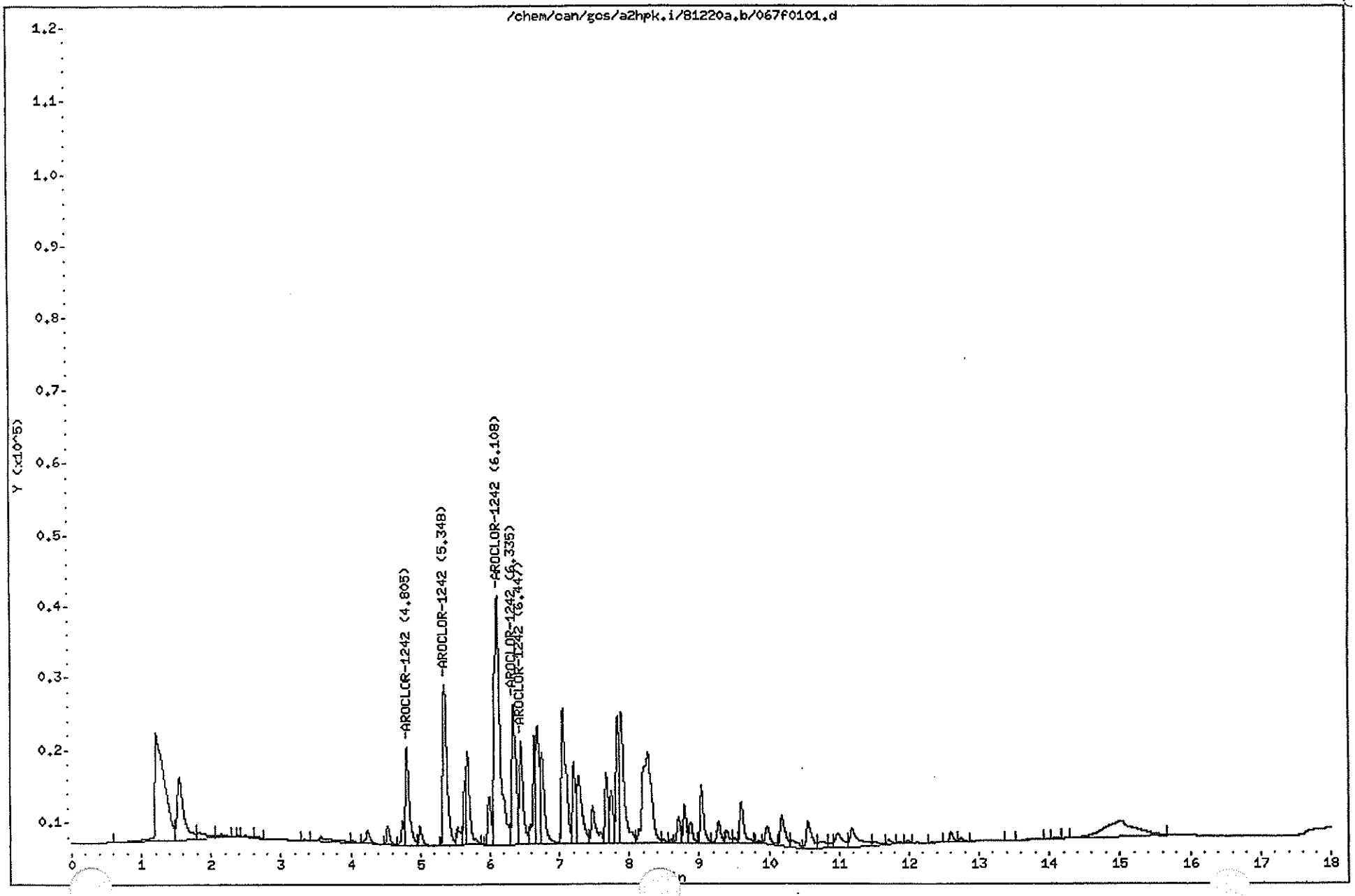
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.805	4.800	0.005	13522	0.50000	0.5083	80.00- 120.00	100.00
5.348	5.343	0.005	22210	0.50000	0.4958	122.23- 203.72	164.25
6.108	6.102	0.006	34381	0.50000	0.5158	193.45- 322.42	254.26
6.335	6.328	0.007	19390	0.50000	0.5148	108.22- 180.37	143.40
6.447	6.440	0.007	14189	0.50000	0.5296	79.59- 132.66	104.93
Average of Peak Amounts =					0.513		

Data File: /chem/can/gcs/a2hpk.i/81220a.b/067f0101.d
Date : 21-DEC-1998 06:42
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81220a.b/068f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/068f0101.d
Lab Smp Id: 1232 C046
Inj Date : 21-DEC-1998 07:03
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

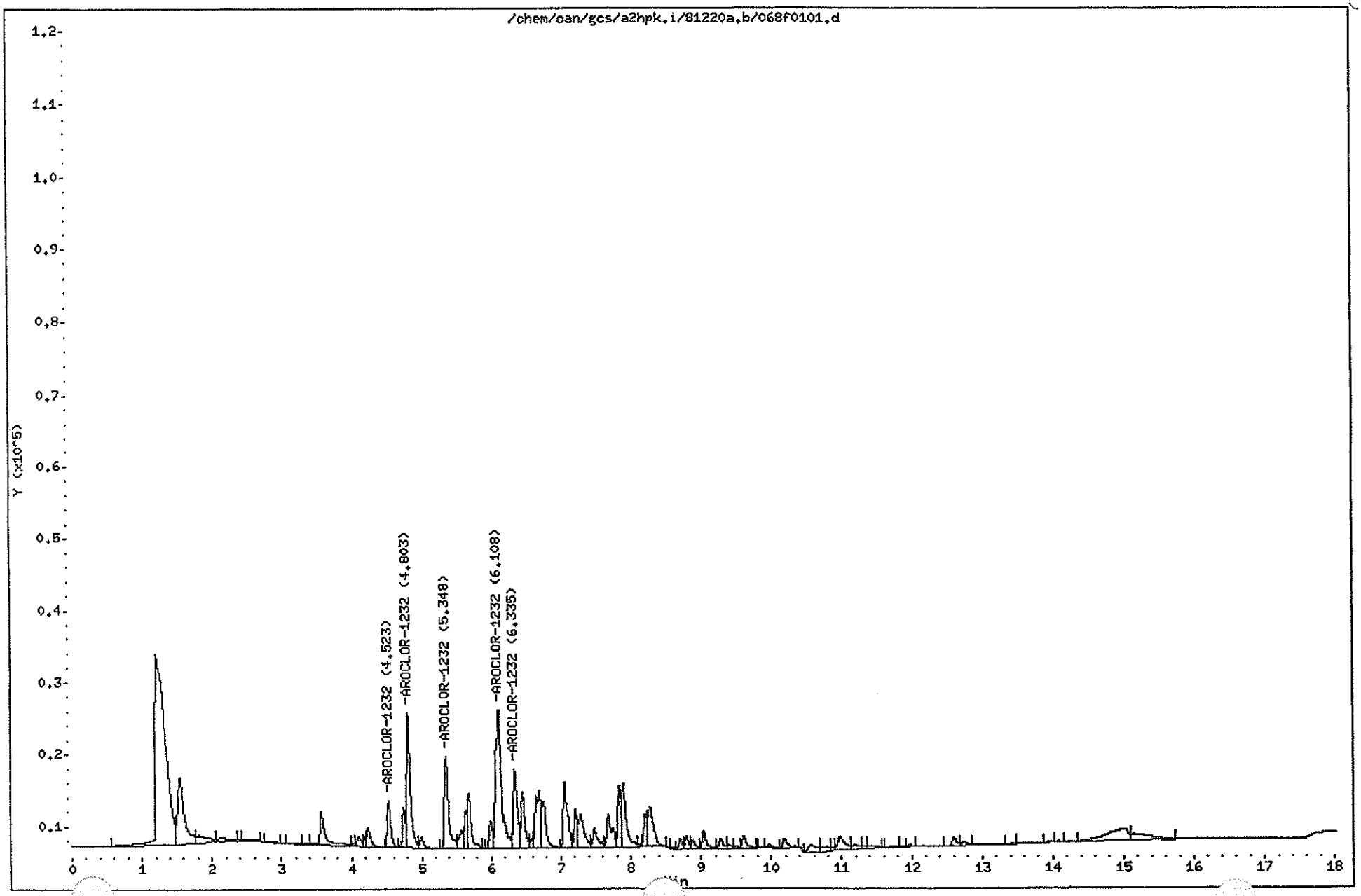
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.523	4.518	0.005	6640	0.50000	0.5042	80.00- 120.00	100.00
4.803	4.800	0.003	18742	0.50000	0.5026	211.13- 351.88	282.26
5.348	5.345	0.003	12882	0.50000	0.4953	144.23- 240.39	194.01
6.108	6.103	0.005	19357	0.50000	0.5169	220.77- 367.94	291.52
6.335	6.330	0.005	11045	0.50000	0.5131	121.89- 203.14	166.34
Average of Peak Amounts =					0.506		

Data File: /chem/can/gcs/a2hpk.i/81220a.b/068f0101.d
Date : 21-DEC-1998 07:03
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Lab Smp Id: 1660 C110
Inj Date : 21-DEC-1998 11:15
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.275	4.275	0.000	40984	0.02500	0.02499	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.805	4.805	0.000	15819	0.50000	0.5105	80.00- 120.00	100.00
5.348	5.350	-0.002	26952	0.50000	0.4989	127.62- 212.70	170.38
6.108	6.108	0.000	42972	0.50000	0.5126	204.54- 340.90	271.65
6.447	6.447	0.000	17592	0.50000	0.5139	83.69- 139.49	111.21
6.643	6.643	0.000	17665	0.50000	0.4961	83.98- 139.97	111.67
Average of Peak Amounts =					0.506		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.240	8.238	0.002	17479	0.50000	0.5029	80.00- 120.00	100.00
9.393	9.393	0.000	38873	0.50000	0.4913	166.62- 277.69	222.40
9.960	9.958	0.002	45951	0.50000	0.4972	197.70- 329.51	262.89
10.550	10.550	0.000	46293	0.50000	0.5093	199.02- 331.69	264.85
11.977	11.977	0.000	65103	0.50000	0.5118	281.42- 469.03	372.46
Average of Peak Amounts =					0.502		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.107	-0.002	34626	0.02500	0.02626	80.00- 120.00	22.96(M)

Data File: /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 080f0101.d
Analysis Type: NONE

Injection Date: 21-DEC-1998 11:15
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.

COMPOUND	%D
TCMX	0.0
AROCLOR-1016	1.3
AROCLOR-1260	0.5
DCB	5.0

The average of %D's in the continuing calibration is 1.7

Data File: /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Report Date: 24-Dec-1998 07:56

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Lab Smp Id: 1660 C110
Inj Date : 21-DEC-1998 11:15
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81220a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 20-DEC-1998 11:48 Cal File: 013f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.275	4.275	0.000	40984	0.02500	0.02499	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.805	4.805	0.000	15819	0.50000	0.5105	80.00- 120.00	100.00
5.348	5.350	-0.002	26952	0.50000	0.4989	127.62- 212.70	170.38
6.108	6.108	0.000	42972	0.50000	0.5126	204.54- 340.90	271.65
6.447	6.447	0.000	17592	0.50000	0.5139	83.69- 139.49	111.21
6.643	6.643	0.000	17665	0.50000	0.4961	83.98- 139.97	111.67
Average of Peak Amounts =					0.506		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.240	8.238	0.002	17479	0.50000	0.5029	80.00- 120.00	100.00
9.393	9.393	0.000	38873	0.50000	0.4913	166.62- 277.69	222.40
9.960	9.958	0.002	45951	0.50000	0.4972	197.70- 329.51	262.89
10.550	10.550	0.000	46293	0.50000	0.5093	199.02- 331.69	264.85
11.977	11.977	0.000	65103	0.50000	0.5118	281.42- 469.03	372.46
Average of Peak Amounts =					0.502		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.107	-0.002	34626	0.02500	0.02626	80.00- 120.00	22.96(M)

Data File: /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Report Date: 24-Dec-1998 07:56

QC Flag Legend

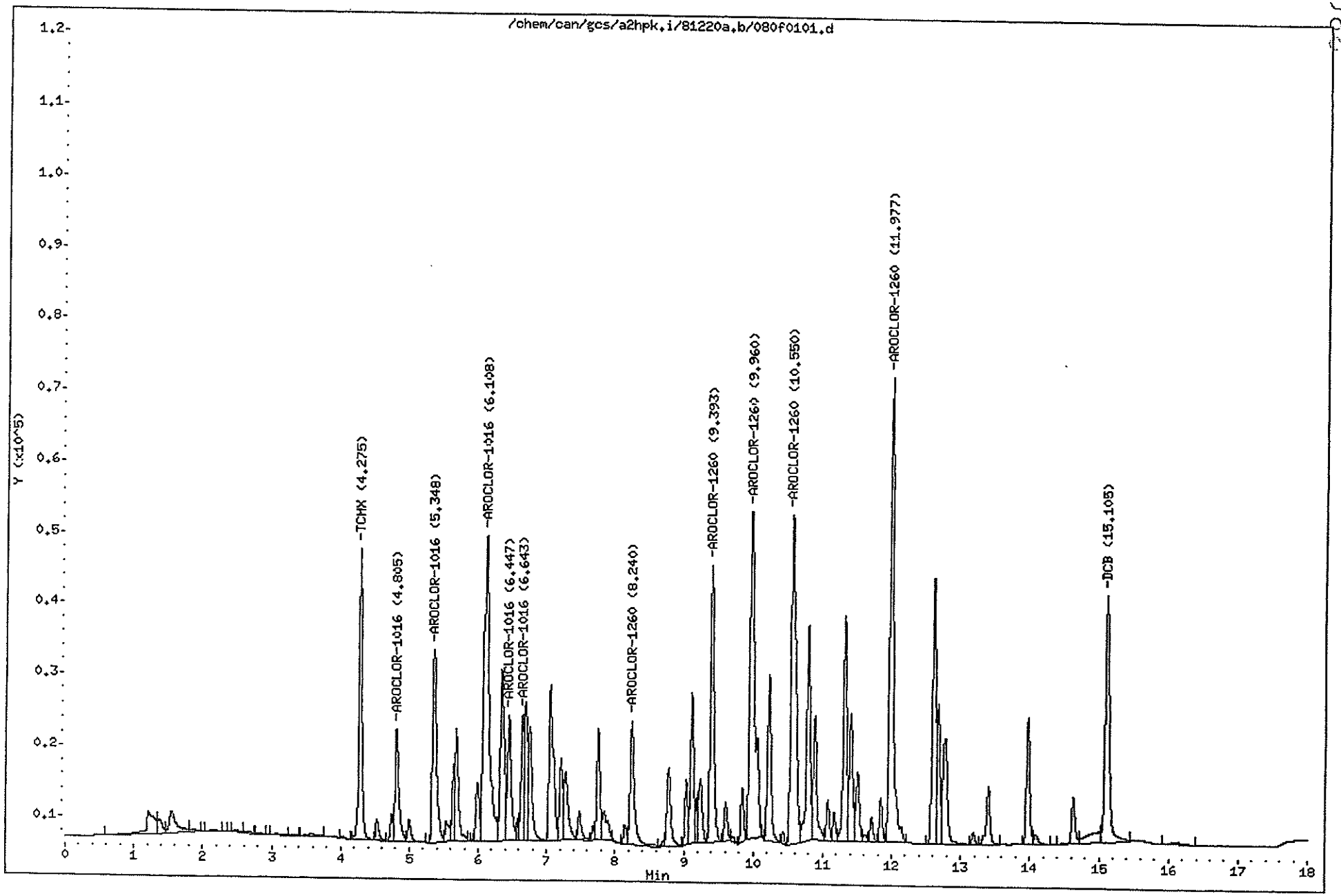
M - Compound response manually integrated.

Da .le: /chem/can/gcs/a2hpk.i/81220a.b/080f0101.d
Date : 21-DEC-1998 11:15
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L020132

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01		2154 C061	12/21/98	1713		
02		1248 C056	12/21/98	1734		
03		1242 C051	12/21/98	1755		
04		1232 C046	12/21/98	1816		
05		1660 C110	12/22/98	0920		
06	CNWD6CHK	CNWD6103	12/22/98	1002		
07		1660 C110	12/22/98	1353		
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QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Data File: /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Lab Smp Id: 2154 C061
Inj Date : 21-DEC-1998 17:13
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.678	6.667	0.011	19426	0.50000	0.4834	80.00- 120.00	100.00
9.072	9.057	0.015	47967	0.50000	0.4942	183.19- 305.32	246.92
9.638	9.623	0.015	34816	0.50000	0.4987	131.23- 218.72	179.22
10.015	9.998	0.017	27509	0.50000	0.5007	107.11- 178.52	141.61
10.595	10.578	0.017	39235	0.50000	0.4986	150.50- 250.84	201.97
Average of Peak Amounts =					0.495		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.542	0.006	9685	0.50000	0.5022	80.00- 120.00	31.13(M)
4.768	4.760	0.008	7024	0.50000	0.4984	56.23- 93.72	22.58
4.830	4.823	0.007	22574	0.50000	0.5012	172.89- 288.15	72.55
Average of Peak Amounts =					0.501		

QC Flag Legend

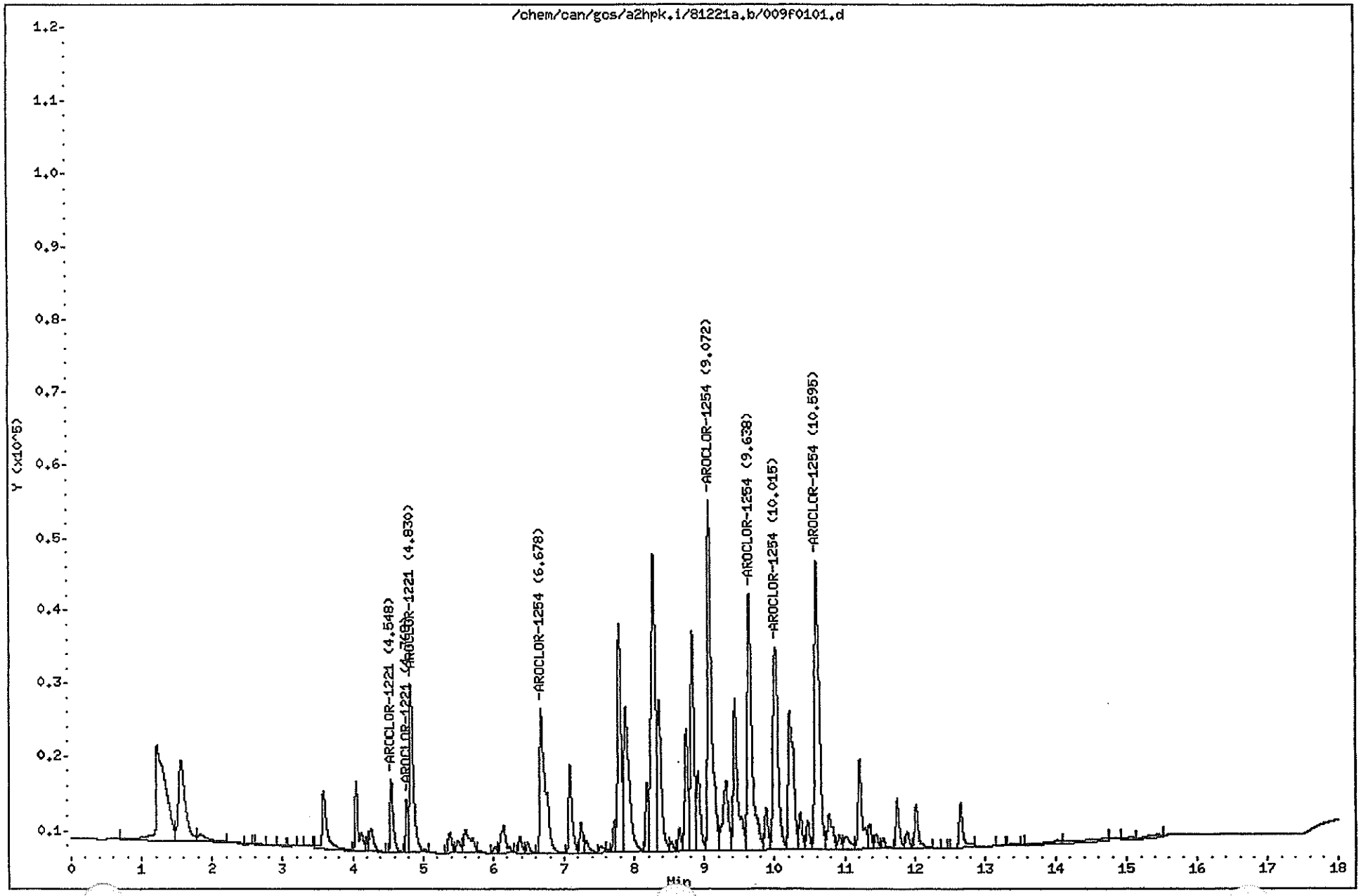
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Date : 21-DEC-1998 17:13
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Lab Smp Id: 1248 C056
Inj Date : 21-DEC-1998 17:34
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

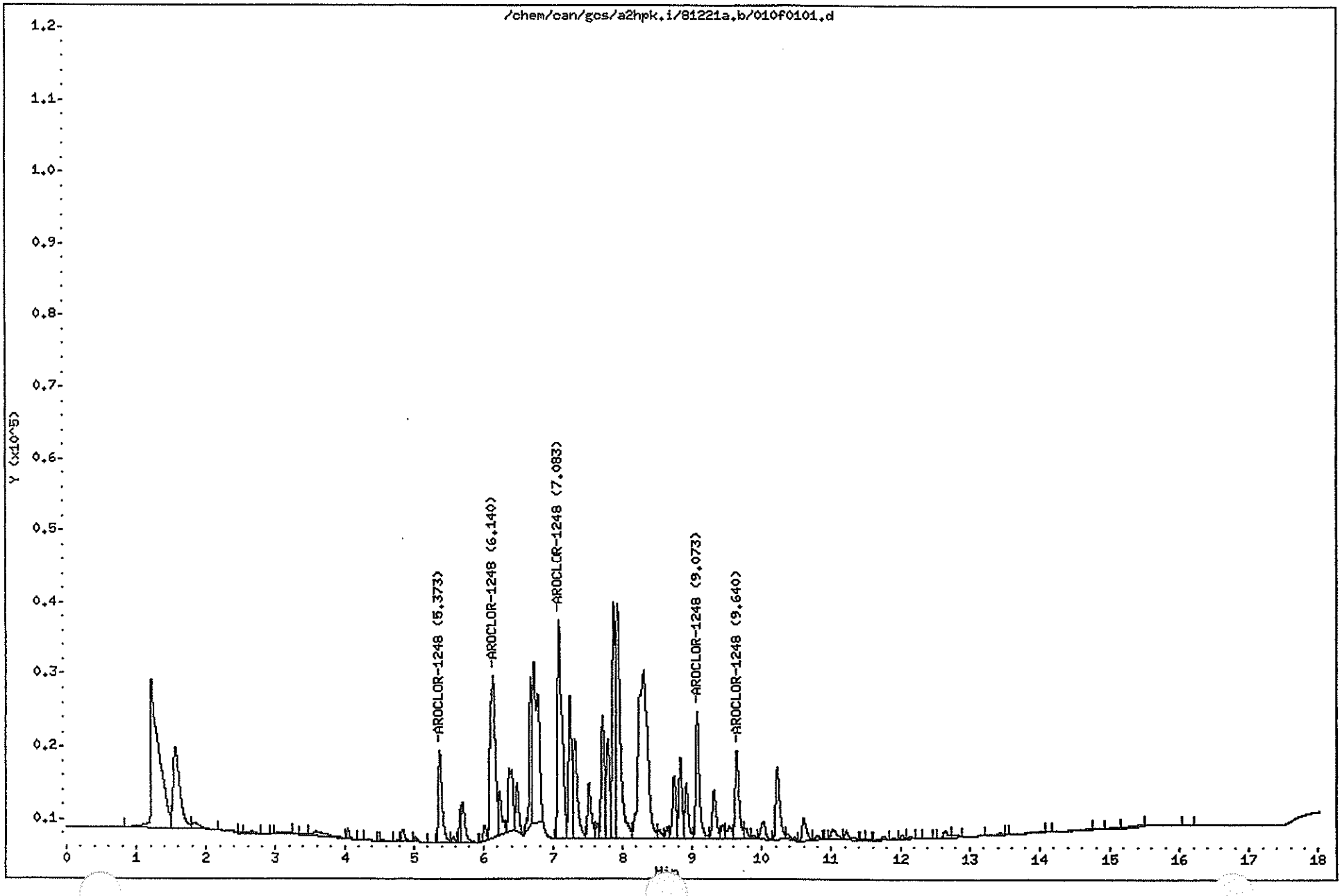
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.373	5.365	0.008	12678	0.50000	0.5242	80.00- 120.00	100.00
6.140	6.132	0.008	22307	0.50000	0.5480	126.36- 210.60	175.95
7.083	7.072	0.011	30260	0.50000	0.5291	175.17- 291.95	238.68
9.073	9.060	0.013	17569	0.50000	0.5305	99.08- 165.14	138.58
9.640	9.628	0.012	12137	0.50000	0.5395	66.11- 110.18	95.73
Average of Peak Amounts =					0.534		

Data File: /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Date : 21-DEC-1998 17:34
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Lab Smp Id: 1242 C051
Inj Date : 21-DEC-1998 17:55
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.833	4.833	0.000	13620	0.50000	0.5120	80.00- 120.00	26.90(M)
5.378	5.378	0.000	22428	0.50000	0.5007	123.50- 205.84	44.29
6.142	6.142	0.000	35120	0.50000	0.5269	193.39- 322.32	69.36
6.368	6.368	0.000	19731	0.50000	0.5238	108.65- 181.08	38.96
6.480	6.480	0.000	14443	0.50000	0.5390	79.53- 132.55	28.52
Average of Peak Amounts =					0.52		

QC Flag Legend

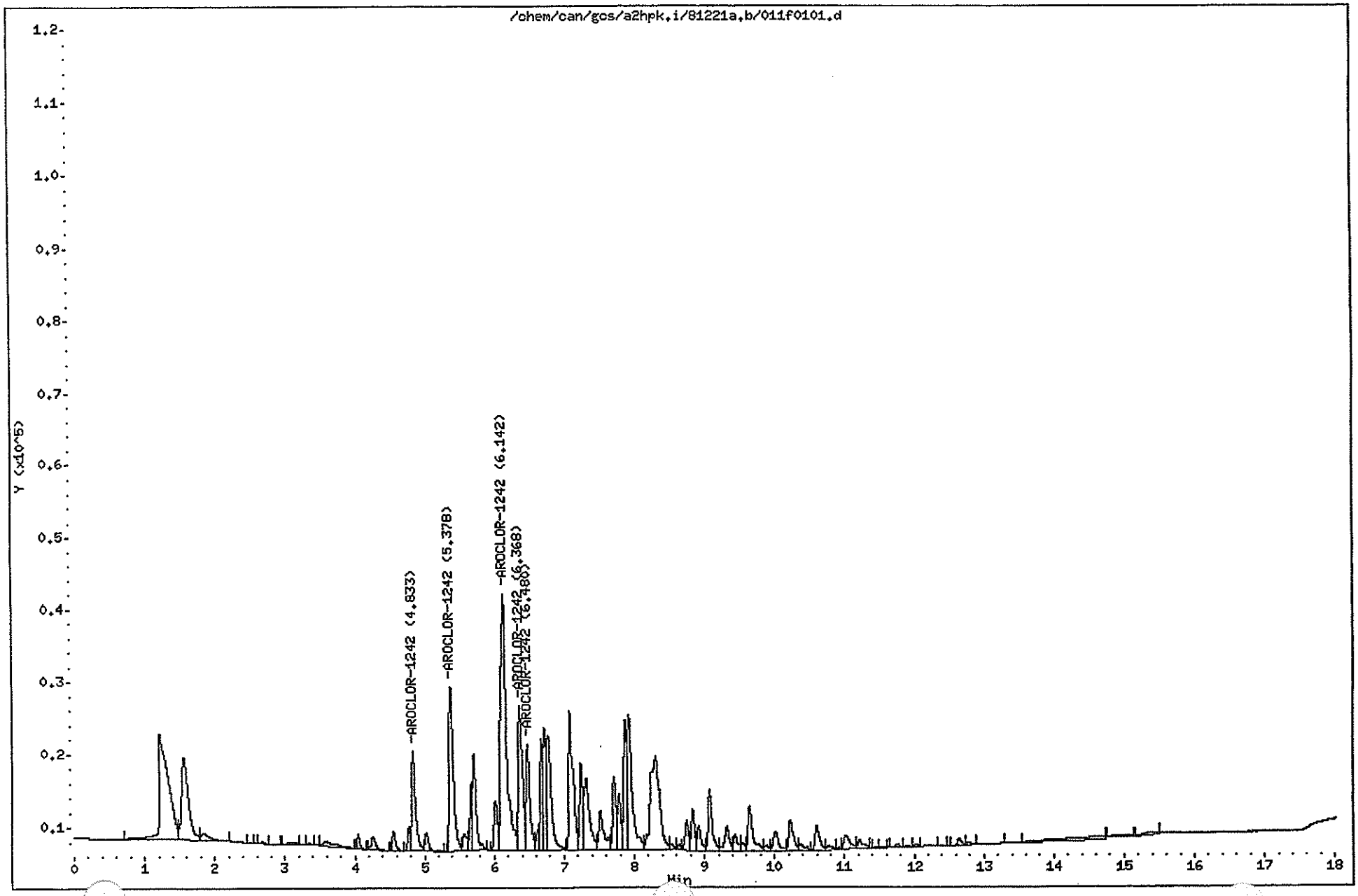
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Date : 21-DEC-1998 17:55
Client ID:
Sample Info: 1242 C051,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Lab Smp Id: 1232 C046
Inj Date : 21-DEC-1998 18:16
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

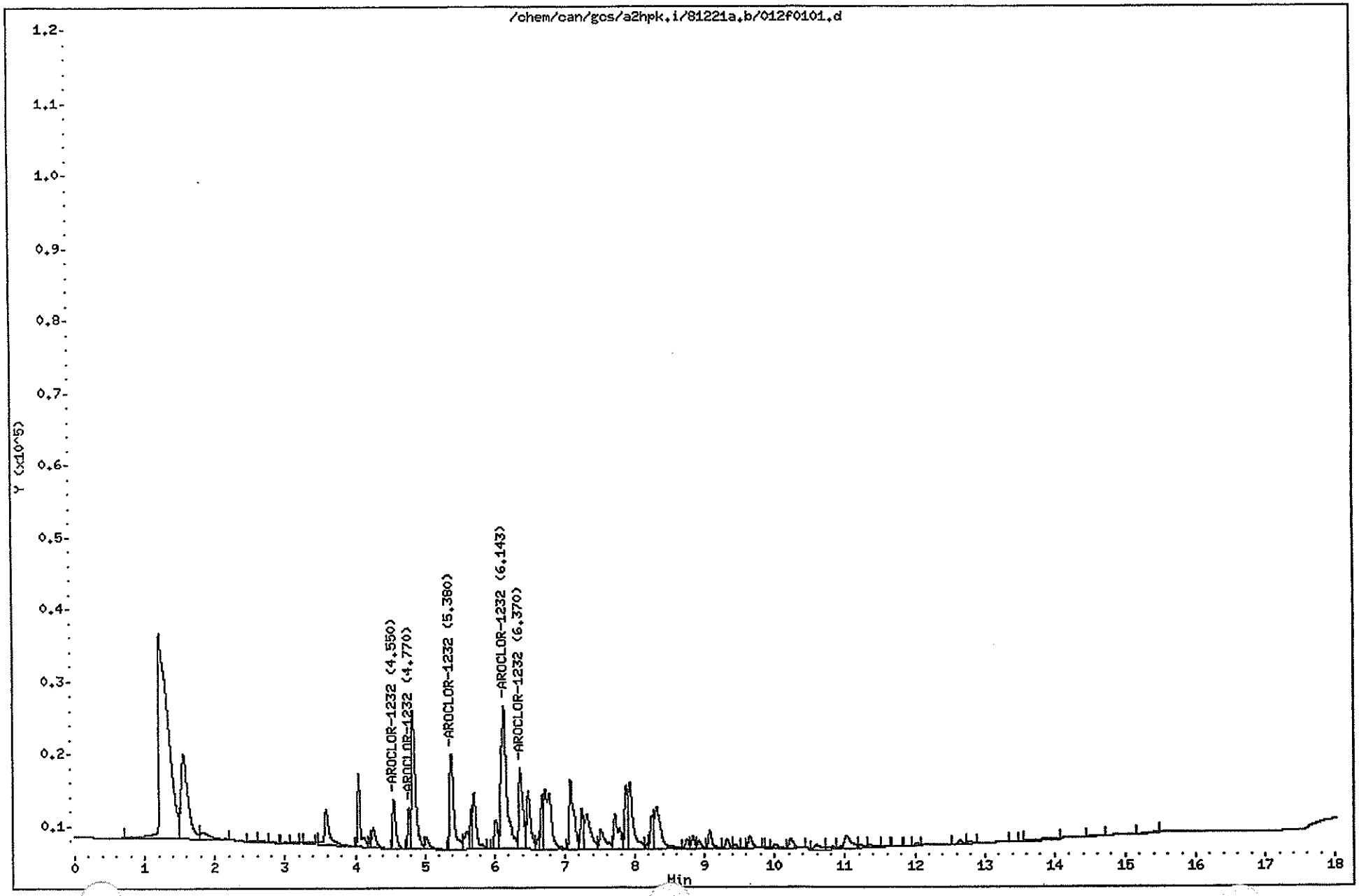
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.543	0.007	6748	0.50000	0.5124	80.00- 120.00	100.00
4.770	4.823	-0.053	5465	0.50000	0.1465	212.47- 354.11	80.99
5.380	5.370	0.010	13108	0.50000	0.5040	148.50- 247.50	194.25
6.143	6.133	0.010	19686	0.50000	0.5257	213.42- 355.71	291.73
6.370	6.360	0.010	11227	0.50000	0.5215	122.53- 204.21	166.38
Average of Peak Amounts =					0.442		

Data File: /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Date : 21-DEC-1998 18:16
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d Pa
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 054f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 09:20
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII

COMPOUND	%D
TCMX	5.6
AROCLOR-1016	4.7
AROCLOR-1260	4.8
DCB	7.6

The average of %D's in the continuing calibration is 5.7

Data File: /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 09:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

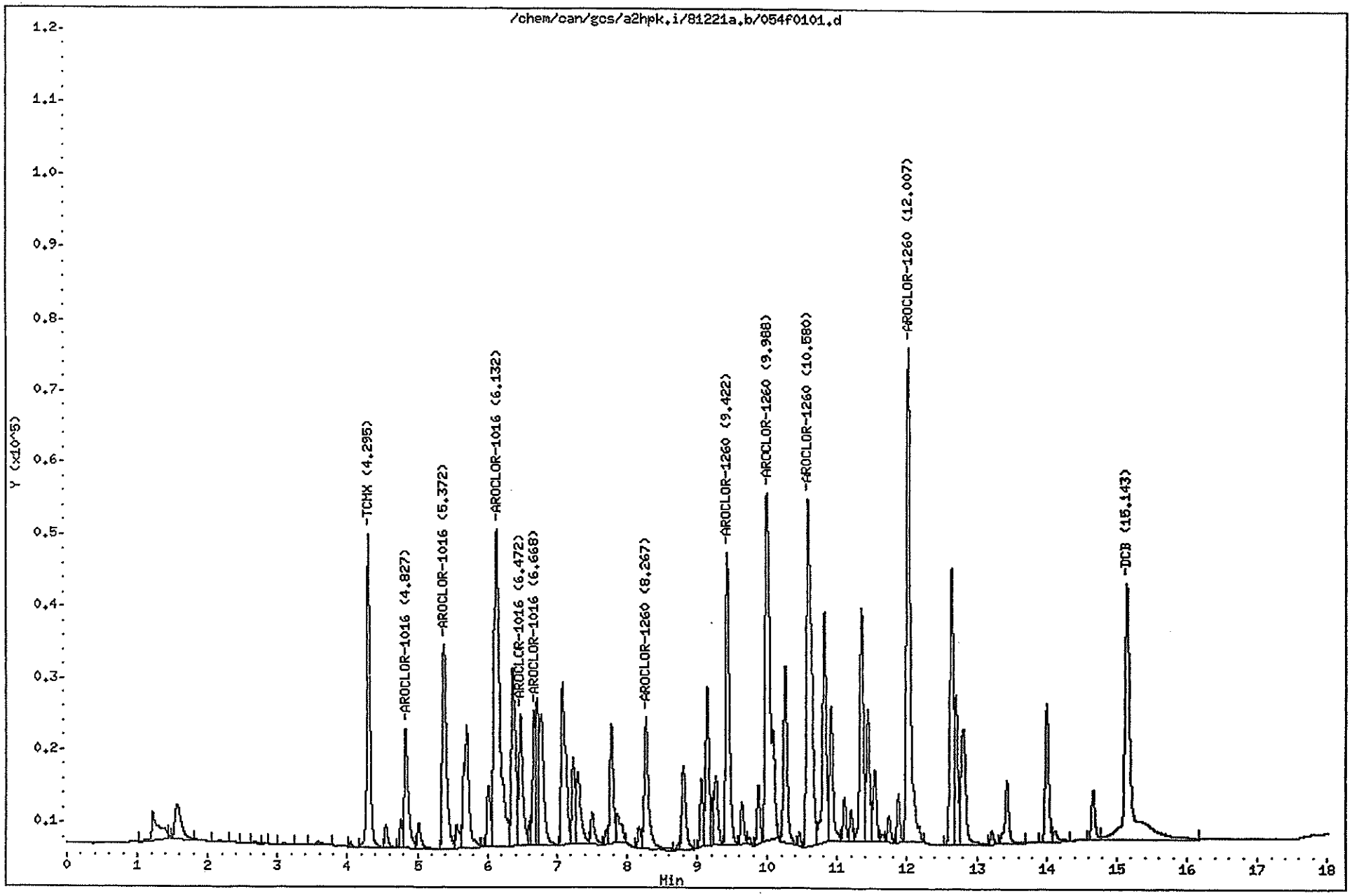
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.295	0.000	43283	0.02500	0.02639	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.827	4.825	0.002	16270	0.50000	0.5250	80.00- 120.00	100.00
5.372	5.370	0.002	28208	0.50000	0.5222	127.22- 212.04	173.37
6.132	6.132	0.000	43951	0.50000	0.5242	198.24- 330.40	270.14
6.472	6.470	0.002	18052	0.50000	0.5273	78.59- 130.99	110.95
6.668	6.668	0.000	18512	0.50000	0.5199	80.95- 134.92	113.78
Average of Peak Amounts =					0.524		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.267	8.265	0.002	18041	0.50000	0.5190	80.00- 120.00	100.00
9.422	9.420	0.002	40547	0.50000	0.5125	165.01- 275.01	224.75
9.988	9.988	0.000	48042	0.50000	0.5198	196.25- 327.09	266.29
10.580	10.578	0.002	48061	0.50000	0.5288	189.58- 315.97	266.40
12.007	12.005	0.002	68714	0.50000	0.5402	260.56- 434.26	380.88
Average of Peak Amounts =					0.524		
$ 9 DCB					CAS #: 2051-24-3		
15.143	15.142	0.001	35464	0.02500	0.02690	80.00- 120.00	100.00

Data /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Date : 22-DEC-1998 09:20
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 067f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 13:53
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.

COMPOUND	%D
TCMX	5.3
AROCLOR-1016	4.6
AROCLOR-1260	5.1
DCB	11.5

The average of %D's in the continuing calibration is 6.6

Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Report Date: 24-Dec-1998 07:55

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 13:53
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

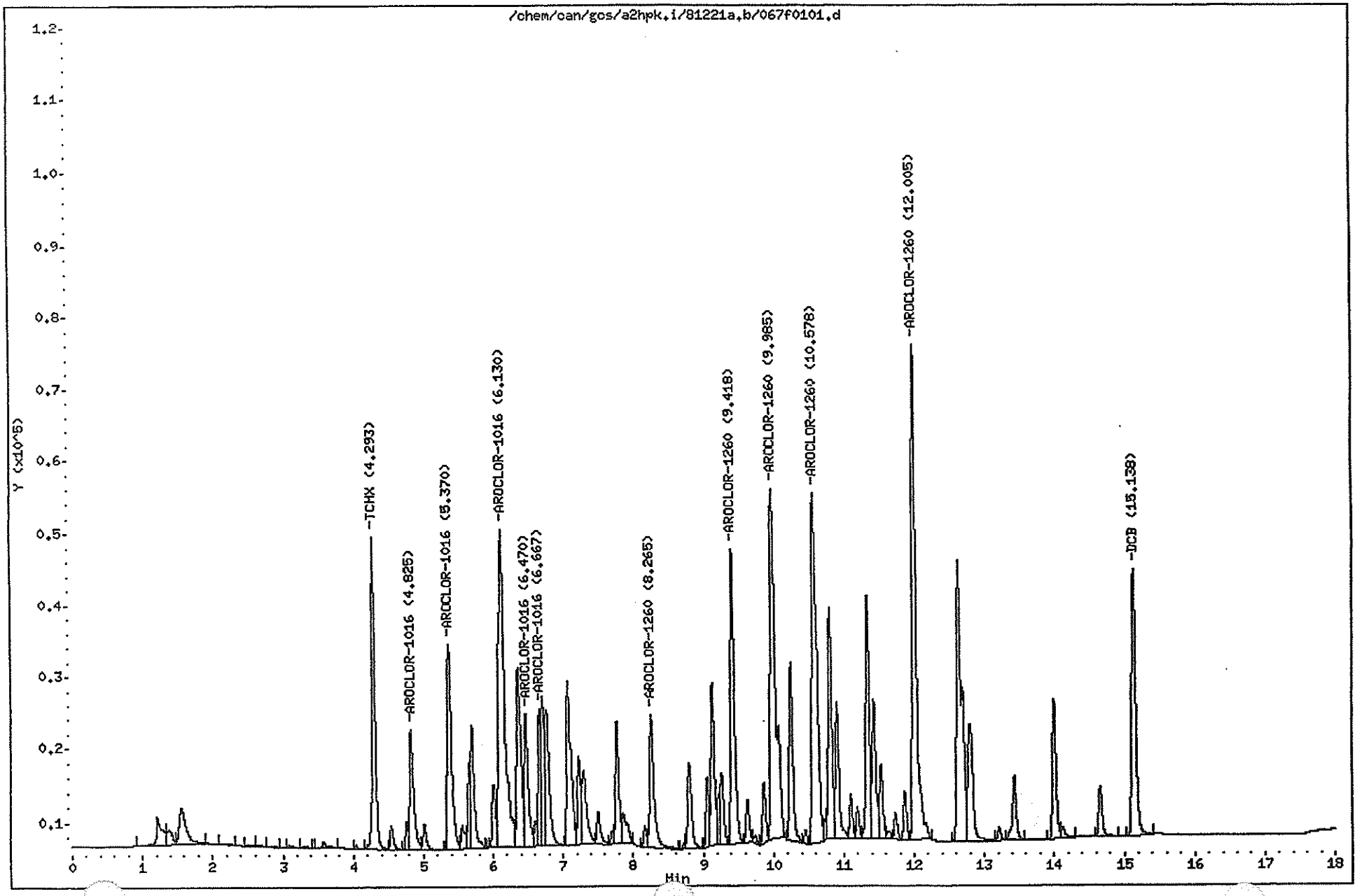
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.295	-0.002	43170	0.02500	0.02632	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.825	4.825	0.000	16304	0.50000	0.5261	80.00- 120.00	100.00
5.370	5.370	0.000	28130	0.50000	0.5208	127.22- 212.04	172.53
6.130	6.132	-0.002	43835	0.50000	0.5229	198.24- 330.40	268.86
6.470	6.470	0.000	17917	0.50000	0.5234	78.59- 130.99	109.89
6.667	6.668	-0.001	18543	0.50000	0.5207	80.95- 134.92	113.73
Average of Peak Amounts =					0.523		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.265	8.265	0.000	18118	0.50000	0.5212	80.00- 120.00	100.00
9.418	9.420	-0.002	40642	0.50000	0.5137	165.01- 275.01	224.32
9.985	9.988	-0.003	48247	0.50000	0.5220	196.25- 327.09	266.29
10.578	10.578	0.000	48351	0.50000	0.5320	189.58- 315.97	266.87
12.005	12.005	0.000	68593	0.50000	0.5392	260.56- 434.26	378.59
Average of Peak Amounts =					0.526		
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.142	-0.004	36765	0.02500	0.02788	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Date : 22-DEC-1998 13:53
Client ID:
Sample Info: 1660 C110,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
RAW QC DATA

CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020000 232

Sample WT/Vol: 30 / g
Work Order: CNWD6103
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/22/98

QC Batch: 8336232

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	130	a
11096-82-5	Aroclor 1260	200	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/056f0101.d
Report Date: 23-Dec-1998 16:33

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/056f0101.d
Lab Smp Id: CNWD6103 Client Smp ID: INTRA-LAB CHECK
Inj Date : 22-DEC-1998 10:02
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNWD6103
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.295	-0.002	18086	0.01103	3.676	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.827	4.825	0.002	13058	0.42140	140.5	80.00- 120.00	100.00(R)
5.372	5.370	0.002	22403	0.41474	138.2	127.22- 212.04	171.57
6.132	6.132	0.000	34144	0.40727	135.8	198.24- 330.40	261.48
6.470	6.470	0.000	13831	0.40400	134.7	78.59- 130.99	105.92
6.665	6.668	-0.003	11761	0.33028	110.1	80.95- 134.92	90.07
Average of Peak Concentrations =					131.8		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.265	8.265	0.000	17888	0.51464	171.5	80.00- 120.00	22.22(RM)
9.420	9.420	0.000	43286	0.54708	182.4	165.01- 275.01	53.76
9.985	9.988	-0.003	54868	0.59363	197.9	196.25- 327.09	68.15

Data File: /chem/can/gcs/a2hpk.i/81221a.b/056f0101.d
Report Date: 23-Dec-1998 16:33

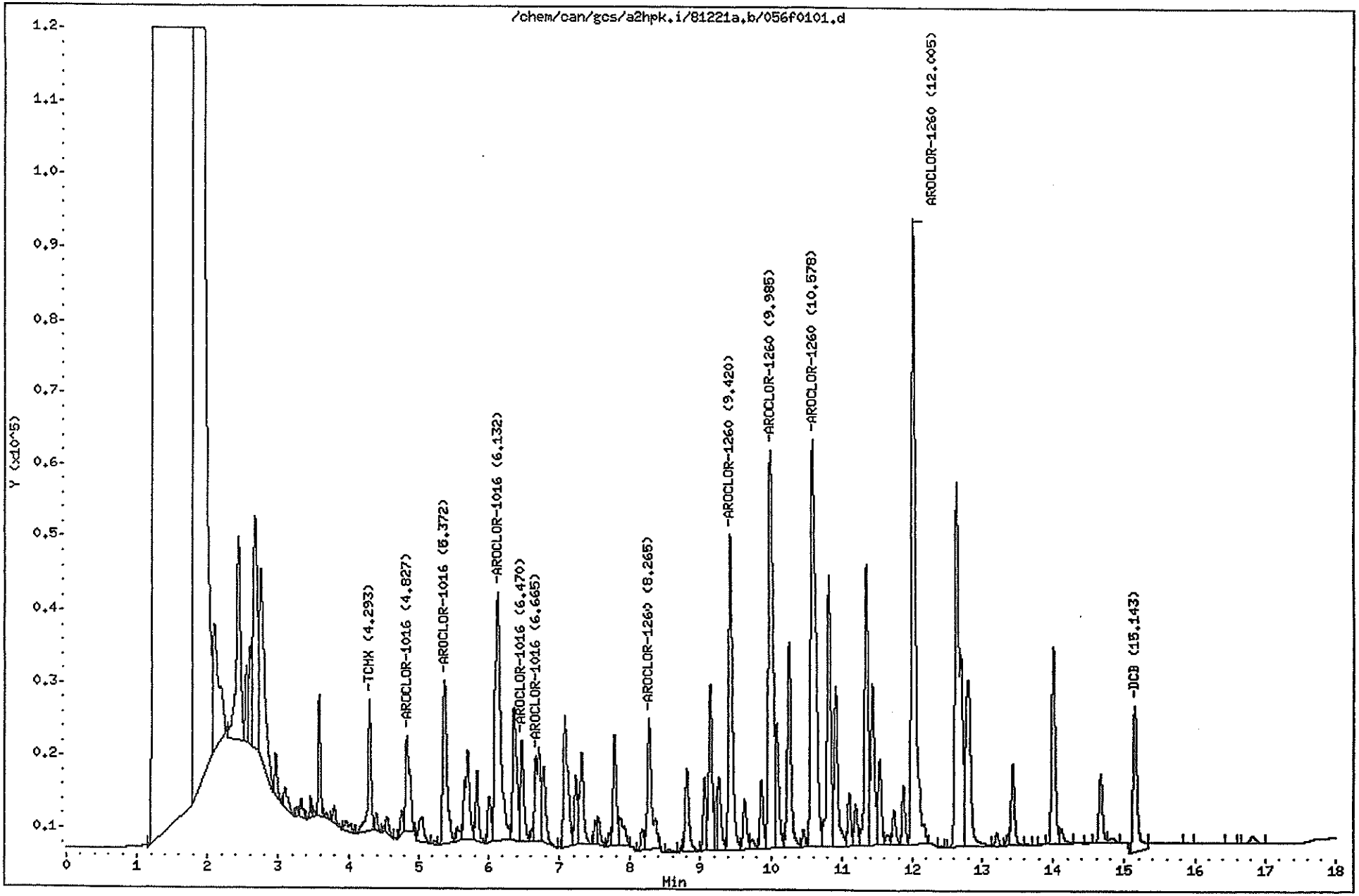
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.578	10.578	0.000	56111	0.61735	205.8	189.58- 315.97	69.69
12.005	12.005	0.000	85886	0.67517	225.0	260.56- 434.26	106.68
Average of Peak Concentrations =					196.5		
$ 9 DCB					CAS #: 2051-24-3		
15.143	15.142	0.001	20187	0.01531	5.103	80.00- 120.00	100.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data . /chem/can/gcs/a2hpk.i/81221a.b/056f0101.d
Date : 22-DEC-1998 10:02
Client ID: INTRA-LAB CHECK
Sample Info: CNWD6103
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020000 232

Sample WT/Vol: 30 / g
Work Order: CNWD6104
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/19/98

QC Batch: 8336232

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	280	p
11096-82-5	Aroclor 1260	300	p

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/097f0101.d
Report Date: 22-Dec-1998 11:18

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/097f0101.d
Lab Smp Id: CNWD6104 Client Smp ID: INTRA-LAB CHECK
Inj Date : 19-DEC-1998 00:55
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNWD6104
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

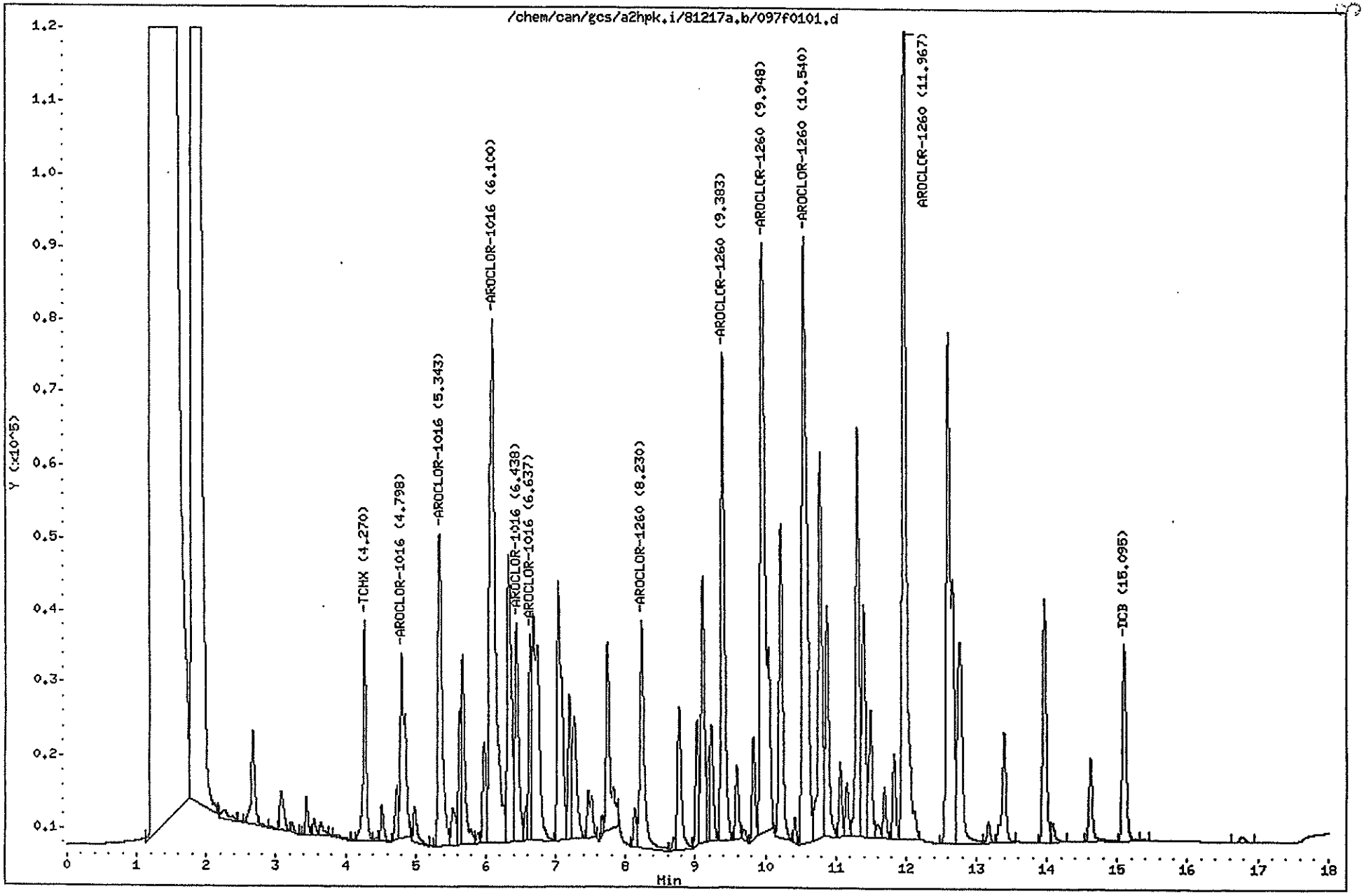
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.270	4.270	0.000	30376	0.01852	6.174	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.798	4.800	-0.002	25405	0.81985	273.3	80.00- 120.00	100.00
5.343	5.343	0.000	42915	0.79446	264.8	128.06- 213.44	168.92
6.100	6.102	-0.002	72194	0.86114	287.0	204.62- 341.03	284.17
6.438	6.440	-0.002	29903	0.87347	291.2	83.61- 139.35	117.71
6.637	6.638	-0.001	28331	0.79561	265.2	84.33- 140.55	111.52
Average of Peak Concentrations =					276.3		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.230	8.233	-0.003	31145	0.89604	298.7	80.00- 120.00	100.00
9.383	9.385	-0.002	67300	0.85059	283.5	164.71- 274.51	216.09
9.948	9.952	-0.004	81375	0.88041	293.5	194.93- 324.88	261.28

Data File: /chem/can/gcs/a2hpk.i/81217a.b/097f0101.d
Report Date: 22-Dec-1998 11:18

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.540	10.542	-0.002	83697	0.92086	307.0	195.72- 326.20	268.73
11.967	11.968	-0.001	119993	0.94329	314.4	277.41- 462.34	385.27
Average of Peak Concentrations =					299.4		
$ 9 DCB					CAS #: 2051-24-3		
15.095	15.097	-0.002	27034	0.02050	6.834	80.00- 120.00	100.00

Da ile: /chem/can/gcs/a2hpk.i/81217a.b/097f0101.d
Date : 19-DEC-1998 00:55
Client ID: INTRA-LAB CHECK
Sample Info: CNWD6104
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R102
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	270	
11096-82-5	Aroclor 1260	310	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Lab Smp Id: CP07R102 Client Smp ID: INTRA-LAB CHECK
Inj Date : 17-DEC-1998 09:44
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CP07R102
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

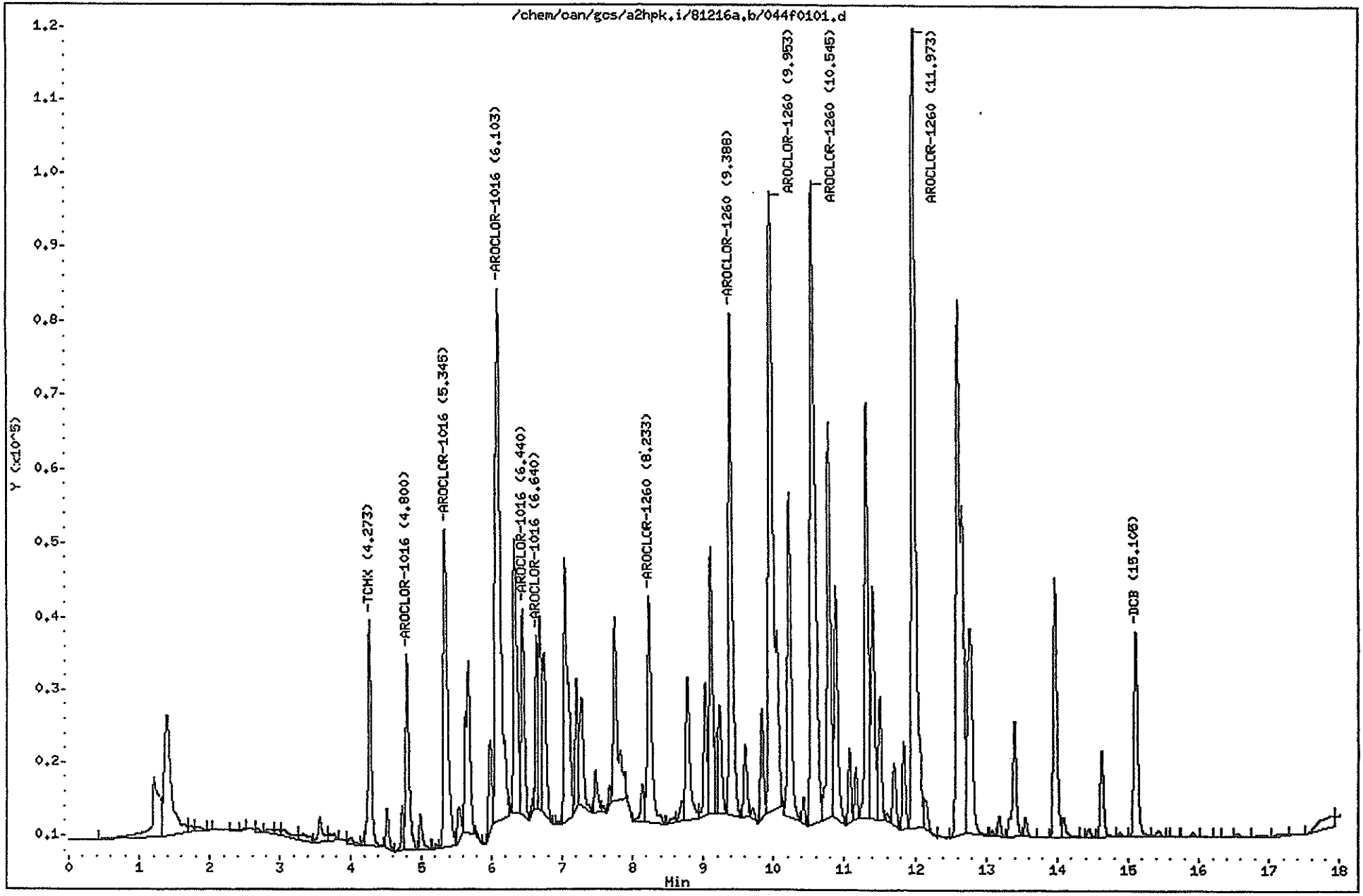
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	30936	0.01886	6.288	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.802	-0.002	26770	0.86390	288.0	80.00- 120.00	100.00
5.345	5.347	-0.002	43363	0.80276	267.6	125.29- 208.81	161.98
6.103	6.105	-0.002	72313	0.86256	287.5	207.30- 345.49	270.13
6.440	6.442	-0.002	28285	0.82620	275.4	84.66- 141.09	105.66
6.640	6.642	-0.002	24019	0.67451	224.8	81.88- 136.47	89.72
Average of Peak Concentrations =					268.7		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.233	8.237	-0.004	31084	0.89428	298.1	80.00- 120.00	100.00
9.388	9.390	-0.002	68274	0.86290	287.6	166.19- 276.99	219.64
9.953	9.955	-0.002	84382	0.91294	304.3	196.82- 328.04	271.46

Data File: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Report Date: 17-Dec-1998 13:22

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg).	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.545	10.547	-0.002	87511	0.96283	320.9	201.36- 335.60	281.53
11.973	11.973	0.000	125106	0.98348	327.8	281.46- 469.10	402.48
Average of Peak Concentrations =					307.8		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	28114	0.02132	7.107	80.00- 120.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Date : 17-DEC-1998 09:44
Client ID: INTRA-LAB CHECK
Sample Info: CP07R102
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R103
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	260	
11096-82-5	Aroclor 1260	280	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Lab Smp Id: CP07R103 Client Smp ID: INTRA-LAB CHECK
Inj Date : 17-DEC-1998 10:05
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CP07R103
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

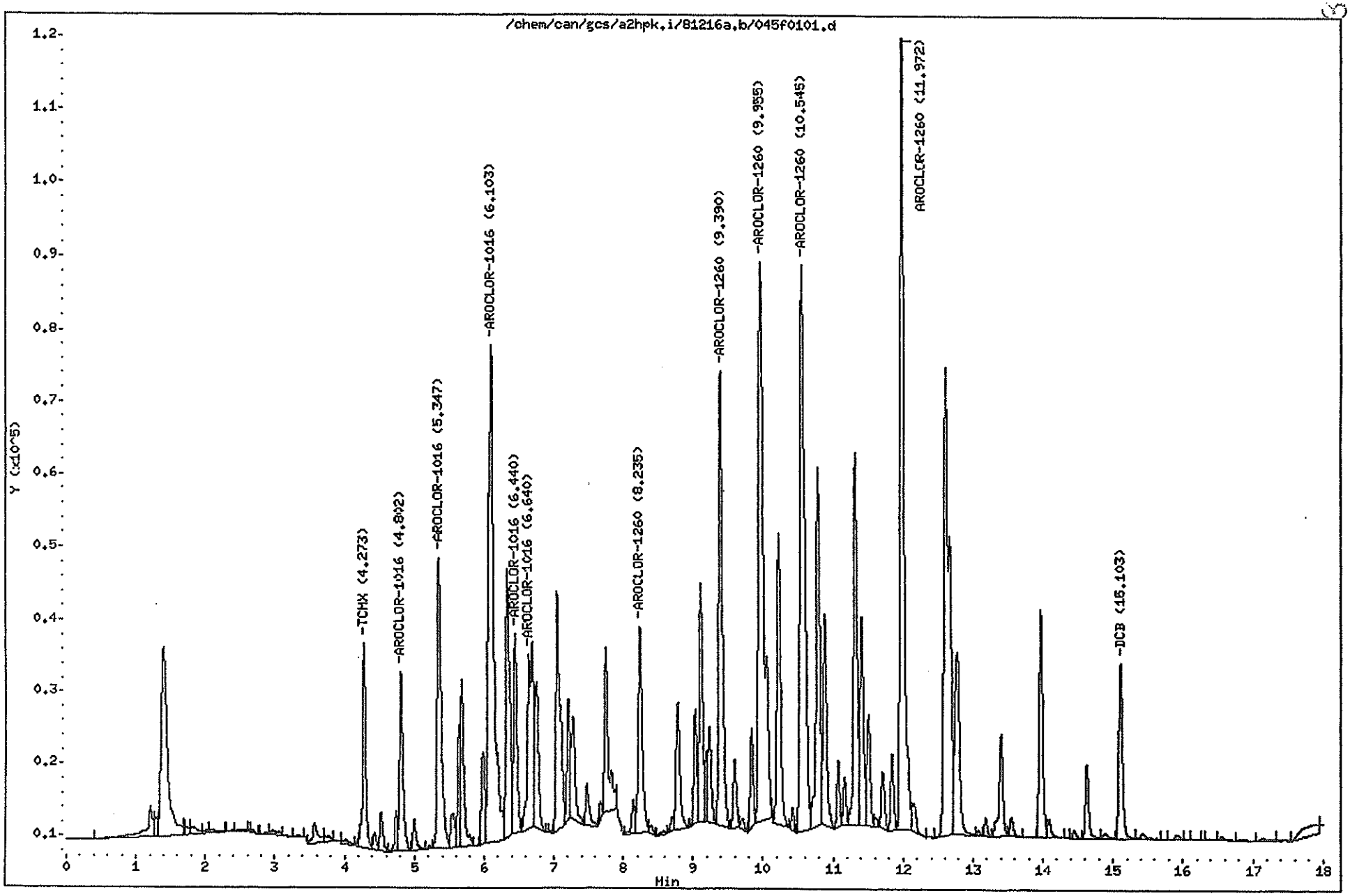
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	28309	0.01726	5.754	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	24945	0.80500	268.3	80.00- 120.00	100.00
5.347	5.347	0.000	40220	0.74457	248.2	125.29- 208.81	161.23
6.103	6.105	-0.002	68717	0.81967	273.2	207.30- 345.49	275.47
6.440	6.442	-0.002	27496	0.80316	267.7	84.66- 141.09	110.23
6.640	6.642	-0.002	24230	0.68044	226.8	81.88- 136.47	97.13
Average of Peak Concentrations =					256.8		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	28508	0.82017	273.4	80.00- 120.00	100.00
9.390	9.390	0.000	62661	0.79196	264.0	166.19- 276.99	219.80
9.955	9.955	0.000	77176	0.83498	278.3	196.82- 328.04	270.72

Data File: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Report Date: 17-Dec-1998 13:22

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.545	10.547	-0.002	78103	0.85932	286.4	201.36- 335.60	273.97
11.972	11.973	-0.001	112901	0.88753	295.8	281.46- 469.10	396.03
Average of Peak Concentrations =					279.6		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.105	-0.002	24343	0.01846	6.154	80.00- 120.00	100.00

Da' 'le: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Da 17-DEC-1998 10:05
Client ID: INTRA-LAB CHECK
Sample Info: CP07R103
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L020000 232

Sample WT/Vol: 30 / g
Work Order: CNWD6101
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/03/98
Date Analyzed: 12/19/98

QC Batch: 8336232

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/096f0101.d
Report Date: 21-Dec-1998 10:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/096f0101.d
Lab Smp Id: CNWD6101
Client Smp ID: INTRA-LAB BLANK
Inj Date : 19-DEC-1998 00:34
Operator : 1808
Inst ID: a2hpk.i
Smp Info : CNWD6101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a
Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15
Cal File: 017f0101.d
Als bottle: 1
QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon
Compound Sublist: REG.sub
Target Version: 3.40
Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

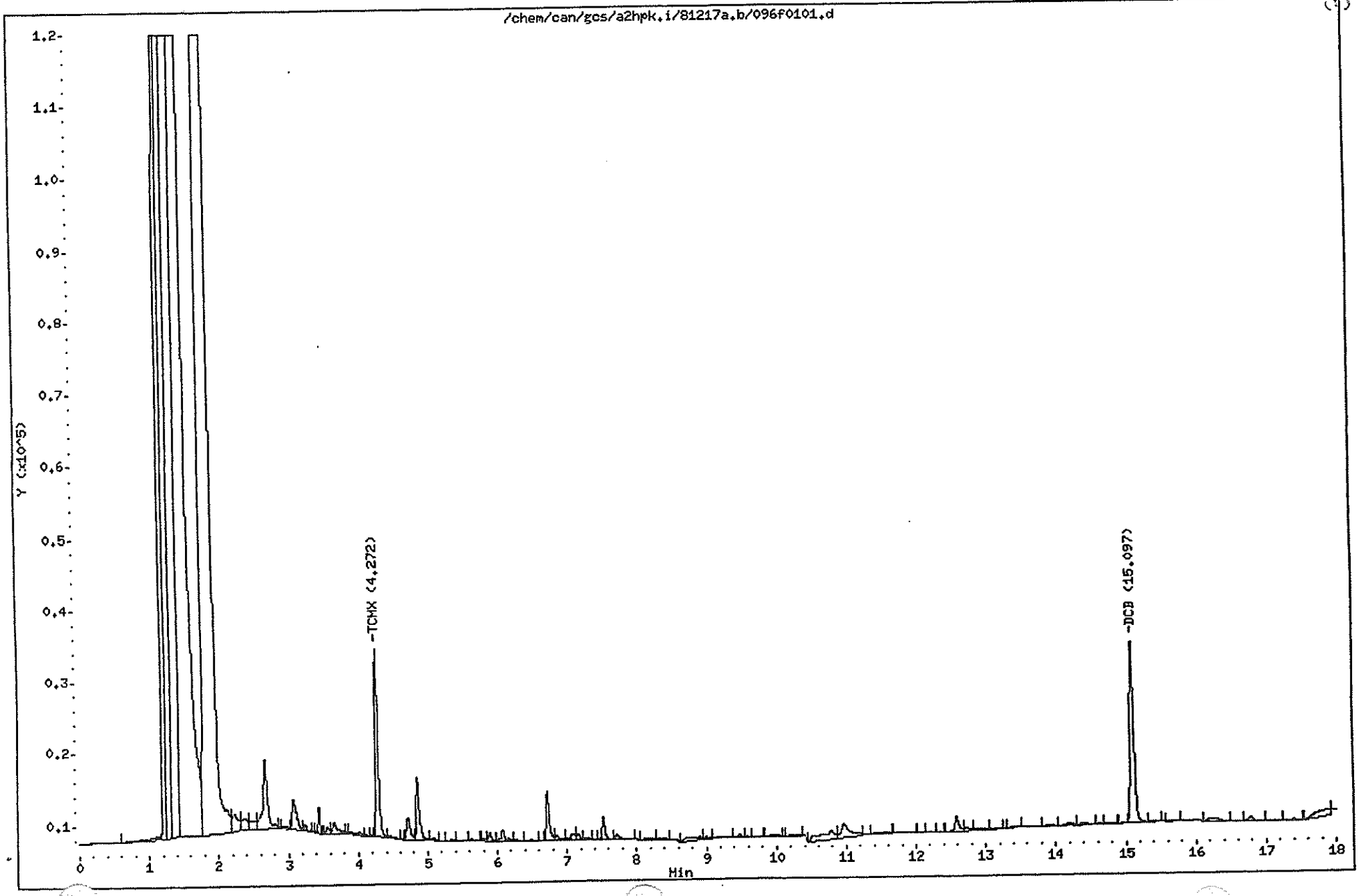
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	25942	0.01582	5.273	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.097	15.097	0.000	25218	0.01913	6.375	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/096f0101.d
Date : 19-DEC-1998 00:34
Client ID: INTRA-LAB BLANK
Sample Info: CNWD6101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R101
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Lab Smp Id: CP07R101 Client Smp ID: INTRA-LAB BLANK
Inj Date : 17-DEC-1998 08:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CP07R101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

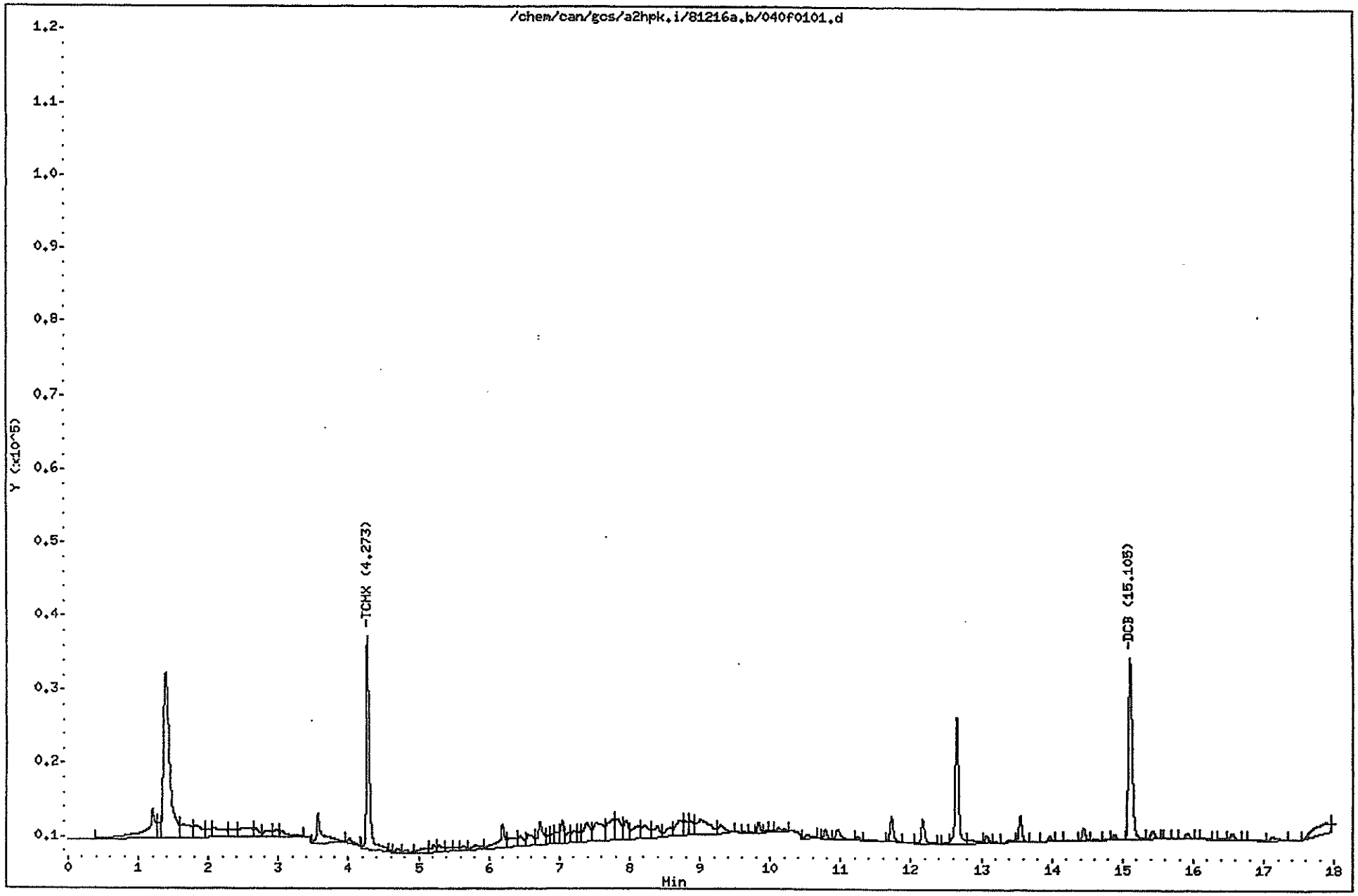
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	29125	0.01776	5.920	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	24672	0.01871	6.237	80.00- 120.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Date : 17-DEC-1998 08:20
Client ID: INTRA-LAB BLANK
Sample Info: CP07R101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



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POLYCHLORINATED BIPHENYLS
INSTRUMENT LOG SHEETS

Sequence: C:\HPCHEM\2\SEQUENCE\81102IC.SEQ

Operator: 0595

Sequence preparation date: 02 Nov 98 03:37 PM

Data File Names: Auto

Data File Subdirectory: 81102IC.B

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

11-2-98 pmr

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX					KPCB2	1
1	8	HEX					KPCB2	1
1	9	HEX					KPCB2	1
1	10	HEX					KPCB2	1
1	11	1660 C064,,1,1					KPCB2	1
1	12	1660 C065,,1,2					KPCB2	1
1	13	1660 C066,,1,3					KPCB2	1
1	14	1660 C067,,1,4					KPCB2	1
1	15	1660 C068,,1,5					KPCB2	1
1	16	2154 C059,,1,1					KPCB2	1
1	17	2154 C060,,1,2					KPCB2	1
1	18	2154 C061,,1,3					KPCB2	1
1	19	2154 C062,,1,4					KPCB2	1
1	20	2154 C063,,1,5					KPCB2	1
1	21	1248 C054,,1,1					KPCB2	1
1	22	1248 C055,,1,2					KPCB2	1
1	23	1248 C056,,1,3					KPCB2	1
1	24	1248 C057,,1,4					KPCB2	1
1	25	1248 C058,,1,5					KPCB2	1
1	26	1242 C049,,1,1					KPCB2	1
1	27	1242 C050,,1,2					KPCB2	1
1	28	1242 C051,,1,3					KPCB2	1
1	29	1242 C052,,1,4					KPCB2	1
1	30	1242 C053,,1,5					KPCB2	1
1	31	1232 C044,,1,1					KPCB2	1
1	32	1232 C045,,1,2					KPCB2	1
1	33	1232 C046,,1,3					KPCB2	1
1	34	1232 C047,,1,4					KPCB2	1
1	35	1232 C048,,1,5					KPCB2	1
1	36						KPCB2	1
1	37						KPCB2	1
1	38						KPCB2	1
1	39						KPCB2	1
1	40						KPCB2	1
1	41						KPCB2	1
1	42						KPCB2	1
	43						KPCB2	1
1	44						KPCB2	1
1	45						KPCB2	1
1	46						KPCB2	1
1	47						KPCB2	1

11-2-98 RMR

11-3-98 RMR

Sequence: C:\HPCHEM\2\SEQUENCE\81216A.SEQ

Operator: 0595

Sequence preparation date: 16 Dec 98 06:38 PM

Data File Names: Auto

Data File Subdirectory: 81216A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	1
1	3	HEX					KPCB2	
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

12-16-98 AMR

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX				KPCB2	1
1	8	1660 C110,,2 Pass				KPCB2	1
1	9	2154 C061,,2				KPCB2	1
1	10	1248 C056,,2				KPCB2	1
1	11	1242 C051,,2				KPCB2	1
1	12	1232 C046,,2				KPCB2	1
1	13	1262 C002,,1,1				KPCB2	1
1	14	1262 C002,,1,2				KPCB2	1
1	15	1262 C002,,1,3				KPCB2	1
1	16	1262 C002,,1,4				KPCB2	1
1	17	1262 C002,,1,5				KPCB2	1
1	18	CNVD6101,2 rerun for 62				KPCB2	1
1	19	CNVD6101,5				KPCB2	1
1	20	CNVCQ101,1000				KPCB2	1
1	21	CNXD3101,1000 rerun 1:2				KPCB2	1
	22	CNW6H101,100				KPCB2	1
	23	CNW6T101,100				KPCB2	1
1	24	CNW6V101,100				KPCB2	1
1	25	CNW6W101,1000				KPCB2	1
1	26	CNW6X101,100				KPCB2	1
1	27	CNW7A101,100				KPCB2	1
1	28	HEX				KPCB2	1
1	29	1660 C110,,2 Pass				KPCB2	1
1	30	1660 C110,,2				KPCB2	1
1	31	CNW7C101,10				KPCB2	1
1	32	CNW7E101 rerun MI 1:5				KPCB2	1
1	33	CNW7G101,100				KPCB2	1
1	34	CNW7H101,100				KPCB2	1
1	35	CNW71101,1000				KPCB2	1
1	36	CNW73101,10 rerun 1:50 MI				KPCB2	1
1	37	CNW74101,100				KPCB2	1
1	38	CNW76101,1000				KPCB2	1
1	39	CNW78101,1000				KPCB2	1
1	40	CP07R101				KPCB2	1
1	41	HEX				KPCB2	1
1	42	1660 C110,,2 Pass				KPCB2	1
1	43	1660 C110,,2				KPCB2	1
	44	CP07R102				KPCB2	1
1	45	CP07R103				KPCB2	1
1	46	CNXA5101,1000				KPCB2	1
1	47	CNXA6101,100				KPCB2	1

12-16-98 AMR

ical for 1262 failed rerun

12-17-98 AMR

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	48	CNX9X101,5		12-17-98 pmR			KPCB2	1
1	49	HEX					KPCB2	1
1	50	1660 C110,,2 Pass 5					KPCB2	1
1	51	1660 C110,,2					KPCB2	1
1	52						KPCB2	1
1	53						KPCB2	1
1	54						KPCB2	1
1	55						KPCB2	1
1	56						KPCB2	1
1	57						KPCB2	1
1	58						KPCB2	1
1	59						KPCB2	1
1	60						KPCB2	1
1	61						KPCB2	1
1	62						KPCB2	1
1	63						KPCB2	1
1	64						KPCB2	
1	65						KPCB2	1
1	66						KPCB2	1
1	67						KPCB2	1
1	68						KPCB2	1
1	69						KPCB2	1
1	70						KPCB2	1
1	71						KPCB2	1
1	72						KPCB2	1
1	73						KPCB2	1
1	74						KPCB2	1
1	75						KPCB2	1
1	76						KPCB2	1
1	77						KPCB2	1
1	78						KPCB2	1
1	79						KPCB2	1
1	80						KPCB2	1
1	81						KPCB2	1
1	82						KPCB2	1
1	83						KPCB2	1
1	84						KPCB2	1
1	85						KPCB2	
1	86						KPCB2	1
1	87						KPCB2	1
1	88						KPCB2	1

17 Dec 98 05:35 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81217A.SEQ

Operator: 0595

Sequence preparation date: 17 Dec 98 05:35 PM

Data File Names: Auto

Data File Subdirectory: 81217A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
	2	HEX					KPCB2	1
1	3	HEX					KPCB2	1
1	4	1660 C110,,2					KPCB2	1
1	5	2154 C061,,2					KPCB2	1
1	6	1248 C056,,2					KPCB2	1

Pass for

inj 12-17-98 BLS

Sample Log Table

inj 12-17-98

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	1242 C051,,2 Pass 5+r					KPCB2	1
1	8	1232 C046,,2					KPCB2	1
1	9	1262 C002,,1,1					KPCB2	1
1	10	1262 C002,,1,2					KPCB2	1
1	11	1262 C002,,1,3 rerun failed					KPCB2	1
1	12	1262 C002,,1,4					KPCB2	1
1	13	1262 C002,,1,5					KPCB2	1
1	14	CNVD6101,2 rerun for 62					KPCB2	1
1	15	CNVD6101,5					KPCB2	1
1	16	CNVCQ101,1000					KPCB2	1
1	17	CNXD3101,5000 Done 12-17-98 BLS					KPCB2	1
1	18	CNW7E101,5					KPCB2	1
1	19	CNW73101,50					KPCB2	1
1	20	CPAE1101					KPCB2	1
1	21	CPAE1102-rerun pass mis inj.					KPCB2	1
1	22	CPA8T102					KPCB2	1
1	23	CPA8W102					KPCB2	
1	24	HEX					KPCB2	
1	25	1660 C110,,2 Pass 5					KPCB2	1
1	26	1660 C110,,2					KPCB2	1
1	27	CPA9C102					KPCB2	1
1	28	CPA9C103					KPCB2	1
1	29	CPA9C104					KPCB2	1
1	30	CPA9F102,5					KPCB2	1
1	31	CPA90102					KPCB2	1
1	32	CPA91102,10					KPCB2	1
1	33	CPA92102					KPCB2	1
1	34	CPA96102,5					KPCB2	1
1	35	CPA98102,10					KPCB2	1
1	36	CPA99102,10					KPCB2	1
1	37	HEX					KPCB2	1
1	38	1660 C110,,2 Pass 5					KPCB2	1
1	39	1660 C110,,2					KPCB2	1
1	40	CP0EH202					KPCB2	1
1	41	CP0EH11A					KPCB2	1
1	42	CP0EH11C					KPCB2	1
1	43	CP0EV202					KPCB2	1
1	44	CP0F0202					KPCB2	
1	45	CP0F2202					KPCB2	
1	46	CP0F4202					KPCB2	1
1	47	CP0F7202					KPCB2	1

inj 12-18-98 BLS

17 Dec 98 05:35 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81217A.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	48	CP0F8202				KPCB2	1
1	49	CP0F9202				KPCB2	1
1	50	HEX				KPCB2	1
1	51	1660 C110,,2 Pass F				KPCB2	1
1	52	1660 C110,,2				KPCB2	1
1	53	CP0FA202				KPCB2	1
1	54	CP0FD202				KPCB2	1
1	55	~~CP0FE202~~ CPAE1-102 12-18-98 AMB failed recent batch				KPCB2	1
1	56	CP0FF202				KPCB2	1
1	57	CP0FG202				KPCB2	1
1	58	CP0FH202				KPCB2	1
1	59	CP0FK202				KPCB2	1
1	60	CP0FL202				KPCB2	1
1	61	CP0FM202				KPCB2	1
1	62	CPC20101				KPCB2	1
	63	~~HEX~~ CP0FE-202				KPCB2	1
1	64	1660 C110,,2				KPCB2	1
1	65	2154 C061,,2				KPCB2	1
1	66	1248 C056,,2				KPCB2	1
1	67	1242 C051,,2				KPCB2	1
1	68	1232 C046,,2				KPCB2	1
1	69	CPC20102				KPCB2	1
1	70	CNW60101,10				KPCB2	1
1	71	CNW64101,10				KPCB2	1
1	72	CNW65101				KPCB2	1
1	73	CNW66101				KPCB2	1
1	74	CNW67101				KPCB2	1
1	75	CNW68101,10				KPCB2	1
1	76	CNW69101				KPCB2	1
1	77	CNW6A101				KPCB2	1
1	78	CNW6C101,10				KPCB2	1
1	79	HEX				KPCB2	1
1	80	1660 C110,,2				KPCB2	1
1	81	1660 C110,,2				KPCB2	1
1	82	CNW6D101				KPCB2	1
1	83	CNW6E101				KPCB2	1
	84	CNW6F101,10				KPCB2	1
1	85	CNW6G101,10				KPCB2	1
1	86	CNW6J101				KPCB2	1
1	87	CNW6L101				KPCB2	1
1	88	CNW6M101,500				KPCB2	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	89	CNW6N101,10					KPCB2	1
1	90	CNW6P101,10					KPCB2	1
1	91	CNW6Q101,10					KPCB2	1
1	92	HEX					KPCB2	1
1	93	1660 C110,,2					KPCB2	1
1	94	1660 C110,,2					KPCB2	1
1	95	CNW6R101,10					KPCB2	1
1	96	CNWD6101					KPCB2	1
1	97	CNWD6102					KPCB2	1
1	98	CNWD6103					KPCB2	1
1	99	1660 C110,,2					KPCB2	1
1	100	1660 C110,,2					KPCB2	1

21 Dec 98 10:55 AM
Sequence: C:\HPCHEM\2\SEQUENCE\81220A.SEQ

Operator: 0595

Sequence preparation date: 21 Dec 98 10:54 AM

Data File Names: Auto

Data File Subdirectory: 81220A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
	2	HEX					KPCB2	1
	3	HEX					KPCB2	1
1	4	1660 C110,,2					KPCB2	1
1	5	2154 C061,,2					KPCB2	1
1	6	1248 C056,,2					KPCB2	1

Pass f+r

328

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	1242 C051,,2	Pass f+r			KPCB2	1
1	8	1232 C046,,2				KPCB2	1
1	~~9~~	~~1262 C002,,1,1~~	I-Cal for 1262 failed Report as 1260, call Gary Wood.			KPCB2	1
1	~~10~~	~~1262 C002,,1,2~~				KPCB2	1
1	~~11~~	~~1262 C002,,1,3~~				KPCB2	1
1	~~12~~	~~1262 C002,,1,4~~				KPCB2	1
1	~~13~~	~~1262 C002,,1,5~~				KPCB2	1
1	14	CNVD6101,2	Done			KPCB2	1
1	15	CNVD6101,5				KPCB2	1
1	16	CNVCQ101,1000				KPCB2	1
1	17	CP169102				KPCB2	1
1	18	CP374101	2-Colr			KPCB2	1
1	19	CP374102,2				KPCB2	1
1	20	CP374103,2				KPCB2	1
1	21	CP3LL103				KPCB2	1
1	22	CP3EP103				KPCB2	1
1	23	CP1Q010J — 2-colr				KPCB2	
1	24	HEX				KPCB2	1
1	25	1660 C110,,2 → missinjected				KPCB2	1
1	26	1660 C110,,2 → OK Pass f+r				KPCB2	1
1	27	CP1RC10J — 2-Colr				KPCB2	1
1	28	CP3JN10J	2-colr			KPCB2	1
1	29	CP3LN10J				KPCB2	1
1	30	CP3LT10J				KPCB2	1
1	31	CP3M310J				KPCB2	1
1	32	CP39P102				KPCB2	1
1	33	CP39P10H				KPCB2	1
1	34	CP39P10J				KPCB2	1
1	35	CP39X102				KPCB2	1
1	36	CP3A1102				KPCB2	1
1	37	HEX				KPCB2	1
1	38	1660 C110,,2	Pass f+r			KPCB2	1
1	39	1660 C110,,2				KPCB2	1
1	40	CP3A3102				KPCB2	1
1	41	CP3A4102				KPCB2	1
1	42	CP3A5102				KPCB2	1
1	43	CP3A6102				KPCB2	1
1	44	CP3A8102,10				KPCB2	
1	45	CP3AC102,50				KPCB2	1
1	46	CP3AE102				KPCB2	1
1	47	CP3AG102				KPCB2	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	48	CP3AJ102				KPCB2	1
1	49	CP3DP102				KPCB2	1
1	50	HEX				KPCB2	1
1	51	1660 C110,,2				KPCB2	1
1	52	1660 C110,,2				KPCB2	1
1	53	CP3DT102				KPCB2	1
1	54	CP3DW101,5				KPCB2	1
1	55	CP3E0101				KPCB2	1
1	56	CP3E2101				KPCB2	1
1	57	CP3E3101,5				KPCB2	1
1	58	CP3E4101				KPCB2	1
1	59	CP3E8102				KPCB2	1
1	60	CP4DC101				KPCB2	1
1	61	CP4DC102 BB				KPCB2	1
1	62	CP3E9102				KPCB2	1
1	63	HEX				KPCB2	1
	64	1660 C110,,2				KPCB2	1
1	65	2154 C061,,2				KPCB2	1
1	66	1248 C056,,2				KPCB2	1
1	67	1242 C051,,2				KPCB2	1
1	68	1232 C046,,2				KPCB2	1
1	69	CP3E9105				KPCB2	1
1	70	CP3E9106				KPCB2	1
1	71	CP3EC102				KPCB2	1
1	72	CP3ED102				KPCB2	1
1	73	CP3EE102				KPCB2	1
1	74	CP3EF102				KPCB2	1
1	75	CP3EH102				KPCB2	1
1	76	CP3EJ102				KPCB2	1
1	77	CP3EK102				KPCB2	1
1	78	CP3EL102				KPCB2	1
1	79	CNW6M101,2000				KPCB2	1
1	80	1660 C110,,2				KPCB2	1
1	81	1660 C110,,2				KPCB2	1
1	82	CP3EM102				KPCB2	1
1	83	CP4DH101				KPCB2	1
1	84	CP4DH102				KPCB2	1
	85	CP3HP102,5				KPCB2	1
1	86	CP3J1102				KPCB2	1
1	87	CP3J2102				KPCB2	1
1	88	CP3J3102				KPCB2	1

Pass f

Pass f

Pass f seq. stopped 12-21-98 11:30

Sequence: C:\HPCHEM\2\SEQUENCE\81221A.SEQ

Operator: 0595

Sequence preparation date: 21 Dec 98 05:16 PM

Data File Names: Auto

Data File Subdirectory: 81221A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	1
1	3	HEX					KPCB2	
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

inj 12-21-98 BLS

Sequence: C:\HPCHEM\2\SEQUENCE\81221A.SEQ

Sample Log Table

Manual Int.; OK!

1254 ok; 1221 ~~??~~ inj 12-21-98

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX					KPCB2	1
1	8	1660 C110,,2					KPCB2	1
1	9	2154 C061,,2					KPCB2	1
1	10	1248 C056,,2					KPCB2	1
1	11	1242 C051,,2					KPCB2	1
1	12	1232 C046,,2					KPCB2	1
1	13	CPF8N101					KPCB2	1
1	14	CPF8N102					KPCB2	1
1	15	CPA8T202					KPCB2	1
1	16	CPA8W202					KPCB2	1
1	17	CPA9C202					KPCB2	1
1	18	CPA9C105					KPCB2	1
1	19	CPA9C106					KPCB2	1
1	20	CPA9F202,5					KPCB2	1
1	21	CPA90202					KPCB2	1
	22	CPA91202,10					KPCB2	1
	23	HEX					KPCB2	1
1	24	1660 C110,,2					KPCB2	1
1	25	1660 C110,,2					KPCB2	1
1	26	CPA92202					KPCB2	1
1	27	CPA96202,5					KPCB2	1
1	28	CPA98202,10					KPCB2	1
1	29	CPA99202,10					KPCB2	1
1	30	CP3EM102					KPCB2	1
1	31	CP4DH101					KPCB2	1
1	32	CP4DH102 RIR					KPCB2	1
1	33	CP3HP102,5					KPCB2	1
1	34	CP3J1102					KPCB2	1
1	35	CP3J2102					KPCB2	1
1	36	CP3J3102					KPCB2	1
1	37	CP3J4102					KPCB2	1
1	38	CP3J5102,10					KPCB2	1
1	39	CP3J8102					KPCB2	1
1	40	HEX					KPCB2	1
1	41	1660 C110,,2					KPCB2	1
1	42	1660 C110,,2					KPCB2	1
	43	CP3J9102					KPCB2	1
	44	CP3JC102,10					KPCB2	1
1	45	CP3JE102					KPCB2	1
1	46	CP08N101					KPCB2	1
1	47	CP08N102					KPCB2	1

Pass f

Pass f

inj 12-22-98

Pass f

processed

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
			Inj 12/22/98 BB				
1	48	CP08N103				KPCB2	1
1	49	CNXAC101,20 RIR 1:100 - ACID - Bad Backend				KPCB2	1
1	50	CNXAD101,10				KPCB2	1
1	51	CNXAG101,20 RIR 1:50 ACID Bad Back end				KPCB2	1
1	52	CNXAJ101,100				KPCB2	1
1	53	HEX				KPCB2	1
1	54	X 1660 C110,,2				KPCB2	1
1	55	1660 C110,,2				KPCB2	1
1	56	X CNXAL101,100				KPCB2	1
1	57	CNXAN101				KPCB2	1
1	58	CNXAR101				KPCB2	1
1	59	CNXAT101				KPCB2	1
1	60	CNXAW101				KPCB2	1
1	61	CNXC1101				KPCB2	1
1	62	CNXCD101,500				KPCB2	1
1	63	CNXCF101,500				KPCB2	1
1	64	CNXCH101				KPCB2	
1	65	CNXCL101				KPCB2	1
1	66	HEX				KPCB2	1
1	67	X 1660 C110,,2 P				KPCB2	1
1	68	2154 C061,,2 P				KPCB2	1
1	69	1248 C056,,2 P				KPCB2	1
1	70	1242 C051,,2 P				KPCB2	1
1	71	1232 C046,,2 P				KPCB2	1
1	72	CNXCM101,10				KPCB2	1
1	73	CNXCN101,10				KPCB2	1
1	74	CNXCP101,10				KPCB2	1
1	75	CNXCQ101,100				KPCB2	1
1	76	CNXCR101,500				KPCB2	1
1	77	CNXD0101				KPCB2	1
1	78	CP37A101				KPCB2	1
1	79	CP37A102,2 Peat Spike				KPCB2	1
1	80	CNXFR102				KPCB2	1
1	81	CNXFR107 Peat Spike				KPCB2	1
1	82	HEX				KPCB2	1
1	83	1660 C110,,2 P				KPCB2	1
1	84	1660 C110,,2 — Did not get sent over in target (Lost)				KPCB2	1
1	85	CP3HL112 update II 1608				KPCB2	
1	86	CP9F5101				KPCB2	1
1	87	CP9F5102,2				KPCB2	1
1	88	CP9F5103,2				KPCB2	1

POLYCHLORINATED BIPHENYLS
ORGANIC EXTRACTION
LOG SHEETS

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 20:30:41

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 001560 Thomas R. Fausnight
001163 Donny E. Williamson

Concentrationist: 009625 Lee J. Nelmes
990005 Charles L. Miller

****
* *
* QC BATCH: 8336232 *
* *
****

PREP DATE: 12/03/98
COMP DATE: 12/03/98

Reviewer/Date: NELMESL / 12/10/98

PCBs (8082)
SONICATION w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	0/00/00	A8L020000-232 CNWD6-1-01B		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L020000-232 CNWD6-1-03C		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 10PPM #3491 1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L020000-232 CNWD6-1-04L	DR	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 10PPM #3491 1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-008 CNW6A-1-01	D	71	QH	SOLID	30.16g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-009 CNW6C-1-01	D	71	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-010 CNW6D-1-01	D	71	QH	SOLID	30.12g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-011 CNW6E-1-01	D	71	QH	SOLID	30.06g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 20:30:41

****
* QC BATCH: 8336232 *
****

PREP DATE: 12/03/98
COMP DATE: 12/03/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-012 CNW6F-1-01	D	71	QH	SOLID	30.08g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-013 CNW6G-1-01	D	71	QH	SOLID	30.04g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-015 CNW6J-1-01	D	71	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-016 CNW6L-1-01	D	71	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-017 CNW6M-1-01	D	71	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-018 CNW6N-1-01	D	71	QH	SOLID	30.08g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-019 CNW6P-1-01	D	71	QH	SOLID	29.10g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS: SAMPLE CONSUMED															
12/15/98	12/16/98	A8L020132-020 CNW6Q-1-01	D	71	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-021 CNW6R-1-01	D	71	QH	SOLID	30.05g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-001 CNW60-1-01	D	71	QH	SOLID	30.02g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 20:30:41

****
* QC BATCH: 8336232 *
****

PREP DATE: 12/03/98
COMP DATE: 12/03/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-002 CNW64-1-01	D	71	QH	SOLID	30.02g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-003 CNW65-1-01	D	71	QH	SOLID	30.07g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-004 CNW66-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-005 CNW67-1-01	D	71	QH	SOLID	30.17g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-006 CNW68-1-01	D	71	QH	SOLID	30.09g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-007 CNW69-1-01	D	71	QH	SOLID	30.18g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

DCM# M38270 ACE# H451-KXKC NA2SO4# 8024-KXRR HEX# M22300
S/S BY DW

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 23

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:06

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 100001 Walsh Cooper
MM Walsh Cooper
NP Walsh Cooper
Concentrationist: 009625 Lee J. Nelmes

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

Reviewer/Date: SALMONSR / 12/10/98

PCBs (8082)
SONICATION w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-014 CNW6H-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-022 CNW6T-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-023 CNW6V-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-024 CNW6W-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-025 CNW6X-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-031 CNW7A-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-032 CNW7C-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:06

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-033 CNW7E-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-034 CNW7G-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-035 CNW7H-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-026 CNW71-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-027 CNW73-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-028 CNW74-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-029 CNW76-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-030 CNW78-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-002 CNXA5-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-003 CNXA6-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:06

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-001 CNX9X-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-01B		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-02C		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 10PPM #3491 1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-03L	DR	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

DCM #M38270 ACE #H451-KXKC HEX #M22300 NA2S04 #8024-KXRR
S/S BY C.W. DONE AS SOXHLETS

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 21

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GENERAL CHEMISTRY
LOG SHEETS

			Quanterra, North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	% SOLIDS				Batch	8338131
Prep Date	12/2/98	Time In	8AM		Analyst	MFG
Anal date	12/3/98	Time Out	2PM		RL	0.1%
Sample	Tare	Sample	Final	diff	Result TS	Result MS
Id	wt	g	wt	g	%	%
BLANK	1.0749	0	1.0742	-0.0007	ND	ND
CNW65	1.0673	1.7155	2.6301	1.5628	91.099	8.901
CNW71	1.0607	1.2633	2.1328	1.0721	84.865	15.135
CNW6L	1.0754	1.3809	2.348	1.2726	92.157	7.843
CNW7G	1.0712	1.2701	2.1525	1.0813	85.135	14.865
~~CNW6E~~	~~1.0609~~	~~1.0344~~		~~-1.0609~~	~~-102.562~~	~~202.562~~ EKP 12/7/98
CNW6F	1.0639	1.2085	2.1894	1.1255	93.132	6.868
CNW6G	1.0612	1.2482	2.2331	1.1719	93.887	6.113
CNW67	1.0765	1.077	1.8974	0.8209	76.221	23.779
CNW60	1.0507	1.0742	2.0514	1.0007	93.158	6.842
CNW7A	1.0804	1.0349	2.0156	0.9352	90.366	9.634
CNW7A/X	1.0668	1.0872	2.0476	0.9808	90.213	9.787
CNW64	1.0647	2.7393	3.4972	2.4325	88.800	11.200
CNW66	1.0594	1.2002	2.2319	1.1725	97.692	2.308
CNW6M	1.0394	1.411	2.2844	1.245	88.235	11.765
CNW7E	1.052	1.2766	2.1244	1.0724	84.004	15.996
CNW6X	1.0389	1.1876	2.0723	1.0334	87.016	12.984
CNW6X/X	1.0564	1.2934	2.1776	1.1212	86.686	13.314
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

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Quanterra General Chemistry Data Review Checklist

Parameter(s): Percent Solids

Batch(es): 8338131

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Calibration/standardization performed per SOP and within specified limits?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?			✓	
B. Sample Results				
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	
2. All reported results bracketed by in control QC ?	✓			
3. Sample analyses done within holding time ?	✓			
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ? *(LCSD, where applicable)*			✓	
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			
3. MS/MSD run at required frequency and within limits ? MS/MSD reported properly and calculated correctly?			✓	
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			
D. Other				
1. Are all nonconformances documented appropriately ?	✓			
2. Calculations checked for error ?	✓			
3. Transcriptions checked for error ?	✓			
4. All client/project specific requirements met ?	✓			
5. Date/time of analysis verified as correct ?	✓			
6. Units verified as correct?	✓			
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	

Level I Analyst: Erin Drummond Date: 12/7/98

Comments:

Level II Reviewer: [illegible] Date: 12-8-98

Comments:

343

N:\WetChem\gchemchk

			Quanterra, North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	% SOLIDS				Batch	8338132
Prep Date	12/2/98	Time In	2PM		Analyst	MFG
Anal date	12/3/98	Time Out	2PM		RL	0.1%
Sample	Tare	Sample	Final	diff	Result TS	Result MS
Id	wt	g	wt	g	%	%
BLANK	1.0378	0	1.0376	-0.0002	ND	ND
CNW6A	1.0394	1.0421	1.9831	0.9437	90.558	9.442
CNW6V	1.0563	1.3618	2.2673	1.211	88.926	11.074
CNW6R	1.0573	1.1777	2.1547	1.0974	93.182	6.818
CNW6P	1.0709	1.6964	1.5949	0.524	30.889	69.111
CNW6Q	1.057	1.4558	2.4068	1.3498	92.719	7.281
CNW6N	1.0712	2.6722	3.3165	2.2453	84.024	15.976
CNW6H	1.0586	1.3354	2.2196	1.161	86.940	13.060
CNW6J	1.0688	1.2318	2.2198	1.151	93.440	6.560
CNW69	1.0374	1.1224	2.0676	1.0302	91.785	8.215
CNW68	1.0531	1.7722	2.6715	1.6184	91.322	8.678
CNW68/X	1.073	1.3014	2.2683	1.1953	91.847	8.153
CNW74	1.0691	1.1153	2.0691	1	89.662	10.338
CNW7H	1.0683	1.5455	2.2625	1.1942	77.269	22.731
CNW73	1.056	1.3614	2.2941	1.2381	90.943	9.057
CNW6W	1.0444	1.148	2.1619	1.1175	97.343	2.657
CNW78	1.0663	1.4592	2.3501	1.2838	87.980	12.020
CNW7C	1.0622	1.0816	2.0387	0.9765	90.283	9.717
CNW76	1.0554	1.64	2.5494	1.494	91.098	8.902
CNW6T	1.0498	1.5557	2.3842	1.3344	85.775	14.225
CNW6D	1.0415	1.297	2.2368	1.1953	92.159	7.841
CNW6C	1.0625	1.136	2.1039	1.0414	91.673	8.327
CNW6C/X	1.0507	1.0845	2.0792	1.0285	94.836	5.164
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): Percent Solids

Batch(es): 8338132

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Calibration/standardization performed per SOP and within specified limits?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?			✓	
B. Sample Results				
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	
2. All reported results bracketed by in control QC ?	✓			
3. Sample analyses done within holding time ?	✓			
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ? *(LCSD, where applicable)*			✓	
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			
3. MS/MSD run at required frequency and within limits ? MS/MSD reported properly and calculated correctly?			✓	
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			
D. Other				
1. Are all nonconformances documented appropriately ?	✓			
2. Calculations checked for error ?	✓			
3. Transcriptions checked for error ?	✓			
4. All client/project specific requirements met ?	✓			
5. Date/time of analysis verified as correct ?	✓			
6. Units verified as correct?	✓			
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓

Level I Analyst: Erin Drummond **Date:** 12/7/98

Comments:

Level II Reviewer: [signature] **Date:** 981206

Comments:

Quanterra, North Canton

Percent Total Solid/Percent Moisture Logsheet

Analysis	% SOLIDS				Batch	8349319
Prep Date	12/15/98	Time In	14:00		Analyst	EKD
Anal date	12/16/98	Time Out	9:00		RL	0.1%

Sample Id	Tare wt	Sample g	Final wt	diff g	Result TS %	Result MS %
BLANK	1.044	0	1.0435	-0.0005	ND	ND
CP16R	1.0561	5.5331	5.5611	4.505	81.419	18.581
CP16RX	1.0573	7.5498	7.31	6.2527	82.819	17.181
CP16V	1.0483	8.0462	7.523	6.4747	80.469	19.531
CP16X	1.0574	9.2793	8.3875	7.3301	78.994	21.006
CP170	1.0605	9.9954	9.1489	8.0884	80.921	19.079
CP172	1.0611	7.2083	7.207	6.1459	85.261	14.739
CP173	1.0637	8.4078	7.707	6.6433	79.014	20.986
CP176	1.0619	8.0437	7.828	6.7661	84.117	15.883
CP177	1.0617	5.5787	5.6368	4.5751	82.010	17.990
CP17A	1.0569	6.4482	6.1046	5.0477	78.281	21.719
CP17D	1.0562	7.6064	6.8042	5.748	75.568	24.432
CNW6E	1.043	1.0655	2.0748	1.0318	96.837	3.163
CNW6EX	1.0536	1.27	2.2805	1.2269	96.606	3.394
CNWNN	1.0577	5.6479	5.9752	4.9175	87.068	12.932
CNWNP	1.064	5.8445	6.1401	5.0761	86.853	13.147
CNWNQ	1.0454	5.1504	5.4958	4.4504	86.409	13.591
CNWNR	1.0414	4.7867	5.1959	4.1545	86.793	13.207
CNWNT	1.0417	4.7103	4.8802	3.8385	81.492	18.508
CNWNV	1.0681	4.9374	4.3407	3.2726	66.282	33.718
CNWNW	1.0511	5.268	5.2948	4.2437	80.556	19.444
CNWNX	1.0634	4.6035	4.034	2.9706	64.529	35.471
CNWP0	1.0437	6.7952	6.6423	5.5986	82.391	17.609
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): % Solids

Batch(es): 8349319

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Calibration/standardization performed per SOP and within specified limits?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?			✓	
B. Sample Results				
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	
2. All reported results bracketed by in control QC ?	✓			
3. Sample analyses done within holding time ?	✓			
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ? *(LCSD, where applicable)*			✓	
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			
3. MS/MSD run at required frequency and within limits ? MS/MSD reported properly and calculated correctly?			✓	
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			
D. Other				
1. Are all nonconformances documented appropriately ?	✓			
2. Calculations checked for error ?	✓			
3. Transcriptions checked for error ?	✓			
4. All client/project specific requirements met ?	✓			
5. Date/time of analysis verified as correct ?	✓			
6. Units verified as correct?	✓			
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓

Level I Analyst: Erin Drummond Date: 12/16/98

Comments:

Level II Reviewer: P. Davis Date: 981217

Comments:

COOLER RECEIPT FORM

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client: CRA Project: _____ Quote# 25175
Cooler Received on: 12-2-98 Opened on: 12-2-98 by: [signature] (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐
Other: _____

Cooler ☒ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
Quanterra Shipper No#: H100

1. Were custody seals on the outside of the cooler and intact? Yes ☒ No ☐
   If YES, Quantity 1 Location over closure
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☒ None ☐ Other: _____
6. Cooler temperature upon receipt 0.3 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial ☐ Coolant ☒ Against Bottles ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ None ☐
7. Were all the bottles sealed in separate plastic bags? Yes ☐ No ☒
8. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
9. Did all bottle labels and tags agree with the custody papers? Yes ☒ No ☐
10. Were samples at the correct pH? Yes ☐ No ☐ NA ☒
11. Were correct bottles used for the tests indicated? Yes ☒ No ☐
12. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
13. Was a sufficient amount of sample sent in each bottle? ? Yes ☐ No ☐
Contacted PM ALM Date: 12-2-98 by: ce via Voice Mail ☒ Verbal ☐ Other ☐
Concerning: limited Qnty

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ ° C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
X	N/A	See back for other anomalies Rec'd only one small container for each sample PM aware

INTERNAL CHAIN-OF-CUSTODY

RSR280

Client: 1628

Lot #: A8L020132

Case Number/SDG: 13307

Storage Location: W20

Quanterra Incorporated
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
CNW60	EZZOL	12/02/98	Yes		Storage	
CNW64	EZZOL	12/02/98	Yes		Storage	
CNW65	EZZOL	12/02/98	Yes		Storage	
CNW66	EZZOL	12/02/98	Yes		Storage	
CNW67	EZZOL	12/02/98	Yes		Storage	
CNW68	EZZOL	12/02/98	Yes		Storage	
CNW69	EZZOL	12/02/98	Yes		Storage	
CNW6A	EZZOL	12/02/98	Yes		Storage	
CNW6C	EZZOL	12/02/98	Yes		Storage	
CNW6D	EZZOL	12/02/98	Yes		Storage	
CNW6E	EZZOL	12/02/98	Yes		Storage	
CNW6F	EZZOL	12/02/98	Yes		Storage	
CNW6G	EZZOL	12/02/98	Yes		Storage	
CNW6H	EZZOL	12/02/98	Yes		Storage	
CNW6J	EZZOL	12/02/98	Yes		Storage	
CNW6L	EZZOL	12/02/98	Yes		Storage	
CNW6M	EZZOL	12/02/98	Yes		Storage	
CNW6N	EZZOL	12/02/98	Yes		Storage	
CNW6P	EZZOL	12/02/98	Yes		Storage	
CNW6Q	EZZOL	12/02/98	Yes		Storage	
CNW6R	EZZOL	12/02/98	Yes		Storage	
CNW6T	EZZOL	12/02/98	Yes		Storage	
CNW6V	EZZOL	12/02/98	Yes		Storage	

RSR280

Quanterra Incorporated
Sample Control Record

Client: 1628

Lot #: A8L020132

Case Number/SDG: 13307

Storage Location: W20

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
CNW6W	EZZOL	12/02/98	Yes		Storage	
CNW6X	EZZOL	12/02/98	Yes		Storage	
CNW71	EZZOL	12/02/98	Yes		Storage	
CNW73	EZZOL	12/02/98	Yes		Storage	
CNW74	EZZOL	12/02/98	Yes		Storage	
CNW76	EZZOL	12/02/98	Yes		Storage	
CNW78	EZZOL	12/02/98	Yes		Storage	
CNW7A	EZZOL	12/02/98	Yes		Storage	
CNW7C	EZZOL	12/02/98	Yes		Storage	
CNW7E	EZZOL	12/02/98	Yes		Storage	
CNW7G	EZZOL	12/02/98	Yes		Storage	
CNW7H	EZZOL	12/02/98	Yes		Storage	

LOT NUMBER	SAMPLE	SAMPLE SUFFIX	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	DATE OF TRANSFER	TRANSFERRED BY	ANALYSIS DATE	ANALYST
A8L020132	1		CNW60101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	2		CNW64101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	3		CNW65101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	4		CNW66101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	5		CNW67101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	6		CNW68101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	7		CNW69101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	8		CNW6A101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	9		CNW6C101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	10		CNW6D101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	11		CNW6E101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	12		CNW6F101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	13		CNW6G101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	14		CNW6H101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	15		CNW6J101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	16		CNW6L101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	17		CNW6M101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/21/98	Raymond Risden
A8L020132	18		CNW6N101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	19		CNW6P101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	20		CNW6Q101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/18/98	Raymond Risden
A8L020132	21		CNW6R101	GC8082_S	12/03/98	Eric Miller	12/10/98	Lee Nelmes	12/19/98	Raymond Risden
A8L020132	22		CNW6T101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	23		CNW6V101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	24		CNW6W101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	25		CNW6X101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden

LOT NUMBER	SAMPLE	SAMPLE SUFFIX	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	DATE OF TRANSFER	TRANSFERRED BY	ANALYSIS DATE	ANALYST
A8L020132	26		CNW71101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	27		CNW73101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	28		CNW74101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	29		CNW76101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	30		CNW78101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	31		CNW7A101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	32		CNW7C101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	33		CNW7E101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	34		CNW7G101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L020132	35		CNW7H101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden

*** E N D O F R E P O R T ***

LOT NUMBER	SAMPLE	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	ANALYSIS DATE	ANALYST
A8L020132	1	CNM60102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	2	CNM64102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	3	CNM65102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	4	CNM66102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	5	CNM67102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	6	CNM68104	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	7	CNM69102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	8	CNM6A102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	9	CNM6C102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	10	CNM6D102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	11	CNM6E102	TS	12/15/98	Erin Drummond	12/16/98	Erin Drummond
A8L020132	12	CNM6F102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	13	CNM6G102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	14	CNM6H104	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	15	CNM6J102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	16	CNM6L102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	17	CNM6M102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	18	CNM6N102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	19	CNM6P102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	20	CNM6Q102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	21	CNM6R102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	22	CNM6T102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	23	CNM6V102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	24	CNM6W104	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
A8L020132	25	CNM6X102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond

LOT NUMBER	SAMPLE	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	ANALYSIS DATE	ANALYST
ABL020132	26	CNW71102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	27	CNW73102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	28	CNW74102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	29	CNW76102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	30	CNW78102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	31	CNW7A102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	32	CNW7C102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	33	CNW7E102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	34	CNW7G104	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond
ABL020132	35	CNW7H102	TS	12/02/98	Melissa Fuller-Gustavel	12/03/98	Erin Drummond

*** END OF REPORT ***

CHAIN-OF-CUSTODY

p1 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): QuanTerra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	12/1/98		S-120198-IH-001	soil	1	✓	standard Turn
			002		1	✓	
			003		1	✓	
			004		1	✓	
			005		1	✓	
			006		1	✓	MS/MSD
			007		1	✓	
			008		1	✓	
			009		1	✓	
			010		1	✓	
			011		1	✓	
			012		1	✓	
			013		1	✓	
			014		1	✓	MS/MSD
			015		1	✓	
			TOTAL NUMBER OF CONTAINERS		15		

RELINQUISHED BY: ① John Hargens	DATE: 12/1/98 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed EX AIR BILL No. 808 686399535

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:
DATE: 12-2-98 TIME: 10:00

4053

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

p 2 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	12/1/98		S-120198-SH-016	soil	1	✓	
			017		1	✓	
			018		1	✓	
			019		1	✓	
			020		1	✓	
			021		1	✓	
			022		1	✓	
			023		1	✓	
			024		1	✓	MS/MSD
			025		1	✓	
			026		1	✓	
			027		1	✓	
			028		1	✓	
			029		1	✓	
			030		1	✓	
			TOTAL NUMBER OF CONTAINERS		15		

RELINQUISHED BY: ① John Hargens	DATE: 12/1/98 TIME: 1400	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 808686399535

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [illegible]
DATE: 12-2-98 TIME: 10:00

4054

1001(FOR -OCT 24/96-REV.0-(C)(F-01)

p3 of 3

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	12/1/98		S-120198-JH-0[redacted]31	soil	1	✓	
			0[redacted]32		1	✓	
			0[redacted]33		1	✓	
			034		1	✓	MS/MSD
			035		1	✓	

TOTAL NUMBER OF CONTAINERS 5 +15 +15 = 35 Total

RELINQUISHED BY:	DATE: / TIME:	RECEIVED BY:	DATE: / TIME:
① John Hargens	12/1/98 / 1900	②	
②		③	
③		④	

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 808686399535

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

DATE: 12-2-98 TIME: 1000

4045

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
330 497-0772 Fax

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR

Lot #: A9B040136

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Amy L. McCormick
Project Manager

February 4, 1999

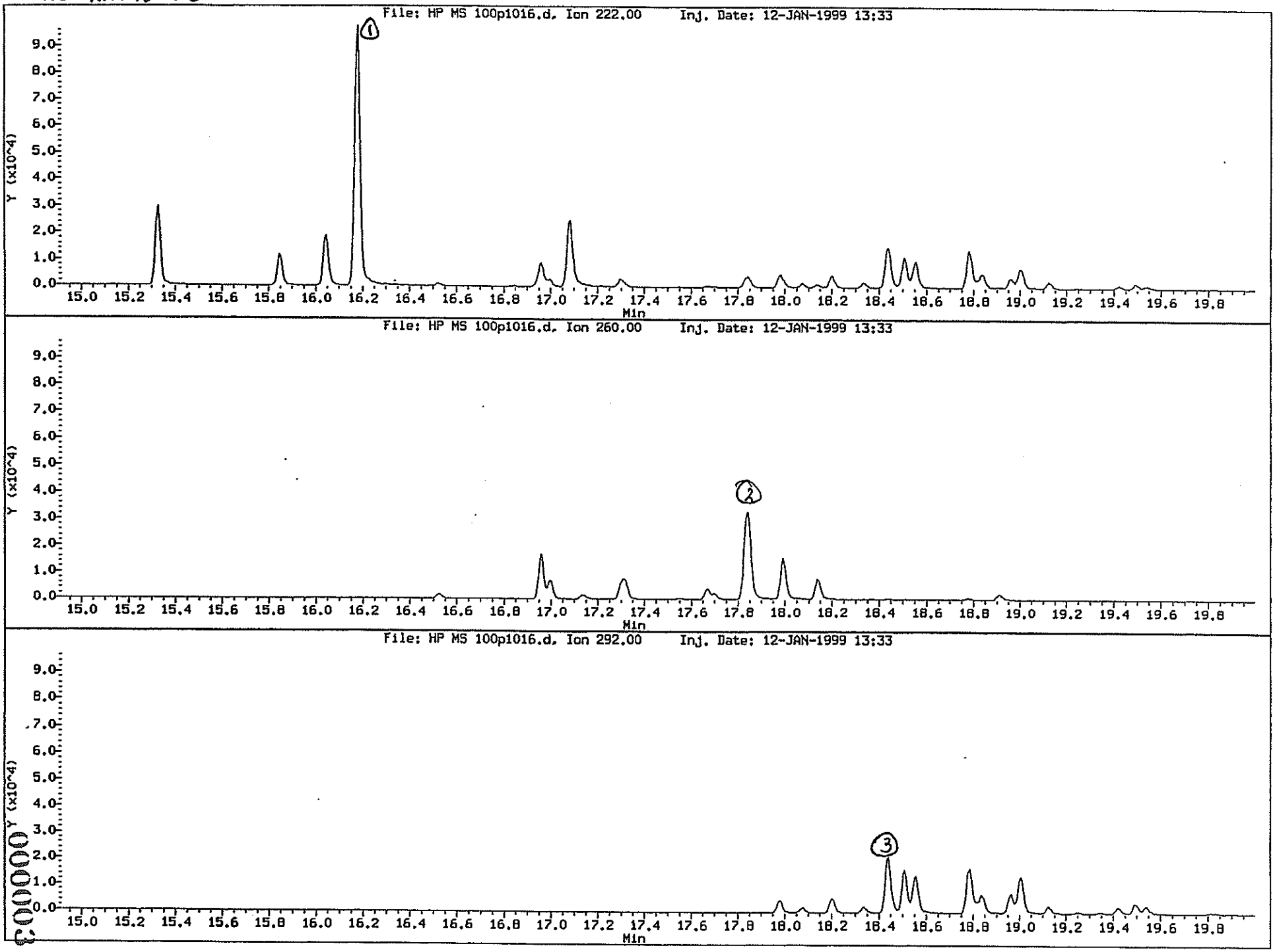
CASE NARRATIVE

The following report contains the chromatograms from the GC/MS confirmation of one solid sample submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar Site, project number 13307. The sample was received December 2, 1998, according to documented sample acceptance procedures and was analyzed for Polychlorinated Biphenyls. On January 8, 1999, the client requested GC/MS confirmation.

Quanterra utilizes USEPA approved methods in all analytical work. Results were provided by facsimile transmission to Steve Day on January 15 and 18, 1999.

AROCLOR 1016
STANDARD

100NG AR1016 STD



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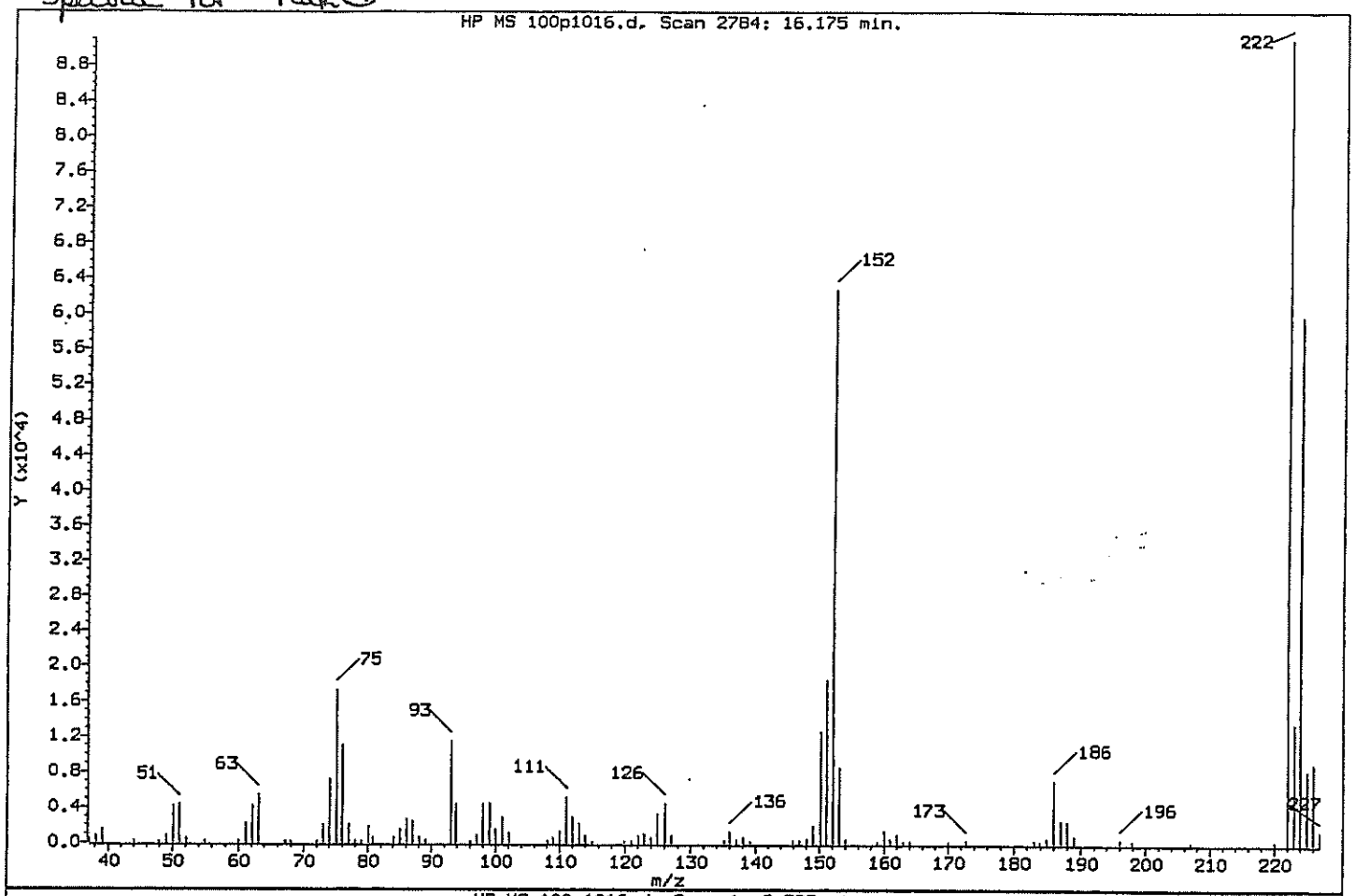
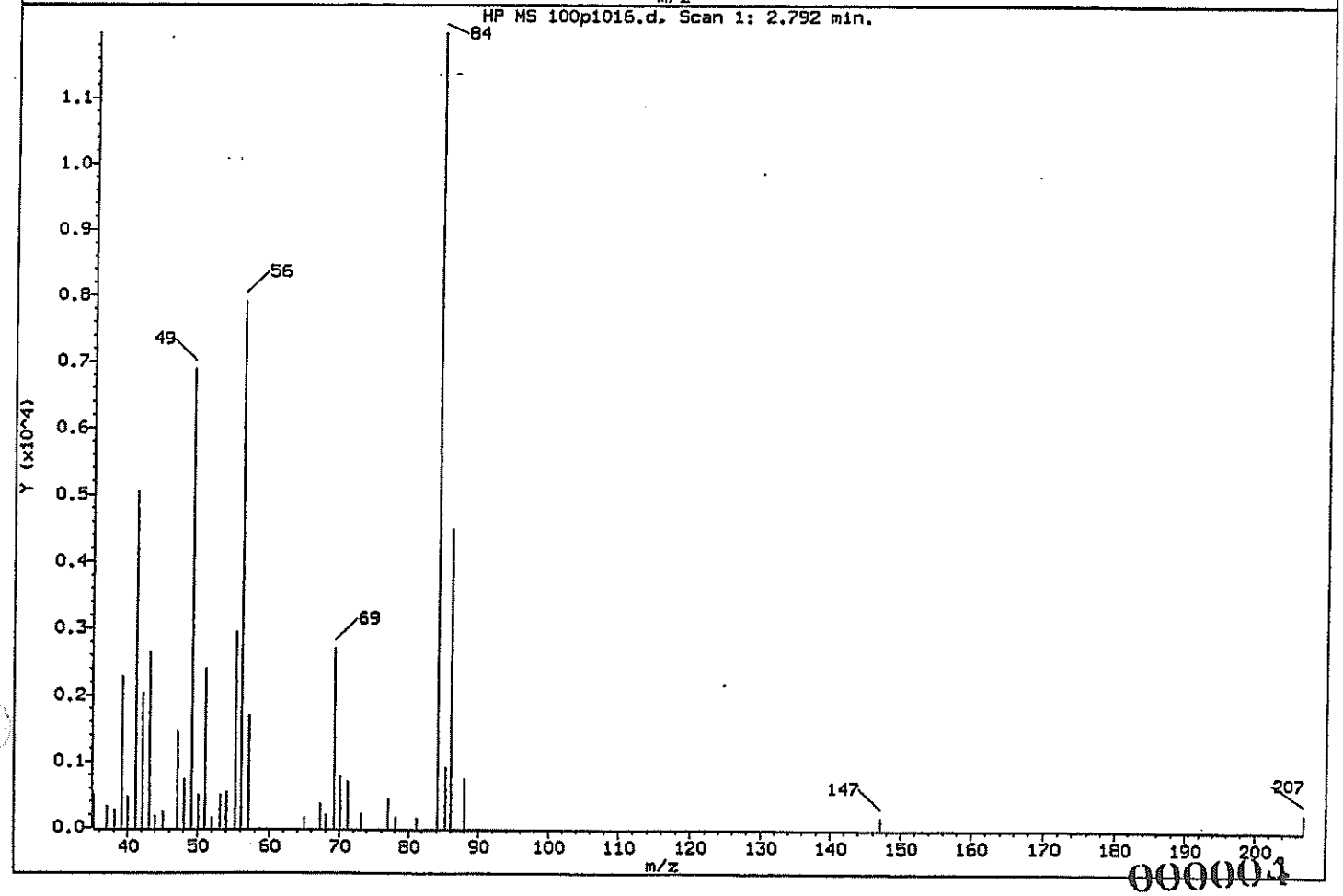
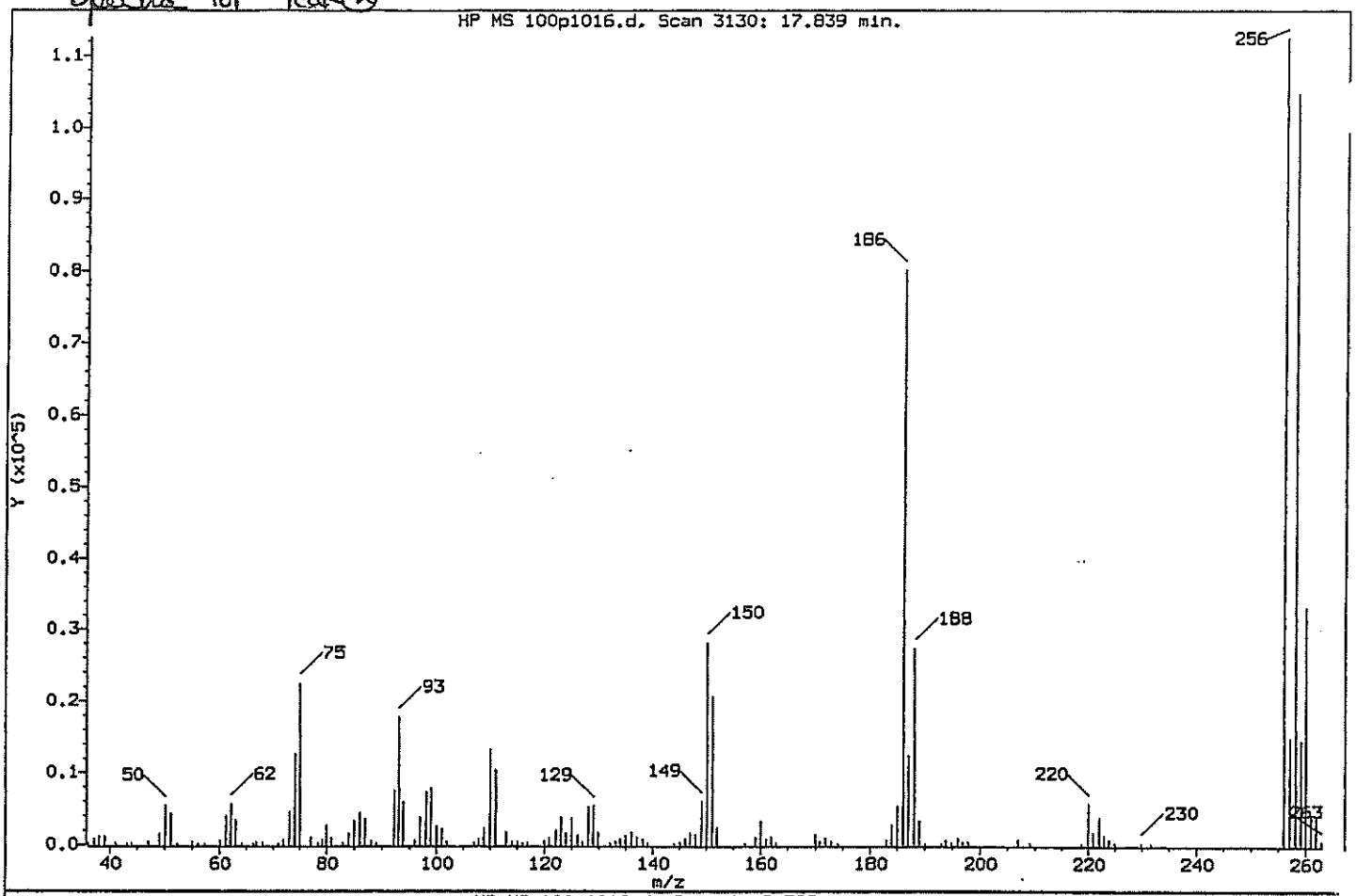
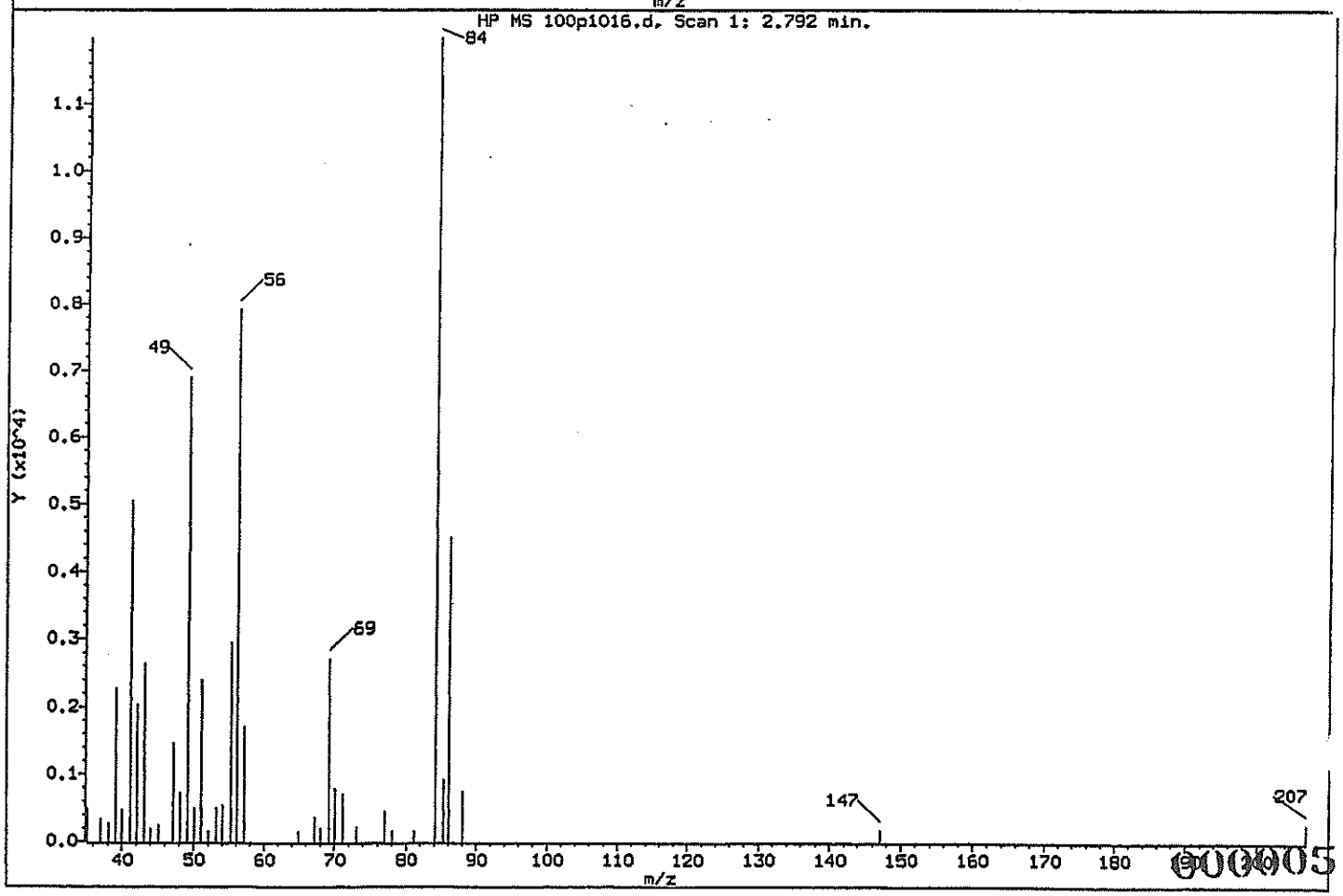




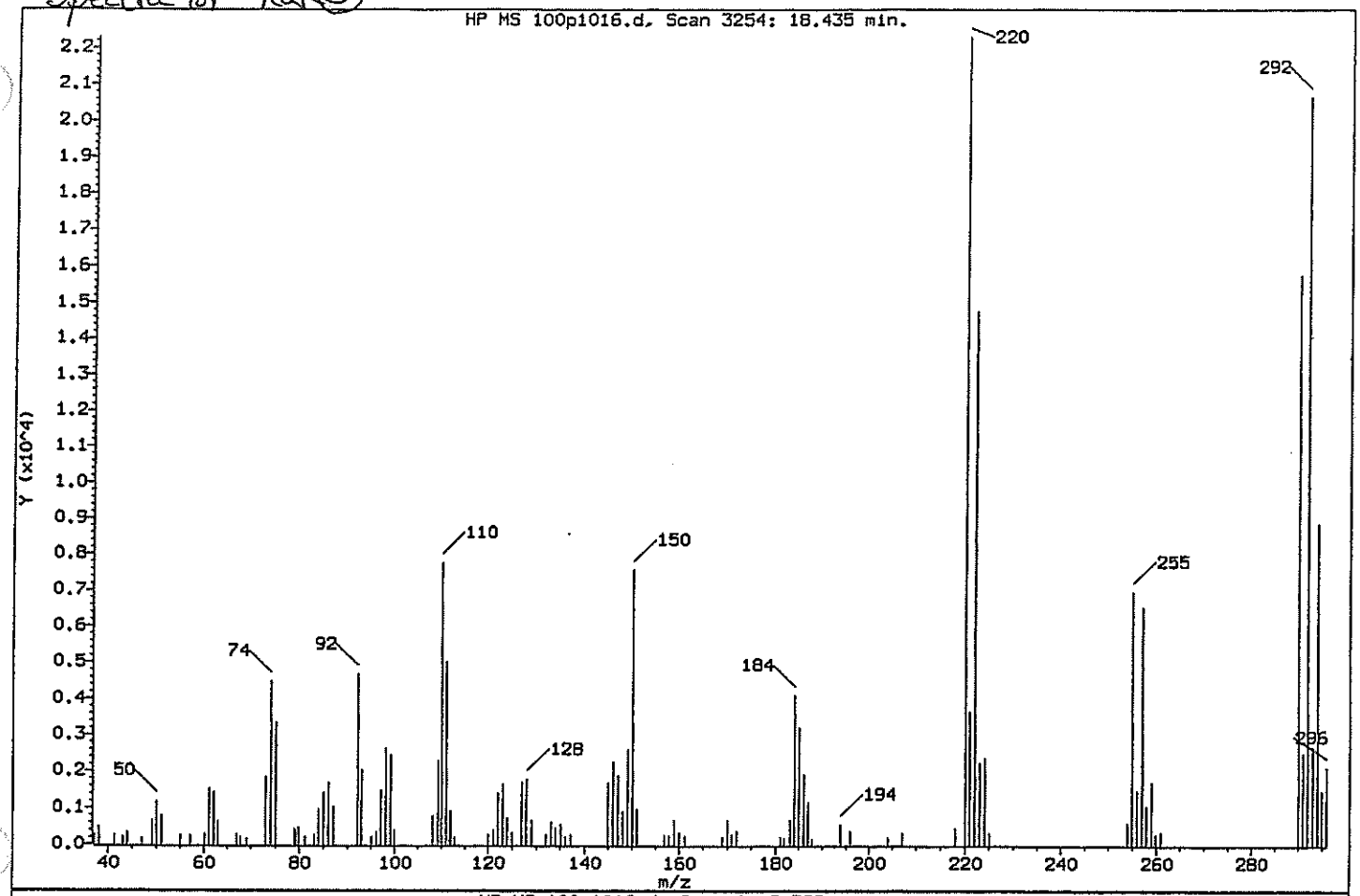
000001

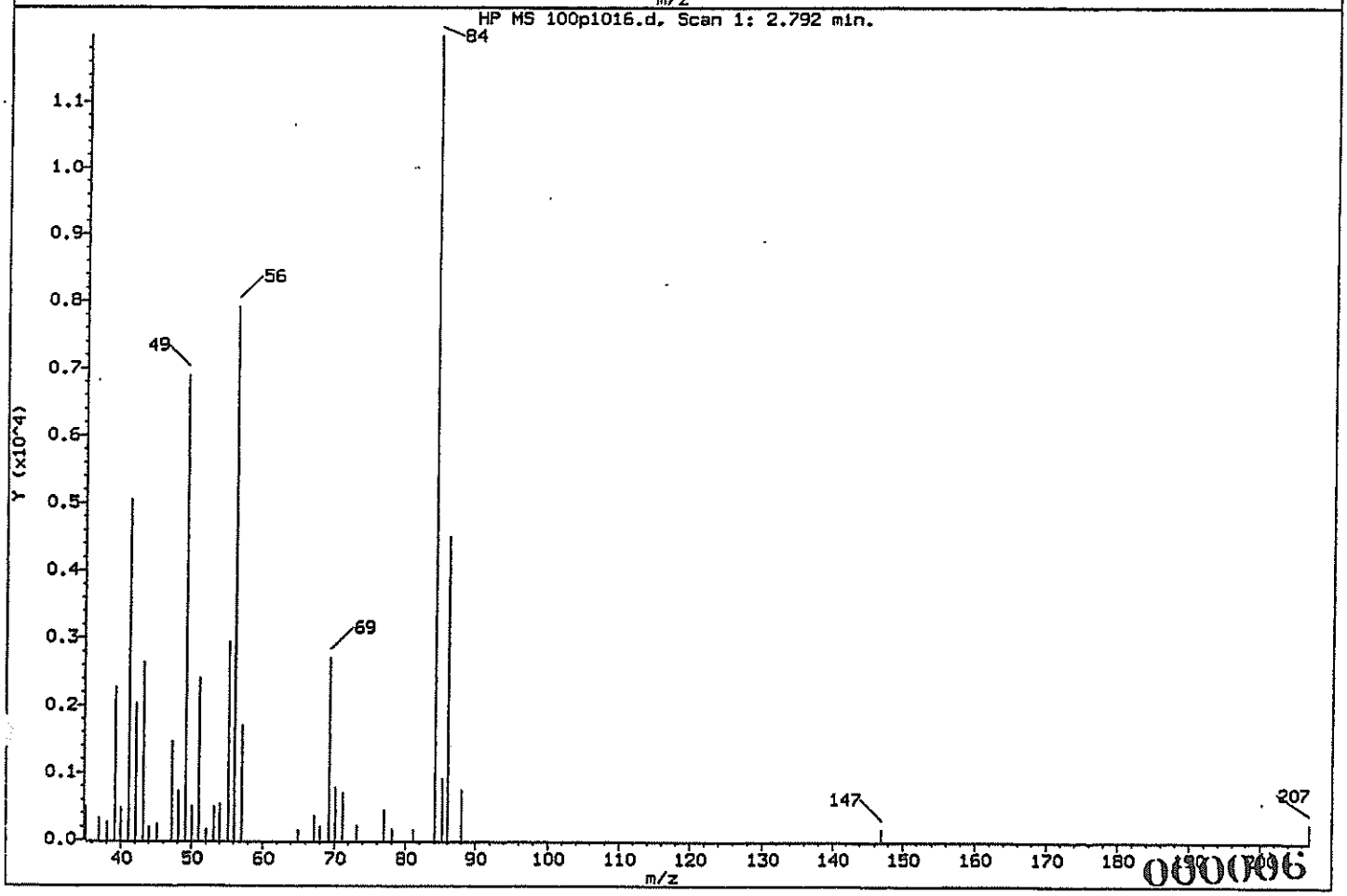
Spectra for Peak (2)





Spectra for Peak 3





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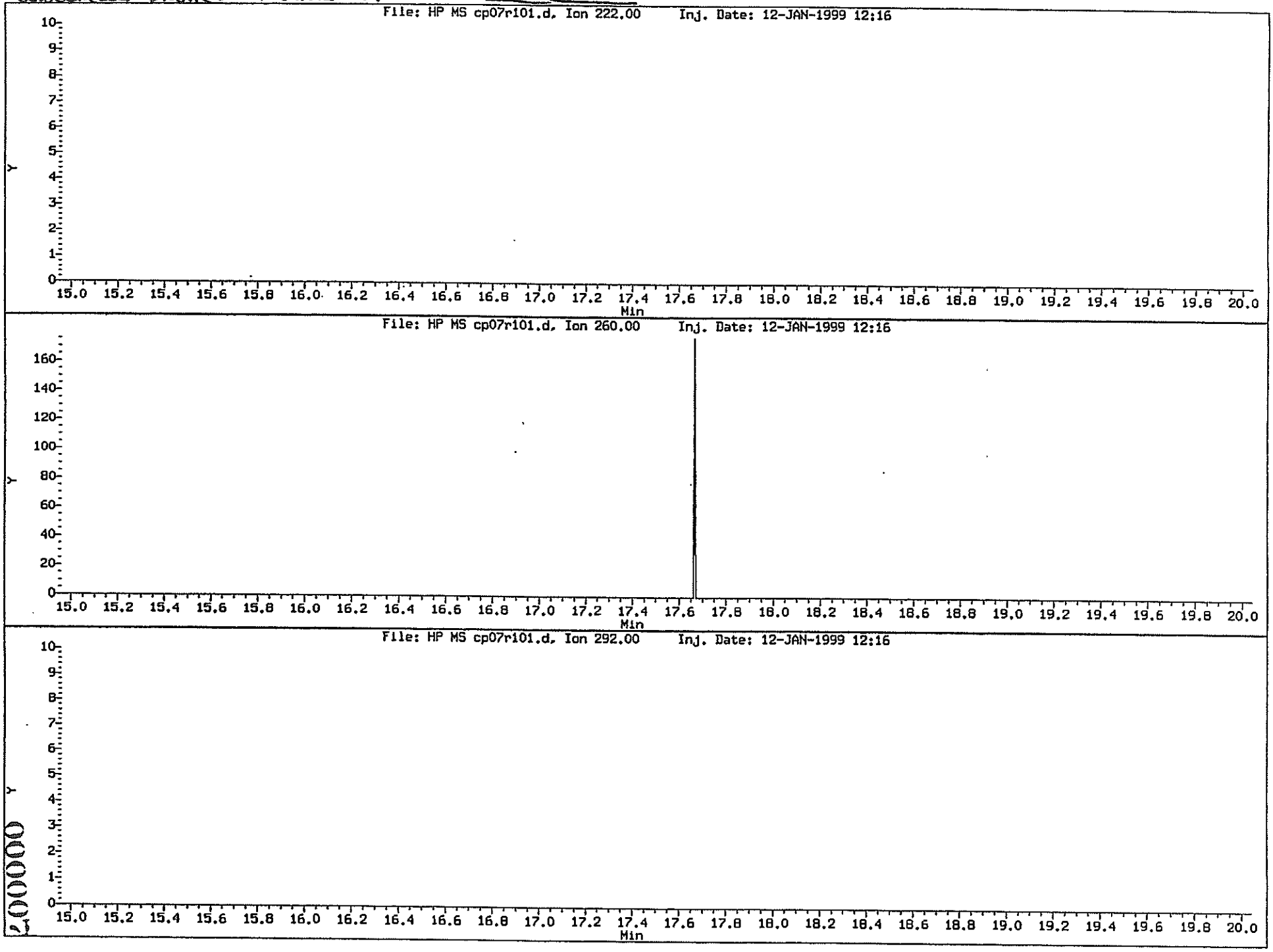
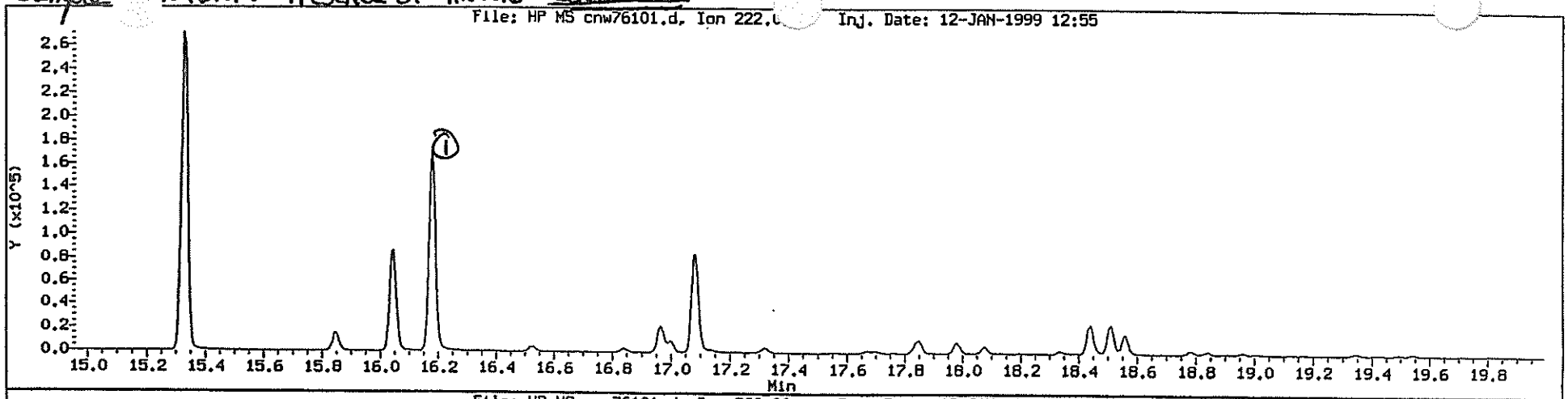
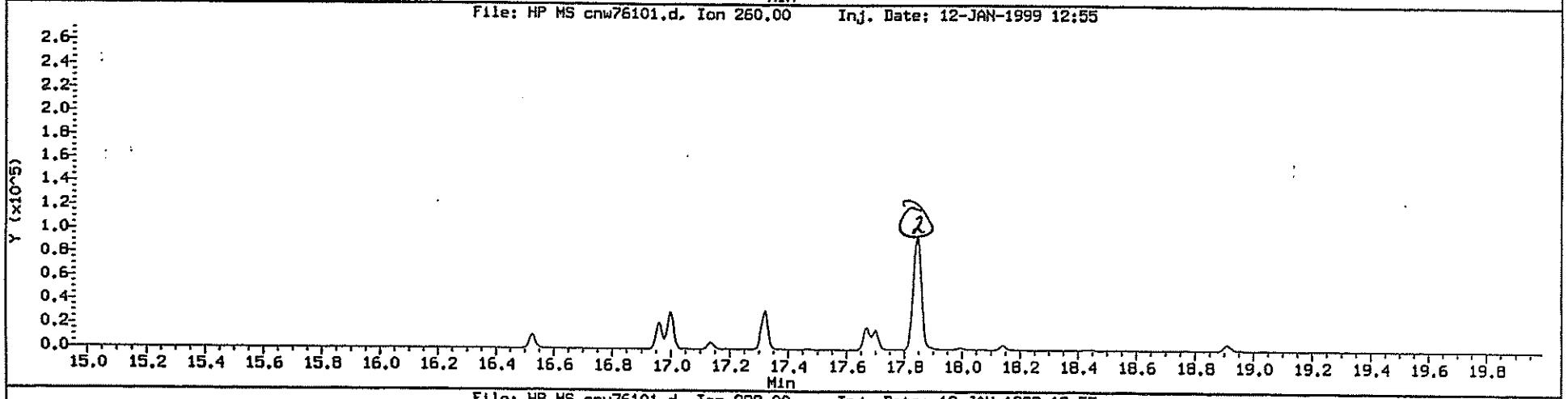
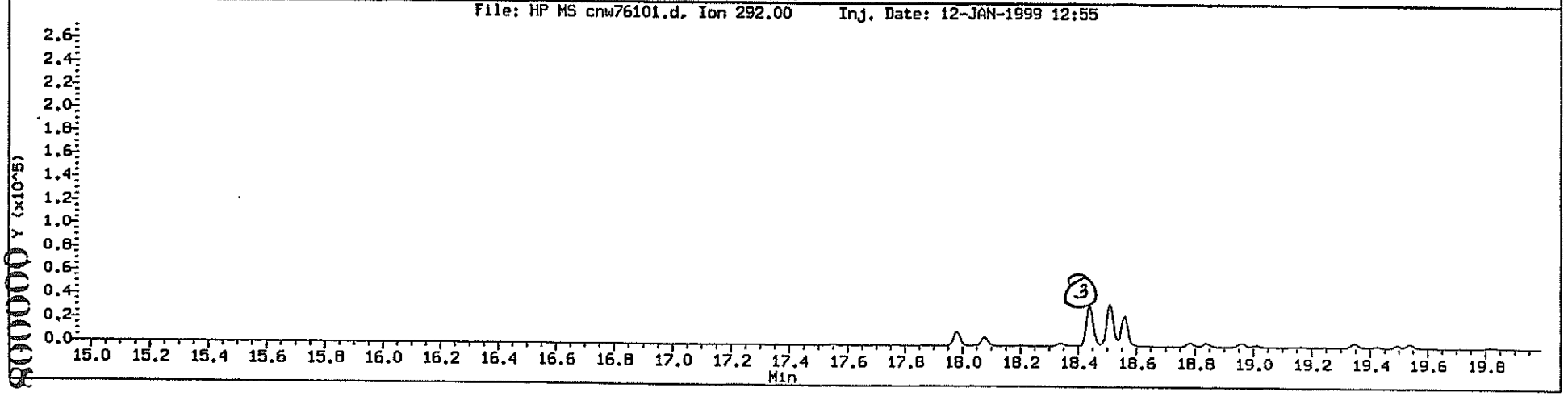


Sample cnw76101: Presence of AR1016 Confirmed:







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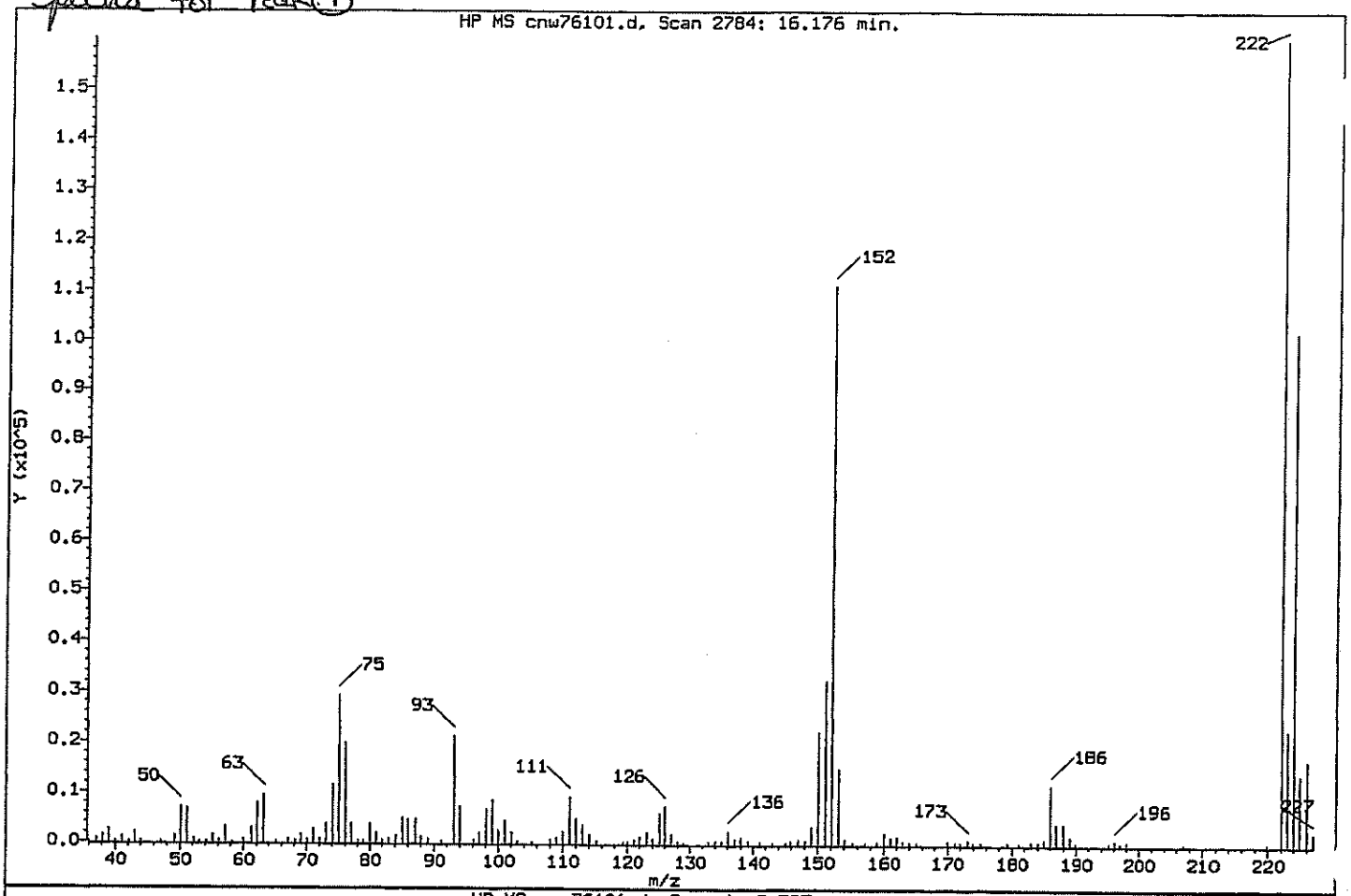

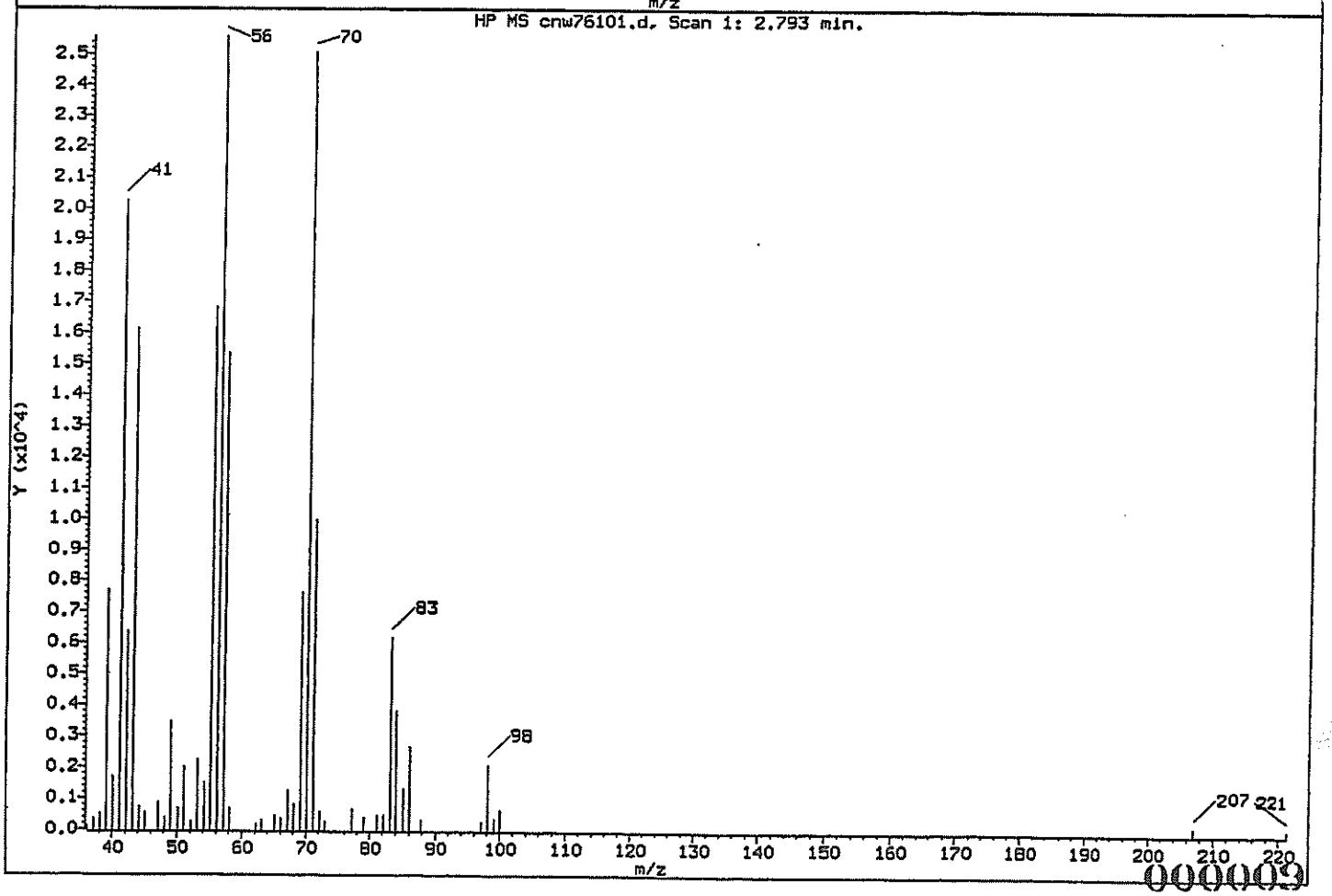

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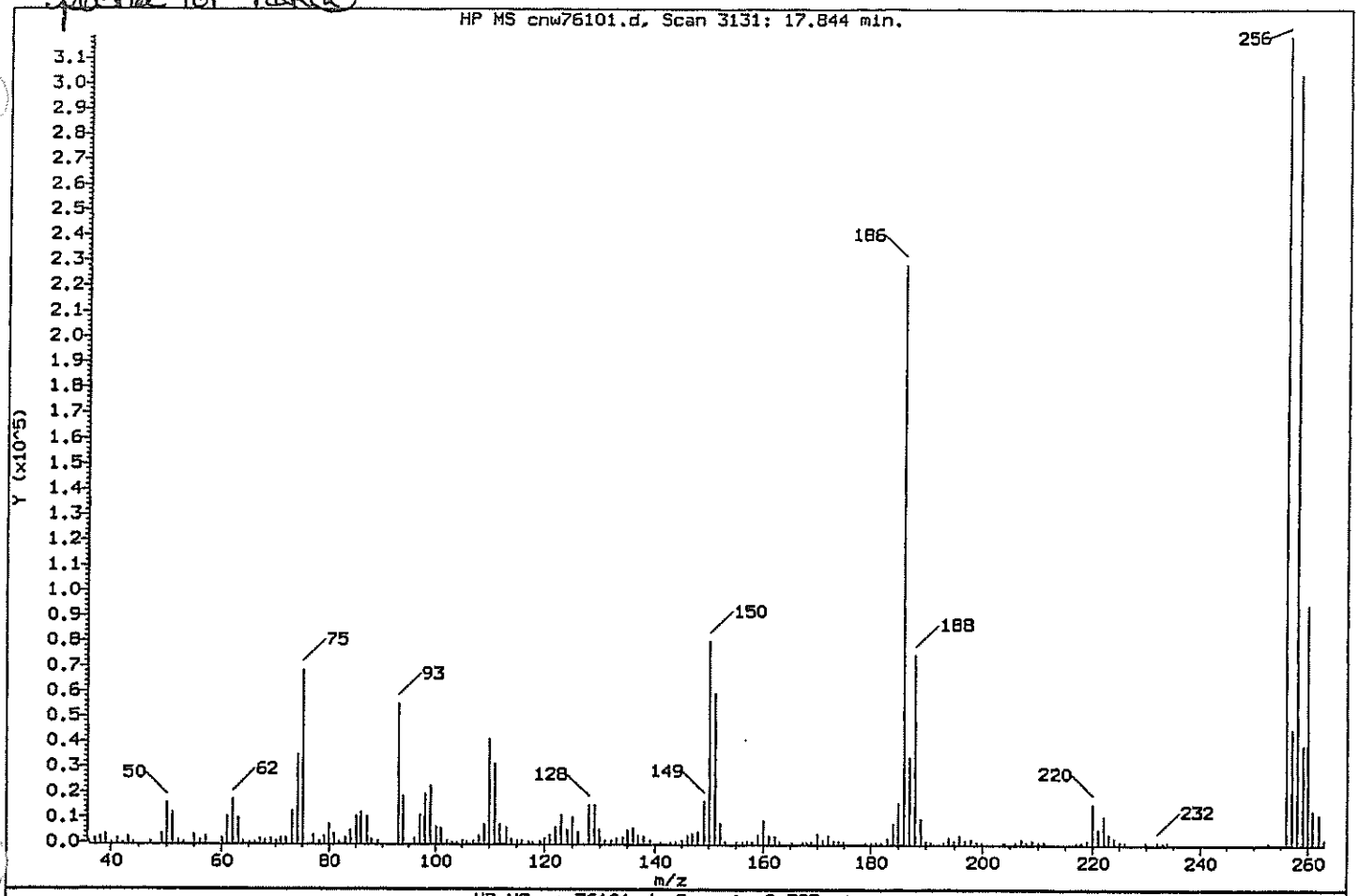

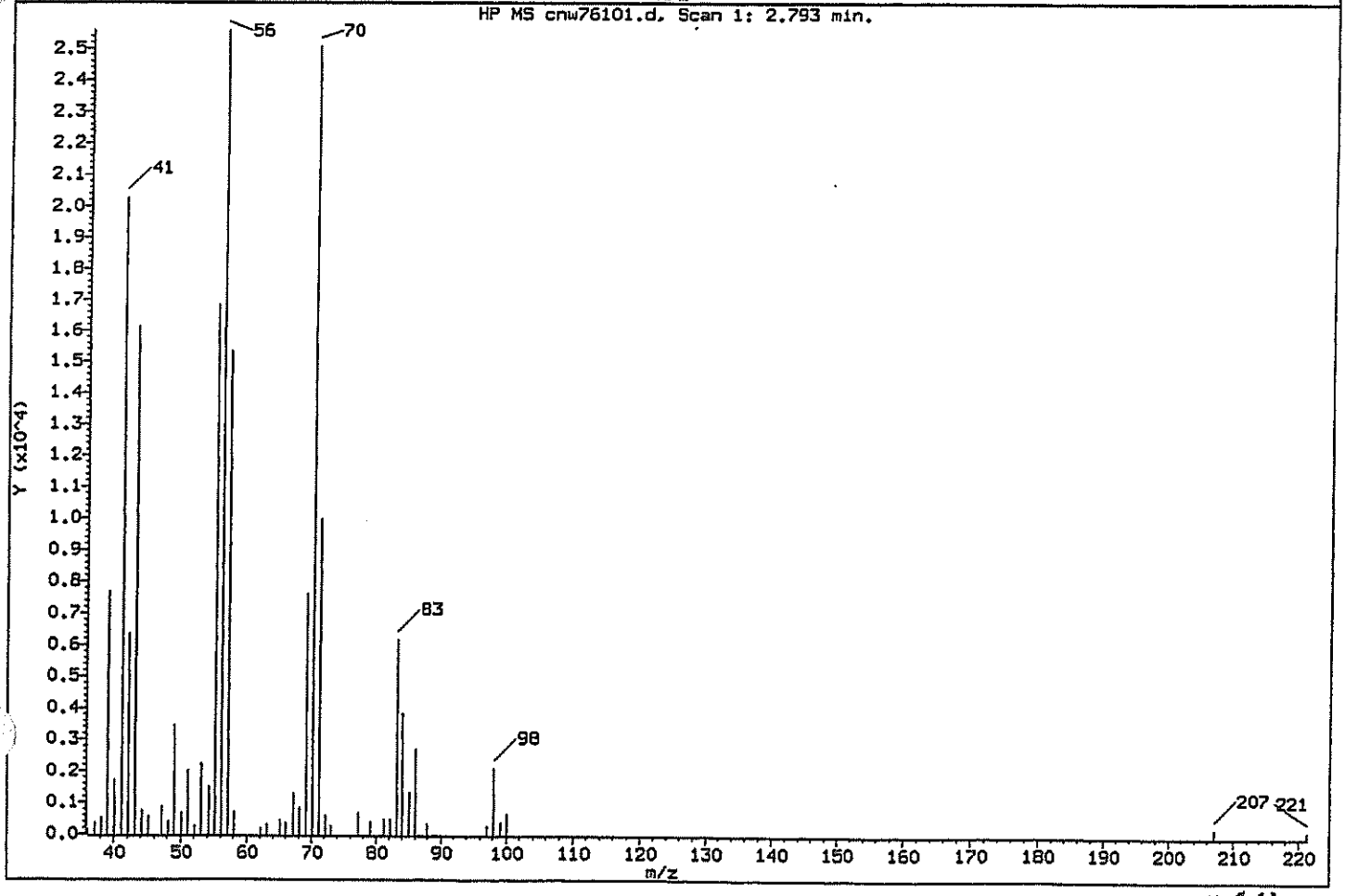

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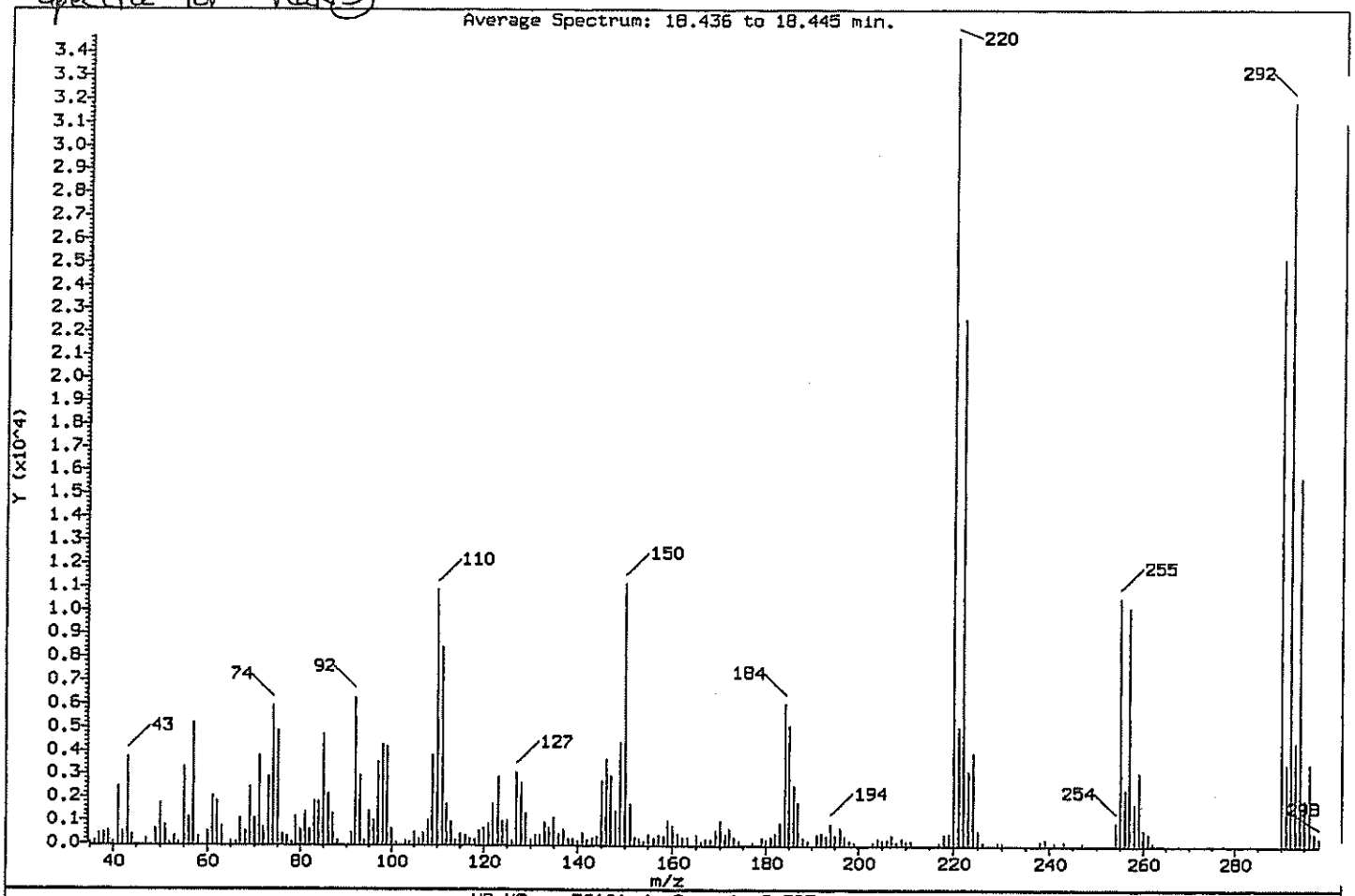
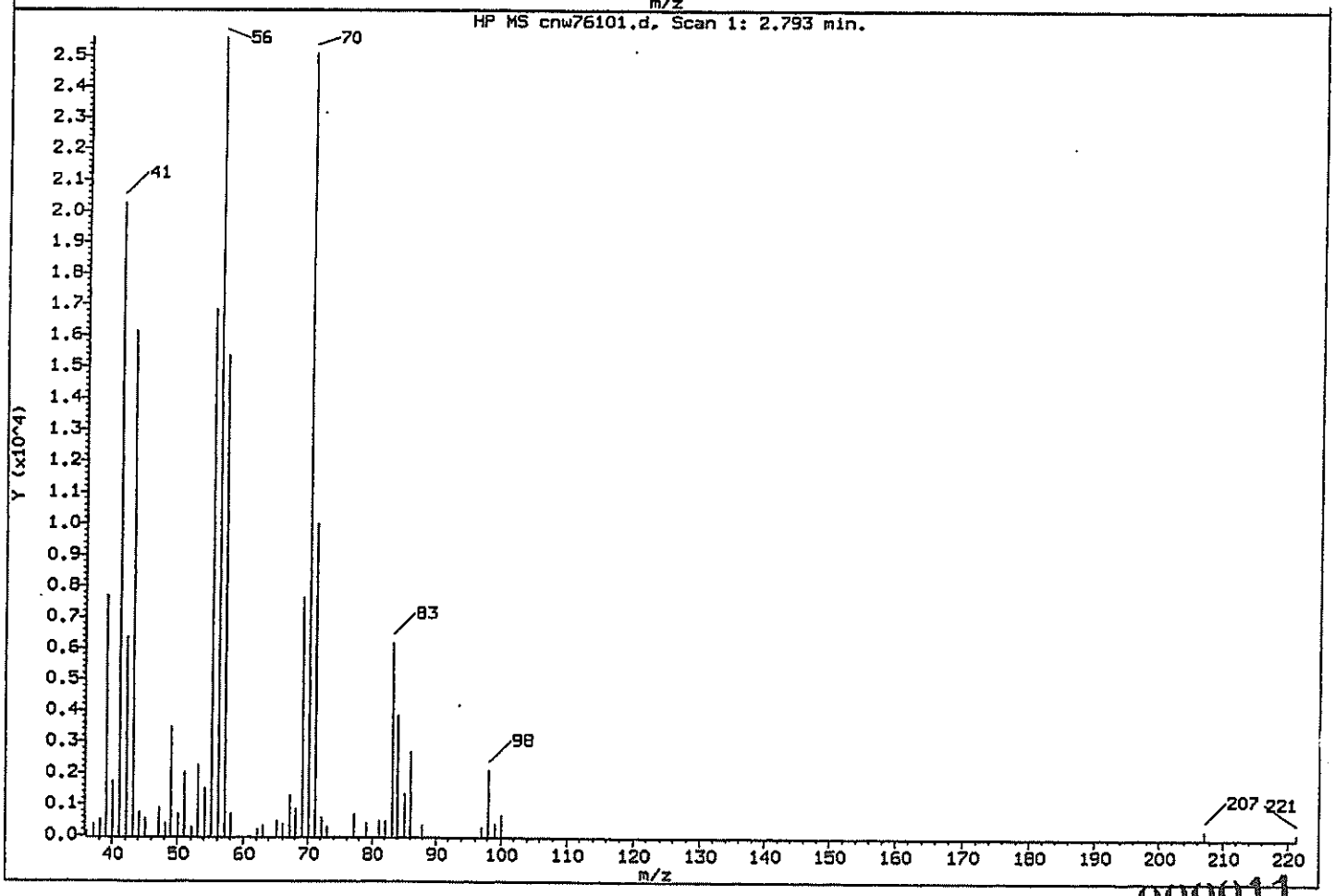
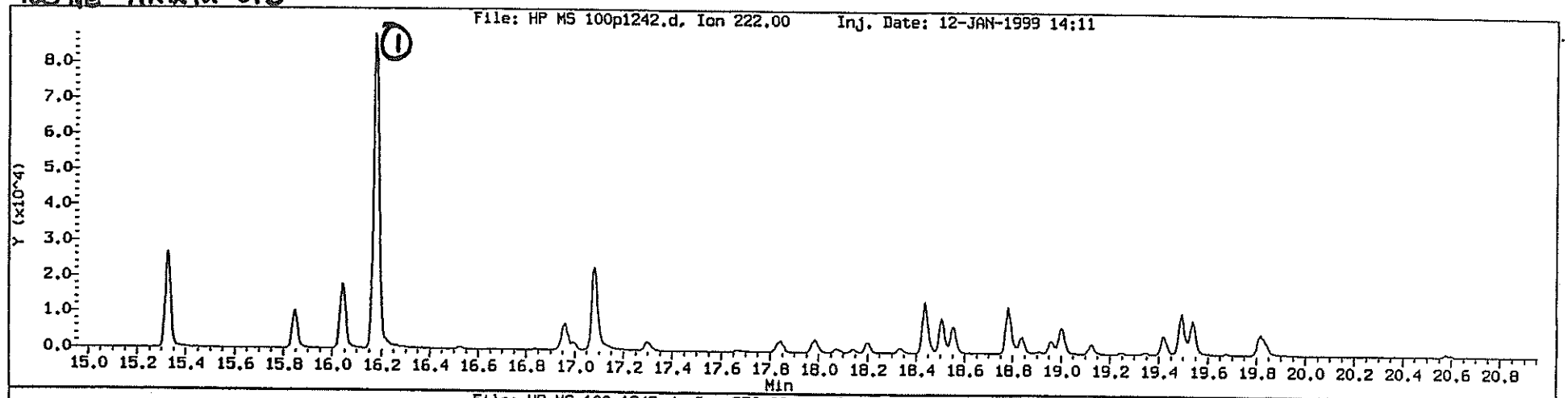
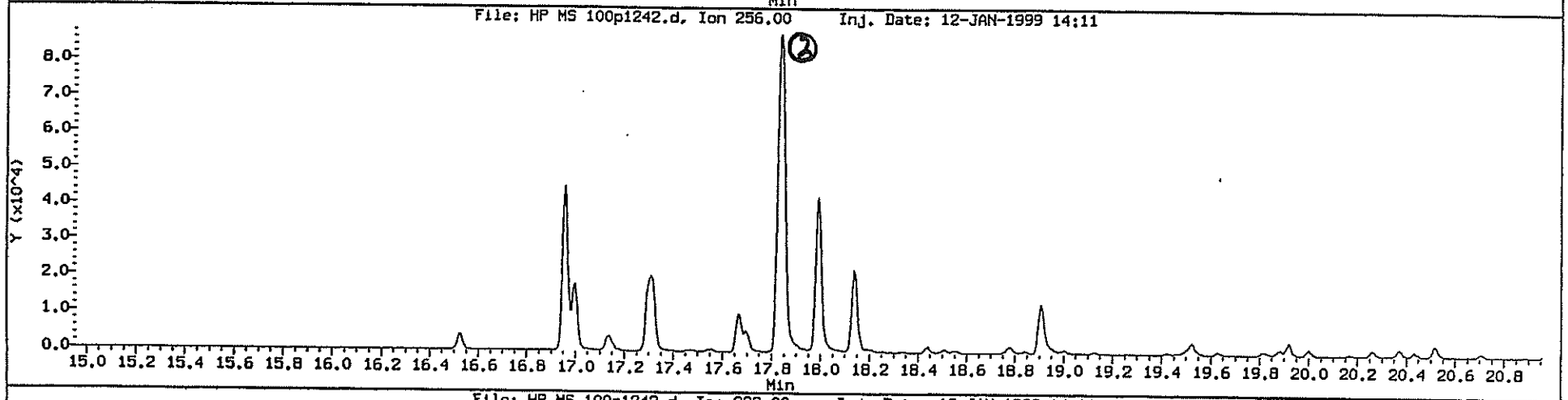


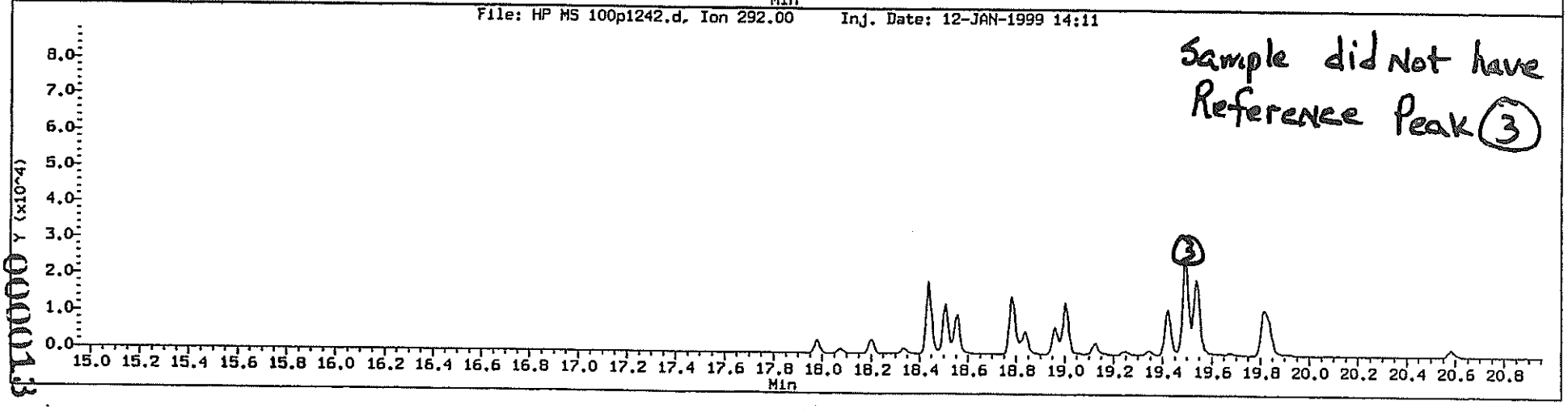


AROCLOR 1242
STANDARD

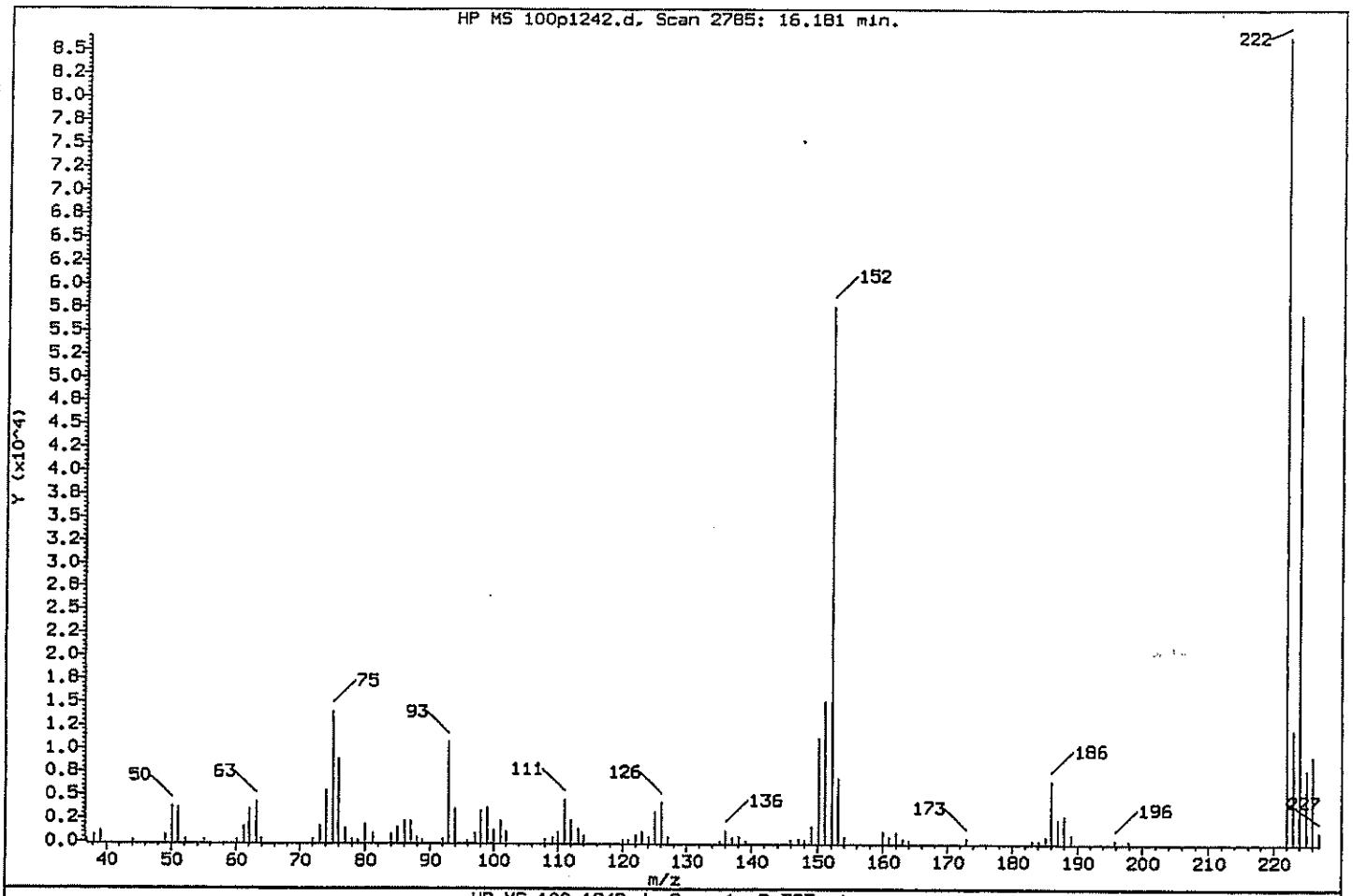
100 NG AR1242 STD







Sample did Not have Reference Peak 3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m/z
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93
50
63
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126
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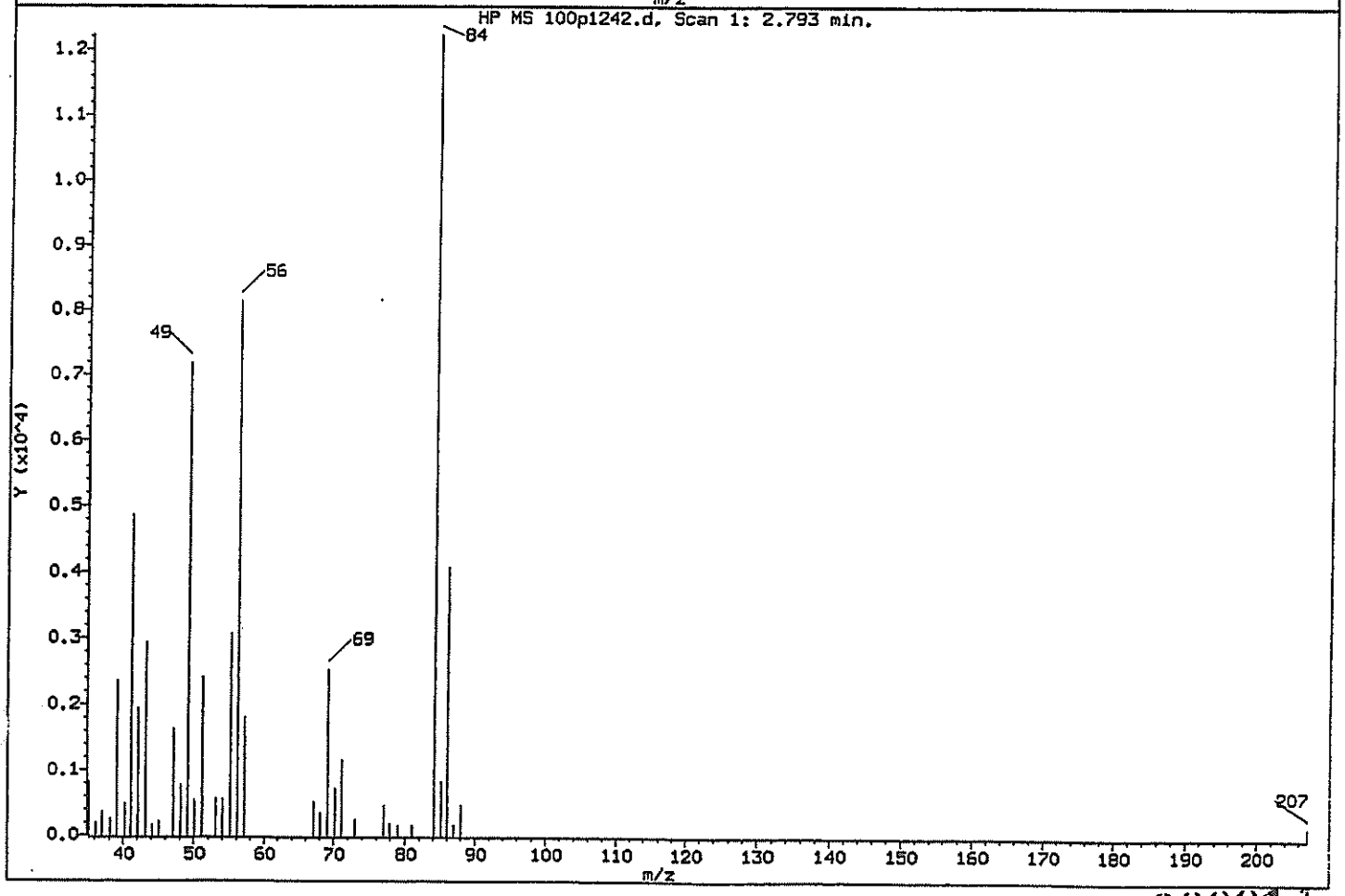
173
186
196
227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m/z
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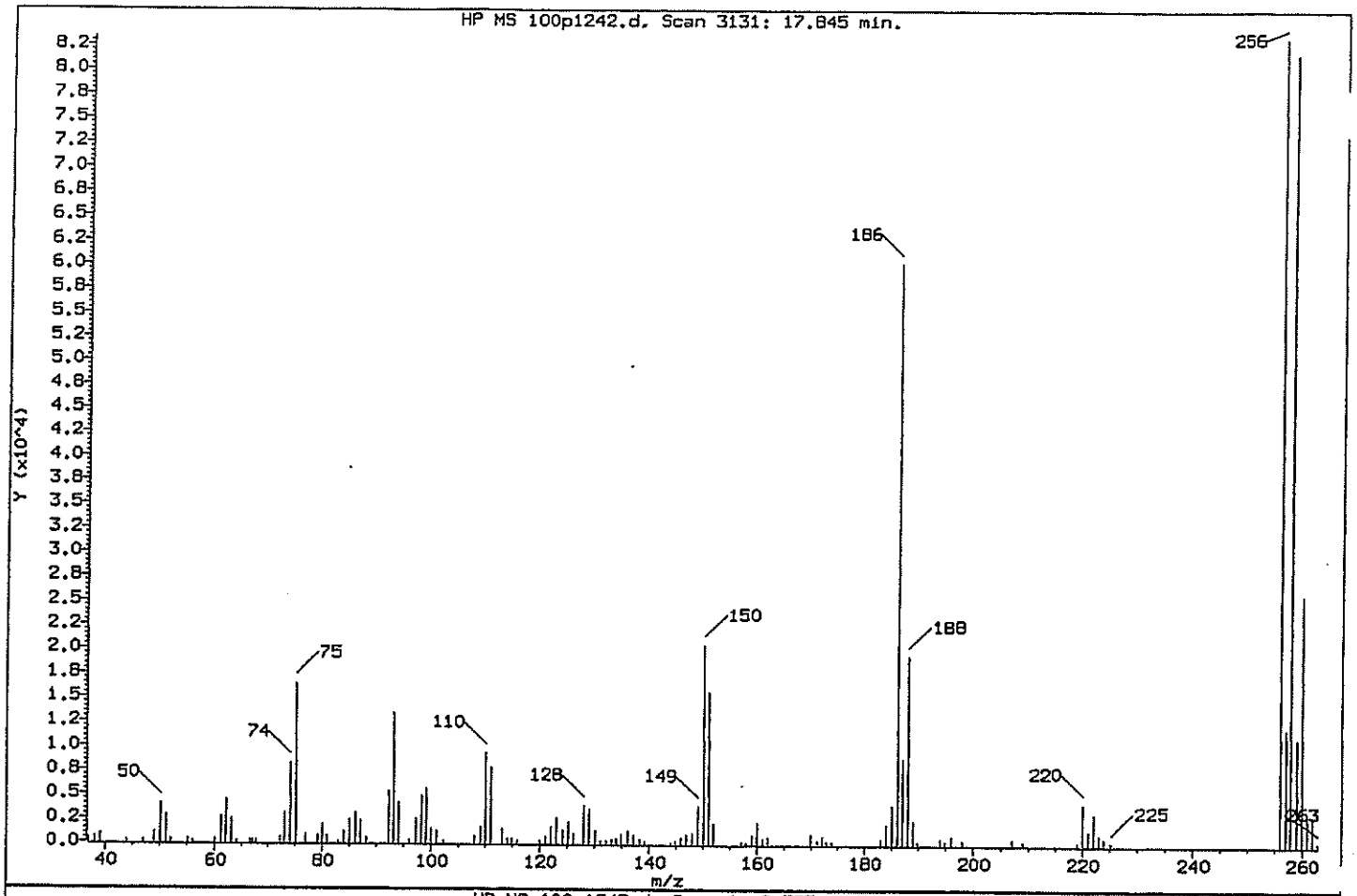
56
49
69
207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m/z
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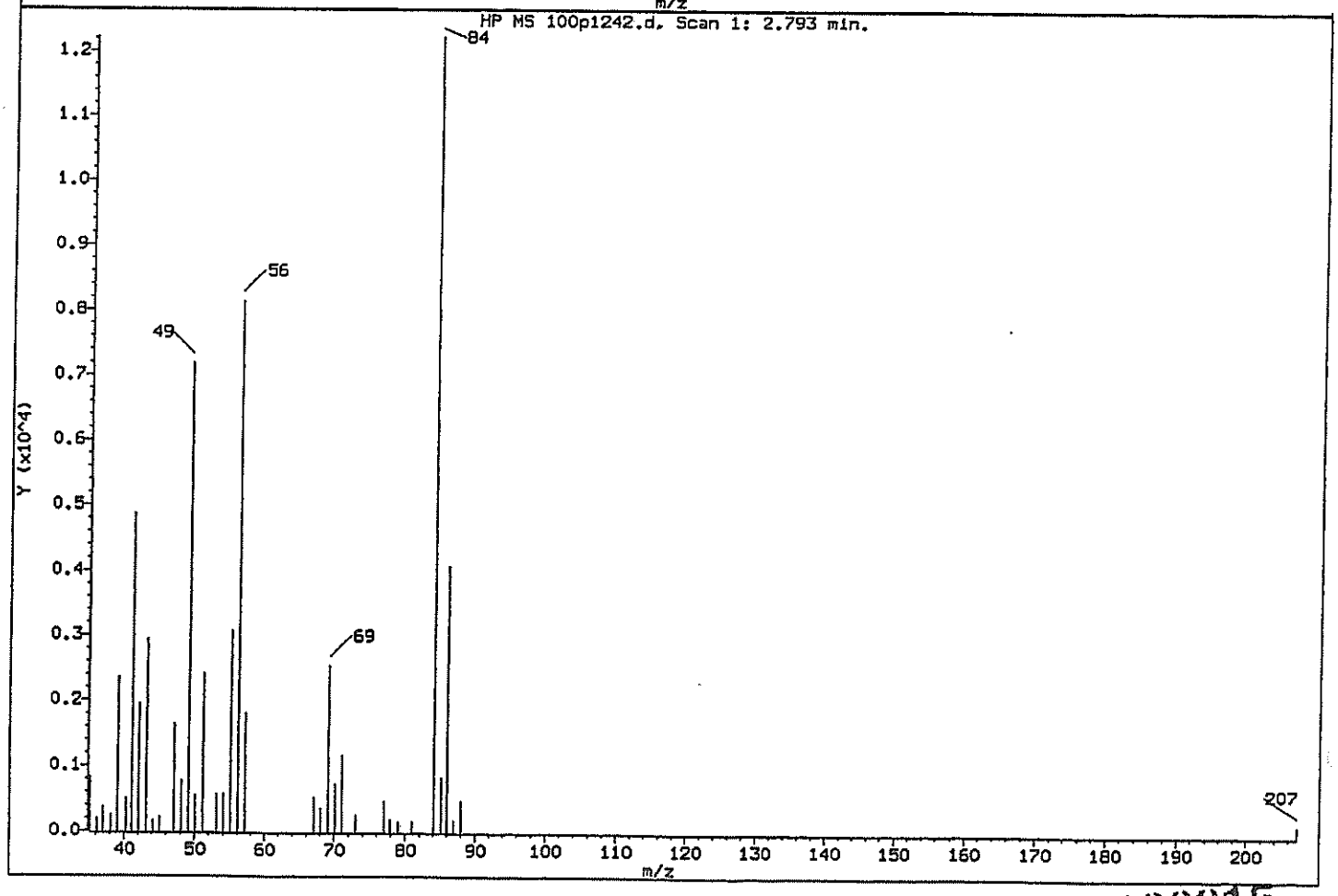
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m/z
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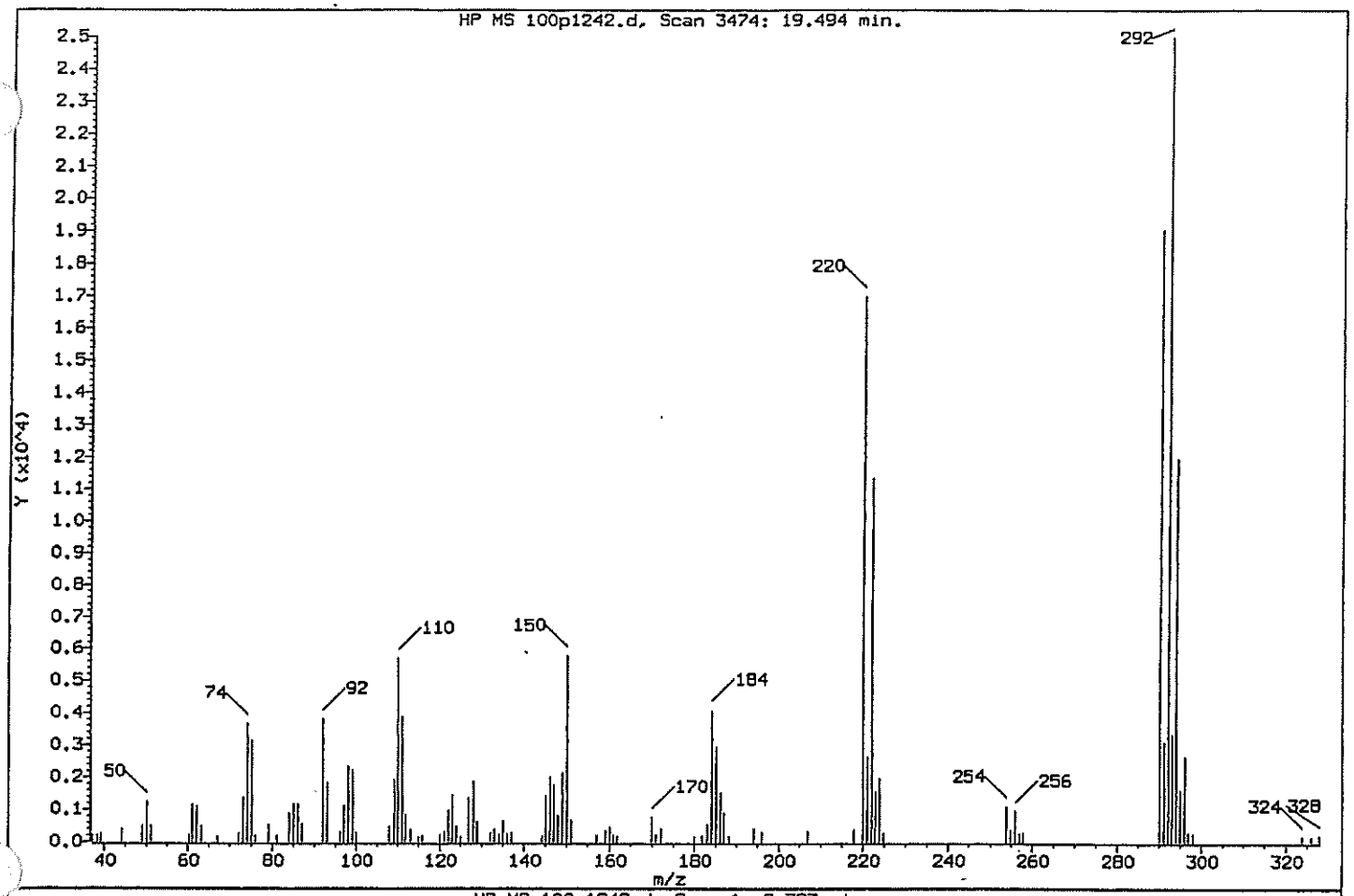
56
49
69
207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m/z
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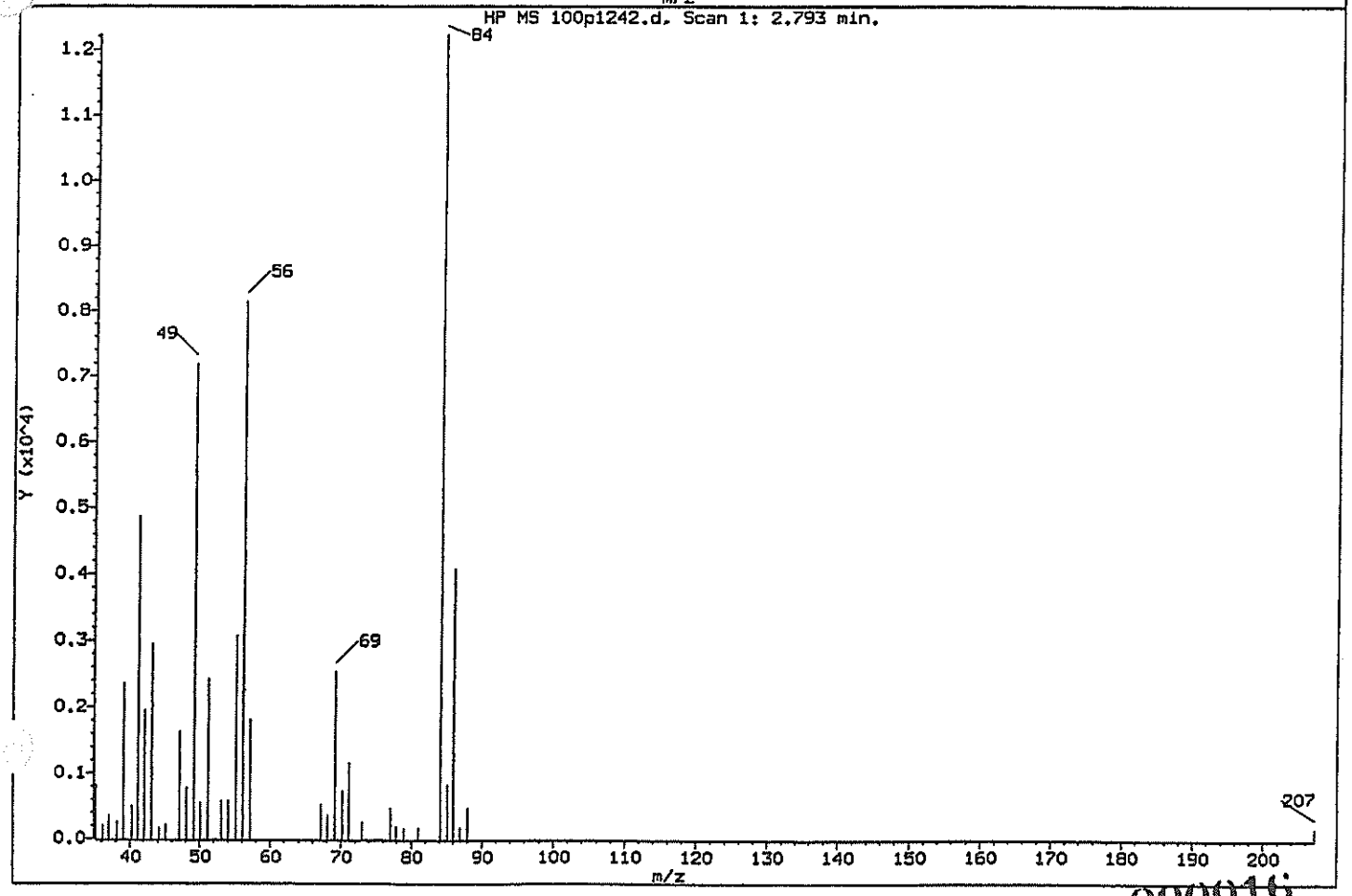
HP MS 100p1242.d, Scan 1: 2.793 min.
Y (x10^4)
m/z
84
56
49
69
207

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
330 497-0772 Fax

JAN 18 1999
RECEIVED

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR

Lot #: A8L030146

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Amy L. McCormick
Project Manager

January 15, 1999

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- **Sample Data**
- **Standard Data**
- **Raw QC Data**
- **Instrument Log Sheets**
- **Organic Extraction Log Sheets**

General Chemistry
- **Log Sheets**

Cooler Receipt Form
Internal Chain-of-Custody
Chain-of-Custody

CASE NARRATIVE

CASE NARRATIVE

The following report contains the analytical results for twenty-six solid samples submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar Site, project number 13307. The samples were received December 3, 1998, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Results were provided by facsimile transmission to Steve Day on January 8, 1999. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

QA/QC PROGRAM ELEMENTS

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

METHOD BLANK (continued)
The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE
A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS
In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

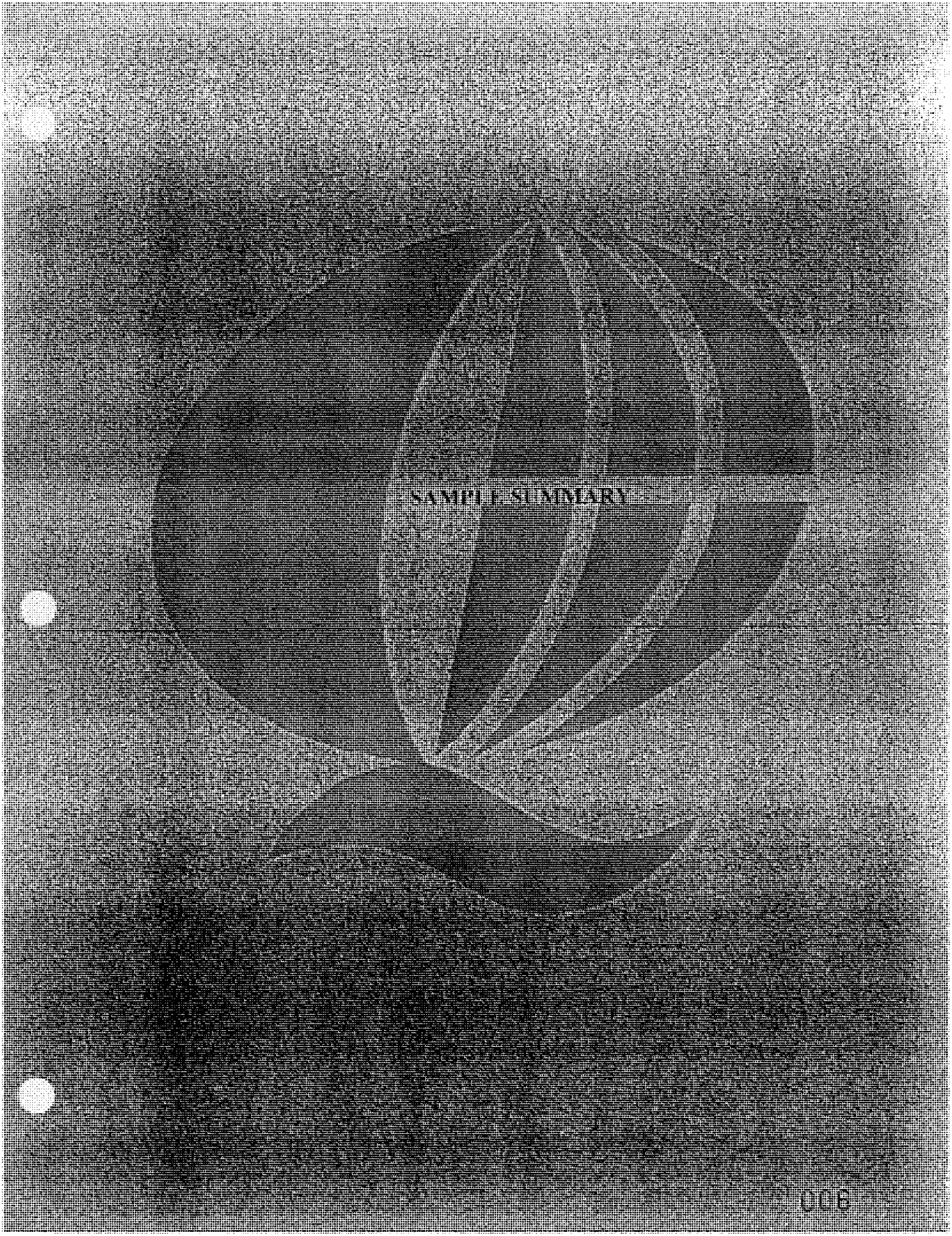
The acceptance criteria do not apply to samples that are diluted. If the dilution is more than 5X, the recoveries will be reported as diluted out. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

SAMPLE SUMMARY



SAMPLE SUMMARY

A8L030146

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
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CNXA5	002	S-120298-JH-037	12/02/98	
CNXA6	003	S-120298-JH-038	12/02/98	
CNXAC	004	S-120298-JH-039	12/02/98	
CNXAD	005	S-120298-JH-040	12/02/98	
CNXAG	006	S-120298-JH-041	12/02/98	
CNXAJ	007	S-120298-JH-042	12/02/98	
CNXAL	008	S-120298-JH-043	12/02/98	
CNXAN	009	S-120298-JH-044	12/02/98	
CNXAR	010	S-120298-JH-045	12/02/98	
CNXAT	011	S-120298-JH-046	12/02/98	
CNXAW	012	S-120298-JH-047	12/02/98	
CNXC1	013	S-120298-JH-048	12/02/98	
CNXCD	014	S-120298-JH-049	12/02/98	
CNXCF	015	S-120298-JH-050	12/02/98	
CNXCH	016	S-120298-JH-051	12/02/98	
CNXCL	017	S-120298-JH-052	12/02/98	
CNXCM	018	S-120298-JH-053	12/02/98	
CNXCN	019	S-120298-JH-054	12/02/98	
CNXCP	020	S-120298-JH-055	12/02/98	
CNXCQ	021	S-120298-JH-056	12/02/98	
CNXCR	022	S-120298-JH-057	12/02/98	
CNXD0	023	S-120298-JH-058	12/02/98	
CNXD1	024	S-120298-JH-059	12/02/98	
CNXD2	025	S-120298-JH-060	12/02/98	
CNXD3	026	S-120298-JH-061	12/02/98	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A8L030146

PARAMETER	ANALYTICAL METHOD
PCBs	SW846 8082
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

POLYCHLORINATED BIPHENYLS
QC SUMMARY DATA

SW846 8082 SURROGATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN QESSDG:

Lot #: A8L030146

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-120298-JH-039	128D	468D	01
02	S-120298-JH-040	92 D	115D	00
03	S-120298-JH-041	213D	456D	02
04	S-120298-JH-042	439D	992D	02
05	S-120298-JH-043	593D	69 D	01
06	S-120298-JH-044	82	93	00
07	S-120298-JH-045	74	82	00
08	S-120298-JH-046	76	92	00
09	S-120298-JH-047	60	75	00
10	S-120298-JH-049	892D	366D	02
11	S-120298-JH-050	441D	85 D	01
12	S-120298-JH-051	88	104	00
13	S-120298-JH-052	86	108	00
14	S-120298-JH-053	97 D	161D	01
15	S-120298-JH-054	80 D	128D	00
16	S-120298-JH-055	85 D	86 D	00
17	S-120298-JH-056	523D	104D	01
18	S-120298-JH-057	337D	195D	02
19	S-120298-JH-048	78	89	00
20	S-120298-JH-058	85	106	00
21	S-120298-JH-059	592D	598D	02
22	S-120298-JH-060	240D	222D	02
23	S-120298-JH-061	652D	0.0D	02
24	INTRA-LAB QC	108	107	00
25	METHOD BLK. CP08N101	91	99	00
26	METHOD BLK. CP35A101	103	109	00
27	LCS CP08N102	91	105	00

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN QESSDG:

Lot #: A8L030146

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	LCS CP35A102	108	113	00
02	LAB MS/MSD D	98	104	00
03	LCSD CP08N103	77	92	00
04	LAB MS/MSD S	59	98	00
05	S-120298-JH-037	141D	279D	02
06	S-120298-JH-038	141D	347D	02
07	S-120298-JH-036	80 D	140D	01
08	METHOD BLK. CP07R101	89	94	00
09	LCS CP07R102	94	107	00
10	LCSD CP07R103	86	92	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-129)
SRG02	= Decachlorobiphenyl	(10-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L040000 WO #: CP07R102
BATCH: 8338112

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	270	81	60 - 133	
Aroclor 1260	330	310	92	59 - 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

I Name: QUANTERRA

Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN

SDG No:

Lot #: A8L040000

WO #: CP07R103
BATCH: 8338112

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	260	77	60 - 133	
Aroclor 1260	330	280	84	59 - 129	

NOTES(S):

* Values outside of QC limits

ike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L040000 WO #: CP08N102
BATCH: 8338126

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	250	76	60 - 133	
Aroclor 1260	330	300	91	59 - 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: QUANTERRA

Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN

SDG No:

Lot #: A8L040000

WO #: CP08N103
BATCH: 8338126

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	230	68	60- 133	
Aroclor 1260	330	270	81	59- 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Lot #: A8L080000 WO #: CP35A102
BATCH: 8342110

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	310	92	60 - 133	
Aroclor 1260	330	340	101	59 - 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QUANTERRA

Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN

SDG No:

Matrix Spike ID: LAB MS/MSD

Level: (low/med) LOW

Lot #: A8L040127

WO #: CP0TA10F
BATCH: 8342110

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	330	ND	310	93	44 - 139	
Aroclor 1260	330	ND	270	82	44 - 139	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No:

Matrix Spike ID: LAB MS/MSD Level:(low/med) LOW

Lot #: A8L040127 WO #: CP0TA10G
BATCH: 8342110

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	330	290	86	7.2	28	44- 139	
Aroclor 1260	330	350	106	26	28	44- 139	

NOTES(S):

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

CP07R101

SW846 8082 METHOD BLANK SUMMARY

I[illegible] Name: QUANTERRA

Lab Code: QESCAN

Lab File ID: 040f0101.

Matrix: SOLID

SDG Number:

Lot Number: A8L030146

Extraction Method: 3550

Date Extracted: 12/04/98

Date Analyzed(1): 12/17/98

Time Analyzed(1): 08:20

Instrument ID(1): K

Date Analyzed(2): N/A

Time Analyzed(2): N/A

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-120298-JH-037	CNXA5101	12/17/98	N/A
02	S-120298-JH-038	CNXA6101	12/17/98	N/A
[illegible]	[illegible]-120298-JH-036	CNX9X101	12/17/98	N/A
[illegible]	[illegible]CHECK SAMPLE	CP07R102 C	12/17/98	N/A
05	DUPLICATE CHECK	CP07R103 L	12/17/98	N/A
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

BLANK WORKORDER NO.

CP08N101

SW846 8082 METHOD BLANK SUMMARY

Lab Name: QUANTERRA

Lab Code: QESCAN

SDG Number:

Lab File ID: 046f0101.

Lot Number: A8L030146

Matrix: SOLID

Extraction Method: 3550

Date Extracted: 12/04/98

Date Analyzed(1): 12/22/98

Date Analyzed(2): N/A

Time Analyzed(1): 06:32

Time Analyzed(2): N/A

Instrument ID(1): K

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-120298-JH-039	CNXAC101	12/23/98	N/A
02	S-120298-JH-040	CNXAD101	12/22/98	N/A
03	S-120298-JH-041	CNXAG101	12/23/98	N/A
04	S-120298-JH-042	CNXAJ101	12/22/98	N/A
05	S-120298-JH-043	CNXAL101	12/22/98	N/A
06	S-120298-JH-044	CNXAN101	12/22/98	N/A
07	S-120298-JH-045	CNXAR101	12/22/98	N/A
08	S-120298-JH-046	CNXAT101	12/22/98	N/A
09	S-120298-JH-047	CNXAW101	12/22/98	N/A
10	S-120298-JH-049	CNXCD101	12/22/98	N/A
11	S-120298-JH-050	CNXCF101	12/22/98	N/A
12	S-120298-JH-051	CNXCH101	12/22/98	N/A
13	S-120298-JH-052	CNXCL101	12/22/98	N/A
14	S-120298-JH-053	CNXCM101	12/22/98	N/A
15	S-120298-JH-054	CNXCN101	12/22/98	N/A
16	S-120298-JH-055	CNXCP101	12/22/98	N/A
17	S-120298-JH-056	CNXCQ101	12/22/98	N/A
18	S-120298-JH-057	CNXCR101	12/22/98	N/A
19	S-120298-JH-048	CNXC1101	12/22/98	N/A
20	S-120298-JH-058	CNXD0101	12/22/98	N/A
21	CHECK SAMPLE	CP08N102 C	12/22/98	N/A
22	DUPLICATE CHECK	CP08N103 L	12/22/98	N/A

COMMENTS:

FORM IV

BLANK WORKORDER NO.

CP35A101

SW846 8082 METHOD BLANK SUMMARY

L Name: QUANTERRA

Lab Code: QESCAN

Lab File ID: 066f0101.

Matrix: SOLID

SDG Number:

Lot Number: A8L030146

Extraction Method: 3550

Date Extracted: 12/08/98

Date Analyzed(1): 12/15/98

Time Analyzed(1): 13:56

Instrument ID(1): K

Date Analyzed(2): N/A

Time Analyzed(2): N/A

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-120298-JH-059	CNXD1101	12/15/98	N/A
02	S-120298-JH-060	CNXD2101	12/15/98	N/A
03	-120298-JH-061	CNXD3101	12/17/98	N/A
04	LAB MS/MSD	CP0TA10F S	12/15/98	N/A
05	LAB MS/MSD	CP0TA10G D	12/15/98	N/A
06	INTRA-LAB QC	CP0TA101	12/15/98	N/A
07	CHECK SAMPLE	CP35A102 C	12/15/98	N/A
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

COMMENTS:

FORM IV

POLYCHLORINATED BIPHENYLS SAMPLE DATA

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 001

Sample WT/Vol: 30 / g
Work Order: CNX9X101
Dilution factor: 5
Moisture %:6.4

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120298-JH-036

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**430**	
11104-28-2	Aroclor 1221	180	U
11141-16-5	Aroclor 1232	180	U
53469-21-9	Aroclor 1242	180	U
12672-29-6	Aroclor 1248	180	U
11097-69-1	Aroclor 1254	180	U
11096-82-5	Aroclor 1260	180	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/048f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/048f0101.d
Lab Smp Id: CNX9X101 — Client Smp ID: S-120298-JH-036
Inj Date : 17-DEC-1998 11:08
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNX9X101,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 5.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	5.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	5232	0.00319	5.317	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.803	4.802	0.001	4522	0.14593	243.2	80.00- 120.00	30.12(M)
5.347	5.347	0.000	9050	0.16754	279.2	125.29- 208.81	60.27
6.105	6.105	0.000	15966	0.19044	317.4	207.30- 345.49	106.33
6.442	6.442	0.000	7498	0.21902	365.0	84.66- 141.09	49.94
6.640	6.642	-0.002	17680	0.49650	827.5	81.88- 136.47	117.75
Average of Peak Concentrations =					406.5		
7 AROCLOR-1254					CAS #: 11097-69-1		
9.027	9.027	0.000	9005	0.09279	154.6	200.11- 333.51	21.00
9.587	9.588	-0.001	6435	0.09218	153.6	146.07- 243.45	15.01
9.993	9.967	0.026	5109	0.09299	155.0	109.33- 182.22	11.92

PCB are degraded

MDL

Data File: /chem/can/gcs/a2hpk.i/81216a.b/048f0101.d
Report Date: 17-Dec-1998 13:22

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
7 AROCLOR-1254 (continued)							
10.498	10.547	-0.049	5893	0.07489	124.8	155.51- 259.19	13.74
Average of Peak Concentrations =					147.0		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	7381	0.00560	9.330	80.00- 120.00	100.00

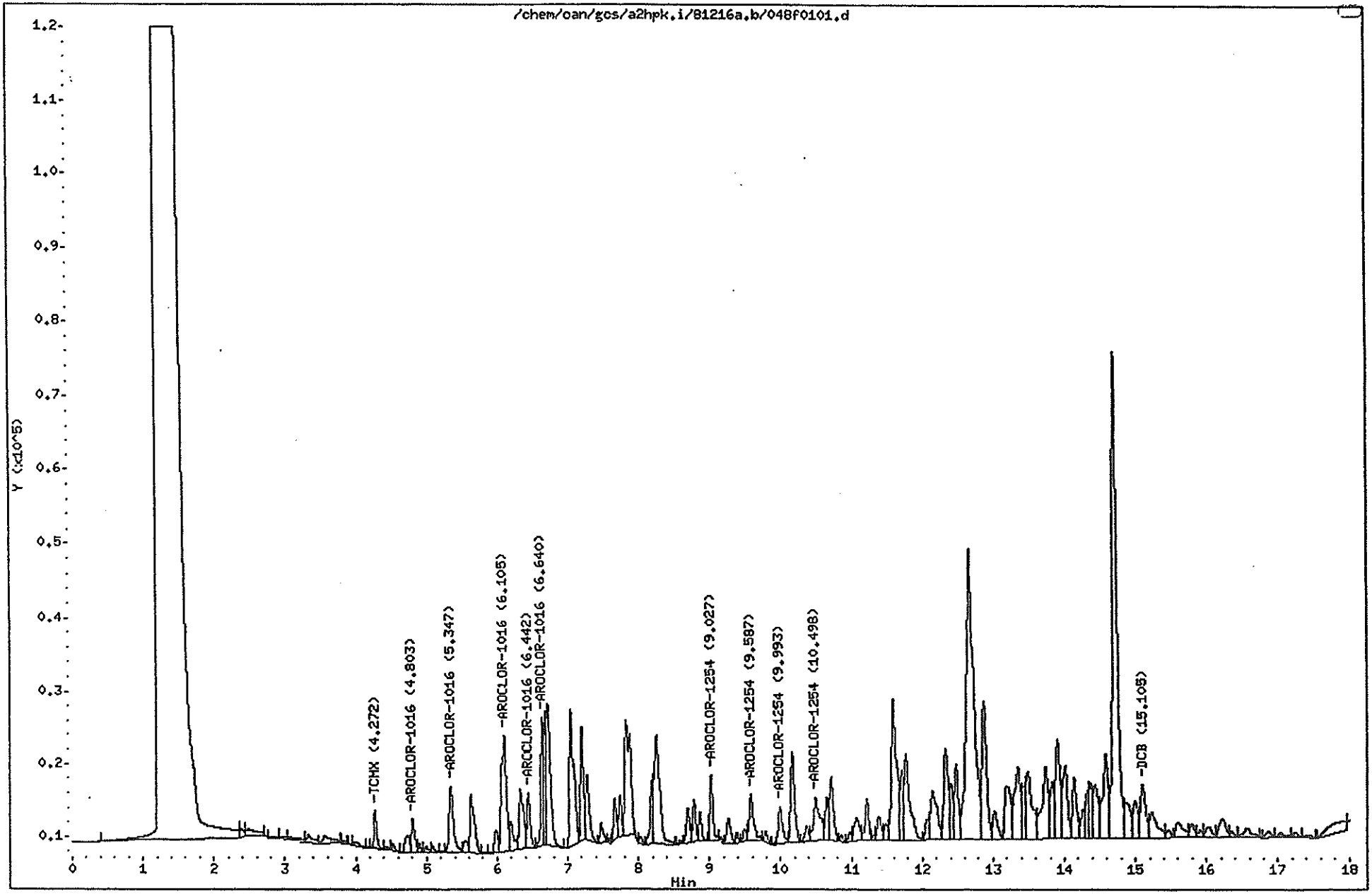
QC Flag Legend

M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81216a.b/048f0101.d
Date : 17-DEC-1998 11:08
Client ID: S-120298-JH-036
Sample Info: CNX9X101,5
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

027



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 002

Sample WT/Vol: 30 / g
Work Order: CNXA5101
Dilution factor: 1000
Moisture %:7.1

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120298-JH-037

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**58000**	
11104-28-2	Aroclor 1221	36000	U
11141-16-5	Aroclor 1232	36000	U
53469-21-9	Aroclor 1242	36000	U
12672-29-6	Aroclor 1248	36000	U
11097-69-1	Aroclor 1254	36000	U
11096-82-5	Aroclor 1260	36000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/046f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/046f0101.d
Lab Smp Id: CNXA5101 Client Smp ID: S-120298-JH-037
Inj Date : 17-DEC-1998 10:26
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXA5101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.233	4.272	-0.039	464	0.000283	94.31	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.805	4.802	0.003	4199	0.13551	45170	80.00- 120.00	27.11(M)
5.350	5.347	0.003	8687	0.16082	53600	125.29- 208.81	56.08
6.108	6.105	0.003	14901	0.17774	59250	207.30- 345.49	96.20
6.445	6.442	0.003	5834	0.17041	56800	84.66- 141.09	37.66
6.643	6.642	0.001	5677	0.15942	53140	81.88- 136.47	36.65
Average of Peak Concentrations =					53590		
$ 9 DCB					CAS #: 2051-24-3		
15.135	15.105	0.030	737	0.000559	186.3	80.00- 120.00	100.00(R)

Data File: /chem/can/gcs/a2hpk.i/81216a.b/046f0101.d
Report Date: 17-Dec-1998 13:22

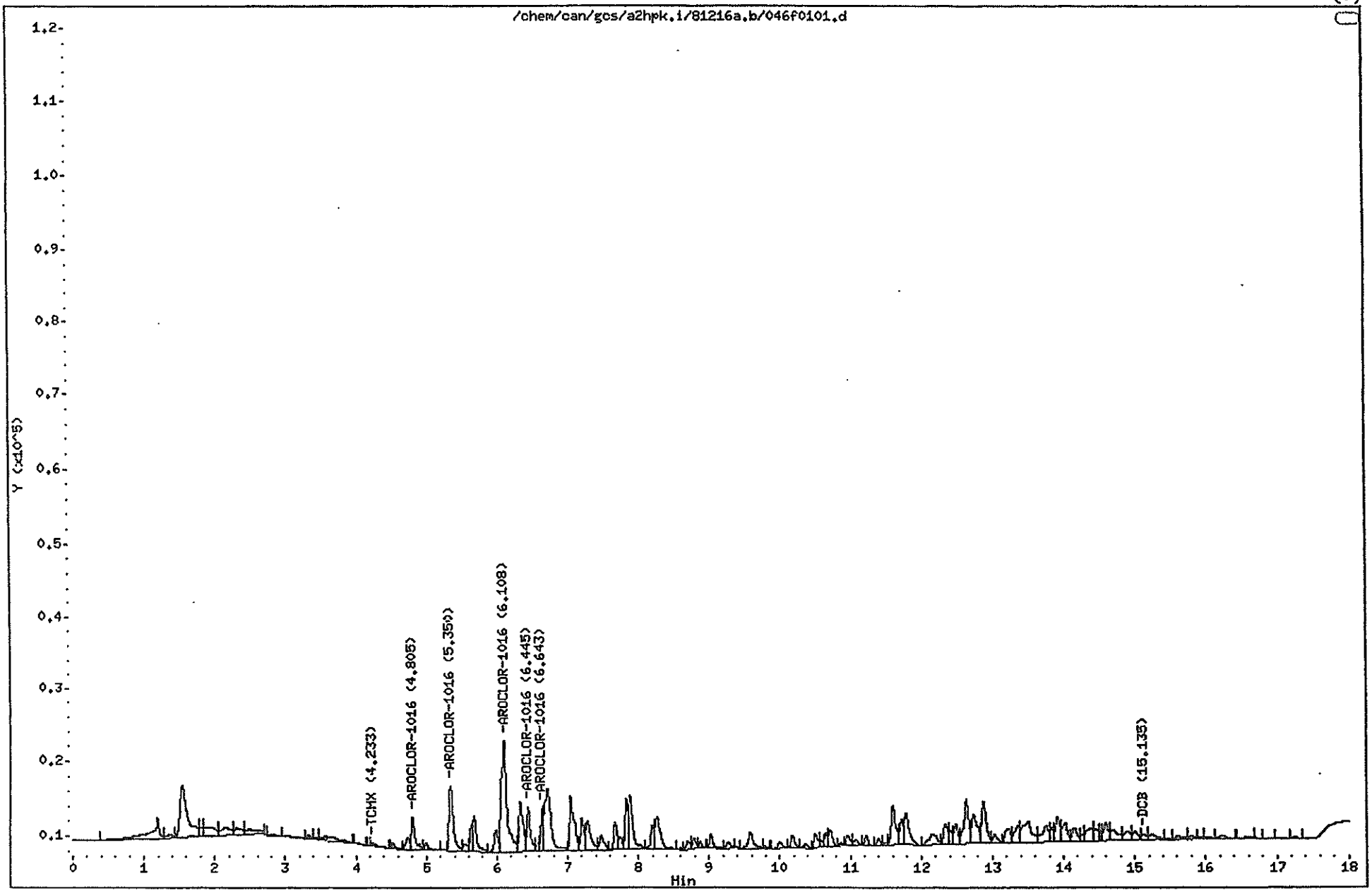
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Da ile: /chem/can/gcs/a2hpk.i/81216a.b/046f0101.d
Da 17-DEC-1998 10:26
Client ID: S-120298-JH-037
Sample Info: CHXA5101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

031



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 003

Sample WT/Vol: 30 / g
Work Order: CNXA6101
Dilution factor: 100
Moisture %:8.5

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: S-120298-JH-038

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	7700	
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	Aroclor 1242	3600	U
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

Data File: /chem/can/gcs/a2hpk.i/81216a.b/047f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/047f0101.d
Lab Smp Id: CNXA6101 Client Smp ID: S-120298-JH-038
Inj Date : 17-DEC-1998 10:47
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXA6101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	461	0.000281	9.370	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.803	4.802	0.001	5243	0.16920	5640	80.00- 120.00	29.81(M)
5.348	5.347	0.001	10929	0.20232	6744	125.29- 208.81	62.13
6.107	6.105	0.002	19810	0.23630	7876	207.30- 345.49	112.62
6.443	6.442	0.001	7792	0.22760	7587	84.66- 141.09	44.30
6.642	6.642	0.000	7819	0.21958	7319	81.88- 136.47	44.45
Average of Peak Concentrations =					7033		
$ 9 DCB					CAS #: 2051-24-3		
15.112	15.105	0.007	915	0.000694	23.13	80.00- 120.00	100.00(R)

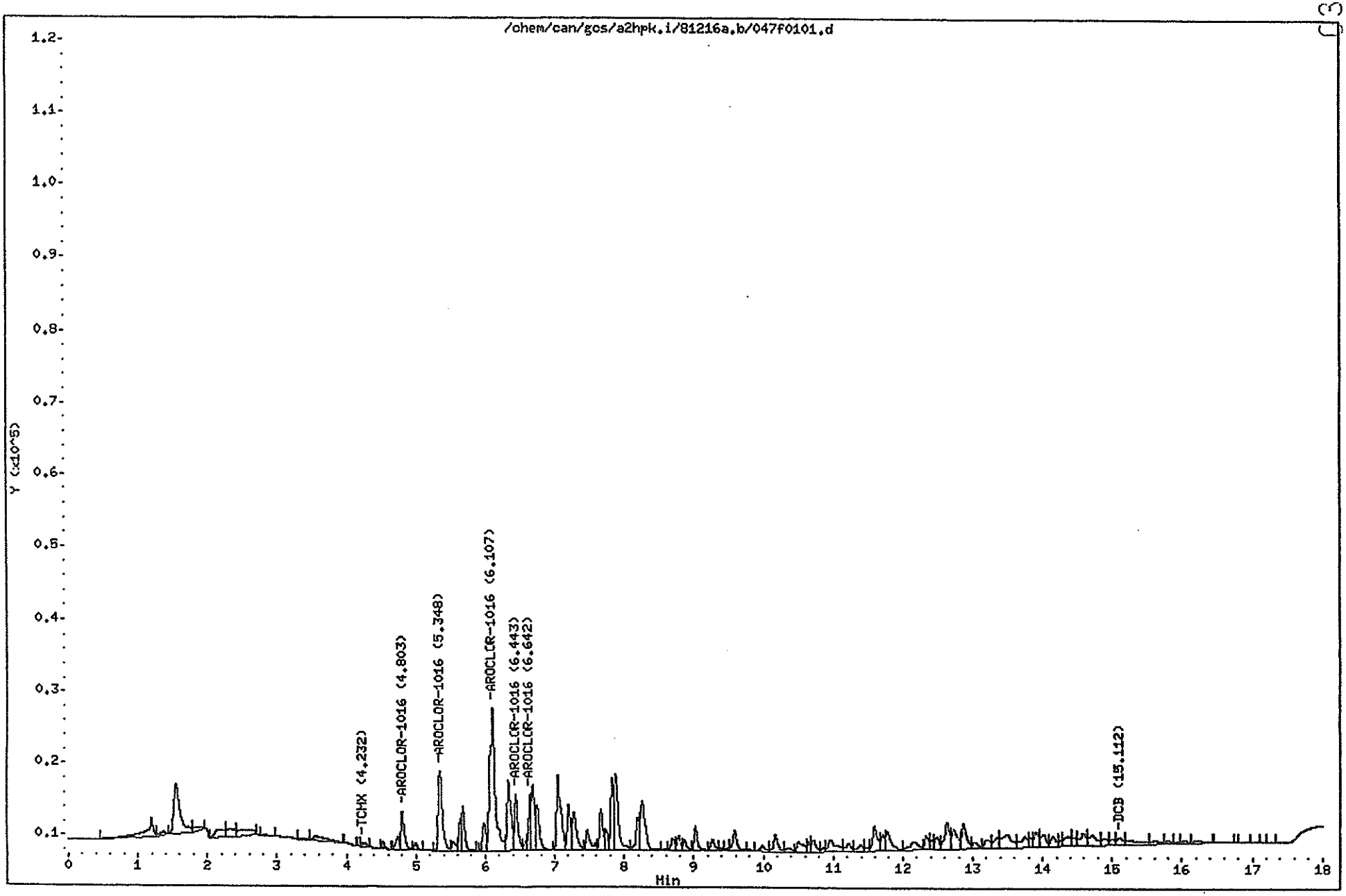
Data File: /chem/can/gcs/a2hpk.i/81216a.b/047f0101.d
Report Date: 17-Dec-1998 13:22

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

D ile: /chem/can/gcs/a2hpk.i/81216a.b/047f0101.d
Da . 17-DEC-1998 10:47
Client ID: S-120298-JH-038
Sample Info: CNXA6101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 004

Sample WT/Vol: 30.05 / g
Work Order: CNXAC101
Dilution factor: 100
Moisture %:9.2

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/23/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-039

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3600	U
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	**Aroclor 1242**	**10000**	
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81223c.b/014f0101.d
Report Date: 26-Dec-1998 15:33

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/014f0101.d
Lab Smp Id: CNXAC101 Client Smp ID: S-120298-JH-039
Inj Date : 23-DEC-1998 20:30
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAC101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 24-Dec-1998 13:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.377	4.292	0.085	420	0.000256	8.522	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
4.830	4.830	0.000	5466	0.20546	6837	80.00- 120.00	25.61(M)
5.380	5.378	0.002	13203	0.29474	9808	127.14- 211.90	61.86
6.147	6.145	0.002	21625	0.32442	10800	190.79- 317.98	101.31
6.375	6.373	0.002	9472	0.25148	8369	108.39- 180.65	44.38
6.487	6.487	0.000	8289	0.30937	10300	78.46- 130.76	38.83
Average of Peak Concentrations =					9221		
$ 9 DCB					CAS #: 2051-24-3		
15.223	15.192	0.031	1233	0.000935	31.12	80.00- 120.00	100.00(R)

other peaks on chromatogram match no Aroclor

037

Data File: /chem/can/gcs/a2hpk.i/81223c.b/014f0101.d
Report Date: 26-Dec-1998 15:33

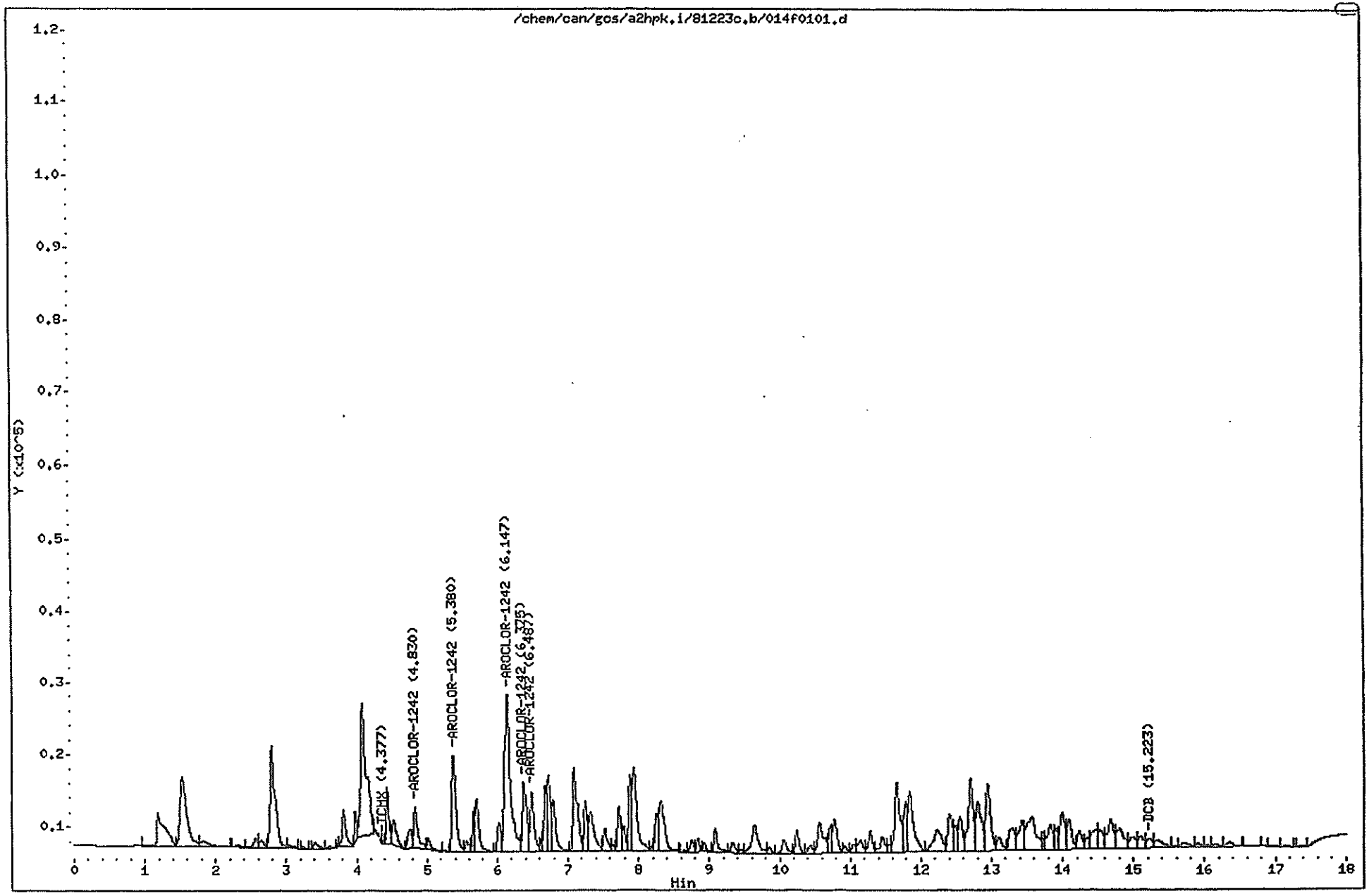
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81223c.b/014f0101.d
Date : 23-DEC-1998 20:30
Client ID: S-120298-JH-039
Sample Info: CNXAC101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

039



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 005

Sample WT/Vol: 30.17 / g
Work Order: CNXAD101
Dilution factor: 10
Moisture %:7.9

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-040

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	360	U
11104-28-2	Aroclor 1221	360	U
11141-16-5	Aroclor 1232	360	U
53469-21-9	Aroclor 1242	360	U
12672-29-6	**Aroclor 1248**	**1600**	
11097-69-1	Aroclor 1254	360	U
11096-82-5	Aroclor 1260	360	U

Data File: /chem/can/gcs/a2hpk.i/81221a.b/050f0101.d
Report Date: 22-Dec-1998 14:43

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/050f0101.d
Lab Smp Id: CNXAD101 Client Smp ID: S-120298-JH-040
Inj Date : 22-DEC-1998 07:56
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAD101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume

FG'S ARE DEGRADED

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.293	0.002	3026	0.00185	6.116	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.373	0.002	12390	0.51231	1698	80.00- 120.00	22.26(MH)
7.073	7.083	-0.010	34838	0.60919	2019	179.01- 298.35	62.59
9.062	9.073	-0.011	9756	0.29458	976.4	103.93- 173.22	17.53
9.627	9.640	-0.013	7295	0.32427	1075	71.80- 119.67	13.11
Average of Peak Concentrations =					1442		
$ 9 DCB					CAS #: 2051-24-3		
15.145	15.143	0.002	3044	0.00231	7.652	80.00- 120.00	100.00

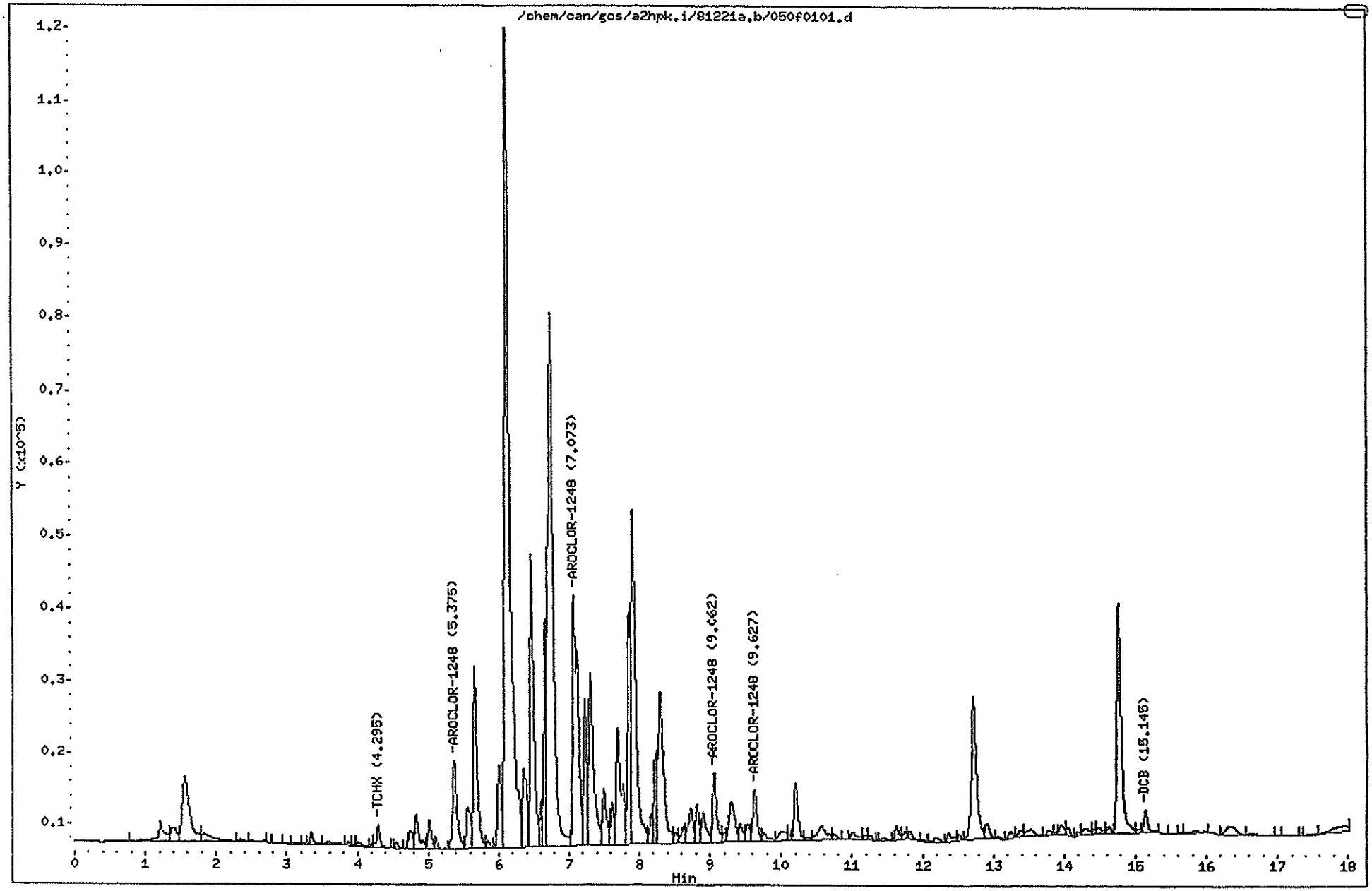
Data File: /chem/can/gcs/a2hpk.i/81221a.b/050f0101.d
Report Date: 22-Dec-1998 14:43

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

File: /chem/can/gcs/a2hpk.i/81221a.b/050f0101.d
Date : 22-DEC-1998 07:56
Client ID: S-120298-JH-040
Sample Info: CNXAD101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



043

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 006

Sample WT/Vol: 30.16 / g
Work Order: CNXAG101
Dilution factor: 50
Moisture %:8.8

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/23/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-041

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	1800	U
11104-28-2	Aroclor 1221	1800	U
11141-16-5	Aroclor 1232	1800	U
53469-21-9	**Aroclor 1242**	**5300**	
12672-29-6	Aroclor 1248	1800	U
11097-69-1	Aroclor 1254	1800	U
11096-82-5	Aroclor 1260	1800	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81223c.b/015f0101.d
Report Date: 26-Dec-1998 15:33

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/015f0101.d
Lab Smp Id: CNXAG101 Client Smp ID: S-120298-JH-041
Inj Date : 23-DEC-1998 20:51
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAG101,50
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 24-Dec-1998 13:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.160	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.377	4.292	0.085	1398	0.000852	14.13	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.832	4.830	0.002	6073	0.22828	3784	80.00- 120.00	23.50(M)
5.382	5.378	0.004	16589	0.37033	6139	127.14- 211.90	64.20
6.147	6.145	0.002	23009	0.34518	5722	190.79- 317.98	89.05
6.375	6.373	0.002	8868	0.23544	3903	108.39- 180.65	34.32
6.487	6.487	0.000	7558	0.28208	4676	78.46- 130.76	29.25
Average of Peak Concentrations =					4845		
$ 9 DCB					CAS #: 2051-24-3		
15.225	15.192	0.033	2407	0.00183	30.26	80.00- 120.00	100.00(R)

other pks match no Aroclor

Data File: /chem/can/gcs/a2hpk.i/81223c.b/015f0101.d
Report Date: 26-Dec-1998 15:33

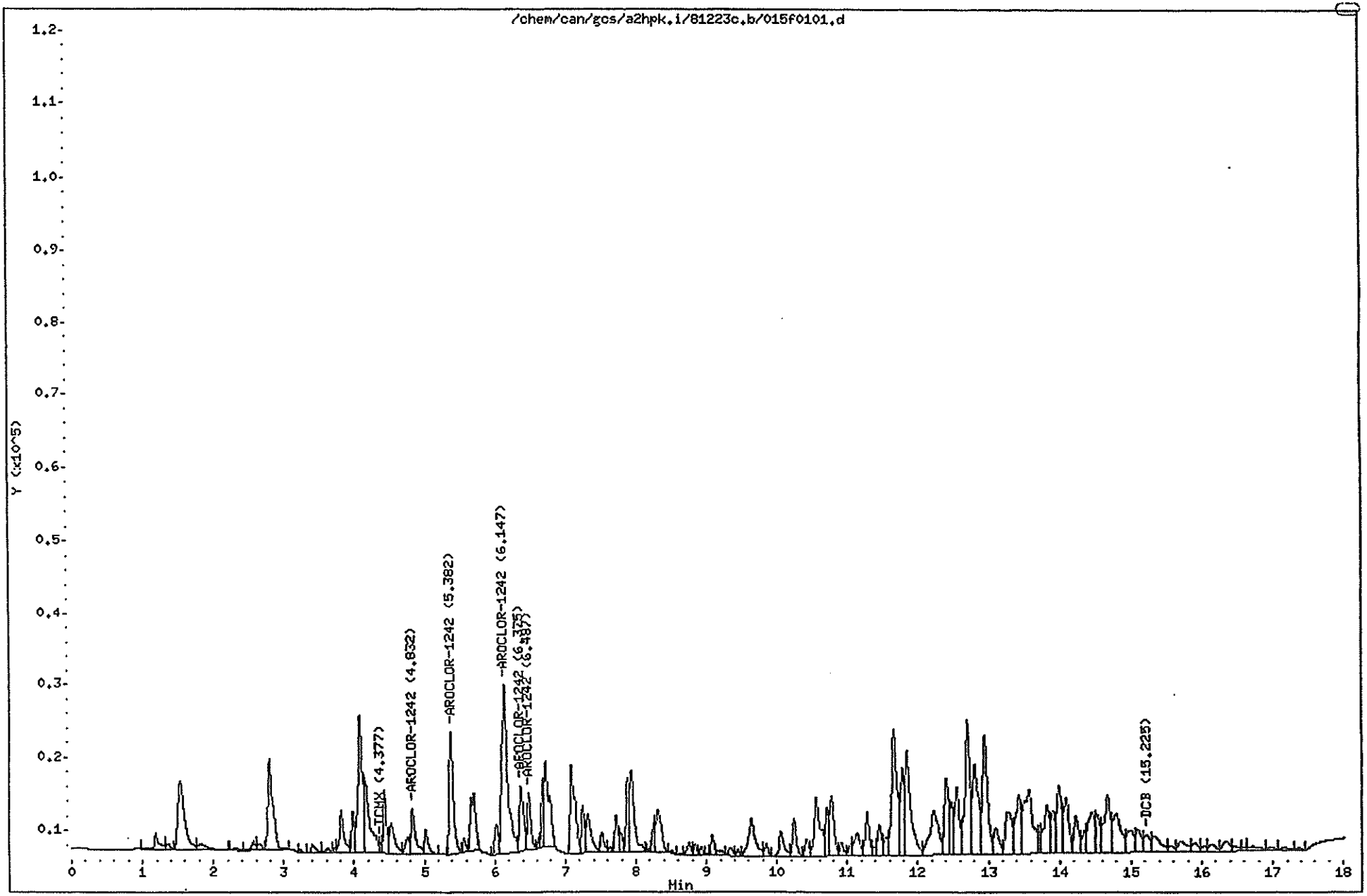
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

File: /chem/can/gcs/a2hpk.i/81223c.b/015f0101.d
Date : 23-DEC-1998 20:51
Client ID: S-120298-JH-041
Sample Info: CNXAC101,50
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

047



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 007

Sample WT/Vol: 30.04 / g
Work Order: CNXAJ101
Dilution factor: 100
Moisture %:8.6

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-042

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3600	U
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	**Aroclor 1242**	**17000**	
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/052f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/052f0101.d
Lab Smp Id: CNXAJ101 Client Smp ID: S-120298-JH-042
Inj Date : 22-DEC-1998 08:38
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAJ101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.255	4.293	-0.038	1440	0.000878	29.23	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.828	4.770	0.058	8082	0.30380	10110	80.00- 120.00	26.74(M)
5.372	5.378	-0.006	23187	0.51762	17230	533.15- 888.59	76.72
6.133	6.142	-0.009	33370	0.50062	16660	834.87-1391.44	110.42
6.362	6.368	-0.006	16964	0.45039	14990	469.04- 781.74	56.13
6.472	6.480	-0.008	14099	0.52621	17520	343.34- 572.23	46.65
Average of Peak Concentrations =					15300		
$ 9 DCB					CAS #: 2051-24-3		
15.150	15.143	0.007	2615	0.00198	66.02	80.00- 120.00	100.00(R)

PCB'S ARE DEGRADED

Data File: /chem/can/gcs/a2hpk.i/81221a.b/052f0101.d
Report Date: 22-Dec-1998 14:44

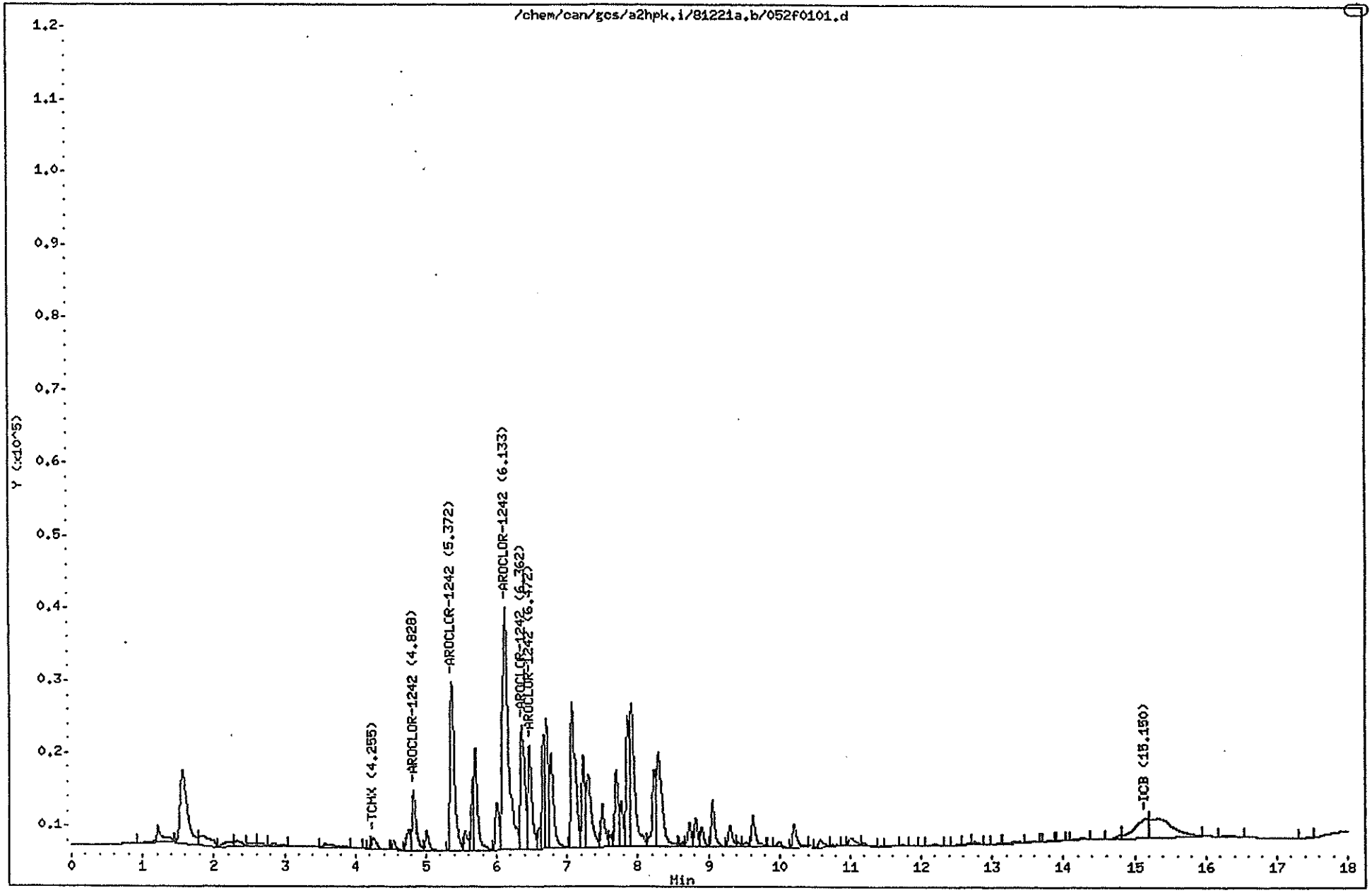
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

D ile: /chem/can/gcs/a2hpk.i/81221a.b/052f0101.d
Da... : 22-DEC-1998 08:38
Client ID: S-120298-JH-042
Sample Info: CNXAJ101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32

051



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 008

Sample WT/Vol: 30.11 / g
Work Order: CNXAL101
Dilution factor: 100
Moisture %:12

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-043

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	**Aroclor 1242**	**19000**	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/095f0101.d
Report Date: 23-Dec-1998 10:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/095f0101.d
Lab Smp Id: CNXAL101 Client Smp ID: S-120298-JH-043
Inj Date : 22-DEC-1998 23:40
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAL101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume

PCB'S ARE DEGRADED

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.253	4.295	-0.042	1945	0.00119	39.39	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
4.825	4.833	-0.008	14517	0.54568	18120	80.00- 120.00	26.53(M)
5.375	5.378	-0.003	26955	0.60174	19980	123.50- 205.84	49.26
6.132	6.142	-0.010	39182	0.58781	19520	193.39- 322.32	71.61
6.360	6.368	-0.008	11066	0.29380	9757	108.65- 181.08	20.22
6.472	6.480	-0.008	12631	0.47142	15660	79.53- 132.55	23.08
Average of Peak Concentrations =					16610		
$ 9 DCB					CAS #: 2051-24-3		
15.145	15.142	0.003	181	0.000137	4.559	80.00- 120.00	100.00(R)

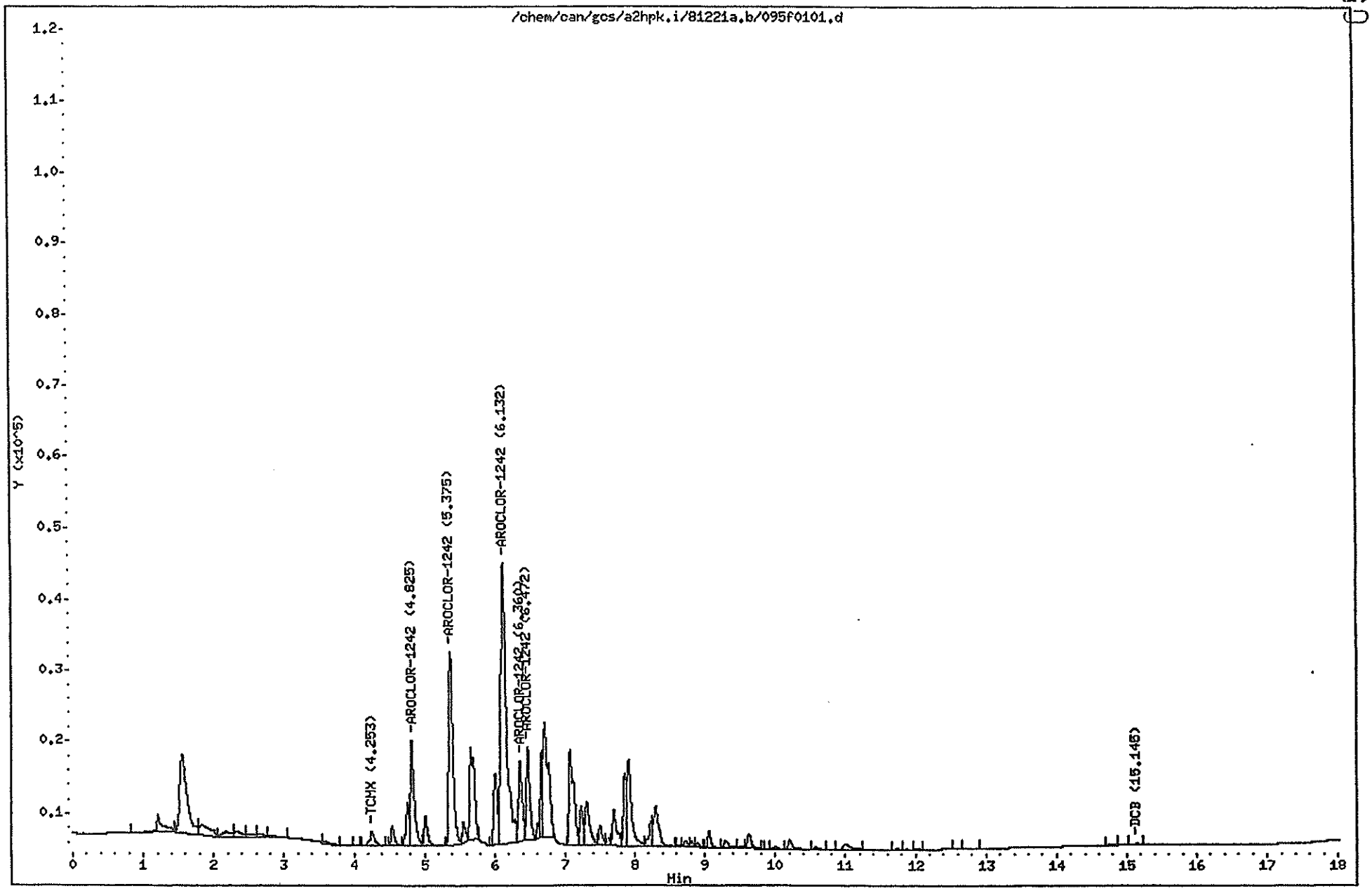
Data File: /chem/can/gcs/a2hpk.i/81221a.b/095f0101.d
Report Date: 23-Dec-1998 10:22

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Dat e: /chem/can/gcs/a2hpk.i/81221a.b/095f0101.d
Date 22-DEC-1998 23:40
Client ID: S-120298-JH-043
Sample Info: CNXAL101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



055

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 009

Sample WT/Vol: 30.17 / g
Work Order: CNXAN101
Dilution factor: 1
Moisture %:12

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-044

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

Data File: /chem/can/gcs/a2hpk.i/81221a.b/057f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/057f0101.d
Lab Smp Id: CNXAN101 Client Smp ID: S-120298-JH-044
Inj Date : 22-DEC-1998 10:23
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAN101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

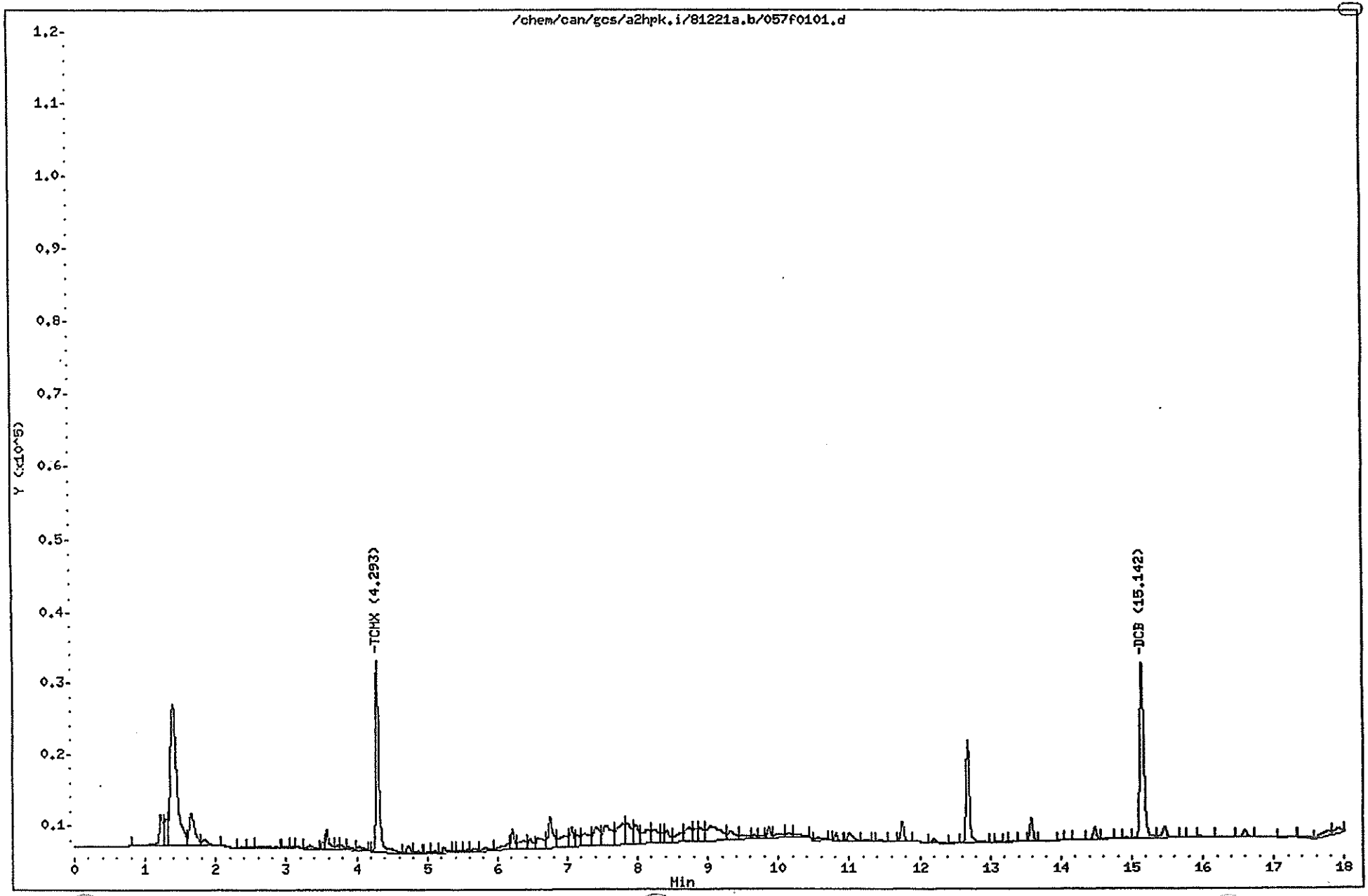
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.293	0.000	26794	0.01634	5.415	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.142	15.143	-0.001	24589	0.01865	6.181	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/057f0101.d
Date : 22-DEC-1998 10:23
Client ID: S-120298-JH-044
Sample Info: CNXAN101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 010

Sample WT/Vol: 30 / g
Work Order: CNXAR101
Dilution factor: 1
Moisture %:13

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-045

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/058f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/058f0101.d
Lab Smp Id: CNXAR101 Client Smp ID: S-120298-JH-045
Inj Date : 22-DEC-1998 10:44
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAR101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

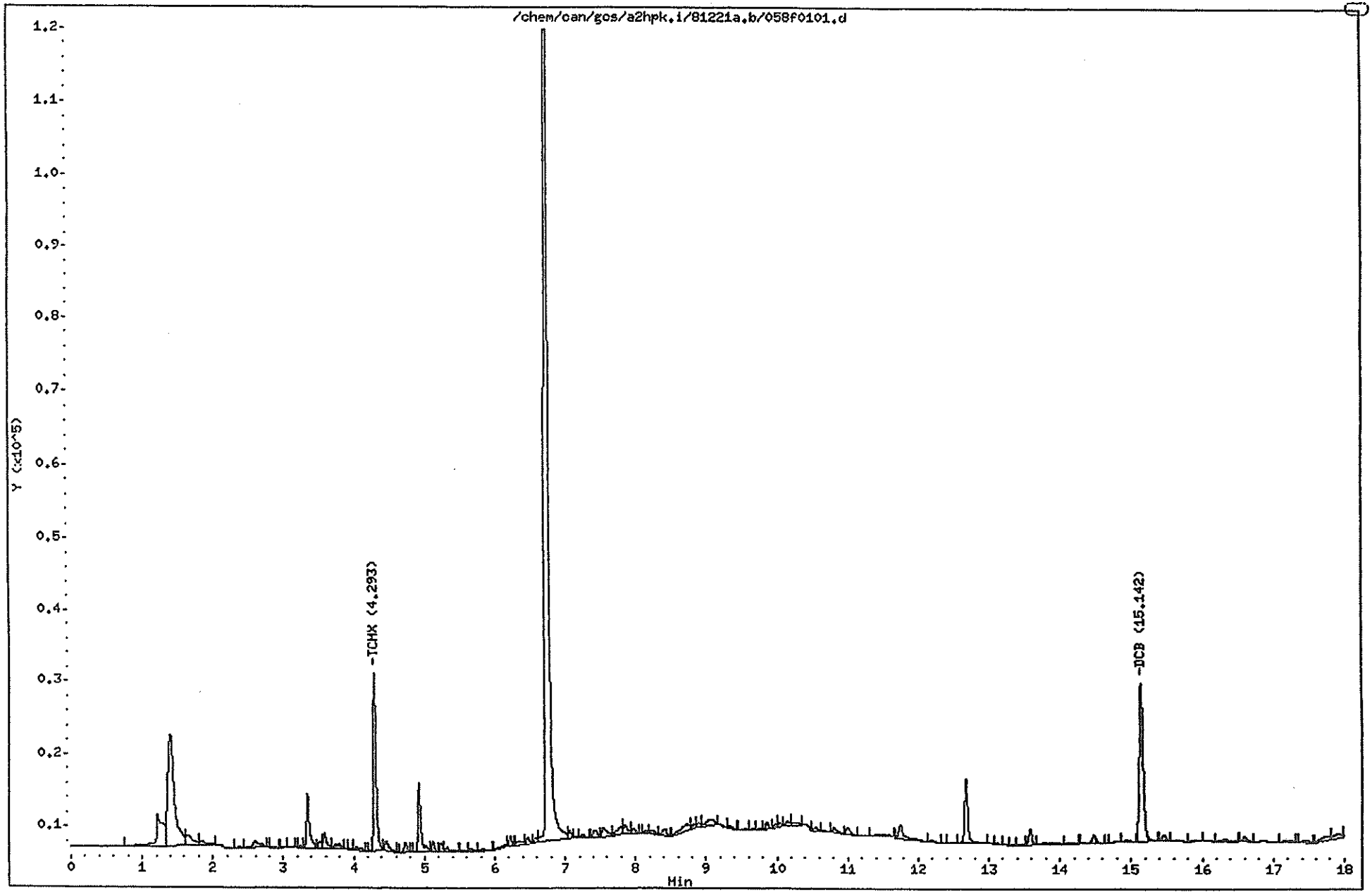
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.293	0.000	24288	0.01481	4.936	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.142	15.143	-0.001	21730	0.01648	5.493	80.00- 120.00	100.00

Da: le: /chem/can/gcs/a2hpk.i/81221a.b/058f0101.d
Date : 22-DEC-1998 10:44
Client ID: S-120298-JH-045
Sample Info: CHXAR101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 011

Sample WT/Vol: 30.15 / g
Work Order: CNXAT101
Dilution factor: 1
Moisture %:16

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-046

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/059f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/059f0101.d
Lab Smp Id: CNXAT101 Client Smp ID: S-120298-JH-046
Inj Date : 22-DEC-1998 11:05
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAT101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

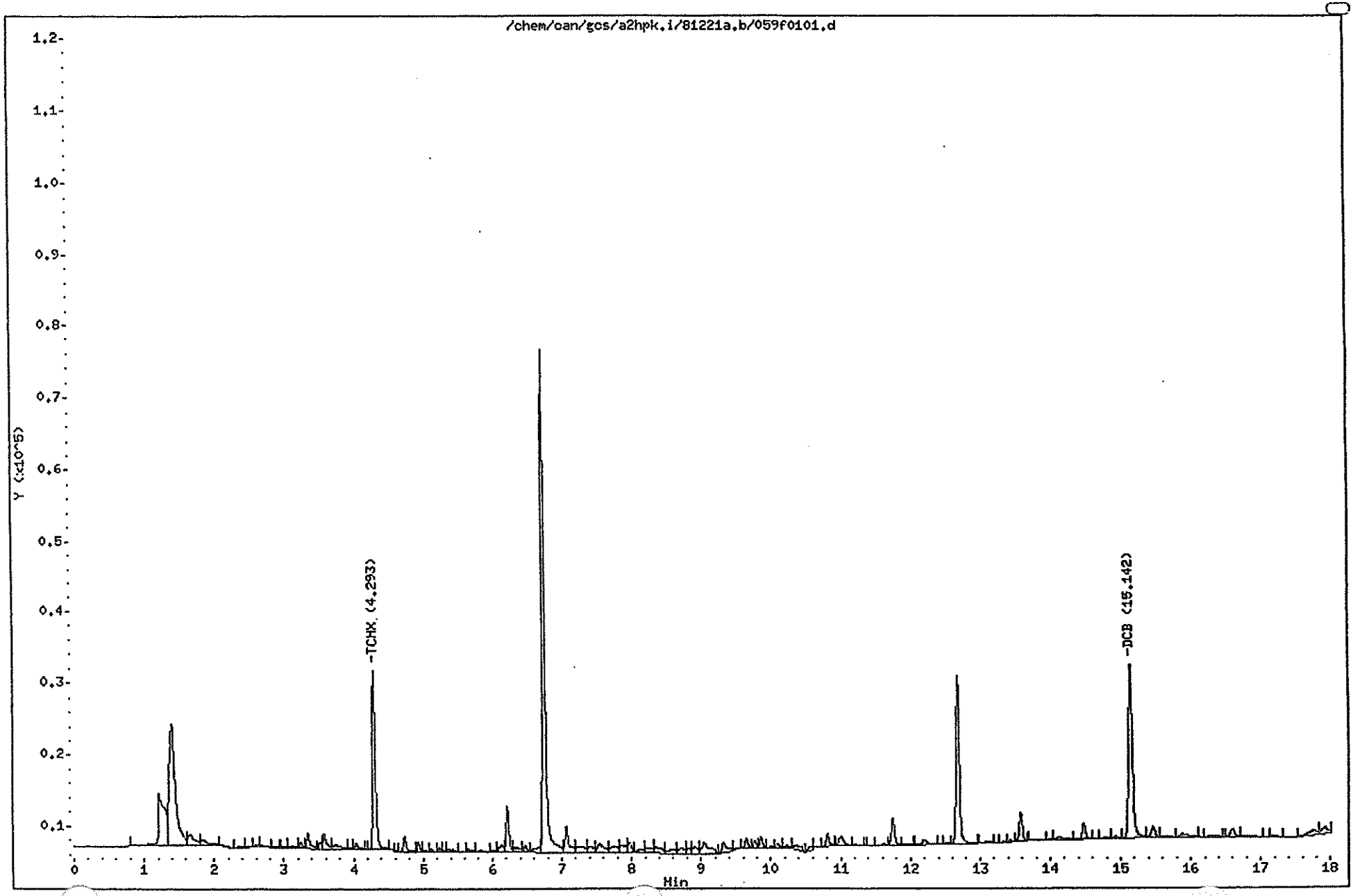
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.150	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.293	0.000	25017	0.01525	5.059	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.142	15.143	-0.001	24286	0.01842	6.109	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/059f0101.d
Date : 22-DEC-1998 11:05
Client ID: S-120298-JH-046
Sample Info: CHXAT101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 012

Sample WT/Vol: 30.04 / g
Work Order: CNXAW101
Dilution factor: 1
Moisture %:7.3

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-047

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/060f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/060f0101.d
Lab Smp Id: CNXAW101 Client Smp ID: S-120298-JH-047
Inj Date : 22-DEC-1998 11:26
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXAW101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

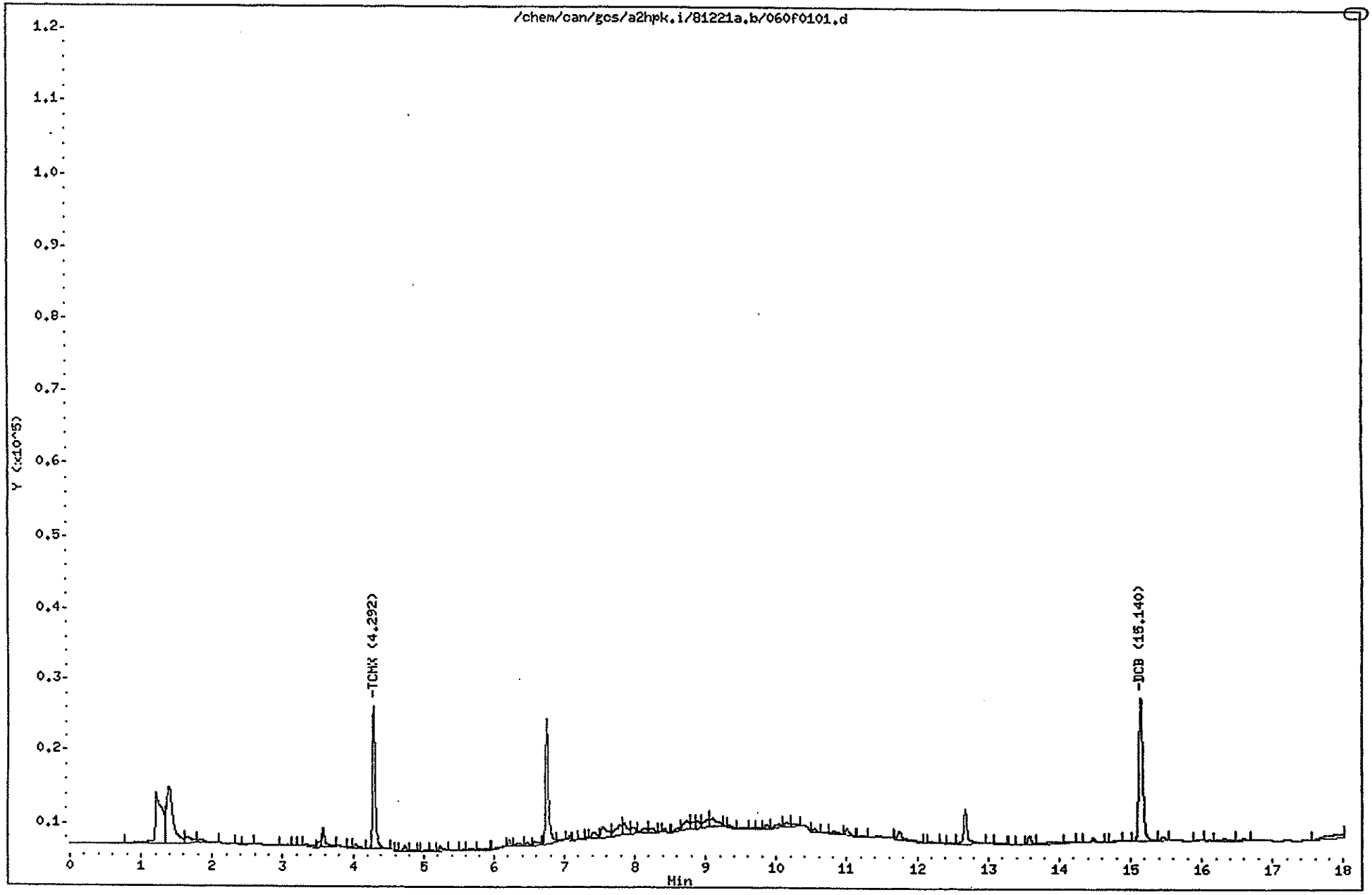
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.293	-0.001	19727	0.01203	4.004	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.140	15.143	-0.003	19726	0.01496	4.980	80.00- 120.00	100.00

Da[illegible]le: /chem/can/gcs/a2hpk.i/81221a.b/060f0101.d
Dat[illegible] 22-DEC-1998 11:26
Client ID: S-120298-JH-047
Sample Info: CNXAW101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 013

Sample WT/Vol: 30 / g
Work Order: CNXC1101
Dilution factor: 1
Moisture %:8.6

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-048

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/061f0101.d
Report Date: 22-Dec-1998 14:45

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/061f0101.d
Lab Smp Id: CNXC1101 Client Smp ID: S-120298-JH-048
Inj Date : 22-DEC-1998 11:47
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXC1101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

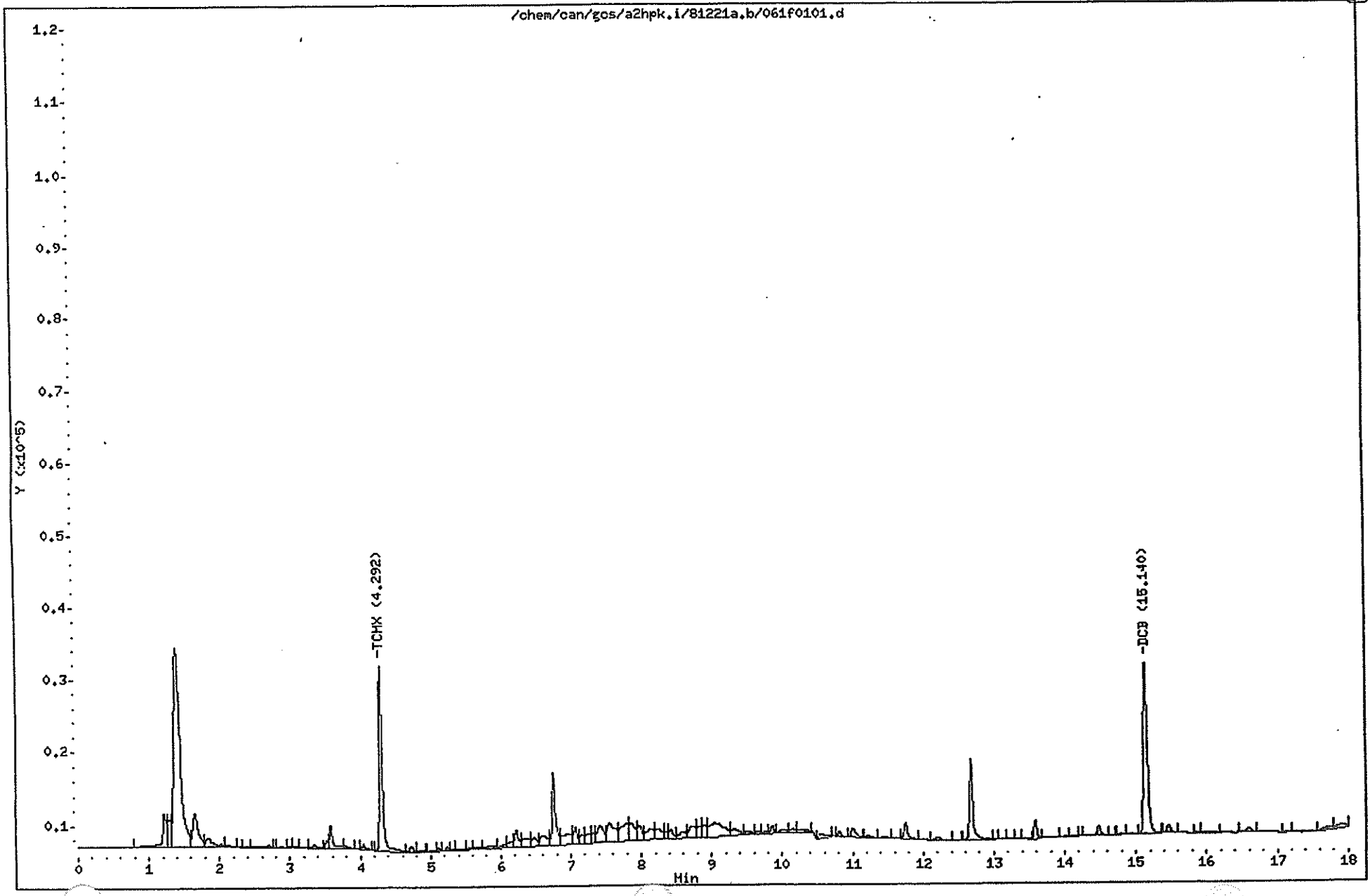
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.293	-0.001	25494	0.01554	5.182	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.140	15.143	-0.003	23543	0.01786	5.952	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/061f0101.d
Date : 22-DEC-1998 11:47
Client ID: S-120298-JH-048
Sample Info: CNXC1101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



070

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 014

Sample WT/Vol: 30.09 / g
Work Order: CNXCD101
Dilution factor: 500
Moisture %:10

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-049

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	18000	U
11104-28-2	Aroclor 1221	18000	U
11141-16-5	Aroclor 1232	18000	U
53469-21-9	Aroclor 1242	18000	U
12672-29-6	**Aroclor 1248**	**96000**	
11097-69-1	Aroclor 1254	18000	U
11096-82-5	Aroclor 1260	18000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/062f0101.d
Report Date: 22-Dec-1998 14:45

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/062f0101.d
Lab Smp Id: CNXCD101 Client Smp ID: S-120298-JH-049
Inj Date : 22-DEC-1998 12:08
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCD101,500
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume

PCB'S ARE DEGRADED

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.207	4.293	-0.086	585	0.000357	59.27	80.00- 120.00	100.00(R)
6 AROCLOR-1248					CAS #: 12672-29-6		
5.377	5.373	0.004	6323	0.26145	43440	80.00- 120.00	21.84(M)
6.097	6.140	-0.043	29267	0.71896	119500	131.96- 219.94	101.09
7.072	7.083	-0.011	39895	0.69762	115900	179.01- 298.35	137.80
9.060	9.073	-0.013	14878	0.44923	74650	103.93- 173.22	51.39
9.628	9.640	-0.012	10359	0.46047	76520	71.80- 119.67	35.78
Average of Peak Concentrations =					86000		
$ 9 DCB					CAS #: 2051-24-3		
15.127	15.143	-0.016	1931	0.00146	243.4	80.00- 120.00	100.00(R)

Data File: /chem/can/gcs/a2hpk.i/81221a.b/062f0101.d
Report Date: 22-Dec-1998 14:45

QC Flag Legend

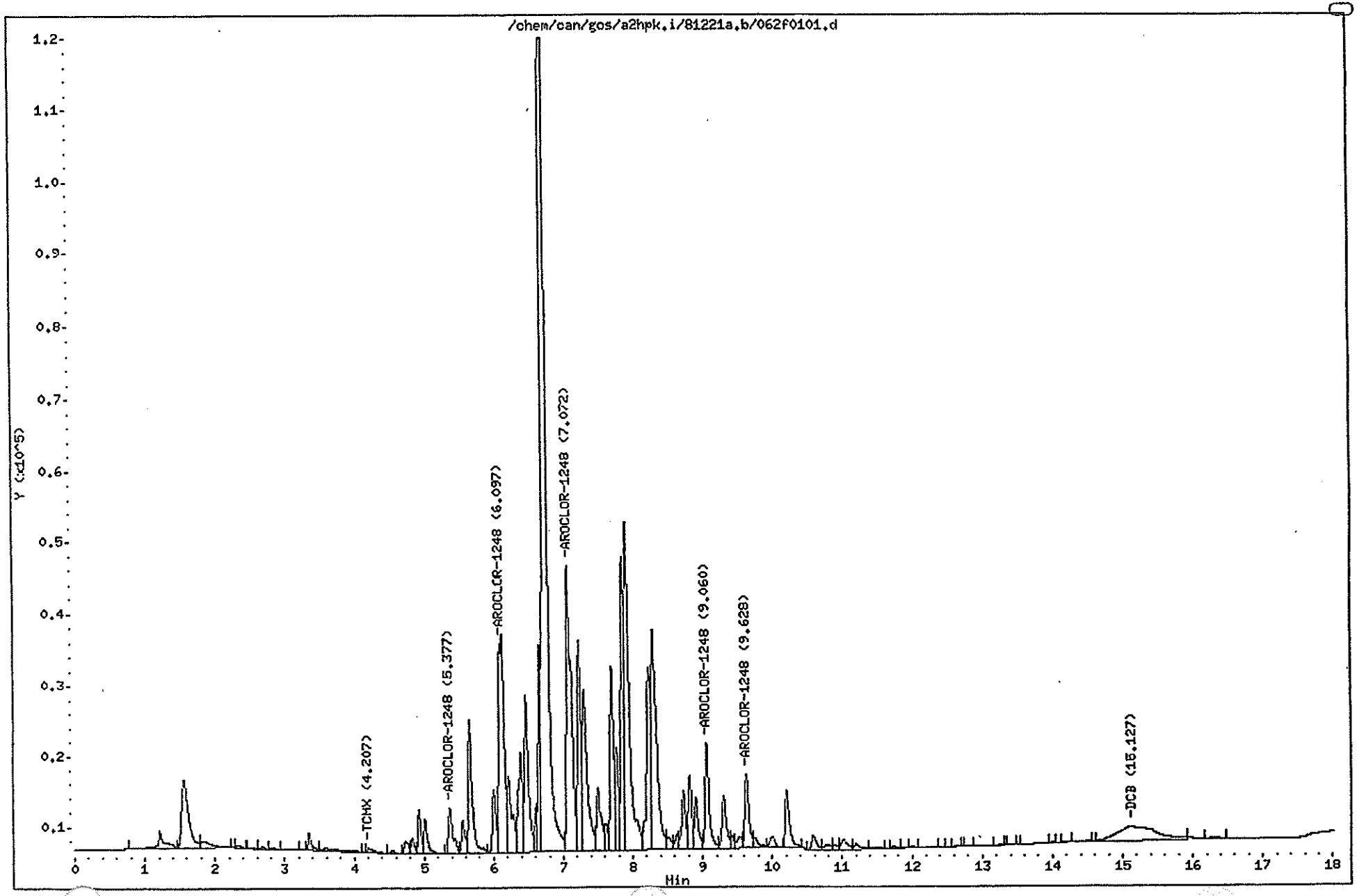
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gos/a2hpk.i/81221a.b/062f0101.d
Date : 22-DEC-1998 12:08
Client ID: S-120298-JH-049
Sample Info: CNXCD101,500
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

074



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 015

Sample WT/Vol: 30.02 / g
Work Order: CNXCF101
Dilution factor: 500
Moisture %:13

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-050

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	19000	U
11104-28-2	Aroclor 1221	19000	U
11141-16-5	Aroclor 1232	19000	U
53469-21-9	Aroclor 1242	19000	U
12672-29-6	**Aroclor 1248**	**75000**	
11097-69-1	Aroclor 1254	19000	U
11096-82-5	Aroclor 1260	19000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/063f0101.d
Report Date: 22-Dec-1998 14:45

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/063f0101.d
Lab Smp Id: CNXCF101 Client Smp ID: S-120298-JH-050
Inj Date : 22-DEC-1998 12:29
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCF101,500
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.207	4.293	-0.086	289	0.000176	29.35	80.00- 120.00	100.00(R)
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.373	0.002	7197	0.29758	49560	80.00- 120.00	23.57(M)
6.132	6.140	-0.008	33710	0.82811	137900	131.96- 219.94	110.38
7.072	7.083	-0.011	21428	0.37470	62410	179.01- 298.35	70.16
9.060	9.073	-0.013	7238	0.21855	36400	103.93- 173.22	23.70
9.630	9.640	-0.010	5005	0.22248	37050	71.80- 119.67	16.39
Average of Peak Concentrations =					64670		
$ 9 DCB					CAS #: 2051-24-3		
15.143	15.143	0.000	45	<0.0	5.684	80.00- 120.00	100.00

PCB'S ARE DEGRADED

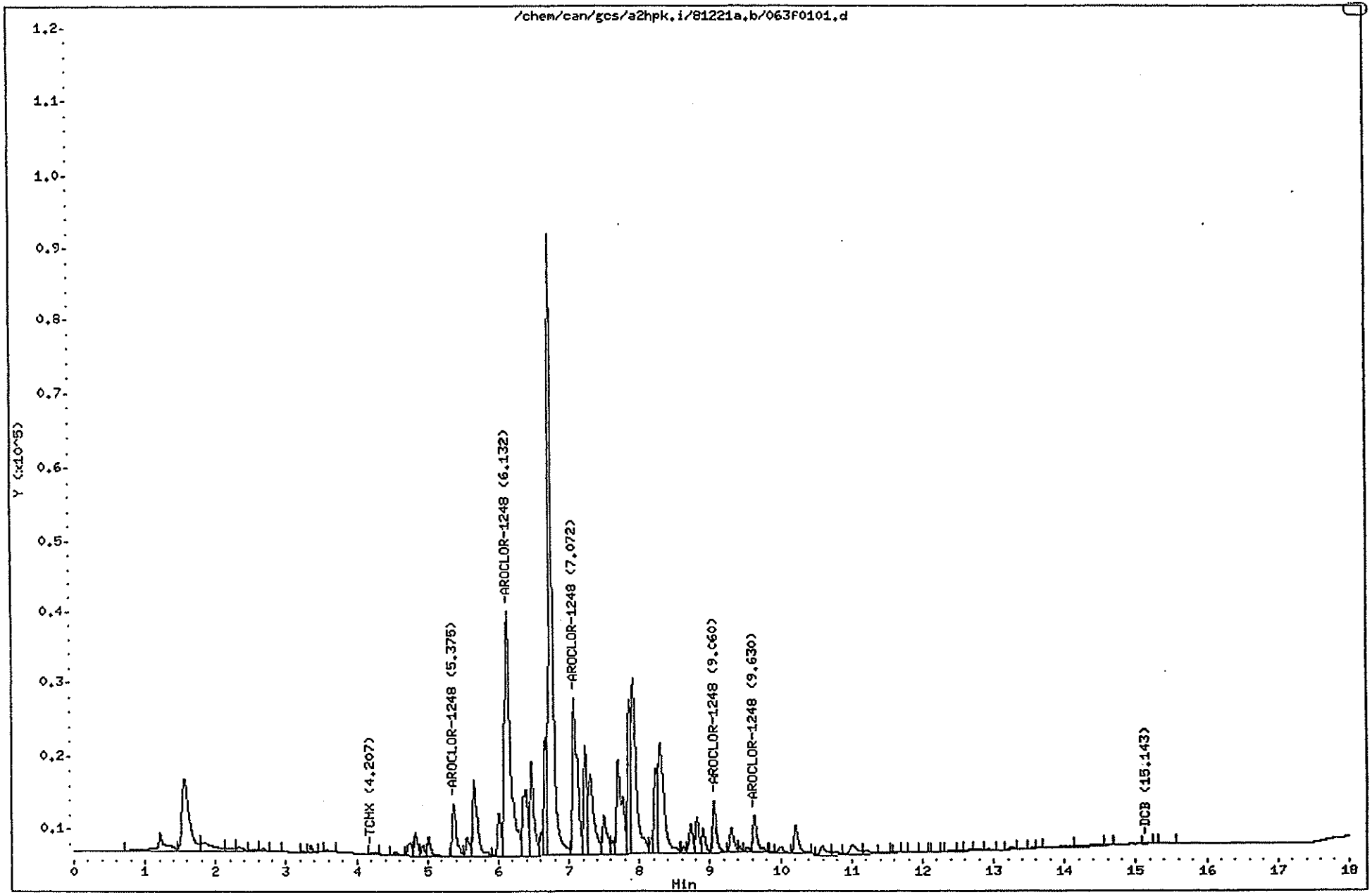
Data File: /chem/can/gcs/a2hpk.i/81221a.b/063f0101.d
Report Date: 22-Dec-1998 14:45

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/063F0101.d
Date : 22-DEC-1998 12:29
Client ID: S-120298-JH-050
Sample Info: CNXCF101,500
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 016

Sample WT/Vol: 30.11 / g
Work Order: CNXCH101
Dilution factor: 1
Moisture %:13

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-051

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/064f0101.d
Report Date: 22-Dec-1998 14:45

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/064f0101.d
Lab Smp Id: CNXCH101 Client Smp ID: S-120298-JH-051
Inj Date : 22-DEC-1998 12:50
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCH101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

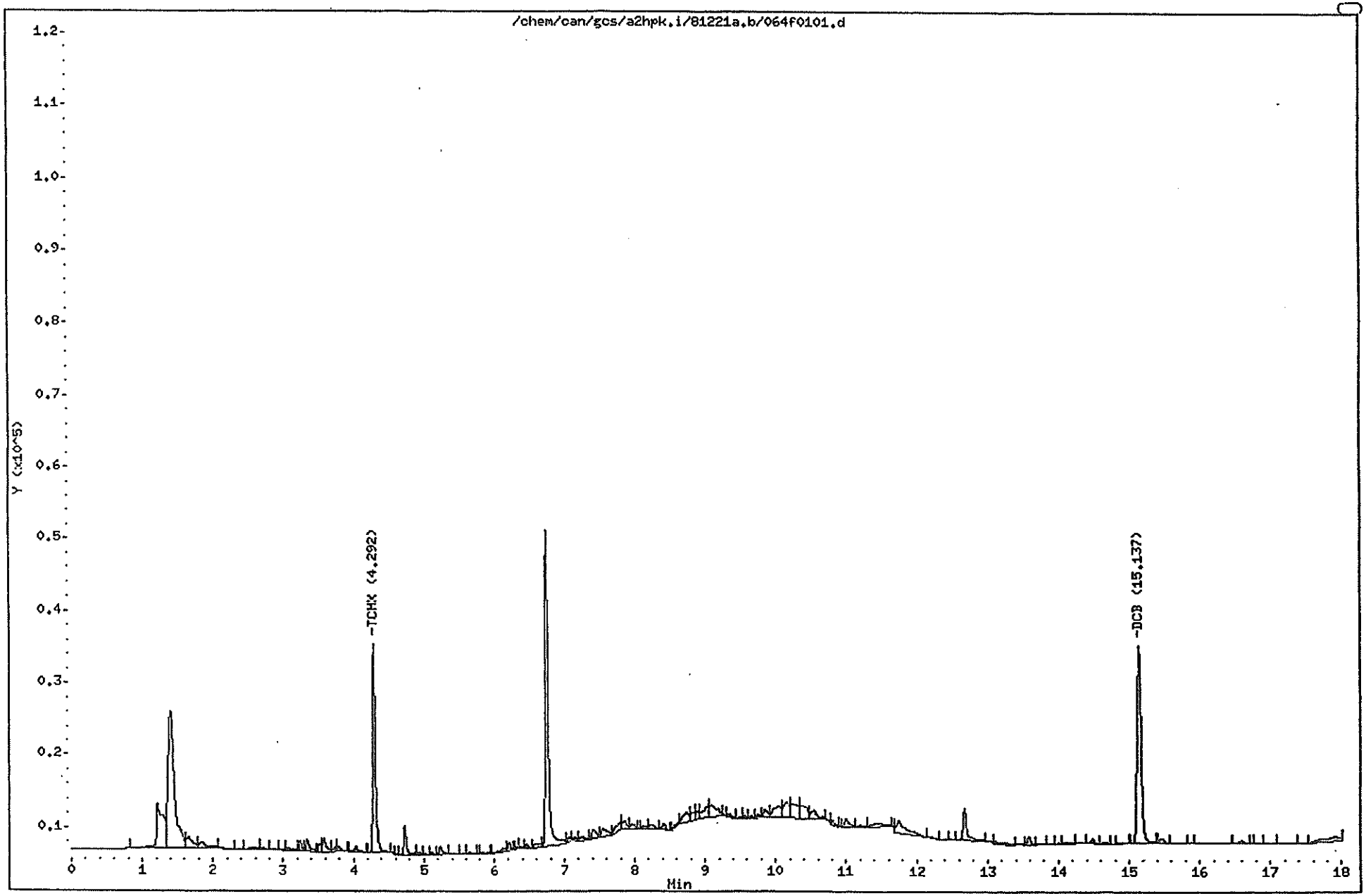
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.293	-0.001	28977	0.01767	5.868	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.137	15.143	-0.006	27455	0.02082	6.915	80.00- 120.00	100.00

Da. le: /chem/can/gcs/a2hpk.i/81221a.b/064f0101.d
Date : 22-DEC-1998 12:50
Client ID: S-120298-JH-051
Sample Info: CNXCH101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 017

Sample WT/Vol: 30.06 / g
Work Order: CNXCL101
Dilution factor: 1
Moisture %:13

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-052

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/065f0101.d
Report Date: 22-Dec-1998 14:45

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/065f0101.d
Lab Smp Id: CNXCL101 Client Smp ID: S-120298-JH-052
Inj Date : 22-DEC-1998 13:11
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCL101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

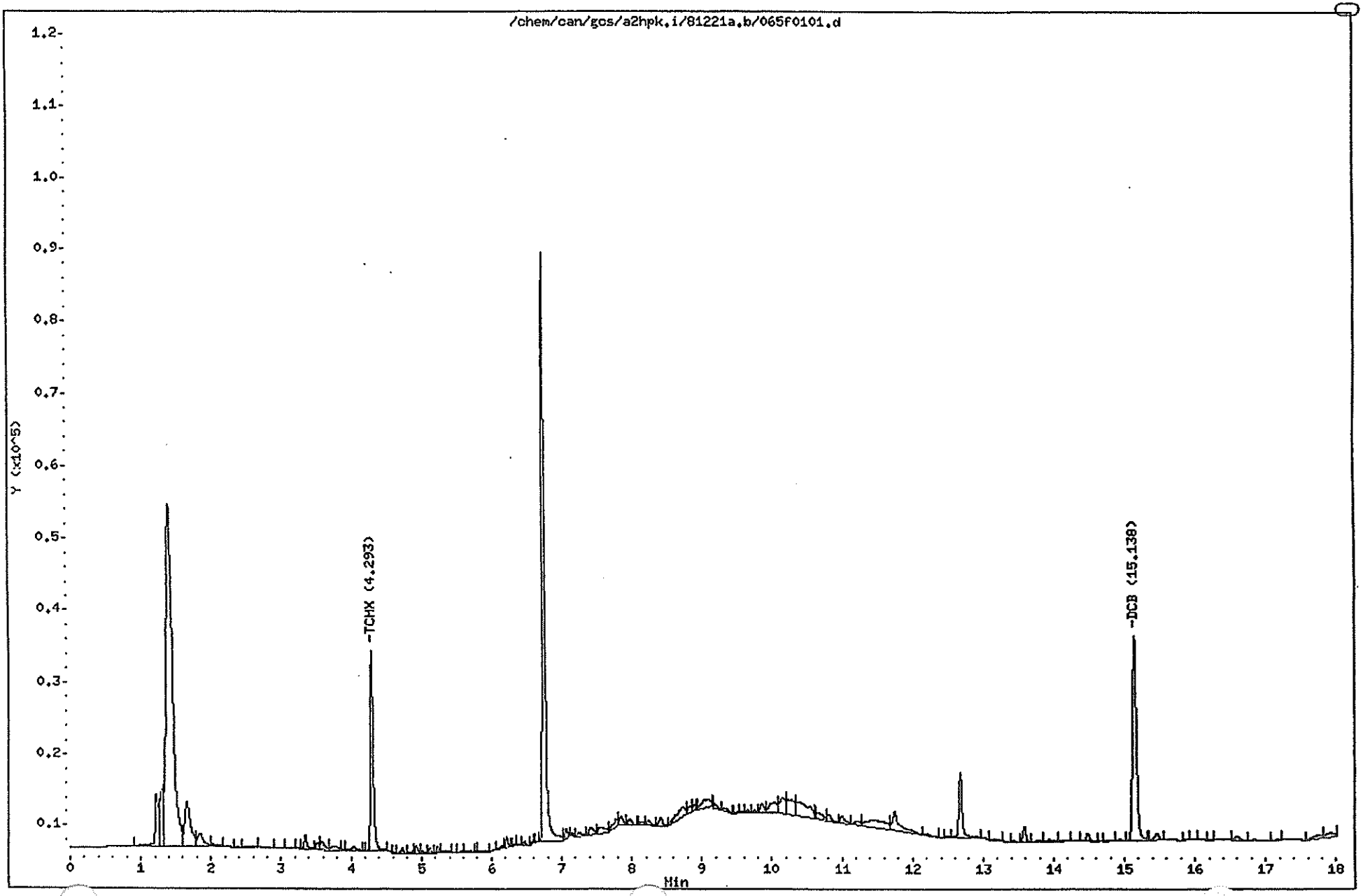
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.293	0.000	28047	0.01710	5.689	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.143	-0.005	28546	0.02165	7.202	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/065f0101.d
Date : 22-DEC-1998 13:11
Client ID: S-120298-JH-052
Sample Info: CNXCL101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 018

Sample WT/Vol: 30.14 / g
Work Order: CNXCM101
Dilution factor: 10
Moisture %:7.9

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-053

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	360	U
11104-28-2	Aroclor 1221	360	U
11141-16-5	Aroclor 1232	360	U
53469-21-9	Aroclor 1242	360	U
12672-29-6	**Aroclor 1248**	**1200**	
11097-69-1	Aroclor 1254	360	U
11096-82-5	Aroclor 1260	360	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/072f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/072f0101.d
Lab Smp Id: CNXCM101 Client Smp ID: S-120298-JH-053
Inj Date : 22-DEC-1998 15:38
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCM101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.295	-0.003	3178	0.00194	6.429	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.368	5.365	0.003	7204	0.29787	988.3	80.00- 120.00	24.32(M)
6.132	6.132	0.000	22245	0.54646	1813	126.36- 210.60	75.11
7.070	7.072	-0.002	17714	0.30975	1028	175.17- 291.95	59.81
9.057	9.060	-0.003	8253	0.24919	826.8	99.08- 165.14	27.87
9.623	9.628	-0.005	6397	0.28435	943.4	66.11- 110.18	21.60
Average of Peak Concentrations =					1120		
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.142	-0.004	4240	0.00322	10.67	80.00- 120.00	100.00

PCBs ARE DEGRADE

other pks match no Aroclor

Data File: /chem/can/gcs/a2hpk.i/81221a.b/072f0101.d
Report Date: 23-Dec-1998 10:21

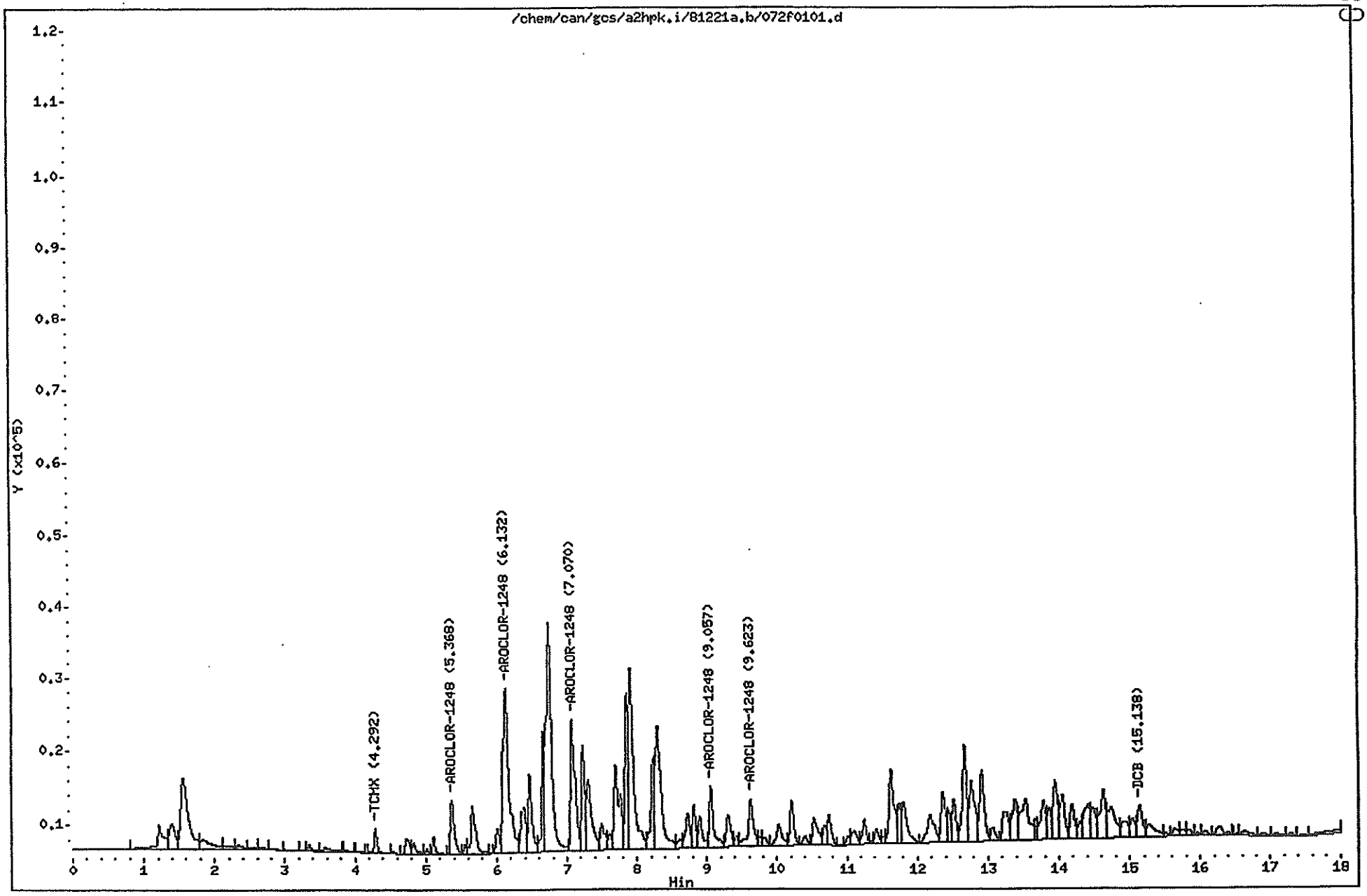
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/072f0101.d
Date : 22-DEC-1998 15:38
Client ID: S-120298-JH-053
Sample Info: CNXCH101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 019

Sample WT/Vol: 30.18 / g
Work Order: CNXCN101
Dilution factor: 10
Moisture %:7.0

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-054

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	350	U
12672-29-6	**Aroclor 1248**	**870**	
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/073f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/073f0101.d
Lab Smp Id: CNXCN101 Client Smp ID: S-120298-JH-054
Inj Date : 22-DEC-1998 15:59
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCN101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.180	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.295	-0.003	2629	0.00160	5.311	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.370	5.365	0.005	6936	0.28679	950.3	80.00- 120.00	19.00(M)
6.132	6.132	0.000	17529	0.43061	1427	126.36- 210.60	48.01
7.070	7.072	-0.002	12970	0.22680	751.5	175.17- 291.95	35.53
9.055	9.060	-0.005	4085	0.12334	408.7	99.08- 165.14	11.19
9.618	9.628	-0.010	3457	0.15367	509.2	66.11- 110.18	9.47
Average of Peak Concentrations =					809.3		
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.142	-0.004	3375	0.00256	8.481	80.00- 120.00	100.00

PCB'S ARE DEGRADED

other pks match no Aroclor

Data File: /chem/can/gcs/a2hpk.i/81221a.b/073f0101.d
Report Date: 23-Dec-1998 10:21

QC Flag Legend

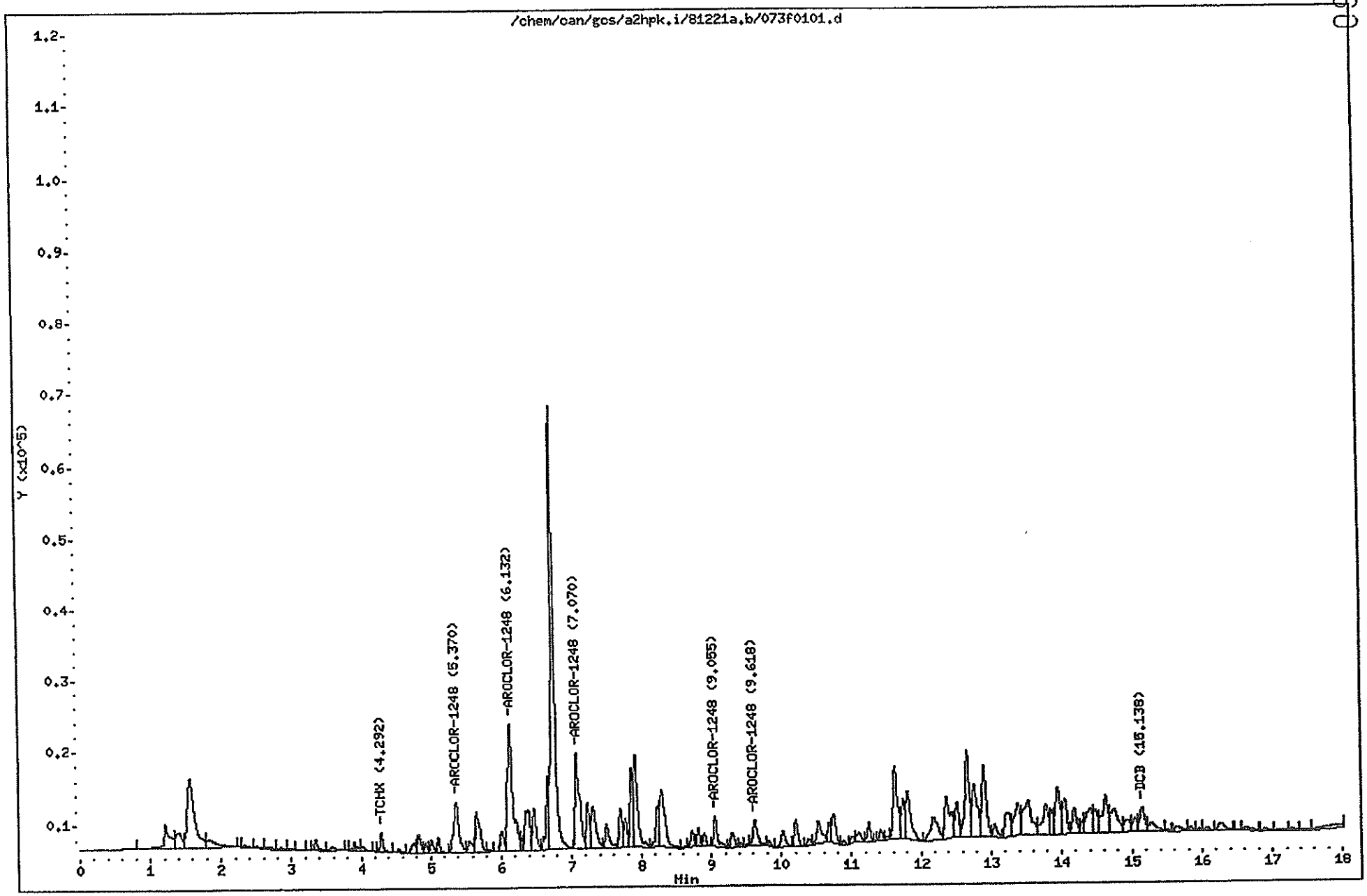
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/073f0101.d
Date : 22-DEC-1998 15:59
Client ID: S-120298-JH-054
Sample Info: CNXCN101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

C92



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 020

Sample WT/Vol: 30.14 / g
Work Order: CNXCP101
Dilution factor: 10
Moisture %:11

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-055

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	370	U
11104-28-2	Aroclor 1221	370	U
11141-16-5	Aroclor 1232	370	U
53469-21-9	**Aroclor 1242**	**2000**	
12672-29-6	Aroclor 1248	370	U
11097-69-1	Aroclor 1254	370	U
11096-82-5	Aroclor 1260	370	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/074f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/074f0101.d
Lab Smp Id: CNXCP101 Client Smp ID: S-120298-JH-055
Inj Date : 22-DEC-1998 16:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCP101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.290	4.295	-0.005	2804	0.00171	5.672	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.825	4.825	0.000	8608	0.27779	921.7	80.00- 120.00	26.94(M)
5.368	5.370	-0.002	26203	0.48508	1609	127.22- 212.04	82.01
6.128	6.132	-0.004	45865	0.54708	1815	198.24- 330.40	143.55
6.467	6.470	-0.003	17581	0.51354	1704	78.59- 130.99	55.03
6.663	6.668	-0.005	21080	0.59198	1964	80.95- 134.92	65.98
Average of Peak Concentrations =					1603		
5 AROCLOR-1242					CAS #: 53469-21-9		
4.825	4.833	-0.008	8608	0.32357	1074	80.00- 120.00	26.94(M)
5.368	5.378	-0.010	26203	0.58495	1941	123.50- 205.84	82.01
6.128	6.142	-0.014	45865	0.68807	2283	193.39- 322.32	143.55

PCB'S ARE DEGRADED

Pattern Does Resemble 1242

other pks match non Aroclor

Data File: /chem/can/gcs/a2hpk.i/81221a.b/074f0101.d
Report Date: 23-Dec-1998 10:21

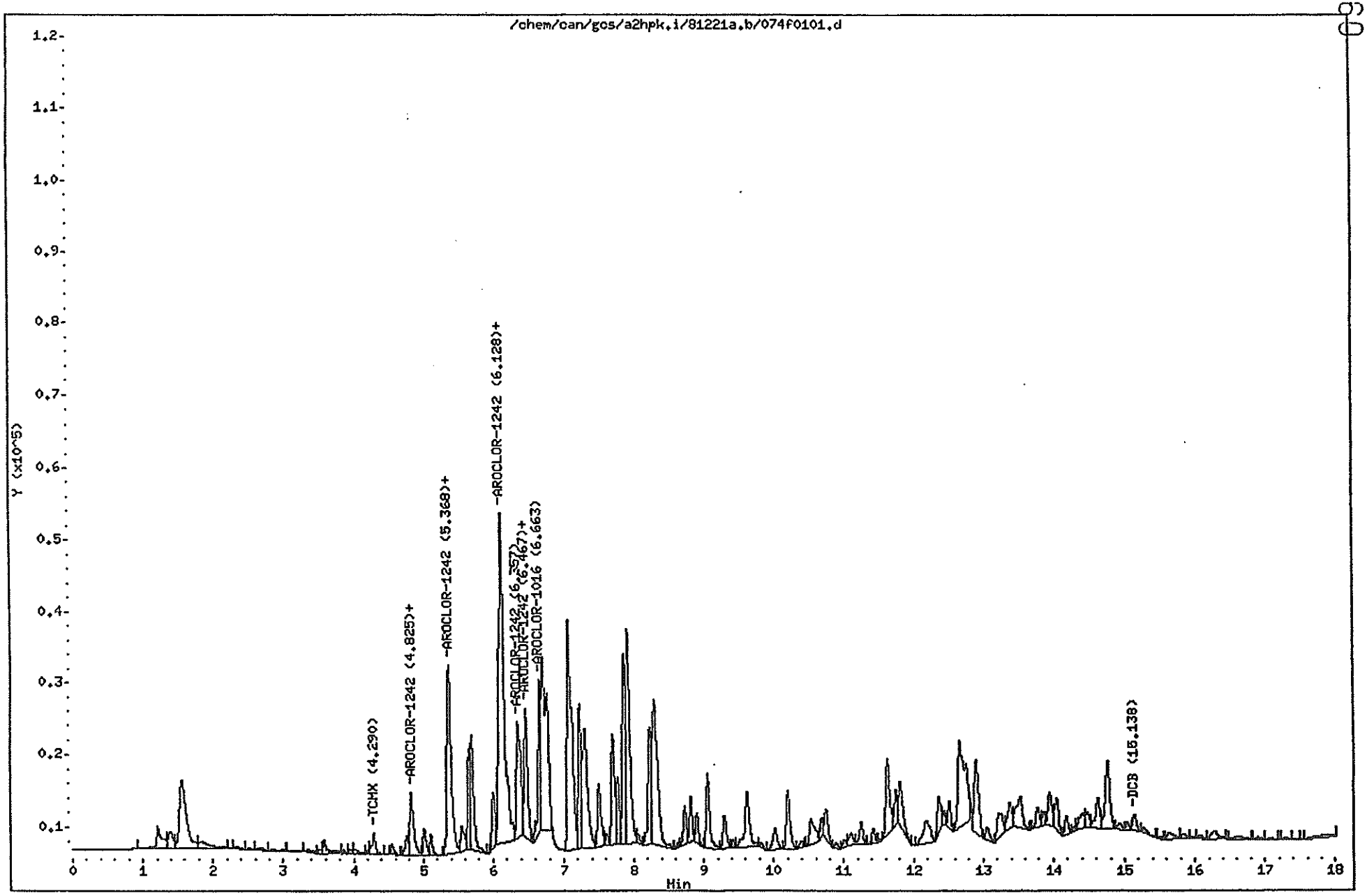
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242 (continued)							
6.357	6.368	-0.011	15898	0.42209	1400	108.65- 181.08	49.76
6.467	6.480	-0.013	17581	0.65617	2177	79.53- 132.55	55.03
Average of Peak Concentrations =					1775		
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.142	-0.004	2267	0.00172	5.704	80.00- 120.00	100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/074f0101.d
Date : 22-DEC-1998 16:20
Client ID: S-120298-JH-055
Sample Info: CNXCP101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 021

Sample WT/Vol: 30.18 / g
Work Order: CNXCQ101
Dilution factor: 100
Moisture %:2.5

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-056

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3400	U
11104-28-2	Aroclor 1221	3400	U
11141-16-5	Aroclor 1232	3400	U
53469-21-9	**Aroclor 1242**	**13000**	
12672-29-6	Aroclor 1248	3400	U
11097-69-1	Aroclor 1254	3400	U
11096-82-5	Aroclor 1260	3400	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/075f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/075f0101.d
Lab Smp Id: CNXCQ101 — Client Smp ID: S-120298-JH-056
Inj Date : 22-DEC-1998 16:41
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNXCQ101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.180	initial volume

PCB'S ARE DEGRADED

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.250	4.295	-0.045	1717	0.00105	34.69	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.823	4.825	-0.002	9915	0.31997	10600	80.00- 120.00	100.00
5.368	5.370	-0.002	17653	0.32680	10830	127.22- 212.04	178.04
6.128	6.132	-0.004	26650	0.31789	10530	198.24- 330.40	268.78
6.465	6.470	-0.005	11684	0.34129	11310	78.59- 130.99	117.84
6.665	6.668	-0.003	12754	0.35816	11870	80.95- 134.92	128.63
Average of Peak Concentrations =					11030		
5 AROCLOR-1242					CAS #: 53469-21-9		
4.823	4.833	-0.010	9915	0.37270	12350	80.00- 120.00	100.00
5.368	5.378	-0.010	17653	0.39408	13060	123.50- 205.84	178.04
6.128	6.142	-0.014	26650	0.39980	13250	193.39- 322.32	268.78

Pattern best resembles 1242

Data File: /chem/can/gcs/a2hpk.i/81221a.b/075f0101.d
Report Date: 23-Dec-1998 10:21

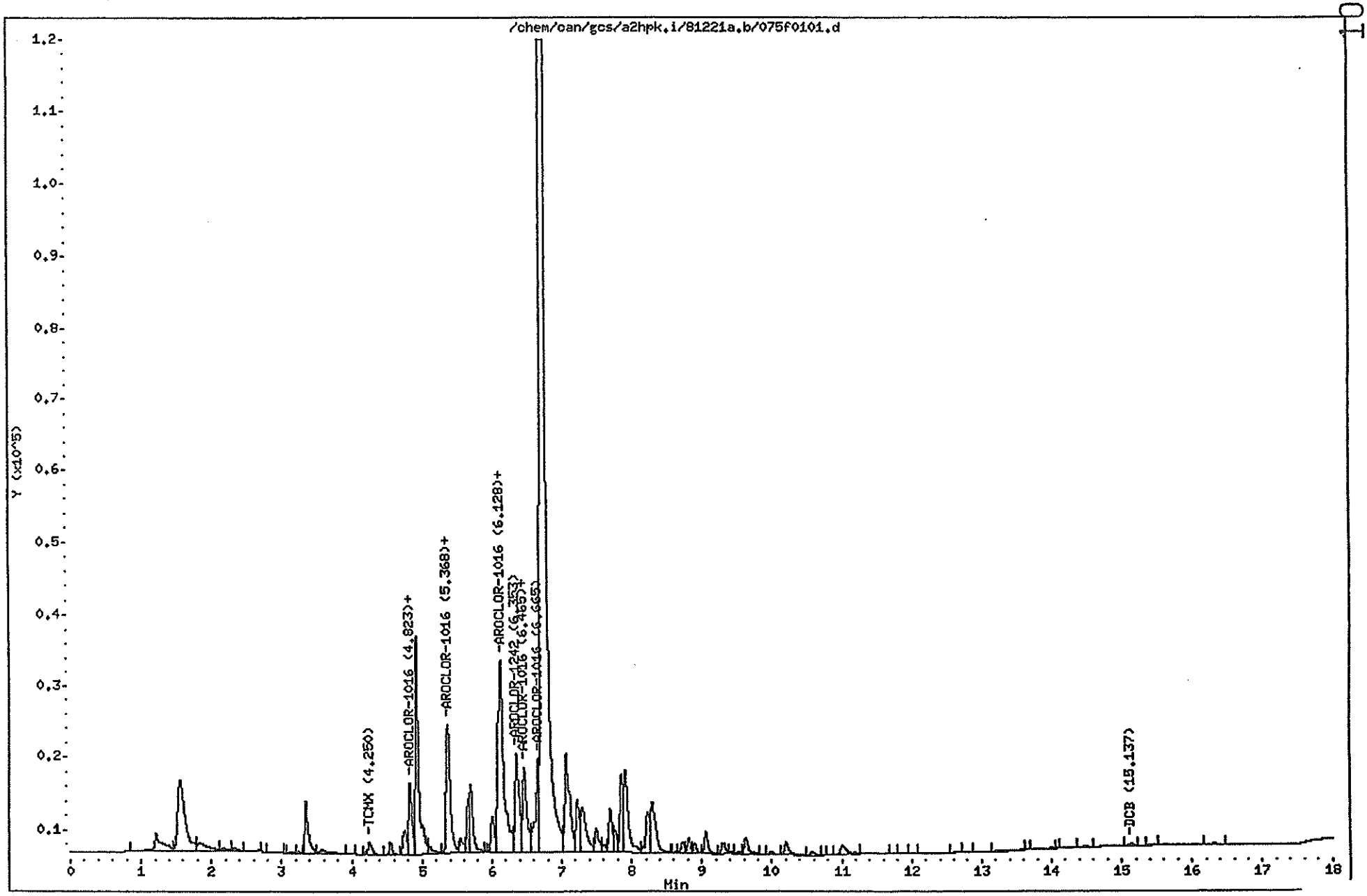
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242 (continued)							
6.353	6.368	-0.015	13531	0.35924	11900	108.65- 181.08	136.47
6.465	6.480	-0.015	11684	0.43608	14450	79.53- 132.55	117.84
Average of Peak Concentrations =					13000		
$ 9 DCB					CAS #: 2051-24-3		
15.137	15.142	-0.005	275	0.000209	6.911	80.00- 120.00	100.00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/oan/gcs/a2hpk.i/81221a.b/075f0101.d
Date : 22-DEC-1998 16:41
Client ID: S-120298-JH-056
Sample Info: CNXCQ101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



100

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 022

Sample WT/Vol: 30.07 / g
Work Order: CNXCR101
Dilution factor: 500
Moisture %:9.2

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-057

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	18000	U
11104-28-2	Aroclor 1221	18000	U
11141-16-5	Aroclor 1232	18000	U
53469-21-9	**Aroclor 1242**	**110000**	
12672-29-6	Aroclor 1248	18000	U
11097-69-1	Aroclor 1254	18000	U
11096-82-5	Aroclor 1260	18000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/076f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/076f0101.d
Lab Smp Id: CNXCR101 Client Smp ID: S-120298-JH-057
Inj Date : 22-DEC-1998 17:01
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXCR101,500
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.070	initial volume

PCB'S ARE DESIRED

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.250	4.295	-0.045	2209	0.00135	224.0	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.822	4.825	-0.003	17281	0.55768	92730	80.00- 120.00	100.00
5.372	5.370	0.002	28402	0.52579	87430	127.22- 212.04	164.35
6.128	6.132	-0.004	48315	0.57631	95830	198.24- 330.40	279.58
6.467	6.470	-0.003	17343	0.50659	84230	78.59- 130.99	100.36
6.663	6.668	-0.005	16820	0.47235	78540	80.95- 134.92	97.33
Average of Peak Concentrations =					87750		
5 AROCLOR-1242					CAS #: 53469-21-9		
4.822	4.833	-0.011	17281	0.64958	108000	80.00- 120.00	24.92(M)
5.372	5.378	-0.006	28402	0.63404	105400	123.50- 205.84	40.95
6.128	6.142	-0.014	48315	0.72482	120500	193.39- 322.32	69.66

Pattern best resembles 1242

Data File: /chem/can/gcs/a2hpk.i/81221a.b/076f0101.d
Report Date: 23-Dec-1998 10:21

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242 (continued)							
6.357	6.368	-0.011	12277	0.32595	54200	108.65- 181.08	17.70
6.467	6.480	-0.013	17343	0.64729	107600	79.53- 132.55	25.01
Average of Peak Concentrations =					99160		
$ 9 DCB					CAS #: 2051-24-3		
15.137	15.142	-0.005	103	<0.0	12.99	80.00- 120.00	100.00(R)

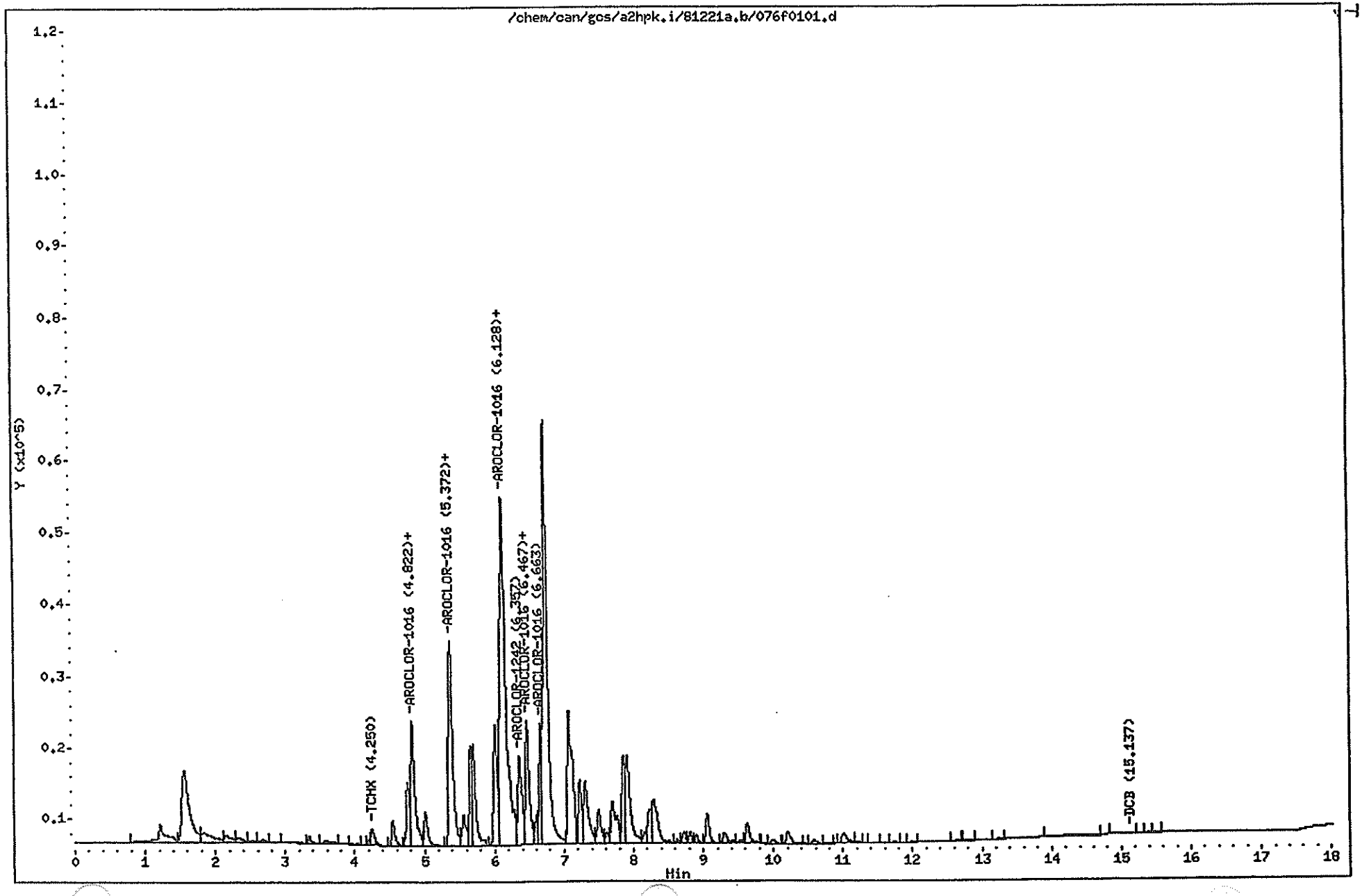
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/076f0101.d
Date : 22-DEC-1998 17:01
Client ID: S-120298-JH-057
Sample Info: CNXCR101,500
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 023

Sample WT/Vol: 30.06 / g
Work Order: CNXD0101
Dilution factor: 1
Moisture %:9.5

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: S-120298-JH-058

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	**Aroclor 1248**	**190**	
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/077f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/077f0101.d
Lab Smp Id: CNXD0101 — Client Smp ID: S-120298-JH-058
Inj Date : 22-DEC-1998 17:22
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNXD0101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.288	4.295	-0.007	27880	0.01700	5.655	80.00- 120.00	100.00
6 AROCLOR-1248					CAS #: 12672-29-6		
5.367	5.365	0.002	8373	0.34621	115.2	80.00- 120.00	22.46(M)
6.127	6.132	-0.005	32941	0.80922	269.2	126.36- 210.60	88.37
7.067	7.072	-0.005	28145	0.49216	163.7	175.17- 291.95	75.50
9.052	9.060	-0.008	15917	0.48060	159.9	99.08- 165.14	42.70
9.617	9.628	-0.011	11778	0.52354	174.2	66.11- 110.18	31.60
Average of Peak Concentrations =					176.4		
$ 9 DCB					CAS #: 2051-24-3		
15.133	15.142	-0.009	27917	0.02117	7.043	80.00- 120.00	100.00

other pks match no Aroclor

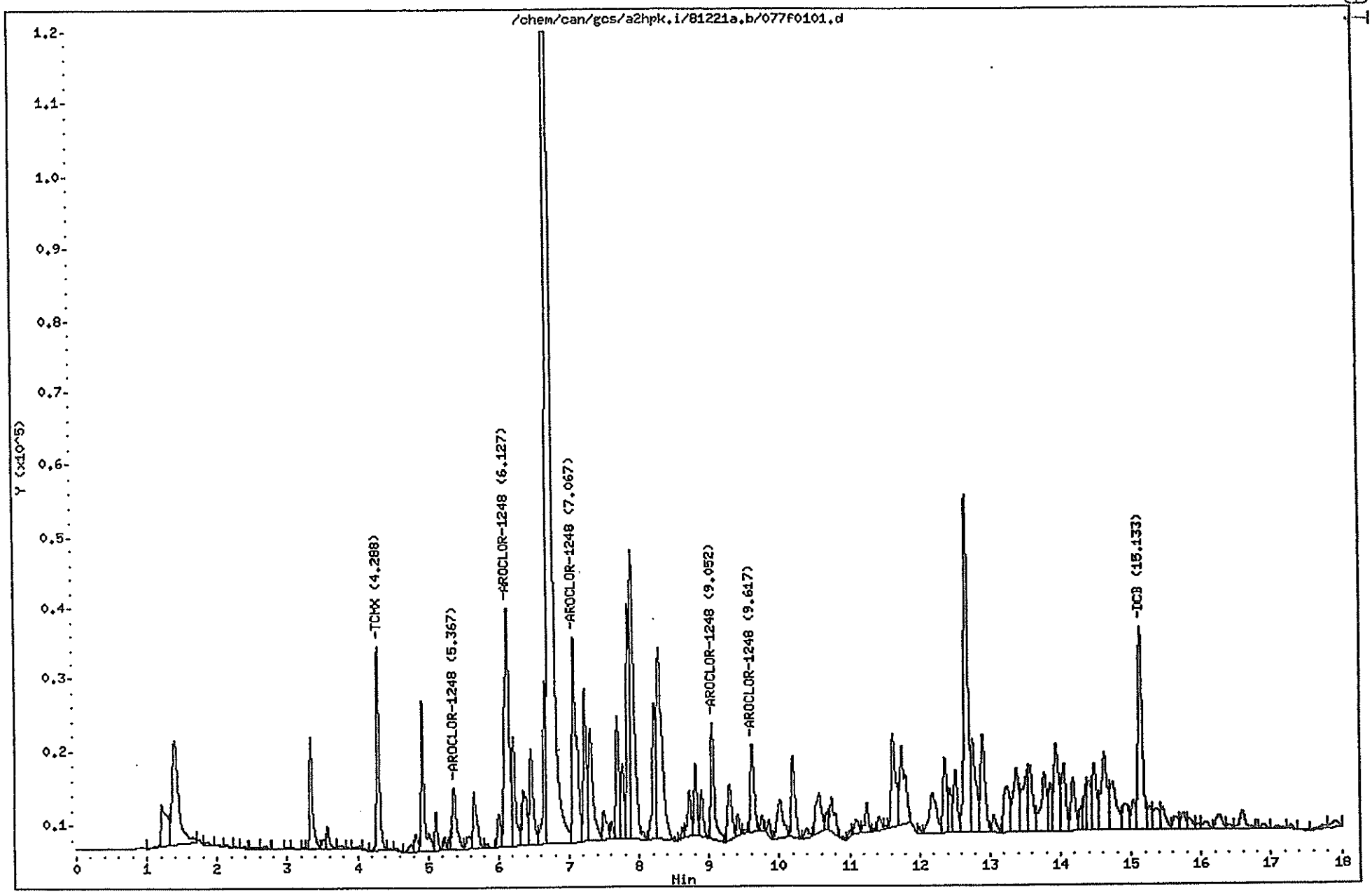
Data File: /chem/can/gcs/a2hpk.i/81221a.b/077f0101.d
Report Date: 23-Dec-1998 10:21

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/077f0101.d
Date : 22-DEC-1998 17:22
Client ID: S-120298-JH-058
Sample Info: CHXD0101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



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CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 024

Sample WT/Vol: 30.01 / g
Work Order: CNXD1101
Dilution factor: 100
Moisture %:8.6

Date Received: 12/03/98
Date Extracted:12/08/98
Date Analyzed: 12/15/98

QC Batch: 8342110

Client Sample Id: S-120298-JH-059

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**29000**	
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	Aroclor 1242	3600	U
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81214a.b/068f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/068f0101.d
Lab Smp Id: CNXD1101 — Client Smp ID: S-120298-JH-059
Inj Date : 15-DEC-1998 14:38
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNXD1101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a — Quant Type: ESTD
Cal Date : 06-DEC-1998 20:55 — Cal File: 026f0101.d
Als bottle: 1
Dil Factor: 100.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.257	4.298	-0.041	1943	0.00118	39.48	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.832	4.832	0.000	13336	0.43037	14340	80.00- 120.00	29.70(M)
5.378	5.377	0.001	46253	0.85626	28530	131.48- 219.13	103.01
6.100	6.140	-0.040	63608	0.75873	25280	201.19- 335.32	141.66
6.477	6.480	-0.003	32782	0.95756	31910	80.13- 133.54	73.01
6.700	6.677	0.023	34783	0.97680	32550	83.41- 139.01	77.46
Average of Peak Concentrations =					26520		
$ 9 DCB					CAS #: 2051-24-3		
15.182	15.157	0.025	1576	0.00120	39.03	80.00- 120.00	100.00(R)

PCB are degraded

Data File: /chem/can/gcs/a2hpk.i/81214a.b/068f0101.d
Report Date: 16-Dec-1998 08:00

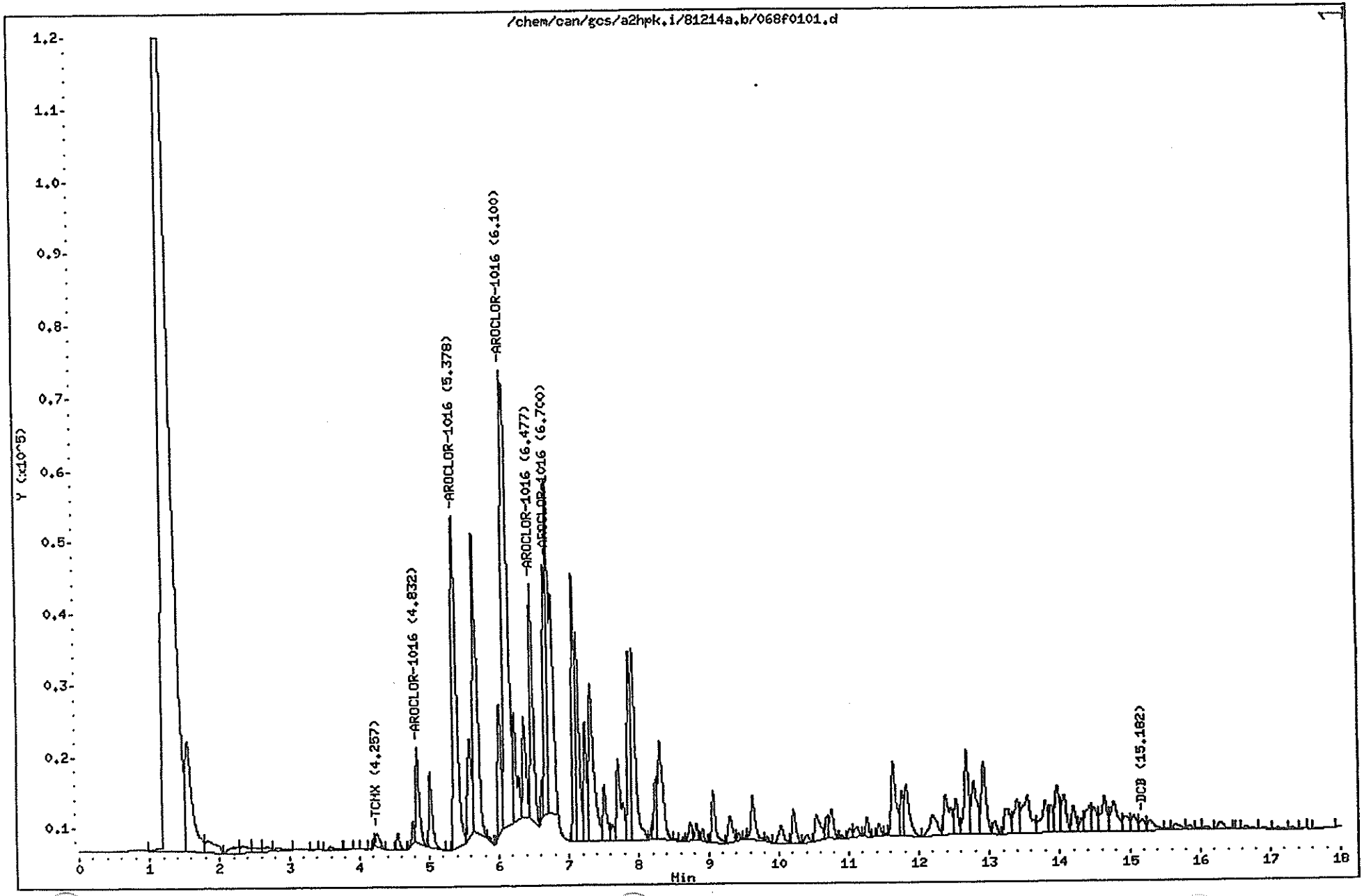
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81214a.b/068f0101.d
Date : 15-DEC-1998 14:38
Client ID: S-120298-JH-059
Sample Info: CNXD1101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 025

Sample WT/Vol: 30 / g
Work Order: CNXD2101
Dilution factor: 500
Moisture %:5.9

Date Received: 12/03/98
Date Extracted:12/08/98
Date Analyzed: 12/15/98

QC Batch: 8342110

Client Sample Id: S-120298-JH-060

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**73000**	
11104-28-2	Aroclor 1221	18000	U
11141-16-5	Aroclor 1232	18000	U
53469-21-9	Aroclor 1242	18000	U
12672-29-6	Aroclor 1248	18000	U
11097-69-1	Aroclor 1254	18000	U
11096-82-5	Aroclor 1260	18000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81214a.b/069f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/069f0101.d
Lab Smp Id: CNXD2101 — Client Smp ID: S-120298-JH-060
Inj Date : 15-DEC-1998 14:59
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CNXD2101,500
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a — Quant Type: ESTD
Cal Date : 06-DEC-1998 20:55 — Cal File: 026f0101.d
Als bottle: 1
Dil Factor: 500.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.258	4.298	-0.040	1577	0.000962	160.2	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.832	4.832	0.000	8500	0.27430	45720	80.00- 120.00	26.26(M)
5.385	5.377	0.008	20126	0.37258	62100	131.48- 219.13	62.17
6.138	6.140	-0.002	35590	0.42452	70750	201.19- 335.32	109.94
6.478	6.480	-0.002	16564	0.48383	80640	80.13- 133.54	51.17
6.700	6.677	0.023	17639	0.49535	82560	83.41- 139.01	54.49
Average of Peak Concentrations =					68350		
$ 9 DCB					CAS #: 2051-24-3		
15.157	15.157	0.000	117	<0.0	14.79	80.00- 120.00	100.00(R)

Data File: /chem/can/gcs/a2hpk.i/81214a.b/069f0101.d
Report Date: 16-Dec-1998 08:00

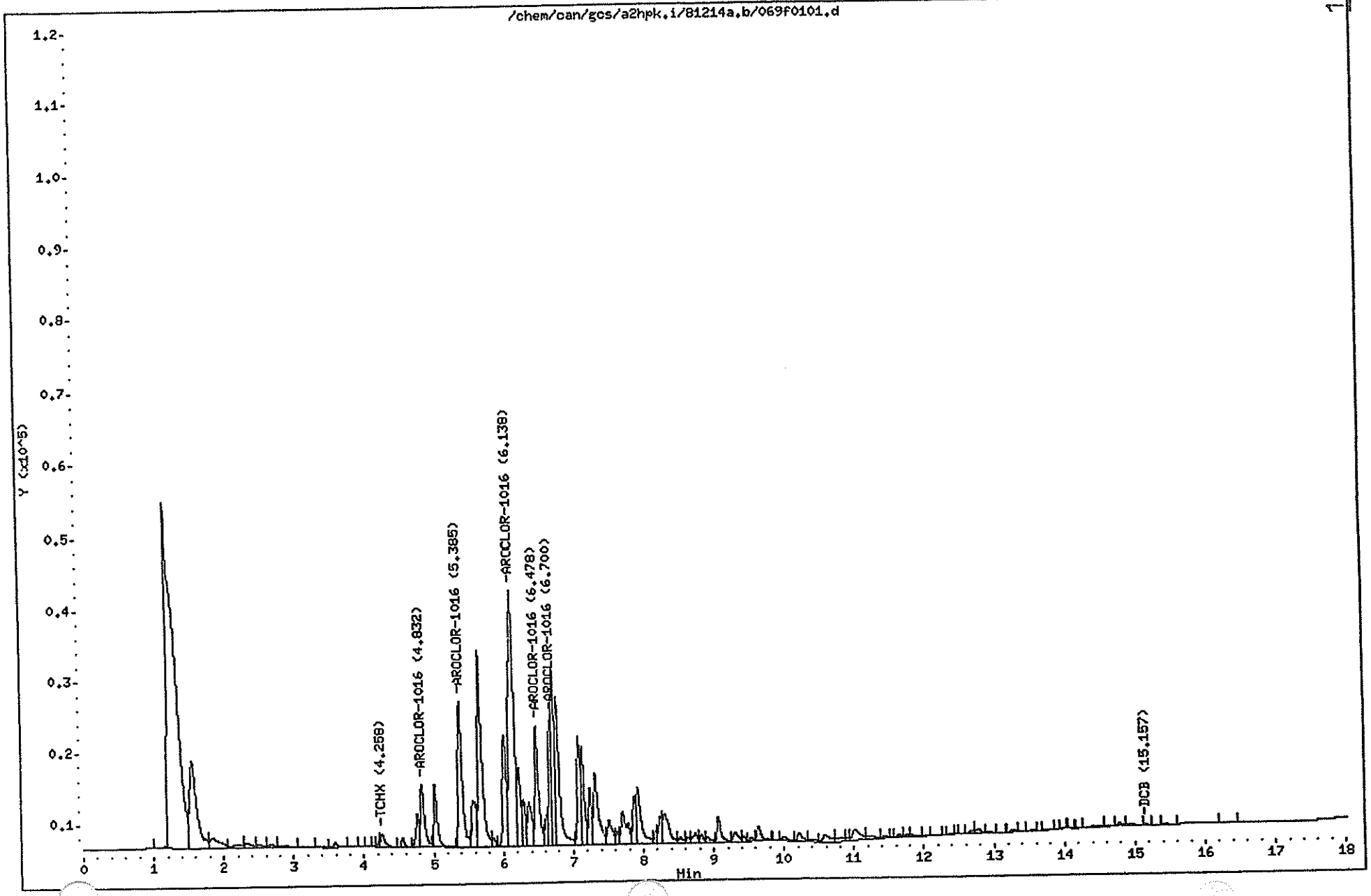
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81214a.b/069f0101.d
Date : 15-DEC-1998 14:59
Client ID: S-120298-JH-060
Sample Info: CNXD2101,500
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L030146 026

Sample WT/Vol: 30.17 / g
Work Order: CNXD3101
Dilution factor: 5000
Moisture %:10

Date Received: 12/03/98
Date Extracted:12/08/98
Date Analyzed: 12/17/98

QC Batch: 8342110

Client Sample Id: S-120298-JH-061

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	**Aroclor 1016**	**700000**	
11104-28-2	Aroclor 1221	180000	U
11141-16-5	Aroclor 1232	180000	U
53469-21-9	Aroclor 1242	180000	U
12672-29-6	Aroclor 1248	180000	U
11097-69-1	Aroclor 1254	180000	U
11096-82-5	Aroclor 1260	180000	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81217a.b/017f0101.d
Report Date: 18-Dec-1998 08:34

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/017f0101.d
Lab Smp Id: CNXD3101 Client Smp ID: S-120298-JH-061
Inj Date : 17-DEC-1998 20:54
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CNXD3101,5000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 18-Dec-1998 08:19 a Quant Type: ESTD
Cal Date : 17-DEC-1998 19:30 Cal File: 013f0101.d
Als bottle: 1
Dil Factor: 5000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	5000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.232	4.272	-0.040	4276	0.00261	4321	80.00- 120.00	100.00(R)
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	22810	0.73610	1220000	80.00- 120.00	27.84(M)
5.357	5.347	0.010	19675	0.36423	603600	125.72- 209.53	24.01
6.108	6.105	0.003	38049	0.45385	752200	205.40- 342.34	46.44
6.445	6.443	0.002	5463	0.15957	264400	83.54- 139.23	6.67
6.642	6.642	0.000	6398	0.17967	297800	82.06- 136.76	7.81
Average of Peak Concentrations =					627600		

PCBs are degraded

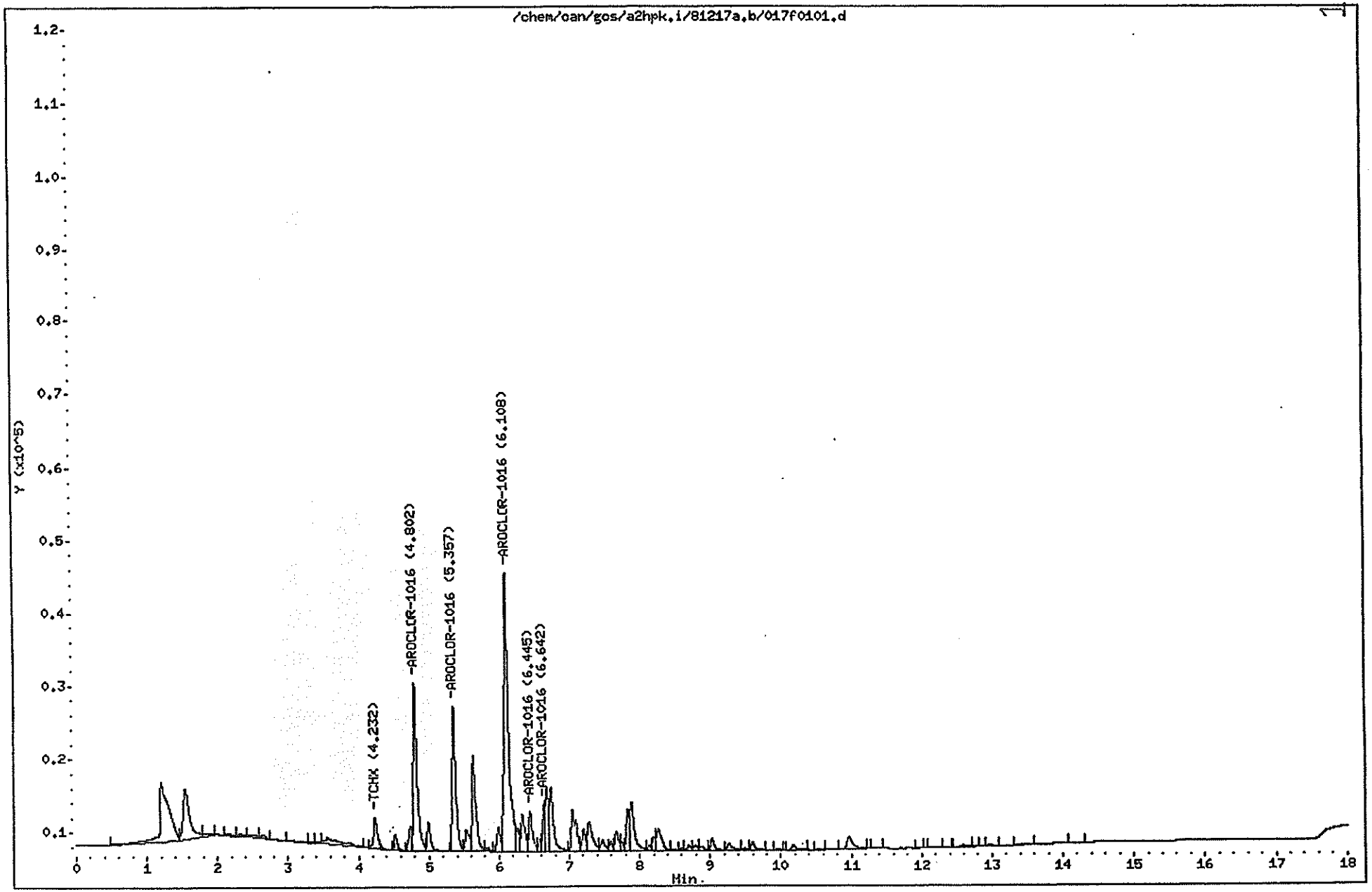
Data File: /chem/can/gcs/a2hpk.i/81217a.b/017f0101.d
Report Date: 18-Dec-1998 08:34

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gos/a2hpk.i/81217a.b/017f0101.d
Date : 17-DEC-1998 20:54
Client ID: S-120298-JH-061
Sample Info: CNXD3101,5000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
STANDARD DATA

Report Date : 03-Nov-1998 07:26

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-1998 19:12
End Cal Date : 03-NOV-1998 03:35
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Cal Date : 03-Nov-1998 07:23 a
Curve Type : Average

Calibration File Names:
Level 1: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Level 2: /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Level 3: /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Level 4: /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Level 5: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221 (1)	21460	20730	20190	17924	16131	19287	11.430
(2)	16100	15495	14828	12623	11417	14093	14.128
(3)	54310	50655	46518	39154	34580	45044	18.025
3 AROCLOR-1016 (1)	36790	34585	30874	27590	25098	30988	15.548
(2)	68020	62015	53172	46229	40652	54018	20.698 <-
(3)	95450	91205	84420	77017	71084	83835	11.908 <-
(4)	37260	36240	34612	32368	30694	34235	7.910 <-
(5)	44370	40335	35072	30878	27392	35609	19.318 <-
4 AROCLOR-1232 (1)	14570	13965	13636	12490	11190	13170	10.180
(2)	44780	41635	38238	33204	28606	37292	17.378
(3)	31460	29150	26666	23094	19667	26007	18.109
(4)	40820	39330	39264	35707	32122	37448	9.404
(5)	24030	22405	22566	20457	18176	21527	10.513
5 AROCLOR-1242 (1)	31840	30125	27060	23943	20048	26603	17.838
(2)	56560	52325	45014	38604	31472	44795	22.628 <-
(3)	75200	73520	68926	62323	53320	66658	13.457 <-
(4)	42720	41435	39098	35261	29812	37665	13.876 <-
(5)	27900	27675	28504	26690	23198	26793	7.888 <-
6 AROCLOR-1248 (1)	29320	27330	25062	20952	18260	24185	18.788
(2)	44030	42975	43582	38093	34856	40707	9.942
(3)	67850	63805	60072	50051	44158	57187	17.189
(4)	37480	34790	34958	30333	28032	33119	11.579
(5)	24310	23460	24076	20988	19650	22497	9.199
7 AROCLOR-1254 (1)	50240	45555	41024	34541	29584	40189	20.627 <-
(2)	112520	106390	100994	87149	78194	97050	14.533 <-
(3)	79920	75180	73302	63530	57108	69808	13.285 <-
(4)	65830	60935	56698	48419	42828	54942	16.948 <-
(5)	91290	84715	81994	71097	64358	78691	13.761 <-

Report Date : 03-Nov-1998 07:26

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-1998 19:12
End Cal Date : 03-NOV-1998 03:35
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Cal Date : 03-Nov-1998 07:23 a
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD	
8 AROCLOR-1260 (1)	41870	38700	34348	30809	28066	34759	16.190	
(2)	99700	91190	76716	67402	60600	79122	20.529	<-
(3)	114350	105660	90302	79608	72222	92428	18.994	<-
(4)	105850	99095	89990	82641	76873	90890	12.977	<-
(5)	146110	136360	125742	116497	111328	127207	11.187	<-
10 AROCLOR-1262 (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
11 AROCLOR-1268 (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	1809400	1745600	1665280	1571180	1408790	1640050	9.577	
$ 9 DCB	1493200	1454700	1321880	1224460	1098450	1318538	12.366	

Report Date: 05-Nov-1998 17:03

Calibration History

Method : /chem/can/gcs/a2hpk.i/81102a.b/kfpcbIII.m
Start Cal Date: 21-SEP-1998 13:45
End Cal Date : 13-OCT-1998 18:00

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.1000		
13-OCT-1998 16:15	AR1262	012f0101.d
23-SEP-1998 11:27	AR1232	013f0101.d
23-SEP-1998 09:42	AR1242	008f0101.d
21-SEP-1998 17:15	AR1248	013f0101.d
21-SEP-1998 15:30	AR2154	008f0101.d
21-SEP-1998 13:45	AR1660td	003f0101.d

Cal Level: 2 , Cal Amount: 0.2000		
13-OCT-1998 16:36	AR1262	013f0101.d
23-SEP-1998 11:48	AR1232	014f0101.d
23-SEP-1998 10:03	AR1242	009f0101.d
21-SEP-1998 17:36	AR1248	014f0101.d
21-SEP-1998 15:51	AR2154	009f0101.d
21-SEP-1998 14:06	AR1660td	004f0101.d

Cal Level: 3 , Cal Amount: 0.5000		
13-OCT-1998 16:57	AR1262	014f0101.d
13-OCT-1998 18:00	AR1268	017f0101.d
23-SEP-1998 12:09	AR1232	015f0101.d
23-SEP-1998 10:24	AR1242	010f0101.d
21-SEP-1998 17:57	AR1248	015f0101.d
21-SEP-1998 16:12	AR2154	010f0101.d
21-SEP-1998 14:27	AR1660td	005f0101.d

Cal Level: 4 , Cal Amount: 1.000		
13-OCT-1998 17:18	AR1262	015f0101.d
23-SEP-1998 12:30	AR1232	016f0101.d
23-SEP-1998 10:45	AR1242	011f0101.d
21-SEP-1998 18:18	AR1248	016f0101.d
21-SEP-1998 16:33	AR2154	011f0101.d
21-SEP-1998 14:48	AR1660td	006f0101.d

Cal Level: 5 , Cal Amount: 2.000		
13-OCT-1998 17:39	AR1262	016f0101.d
23-SEP-1998 12:51	AR1232	017f0101.d
23-SEP-1998 11:06	AR1242	012f0101.d
21-SEP-1998 18:39	AR1248	017f0101.d

21-SEP-1998 15:09	AR1660td	007f0101.d

Continuing Calibration

02-NOV-1998 14:10	AR1660td	017f0101.d
02-NOV-1998 10:09	AR1232	007f0101.d
02-NOV-1998 09:48	AR1242	006f0101.d
02-NOV-1998 09:27	AR1248	005f0101.d
02-NOV-1998 09:06	AR2154	004f0101.d
02-NOV-1998 13:18	AR1660td	016f0101.d
02-NOV-1998 08:45	AR1660td	003f0101.d

Data File: /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Lab Smp Id: 1660 C064
Inj Date : 02-NOV-1998 19:12
Operator : 001803
Smp Info : 1660 C064,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr
Cal Date : 02-NOV-1998 19:12
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 011f0101.d
Calibration Sample, Level: 1

Compound Sublist: AR1660td.sub
Sample Matrix: None

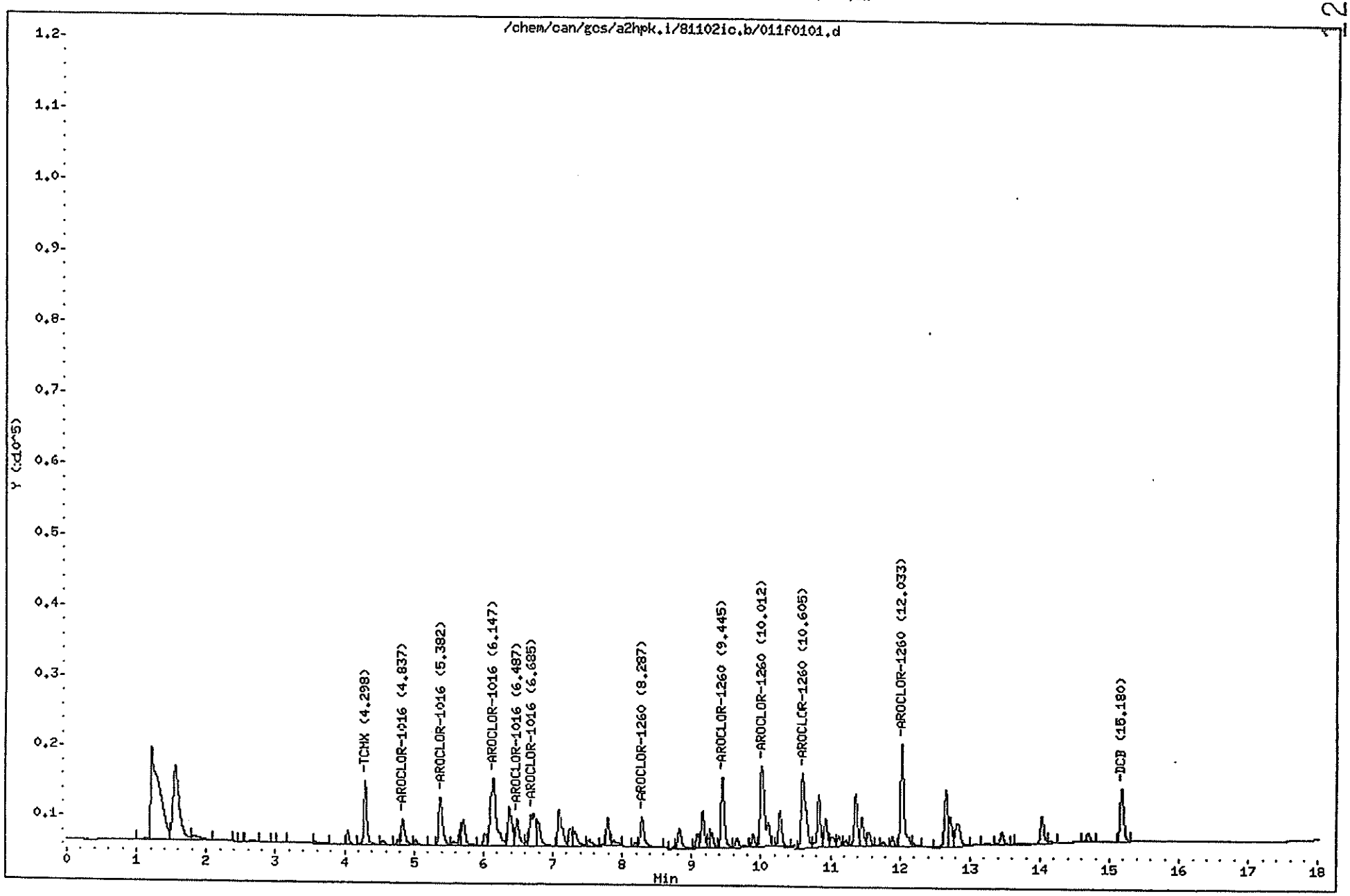
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	9047	0.00500	0.005000	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.837	4.828	0.009	3679	0.10000	0.1000	75.00- 125.00	100.00
5.382	5.380	0.002	6802	0.10000	0.1000	129.17- 215.28	184.89
6.147	6.138	0.009	9545	0.10000	0.1000	205.08- 341.79	259.45
6.487	6.480	0.007	3726	0.10000	0.1000	84.08- 140.13	101.28
6.685	6.680	0.005	4437	0.10000	0.1000	85.20- 142.00	120.60
Average of Peak Amounts =					0.1		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.287	8.282	0.005	4187	0.10000	0.1000	75.00- 125.00	100.00
9.445	9.440	0.005	9970	0.10000	0.1000	167.51- 279.19	238.12
10.012	10.007	0.005	11435	0.10000	0.1000	197.18- 328.63	273.11
10.605	10.600	0.005	10585	0.10000	0.1000	196.50- 327.49	252.81
12.033	12.030	0.003	14611	0.10000	0.1000	274.56- 457.60	348.96
Average of Peak Amounts =					0.1		
$ 9 DCB					CAS #: 2051-24-3		
15.180	15.177	0.003	7466	0.00500	0.005000	75.00- 125.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81102ic.b/011f0101.d
Da... : 02-NOV-1998 19:12
Client ID:
Sample Info: 1660 C064,,1,1

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/012f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/012f0101.d
Lab Smp Id: 1660 C065
Inj Date : 02-NOV-1998 19:33
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C065,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 19:33 Cal File: 012f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

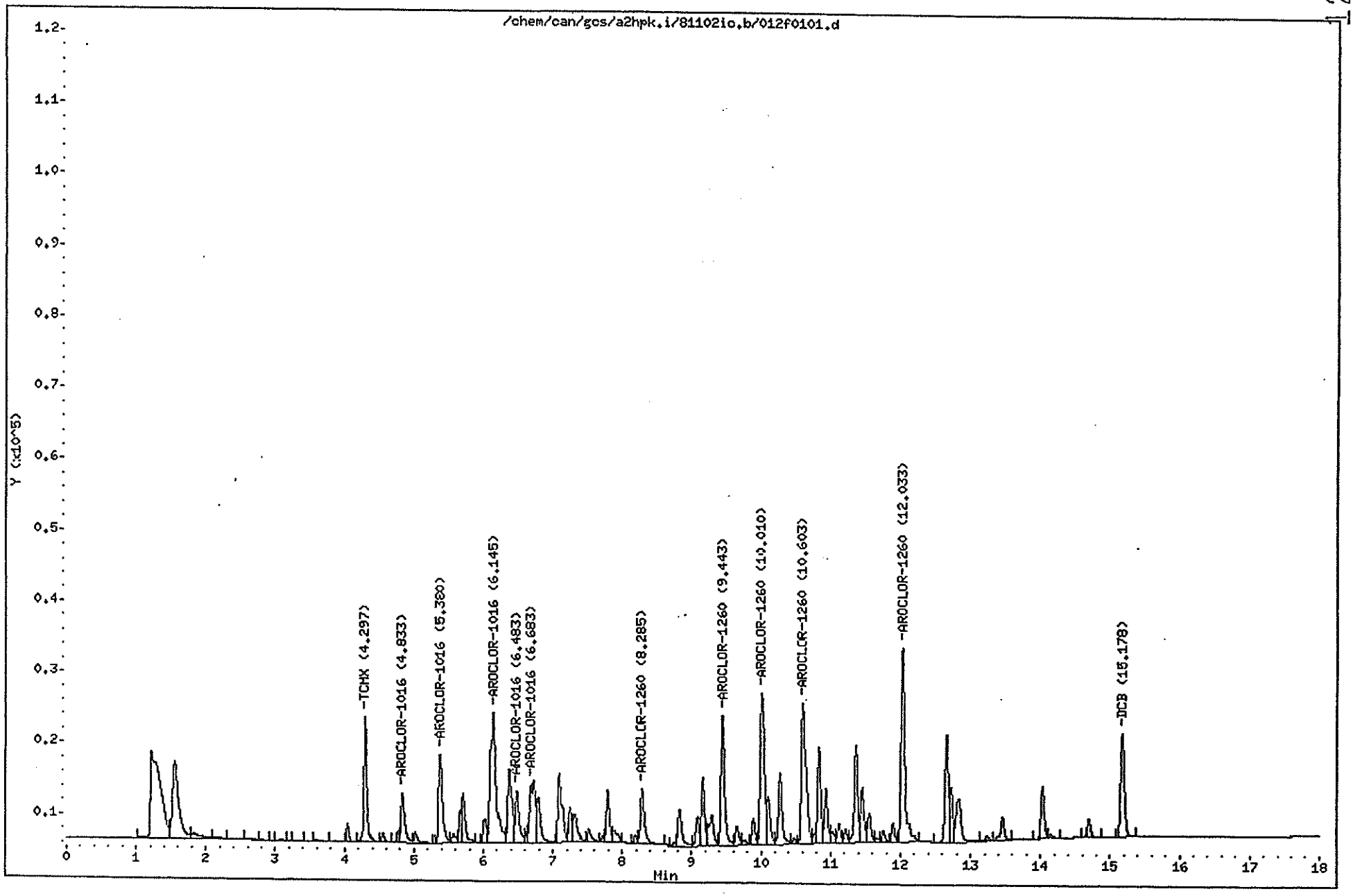
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.297	0.000	17456	0.01000	0.009820	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.833	4.828	0.005	6917	0.20000	0.1938	75.00- 125.00	100.00
5.380	5.380	0.000	12403	0.20000	0.1908	129.17- 215.28	179.31
6.145	6.138	0.007	18241	0.20000	0.1954	205.08- 341.79	263.71
6.483	6.480	0.003	7248	0.20000	0.1972	84.08- 140.13	104.79
6.683	6.680	0.003	8067	0.20000	0.1905	85.20- 142.00	116.63
Average of Peak Amounts =					0.194		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.285	8.282	0.003	7740	0.20000	0.1921	75.00- 125.00	100.00
9.443	9.440	0.003	18238	0.20000	0.1911	167.51- 279.19	235.63
10.010	10.007	0.003	21132	0.20000	0.1921	197.18- 328.63	273.02
10.603	10.600	0.003	19819	0.20000	0.1934	196.50- 327.49	256.06
12.033	12.030	0.003	27272	0.20000	0.1931	274.56- 457.60	352.35
Average of Peak Amounts =					0.192		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	14547	0.01000	0.009869	75.00- 125.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81102io.b/012f0101.d
Date : 02-NOV-1998 19:33
Client ID:
Sample Info: 1660 C065,,1,2

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/013f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/013f0101.d
Lab Smp Id: 1660 C066
Inj Date : 02-NOV-1998 19:54
Operator : 001803
Smp Info : 1660 C066,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr
Cal Date : 02-NOV-1998 19:54
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 013f0101.d
Calibration Sample, Level: 3

Compound Sublist: AR1660td.sub
Sample Matrix: None

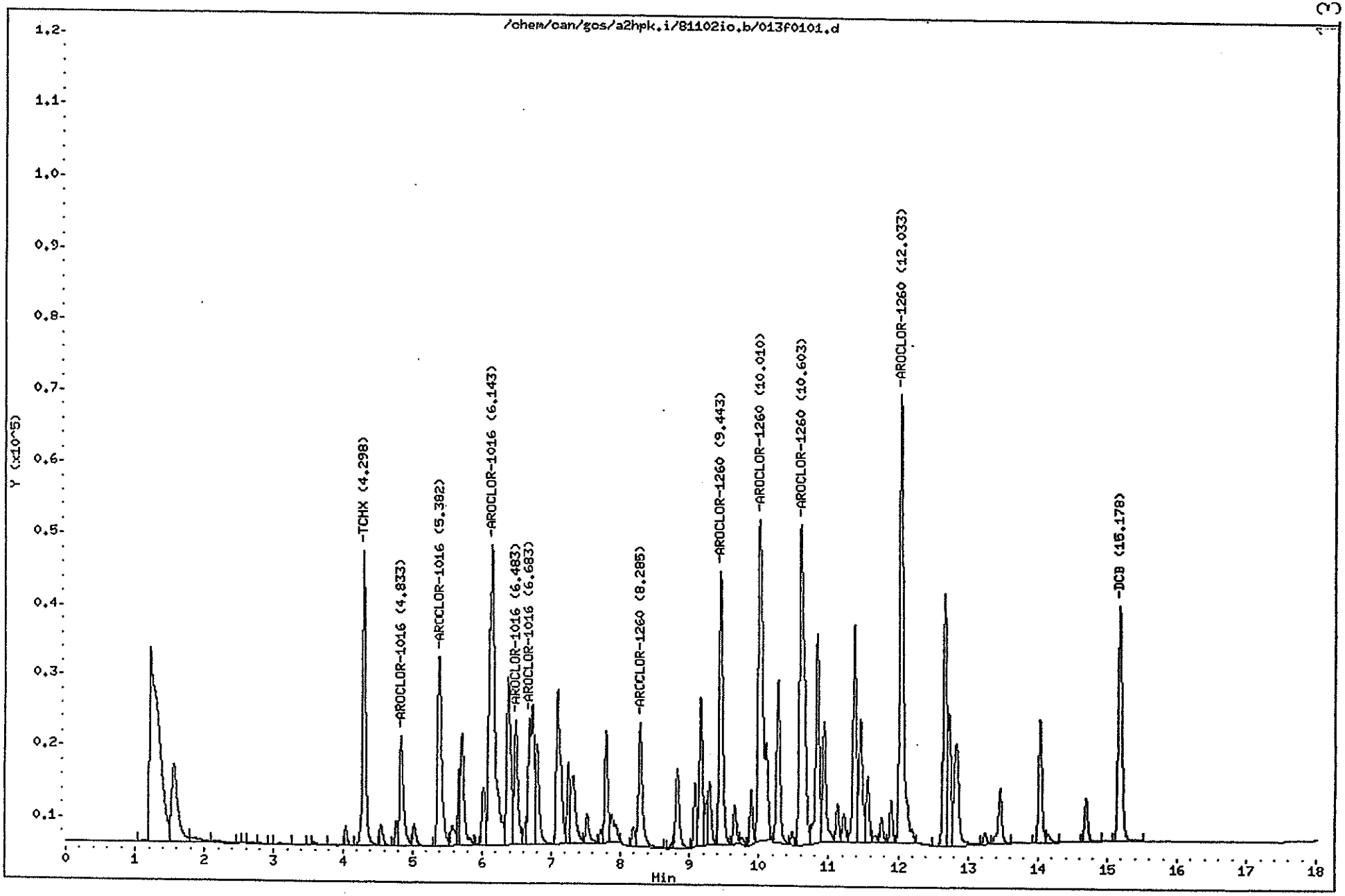
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	41632	0.02500	0.02392	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.833	4.828	0.005	15437	0.50000	0.4529	75.00- 125.00	100.00
5.382	5.380	0.002	26586	0.50000	0.4353	129.17- 215.28	172.22
6.143	6.138	0.005	42210	0.50000	0.4671	205.08- 341.79	273.43
6.483	6.480	0.003	17306	0.50000	0.4802	84.08- 140.13	112.11
6.683	6.680	0.003	17536	0.50000	0.4392	85.20- 142.00	113.60
Average of Peak Amounts =					0.455		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.285	8.282	0.003	17174	0.50000	0.4483	75.00- 125.00	100.00
9.443	9.440	0.003	38358	0.50000	0.4300	167.51- 279.19	223.35
10.010	10.007	0.003	45151	0.50000	0.4365	197.18- 328.63	262.90
10.603	10.600	0.003	44995	0.50000	0.4577	196.50- 327.49	261.99
12.033	12.030	0.003	62871	0.50000	0.4620	274.56- 457.60	366.08
Average of Peak Amounts =					0.447		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	33047	0.02500	0.02322	75.00- 125.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81102ic.b/013f0101.d
Date : 02-NOV-1998 19:54
Client ID:
Sample Info: 1660 C066,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/014f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/014f0101.d
Lab Smp Id: 1660 C067
Inj Date : 02-NOV-1998 20:15
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C067,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:15 Cal File: 014f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

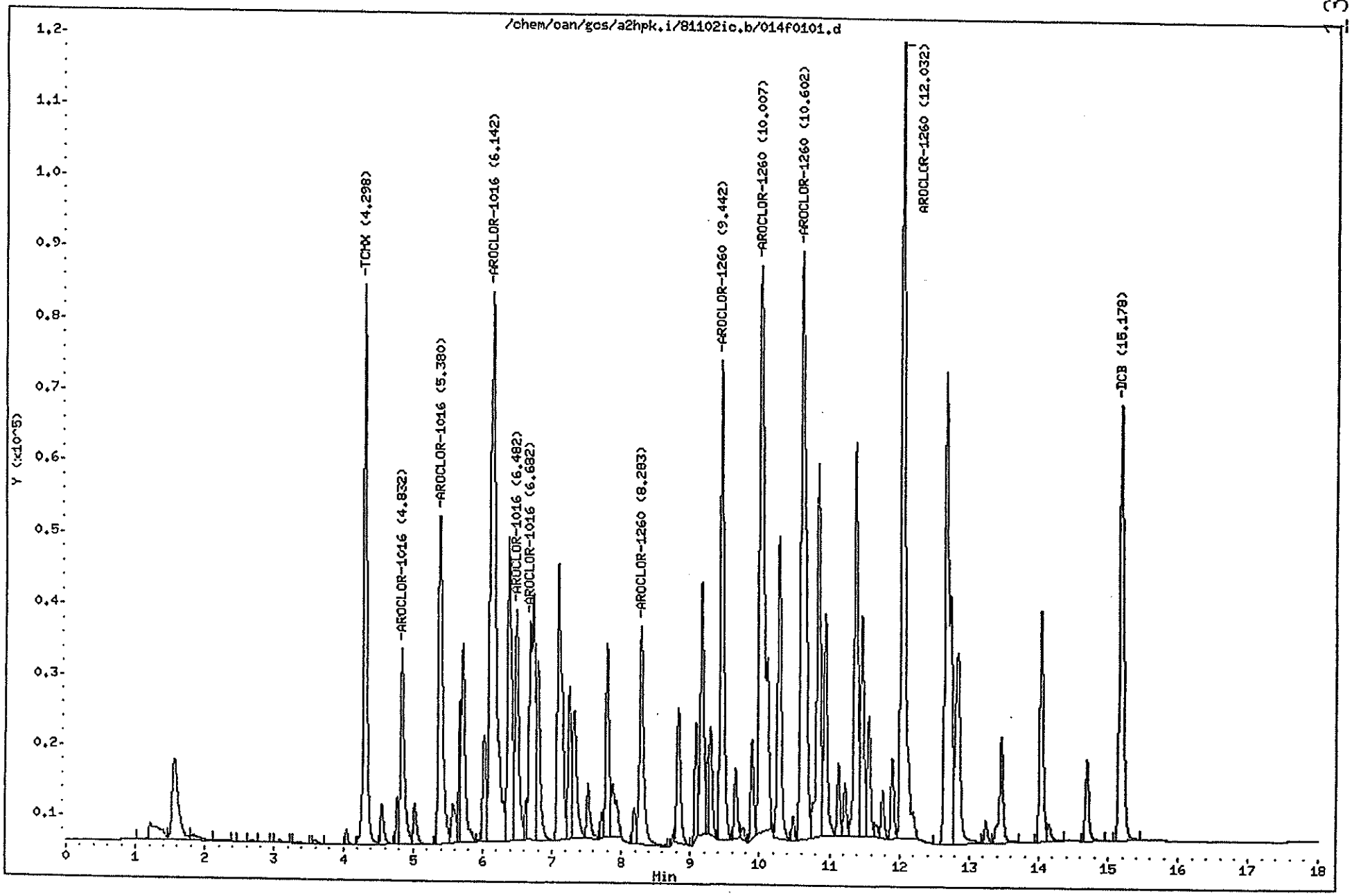
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.297	0.001	78559	0.05000	0.04627	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.832	4.828	0.004	27590	1.00000	0.8500	75.00- 125.00	100.00
5.380	5.380	0.000	46229	1.00000	0.8060	129.17- 215.28	167.56
6.142	6.138	0.004	77017	1.00000	0.8850	205.08- 341.79	279.15
6.482	6.480	0.002	32368	1.00000	0.9216	84.08- 140.13	117.32
6.682	6.680	0.002	30878	1.00000	0.8198	85.20- 142.00	111.92
Average of Peak Amounts =					0.856		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.283	8.282	0.001	30809	1.00000	0.8457	75.00- 125.00	100.00
9.442	9.440	0.002	67402	1.00000	0.8048	167.51- 279.19	218.77
10.007	10.007	0.000	79608	1.00000	0.8166	197.18- 328.63	258.39
10.602	10.600	0.002	82641	1.00000	0.8755	196.50- 327.49	268.24
12.032	12.030	0.002	116497	1.00000	0.8881	274.56- 457.60	378.13
Average of Peak Amounts =					0.846		
$ 9 DCB					CAS #: 2051-24-3		
15.178	15.177	0.001	61223	0.05000	0.04457	75.00- 125.00	100.00

D[illegible]le: /chem/oan/gcs/a2hpk.i/81102ic.b/014f0101.d
Date : 02-NOV-1998 20:15
Client ID:
Sample Info: 1660 C067,,1,4

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/015f0101.d
Report Date: 03-Nov-1998 07:39

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/015f0101.d
Lab Smp Id: 1660 C068
Inj Date : 02-NOV-1998 20:36
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1660 C068,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:36 Cal File: 015f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

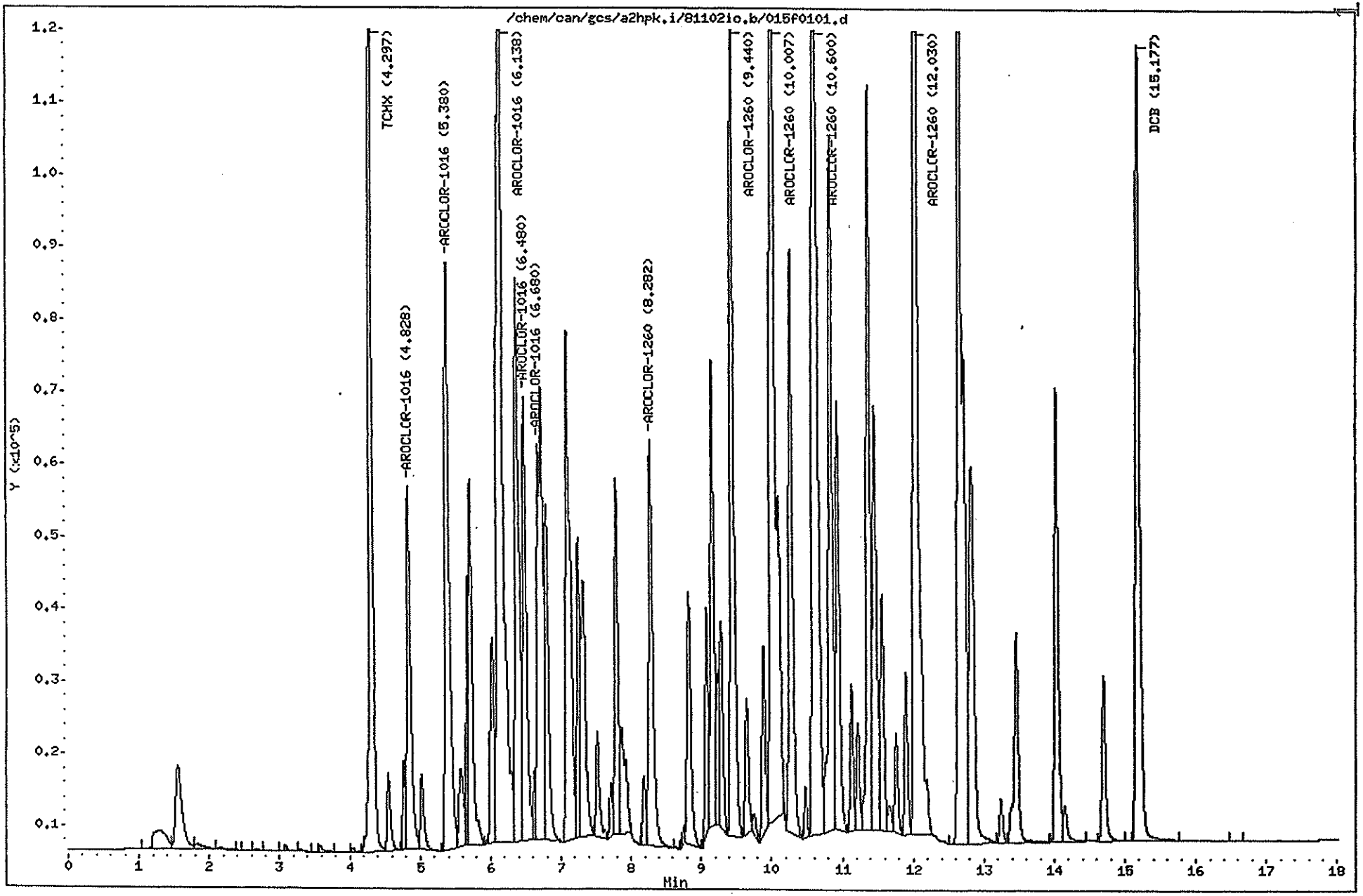
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.297	0.000	140879	0.10000	0.08590	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.828	4.828	0.000	50197	2.00000	1.620	75.00- 125.00	100.00
5.380	5.380	0.000	81304	2.00000	1.505	129.17- 215.28	161.97
6.138	6.138	0.000	142169	2.00000	1.696	205.08- 341.79	283.22
6.480	6.480	0.000	61389	2.00000	1.793	84.08- 140.13	122.30
6.680	6.680	0.000	54783	2.00000	1.538	85.20- 142.00	109.14
Average of Peak Amounts =					1.63		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.282	8.282	0.000	56132	2.00000	1.615	75.00- 125.00	100.00
9.440	9.440	0.000	121200	2.00000	1.532	167.51- 279.19	215.92
10.007	10.007	0.000	144445	2.00000	1.563	197.18- 328.63	257.33
10.600	10.600	0.000	153746	2.00000	1.692	196.50- 327.49	273.90
12.030	12.030	0.000	222656	2.00000	1.750	274.56- 457.60	396.67
Average of Peak Amounts =					1.63		
$ 9 DCB					CAS #: 2051-24-3		
15.177	15.177	0.000	109845	0.10000	0.08331	75.00- 125.00	100.00

Da ile: /chem/oan/gcs/a2hpk.i/81102io.b/015f0101.d
Date : 02-NOV-1998 20:36
Client ID:
Sample Info: 1660 C068,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Lab Smp Id: 2154 C059
Inj Date : 02-NOV-1998 20:57
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C059,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 20:57 Cal File: 016f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

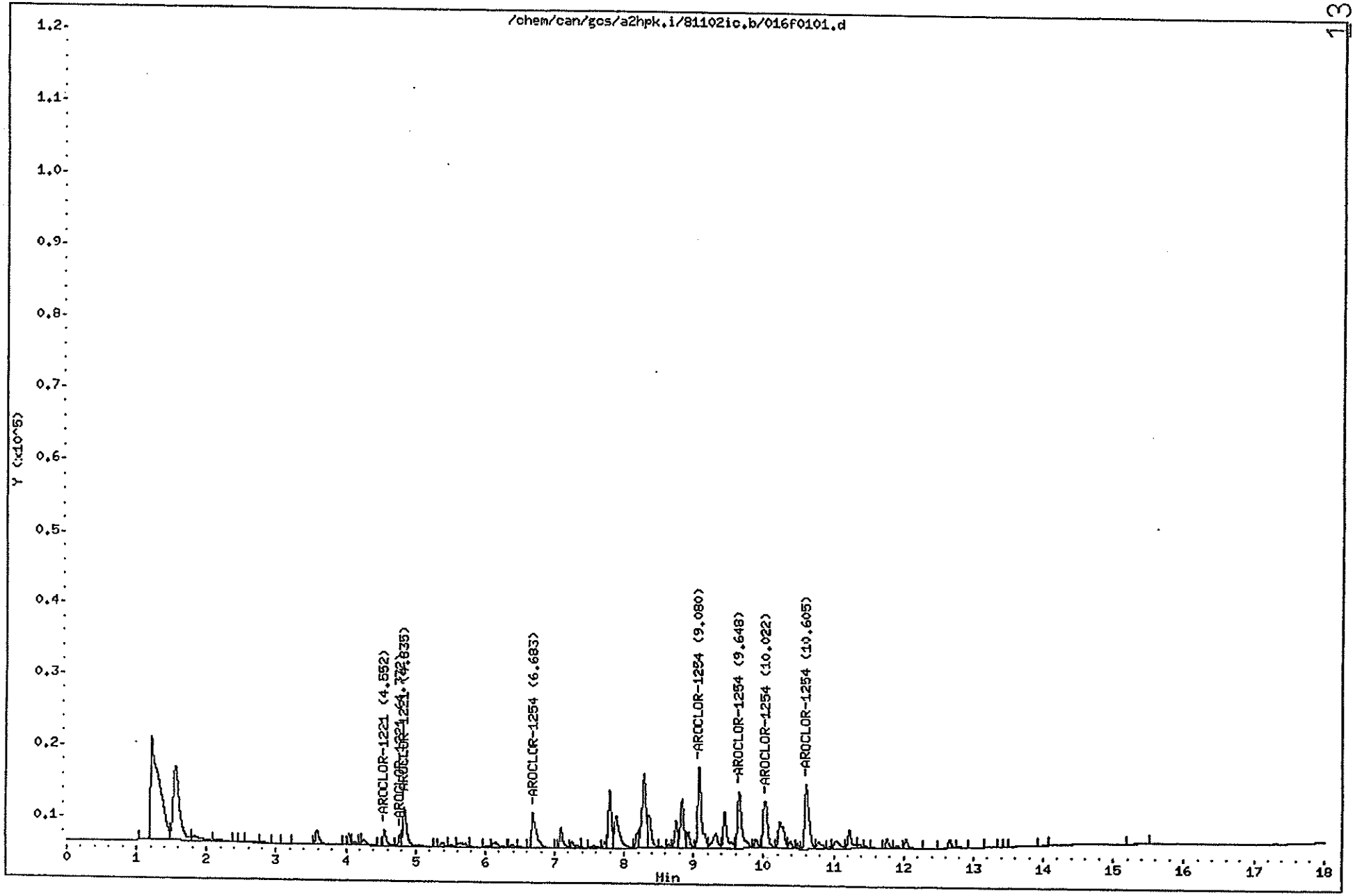
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.683	6.680	0.003	5024	0.10000	0.1000	75.00- 125.00	100.00
9.080	9.077	0.003	11252	0.10000	0.1000	184.64- 307.73	223.96
9.648	9.640	0.008	7992	0.10000	0.1000	134.01- 223.35	159.08
10.022	10.022	0.000	6583	0.10000	0.1000	103.66- 172.76	131.03
10.605	10.602	0.003	9129	0.10000	0.1000	149.90- 249.84	181.71
Average of Peak Amounts =					0.1		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.552	4.547	0.005	2146	0.10000	0.1000	75.00- 125.00	100.00
4.772	4.765	0.007	1610	0.10000	0.1000	55.08- 91.80	75.02
4.835	4.828	0.007	5431	0.10000	0.1000	172.80- 288.00	253.08
Average of Peak Amounts =					0.1		

Da ile: /chem/can/gcs/a2hpk.i/81102ic.b/016f0101.d
Da 02-NOV-1998 20:57
Client ID:
Sample Info: 2154 C059,,1,1

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/017f0101.d
eport Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/017f0101.d
Lab Smp Id: 2154 C060
Inj Date : 02-NOV-1998 21:18
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C060,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 21:18 Cal File: 017f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

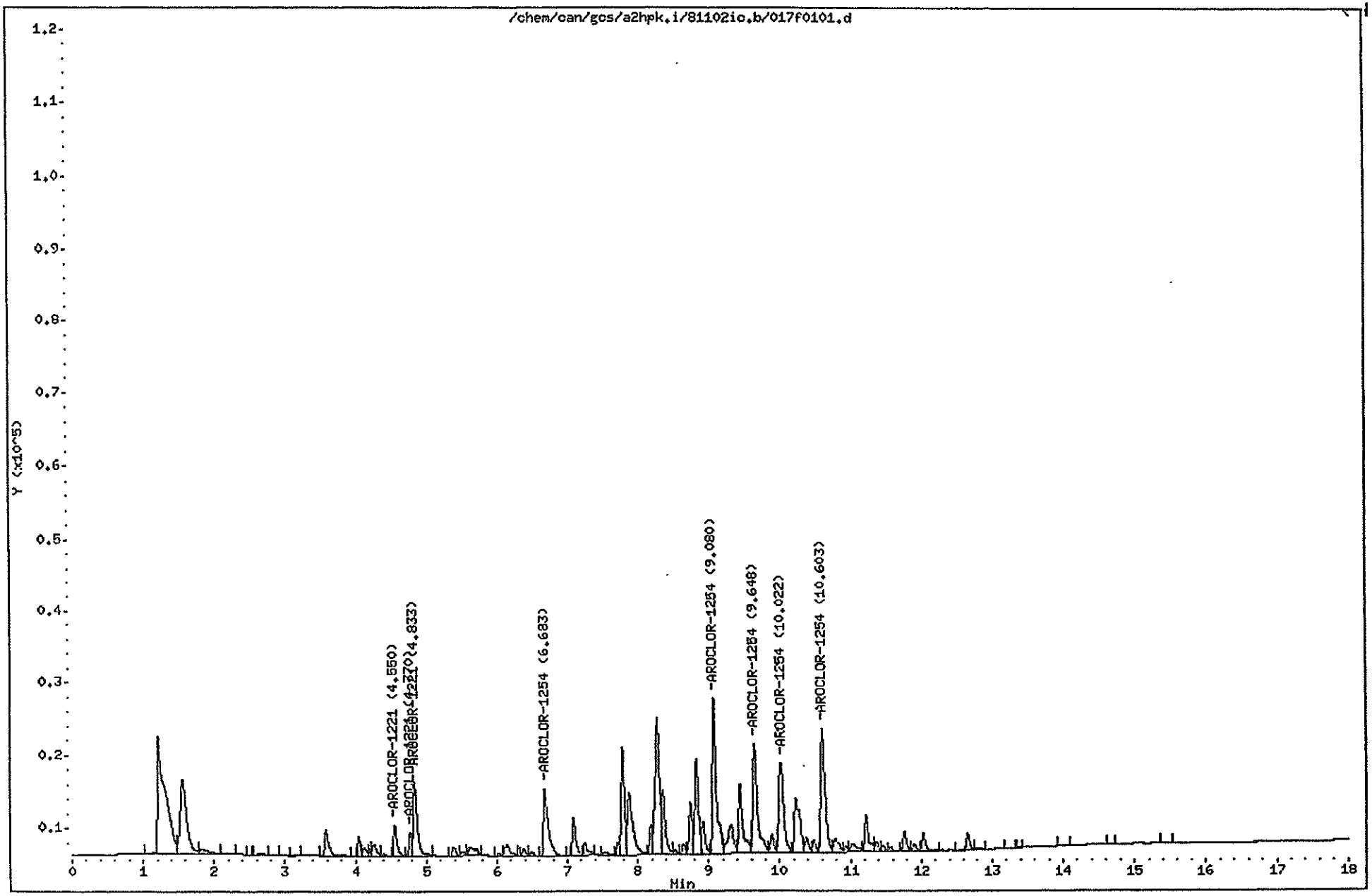
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.683	6.680	0.003	9111	0.20000	0.1902	75.00- 125.00	100.00
9.080	9.077	0.003	21278	0.20000	0.1944	184.64- 307.73	233.54
9.648	9.640	0.008	15036	0.20000	0.1939	134.01- 223.35	165.03
10.022	10.022	0.000	12187	0.20000	0.1923	103.66- 172.76	133.76
10.603	10.602	0.001	16943	0.20000	0.1925	149.90- 249.84	185.96
Average of Peak Amounts =					0.193		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.550	4.547	0.003	4146	0.20000	0.1965	75.00- 125.00	100.00
4.770	4.765	0.005	3099	0.20000	0.1962	55.08- 91.80	74.75
4.833	4.828	0.005	10131	0.20000	0.1930	172.80- 288.00	244.36
Average of Peak Amounts =					0.195		

Dat e: /chem/oan/gcs/a2hpk.i/811021c.b/017f0101.d
Date : 02-NOV-1998 21:18
Client ID:
Sample Info: 2154 C060,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/018f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/018f0101.d
Lab Smp Id: 2154 C061
Inj Date : 02-NOV-1998 21:39
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C061,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 21:39 Cal File: 018f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

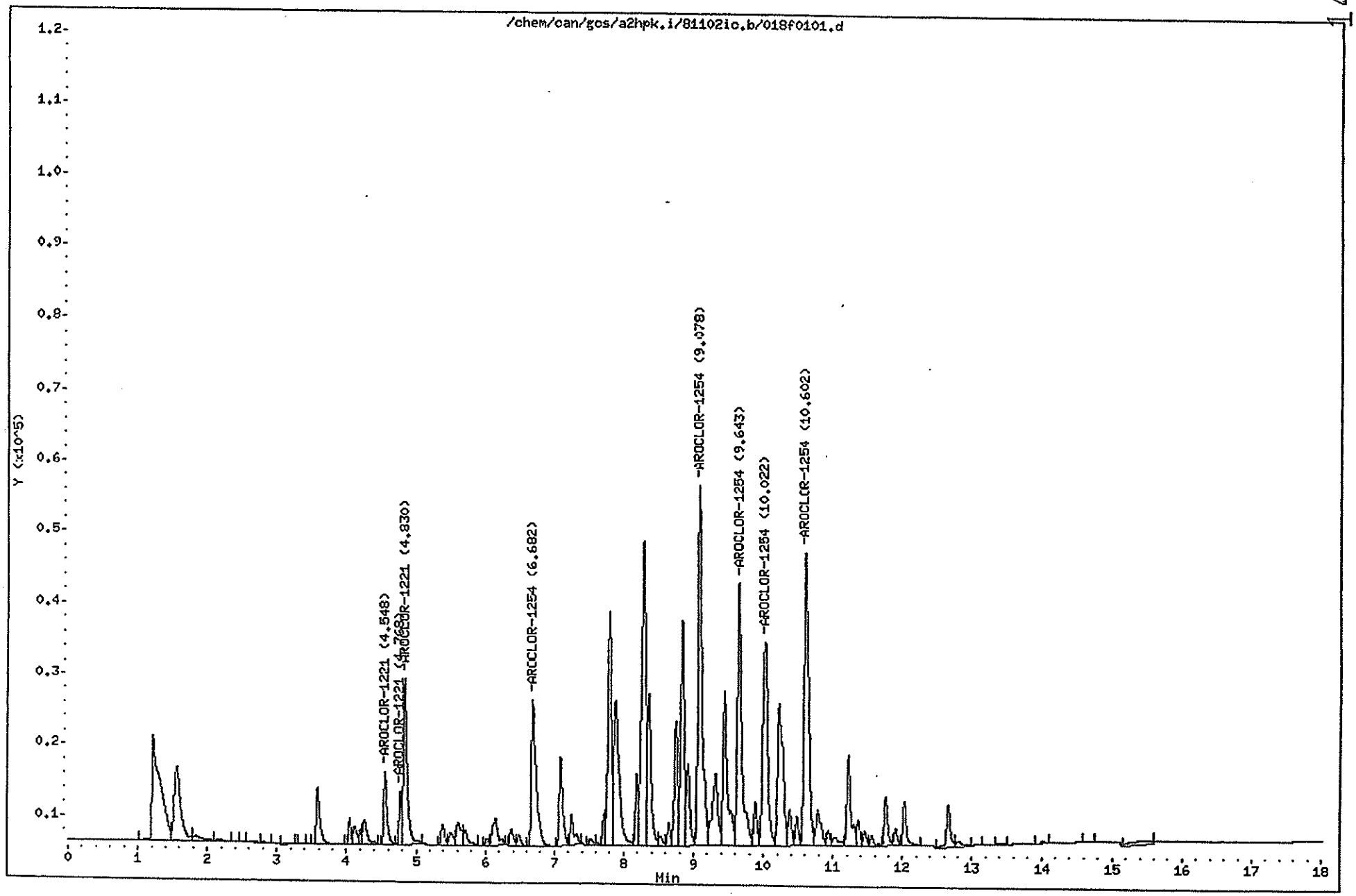
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.682	6.680	0.002	20512	0.50000	0.4498	75.00- 125.00	100.00
9.078	9.077	0.001	50497	0.50000	0.4736	184.64- 307.73	246.18
9.643	9.640	0.003	36651	0.50000	0.4814	134.01- 223.35	178.68
10.022	10.022	0.000	28349	0.50000	0.4636	103.66- 172.76	138.21
10.602	10.602	0.000	40997	0.50000	0.4767	149.90- 249.84	199.87
Average of Peak Amounts =					0.469		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.547	0.001	10095	0.50000	0.4855	75.00- 125.00	100.00
4.768	4.765	0.003	7414	0.50000	0.4791	55.08- 91.80	73.44
4.830	4.828	0.002	23259	0.50000	0.4606	172.80- 288.00	230.40
Average of Peak Amounts =					0.475		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/018f0101.d
Date : 02-NOV-1998 21:39
Client ID:
Sample Info: 2154 C061,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/019f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/019f0101.d
Lab Smp Id: 2154 C062
Inj Date : 02-NOV-1998 22:00
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C062,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:00 Cal File: 019f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

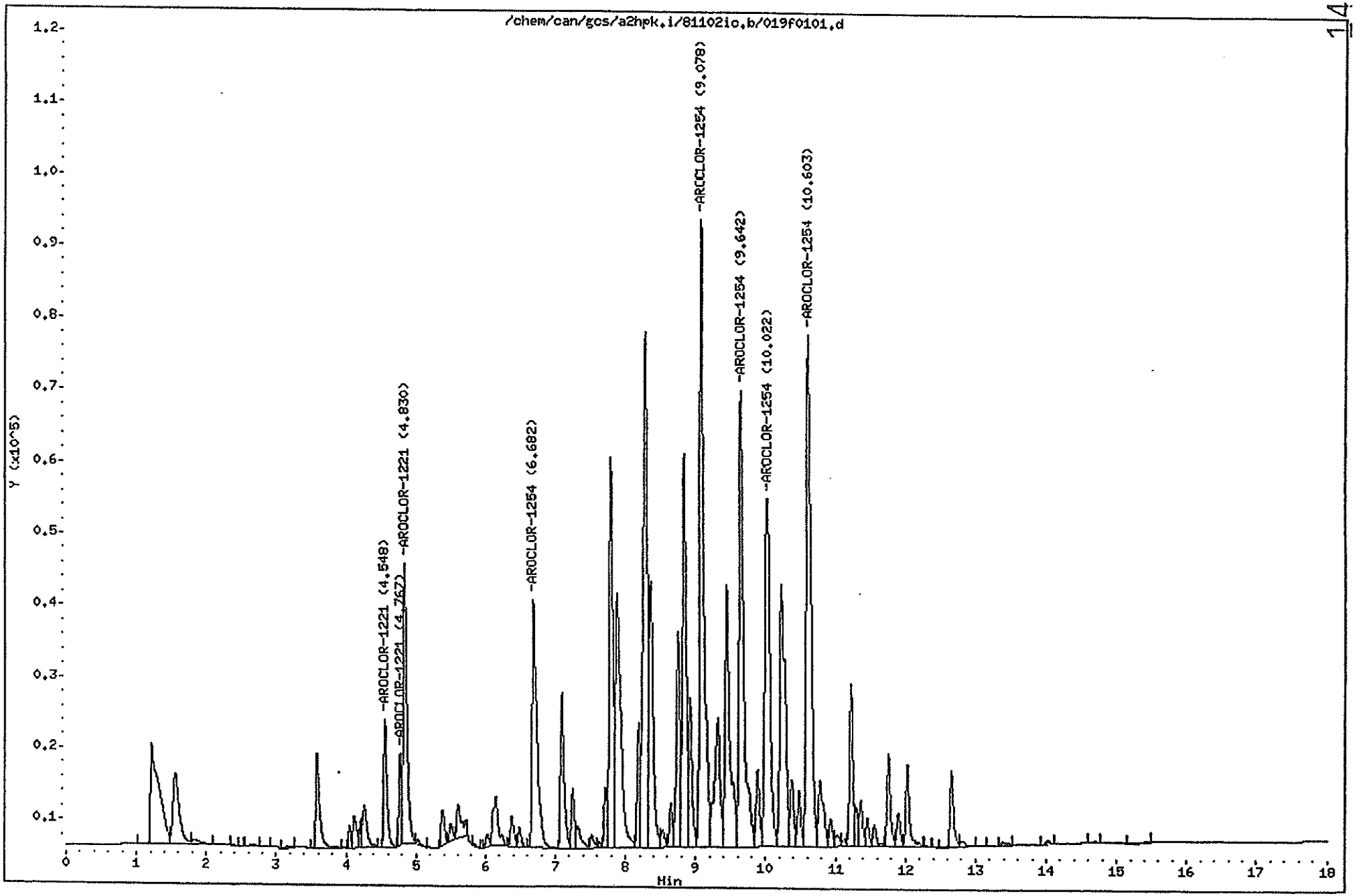
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.682	6.680	0.002	34541	1.00000	0.8063	75.00- 125.00	100.00
9.078	9.077	0.001	87149	1.00000	0.8564	184.64- 307.73	252.31
9.642	9.640	0.002	63530	1.00000	0.8705	134.01- 223.35	183.93
10.022	10.022	0.000	48419	1.00000	0.8352	103.66- 172.76	140.18
10.603	10.602	0.001	71097	1.00000	0.8641	149.90- 249.84	205.83
Average of Peak Amounts =					0.847		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.547	0.001	17924	1.00000	0.8928	75.00- 125.00	100.00
4.767	4.765	0.002	12623	1.00000	0.8551	55.08- 91.80	70.43
4.830	4.828	0.002	39154	1.00000	0.8215	172.80- 288.00	218.44
Average of Peak Amounts =					0.856		

File: /chem/can/gcs/a2hpk.i/81102ic.b/019f0101.d
Date: 02-NOV-1998 22:00
Client ID:
Sample Info: 2154 C062,,1,4

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/020f0101.d
Lab Smp Id: 2154 C063
Inj Date : 02-NOV-1998 22:21
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 2154 C063,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:21 Cal File: 020f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

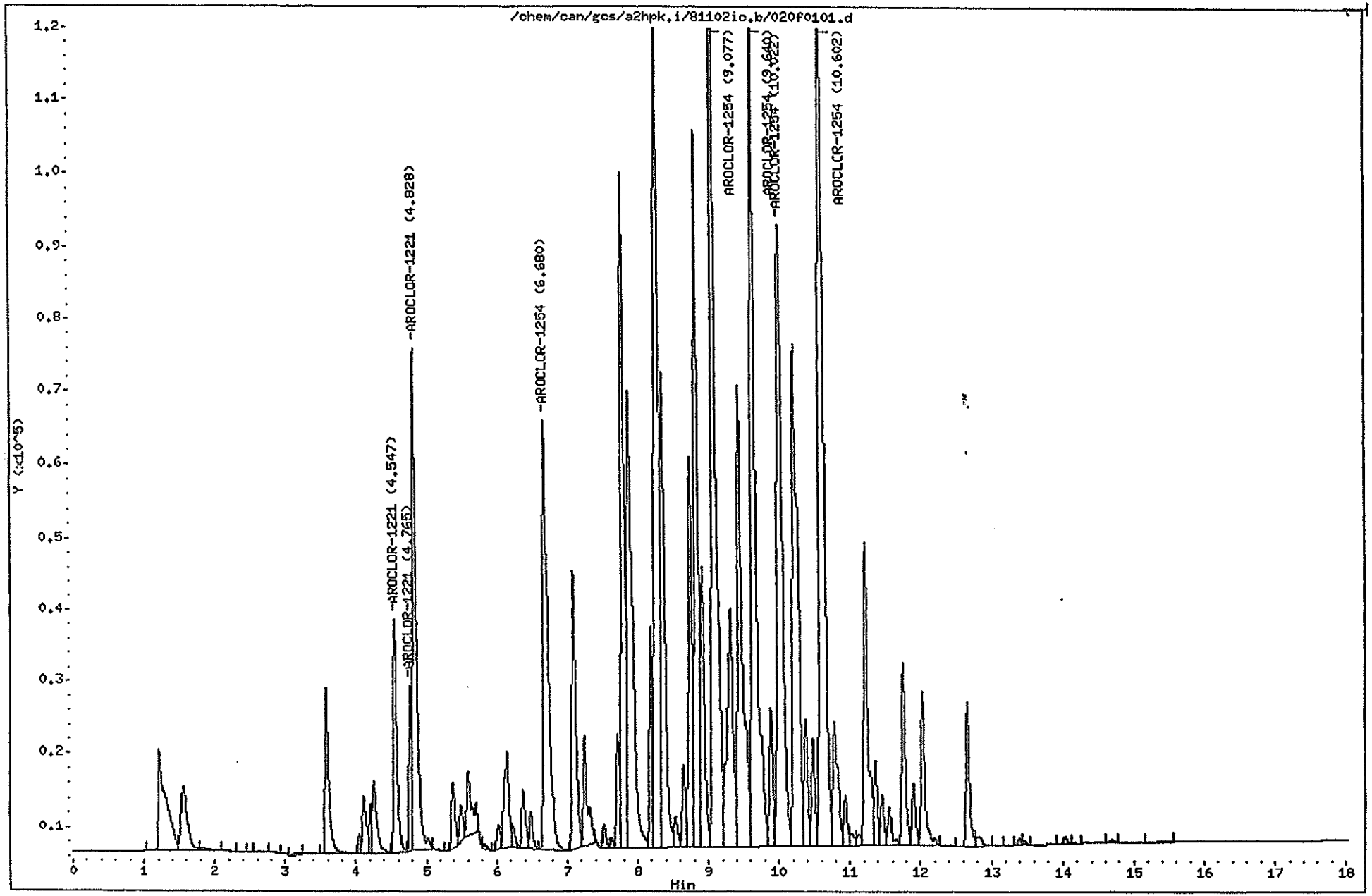
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.680	6.680	0.000	59167	2.00000	1.472	75.00- 125.00	100.00
9.077	9.077	0.000	156389	2.00000	1.611	184.64- 307.73	264.32
9.640	9.640	0.000	114215	2.00000	1.636	134.01- 223.35	193.04
10.022	10.022	0.000	85657	2.00000	1.559	103.66- 172.76	144.77
10.602	10.602	0.000	128716	2.00000	1.636	149.90- 249.84	217.55
Average of Peak Amounts =					1.58		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.547	4.547	0.000	32262	2.00000	1.673	75.00- 125.00	100.00
4.765	4.765	0.000	22834	2.00000	1.620	55.08- 91.80	70.78
4.828	4.828	0.000	69161	2.00000	1.535	172.80- 288.00	214.37
Average of Peak Amounts =					1.61		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/020f0101.d
Date : 02-NOV-1998 22:21
Client ID:
Sample Info: 2154 C063,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/021f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/021f0101.d
Lab Smp Id: 1248 C054
Inj Date : 02-NOV-1998 22:42
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C054,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 22:42 Cal File: 021f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.377	5.375	0.002	2932	0.10000	0.1000	75.00- 125.00	100.00
6.147	6.140	0.007	4403	0.10000	0.1000	130.42- 217.37	150.17
7.090	7.087	0.003	6785	0.10000	0.1000	179.77- 299.62	231.41
9.082	9.078	0.004	3748	0.10000	0.1000	104.61- 174.36	127.83
9.650	9.643	0.007	2431	0.10000	0.1000	72.05- 120.08	82.91

Average of Peak Amounts = 0.1

D: le: /chem/can/gcs/a2hpk.i/81102ic.b/021f0101.d
Date : 02-NOV-1998 22:42
Client ID:
Sample Info: 1248 C054,,1,1

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

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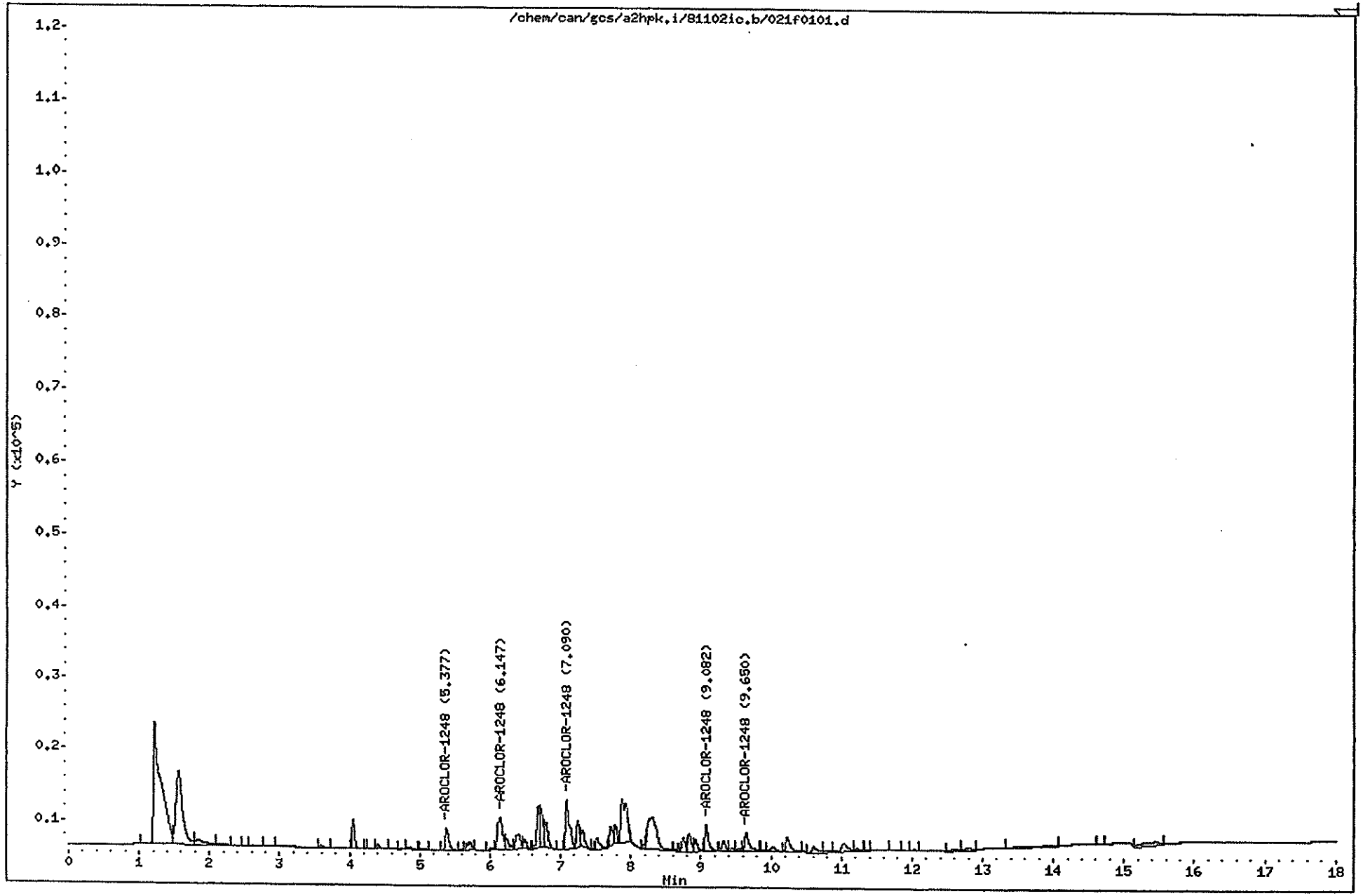


Data File: /chem/can/gcs/a2hpk.i/81102ic.b/022f0101.d
Report Date: 03-Nov-1998 07:40

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/022f0101.d
Lab Smp Id: 1248 C055
Inj Date : 02-NOV-1998 23:03
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C055,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:03 Cal File: 022f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

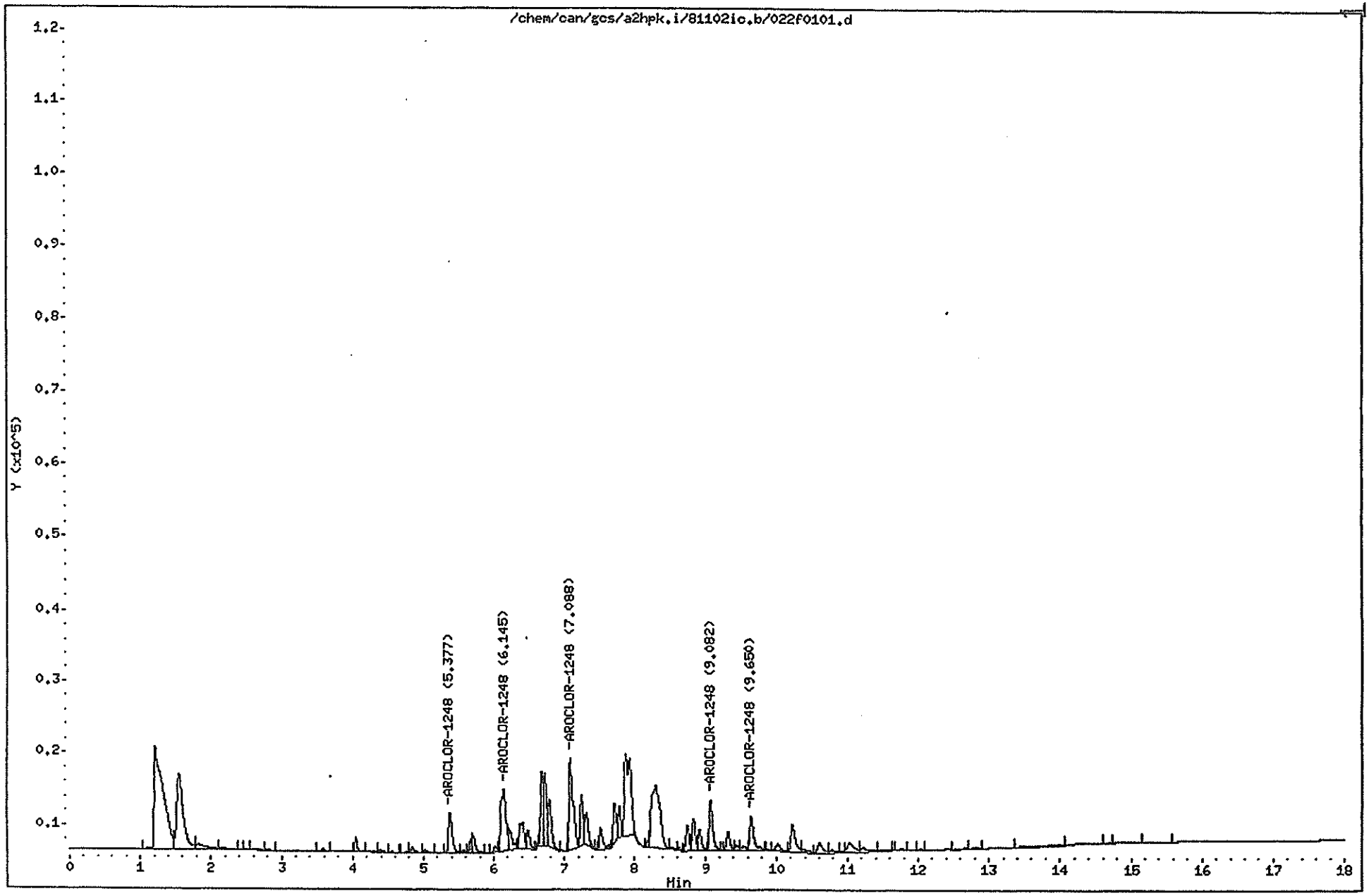
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.377	5.375	0.002	5466	0.20000	0.1930	75.00- 125.00	100.00
6.145	6.140	0.005	8595	0.20000	0.1976	130.42- 217.37	157.24
7.088	7.087	0.001	12761	0.20000	0.1938	179.77- 299.62	233.46
9.082	9.078	0.004	6958	0.20000	0.1926	104.61- 174.36	127.30
9.650	9.643	0.007	4692	0.20000	0.1964	72.05- 120.08	85.84
Average of Peak Amounts =					0.195		

D ile: /chem/can/gcs/a2hpk.i/81102ic.b/022f0101.d
Date : 02-NOV-1998 23:03
Client ID:
Sample Info: 1248 C055,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/023f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/023f0101.d
Lab Smp Id: 1248 C056
Inj Date : 02-NOV-1998 23:24
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C056,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:24 Cal File: 023f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

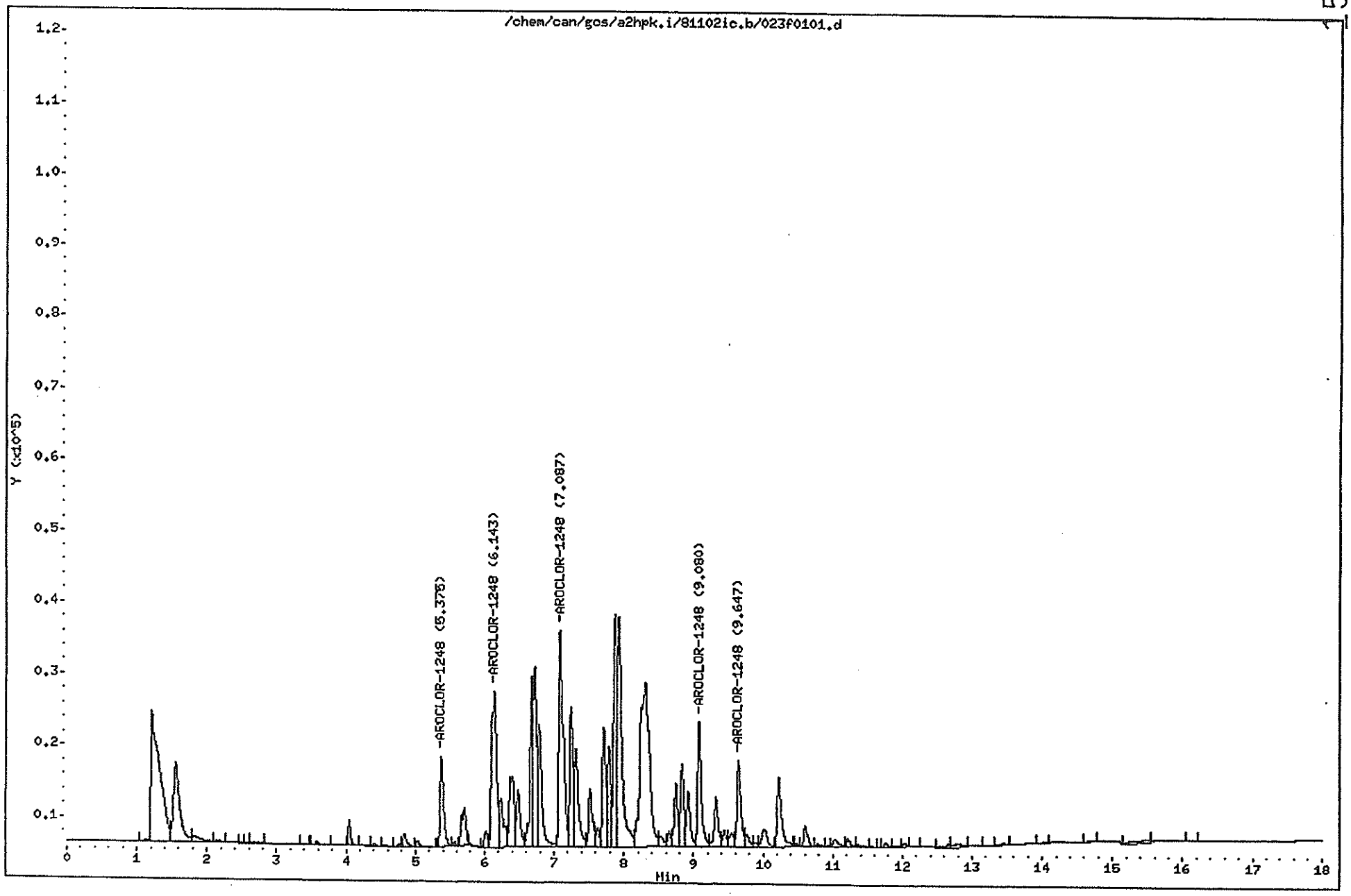
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.375	0.000	12531	0.50000	0.4601	75.00- 125.00	100.00
6.143	6.140	0.003	21791	0.50000	0.5006	130.42- 217.37	173.90
7.087	7.087	0.000	30036	0.50000	0.4700	179.77- 299.62	239.69
9.080	9.078	0.002	17479	0.50000	0.4890	104.61- 174.36	139.49
9.647	9.643	0.004	12038	0.50000	0.5026	72.05- 120.08	96.07
Average of Peak Amounts =					0.484		

D: le: /chem/can/gcs/a2hpk.i/81102ic.b/023f0101.d
Date : 02-NOV-1998 23:24
Client ID:
Sample Info: 1248 C056,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/024f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/024f0101.d
Lab Smp Id: 1248 C057
Inj Date : 02-NOV-1998 23:45
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C057,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 02-NOV-1998 23:45 Cal File: 024f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.373	5.375	-0.002	20952	1.00000	0.8163	75.00- 125.00	100.00
6.140	6.140	0.000	38093	1.00000	0.9033	130.42- 217.37	181.81
7.085	7.087	-0.002	50051	1.00000	0.8280	179.77- 299.62	238.88
9.078	9.078	0.000	30333	1.00000	0.8820	104.61- 174.36	144.77
9.645	9.643	0.002	20988	1.00000	0.9043	72.05- 120.08	100.17
Average of Peak Amounts =					0.867		

Dat e: /chem/can/gcs/a2hpk.i/81102ic.b/024f0101.d
Date : 02-NOV-1998 23:45
Client ID:
Sample Info: 1248 C057,,1,4

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

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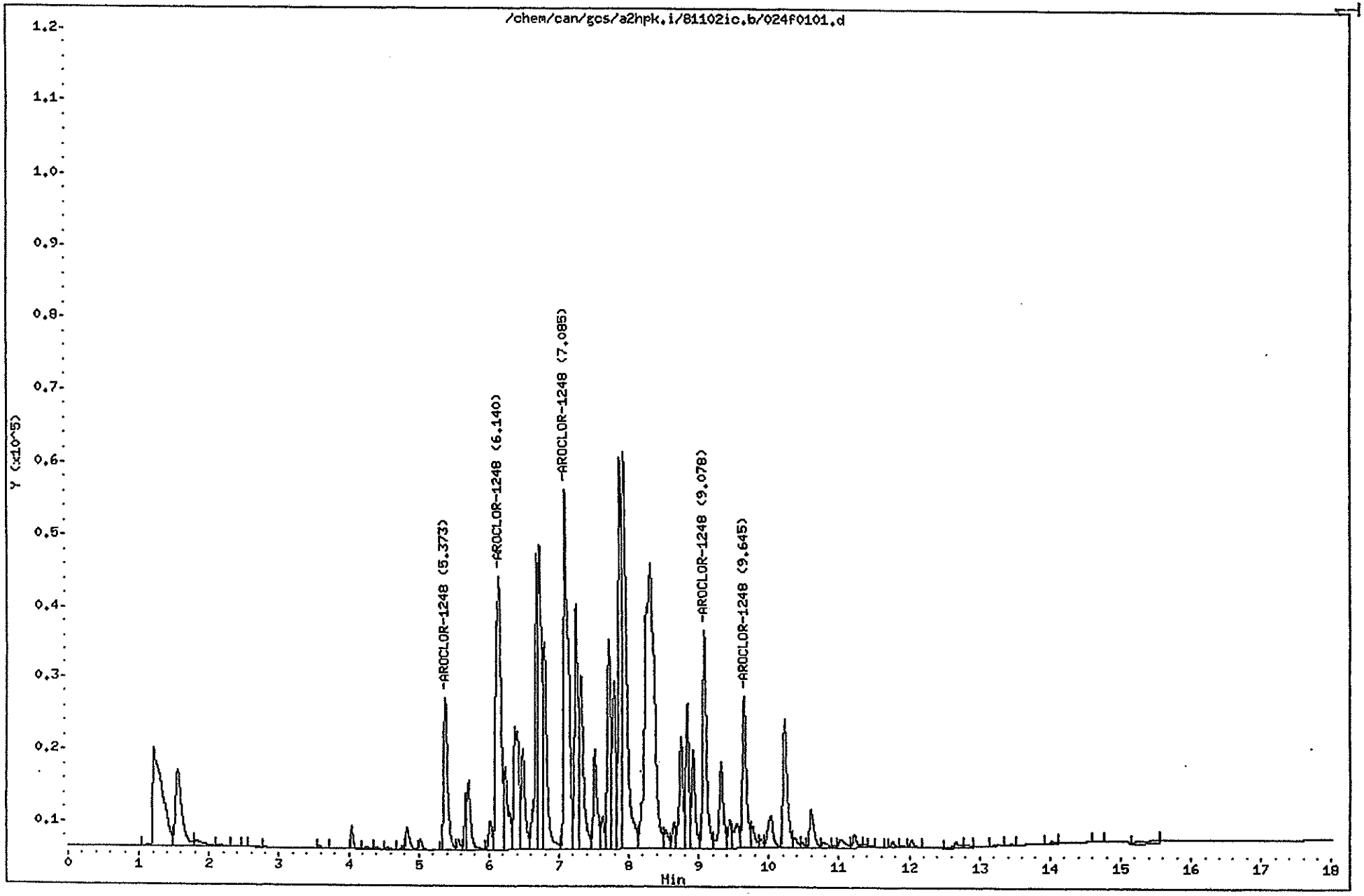


Data File: /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Lab Smp Id: 1248 C058
Inj Date : 03-NOV-1998 00:06
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1248 C058,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:06 Cal File: 025f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

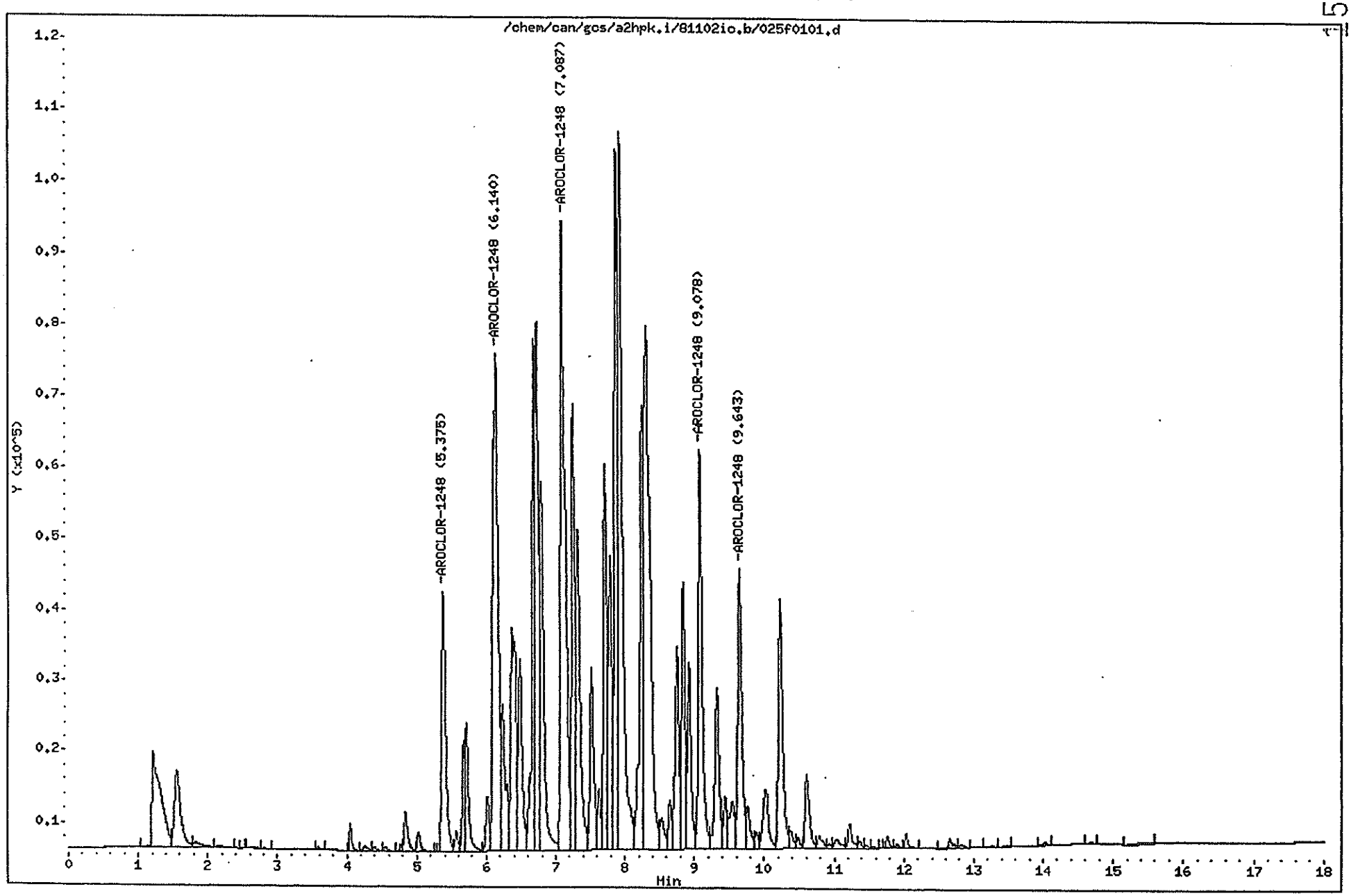
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.375	5.375	0.000	36520	2.00000	1.510	75.00- 125.00	100.00
6.140	6.140	0.000	69713	2.00000	1.712	130.42- 217.37	190.89
7.087	7.087	0.000	88316	2.00000	1.544	179.77- 299.62	241.83
9.078	9.078	0.000	56065	2.00000	1.693	104.61- 174.36	153.52
9.643	9.643	0.000	39299	2.00000	1.747	72.05- 120.08	107.61
Average of Peak Amounts =					1.64		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/025f0101.d
Dat 03-NOV-1998 00:06
Client ID:
Sample Info: 1248 C058,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/026f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/026f0101.d
Lab Smp Id: 1242 C049
Inj Date : 03-NOV-1998 00:27
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C049,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:27 Cal File: 026f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.835	4.828	0.007	3184	0.10000	0.1000	75.00- 125.00	100.00
5.378	5.378	0.000	5656	0.10000	0.1000	124.76- 207.94	177.64
6.147	6.138	0.009	7520	0.10000	0.1000	191.04- 318.39	236.18
6.375	6.367	0.008	4272	0.10000	0.1000	108.36- 180.61	134.17
6.485	6.480	0.005	2790	0.10000	0.1000	79.00- 131.67	87.63

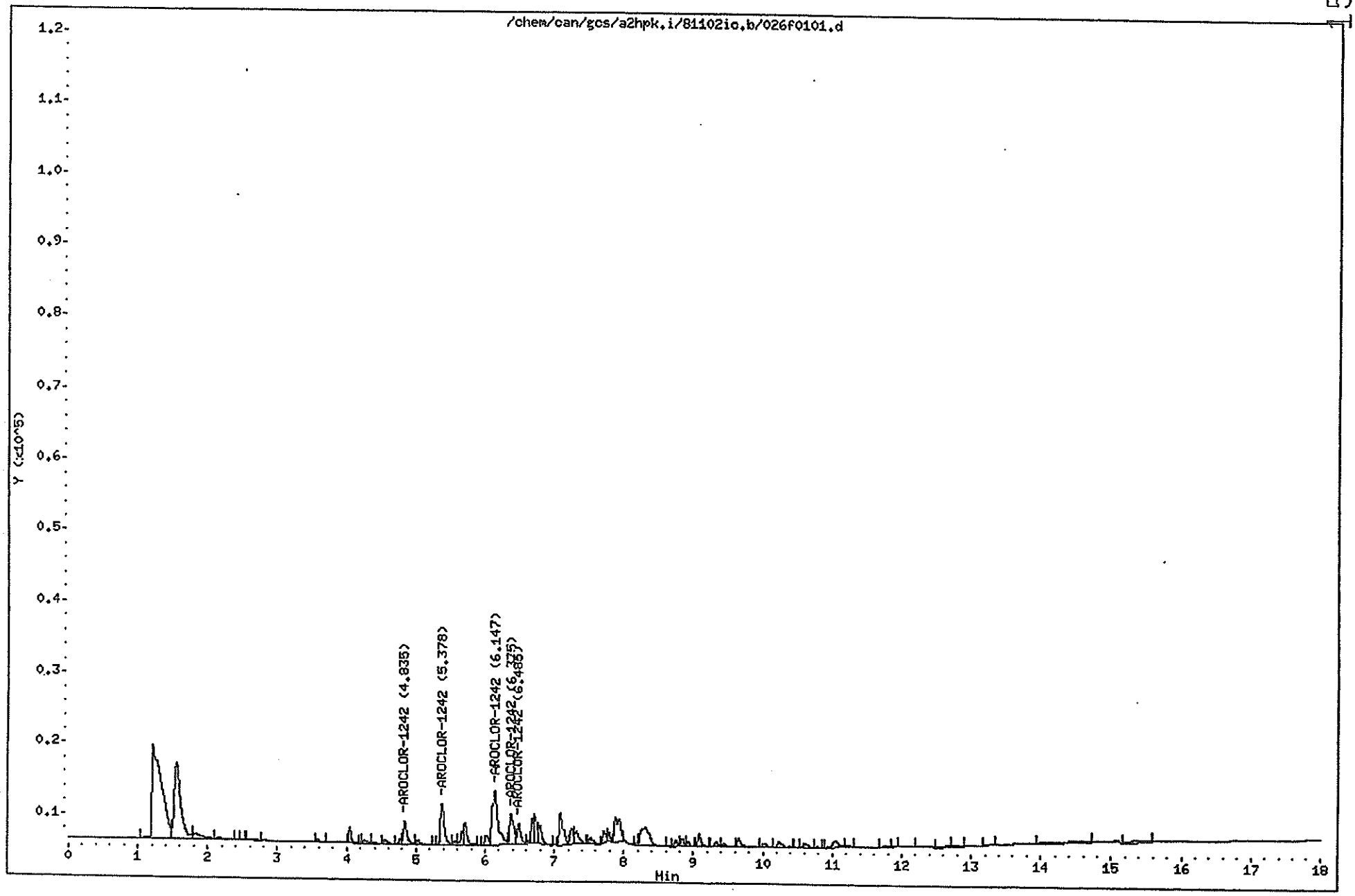
Average of Peak Amounts = 0.1

D: .le: /chem/can/gcs/a2hpk.i/81102ic.b/026f0101.d
Date : 03-NOV-1998 00:27
Client ID:
Sample Info: 1242 C049,,1,1

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/027f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

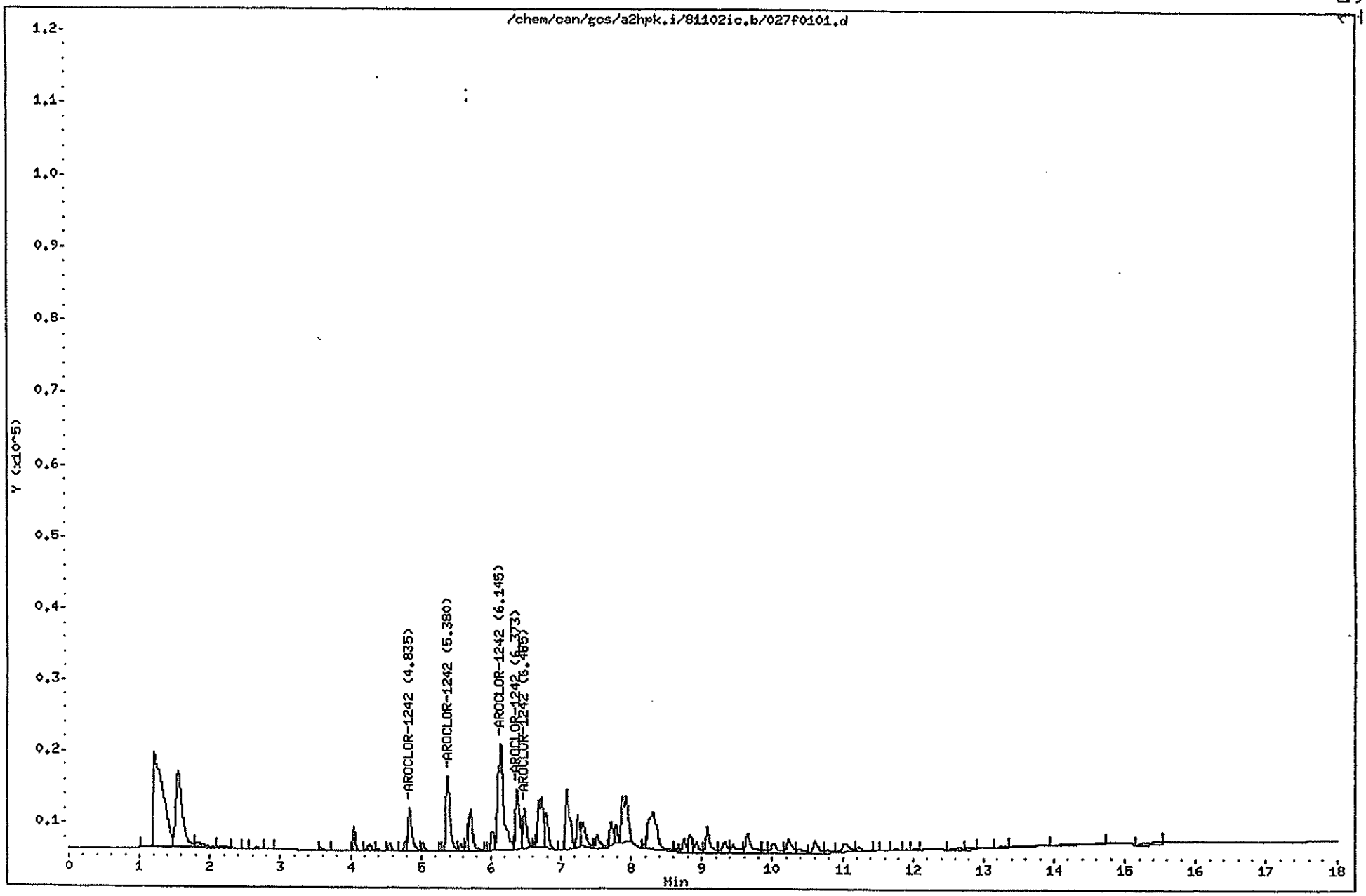
Data file : /chem/can/gcs/a2hpk.i/81102ic.b/027f0101.d
Lab Smp Id: 1242 C050
Inj Date : 03-NOV-1998 00:48
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C050,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 00:48 Cal File: 027f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.835	4.828	0.007	6025	0.20000	0.1945	75.00- 125.00	100.00
5.380	5.378	0.002	10465	0.20000	0.1922	124.76- 207.94	173.69
6.145	6.138	0.007	14704	0.20000	0.1977	191.04- 318.39	244.05
6.373	6.367	0.006	8287	0.20000	0.1969	108.36- 180.61	137.54
6.485	6.480	0.005	5535	0.20000	0.1992	79.00- 131.67	91.87
Average of Peak Amounts =					0.196		

Dat e: /chem/can/gcs/a2hpk.i/81102ic.b/027f0101.d
Date 03-NOV-1998 00:48
Client ID:
Sample Info: 1242 C050,,1,2

Instrument: a2hpk.i

Operator: 001803
Column phase: RTX-CLP PESTICIDES
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/028f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/028f0101.d
Lab Smp Id: 1242 C051
Inj Date : 03-NOV-1998 01:09
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C051,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:09 Cal File: 028f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

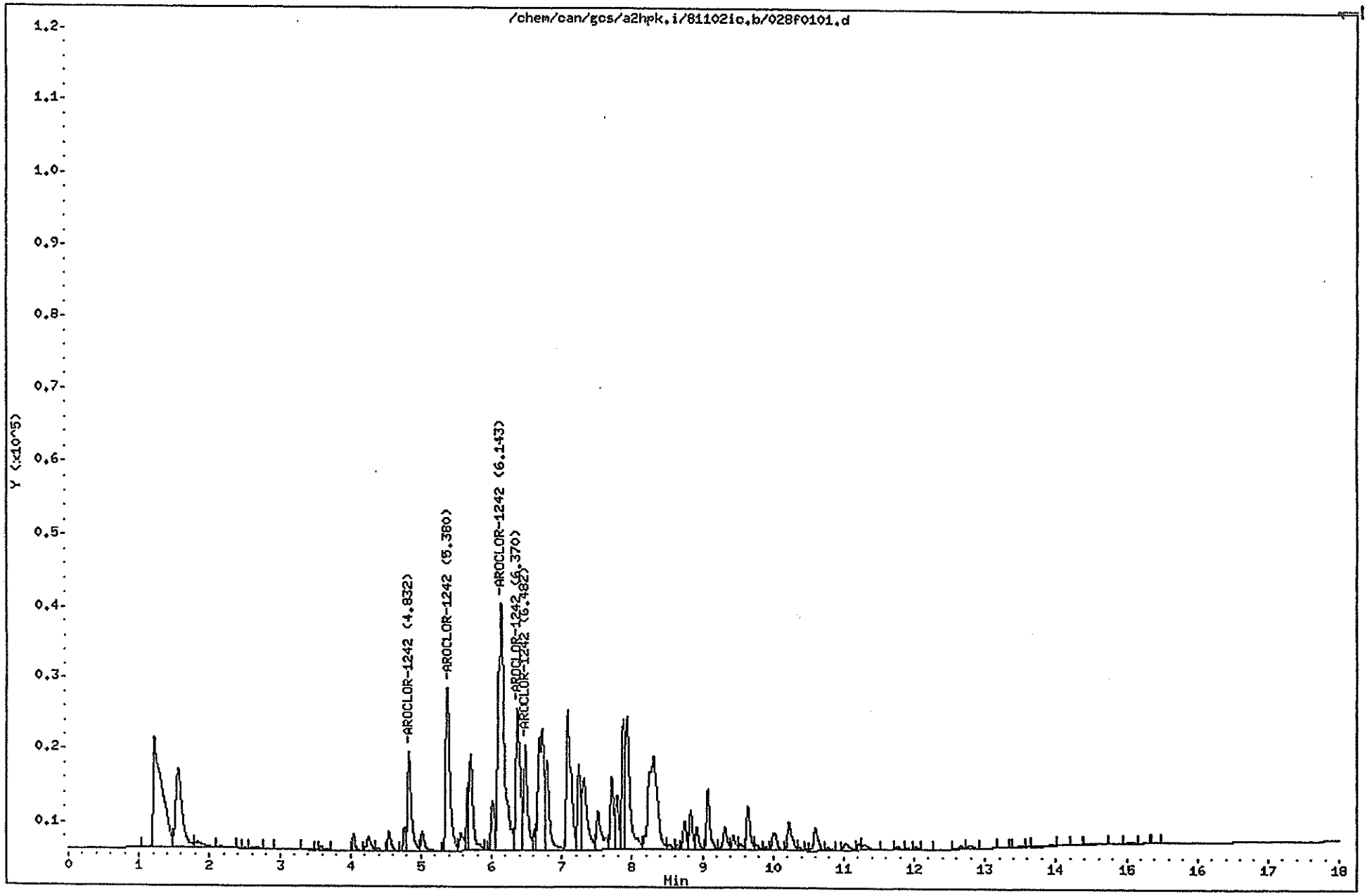
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.832	4.828	0.004	13530	0.50000	0.4559	75.00- 125.00	100.00
5.380	5.378	0.002	22507	0.50000	0.4387	124.76- 207.94	166.35
6.143	6.138	0.005	34463	0.50000	0.4750	191.04- 318.39	254.72
6.370	6.367	0.003	19549	0.50000	0.4758	108.36- 180.61	144.49
6.482	6.480	0.002	14252	0.50000	0.5085	79.00- 131.67	105.34
Average of Peak Amounts =					0.471		

Da[illegible]le: /chem/can/gcs/a2hpk.i/81102ic.b/028f0101.d
Date : 03-NOV-1998 01:09
Client ID:
Sample Info: 1242 C051,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Lab Smp Id: 1242 C052
Inj Date : 03-NOV-1998 01:29
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C052,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:29 Cal File: 029f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

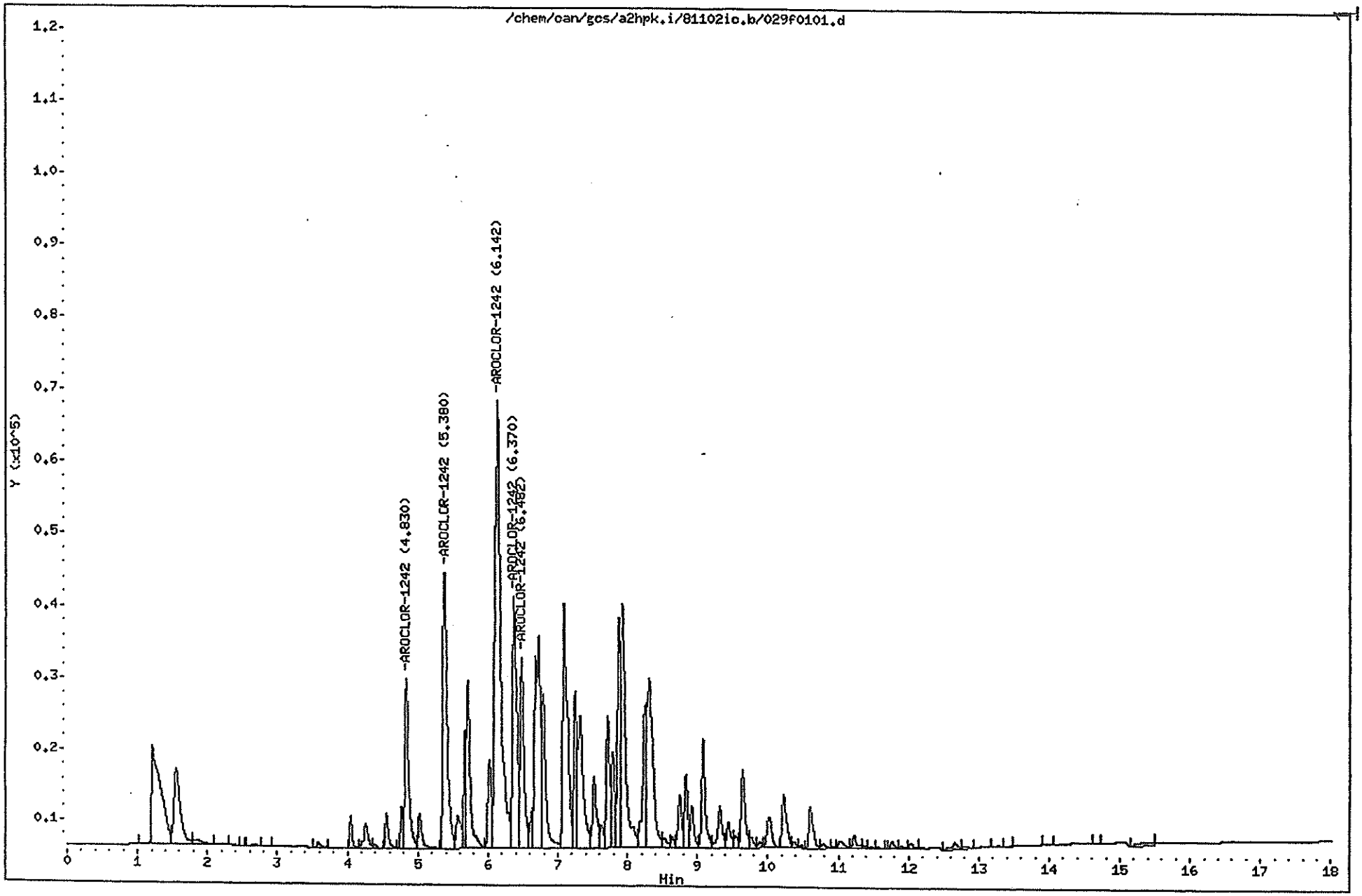
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.830	4.828	0.002	23943	1.00000	0.8478	75.00- 125.00	100.00
5.380	5.378	0.002	38604	1.00000	0.8021	124.76- 207.94	161.23
6.142	6.138	0.004	62323	1.00000	0.8904	191.04- 318.39	260.30
6.370	6.367	0.003	35261	1.00000	0.8898	108.36- 180.61	147.27
6.482	6.480	0.002	26690	1.00000	0.9638	79.00- 131.67	111.47
Average of Peak Amounts =					0.879		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/029f0101.d
Date : 03-NOV-1998 01:29
Client ID:
Sample Info: 1242 C052,,1,4

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Report Date: 03-Nov-1998 07:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Lab Smp Id: 1242 C053
Inj Date : 03-NOV-1998 01:50
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1242 C053,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 01:50 Cal File: 030f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

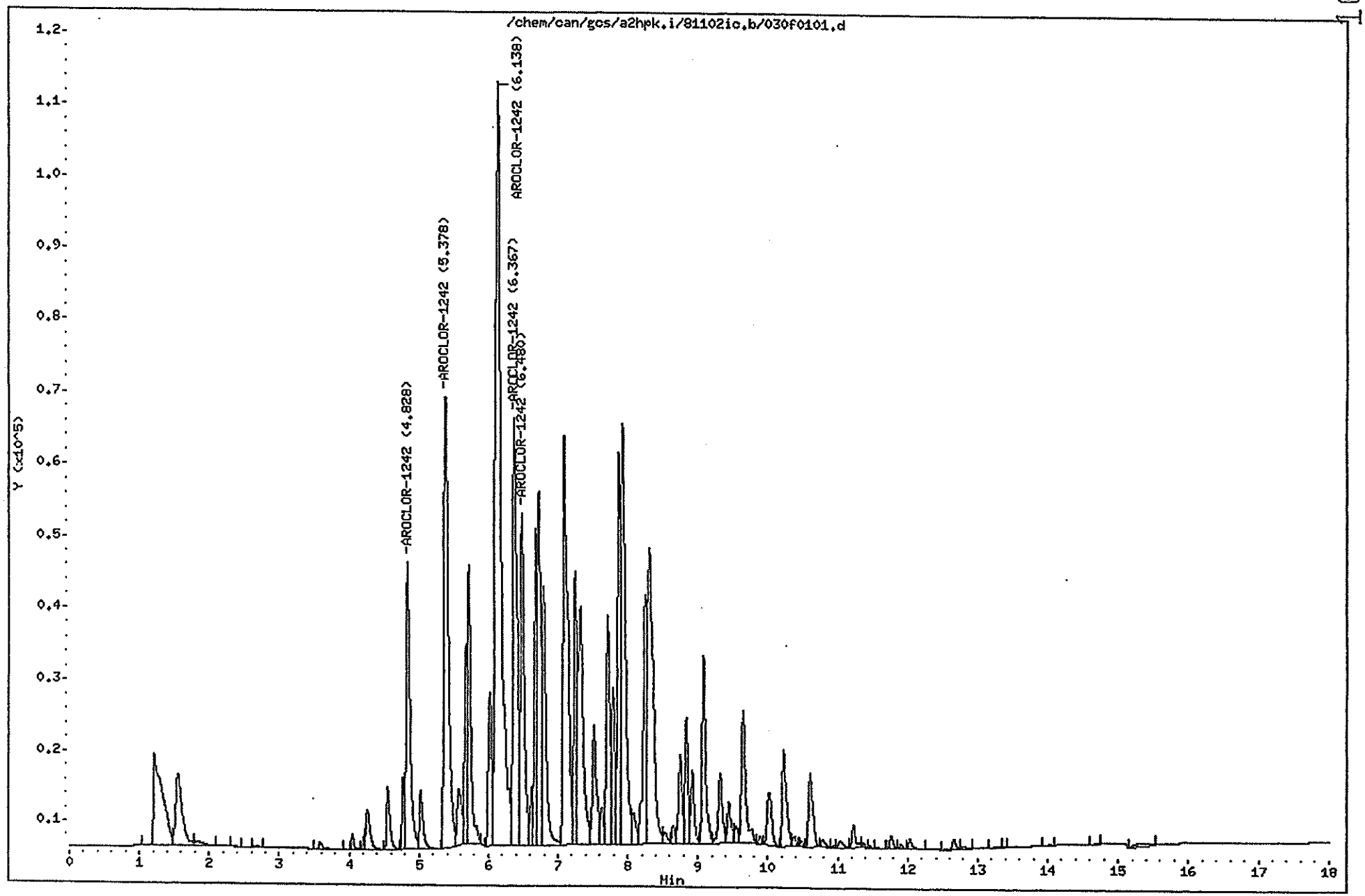
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.828	4.828	0.000	40097	2.00000	1.507	75.00- 125.00	100.00
5.378	5.378	0.000	62945	2.00000	1.405	124.76- 207.94	156.98
6.138	6.138	0.000	106641	2.00000	1.600	191.04- 318.39	265.96
6.367	6.367	0.000	59625	2.00000	1.583	108.36- 180.61	148.70
6.480	6.480	0.000	46396	2.00000	1.732	79.00- 131.67	115.71
Average of Peak Amounts =					1.57		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/030f0101.d
Date : 03-NOV-1998 01:50
Client ID:
Sample Info: 1242 C053,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Lab Smp Id: 1232 C044
Inj Date : 03-NOV-1998 02:11
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C044,,1,1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:11 Cal File: 031f0101.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

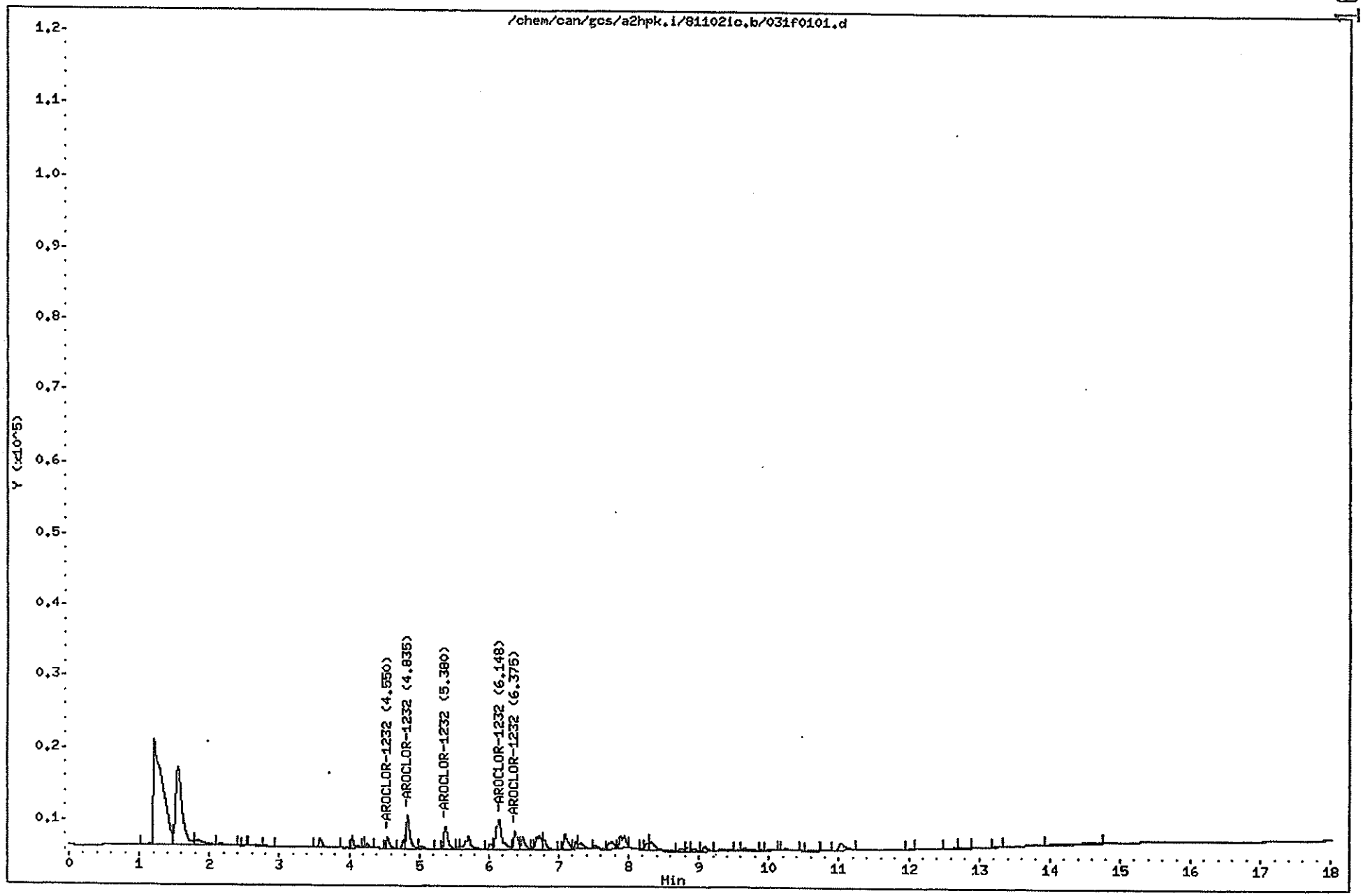
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.547	0.003	1457	0.10000	0.1000	75.00- 125.00	100.00
4.835	4.827	0.008	4478	0.10000	0.1000	210.31- 350.52	307.34
5.380	5.378	0.002	3146	0.10000	0.1000	146.67- 244.44	215.92
6.148	6.140	0.008	4082	0.10000	0.1000	215.96- 359.93	280.16
6.375	6.368	0.007	2403	0.10000	0.1000	124.12- 206.86	164.93
Average of Peak Amounts =					0.1		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/031f0101.d
Date : 03-NOV-1998 02:11
Client ID:
Sample Info: 1232 C044,,1,1

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/032f0101.d
Lab Smp Id: 1232 C045
Inj Date : 03-NOV-1998 02:33
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C045,,1,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:33 Cal File: 032f0101.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

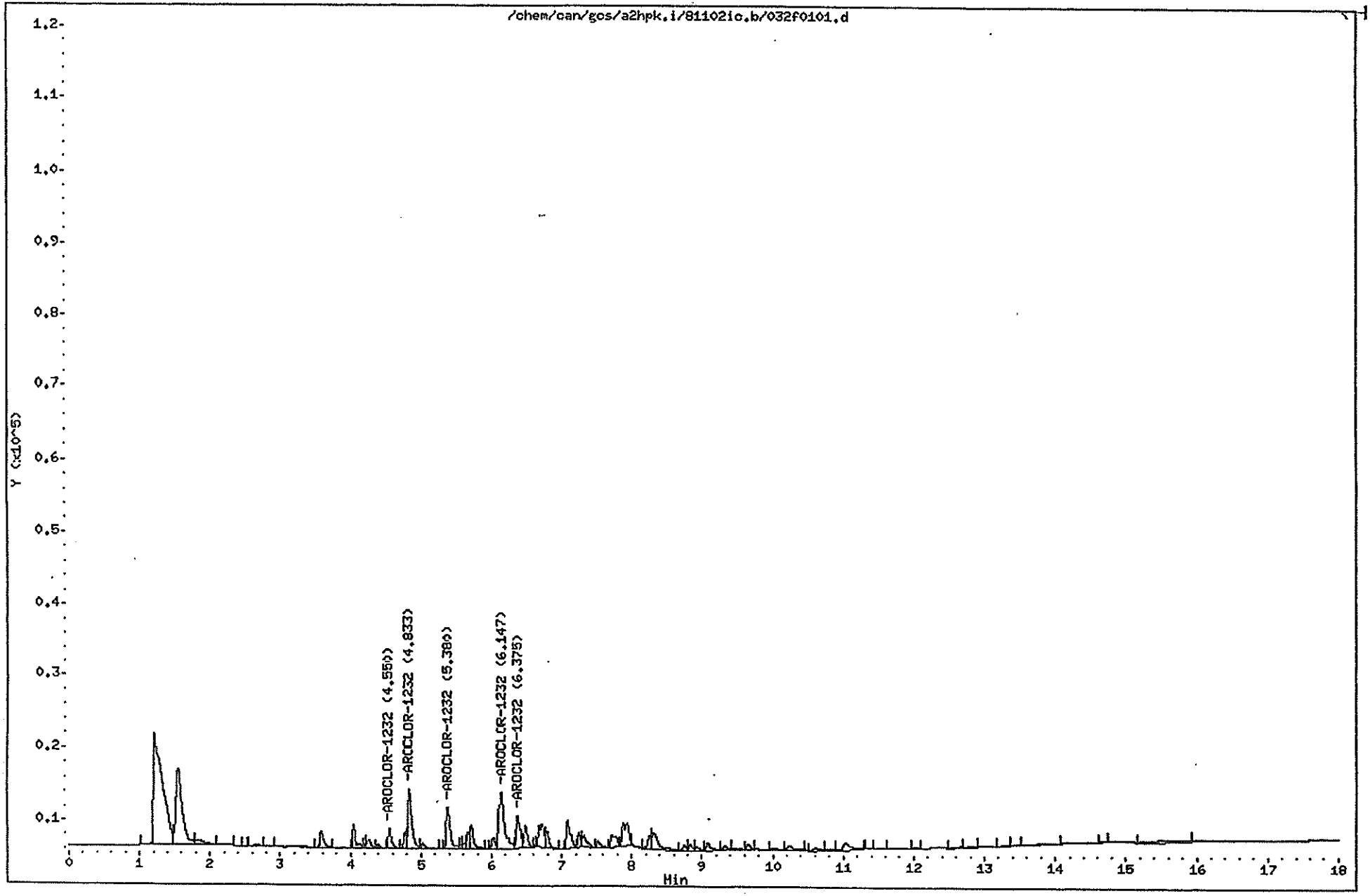
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.547	0.003	2793	0.20000	0.1958	75.00- 125.00	100.00
4.833	4.827	0.006	8327	0.20000	0.1927	210.31- 350.52	298.14
5.380	5.378	0.002	5830	0.20000	0.1924	146.67- 244.44	208.74
6.147	6.140	0.007	7866	0.20000	0.1963	215.96- 359.93	281.63
6.375	6.368	0.007	4481	0.20000	0.1930	124.12- 206.86	160.44
Average of Peak Amounts =					0.194		

Dat ie: /chem/can/gos/a2hpk.i/81102ic.b/032f0101.d
Date : 03-NOV-1998 02:33
Client ID:
Sample Info: 1232 C045,,1,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/033f0101.d
Lab Smp Id: 1232 C046
Inj Date : 03-NOV-1998 02:53
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C046,,1,3
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 02:53 Cal File: 033f0101.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.548	4.547	0.001	6818	0.50000	0.4850	75.00- 125.00	100.00
4.830	4.827	0.003	19119	0.50000	0.4601	210.31- 350.52	280.42
5.380	5.378	0.002	13333	0.50000	0.4583	146.67- 244.44	195.56
6.145	6.140	0.005	19632	0.50000	0.4932	215.96- 359.93	287.94
6.372	6.368	0.004	11283	0.50000	0.4906	124.12- 206.86	165.49
		Average of Peak Amounts =			0.477		

Da\ le: /chem/oan/gcs/a2hpk.i/81102ic.b/033f0101.d
Date : 03-NOV-1998 02:53
Client ID:
Sample Info: 1232 C046,,1,3

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

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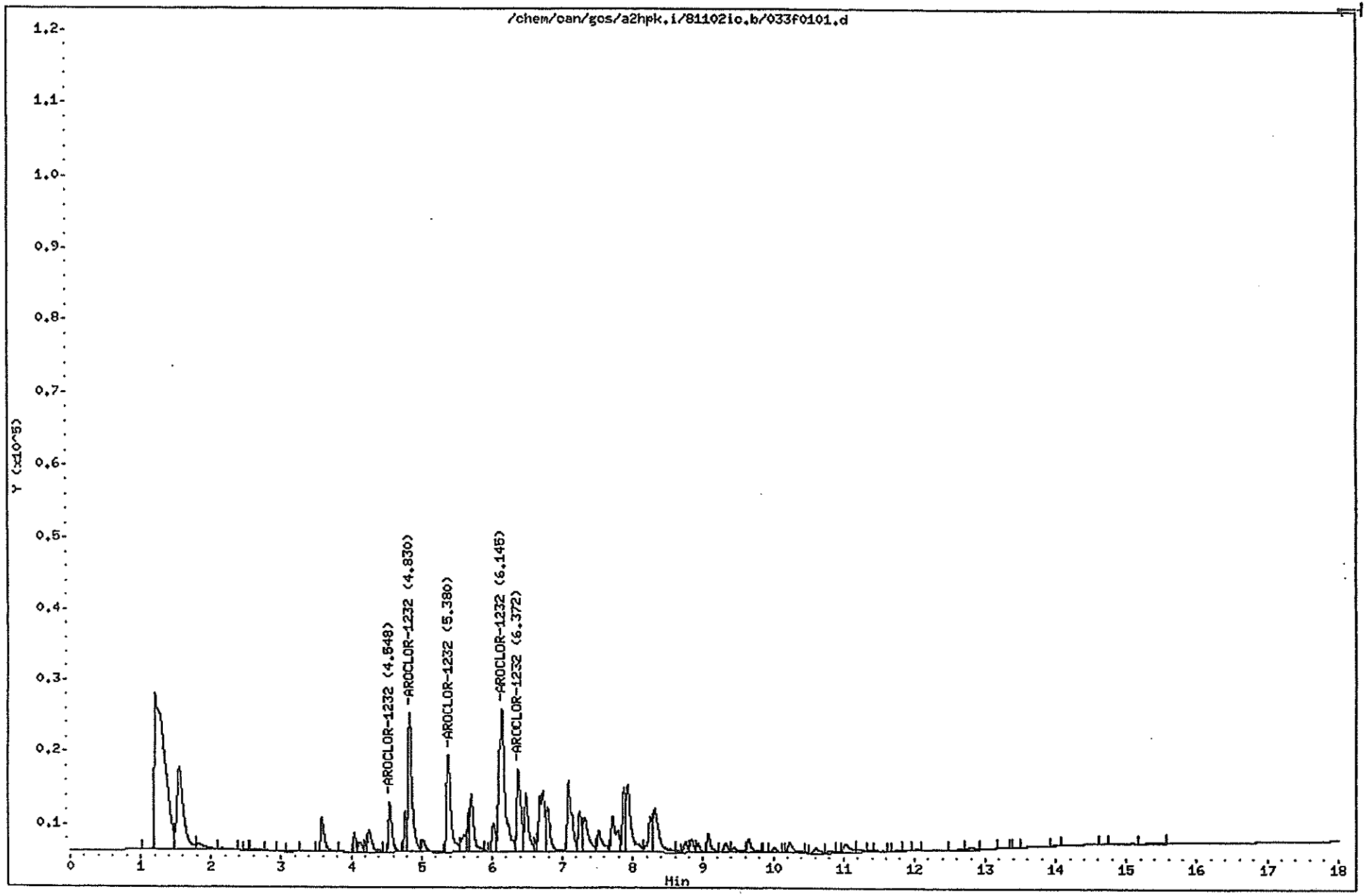


Data File: /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Lab Smp Id: 1232 C047
Inj Date : 03-NOV-1998 03:14
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C047,,1,4
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 03:14 Cal File: 034f0101.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

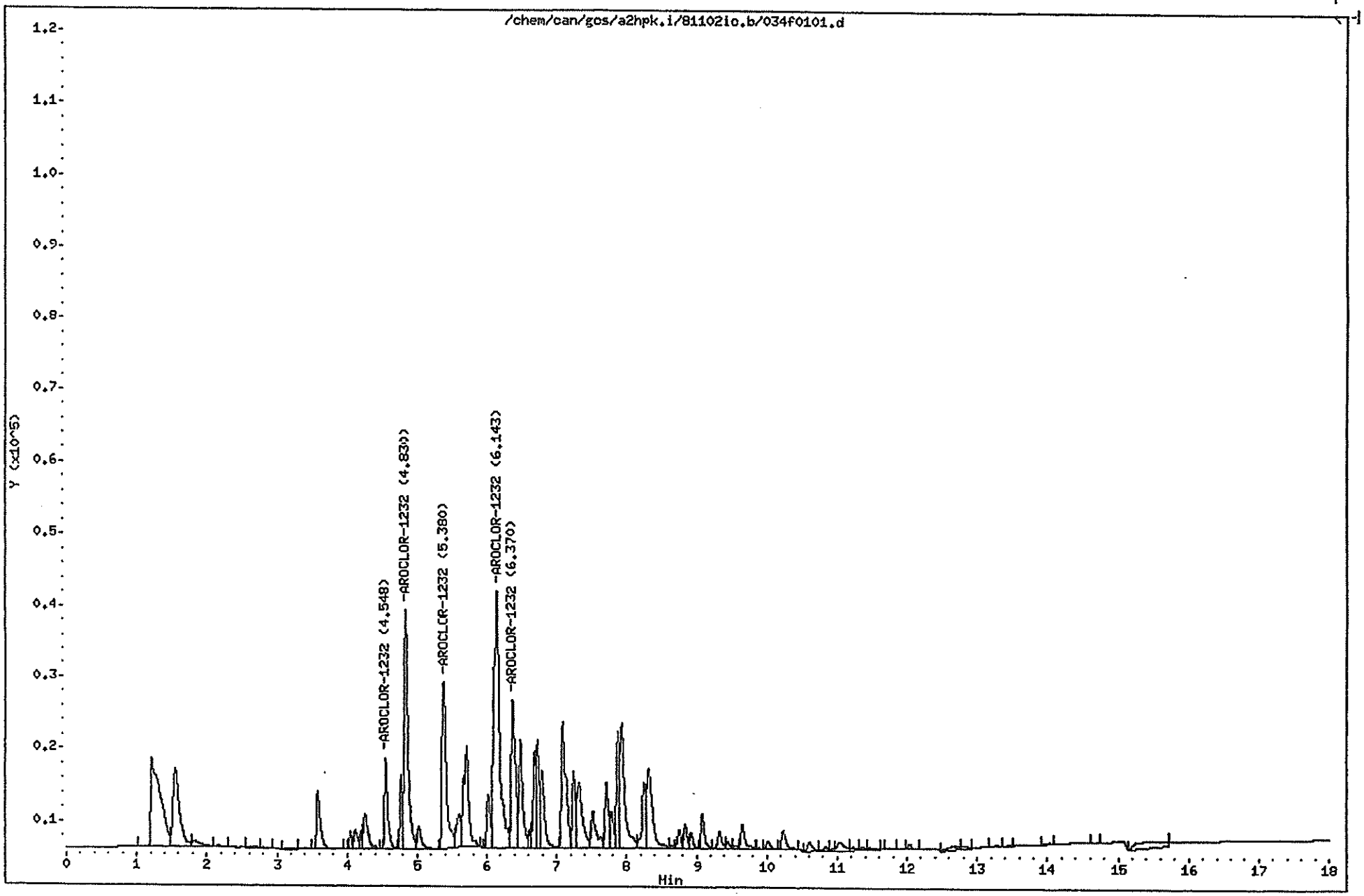
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.548	4.547	0.001	12490	1.00000	0.9140	75.00- 125.00	100.00
4.830	4.827	0.003	33204	1.00000	0.8414	210.31- 350.52	265.84
5.380	5.378	0.002	23094	1.00000	0.8370	146.67- 244.44	184.90
6.143	6.140	0.003	35707	1.00000	0.9208	215.96- 359.93	285.88
6.370	6.368	0.002	20457	1.00000	0.9147	124.12- 206.86	163.79
Average of Peak Amounts =					0.886		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/034f0101.d
Date : 03-NOV-1998 03:14
Client ID:
Sample Info: 1232 C047,,1,4

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32



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Data File: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Report Date: 03-Nov-1998 07:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Lab Smp Id: 1232 C048
Inj Date : 03-NOV-1998 03:35
Operator : 001803 Inst ID: a2hpk.i
Smp Info : 1232 C048,,1,5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81102ic.b/kfpcbIII.m
Meth Date : 03-Nov-1998 07:29 risdenr Quant Type: ESTD
Cal Date : 03-NOV-1998 03:35 Cal File: 035f0101.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

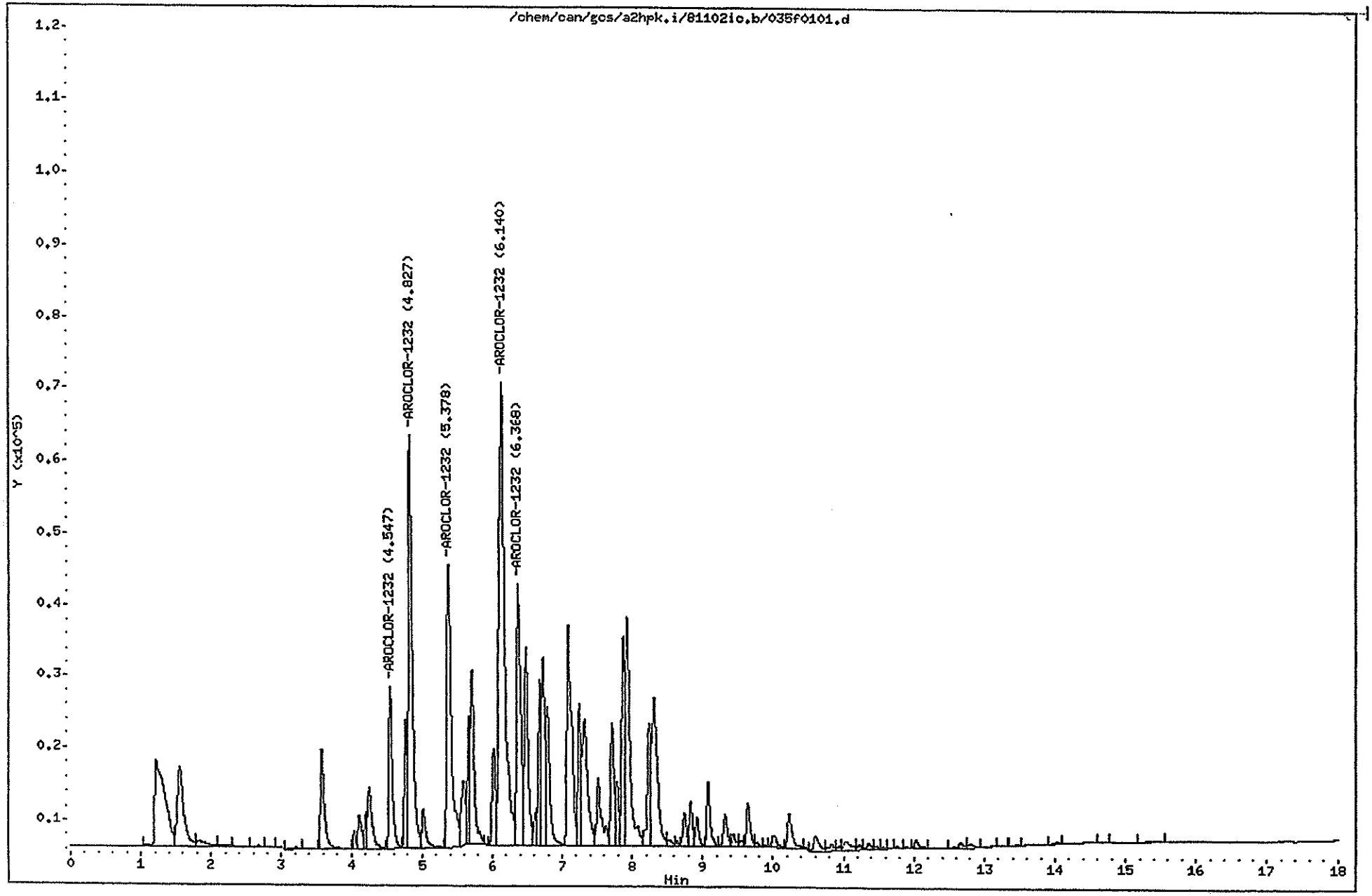
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.547	4.547	0.000	22381	2.00000	1.699	75.00- 125.00	100.00
4.827	4.827	0.000	57211	2.00000	1.534	210.31- 350.52	255.62
5.378	5.378	0.000	39334	2.00000	1.512	146.67- 244.44	175.75
6.140	6.140	0.000	64243	2.00000	1.716	215.96- 359.93	287.04
6.368	6.368	0.000	36353	2.00000	1.689	124.12- 206.86	162.43
Average of Peak Amounts =					1.63		

Da le: /chem/can/gcs/a2hpk.i/81102ic.b/035f0101.d
Dat . 03-NOV-1998 03:35
Client ID:
Sample Info: 1232 C048,,1,5

Instrument: a2hpk.i

Operator: 001803
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L030146

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.30 S2 : 15.16

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/15/98	1129	4.30	15.16
02		2154 C061	12/15/98	1150		
03		1248 C056	12/15/98	1211		
04		1242 C051	12/15/98	1232		
05		1232 C046	12/15/98	1253		
06	CP35ABLK	CP35A101	12/15/98	1356	4.30	15.16
07	CP35ACHK	CP35A102	12/15/98	1417	4.30	15.16
08	S-120298-JH-	CNXD1101	12/15/98	1438	4.26	15.18
09	S-120298-JH-	CNXD2101	12/15/98	1459	4.26	15.16
10		1660 C110	12/15/98	1705	4.30	15.16
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30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PCB

Data File: /chem/can/gcs/a2hpk.i/81214a.b/059f0101.d
Report Date: 12/15/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 059f0101.d
Analysis Type: NONE

Injection Date: 15-DEC-1998 11:29
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81214a.b/kfpcbII

COMPOUND	%D
TCMX	5.1
AROCLOR-1016	3.6
AROCLOR-1260	4.0
DCB	0.7

The average of %D's in the continuing calibration is 3.4

Data File: /chem/can/gcs/a2hpk.i/81214a.b/059f0101.d
Report Date: 16-Dec-1998 07:59

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/059f0101.d
Lab Smp Id: 1660 C110
Inj Date : 15-DEC-1998 11:29
Operator : 1808
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 026f0101.d
Continuing Calibration Sample

Compound Sublist: AR1660td.sub
Sample Matrix: None

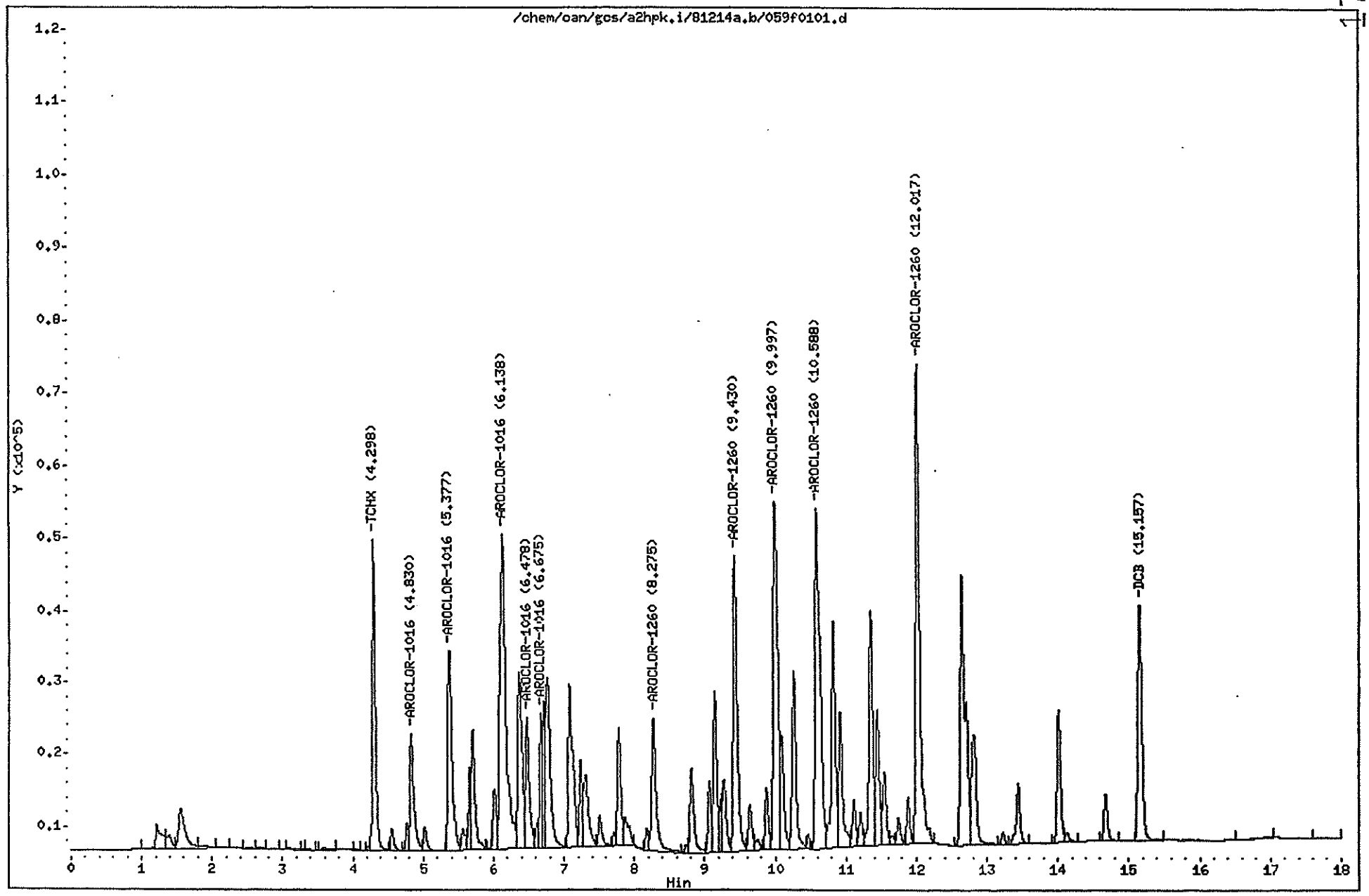
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.298	0.000	43108	0.02500	0.02628	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.830	4.832	-0.002	16071	0.50000	0.5186	80.00- 120.00	100.00
5.377	5.377	0.000	27705	0.50000	0.5129	131.48- 219.13	172.39
6.138	6.140	-0.002	43499	0.50000	0.5189	201.19- 335.32	270.67
6.478	6.480	-0.002	17850	0.50000	0.5214	80.13- 133.54	111.07
6.675	6.677	-0.002	18420	0.50000	0.5173	83.41- 139.01	114.62
Average of Peak Amounts =					0.518		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.275	8.277	-0.002	18125	0.50000	0.5214	80.00- 120.00	100.00
9.430	9.432	-0.002	40819	0.50000	0.5159	171.69- 286.15	225.21
9.997	9.998	-0.001	48155	0.50000	0.5210	202.14- 336.89	265.68
10.588	10.590	-0.002	47301	0.50000	0.5204	199.32- 332.20	260.97
12.017	12.018	-0.001	66442	0.50000	0.5223	282.30- 470.51	366.58
Average of Peak Amounts =					0.52		
$ 9 DCB					CAS #: 2051-24-3		
15.157	15.157	0.000	32721	0.02500	0.02482	80.00- 120.00	100.00

Da le: /chem/can/gcs/a2hpk.i/81214a.b/059f0101.d
Dat. . 15-DEC-1998 11:29
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81214a.b/060f0101.d
Report Date: 16-Dec-1998 07:59

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/060f0101.d
Lab Smp Id: 2154 C061
Inj Date : 15-DEC-1998 11:50
Operator : 1808
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 026f0101.d
Continuing Calibration Sample

Compound Sublist: AR2154.sub
Sample Matrix: None

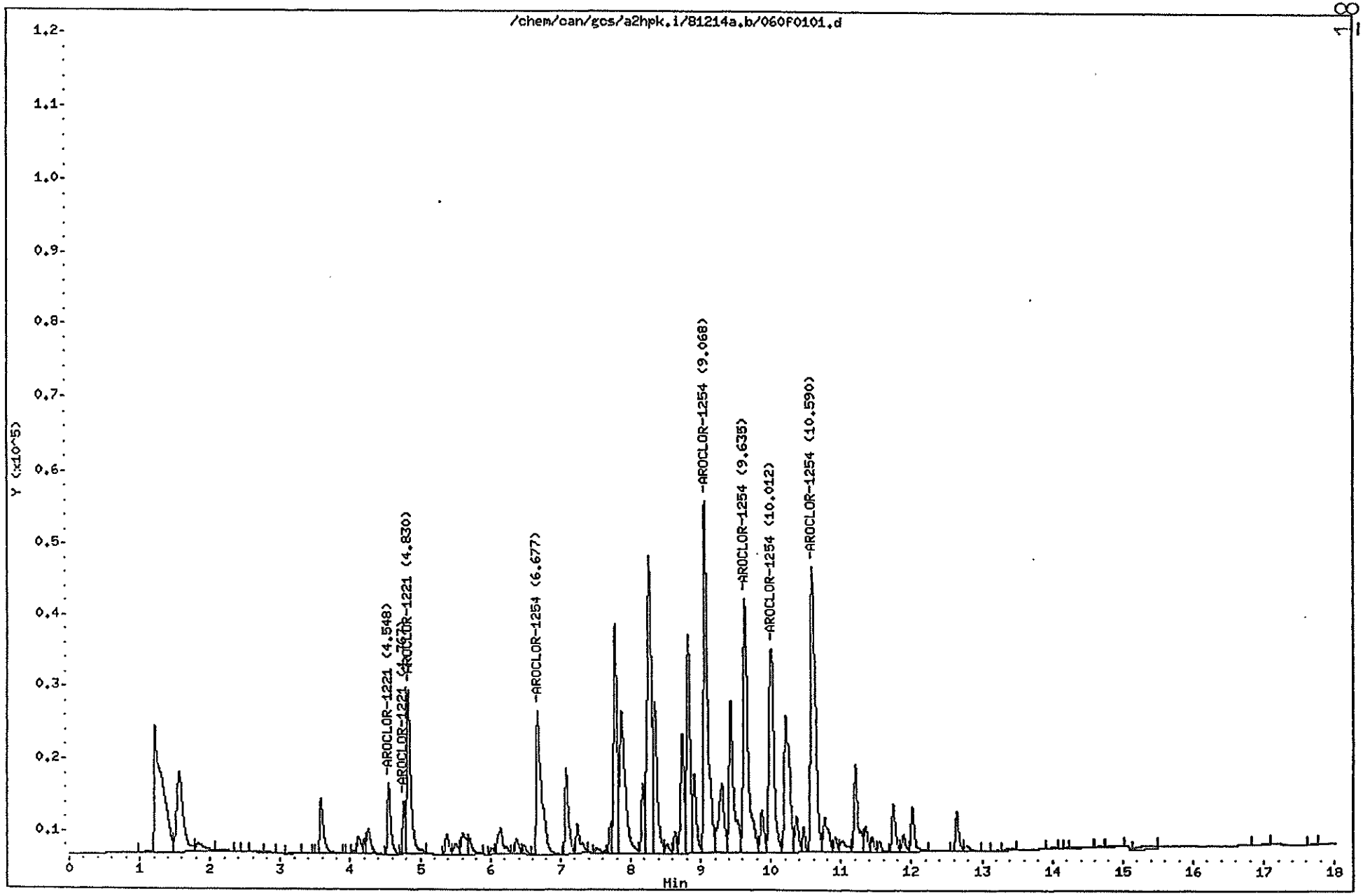
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.677	6.677	0.000	19889	0.50000	0.4949	80.00- 120.00	100.00
9.068	9.068	0.000	48881	0.50000	0.5037	184.33- 307.21	245.77
9.635	9.635	0.000	35198	0.50000	0.5042	132.73- 221.22	176.97
10.012	10.012	0.000	28137	0.50000	0.5121	106.10- 176.84	141.47
10.590	10.590	0.000	39682	0.50000	0.5043	149.64- 249.40	199.52
Average of Peak Amounts =					0.504		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.548	0.000	9853	0.50000	0.5109	80.00- 120.00	100.00
4.767	4.767	0.000	7268	0.50000	0.5157	55.32- 92.21	73.76
4.830	4.830	0.000	22619	0.50000	0.5022	172.17- 286.96	229.56
Average of Peak Amounts =					0.51		

Da le: /chem/can/gcs/a2hpk.i/81214a.b/060f0101.d
Dat . 15-DEC-1998 11:50
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81214a.b/061f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/061f0101.d
Lab Smp Id: 1248 C056
Inj Date : 15-DEC-1998 12:11
Operator : 1808
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 026f0101.d
Continuing Calibration Sample

Compound Sublist: AR1248.sub
Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.372	5.372	0.000	12756	0.50000	0.5274	80.00- 120.00	100.00
6.138	6.138	0.000	22167	0.50000	0.5445	130.33- 217.22	173.78
7.082	7.082	0.000	30284	0.50000	0.5296	178.06- 296.76	237.41
9.070	9.070	0.000	17532	0.50000	0.5294	103.08- 171.80	137.44
9.637	9.637	0.000	11898	0.50000	0.5289	69.96- 116.59	93.27
Average of Peak Amounts =					0.532		

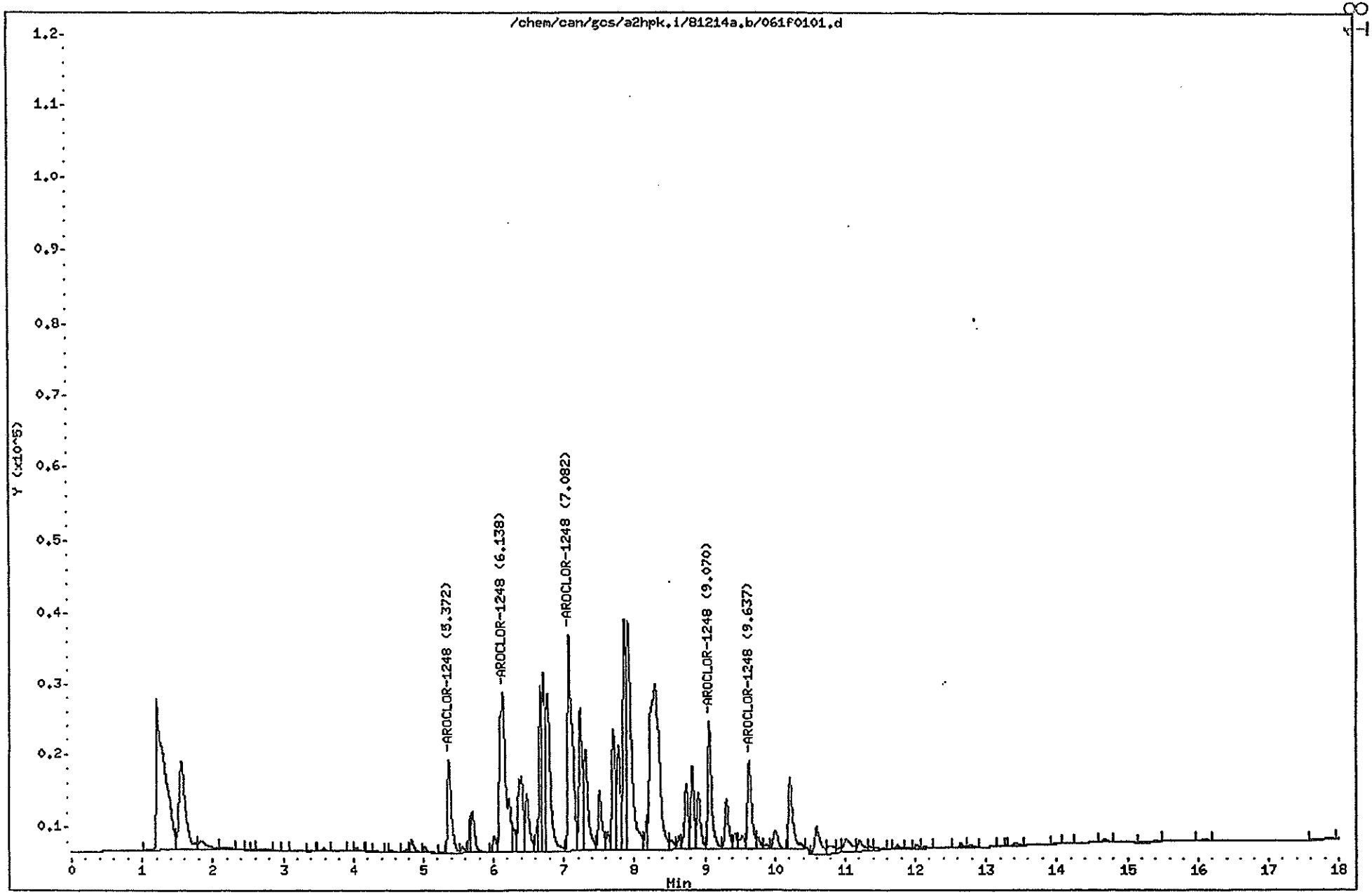
Dat e: /chem/can/gcs/a2hpk.i/81214a.b/061f0101.d
Date 15-DEC-1998 12:11
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808

Column phase: RTX-CLP PESTICIDES

Column diameter: 0.32



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Data File: /chem/can/gcs/a2hpk.i/81214a.b/062f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/062f0101.d
Lab Smp Id: 1242 C051
Inj Date : 15-DEC-1998 12:32
Operator : 1808
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 026f0101.d
Continuing Calibration Sample

Compound Sublist: AR1242.sub
Sample Matrix: None

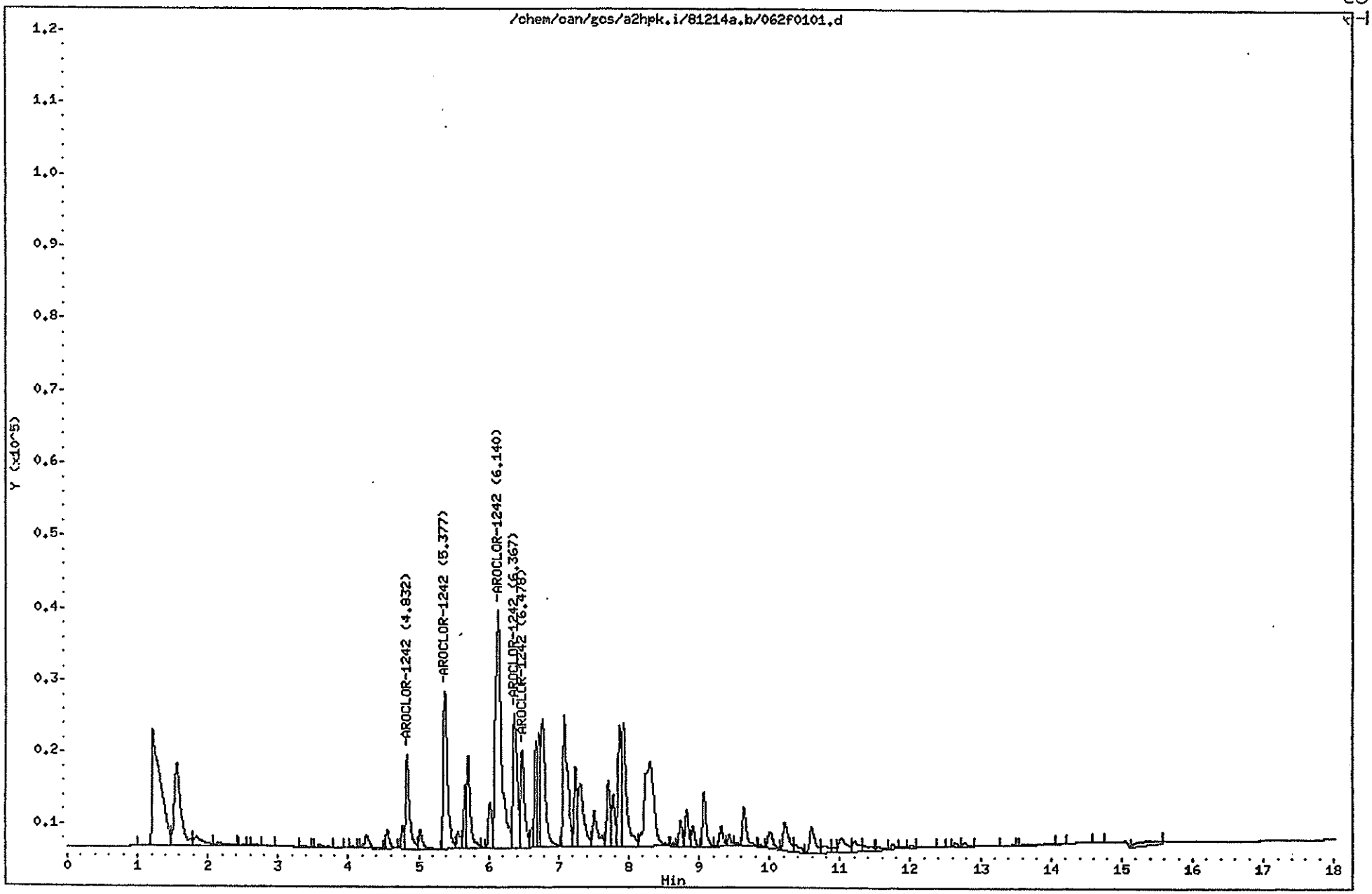
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.832	4.832	0.000	12998	0.50000	0.4886	80.00- 120.00	100.00
5.377	5.377	0.000	21840	0.50000	0.4876	126.02- 210.03	168.03
6.140	6.140	0.000	32985	0.50000	0.4948	190.33- 317.21	253.77
6.367	6.367	0.000	18619	0.50000	0.4943	107.43- 179.06	143.25
6.478	6.478	0.000	13575	0.50000	0.5066	78.33- 130.55	104.44
Average of Peak Amounts =					0.494		

Dat .e: /chem/can/gcs/a2hpk.i/81214a.b/062f0101.d
Date : 15-DEC-1998 12:32
Client ID:
Sample Info: 1242 C051,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81214a.b/063f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/063f0101.d
Lab Smp Id: 1232 C046
Inj Date : 15-DEC-1998 12:53
Operator : 1808
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 026f0101.d
Continuing Calibration Sample

Compound Sublist: AR1232.sub
Sample Matrix: None

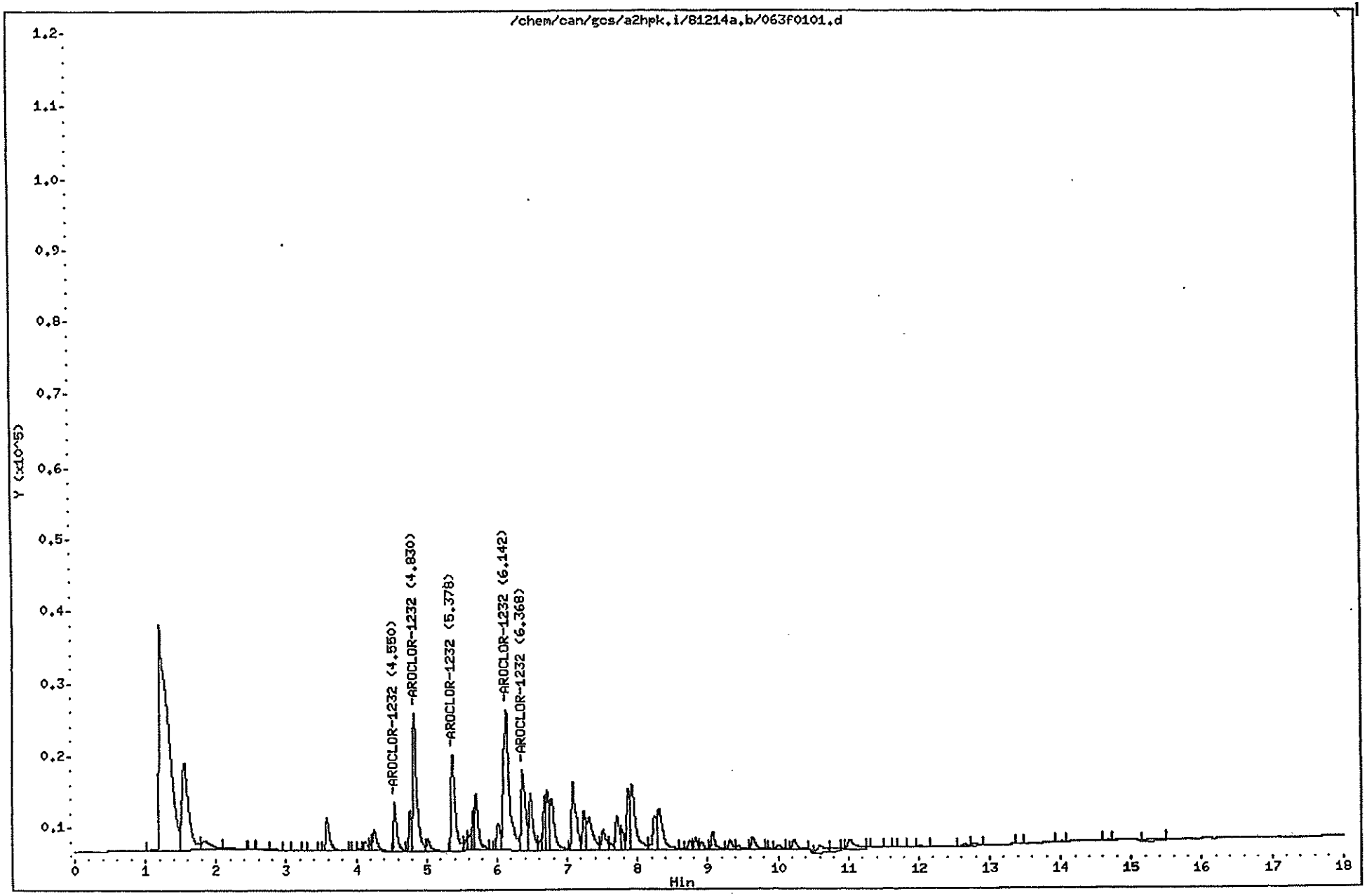
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.550	0.000	6809	0.50000	0.5170	80.00- 120.00	100.00
4.830	4.830	0.000	19088	0.50000	0.5118	210.25- 350.42	280.33
5.378	5.378	0.000	13341	0.50000	0.5130	146.95- 244.91	195.93
6.142	6.142	0.000	19444	0.50000	0.5192	214.17- 356.95	285.56
6.368	6.368	0.000	11168	0.50000	0.5188	123.01- 205.02	164.02
Average of Peak Amounts =					0.516		

Da. ile: /chem/oan/gcs/a2hpk.i/81214a.b/063f0101.d
Date : 15-DEC-1998 12:53
Client ID:
Sample Info: 1232 C046,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81214a.b/075f0101.d
Report Date: 12/16/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 075f0101.d
Analysis Type: NONE

Injection Date: 15-DEC-1998 17:05
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII

COMPOUND	%D
TCMX	8.2
AROCLOR-1016	5.5
AROCLOR-1260	6.3
DCB	5.0

The average of %D's in the continuing calibration is 6.3

Data File: /chem/can/gcs/a2hpk.i/81214a.b/075f0101.d
Report Date: 16-Dec-1998 08:01

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/075f0101.d
Lab Smp Id: 1660 C110
Inj Date : 15-DEC-1998 17:05
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a Quant Type: ESTD
Cal Date : 06-DEC-1998 20:55 Cal File: 026f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.298	0.000	44360	0.02500	0.02705	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.832	4.832	0.000	16421	0.50000	0.5299	80.00- 120.00	100.00
5.377	5.377	0.000	28337	0.50000	0.5246	131.48- 219.13	172.57
6.138	6.140	-0.002	44094	0.50000	0.5260	201.19- 335.32	268.52
6.478	6.480	-0.002	18170	0.50000	0.5307	80.13- 133.54	110.65
6.675	6.677	-0.002	18773	0.50000	0.5272	83.41- 139.01	114.32
Average of Peak Amounts =					0.528		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.275	8.277	-0.002	18404	0.50000	0.5295	80.00- 120.00	100.00
9.430	9.432	-0.002	41455	0.50000	0.5239	171.69- 286.15	225.25
9.997	9.998	-0.001	49169	0.50000	0.5320	202.14- 336.89	267.16
10.590	10.590	0.000	48528	0.50000	0.5339	199.32- 332.20	263.68
12.018	12.018	0.000	68552	0.50000	0.5389	282.30- 470.51	372.48
Average of Peak Amounts =					0.532		
$ 9 DCB					CAS #: 2051-24-3		
15.157	15.157	0.000	34599	0.02500	0.02624	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81214a.b/075f0101.d
Date : 15-DEC-1998 17:05
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES

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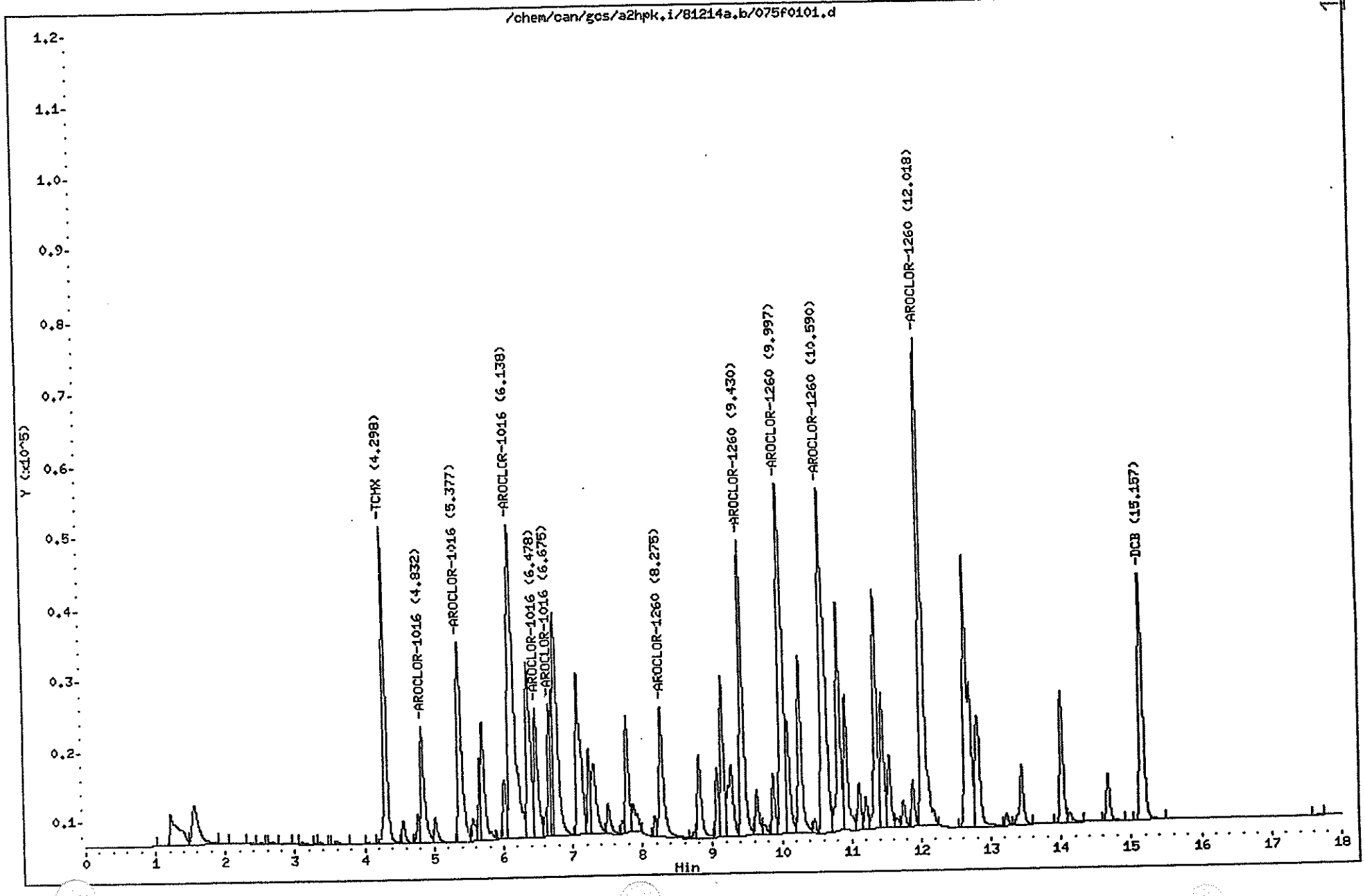

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L030

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/9

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01		2154 C061	12/16/98	2127		
02		1248 C056	12/16/98	2148		
03		1242 C051	12/16/98	2209		
04		1232 C046	12/16/98	2230		
05		1660 C110	12/17/98	0428		
06	CPO7RBLK	CP07R101	12/17/98	0820		
07		1660 C110	12/17/98	0902		
08	CPO7RCHK	CP07R102	12/17/98	0944		
09	CPO7RCHKDUP	CP07R103	12/17/98	1005		
10	S-120298-JH-	CNXA5101	12/17/98	1026		
11	S-120298-JH-	CNXA6101	12/17/98	1047		
12	S-120298-JH-	CNX9X101	12/17/98	1108		
13		1660 C110	12/17/98	1150		
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QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Lab Smp Id: 2154 C061
Inj Date : 16-DEC-1998 21:27
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

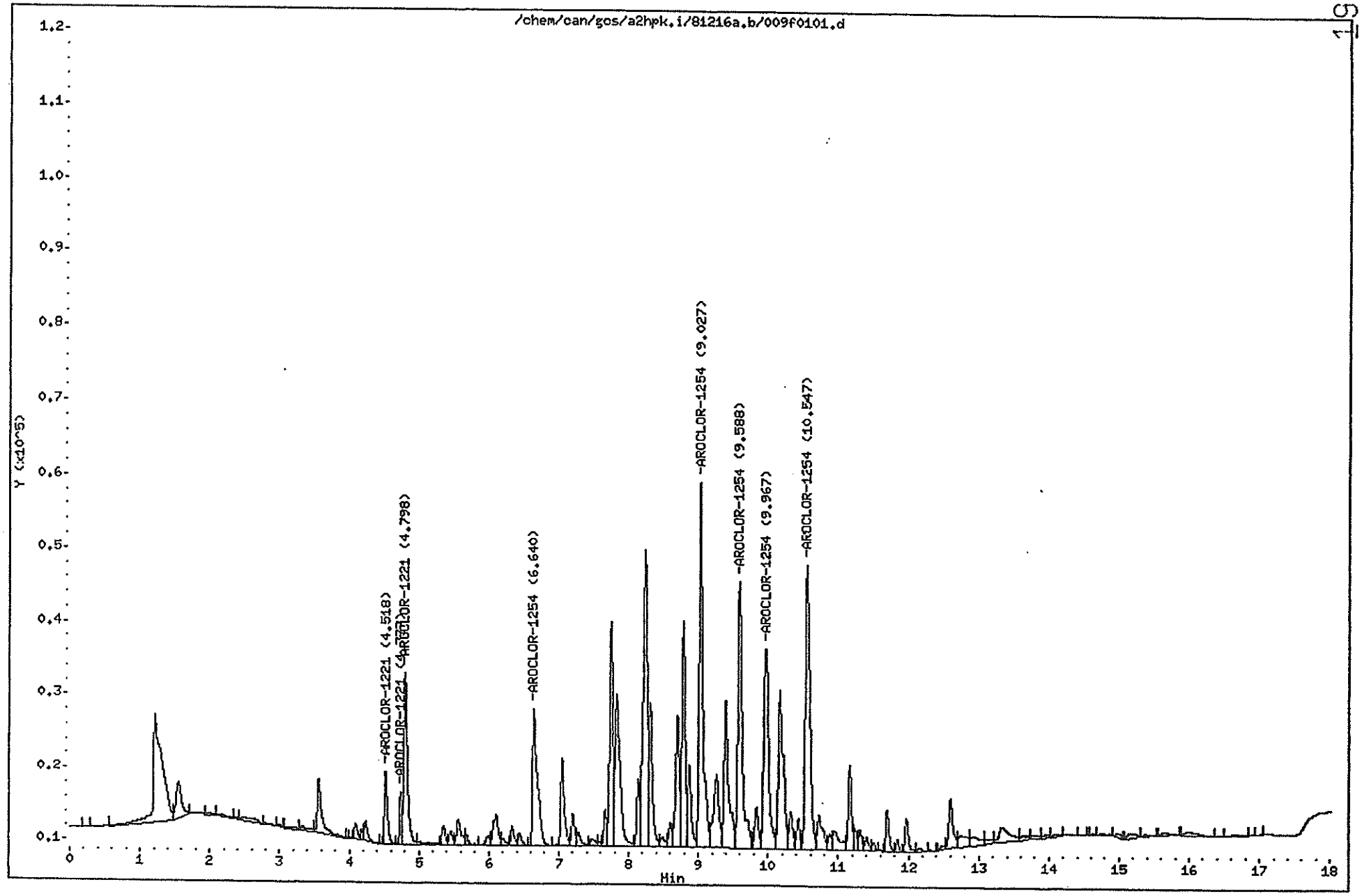
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.640	6.640	0.000	18672	0.50000	0.4646	80.00- 120.00	100.00
9.027	9.027	0.000	49819	0.50000	0.5133	200.11- 333.51	266.81
9.588	9.588	0.000	36366	0.50000	0.5209	146.07- 243.45	194.76
9.967	9.967	0.000	27220	0.50000	0.4954	109.33- 182.22	145.78
10.547	10.547	0.000	38717	0.50000	0.4920	155.51- 259.19	207.35
Average of Peak Amounts =					0.497		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.518	4.518	0.000	10011	0.50000	0.5190	80.00- 120.00	100.00
4.737	4.737	0.000	7195	0.50000	0.5106	53.90- 89.84	71.87
4.798	4.798	0.000	23635	0.50000	0.5247	177.07- 295.11	236.09
Average of Peak Amounts =					0.518		

Da le: /chem/can/gcs/a2hpk.i/81216a.b/009f0101.d
Da . 16-DEC-1998 21:27
Client ID:
Sample Info: 2154 C061,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



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Data File: /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
Lab Smp Id: 1248 C056
Inj Date : 16-DEC-1998 21:48
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

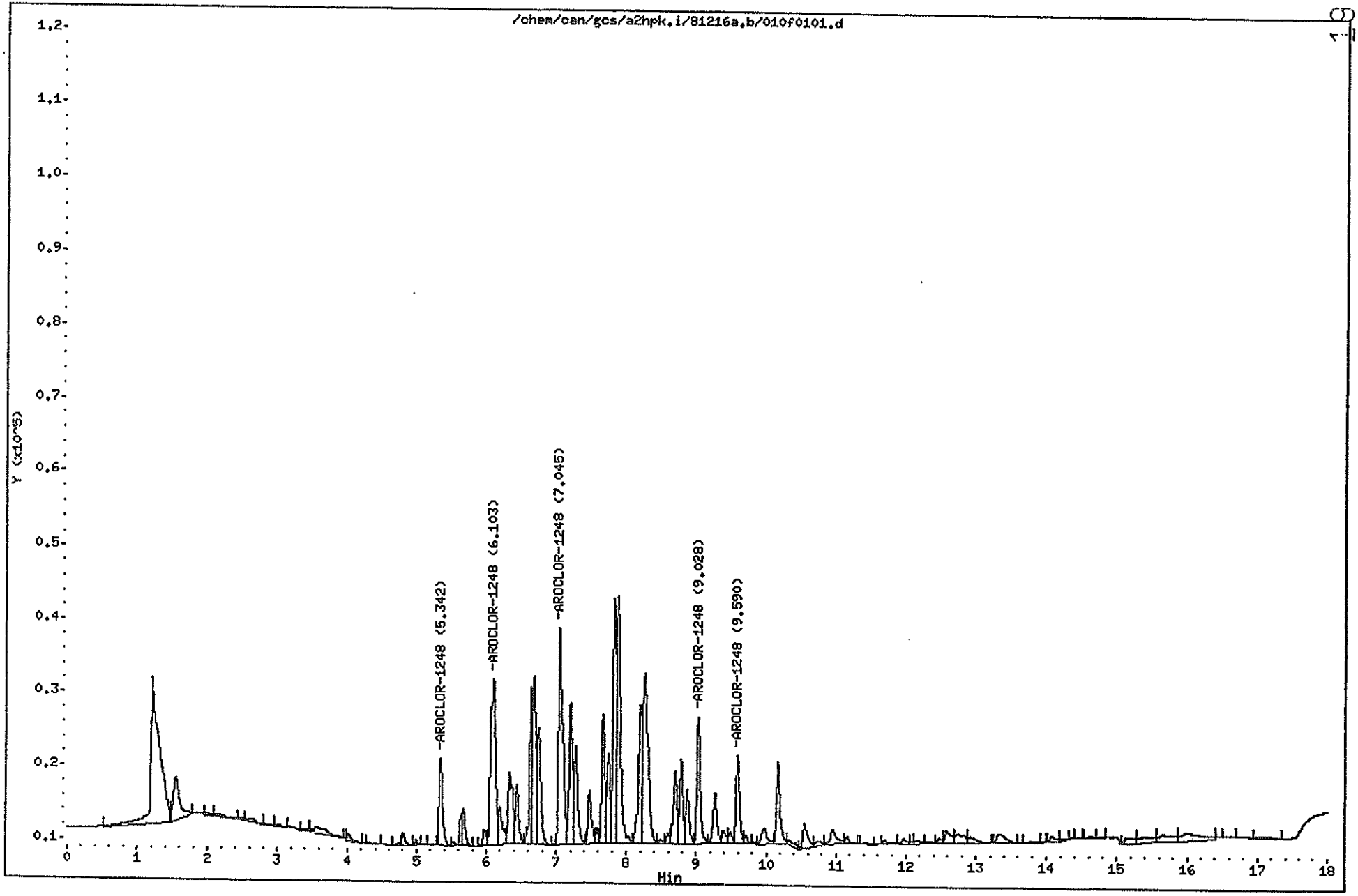
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.342	5.342	0.000	11718	0.50000	0.4845	80.00- 120.00	100.00
6.103	6.103	0.000	22570	0.50000	0.5544	144.46- 240.76	192.61
7.045	7.045	0.000	29502	0.50000	0.5159	188.82- 314.71	251.77
9.028	9.028	0.000	17203	0.50000	0.5194	110.11- 183.51	146.81
9.590	9.590	0.000	11829	0.50000	0.5258	75.71- 126.18	100.95
Average of Peak Amounts =					0.52		

File: /chem/can/gcs/a2hpk.i/81216a.b/010f0101.d
: 16-DEC-1998 21:48
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/011f0101.d
Lab Smp Id: 1242 C051
Inj Date : 16-DEC-1998 22:09
Operator : 1808
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a
Cal Date : 15-DEC-1998 19:11
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 081f0101.d
Continuing Calibration Sample

Compound Sublist: AR1242.sub
Sample Matrix: None

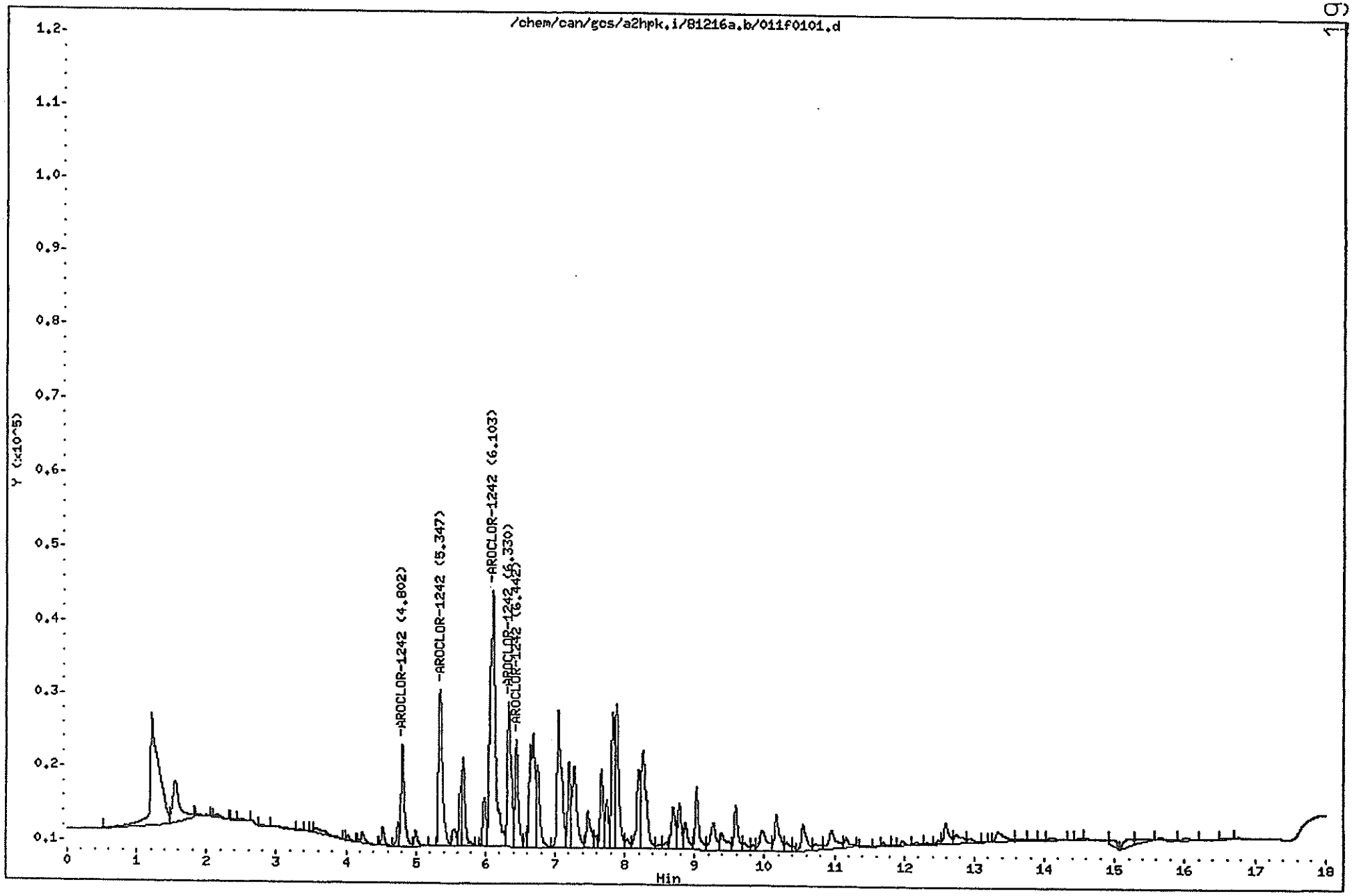
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.802	4.802	0.000	13689	0.50000	0.5146	80.00- 120.00	100.00
5.347	5.347	0.000	21213	0.50000	0.4736	116.22- 193.70	154.96
6.103	6.103	0.000	34790	0.50000	0.5219	190.61- 317.68	254.15
6.330	6.330	0.000	19600	0.50000	0.5204	107.39- 178.98	143.18
6.442	6.442	0.000	14502	0.50000	0.5412	79.45- 132.42	105.94
Average of Peak Amounts =					0.514		

D ile: /chem/can/gcs/a2hpk.i/81216a.b/011f0101.d
Da . 16-DEC-1998 22:09
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81216a.b/012f0101.d
Report Date: 17-Dec-1998 13:20

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/012f0101.d
Lab Smp Id: 1232 C046
Inj Date : 16-DEC-1998 22:30
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 15-DEC-1998 19:11 Cal File: 081f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

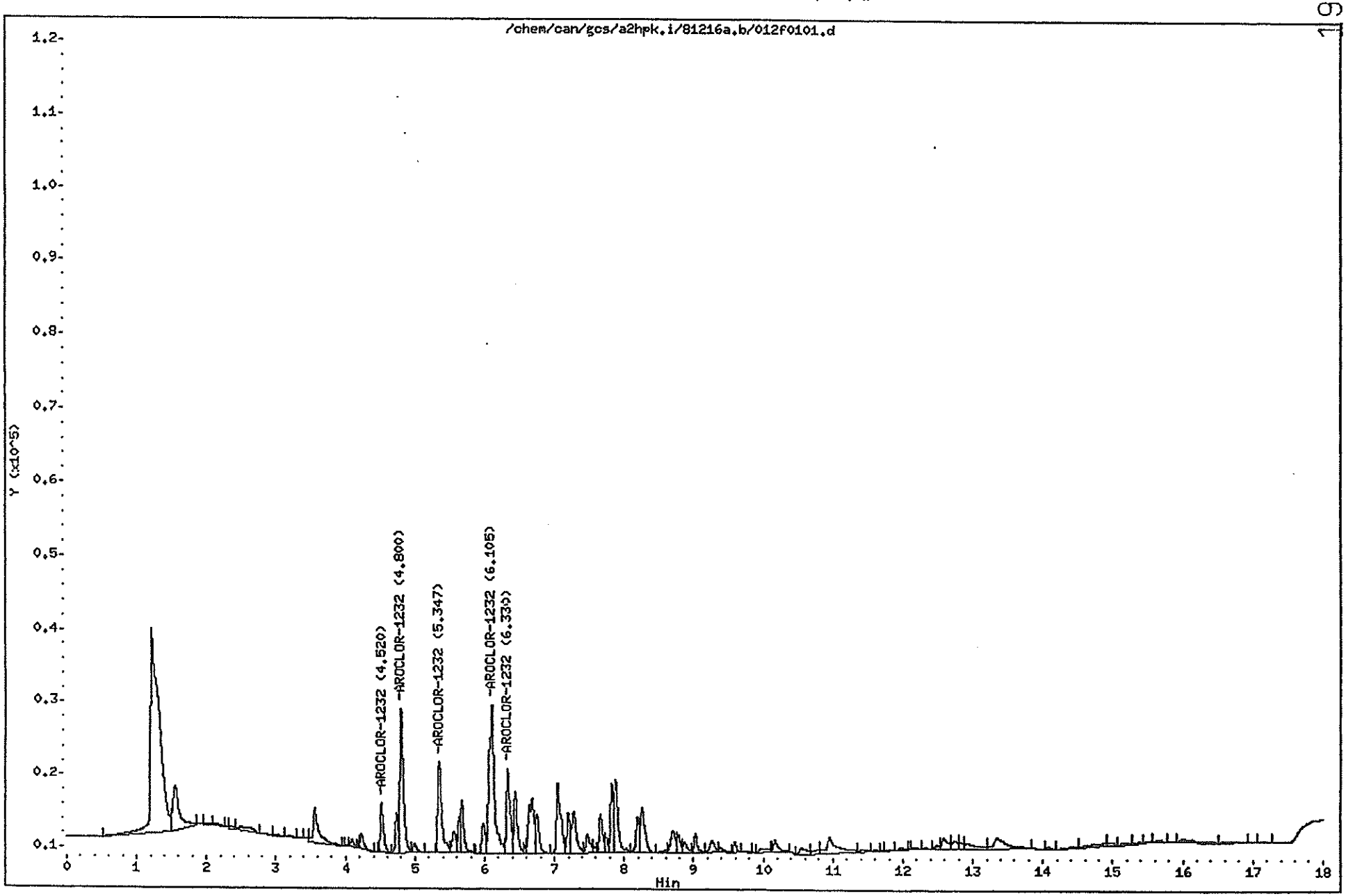
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.520	4.520	0.000	6865	0.50000	0.5212	80.00- 120.00	100.00
4.800	4.800	0.000	19697	0.50000	0.5282	215.19- 358.65	286.92
5.347	5.347	0.000	12523	0.50000	0.4815	136.81- 228.02	182.42
6.105	6.105	0.000	20412	0.50000	0.5451	223.00- 371.67	297.33
6.330	6.330	0.000	11596	0.50000	0.5387	126.69- 211.14	168.91
Average of Peak Amounts =					0.523		

D ile: /chem/can/gcs/a2hpk.i/81216a.b/012f0101.d
Date : 16-DEC-1998 22:30
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 029f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 04:28
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.

COMPOUND	%D
TCMX	3.8
AROCLOR-1016	6.7
AROCLOR-1260	4.5
DCB	2.0

The average of %D's in the continuing calibration is 4.3

Data File: /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Report Date: 17-Dec-1998 13:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 04:28
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

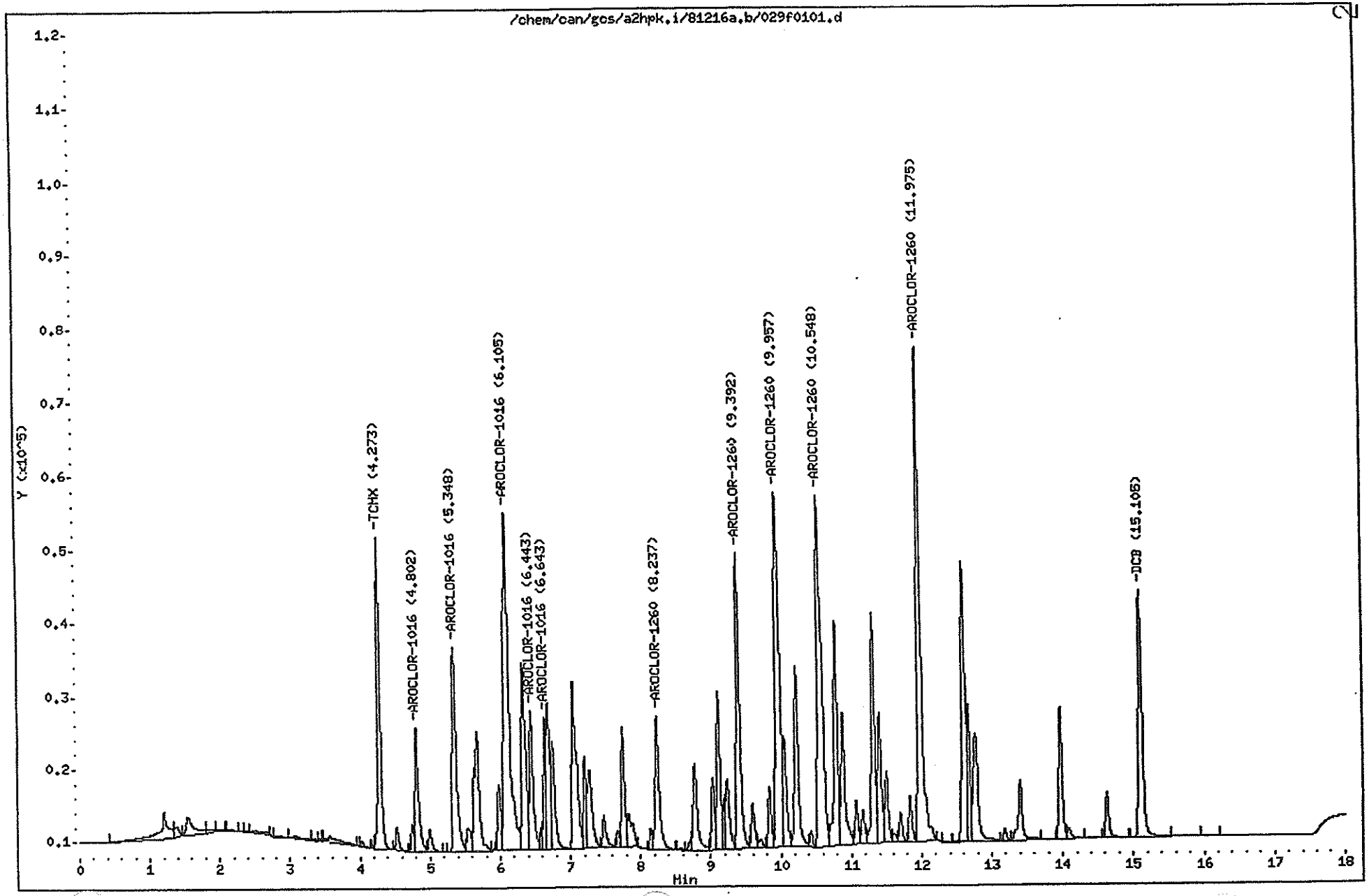
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	42579	0.02500	0.02596	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	16807	0.50000	0.5424	80.00- 120.00	100.00
5.348	5.347	0.001	27866	0.50000	0.5159	125.29- 208.81	165.80
6.105	6.105	0.000	46100	0.50000	0.5499	207.30- 345.49	274.29
6.443	6.442	0.001	19002	0.50000	0.5550	84.66- 141.09	113.06
6.643	6.642	0.001	17970	0.50000	0.5046	81.88- 136.47	106.92
Average of Peak Amounts =					0.534		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.237	8.237	0.000	18017	0.50000	0.5183	80.00- 120.00	100.00
9.392	9.390	0.002	40407	0.50000	0.5107	166.19- 276.99	224.27
9.957	9.955	0.002	48437	0.50000	0.5240	196.82- 328.04	268.84
10.548	10.547	0.001	48061	0.50000	0.5288	201.36- 335.60	266.75
11.975	11.973	0.002	67403	0.50000	0.5299	281.46- 469.10	374.11
Average of Peak Amounts =					0.522		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	33618	0.02500	0.02550	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/029f0101.d
Date : 17-DEC-1998 04:28
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d Pa
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 042f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 09:02
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII

COMPOUND	%D
TCMX	5.8
AROCLOR-1016	9.1
AROCLOR-1260	7.7
DCB	0.6

The average of %D's in the continuing calibration is 5.8

Data File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Report Date: 17-Dec-1998 13:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 09:02
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

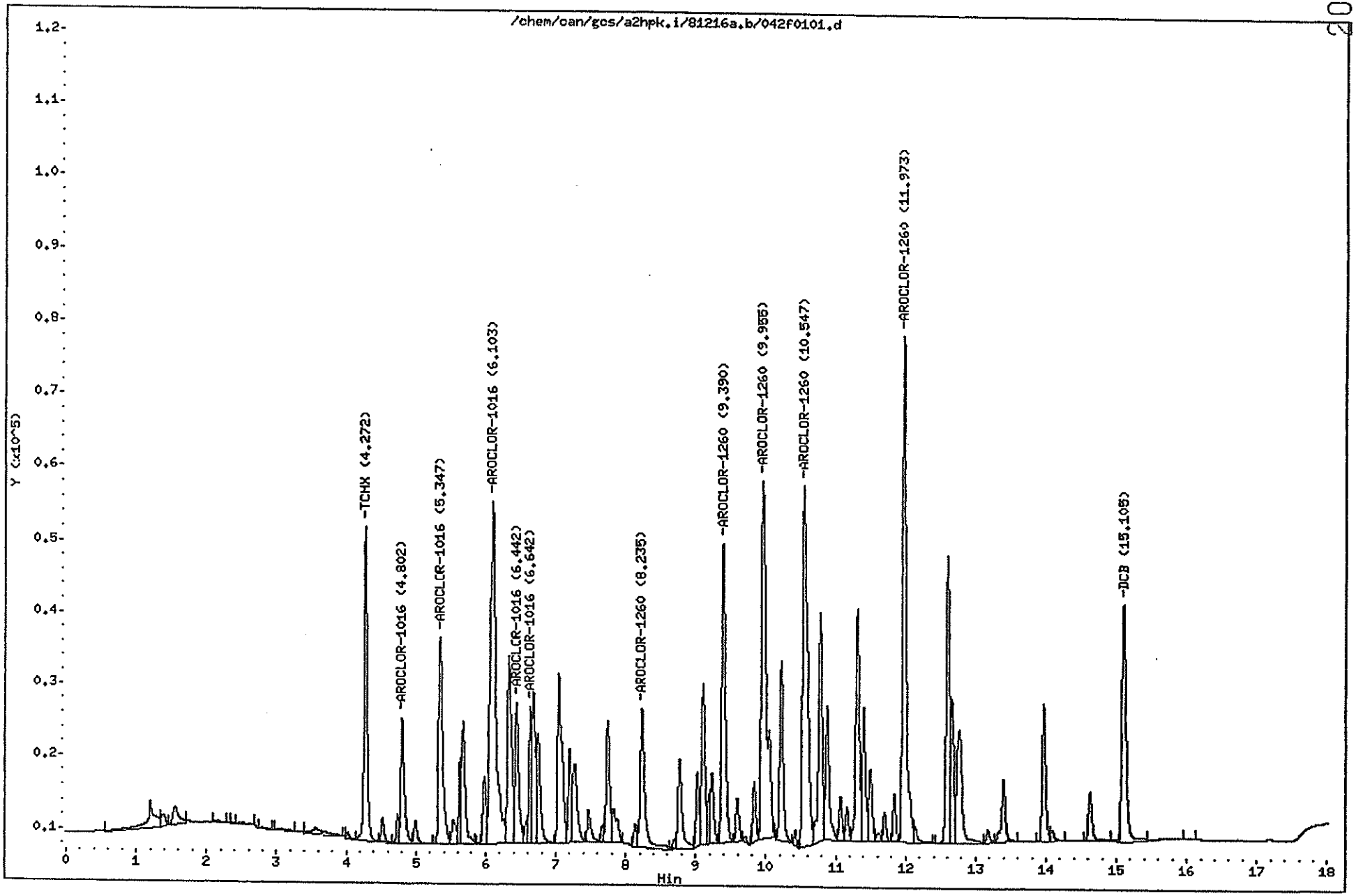
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	43375	0.02500	0.02645	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	17122	0.50000	0.5525	80.00- 120.00	100.00
5.347	5.347	0.000	28545	0.50000	0.5284	125.29- 208.81	166.72
6.103	6.105	-0.002	47226	0.50000	0.5633	207.30- 345.49	275.82
6.442	6.442	0.000	19280	0.50000	0.5632	84.66- 141.09	112.60
6.642	6.642	0.000	18552	0.50000	0.5210	81.88- 136.47	108.35
Average of Peak Amounts =					0.546		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	18872	0.50000	0.5429	80.00- 120.00	100.00
9.390	9.390	0.000	41327	0.50000	0.5223	166.19- 276.99	218.99
9.955	9.955	0.000	49289	0.50000	0.5333	196.82- 328.04	261.18
10.547	10.547	0.000	49639	0.50000	0.5461	201.36- 335.60	263.03
11.973	11.973	0.000	69561	0.50000	0.5468	281.46- 469.10	368.59
Average of Peak Amounts =					0.538		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	32756	0.02500	0.02484	80.00- 120.00	100.00

D File: /chem/can/gcs/a2hpk.i/81216a.b/042f0101.d
D : 17-DEC-1998 09:02
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Report Date: 12/17/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 050f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 11:50
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII

COMPOUND	%D
TCMX	1.3
AROCLOR-1016	2.4
AROCLOR-1260	0.7
DCB	5.4

The average of %D's in the continuing calibration is 2.4

Data File: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Report Date: 31-Dec-1998 10:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 11:50
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.272	0.000	40484	0.02500	0.02468	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	15980	0.50000	0.5157	80.00- 120.00	100.00
5.347	5.347	0.000	26981	0.50000	0.4995	125.29- 208.81	168.84
6.103	6.105	-0.002	44175	0.50000	0.5269	207.30- 345.49	276.44
6.442	6.442	0.000	17970	0.50000	0.5249	84.66- 141.09	112.45
6.642	6.642	0.000	17523	0.50000	0.4921	81.88- 136.47	109.66
Average of Peak Amounts =					0.512		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	17644	0.50000	0.5076	80.00- 120.00	100.00
9.390	9.390	0.000	38631	0.50000	0.4882	166.19- 276.99	218.95
9.955	9.955	0.000	46095	0.50000	0.4987	196.82- 328.04	261.25
10.547	10.547	0.000	46491	0.50000	0.5115	201.36- 335.60	263.49
11.973	11.973	0.000	64969	0.50000	0.5107	281.46- 469.10	368.22
Average of Peak Amounts =					0.503		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.105	-0.002	31168	0.02500	0.02364	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/050f0101.d
Date : 17-DEC-1998 11:50
Client ID:
Sample Info: 1660 C110,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

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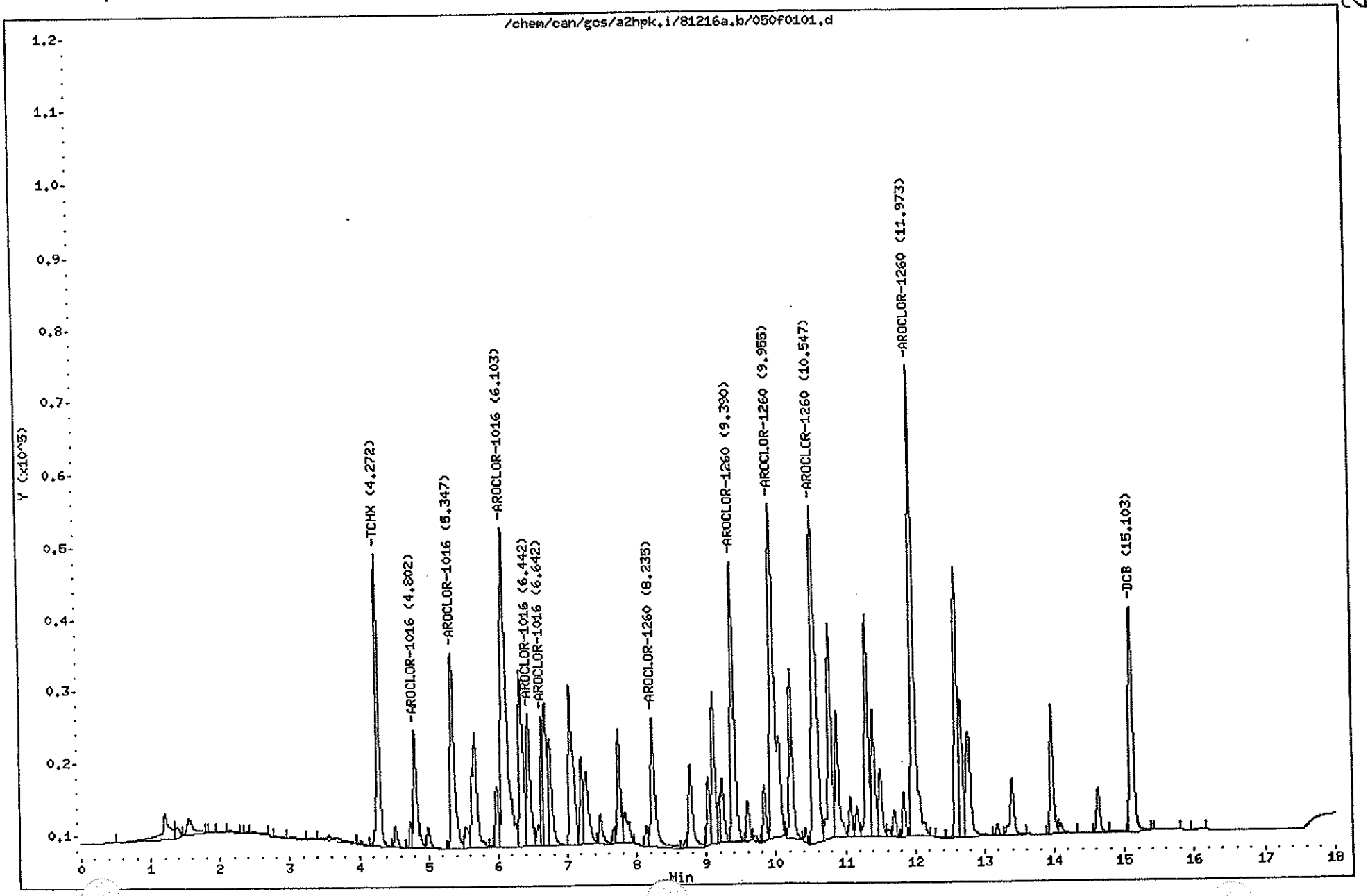

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L03(

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/9

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.27 S2 : 15.10

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/17/98	1620	4.27	15.10
02		2154 C061	12/17/98	1641		
03		1248 C056	12/17/98	1703		
04		1242 C051	12/17/98	1724		
05		1232 C046	12/17/98	1745		
06	S-120298-JH-	CNXD3101	12/17/98	2054	4.23	
07		1660 C110	12/17/98	2342	4.27	15.10
08						
09						
10						
11						
12						
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14						
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29						
30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Report Date: 12/18/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 004f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 16:20
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.

COMPOUND	%D
TCMX	0.6
AROCLOR-1016	3.6
AROCLOR-1260	1.9
DCB	1.1

The average of %D's in the continuing calibration is 1.8

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 16:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	41244	0.02500	0.02515	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.800	0.002	16264	0.50000	0.5248	80.00- 120.00	100.00
5.347	5.343	0.004	27263	0.50000	0.5047	128.06- 213.44	167.63
6.105	6.102	0.003	44542	0.50000	0.5313	204.62- 341.03	273.87
6.443	6.440	0.003	18116	0.50000	0.5292	83.61- 139.35	111.39
6.642	6.638	0.004	17794	0.50000	0.4997	84.33- 140.55	109.41
Average of Peak Amounts =					0.518		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.237	8.233	0.004	17734	0.50000	0.5102	80.00- 120.00	100.00
9.390	9.385	0.005	39356	0.50000	0.4974	164.71- 274.51	221.92
9.957	9.952	0.005	46768	0.50000	0.5060	194.93- 324.88	263.72
10.547	10.542	0.005	46824	0.50000	0.5152	195.72- 326.20	264.04
11.973	11.968	0.005	66120	0.50000	0.5198	277.41- 462.34	372.84
Average of Peak Amounts =					0.51		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.097	0.006	33318	0.02500	0.02527	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81217a.b/004f0101.d
Date : 17-DEC-1998 16:20
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES

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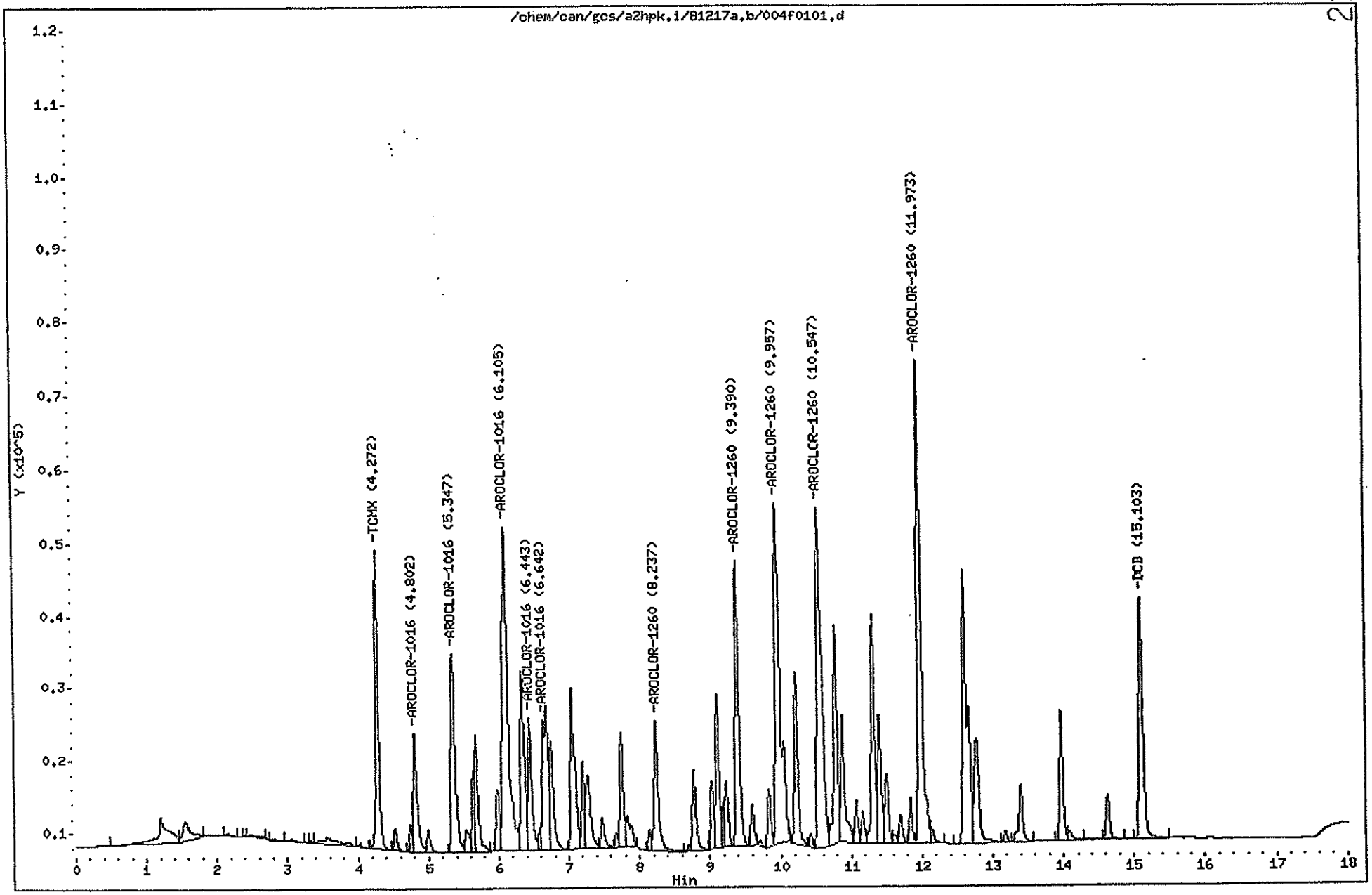


Data File: /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Lab Smp Id: 2154 C061
Inj Date : 17-DEC-1998 16:41
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.642	6.638	0.004	19060	0.50000	0.4743	80.00- 120.00	100.00
9.027	9.023	0.004	47669	0.50000	0.4912	183.65- 306.08	250.10
9.592	9.588	0.004	35184	0.50000	0.5040	134.94- 224.90	184.60
9.968	9.965	0.003	26820	0.50000	0.4882	104.37- 173.96	140.71
10.548	10.543	0.005	38422	0.50000	0.4883	148.01- 246.69	201.58
Average of Peak Amounts =					0.489		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.520	4.518	0.002	9770	0.50000	0.5066	80.00- 120.00	100.00
4.738	4.737	0.001	6997	0.50000	0.4965	54.30- 90.51	71.62
4.800	4.798	0.002	22530	0.50000	0.5002	172.76- 287.93	230.60
Average of Peak Amounts =					0.501		

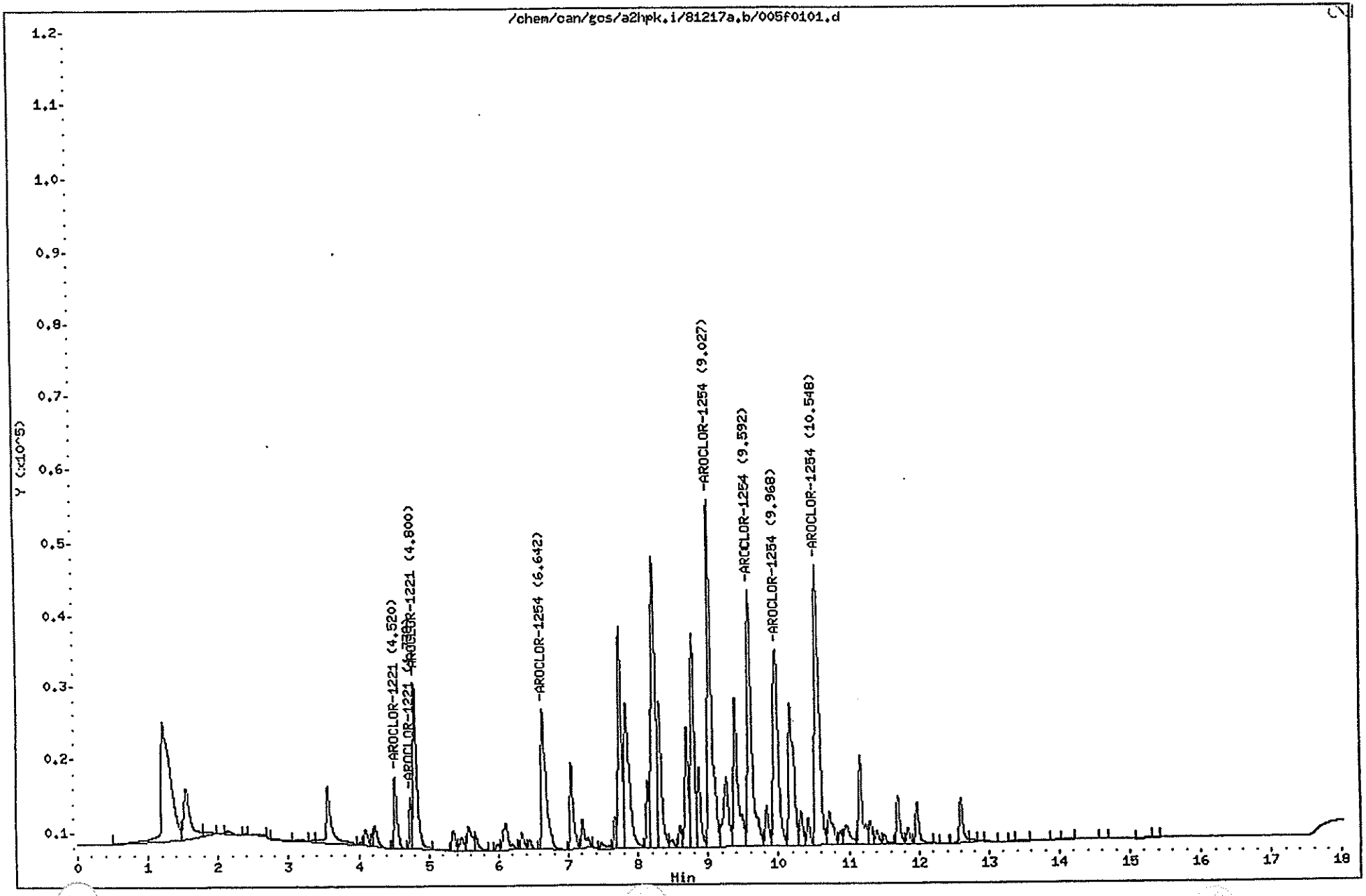
Data File: /chem/can/gcs/a2hpk.i/81217a.b/005f0101.d
Date : 17-DEC-1998 16:41
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES

214



Data File: /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Lab Smp Id: 1248 C056
Inj Date : 17-DEC-1998 17:03
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

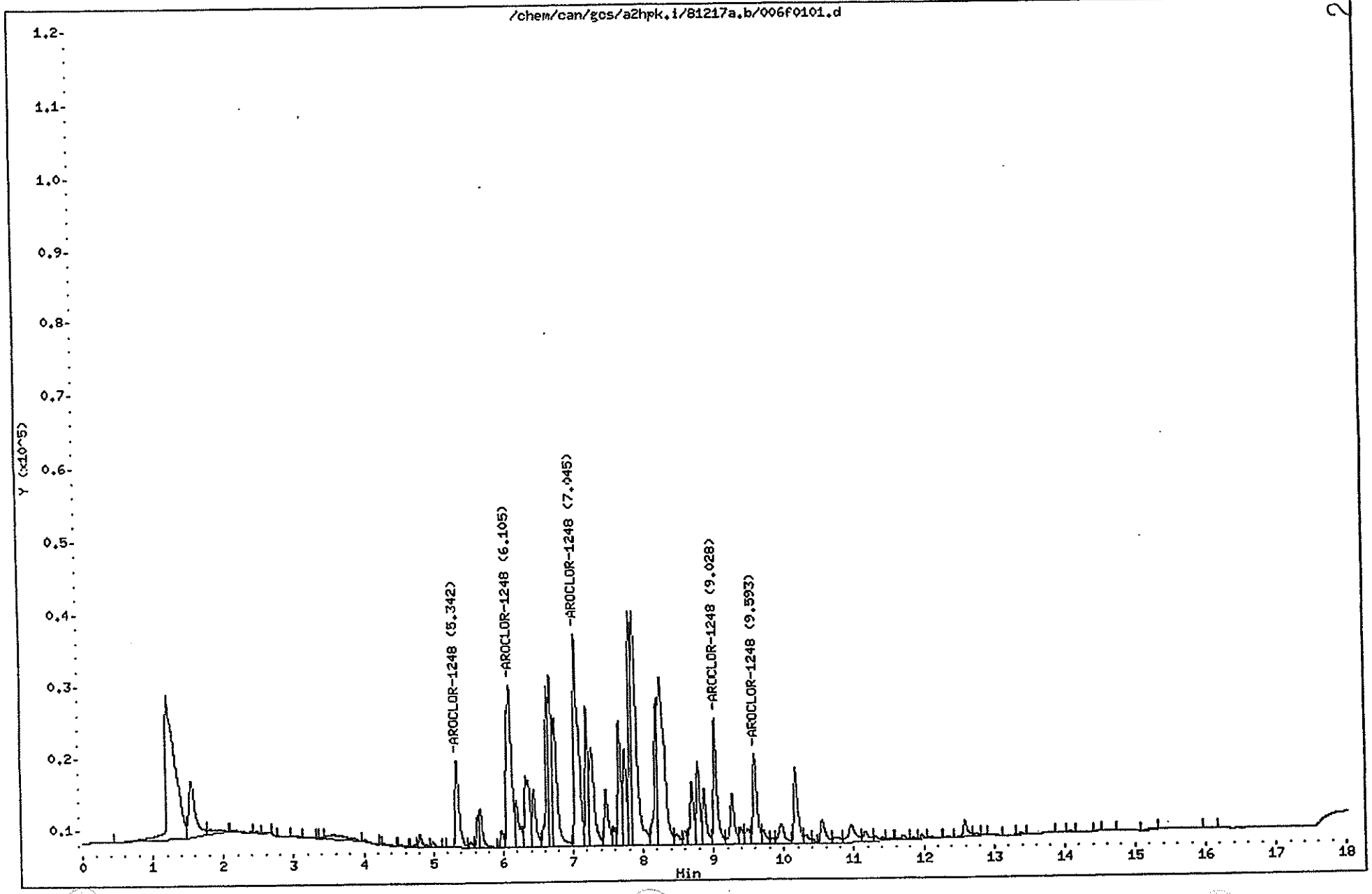
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.342	5.338	0.004	12087	0.50000	0.4998	80.00- 120.00	100.00
6.105	6.102	0.003	22306	0.50000	0.5480	137.72- 229.53	184.55
7.045	7.042	0.003	29366	0.50000	0.5135	181.30- 302.17	242.96
9.028	9.025	0.003	17365	0.50000	0.5243	108.43- 180.71	143.67
9.593	9.590	0.003	12471	0.50000	0.5543	78.36- 130.60	103.18
Average of Peak Amounts =					0.528		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/006f0101.d
Date : 17-DEC-1998 17:03
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Lab Smp Id: 1242 C051
Inj Date : 17-DEC-1998 17:24
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

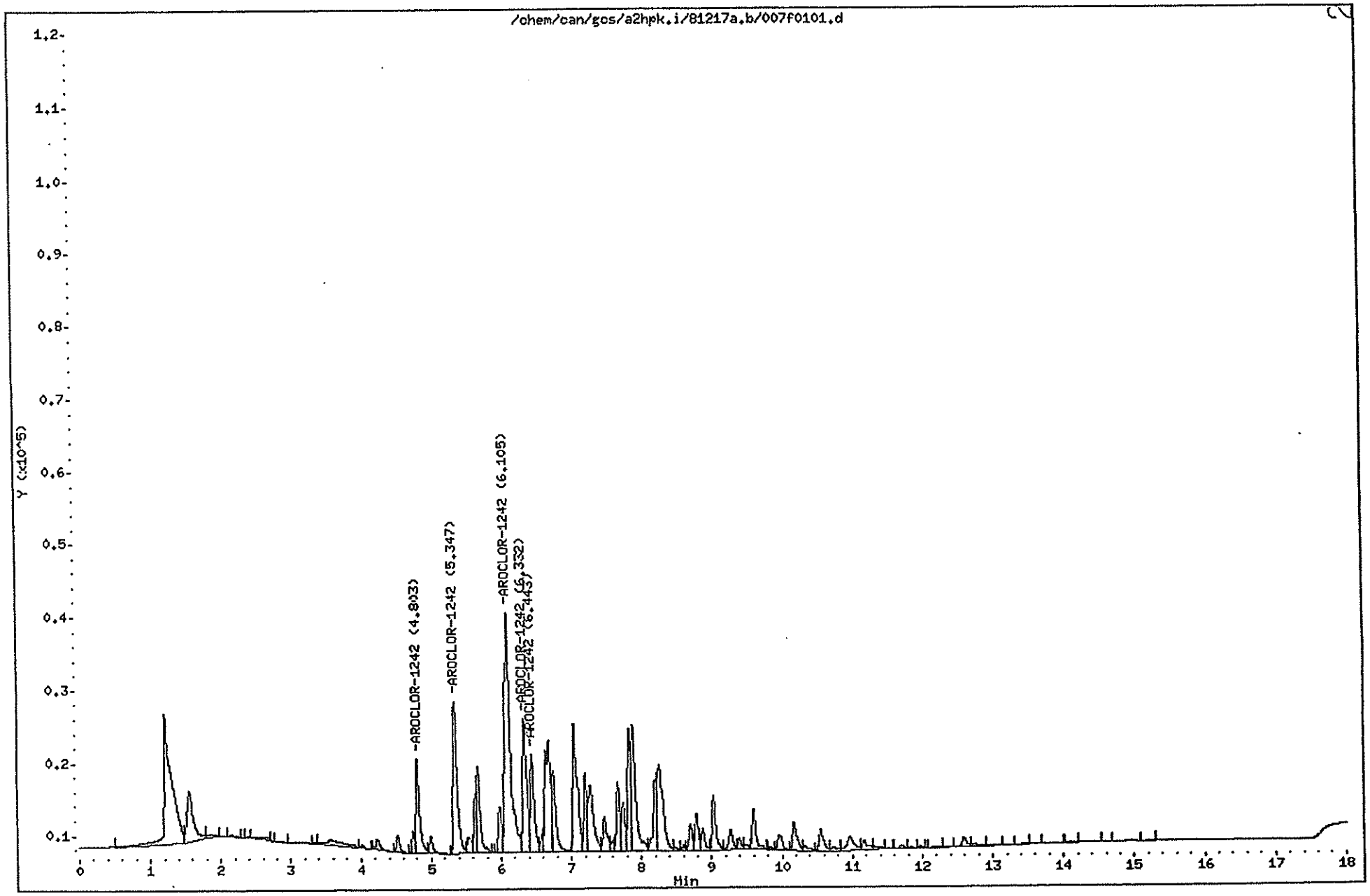
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.803	4.800	0.003	12807	0.50000	0.4814	80.00- 120.00	100.00
5.347	5.343	0.004	20849	0.50000	0.4654	122.23- 203.72	162.79
6.105	6.102	0.003	32922	0.50000	0.4939	193.45- 322.42	257.06
6.332	6.328	0.004	18392	0.50000	0.4883	108.22- 180.37	143.61
6.443	6.440	0.003	13540	0.50000	0.5053	79.59- 132.66	105.72
Average of Peak Amounts =					0.487		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/007f0101.d
Date : 17-DEC-1998 17:24
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81217a.b/008f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/008f0101.d
Lab Smp Id: 1232 C046
Inj Date : 17-DEC-1998 17:45
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

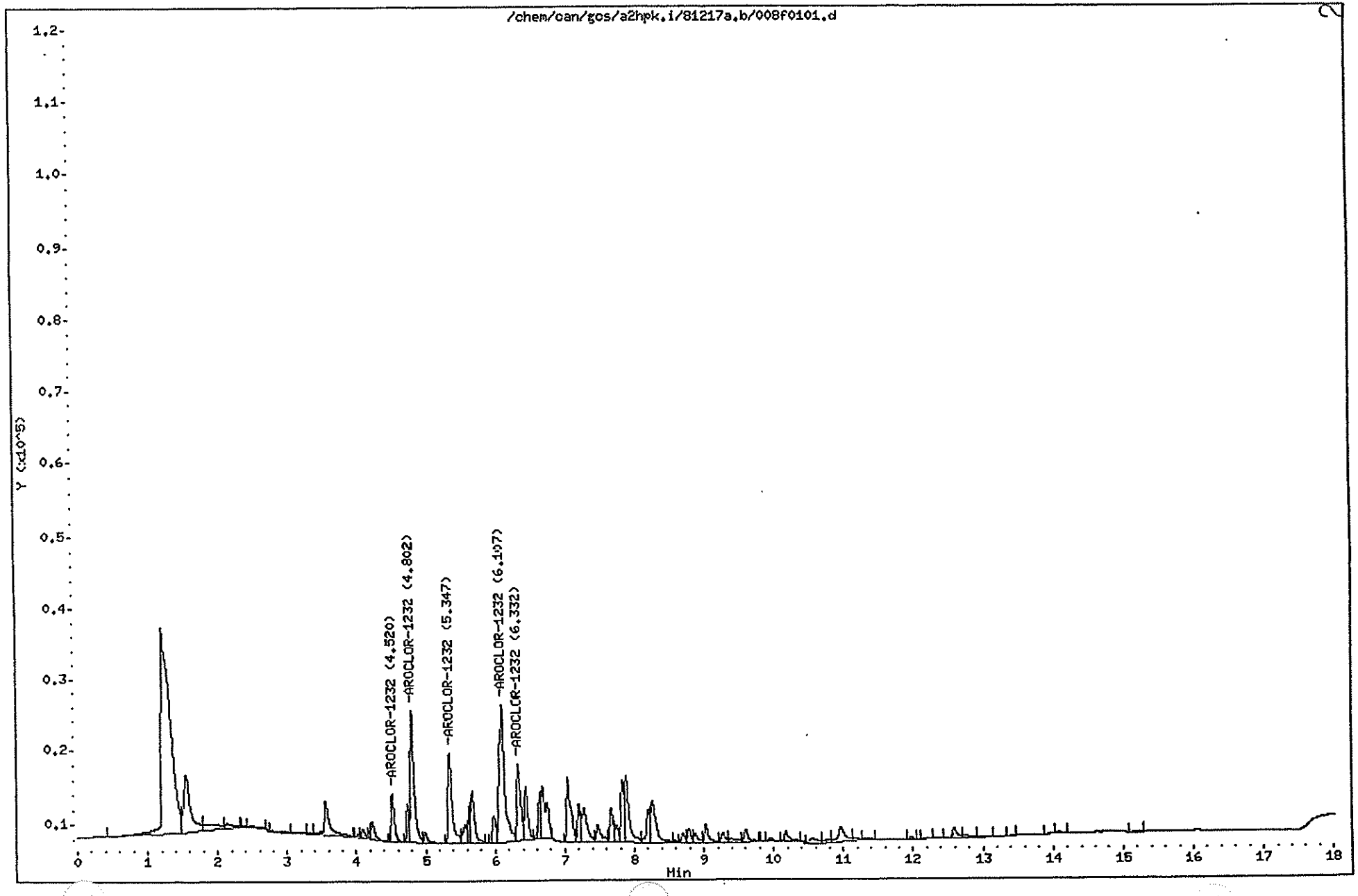
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.520	4.518	0.002	6357	0.50000	0.4827	80.00- 120.00	100.00
4.802	4.800	0.002	17976	0.50000	0.4820	211.13- 351.88	282.77
5.347	5.345	0.002	12113	0.50000	0.4658	144.23- 240.39	190.55
6.107	6.103	0.004	18665	0.50000	0.4984	220.77- 367.94	293.61
6.332	6.330	0.002	10362	0.50000	0.4814	121.89- 203.14	163.00
Average of Peak Amounts =					0.482		

Data File: /chem/can/gcs/a2hpk.i/81217a.b/008f0101.d
Date : 17-DEC-1998 17:45
Client ID:
Sample Info: 1232 C046,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Report Date: 12/18/1998

P.

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 025f0101.d
Analysis Type: NONE

Injection Date: 17-DEC-1998 23:42
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81217a.b/kfpcbII

COMPOUND	%D
TCMX	2.8
AROCLOR-1016	4.9
AROCLOR-1260	3.9
DCB	3.7

The average of %D's in the continuing calibration is 3.8

Data File: /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Report Date: 21-Dec-1998 10:27

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Lab Smp Id: 1660 C110
Inj Date : 17-DEC-1998 23:42
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81217a.b/kfpcbIII.m
Meth Date : 21-Dec-1998 08:55 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

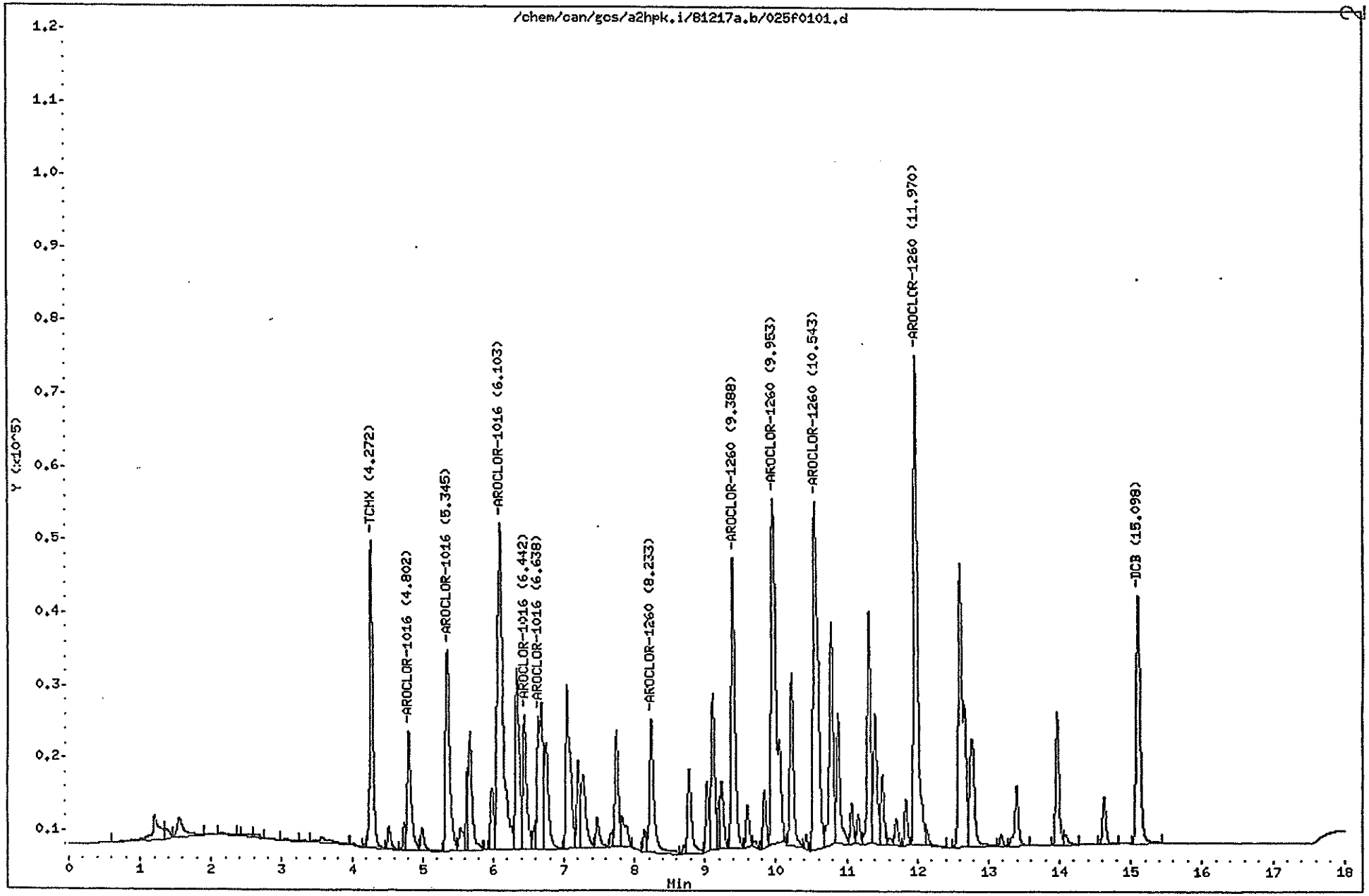
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.272	4.270	0.002	42138	0.02500	0.02569	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.800	0.002	16404	0.50000	0.5294	80.00- 120.00	100.00
5.345	5.343	0.002	27634	0.50000	0.5116	128.06- 213.44	168.46
6.103	6.102	0.001	44889	0.50000	0.5354	204.62- 341.03	273.65
6.442	6.440	0.002	18332	0.50000	0.5355	83.61- 139.35	111.75
6.638	6.638	0.000	18205	0.50000	0.5112	84.33- 140.55	110.98
Average of Peak Amounts =					0.525		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.233	8.233	0.000	18159	0.50000	0.5224	80.00- 120.00	100.00
9.388	9.385	0.003	39911	0.50000	0.5044	164.71- 274.51	219.79
9.953	9.952	0.001	47543	0.50000	0.5144	194.93- 324.88	261.82
10.543	10.542	0.001	47928	0.50000	0.5273	195.72- 326.20	263.94
11.970	11.968	0.002	67240	0.50000	0.5286	277.41- 462.34	370.28
Average of Peak Amounts =					0.519		
$ 9 DCB					CAS #: 2051-24-3		
15.098	15.097	0.001	34171	0.02500	0.02592	80.00- 120.00	100.00

Dat: : /chem/can/gcs/a2hpk.i/81217a.b/025f0101.d
Date : 17-DEC-1998 23:42
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L030146

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/98

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01		2154 C061	12/21/98	1713		
02		1248 C056	12/21/98	1734		
03		1242 C051	12/21/98	1755		
04		1232 C046	12/21/98	1816		
05		1660 C110	12/22/98	0426		
06	CP08NBLK	CP08N101	12/22/98	0632		
07	CP08NCHK	CP08N102	12/22/98	0653		
08	CP08NCHKDUP	CP08N103	12/22/98	0714		
09	S-120298-JH-	CNXAD101	12/22/98	0756		
10	S-120298-JH-	CNXAJ101	12/22/98	0838		
11		1660 C110	12/22/98	0920		
12	S-120298-JH-	CNXAN101	12/22/98	1023		
13	S-120298-JH-	CNXAR101	12/22/98	1044		
14	S-120298-JH-	CNXAT101	12/22/98	1105		
15	S-120298-JH-	CNXAW101	12/22/98	1126		
16	S-120298-JH-	CNXC1101	12/22/98	1147		
17	S-120298-JH-	CNXCD101	12/22/98	1208		
18	S-120298-JH-	CNXCF101	12/22/98	1229		
19	S-120298-JH-	CNXCH101	12/22/98	1250		
20	S-120298-JH-	CNXCL101	12/22/98	1311		
21		1660 C110	12/22/98	1353		
22		2154 C061	12/22/98	1414		
23		1248 C056	12/22/98	1435		
24		1242 C051	12/22/98	1456		
25		1232 C046	12/22/98	1517		
26	S-120298-JH-	CNXCM101	12/22/98	1538		
27	S-120298-JH-	CNXCN101	12/22/98	1559		
28	S-120298-JH-	CNXCP101	12/22/98	1620		
29	S-120298-JH-	CNXCQ101	12/22/98	1641		
30	S-120298-JH-	CNXCR101	12/22/98	1701		
31	S-120298-JH-	CNXD0101	12/22/98	1722		
32		1660 C110	12/22/98	1928		

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L030

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/9

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	S-120298-JH-	CNXAL101	12/22/98	2340		
02		1660 C110	12/23/98	0022		
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Report Date: 22-Dec-1998 14:37

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Lab Smp Id: 2154 C061
Inj Date : 21-DEC-1998 17:13
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.678	6.678	0.000	19426	0.50000	0.4834	80.00- 120.00	100.00
9.072	9.072	0.000	47967	0.50000	0.4942	185.19- 308.65	246.92
9.638	9.638	0.000	34816	0.50000	0.4987	134.42- 224.03	179.22
10.015	10.015	0.000	27509	0.50000	0.5007	106.21- 177.01	141.61
10.595	10.595	0.000	39235	0.50000	0.4986	151.48- 252.46	201.97
Average of Peak Amounts =					0.495		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.548	4.548	0.000	9685	0.50000	0.5022	80.00- 120.00	31.13(M)
4.768	4.768	0.000	7024	0.50000	0.4984	54.39- 90.66	22.58
4.830	4.830	0.000	22574	0.50000	0.5012	174.81- 291.35	72.55
Average of Peak Amounts =					0.501		

QC Flag Legend

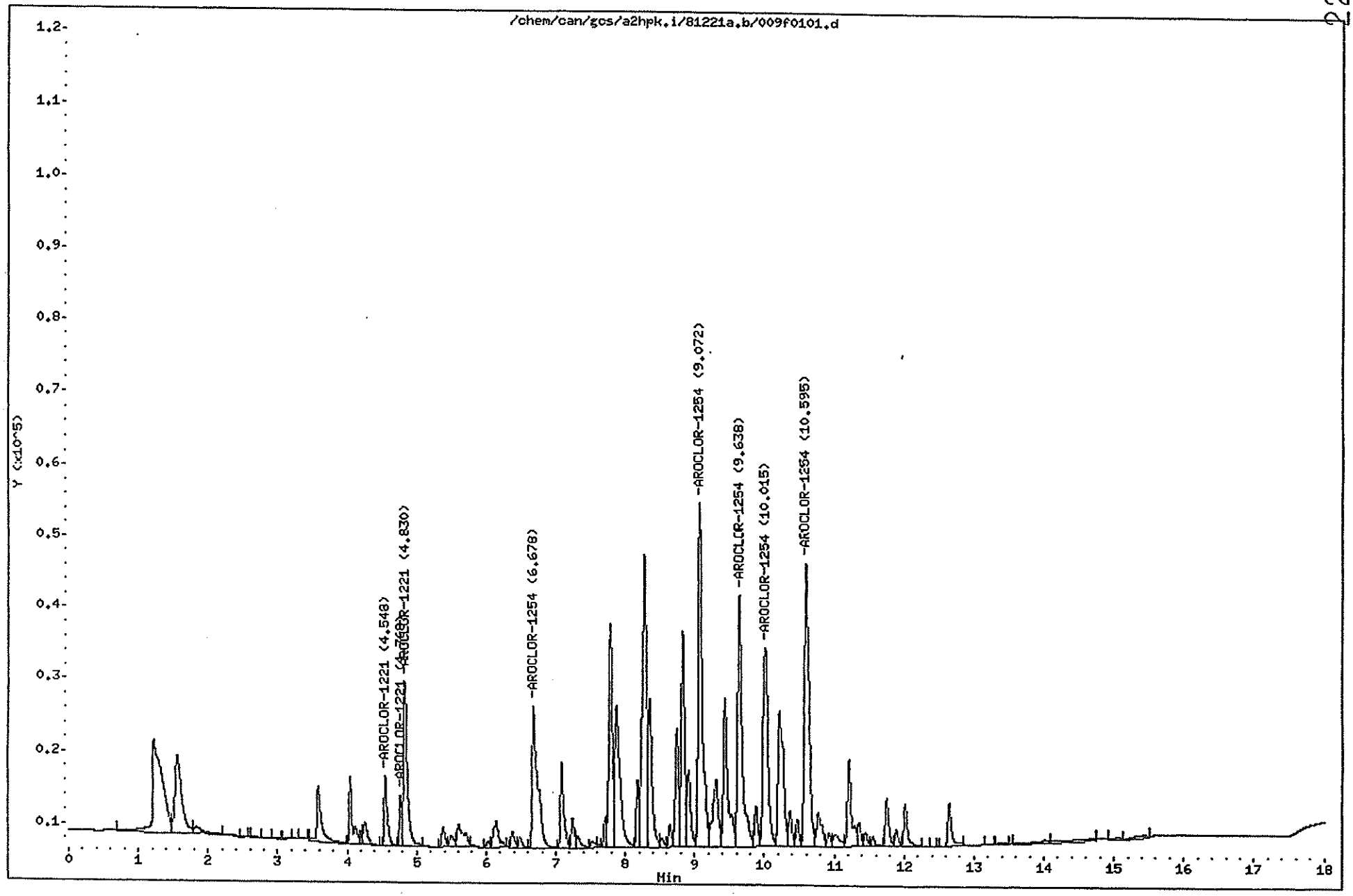
M - Compound response manually integrated.

D: le: /chem/can/gcs/a2hpk.i/81221a.b/009f0101.d
Date : 21-DEC-1998 17:13
Client ID:
Sample Info: 2154 C061,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Report Date: 22-Dec-1998 14:37

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Lab Smp Id: 1248 C056
Inj Date : 21-DEC-1998 17:34
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

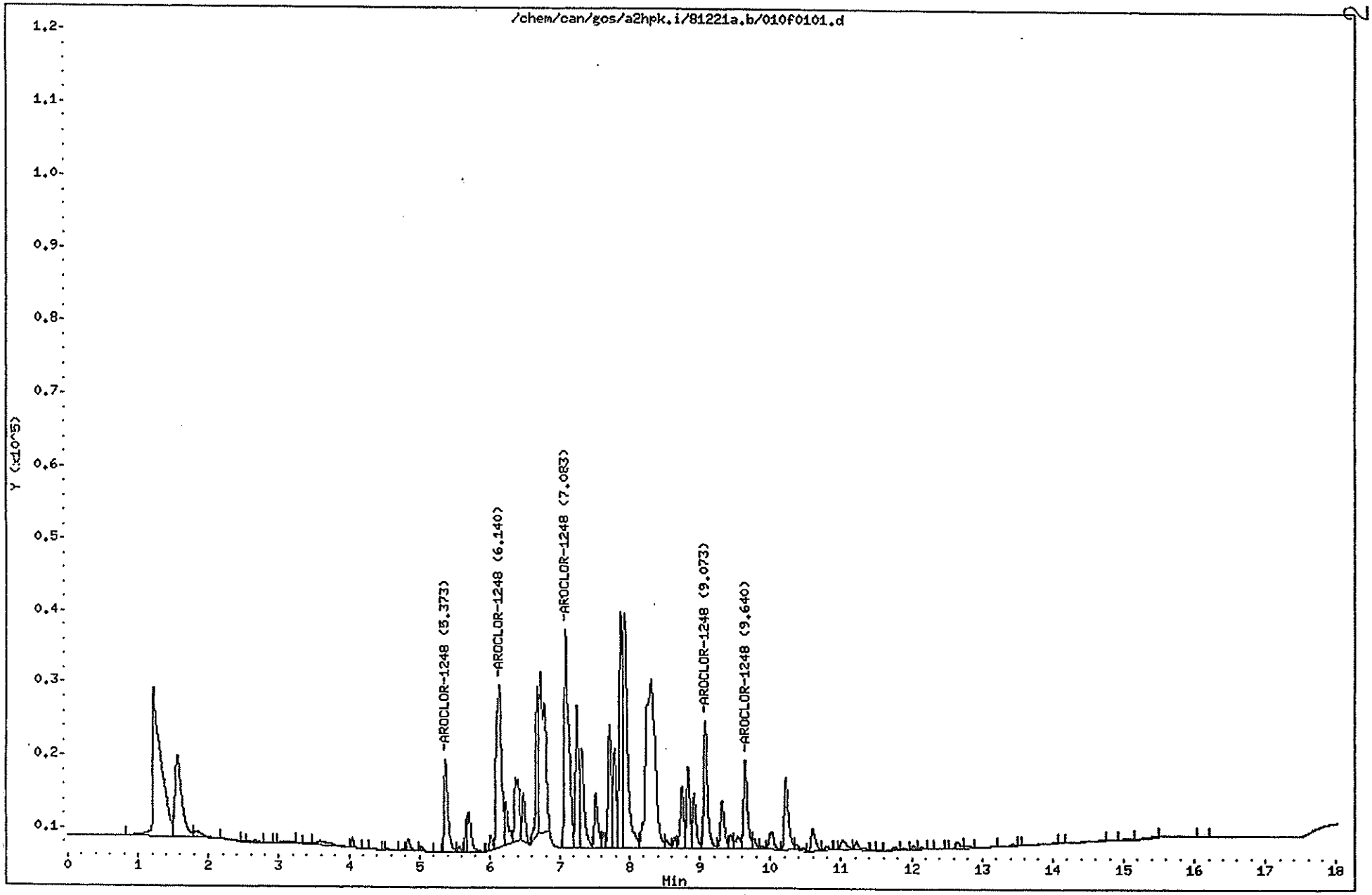
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.373	5.373	0.000	12678	0.50000	0.5242	80.00- 120.00	100.00
6.140	6.140	0.000	22307	0.50000	0.5480	131.96- 219.94	175.95
7.083	7.083	0.000	30260	0.50000	0.5291	179.01- 298.35	238.68
9.073	9.073	0.000	17569	0.50000	0.5305	103.93- 173.22	138.58
9.640	9.640	0.000	12137	0.50000	0.5395	71.80- 119.67	95.73
Average of Peak Amounts =					0.534		

Dat e: /chem/can/gcs/a2hpk.i/81221a.b/010f0101.d
Date : 21-DEC-1998 17:34
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Report Date: 22-Dec-1998 15:08

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Lab Smp Id: 1242 C051
Inj Date : 21-DEC-1998 17:55
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 15:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.833	4.833	0.000	13620	0.50000	0.5120	80.00- 120.00	26.90(M)
5.378	5.378	0.000	22428	0.50000	0.5007	123.50- 205.84	44.29
6.142	6.142	0.000	35120	0.50000	0.5269	193.39- 322.32	69.36
6.368	6.368	0.000	19731	0.50000	0.5238	108.65- 181.08	38.96
6.480	6.480	0.000	14443	0.50000	0.5390	79.53- 132.55	28.52
Average of Peak Amounts =					0.52		

QC Flag Legend

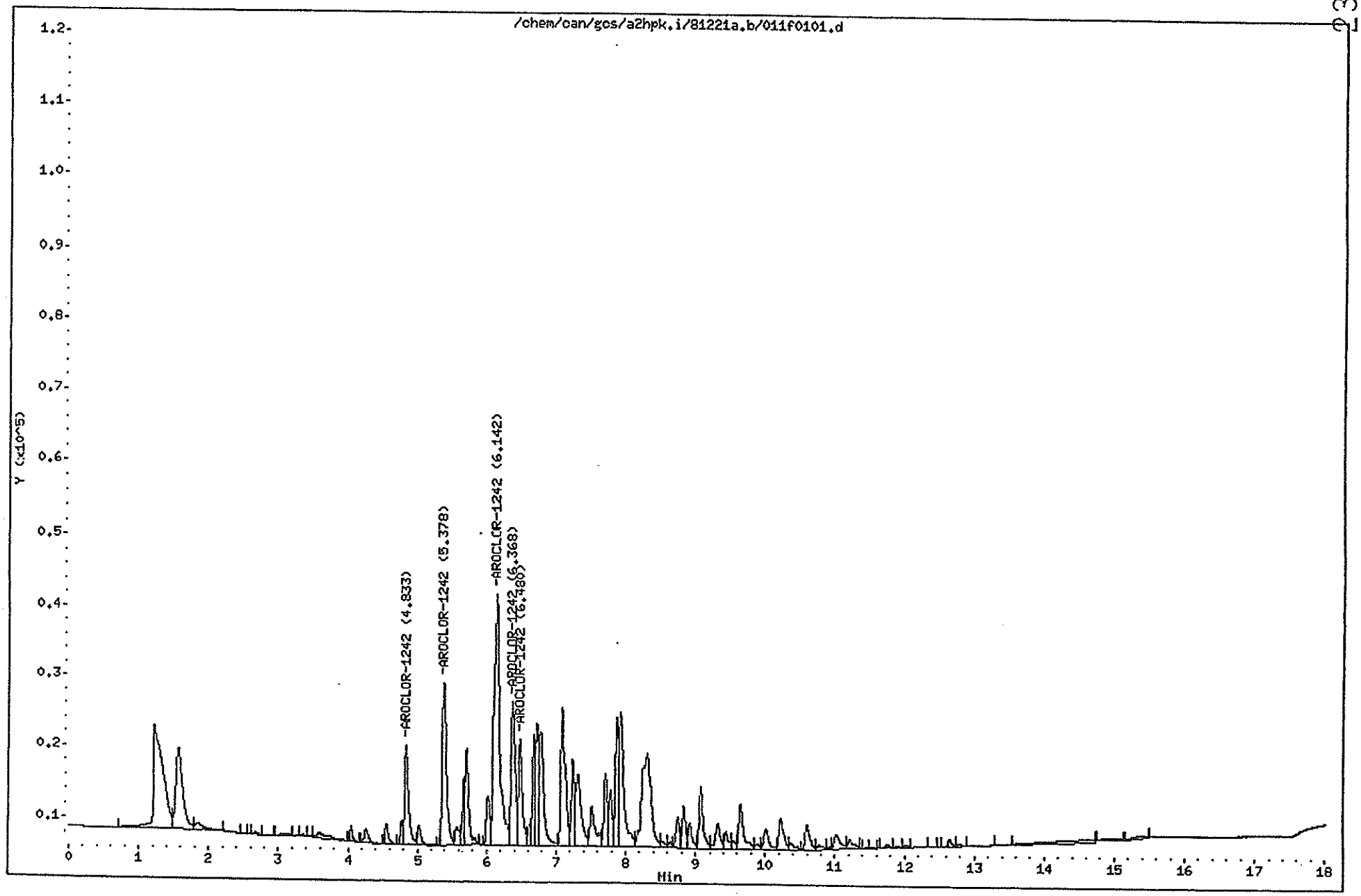
M - Compound response manually integrated.

Da le: /chem/can/gcs/a2hpk.i/81221a.b/011f0101.d
Date : 21-DEC-1998 17:55
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



031

Data File: /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Report Date: 22-Dec-1998 14:38

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Lab Smp Id: 1232 C046
Inj Date : 21-DEC-1998 18:16
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
**	======	========	========	=======	=======	==========	=====
4 AROCLOR-1232					CAS #: 11141-16-5		
4.550	4.550	0.000	6748	0.50000	0.5124	80.00- 120.00	100.00
4.770	4.770	0.000	5465	0.50000	0.1465	60.74- 101.23	80.99
5.380	5.380	0.000	13108	0.50000	0.5040	145.69- 242.81	194.25
6.143	6.143	0.000	19686	0.50000	0.5257	218.80- 364.66	291.73
6.370	6.370	0.000	11227	0.50000	0.5215	124.78- 207.97	166.38

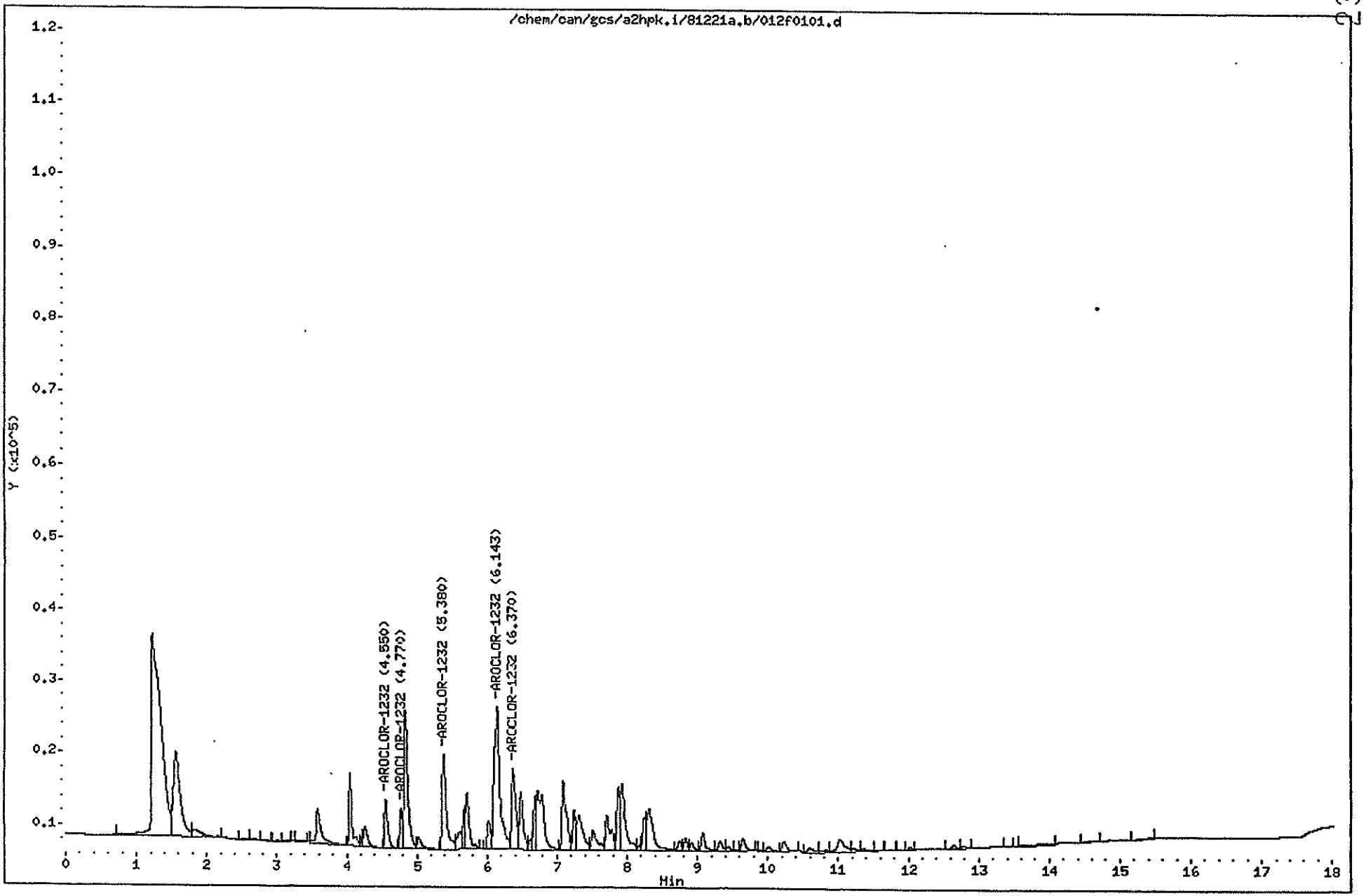
Average of Peak Amounts = 0.442

Da le: /chem/can/gcs/a2hpk.i/81221a.b/012f0101.d
Da 21-DEC-1998 18:16
Client ID:
Sample Info: 1232 C046,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/041f0101.d
Report Date: 12/22/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 041f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 04:26
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.

COMPOUND	%D
TCMX	5.8
AROCLOR-1016	5.9
AROCLOR-1260	5.7
DCB	11.7

The average of %D's in the continuing calibration is 7.3

Data File: /chem/can/gcs/a2hpk.i/81221a.b/041f0101.d
Report Date: 22-Dec-1998 14:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/041f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 04:26
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

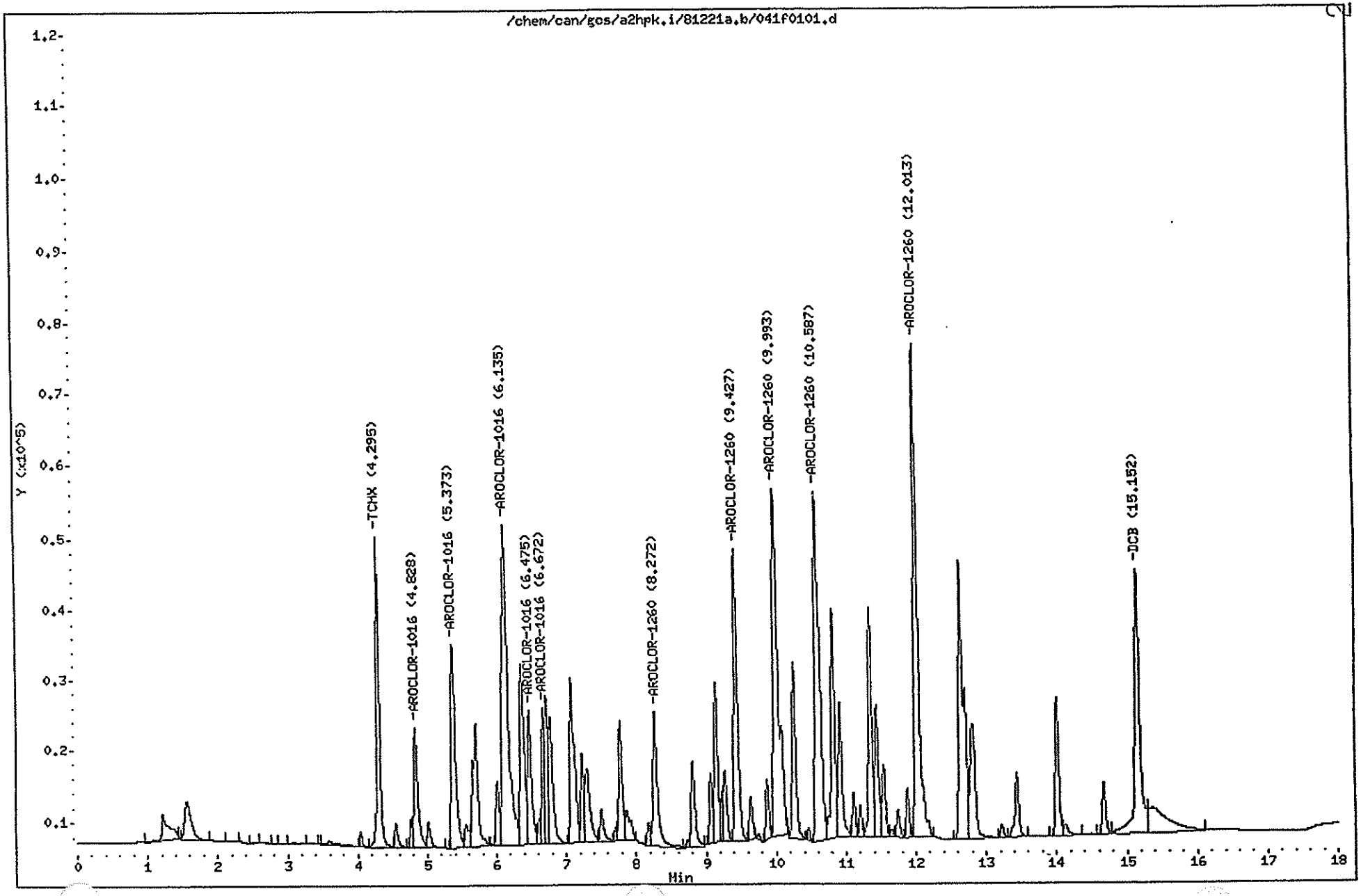
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.293	0.002	43365	0.02500	0.02644	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.828	4.825	0.003	16472	0.50000	0.5316	80.00- 120.00	100.00
5.373	5.370	0.003	28304	0.50000	0.5240	129.12- 215.20	171.83
6.135	6.132	0.003	44805	0.50000	0.5344	201.49- 335.82	272.01
6.475	6.472	0.003	18337	0.50000	0.5356	79.73- 132.88	111.32
6.672	6.668	0.004	18585	0.50000	0.5219	81.41- 135.68	112.83
Average of Peak Amounts =					0.53		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.272	8.267	0.005	18333	0.50000	0.5274	80.00- 120.00	100.00
9.427	9.422	0.005	40782	0.50000	0.5154	171.13- 285.21	222.45
9.993	9.988	0.005	48367	0.50000	0.5233	202.26- 337.10	263.82
10.587	10.580	0.007	48663	0.50000	0.5354	199.91- 333.18	265.44
12.013	12.007	0.006	68722	0.50000	0.5402	285.25- 475.42	374.85
Average of Peak Amounts =					0.528		
$ 9 DCB					CAS #: 2051-24-3		
15.152	15.143	0.009	36814	0.02500	0.02792	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/041f0101.d
Date : 22-DEC-1998 04:26
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Report Date: 12/22/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 054f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 09:20
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbI

COMPOUND	%D
TCMX	5.6
AROCLOR-1016	4.7
AROCLOR-1260	4.8
DCB	7.6

The average of %D's in the continuing calibration is 5.7

Data File: /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Report Date: 22-Dec-1998 14:44

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 09:20
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

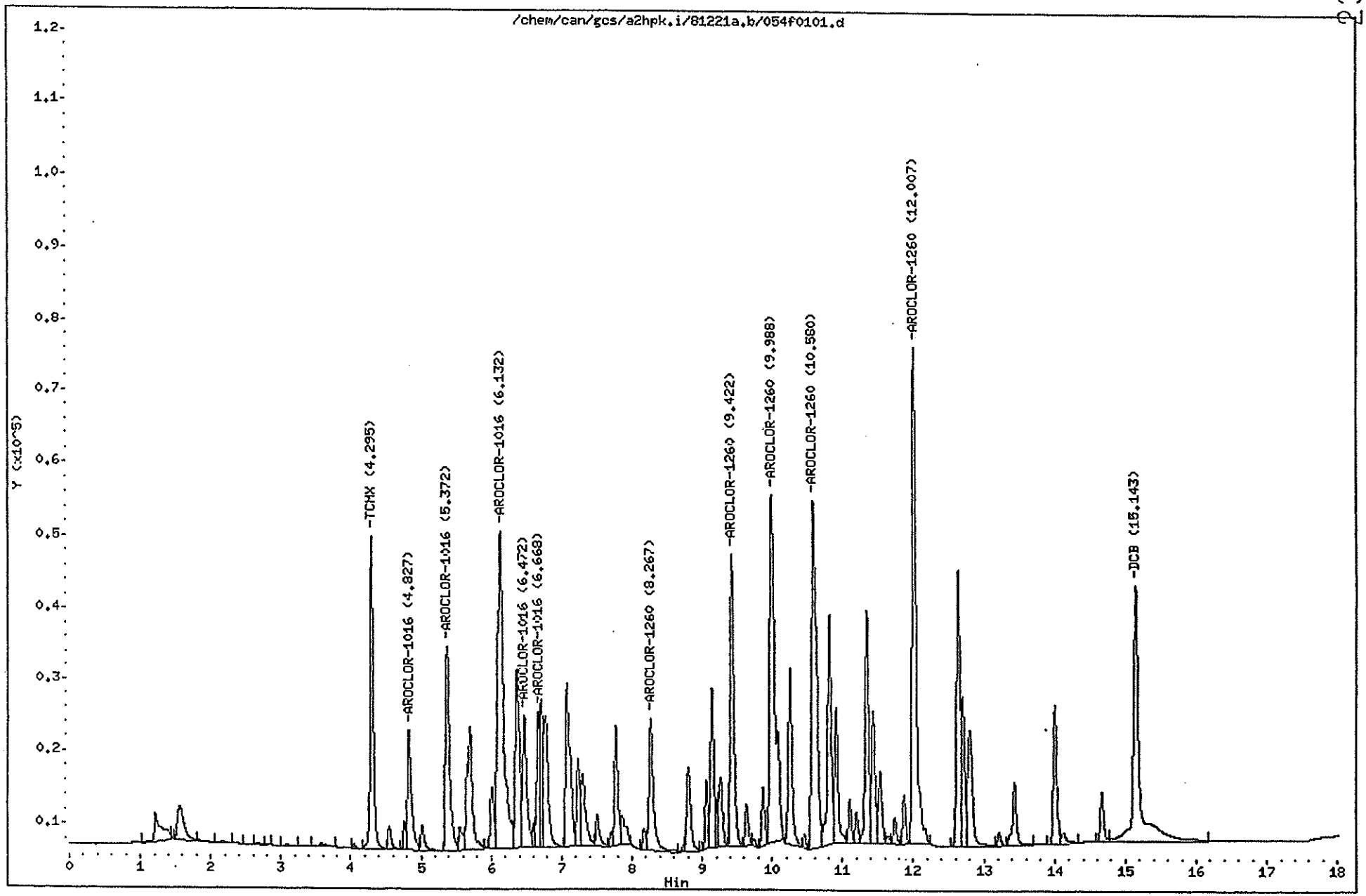
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.293	0.002	43283	0.02500	0.02639	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.827	4.825	0.002	16270	0.50000	0.5250	80.00- 120.00	100.00
5.372	5.370	0.002	28205	0.50000	0.5222	129.12- 215.20	173.37
6.132	6.132	0.000	43951	0.50000	0.5242	201.49- 335.82	270.14
6.472	6.472	0.000	18052	0.50000	0.5273	79.73- 132.88	110.95
6.668	6.668	0.000	18512	0.50000	0.5199	81.41- 135.68	113.78
Average of Peak Amounts =					0.524		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.267	8.267	0.000	18041	0.50000	0.5190	80.00- 120.00	100.00
9.422	9.422	0.000	40547	0.50000	0.5125	171.13- 285.21	224.75
9.988	9.988	0.000	48042	0.50000	0.5198	202.26- 337.10	266.29
10.580	10.580	0.000	48061	0.50000	0.5288	199.91- 333.18	266.40
12.007	12.007	0.000	68714	0.50000	0.5402	285.25- 475.42	380.88
Average of Peak Amounts =					0.524		
$ 9 DCB					CAS #: 2051-24-3		
15.143	15.143	0.000	35464	0.02500	0.02690	80.00- 120.00	100.00

Dat e: /chem/can/gcs/a2hpk.i/81221a.b/054f0101.d
Date : 22-DEC-1998 09:20
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Report Date: 12/22/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 067f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 13:53
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII

COMPOUND	%D
TCMX	5.3
AROCLOR-1016	4.6
AROCLOR-1260	5.1
DCB	11.5

The average of %D's in the continuing calibration is 6.6

Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Report Date: 22-Dec-1998 15:05

QUANTERRA-NORTH CANTON

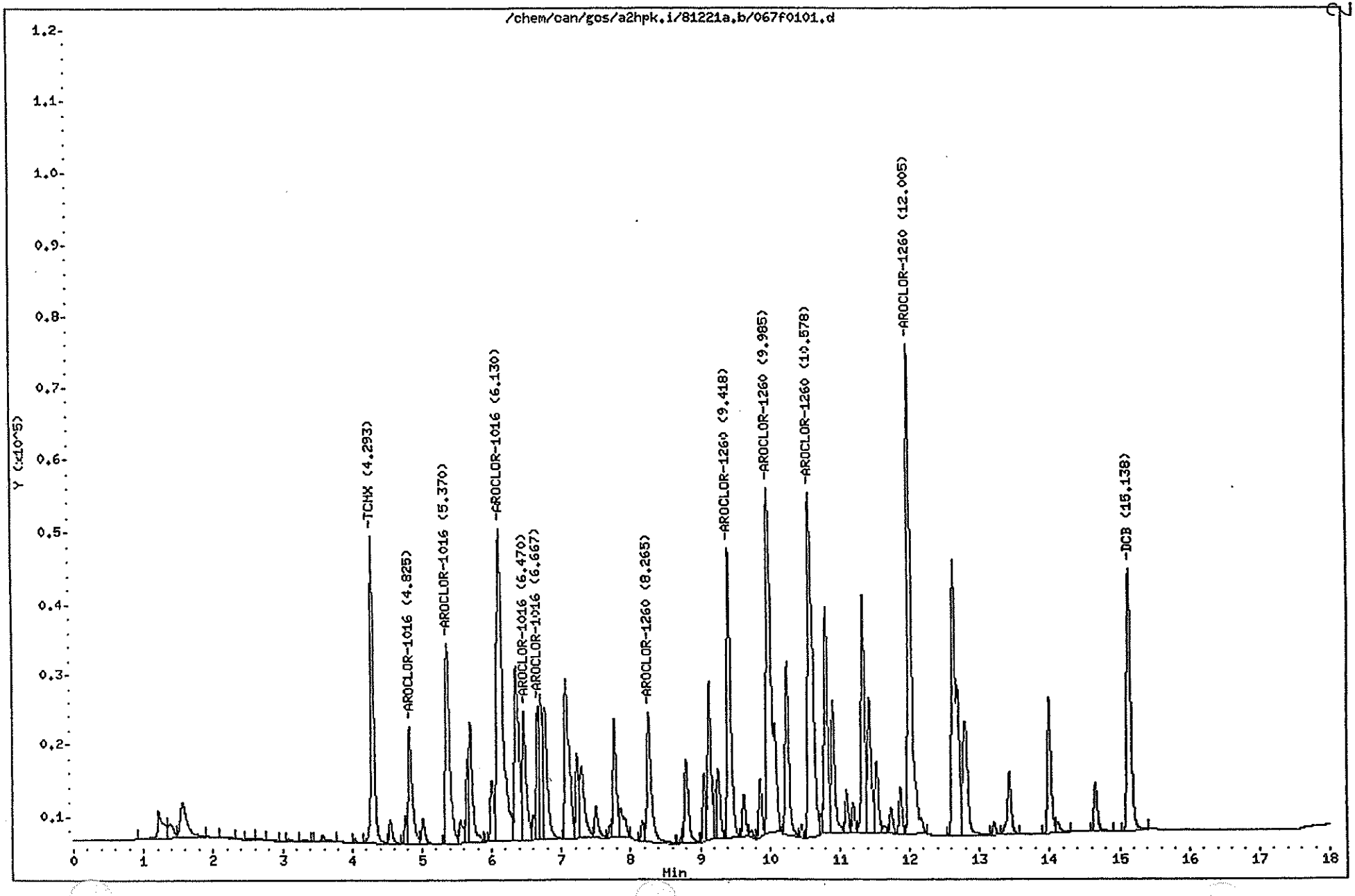
Data file : /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 13:53
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 15:04 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.293	4.293	0.000	43170	0.02500	0.02632	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.825	4.825	0.000	16304	0.50000	0.5261	80.00- 120.00	100.00
5.370	5.370	0.000	28130	0.50000	0.5208	129.40- 215.67	172.53
6.130	6.130	0.000	43835	0.50000	0.5229	201.65- 336.08	268.86
6.470	6.470	0.000	17917	0.50000	0.5234	82.42- 137.37	109.89
6.667	6.667	0.000	18543	0.50000	0.5207	85.30- 142.17	113.73
Average of Peak Amounts =					0.523		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.265	8.265	0.000	18118	0.50000	0.5212	80.00- 120.00	100.00
9.418	9.418	0.000	40642	0.50000	0.5137	168.24- 280.40	224.32
9.985	9.985	0.000	48247	0.50000	0.5220	199.72- 332.87	266.29
10.578	10.578	0.000	48351	0.50000	0.5320	200.15- 333.58	266.87
12.005	12.005	0.000	68593	0.50000	0.5392	283.94- 473.24	378.59
Average of Peak Amounts =					0.526		
$ 9 DCB					CAS #: 2051-24-3		
15.138	15.138	0.000	36765	0.02500	0.02788	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/067f0101.d
Date : 22-DEC-1998 13:53
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column phase: RTX-CLP PESTICIDES
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81221a.b/068f0101.d
Report Date: 22-Dec-1998 15:05

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/068f0101.d
Lab Smp Id: 2154 C061
Inj Date : 22-DEC-1998 14:14
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 15:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

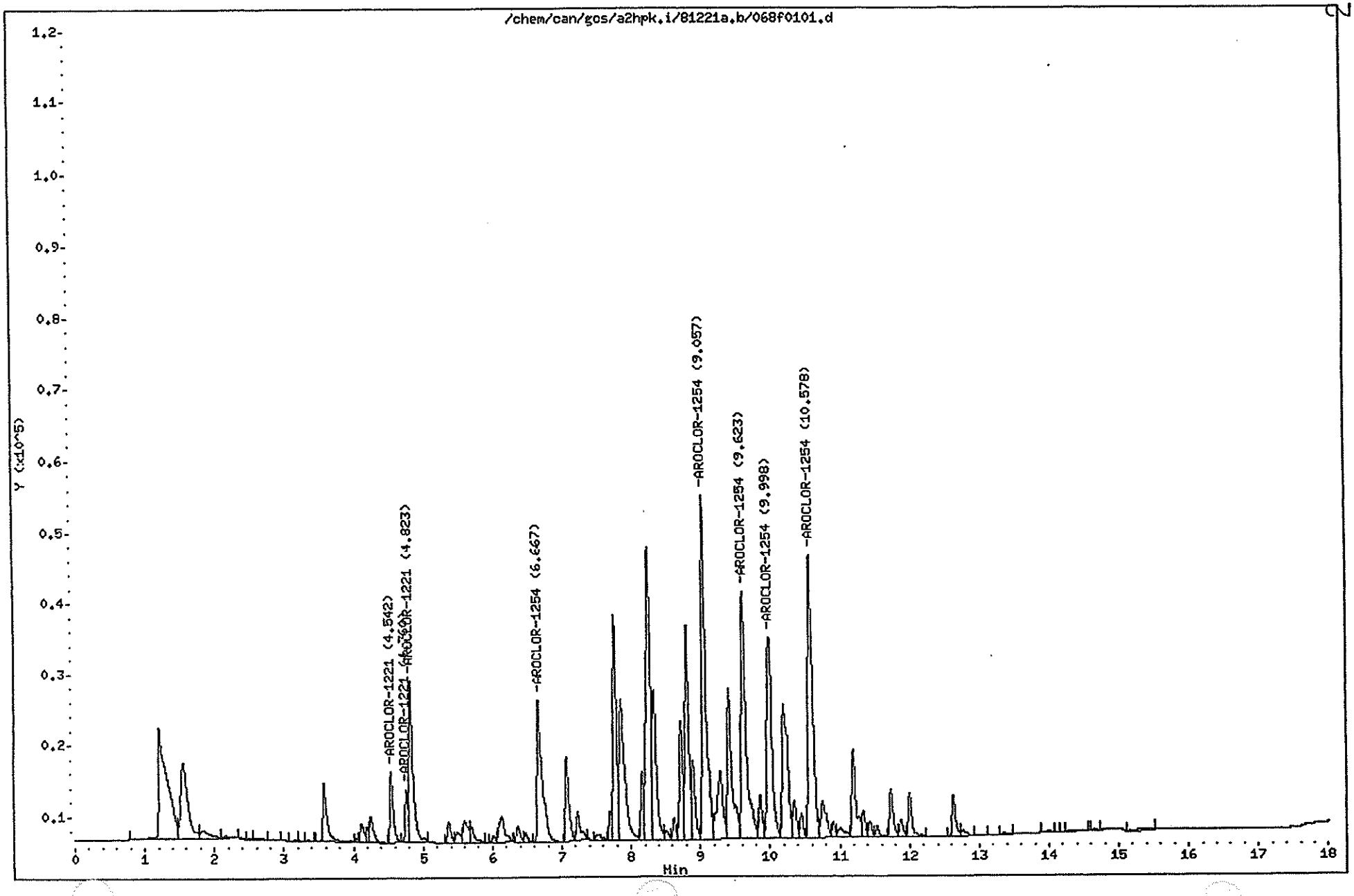
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.667	6.667	0.000	19818	0.50000	0.4931	80.00- 120.00	100.00
9.057	9.057	0.000	48406	0.50000	0.4988	183.19- 305.32	244.25
9.623	9.623	0.000	34676	0.50000	0.4967	131.23- 218.72	174.97
9.998	9.998	0.000	28304	0.50000	0.5152	107.11- 178.52	142.82
10.578	10.578	0.000	39769	0.50000	0.5054	150.50- 250.84	200.67
Average of Peak Amounts =					0.502		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.542	4.542	0.000	9786	0.50000	0.5074	80.00- 120.00	100.00
4.760	4.760	0.000	7337	0.50000	0.5206	56.23- 93.72	74.97
4.823	4.823	0.000	22559	0.50000	0.5008	172.89- 288.15	230.52
Average of Peak Amounts =					0.51		

Data File: /chem/can/gos/a2hpk.i/81221a.b/068f0101.d
Date : 22-DEC-1998 14:14
Client ID:
Sample Info: 2154 C061,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81221a.b/069f0101.d
Report Date: 22-Dec-1998 15:05

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/069f0101.d
Lab Smp Id: 1248 C056
Inj Date : 22-DEC-1998 14:35
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 15:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.365	5.365	0.000	12173	0.50000	0.5033	80.00- 120.00	100.00
6.132	6.132	0.000	20509	0.50000	0.5038	126.36- 210.60	168.48
7.072	7.072	0.000	28431	0.50000	0.4972	175.17- 291.95	233.56
9.060	9.060	0.000	16082	0.50000	0.4856	99.08- 165.14	132.11
9.628	9.628	0.000	10730	0.50000	0.4770	66.11- 110.18	88.15
Average of Peak Amounts =					0.493		

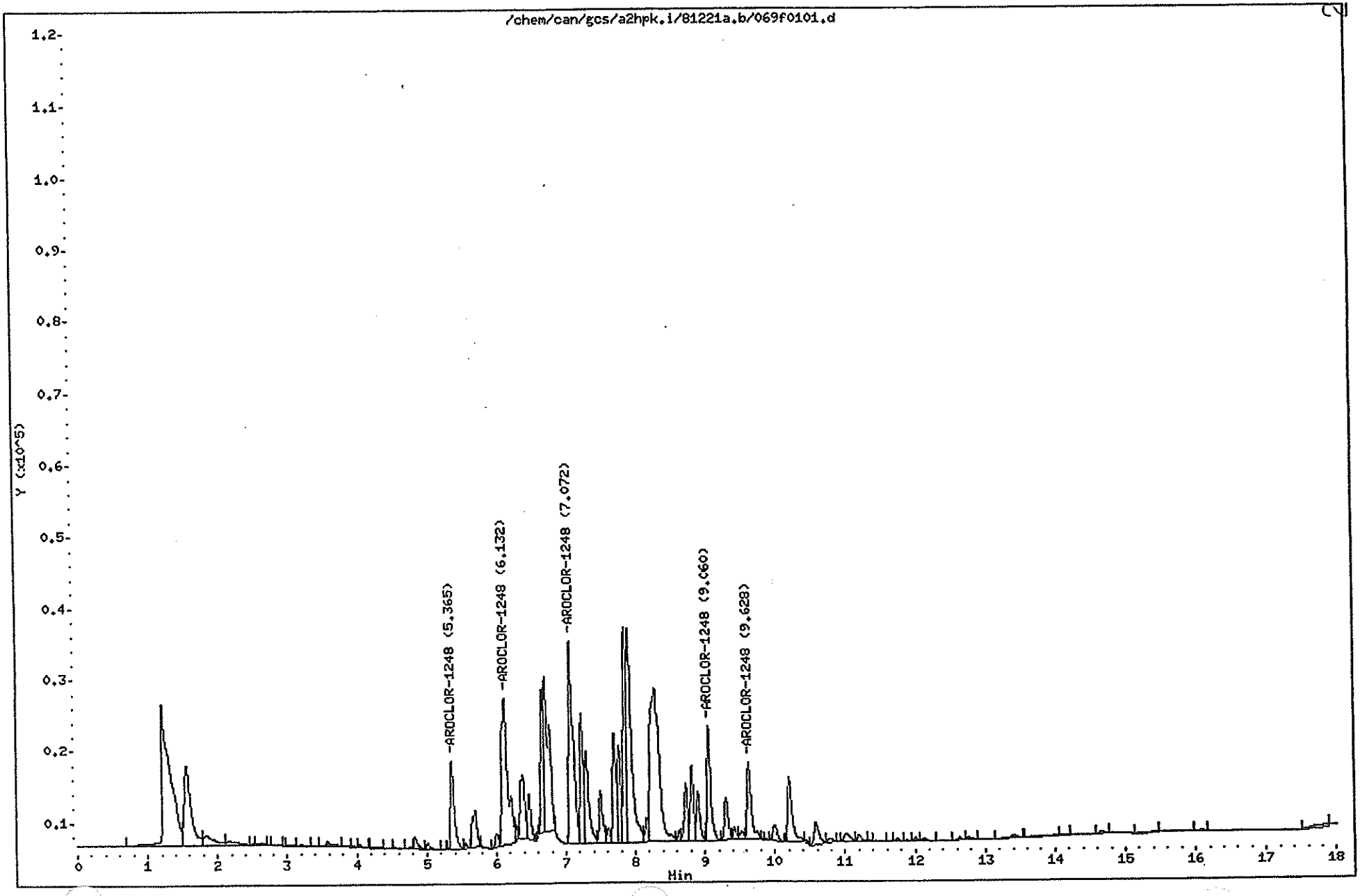
Data File: /chem/can/gcs/a2hpk.i/81221a.b/069f0101.d
Date : 22-DEC-1998 14:35
Client ID:
Sample Info: 1248 C056,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES

246



Data File: /chem/can/gcs/a2hpk.i/81221a.b/070f0101.d
Report Date: 22-Dec-1998 15:08

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/070f0101.d
Lab Smp Id: 1242 C051
Inj Date : 22-DEC-1998 14:56
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 15:05 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.825	4.833	-0.008	13117	0.50000	0.4930	80.00- 120.00	26.27(M)
5.370	5.378	-0.008	22022	0.50000	0.4916	123.50- 205.84	44.11
6.132	6.142	-0.010	32908	0.50000	0.4937	193.39- 322.32	65.91
6.358	6.368	-0.010	18603	0.50000	0.4939	108.65- 181.08	37.26
6.470	6.480	-0.010	13507	0.50000	0.5041	79.53- 132.55	27.05
Average of Peak Amounts =					0.495		

QC Flag Legend

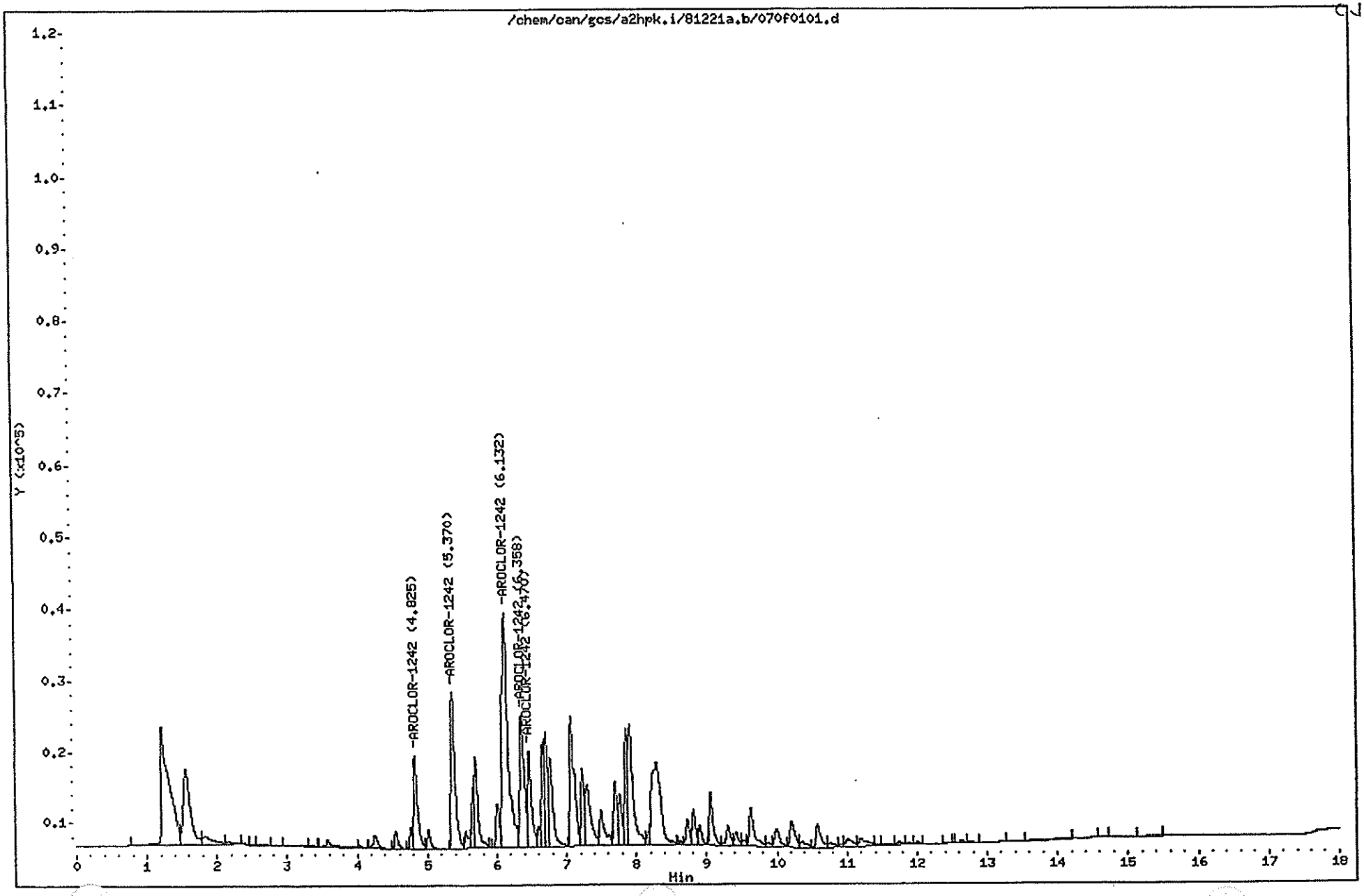
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/070f0101.d
Date : 22-DEC-1998 14:56
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/071f0101.d
Report Date: 23-Dec-1998 10:21

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/071f0101.d
Lab Smp Id: 1232 C046
Inj Date : 22-DEC-1998 15:17
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.543	4.543	0.000	6200	0.50000	0.4708	80.00- 120.00	30.35(M)
4.823	4.823	0.000	17564	0.50000	0.4710	212.47- 354.11	85.98
5.370	5.370	0.000	12276	0.50000	0.4720	148.50- 247.50	60.10
6.133	6.133	0.000	17643	0.50000	0.4711	213.42- 355.71	86.37
6.360	6.360	0.000	10129	0.50000	0.4705	122.53- 204.21	49.59
Average of Peak Amounts =					0.471		

QC Flag Legend

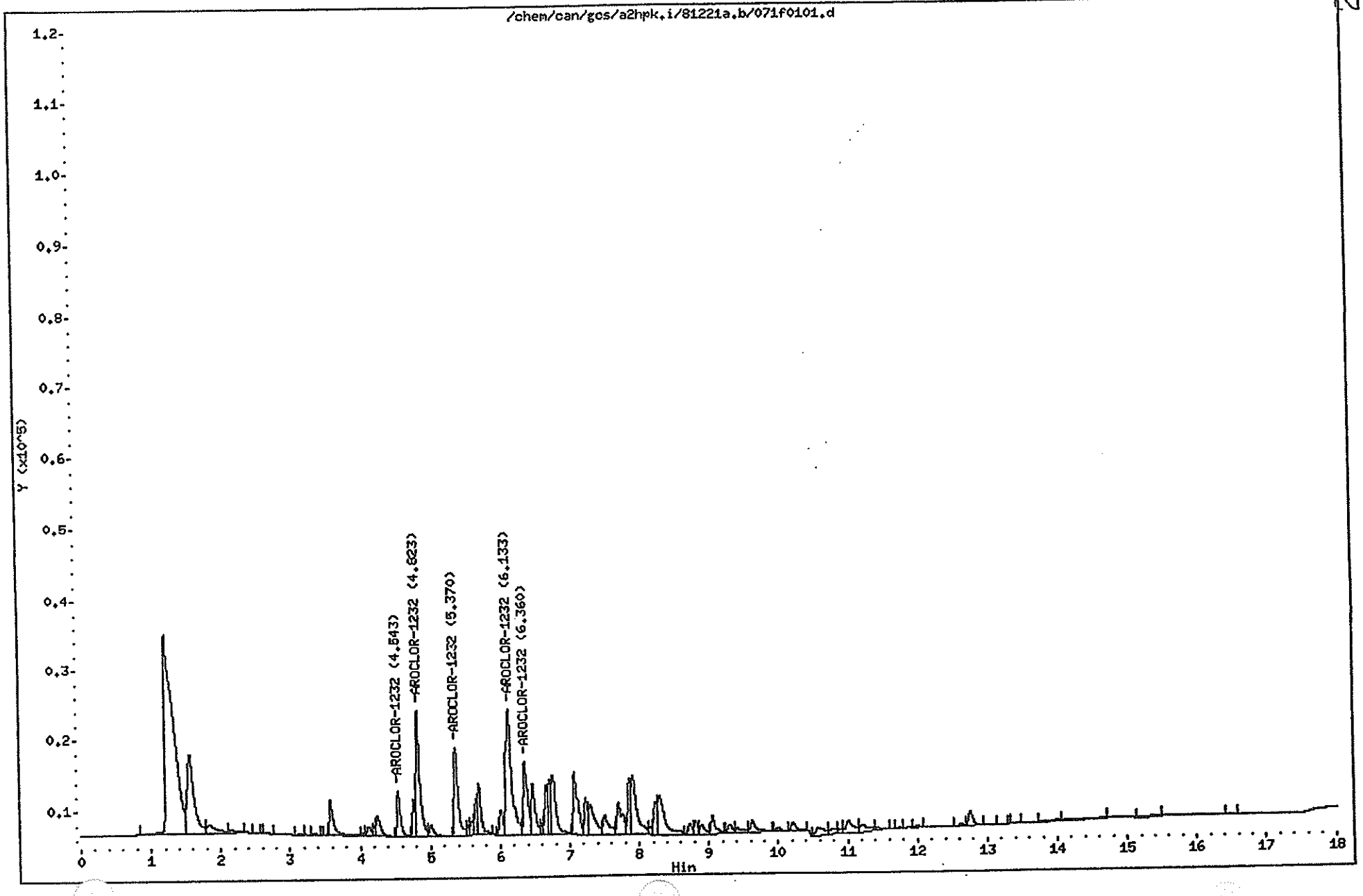
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/071f0101.d
Date : 22-DEC-1998 15:17
Client ID:
Sample Info: 1232 C046,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81221a.b/083f0101.d
Report Date: 12/23/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 083f0101.d
Analysis Type: NONE

Injection Date: 22-DEC-1998 19:28
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbII

COMPOUND	%D
TCMX	4.0
AROCLOR-1016	2.7
AROCLOR-1260	3.1
DCB	5.8

The average of %D's in the continuing calibration is 3.9

Data File: /chem/can/gcs/a2hpk.i/81221a.b/083f0101.d
Report Date: 23-Dec-1998 10:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/083f0101.d
Lab Smp Id: 1660 C110
Inj Date : 22-DEC-1998 19:28
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

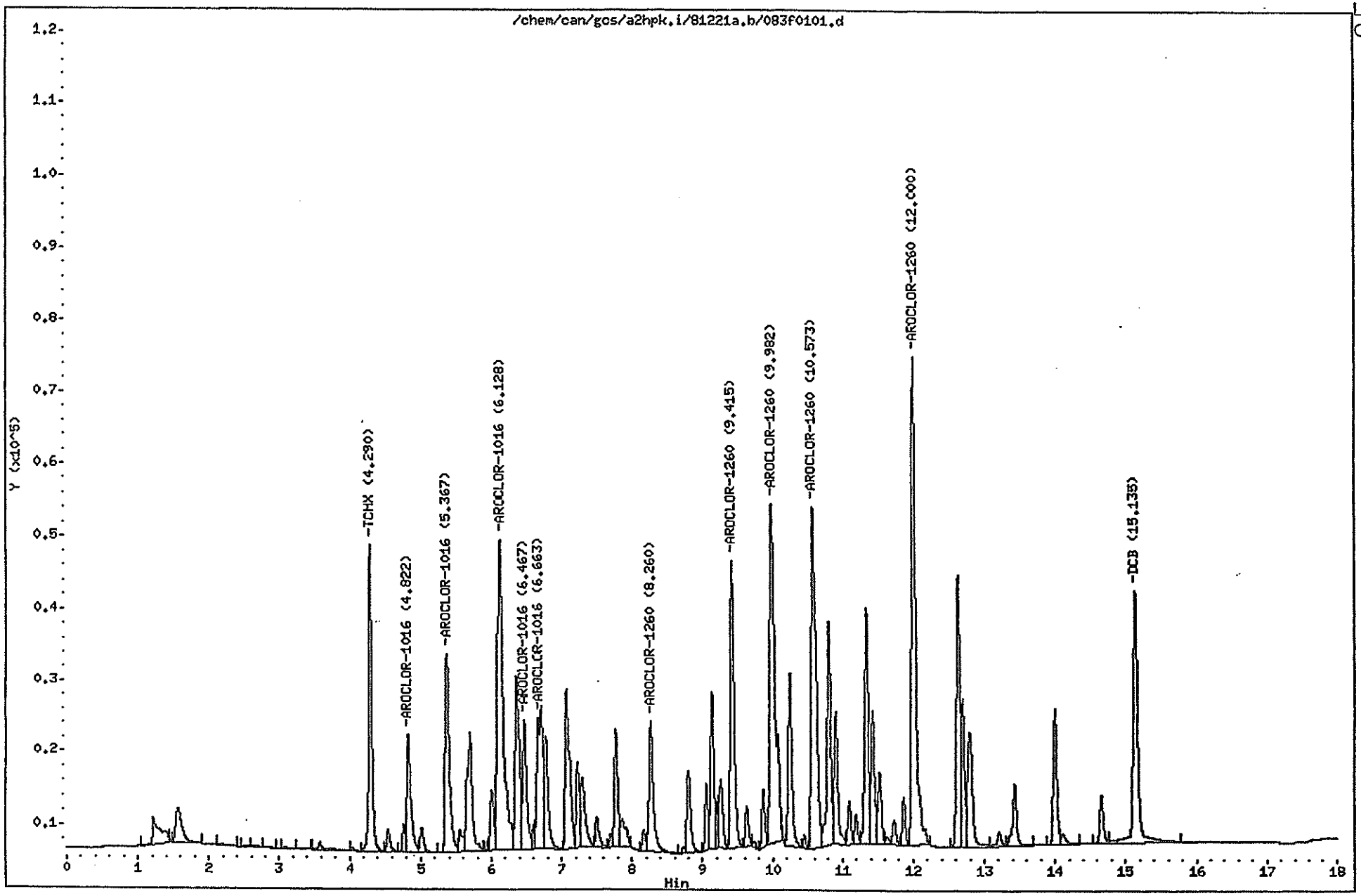
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.290	4.295	-0.005	42640	0.02500	0.02600	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.822	4.825	-0.003	16009	0.50000	0.5166	80.00- 120.00	100.00
5.367	5.370	-0.003	27599	0.50000	0.5109	127.22- 212.04	172.40
6.128	6.132	-0.004	43174	0.50000	0.5150	198.24- 330.40	269.69
6.467	6.470	-0.003	17702	0.50000	0.5171	78.59- 130.99	110.58
6.663	6.668	-0.005	18059	0.50000	0.5071	80.95- 134.92	112.81
Average of Peak Amounts =					0.513		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.260	8.265	-0.005	17795	0.50000	0.5120	80.00- 120.00	100.00
9.415	9.420	-0.005	39934	0.50000	0.5047	165.01- 275.01	224.41
9.982	9.988	-0.006	47087	0.50000	0.5094	196.25- 327.09	264.61
10.573	10.578	-0.005	47261	0.50000	0.5200	189.58- 315.97	265.59
12.000	12.005	-0.005	67667	0.50000	0.5319	260.56- 434.26	380.26
Average of Peak Amounts =					0.516		
$ 9 DCB					CAS #: 2051-24-3		
15.135	15.142	-0.007	34860	0.02500	0.02644	80.00- 120.00	100.00

Data : /chem/can/gcs/a2hpk.i/81221a.b/083f0101.d
Date .-DEC-1998 19:28
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81221a.b/097f0101.d
Report Date: 12/23/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 097f0101.d
Analysis Type: NONE

Injection Date: 23-DEC-1998 00:22
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII

COMPOUND	%D
TCMX	8.7
AROCLOR-1016	6.2
AROCLOR-1260	16.4
DCB	34.8

The average of %D's in the continuing calibration is 16.5

Data File: /chem/can/gcs/a2hpk.i/81221a.b/097f0101.d
Report Date: 23-Dec-1998 10:22

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/097f0101.d
Lab Smp Id: 1660 C110
Inj Date : 23-DEC-1998 00:22
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 23-Dec-1998 10:20 sharkeyp Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

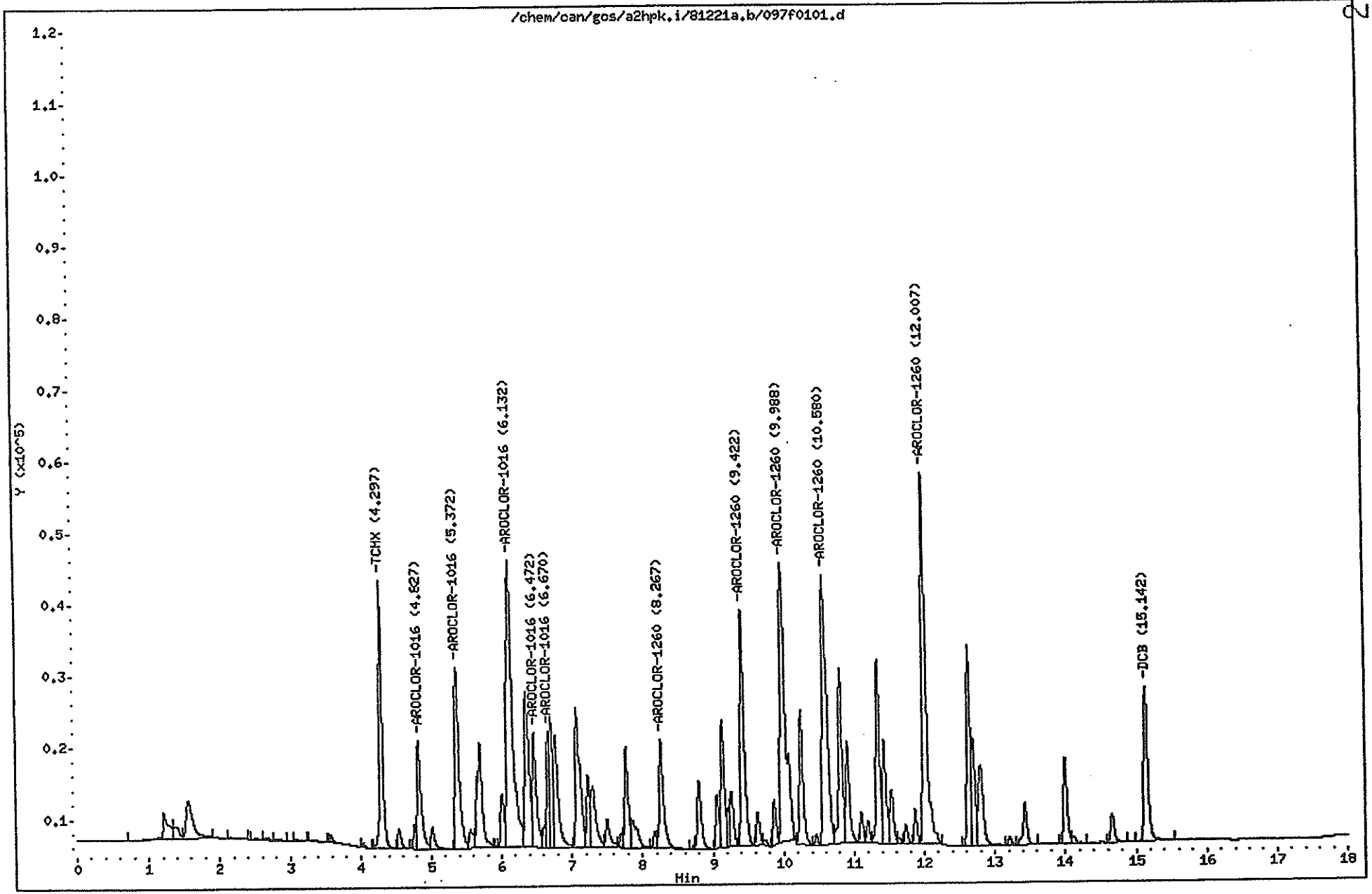
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.295	0.002	37436	0.02500	0.02283	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.827	4.825	0.002	15021	0.50000	0.4847	80.00- 120.00	100.00
5.372	5.370	0.002	25249	0.50000	0.4674	127.22- 212.04	168.09
6.132	6.132	0.000	39978	0.50000	0.4769	198.24- 330.40	266.15
6.472	6.470	0.002	15817	0.50000	0.4620	78.59- 130.99	105.30
6.670	6.668	0.002	16184	0.50000	0.4545	80.95- 134.92	107.74
Average of Peak Amounts =					0.469		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.267	8.265	0.002	15008	0.50000	0.4318	80.00- 120.00	100.00
9.422	9.420	0.002	32956	0.50000	0.4165	165.01- 275.01	219.59
9.988	9.988	0.000	38908	0.50000	0.4210	196.25- 327.09	259.25
10.580	10.578	0.002	37583	0.50000	0.4135	189.58- 315.97	250.42
12.007	12.005	0.002	51886	0.50000	0.4079	260.56- 434.26	345.72
Average of Peak Amounts =					0.418		
$ 9 DCB					CAS #: 2051-24-3		
15.142	15.142	0.000	21505	0.02500	0.01631	80.00- 120.00	100.00

Data File: /chem/can/gos/a2hpk.i/81221a.b/097f0101.d
Date : 23-DEC-1998 00:22
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A8L030

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 11/02/9

Instrument ID: A2HPK

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.29 S2 : 15.19

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660 C110	12/23/98	1803	4.29	15.20
02		2154 C061	12/23/98	1824		
03		1248 C056	12/23/98	1845		
04		1242 C051	12/23/98	1906		
05		1232 C046	12/23/98	1927		
06	S-120298-JH-	CNXAC101	12/23/98	2030	4.38	15.22
07	S-120298-JH-	CNXAG101	12/23/98	2051	4.38	15.22
08		1660 C110	12/23/98	2339	4.29	15.19
09						
10						
11						
12						
13						
14						
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29						
30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /chem/can/gcs/a2hpk.i/81223c.b/007f0101.d
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 007f0101.d
Analysis Type: NONE

Injection Date: 23-DEC-1998 18:03
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII

COMPOUND	%D
TCMX	3.3
AROCLOR-1016	5.0
AROCLOR-1260	6.9
DCB	11.4

The average of %D's in the continuing calibration is 6.6

Data File: /chem/can/gcs/a2hpk.i/81223c.b/007f0101.d
Report Date: 26-Dec-1998 18:02

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/007f0101.d
Lab Smp Id: 1660 C110
Inj Date : 23-DEC-1998 18:03
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

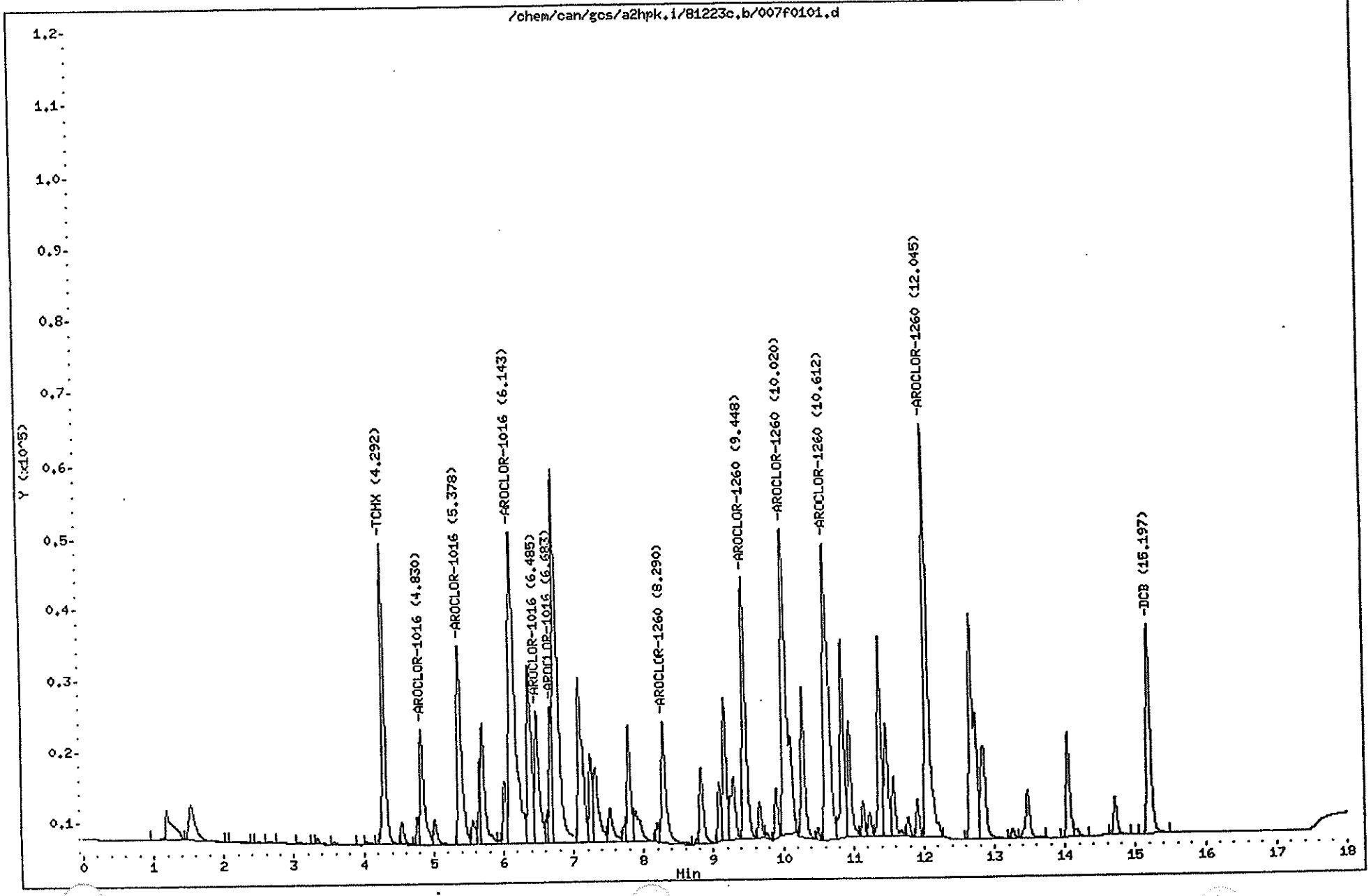
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.290	0.002	42335	0.02500	0.02581	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.830	4.830	0.000	15962	0.50000	0.5151	80.00- 120.00	100.00
5.378	5.377	0.001	27774	0.50000	0.5142	134.50- 224.17	174.00
6.143	6.143	0.000	43872	0.50000	0.5233	202.66- 337.77	274.85
6.485	6.485	0.000	18395	0.50000	0.5373	84.10- 140.17	115.24
6.683	6.680	0.003	19051	0.50000	0.5350	91.35- 152.25	119.35
Average of Peak Amounts =					0.525		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.290	8.287	0.003	16785	0.50000	0.4829	80.00- 120.00	100.00
9.448	9.445	0.003	36847	0.50000	0.4657	173.85- 289.76	219.52
10.020	10.015	0.005	43018	0.50000	0.4654	205.86- 343.09	256.29
10.612	10.608	0.004	41742	0.50000	0.4592	199.16- 331.93	248.69
12.045	12.040	0.005	57626	0.50000	0.4530	284.17- 473.62	343.32
Average of Peak Amounts =					0.465		
$ 9 DCB					CAS #: 2051-24-3		
15.197	15.188	0.009	29221	0.02500	0.02216	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81223c.b/007f0101.d
Date : 23-DEC-1998 18:03
Client ID:
Sample Info: 1660 C110,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81223c.b/008f0101.d
Report Date: 26-Dec-1998 18:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/008f0101.d
Lab Smp Id: 2154 C061
Inj Date : 23-DEC-1998 18:24
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 2154 C061,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

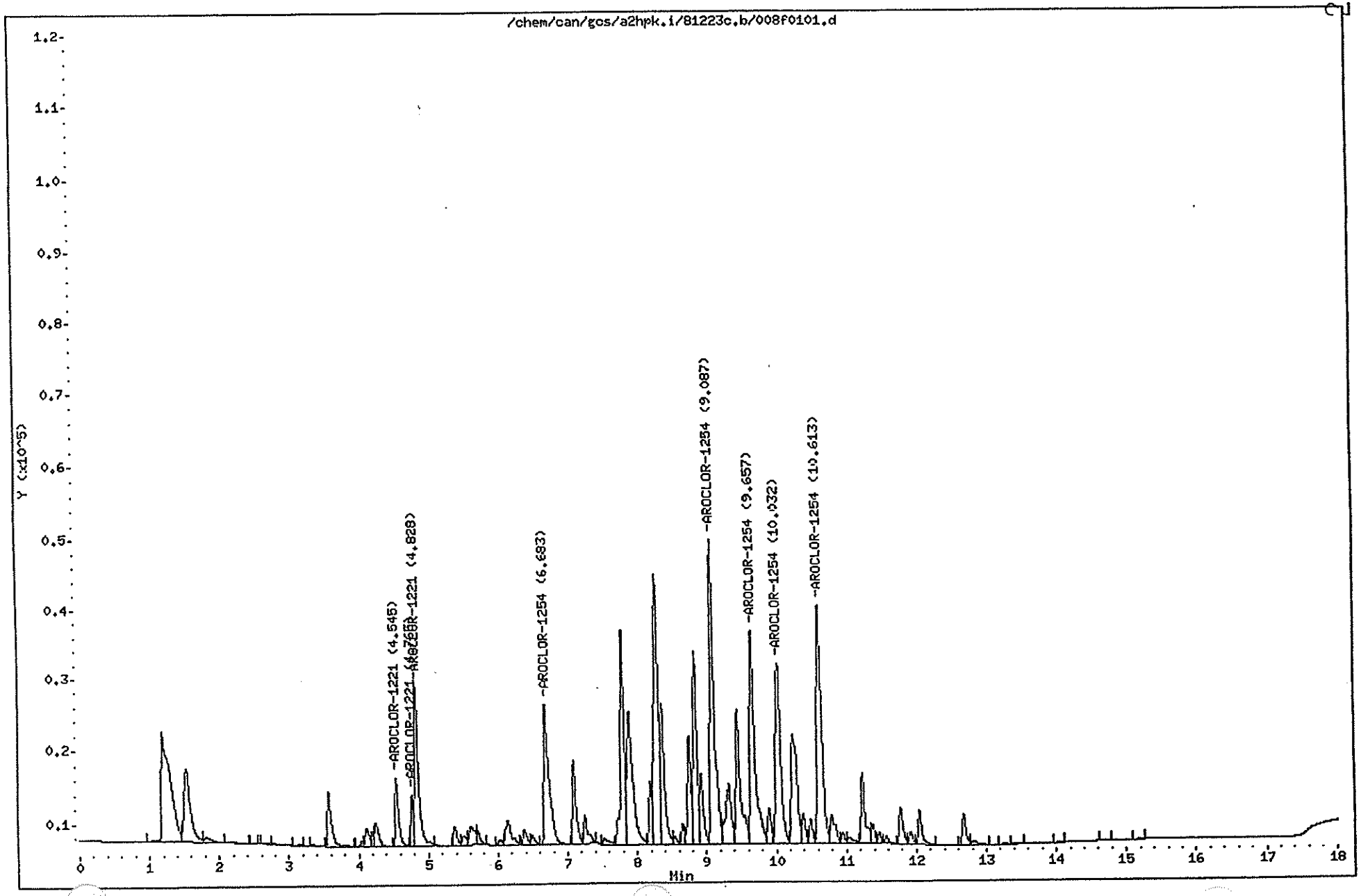
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
6.683	6.682	0.001	19363	0.50000	0.4818	80.00- 120.00	100.00
9.087	9.085	0.002	42853	0.50000	0.4416	185.99- 309.99	221.31
9.657	9.657	0.000	29681	0.50000	0.4252	129.11- 215.18	153.29
10.032	10.030	0.002	24928	0.50000	0.4537	112.33- 187.22	128.74
10.613	10.612	0.001	33383	0.50000	0.4242	152.35- 253.92	172.41
Average of Peak Amounts =					0.445		
2 AROCLOR-1221					CAS #: 11104-28-2		
4.545	4.535	0.010	9505	0.50000	0.4928	80.00- 120.00	100.00
4.765	4.767	-0.002	6943	0.50000	0.4927	34.69- 57.81	73.05
4.828	4.828	0.000	21898	0.50000	0.4862	99.69- 166.15	230.38
Average of Peak Amounts =					0.491		

Data File: /chem/can/gcs/a2hpk.i/81223c.b/008f0101.d
Date : 23-DEC-1998 18:24
Client ID:
Sample Info: 2154 C061,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81223c.b/009f0101.d
Report Date: 26-Dec-1998 18:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/009f0101.d
Lab Smp Id: 1248 C056
Inj Date : 23-DEC-1998 18:45
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1248 C056,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

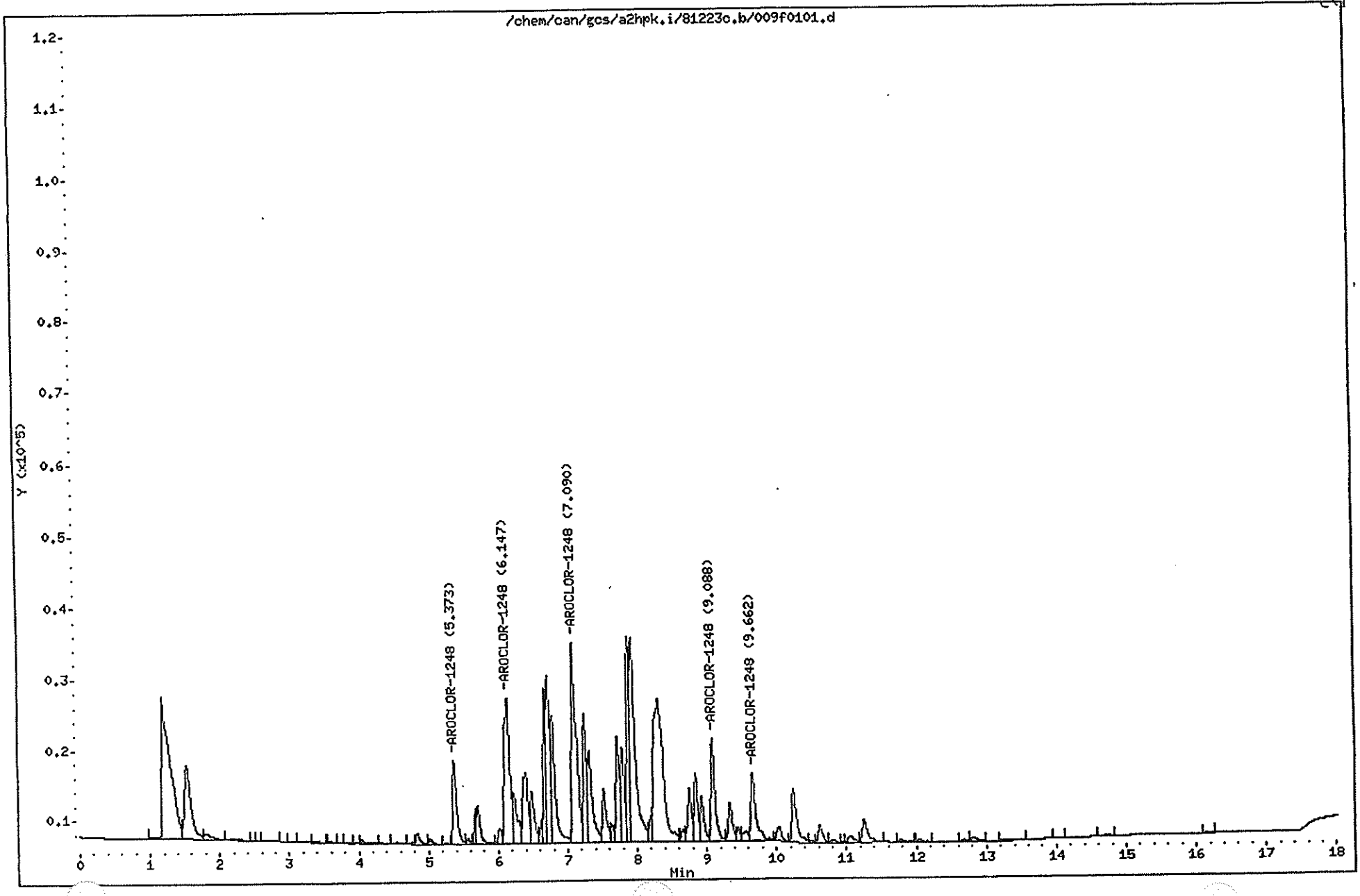
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
5.373	5.372	0.001	11823	0.50000	0.4889	80.00- 120.00	100.00
6.147	6.145	0.002	20410	0.50000	0.5014	117.61- 196.01	172.63
7.090	7.088	0.002	28157	0.50000	0.4924	176.18- 293.63	238.15
9.088	9.087	0.001	14520	0.50000	0.4384	98.60- 164.33	122.81
9.662	9.660	0.002	9498	0.50000	0.4222	60.99- 101.65	80.33
Average of Peak Amounts =					0.469		

Data File: /chem/can/gcs/a2hpk.i/81223c.b/009f0101.d
Date : 23-DEC-1998 18:45
Client ID:
Sample Info: 1248 C056,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81223c.b/010f0101.d
Report Date: 26-Dec-1998 18:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/010f0101.d
Lab Smp Id: 1242 C051
Inj Date : 23-DEC-1998 19:06
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1242 C051,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

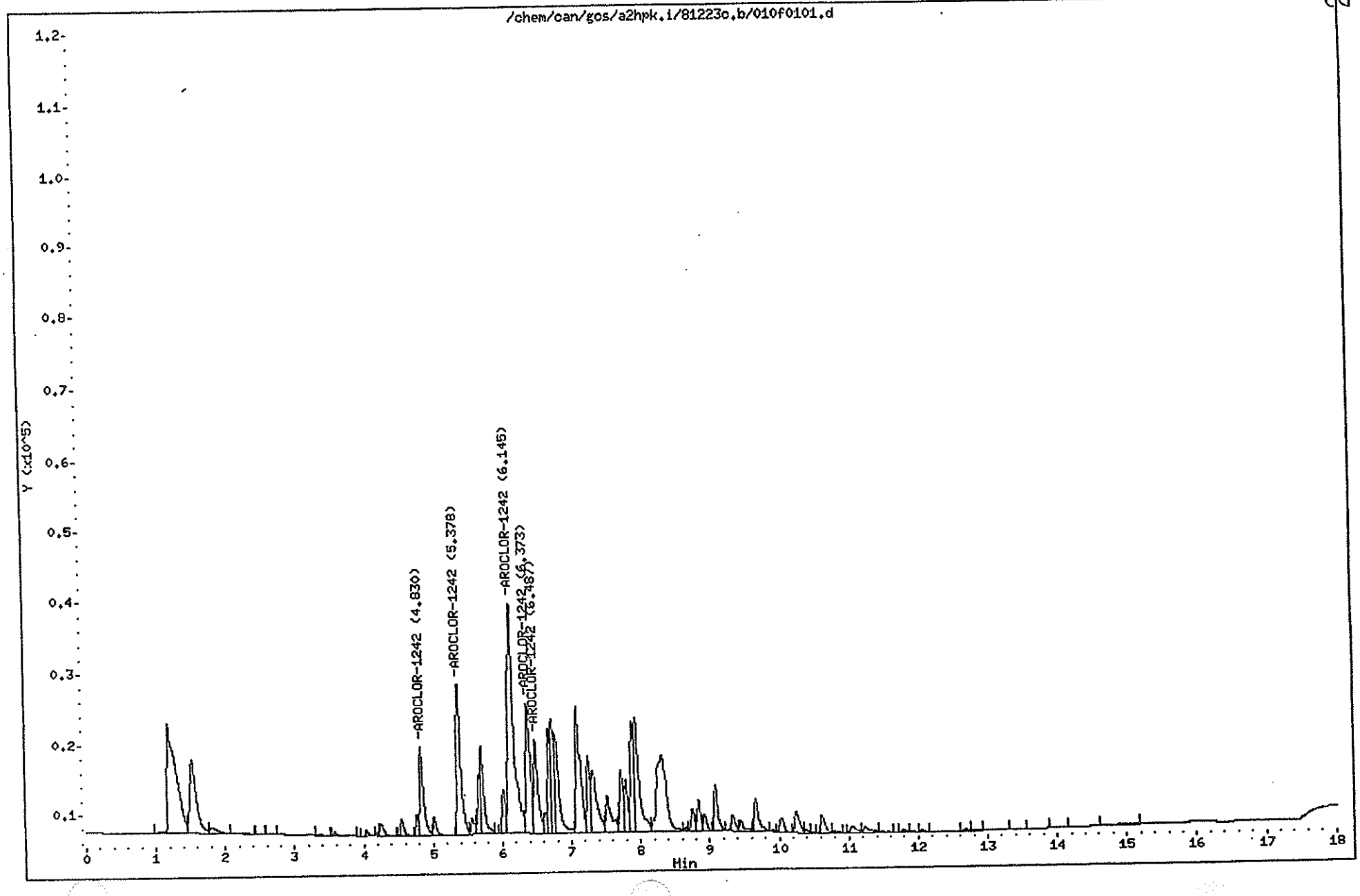
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
4.830	4.830	0.000	12707	0.50000	0.4776	80.00- 120.00	100.00
5.378	5.377	0.001	21541	0.50000	0.4809	144.17- 240.28	169.52
6.145	6.145	0.000	32325	0.50000	0.4849	202.77- 337.96	254.39
6.373	6.373	0.000	18364	0.50000	0.4876	104.84- 174.74	144.52
6.487	6.485	0.002	13293	0.50000	0.4961	68.07- 113.44	104.61
Average of Peak Amounts =					0.485		

Data File: /chem/can/gcs/a2hpk.i/81223c.b/010f0101.d
Date : 23-DEC-1998 19:06
Client ID:
Sample Info: 1242 C051,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hpk.i/81223c.b/011f0101.d
Report Date: 26-Dec-1998 18:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/011f0101.d
Lab Smp Id: 1232 C046
Inj Date : 23-DEC-1998 19:27
Operator : 1808 Inst ID: a2hpk.i
Smp Info : 1232 C046,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None
Processing Host: hpuxcs2

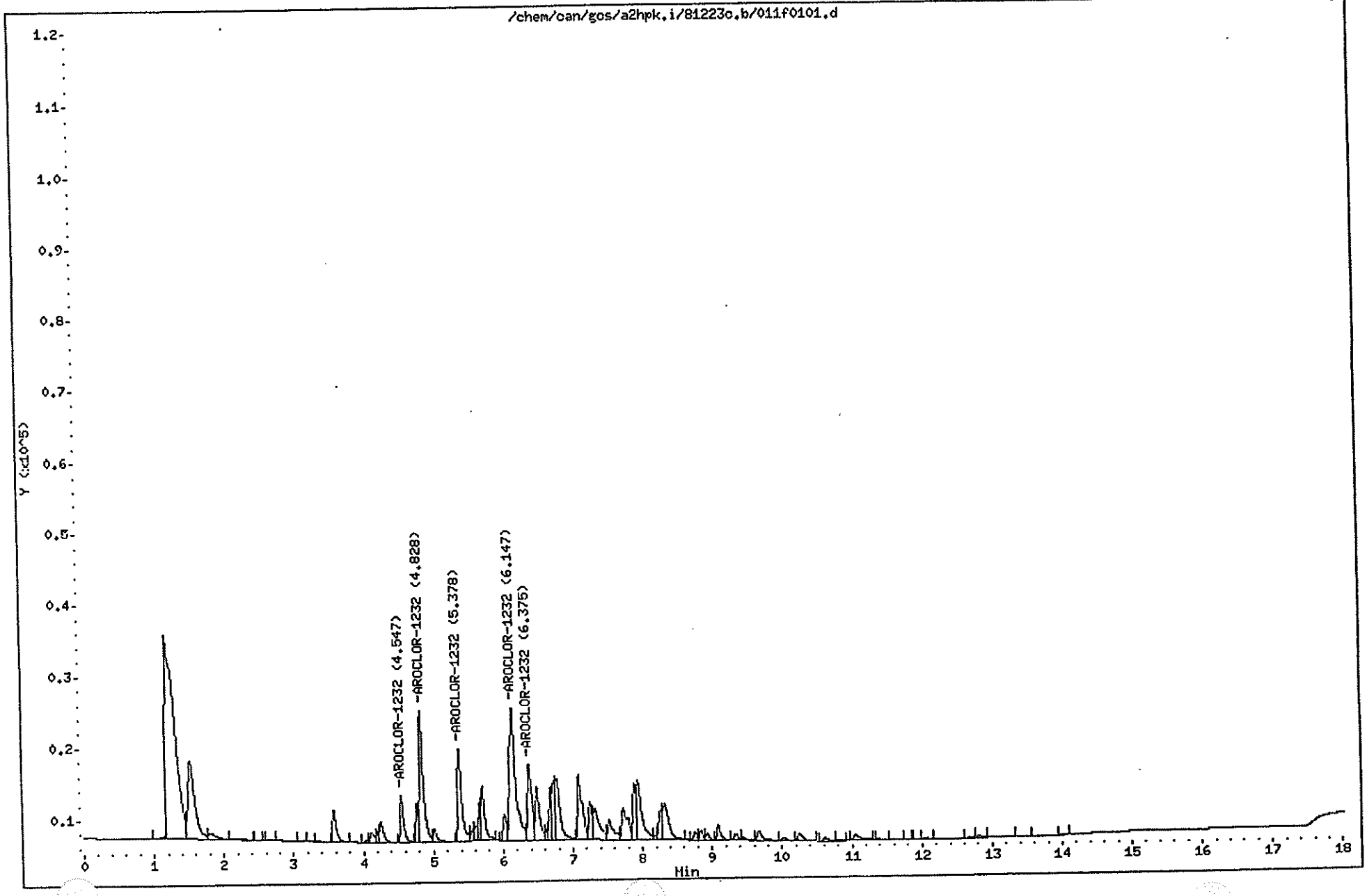
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
4.547	4.525	0.022	6446	0.50000	0.4894	80.00- 120.00	100.00
4.828	4.830	-0.002	18173	0.50000	0.4873	86.35- 143.91	281.93
5.378	5.378	0.000	12789	0.50000	0.4917	67.66- 112.76	198.40
6.147	6.148	-0.001	18405	0.50000	0.4915	91.49- 152.49	285.53
6.375	6.377	-0.002	10500	0.50000	0.4878	48.75- 81.25	162.89
Average of Peak Amounts =					0.49		

Data File: /chem/can/gos/a2hpk.i/81223c.b/011f0101.d
Date : 23-DEC-1998 19:27
Client ID:
Sample Info: 1232 C046,,2

Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hpk.i/81223c.b/023f0101.d
Report Date: 12/24/1998

CONTINUING CALIBRATION REPORT

Instrument ID: a2hpk.i
Lab File ID: 023f0101.d
Analysis Type: NONE

Injection Date: 23-DEC-1998 23:39
Lab Sample ID: 1660 C110
Method File: /chem/can/gcs/a2hpk.i/81223c.b/kfpcbII

COMPOUND	%D
TCMX	4.5
AROCLOR-1016	1.2
AROCLOR-1260	3.7
DCB	5.4

The average of %D's in the continuing calibration is 3.7

Data File: /chem/can/gcs/a2hpk.i/81223c.b/023f0101.d
Report Date: 26-Dec-1998 18:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81223c.b/023f0101.d
Lab Smp Id: 1660 C110
Inj Date : 23-DEC-1998 23:39
Operator : 1808
Smp Info : 1660 C110,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81223c.b/kfpcbIII.m
Meth Date : 26-Dec-1998 15:56 a
Cal Date : 17-DEC-1998 00:15
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Inst ID: a2hpk.i

Quant Type: ESTD
Cal File: 017f0101.d
Continuing Calibration Sample

Compound Sublist: AR1660td.sub
Sample Matrix: None

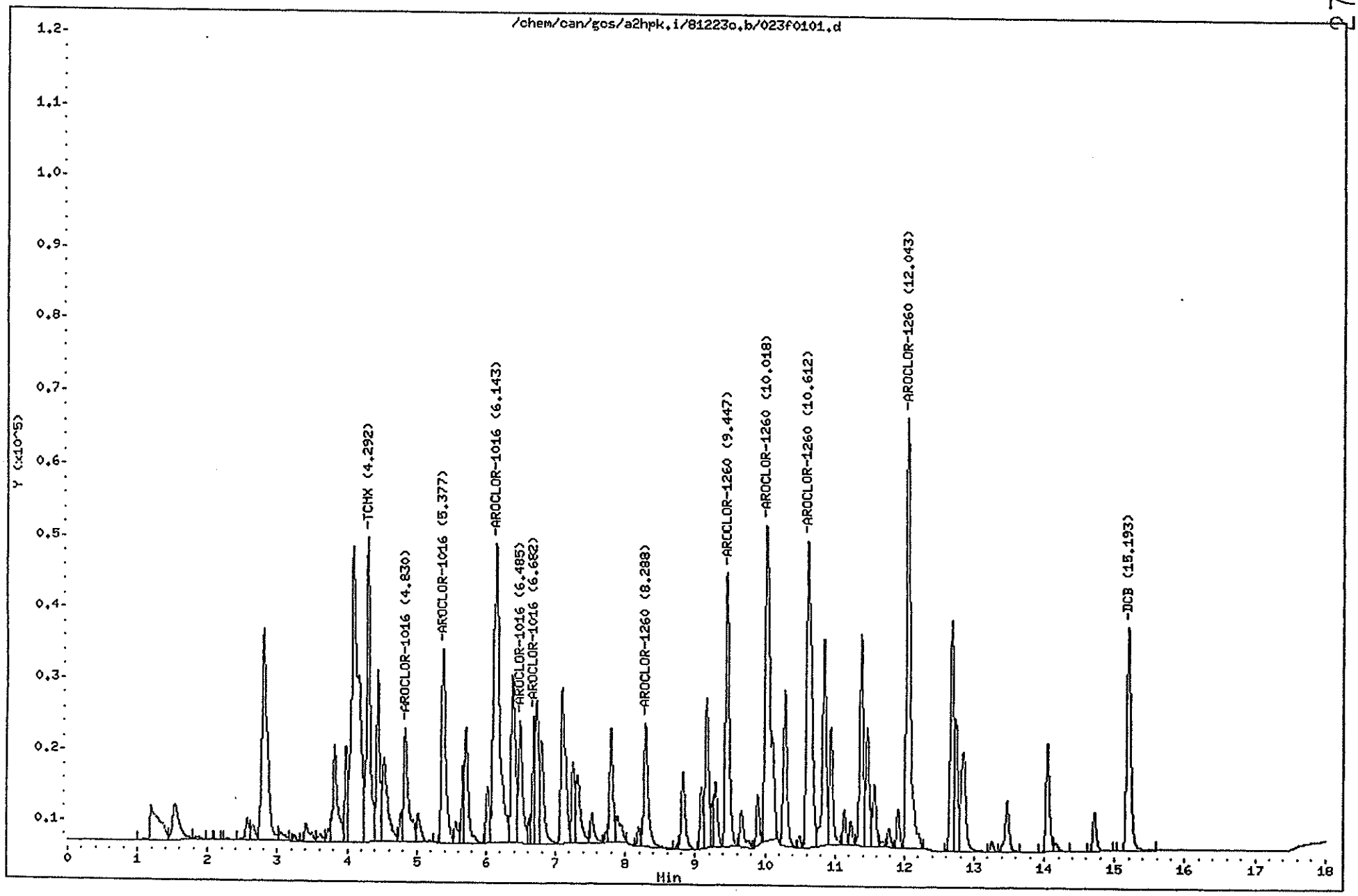
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.292	4.290	0.002	42829	0.02500	0.02611	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.830	4.830	0.000	16076	0.50000	0.5188	80.00- 120.00	100.00
5.377	5.377	0.000	27315	0.50000	0.5057	134.50- 224.17	169.91
6.143	6.143	0.000	41943	0.50000	0.5003	202.66- 337.77	260.90
6.485	6.485	0.000	17195	0.50000	0.5023	84.10- 140.17	106.96
6.682	6.680	0.002	17947	0.50000	0.5040	91.35- 152.25	111.64
Average of Peak Amounts =					0.506		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.288	8.287	0.001	17401	0.50000	0.5006	80.00- 120.00	100.00
9.447	9.445	0.002	38327	0.50000	0.4844	173.85- 289.76	220.26
10.018	10.015	0.003	44266	0.50000	0.4789	205.86- 343.09	254.39
10.612	10.608	0.004	43011	0.50000	0.4732	199.16- 331.93	247.18
12.043	12.040	0.003	59979	0.50000	0.4715	284.17- 473.62	344.69
Average of Peak Amounts =					0.482		
$ 9 DCB					CAS #: 2051-24-3		
15.193	15.188	0.005	31168	0.02500	0.02364	80.00- 120.00	100.00

Da le: /chem/can/gcs/a2hpk.i/81223o.b/023f0101.d
Date : 23-DEC-1998 23:39
Client ID:
Sample Info: 1660 C110,,2

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



POLYCHLORINATED BIPHENYLS
RAW QC DATA

CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R102
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	270	
11096-82-5	Aroclor 1260	310	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Report Date: 30-Dec-1998 15:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Lab Smp Id: CP07R102 — Client Smp ID: CPO7RCHK
Inj Date : 17-DEC-1998 09:44
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP07R102
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1 — QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	30936	0.01886	6.288	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.800	4.802	-0.002	26770	0.86390	288.0	80.00- 120.00	100.00
5.345	5.347	-0.002	43363	0.80276	267.6	125.29- 208.81	161.98
6.103	6.105	-0.002	72313	0.86256	287.5	207.30- 345.49	270.13
6.440	6.442	-0.002	28285	0.82620	275.4	84.66- 141.09	105.66
6.640	6.642	-0.002	24019	0.67451	224.8	81.88- 136.47	89.72
Average of Peak Concentrations =					268.7		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.233	8.237	-0.004	31084	0.89428	298.1	80.00- 120.00	100.00
9.388	9.390	-0.002	68274	0.86290	287.6	166.19- 276.99	219.64
9.953	9.955	-0.002	84382	0.91294	304.3	196.82- 328.04	271.46
10.545	10.547	-0.002	87511	0.96283	320.9	201.36- 335.60	281.53

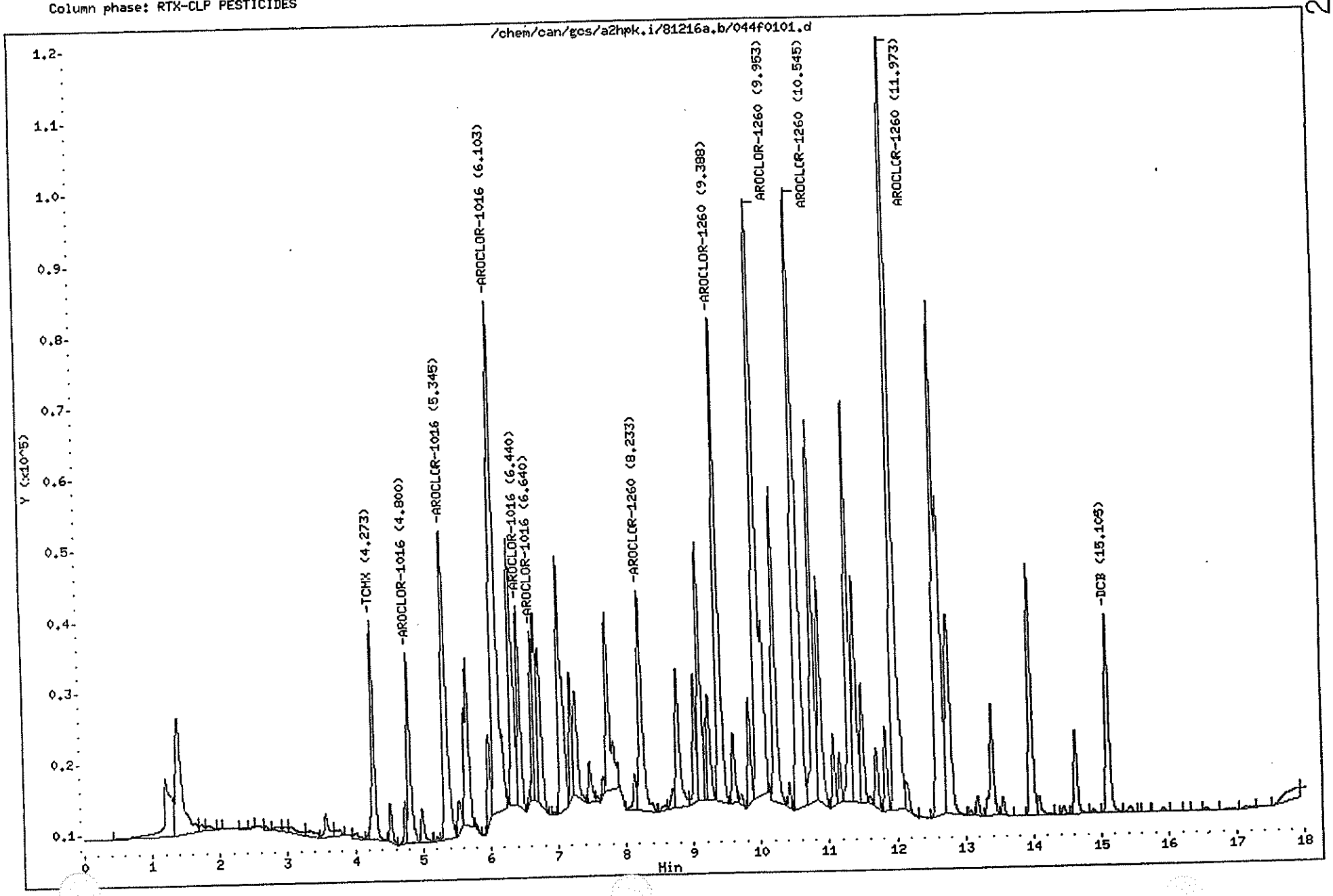
Data File: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Report Date: 30-Dec-1998 15:41

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
**	======	========	========	=======	=======	==========	=====
8 AROCLOR-1260 (continued)							
11.973	11.973	0.000	125106	0.98348	327.8	281.46- 469.10	402.48
Average of Peak Concentrations =					307.8		
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	28114	0.02132	7.107	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/044f0101.d
Date : 17-DEC-1998 09:44
Client ID: CP07RCHK
Sample Info: CP07R102
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R103
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	260	
11096-82-5	Aroclor 1260	280	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Report Date: 30-Dec-1998 15:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Lab Smp Id: CP07R103 — Client Smp ID: CP07RCHKDUP
Inj Date : 17-DEC-1998 10:05
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP07R103
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1 — QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	28309	0.01726	5.754	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.802	4.802	0.000	24945	0.80500	268.3	80.00- 120.00	100.00
5.347	5.347	0.000	40220	0.74457	248.2	125.29- 208.81	161.23
6.103	6.105	-0.002	68717	0.81967	273.2	207.30- 345.49	275.47
6.440	6.442	-0.002	27496	0.80316	267.7	84.66- 141.09	110.23
6.640	6.642	-0.002	24230	0.68044	226.8	81.88- 136.47	97.13
Average of Peak Concentrations =					256.8		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.235	8.237	-0.002	28508	0.82017	273.4	80.00- 120.00	100.00
9.390	9.390	0.000	62661	0.79196	264.0	166.19- 276.99	219.80
9.955	9.955	0.000	77176	0.83498	278.3	196.82- 328.04	270.72
10.545	10.547	-0.002	78103	0.85932	286.4	201.36- 335.60	273.97

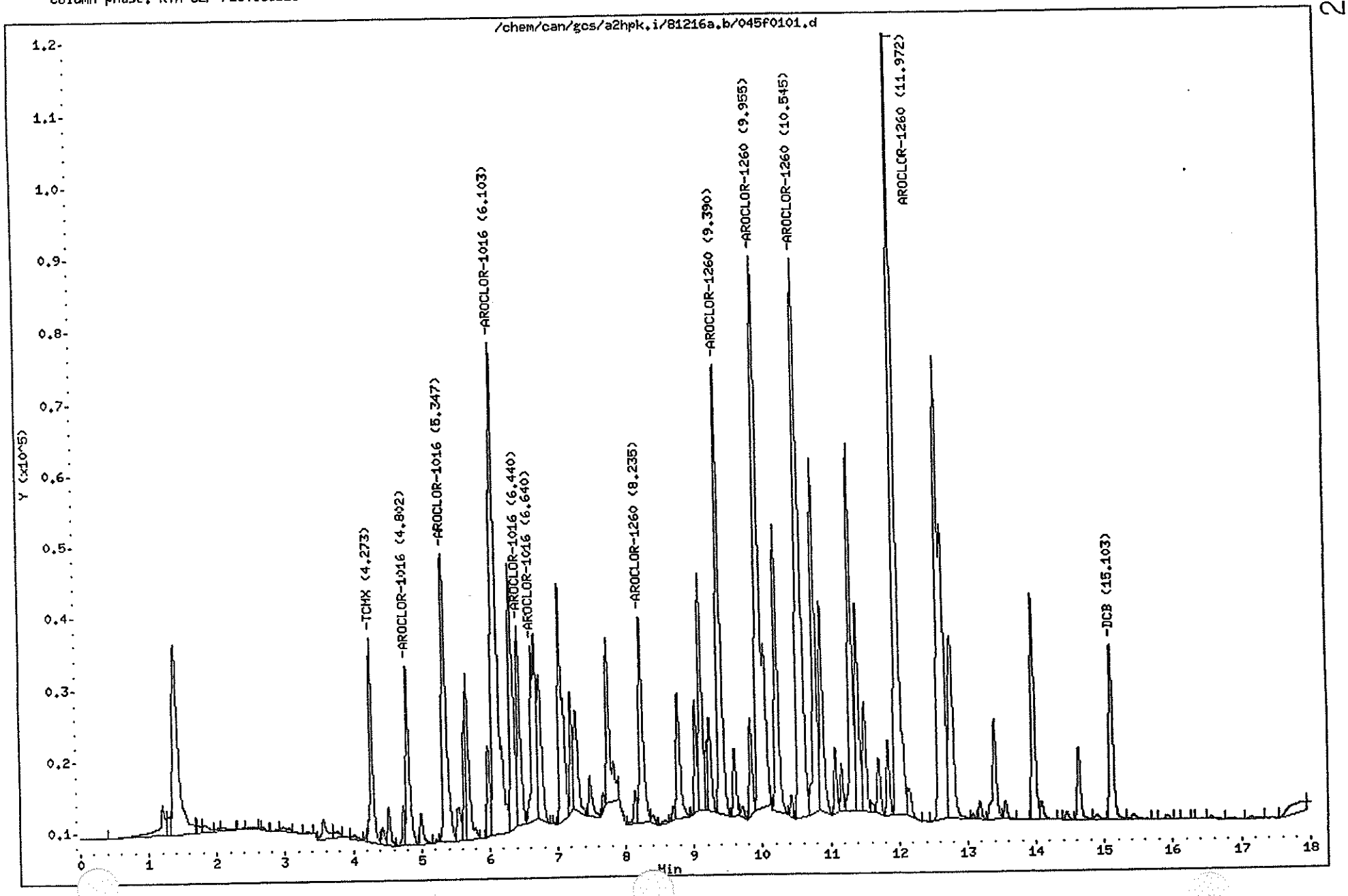
Data File: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Report Date: 30-Dec-1998 15:41

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
11.972	11.973	-0.001	112901	0.88753	295.8	281.46- 469.10	396.03
Average of Peak Concentrations =					279.6		
$ 9 DCB					CAS #: 2051-24-3		
15.103	15.105	-0.002	24343	0.01846	6.154	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81216a.b/045f0101.d
Date : 17-DEC-1998 10:05
Client ID: CP07RCHKDUP
Sample Info: CP07R103
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 126

Sample WT/Vol: 30 / g
Work Order: CP08N102
Dilution factor: 1
Moisture %:NA

Date Received: 12/03/98
Date Extracted:12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	250	
11096-82-5	Aroclor 1260	300	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/047f0101.d
Report Date: 22-Dec-1998 14:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/047f0101.d
Lab Smp Id: CP08N102 — Client Smp ID: INTRA-LAB CHECK
Inj Date : 22-DEC-1998 06:53
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP08N102
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1 — QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.293	0.002	29856	0.01820	6.068	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.825	4.825	0.000	25574	0.82530	275.1	80.00- 120.00	28.88(M)
5.372	5.370	0.002	41060	0.76012	253.4	129.12- 215.20	46.37
6.132	6.132	0.000	69525	0.82930	276.4	201.49- 335.82	78.51
6.470	6.472	-0.002	27212	0.79486	265.0	79.73- 132.88	30.73
6.668	6.668	0.000	21417	0.60144	200.5	81.41- 135.68	24.18
Average of Peak Concentrations =					254.1		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.265	8.267	-0.002	30706	0.88341	294.5	80.00- 120.00	100.00
9.422	9.422	0.000	67194	0.84925	283.1	171.13- 285.21	218.83
9.987	9.988	-0.001	82153	0.88883	296.3	202.26- 337.10	267.55

Data File: /chem/can/gcs/a2hpk.i/81221a.b/047f0101.d
Report Date: 22-Dec-1998 14:42

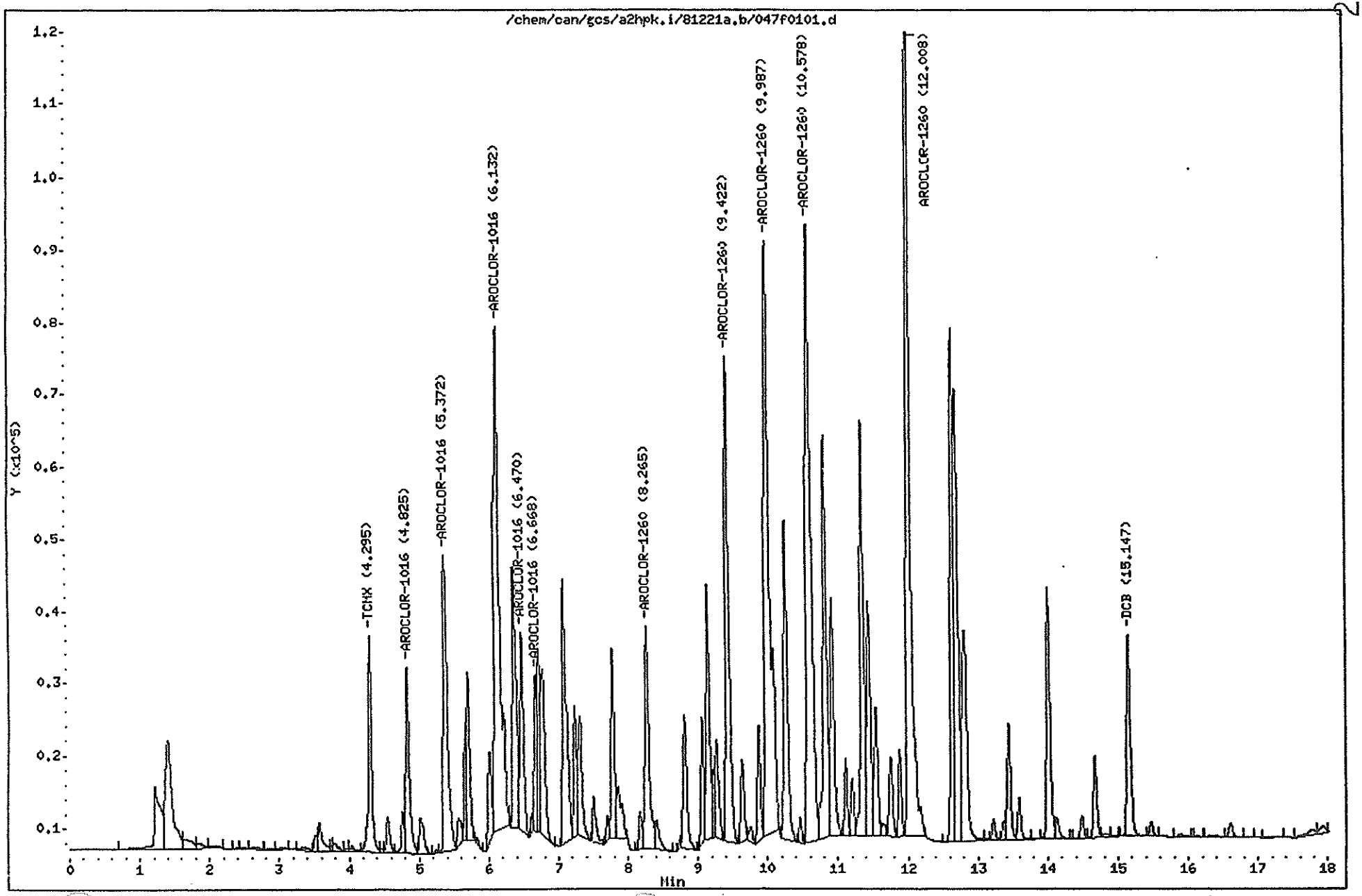
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.578	10.580	-0.002	85588	0.94167	313.9	199.91- 333.18	278.73
12.008	12.007	0.001	123449	0.97045	323.5	285.25- 475.42	402.04
Average of Peak Concentrations =					302.2		
$ 9 DCB					CAS #: 2051-24-3		
15.147	15.143	0.004	27780	0.02107	7.023	80.00- 120.00	100.00

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hpk.i/81221a.b/047f0101.d
Date : 22-DEC-1998 06:53
Client ID: INTRA-LAB CHECK
Sample Info: CP08H102
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name: QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: A8L040000 126

Sample WT/Vol: 30 / g
Work Order: CP08N103
Dilution factor: 1
Moisture %: NA

Date Received: 12/03/98
Date Extracted: 12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	230	
11096-82-5	Aroclor 1260	270	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/048f0101.d
Report Date: 22-Dec-1998 14:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/048f0101.d
Lab Smp Id: CP08N103 — Client Smp ID: INTRA-LAB CHECK
Inj Date : 22-DEC-1998 07:14
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP08N103
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1 — QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

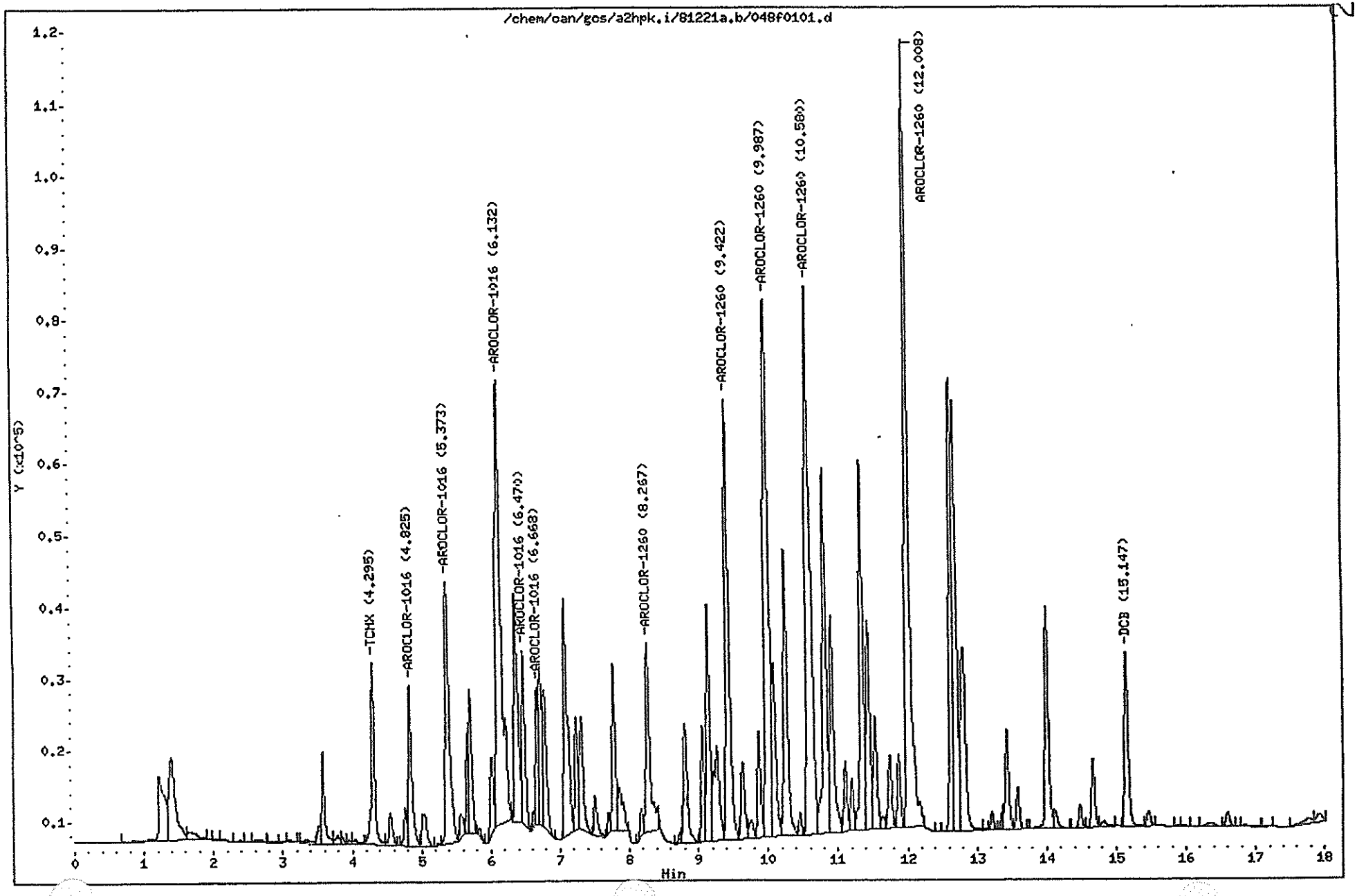
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.295	4.293	0.002	25302	0.01543	5.142	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.825	4.825	0.000	22348	0.72119	240.4	80.00- 120.00	100.00
5.373	5.370	0.003	36590	0.67737	225.8	129.12- 215.20	163.73
6.132	6.132	0.000	61954	0.73900	246.3	201.49- 335.82	277.22
6.470	6.472	-0.002	24231	0.70779	235.9	79.73- 132.88	108.43
6.668	6.668	0.000	19216	0.53963	179.9	81.41- 135.68	85.99
Average of Peak Concentrations =					225.7		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.267	8.267	0.000	26443	0.76076	253.6	80.00- 120.00	100.00
9.422	9.422	0.000	61522	0.77756	259.2	171.13- 285.21	232.66
9.987	9.988	-0.001	75067	0.81216	270.7	202.26- 337.10	283.88

Data File: /chem/can/gcs/a2hpk.i/81221a.b/048f0101.d
Report Date: 22-Dec-1998 14:42

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.580	10.580	0.000	76638	0.84320	281.1	199.91- 333.18	289.82
12.008	12.007	0.001	109772	0.86294	287.6	285.25- 475.42	415.13
Average of Peak Concentrations =					270.4		
$ 9 DCB					CAS #: 2051-24-3		
15.147	15.143	0.004	24388	0.01850	6.165	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/048f0101.d
Date : 22-DEC-1998 07:14
Client ID: INTRA-LAB CHECK
Sample Info: CP08N103
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L080000 110

Sample WT/Vol: 30 / g
Work Order: CP35A102
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/08/98
Date Analyzed: 12/15/98

QC Batch: 8342110

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	310	
11096-82-5	Aroclor 1260	340	

FORM I

Data File: /chem/can/gcs/a2hpk.i/81214a.b/067f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/067f0101.d
Lab Smp Id: CP35A102 — Client Smp ID: INTRA-LAB CHECK
Inj Date : 15-DEC-1998 14:17
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP35A102
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a — Quant Type: ESTD
Cal Date : 06-DEC-1998 20:55 — Cal File: 026f0101.d
Als bottle: 1 — QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL
Processing Host: hpuxcs2

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.298	0.000	35327	0.02154	7.180	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
4.828	4.832	-0.004	30739	0.99198	330.7	80.00- 120.00	100.00
5.377	5.377	0.000	47693	0.88292	294.3	131.48- 219.13	155.15
6.135	6.140	-0.005	79650	0.95008	316.7	201.19- 335.32	259.12
6.475	6.480	-0.005	32847	0.95946	319.8	80.13- 133.54	106.86
6.673	6.677	-0.004	29569	0.83037	276.8	83.41- 139.01	96.19
Average of Peak Concentrations =					307.6		
8 AROCLOR-1260					CAS #: 11096-82-5		
8.272	8.277	-0.005	32790	0.94336	314.4	80.00- 120.00	100.00
9.428	9.432	-0.004	75258	0.95117	317.0	171.69- 286.15	229.52
9.995	9.998	-0.003	91254	0.98729	329.1	202.14- 336.89	278.30

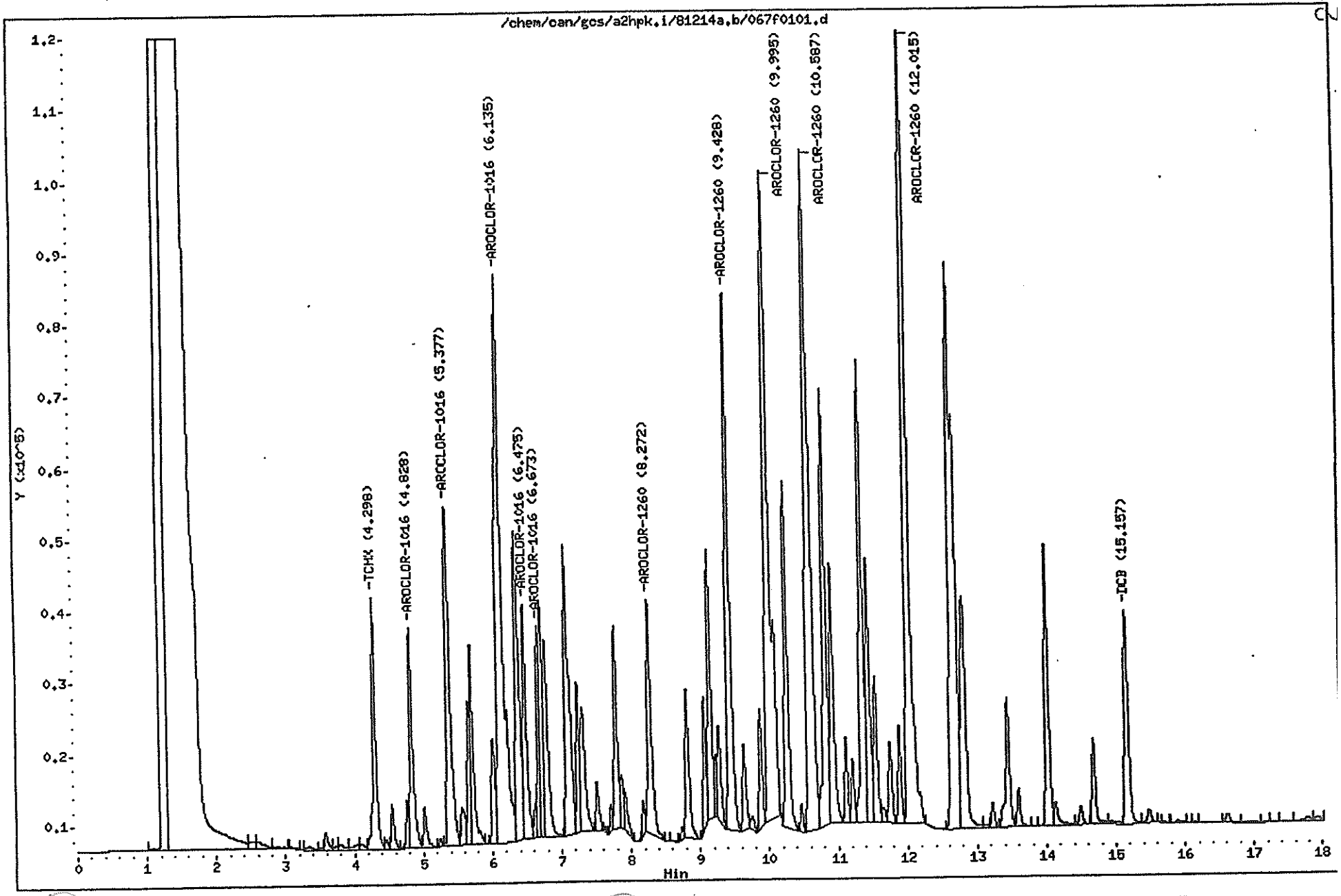
Data File: /chem/can/gcs/a2hpk.i/81214a.b/067f0101.d
Report Date: 16-Dec-1998 08:00

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
10.587	10.590	-0.003	95535	1.05111	350.4	199.32- 332.20	291.35
12.015	12.018	-0.003	140191	1.10207	367.4	282.30- 470.51	427.54
Average of Peak Concentrations =					335.7		
$ 9 DCB					CAS #: 2051-24-3		
15.157	15.157	0.000	29824	0.02262	7.540	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81214a.b/067f0101.d
Date : 15-DEC-1998 14:17
Client ID: INTRA-LAB CHECK
Sample Info: CP36A102
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i

Operator: 1808
Column diameter: 0.32



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CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L040000 112

Sample WT/Vol: 30 / g
Work Order: CP07R101
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/04/98
Date Analyzed: 12/17/98

QC Batch: 8338112

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Report Date: 30-Dec-1998 15:41

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Lab Smp Id: CP07R101 — Client Smp ID: CP07RBLK
Inj Date : 17-DEC-1998 08:20
Operator : 1808 — Inst ID: a2hpk.i
Smp Info : CP07R101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81216a.b/kfpcbIII.m
Meth Date : 17-Dec-1998 13:18 a — Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 — Cal File: 017f0101.d
Als bottle: 1 — QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL

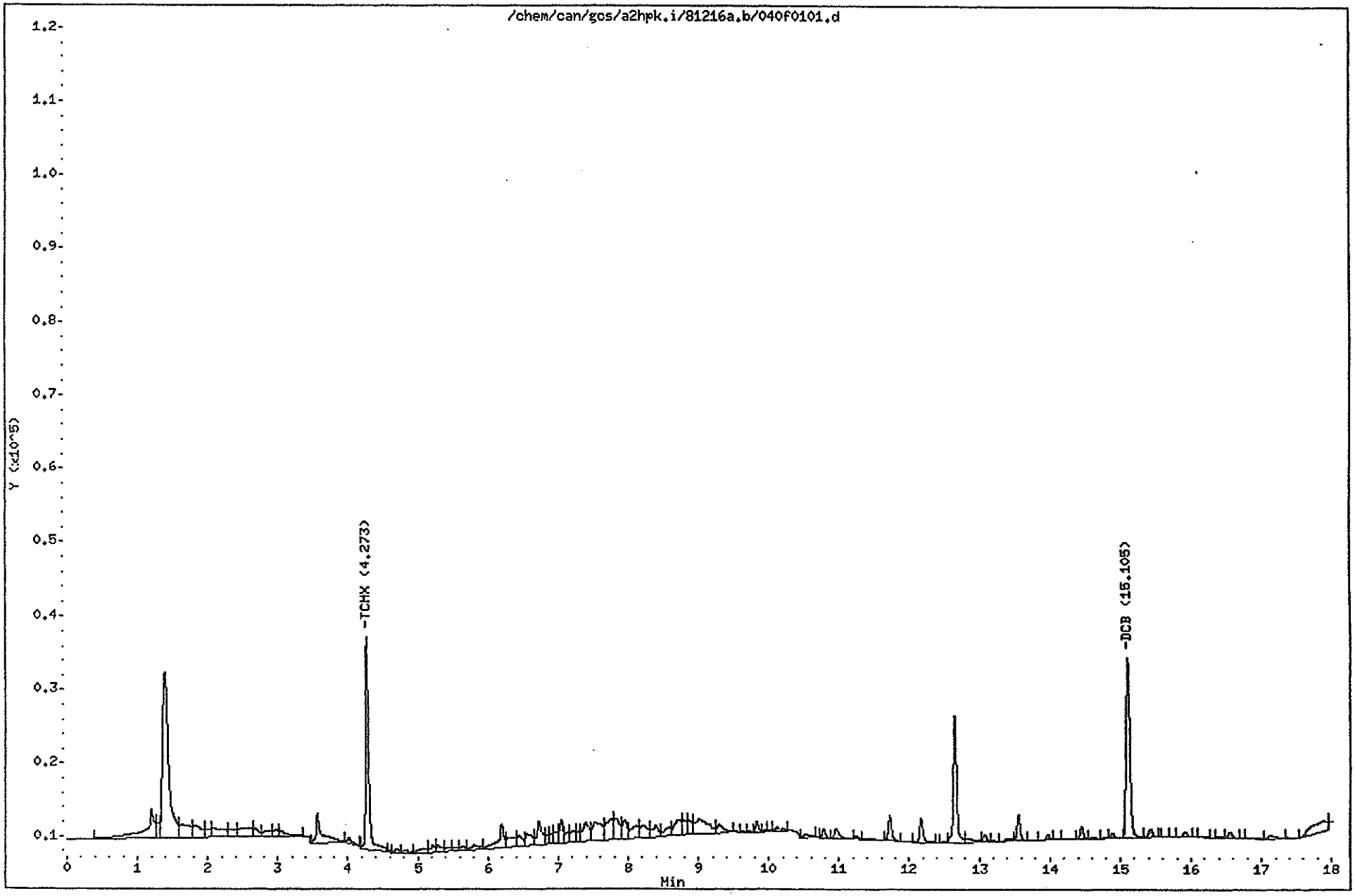
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.273	4.272	0.001	29125	0.01776	5.920	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.105	15.105	0.000	24672	0.01871	6.237	80.00- 120.00	100.00

D ile: /chem/can/gcs/a2hpk.i/81216a.b/040f0101.d
Date : 17-DEC-1998 08:20
Client ID: CP07RBLK
Sample Info: CP07R101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name: QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID: A8L040000 126

Sample WT/Vol: 30 / g
Work Order: CP08N101
Dilution factor: 1
Moisture %: NA

Date Received: 12/03/98
Date Extracted: 12/04/98
Date Analyzed: 12/22/98

QC Batch: 8338126

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81221a.b/046f0101.d
Report Date: 22-Dec-1998 14:42

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81221a.b/046f0101.d
Lab Smp Id: CP08N101 Client Smp ID: INTRA-LAB BLANK
Inj Date : 22-DEC-1998 06:32
Operator : 1808 Inst ID: a2hpk.i
Smp Info : CP08N101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81221a.b/kfpcbIII.m
Meth Date : 22-Dec-1998 13:49 a Quant Type: ESTD
Cal Date : 17-DEC-1998 00:15 Cal File: 017f0101.d
Als bottle: 1 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL
Processing Host: hpuxcs2

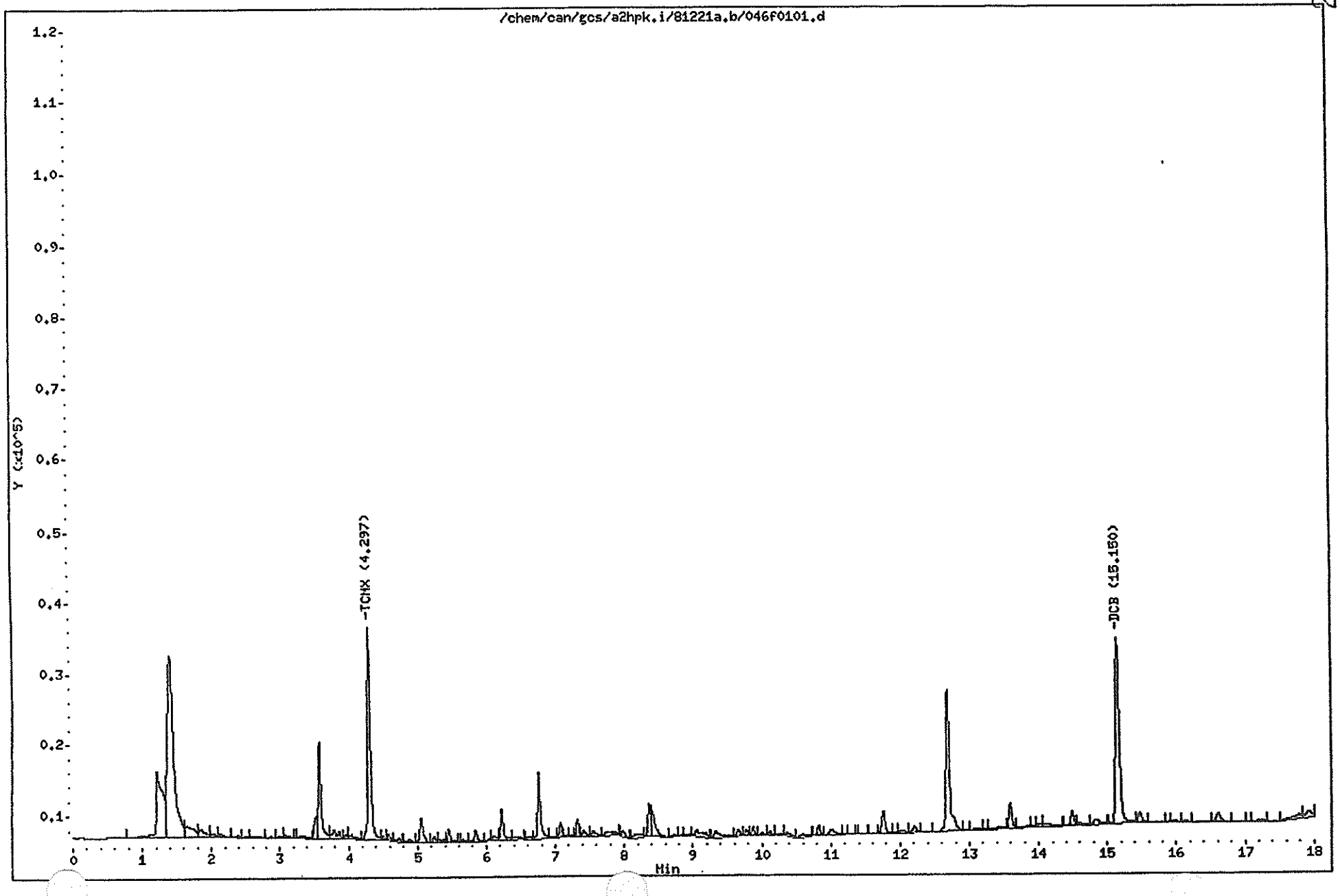
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.297	4.293	0.004	29708	0.01811	6.038	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.150	15.143	0.007	26075	0.01978	6.592	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hpk.i/81221a.b/046f0101.d
Date : 22-DEC-1998 06:32
Client ID: INTRA-LAB BLANK
Sample Info: CP08N101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



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CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A8L080000 110

Sample WT/Vol: 30 / g
Work Order: CP35A101
Dilution factor: 1
Moisture %:NA

Date Received: 12/02/98
Date Extracted:12/08/98
Date Analyzed: 12/15/98

QC Batch: 8342110

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hpk.i/81214a.b/066f0101.d
Report Date: 16-Dec-1998 08:00

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hpk.i/81214a.b/066f0101.d
Lab Smp Id: CP35A101
Inj Date : 15-DEC-1998 13:56
Operator : 1808
Smp Info : CP35A101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hpk.i/81214a.b/kfpcbIII.m
Meth Date : 16-Dec-1998 06:06 a
Cal Date : 06-DEC-1998 20:55
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40
Processing Host: hpuxcs2

Client Smp ID: INTRA-LAB BLANK
Inst ID: a2hpk.i
Quant Type: ESTD
Cal File: 026f0101.d
QC Sample: METHOD BLANK
Compound Sublist: REG.sub
Sample Matrix: SOIL

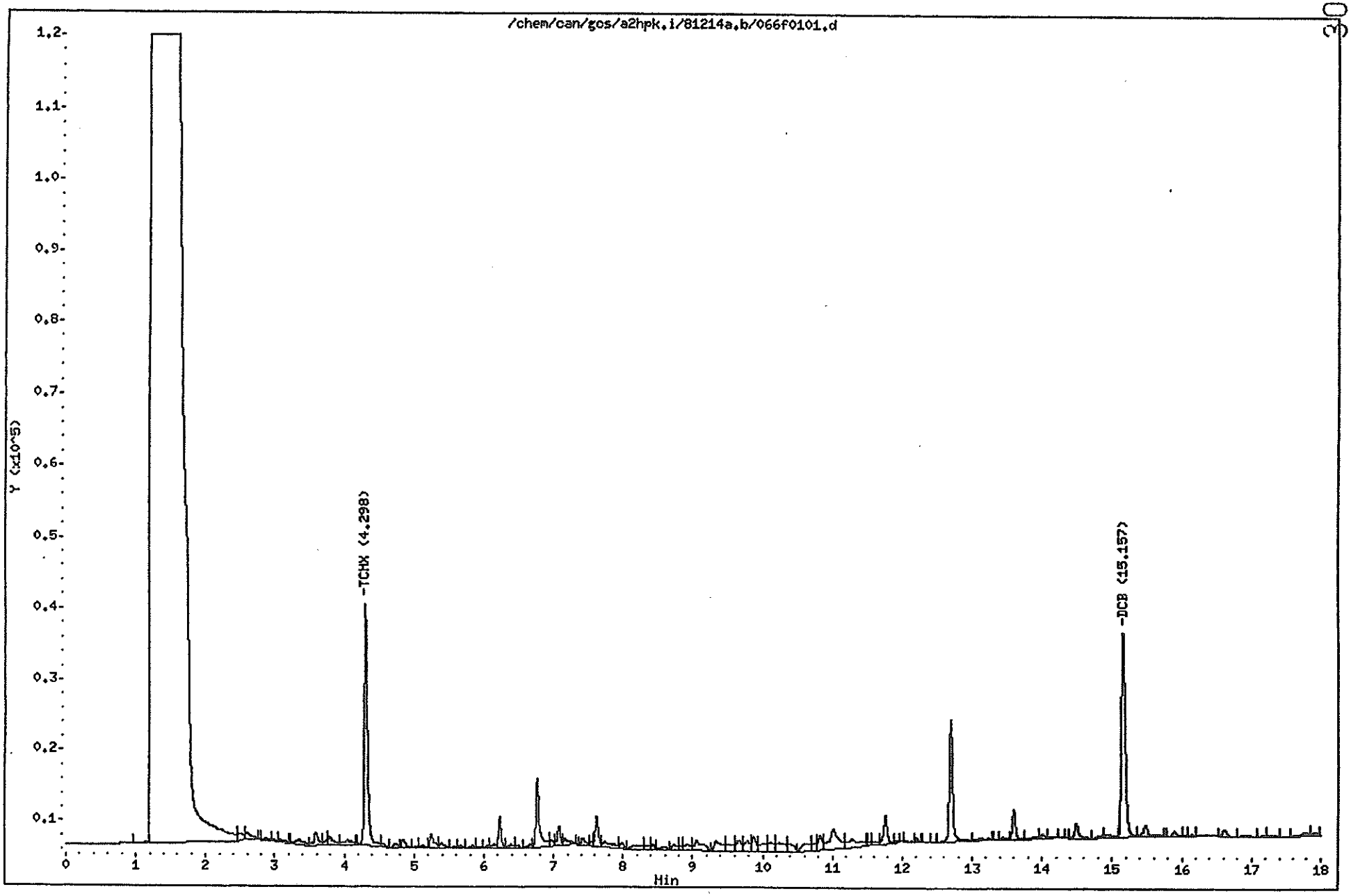
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
4.298	4.298	0.000	33935	0.02069	6.897	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
15.157	15.157	0.000	28653	0.02173	7.244	80.00- 120.00	100.00

File: /chem/can/gcs/a2hpk.i/81214a.b/066f0101.d
Date : 15-DEC-1998 13:56
Client ID: INTRA-LAB BLANK
Sample Info: CP35A101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hpk.i
Operator: 1808
Column diameter: 0.32



301

POLYCHLORINATED BIPHENYLS
INSTRUMENT LOG SHEETS

02 Nov 98 03:38 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81102IC.SEQ

Operator: 0595

Sequence preparation date: 02 Nov 98 03:37 PM

Data File Names: Auto

Data File Subdirectory: 81102IC.B

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	1
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

11-2-98 pmR

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX					KPCB2	1
1	8	HEX					KPCB2	1
1	9	HEX					KPCB2	1
1	10	HEX					KPCB2	1
1	11	1660 C064,,1,1					KPCB2	1
1	12	1660 C065,,1,2					KPCB2	1
1	13	1660 C066,,1,3					KPCB2	1
1	14	1660 C067,,1,4					KPCB2	1
1	15	1660 C068,,1,5					KPCB2	1
1	16	2154 C059,,1,1					KPCB2	1
1	17	2154 C060,,1,2					KPCB2	1
1	18	2154 C061,,1,3					KPCB2	1
1	19	2154 C062,,1,4					KPCB2	1
1	20	2154 C063,,1,5					KPCB2	1
1	21	1248 C054,,1,1					KPCB2	1
1	22	1248 C055,,1,2					KPCB2	1
1	23	1248 C056,,1,3					KPCB2	1
1	24	1248 C057,,1,4					KPCB2	1
1	25	1248 C058,,1,5					KPCB2	1
1	26	1242 C049,,1,1					KPCB2	1
1	27	1242 C050,,1,2					KPCB2	1
1	28	1242 C051,,1,3					KPCB2	1
1	29	1242 C052,,1,4					KPCB2	1
1	30	1242 C053,,1,5					KPCB2	1
1	31	1232 C044,,1,1					KPCB2	1
1	32	1232 C045,,1,2					KPCB2	1
1	33	1232 C046,,1,3					KPCB2	1
1	34	1232 C047,,1,4					KPCB2	1
1	35	1232 C048,,1,5					KPCB2	1
1	36						KPCB2	1
1	37						KPCB2	1
1	38						KPCB2	1
1	39						KPCB2	1
1	40						KPCB2	1
1	41						KPCB2	1
1	42						KPCB2	1
1	43						KPCB2	1
1	44						KPCB2	1
1	45						KPCB2	1
1	46						KPCB2	1
1	47						KPCB2	1

11-2-98 RMR

11-3-98 RMR

Sequence: C:\HPCHEM\2\SEQUENCE\81214A.SEQ

Operator: 0595

Sequence preparation date: 14 Dec 98 03:08 PM

Data File Names: Auto

Data File Subdirectory: 81214A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	1
1	4	1660 C110,,2					KPCB2	1
1	5	2154 C061,,2					KPCB2	1
1	6	1248 C056,,2					KPCB2	1

inj 12-14-98 RLS

Pass f+r

14 Dec 98 03:08 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81214A.SEQ

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	1242 C051,,2] Pass f+r					KPCB2	1
1	8	1232 C046,,2]					KPCB2	1
1	9	CP4PJ101,5					KPCB2	1
1	10	CNX4D11N] z-colr					KPCB2	1
1	11	CP0EH102					KPCB2	1
1	12	CP0EH10H					KPCB2	1
1	13	CP0EH10J					KPCB2	1
1	14	CP0EV102					KPCB2	1
1	15	CP0F0102					KPCB2	1
1	16	CP0F2102					KPCB2	1
1	17	CP0F4102					KPCB2	1
1	18	CP0F7102					KPCB2	1
1	19	HEX					KPCB2	1
1	20	1660 C110,,2] Pass f+r					KPCB2	1
1	21	1660 C110,,2]					KPCB2	1
1	22	CP0F8102					KPCB2	1
1	23	CP0F9102					KPCB2	1
1	24	CP0FA102					KPCB2	1
1	25	CP0FD102					KPCB2	1
1	26	CP0FE102					KPCB2	1
1	27	CP0FF102					KPCB2	1
1	28	CP0FG102					KPCB2	1
1	29	CP0FH102					KPCB2	1
1	30	CP0FK102					KPCB2	1
1	31	CP0FL102					KPCB2	1
1	32	HEX					KPCB2	1
1	33	1660 C110,,2] Pass f					KPCB2	1
1	34	1660 C110,,2]					KPCB2	1
1	35	CP0FM102					KPCB2	1
1	36	CP2CE101					KPCB2	1
1	37	CP2CE102					KPCB2	1
1	38	CNWNN101					KPCB2	1
1	39	CNWNN10J					KPCB2	1
1	40	CNWNN10K					KPCB2	1
1	41	CNWNP101					KPCB2	1
1	42	CP359101					KPCB2	1
1	43	CP359102					KPCB2	1
1	44	CP1VX10D					KPCB2	1
1	45	HEX					KPCB2	1
1	46	1660 C110,,2] Pass f					KPCB2	1
1	47	1660 C110,,2]					KPCB2	1

inj 12-14-98

inj 12-15-98

Sample Log Table

inj 12-15-98

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	48	CP10X104					KPCB2	1
1	49	CP118104					KPCB2	1
1	50	CP120104					KPCB2	1
1	51	CP123104					KPCB2	1
1	52	CP125104					KPCB2	1
1	53	CP0TA101					KPCB2	1
1	54	CP0TA10F					KPCB2	1
1	55	CP0TA10G					KPCB2	1
1	56	CP0TC101					KPCB2	1
1	57	CP0TD101					KPCB2	1
1	58	HEX					KPCB2	1
1	59X	1660 C110,,2					KPCB2	1
1	60	2154 C061,,2					KPCB2	1
1	61	1248 C056,,2					KPCB2	1
1	62	1242 C051,,2					KPCB2	1
1	63X	1232 C046,,2					KPCB2	
1	64	CP0TF101					KPCB2	1
1	65	CP0TG101					KPCB2	1
1	66X	CP35A101					KPCB2	1
1	67	CP35A102					KPCB2	1
1	68	CNXD1101,100					KPCB2	1
1	69X	CNXD2101,500					KPCB2	1
1	70	CNXD3101,500					KPCB2	1
1	71	CNVCQ101,100					KPCB2	1
1	72	CNVCT101					KPCB2	1
1	73	CNVD6101,5					KPCB2	1
1	74	HEX					KPCB2	1
1	75X	1660 C110,,2					KPCB2	1
1	76	1660 C110,,2					KPCB2	1
1	77	1262 C002,,1,1					KPCB2	1
1	78	1262 C002,,1,2					KPCB2	1
1	79	1262 C002,,1,3					KPCB2	1
1	80	1262 C002,,1,4					KPCB2	1
1	81	1262 C002,,1,5					KPCB2	1
1	82	HEX					KPCB2	1
1	83	1660 C110,,2					KPCB2	
1	84	1660 C110,,2					KPCB2	1
1	85						KPCB2	1
1	86						KPCB2	1
1	87						KPCB2	1
1	88						KPCB2	1

Pass f

processed 12-15

pass f

pass f
processed 12-16

16 Dec 98 06:38 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81216A.SEQ

Operator: 0595

Sequence preparation date: 16 Dec 98 06:38 PM

Data File Names: Auto

Data File Subdirectory: 81216A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
	2	HEX					KPCB2	1
1	3	HEX					KPCB2	1
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

12-16-98 [illegible]

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX		12-16-98 PMR			KPCB2	1
1	8	1660 C110,,2 Pass					KPCB2	1
1	9	2154 C061,,2					KPCB2	1
1	10	1248 C056,,2					KPCB2	1
1	11	1242 C051,,2					KPCB2	1
1	12	1232 C046,,2					KPCB2	1
1	13	1262 C002,,1,1					KPCB2	1
1	14	1262 C002,,1,2					KPCB2	1
1	15	1262 C002,,1,3					KPCB2	1
1	16	1262 C002,,1,4					KPCB2	1
1	17	1262 C002,,1,5		12-17-98 PMR			KPCB2	1
1	18	CNVD6101,2 rerun for 62					KPCB2	1
1	19	CNVD6101,5					KPCB2	1
1	20	CNVCQ101,1000					KPCB2	1
1	21	CNXD3101,1000 rerun 1:2					KPCB2	1
1	22	CNW6H101,100					KPCB2	1
1	23	CNW6T101,100					KPCB2	
1	24	CNW6V101,100					KPCB2	1
1	25	CNW6W101,1000					KPCB2	1
1	26	CNW6X101,100					KPCB2	1
1	27	CNW7A101,100					KPCB2	1
1	28	HEX					KPCB2	1
1	29	1660 C110,,2 Pass					KPCB2	1
1	30	1660 C110,,2					KPCB2	1
1	31	CNW7C101,10					KPCB2	1
1	32	CNW7E101 rerun MI 1:5					KPCB2	1
1	33	CNW7G101,100					KPCB2	1
1	34	CNW7H101,100					KPCB2	1
1	35	CNW71101,1000					KPCB2	1
1	36	CNW73101,10 rerun 1:50 MI					KPCB2	1
1	37	CNW74101,100					KPCB2	1
1	38	CNW76101,1000					KPCB2	1
1	39	CNW78101,1000					KPCB2	1
1	40	CP07R101					KPCB2	1
1	41	HEX					KPCB2	1
1	42	1660 C110,,2 Pass					KPCB2	1
1	43	1660 C110,,2					KPCB2	1
1	44	CP07R102					KPCB2	
1	45	CP07R103					KPCB2	1
1	46	CNXA5101,1000					KPCB2	1
1	47	CNXA6101,100					KPCB2	1

ical for 1262 failed rerun

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	48	CNX9X101,5	12-17-98 RMR			KPCB2	1
1	49	HEX				KPCB2	1
1	50	1660 C110,,2 Pass 5				KPCB2	1
1	51	1660 C110,,2				KPCB2	1
1	52					KPCB2	1
1	53					KPCB2	1
1	54					KPCB2	1
1	55					KPCB2	1
1	56					KPCB2	1
1	57					KPCB2	1
1	58					KPCB2	1
1	59					KPCB2	1
1	60					KPCB2	1
1	61					KPCB2	1
1	62					KPCB2	1
1	63					KPCB2	1
1	64					KPCB2	1
1	65					KPCB2	1
1	66					KPCB2	1
1	67					KPCB2	1
1	68					KPCB2	1
1	69					KPCB2	1
1	70					KPCB2	1
1	71					KPCB2	1
1	72					KPCB2	1
1	73					KPCB2	1
1	74					KPCB2	1
1	75					KPCB2	1
1	76					KPCB2	1
1	77					KPCB2	1
1	78					KPCB2	1
1	79					KPCB2	1
1	80					KPCB2	1
1	81					KPCB2	1
1	82					KPCB2	1
1	83					KPCB2	1
1	84					KPCB2	1
1	85					KPCB2	1
1	86					KPCB2	1
1	87					KPCB2	1
1	88					KPCB2	1

Sequence: C:\HPCHEM\2\SEQUENCE\81217A.SEQ

Operator: 0595

Sequence preparation date: 17 Dec 98 05:35 PM

Data File Names: Auto

Data File Subdirectory: 81217A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	
1	4	X 1660 C110,,2 Pass for					KPCB2	1
1	5	X 2154 C061,,2					KPCB2	1
1	6	X 1248 C056,,2					KPCB2	1

inj 12-17-98 BLS

17 Dec 98 05:35 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81217A.SEQ

Sample Log Table

inj 12-17-98

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	1242 C051,,2 Pass 5+r					KPCB2	1
1	8	1232 C046,,2					KPCB2	1
1	9	1262 C002,,1,1					KPCB2	1
1	10	1262 C002,,1,2					KPCB2	1
1	11	1262 C002,,1,3 rerun failed					KPCB2	1
1	12	1262 C002,,1,4					KPCB2	1
1	13	1262 C002,,1,5					KPCB2	1
1	14	CNVD6101,2 rerun for 62					KPCB2	1
1	15	CNVD6101,5					KPCB2	1
1	16	CNVCQ101,1000					KPCB2	1
1	17	CNXD3101,5000 Done 12-17-98 BLS					KPCB2	1
1	18	CNW7E101,5					KPCB2	1
1	19	CNW73101,50					KPCB2	1
1	20	CPAE1101					KPCB2	1
1	21	CPAE1102-rerun pass mis inj.					KPCB2	1
	22	CPA8T102					KPCB2	1
1	23	CPA8W102					KPCB2	1
1	24	HEX					KPCB2	1
1	25	1660 C110,,2 Pass 5					KPCB2	1
1	26	1660 C110,,2					KPCB2	1
1	27	CPA9C102					KPCB2	1
1	28	CPA9C103					KPCB2	1
1	29	CPA9C104					KPCB2	1
1	30	CPA9F102,5					KPCB2	1
1	31	CPA90102					KPCB2	1
1	32	CPA91102,10					KPCB2	1
1	33	CPA92102					KPCB2	1
1	34	CPA96102,5					KPCB2	1
1	35	CPA98102,10					KPCB2	1
1	36	CPA99102,10					KPCB2	1
1	37	HEX					KPCB2	1
1	38	1660 C110,,2 Pass 5					KPCB2	1
1	39	1660 C110,,2					KPCB2	1
1	40	CP0EH202					KPCB2	1
1	41	CP0EH11A					KPCB2	1
1	42	CP0EH11C					KPCB2	1
1	43	CP0EV202					KPCB2	1
1	44	CP0F0202					KPCB2	1
1	45	CP0F2202					KPCB2	1
1	46	CP0F4202					KPCB2	1
1	47	CP0F7202					KPCB2	1

inj 12-18-98 BLS

21 Dec 98 05:19 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81221A.SEQ

Operator: 0595

Sequence preparation date: 21 Dec 98 05:16 PM

Data File Names: Auto

Data File Subdirectory: 81221A

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

inj 12-21-98 BLS

Sample Log Table

Manual Int.; OK!

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	HEX					KPCB2	1
1	8	1660 C110,,2					KPCB2	1
1	9	2154 C061,,2					KPCB2	1
1	10	1248 C056,,2					KPCB2	1
1	11	1242 C051,,2					KPCB2	1
1	12	1232 C046,,2					KPCB2	1
1	13	CPF8N101					KPCB2	1
1	14	CPF8N102					KPCB2	1
1	15	CPA8T202					KPCB2	1
1	16	CPA8W202					KPCB2	1
1	17	CPA9C202					KPCB2	1
1	18	CPA9C105					KPCB2	1
1	19	CPA9C106					KPCB2	1
1	20	CPA9F202,5					KPCB2	1
1	21	CPA90202					KPCB2	1
1	22	CPA91202,10					KPCB2	1
1	23	HEX					KPCB2	1
1	24	1660 C110,,2					KPCB2	1
1	25	1660 C110,,2					KPCB2	1
1	26	CPA92202					KPCB2	1
1	27	CPA96202,5					KPCB2	1
1	28	CPA98202,10					KPCB2	1
1	29	CPA99202,10					KPCB2	1
1	30	CP3EM102					KPCB2	1
1	31	CP4DH101					KPCB2	1
1	32	CP4DH102 RIR					KPCB2	1
1	33	CP3HP102,5					KPCB2	1
1	34	CP3J1102					KPCB2	1
1	35	CP3J2102					KPCB2	1
1	36	CP3J3102					KPCB2	1
1	37	CP3J4102					KPCB2	1
1	38	CP3J5102,10					KPCB2	1
1	39	CP3J8102					KPCB2	1
1	40	HEX					KPCB2	1
1	41	1660 C110,,2					KPCB2	1
1	42	1660 C110,,2					KPCB2	1
1	43	CP3J9102					KPCB2	1
1	44	CP3JC102,10					KPCB2	1
1	45	CP3JE102					KPCB2	1
1	46	CP08N101					KPCB2	1
1	47	CP08N102					KPCB2	1

1254 ok; 1221 ok

inj 12-21-98

Pass f

Pass f

inj 12-22-98

Pass f

processed

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
			Inj 12/22/98 BB				
1	48 X	CP08N103				KPCB2	1
1	49	CNXAC101,20 R/R 1:100 - ACID - Bad Backend				KPCB2	1
1	50 X	CNXAD101,10				KPCB2	1
1	51	CNXAG101,20 R/R 1:50 ACID Bad Back end				KPCB2	1
1	52 X	CNXAJ101,100				KPCB2	1
1	53	HEX				KPCB2	1
1	54 X	1660 C110,,2				KPCB2	1
1	55	1660 C110,,2				KPCB2	1
1	56	CNXAL101,100				KPCB2	1
1	57 X	CNXAN101				KPCB2	1
1	58	CNXAR101				KPCB2	1
1	59	CNXAT101				KPCB2	1
1	60	CNXAW101				KPCB2	1
1	61	CNXC1101				KPCB2	1
1	62	CNXCD101,500				KPCB2	1
1	63	CNXCF101,500				KPCB2	
1	64	CNXCH101				KPCB2	1
1	65 X	CNXCL101				KPCB2	1
1	66	HEX				KPCB2	1
1	67 X	1660 C110,,2 P				KPCB2	1
1	68	2154 C061,,2 P				KPCB2	1
1	69	1248 C056,,2 P				KPCB2	1
1	70	1242 C051,,2 P				KPCB2	1
1	71 X	1232 C046,,2 P				KPCB2	1
1	72 X	CNXCM101,10				KPCB2	1
1	73	CNXCN101,10				KPCB2	1
1	74	CNXCP101,10				KPCB2	1
1	75	CNXCQ101,100				KPCB2	1
1	76	CNXCR101,500				KPCB2	1
1	77 X	CNXD0101				KPCB2	1
1	78	CP37A101				KPCB2	1
1	79	CP37A102,2 Pest Spike				KPCB2	1
1	80	CNXFR102				KPCB2	1
1	81	CNXFR107 Pest Spike				KPCB2	1
1	82	HEX				KPCB2	1
1	83 X	1660 C110,,2 P				KPCB2	1
1	84	1660 C110,,2 — Did not get sent over in target (Lost)				KPCB2	
1	85	CP3HL112 opdate II +608				KPCB2	
1	86	CP9F5101				KPCB2	1
1	87	CP9F5102,2				KPCB2	1
1	88	CP9F5103,2				KPCB2	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Multiplier Amount	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	89	CP4T7102,100 update Inj 12/22/98BB				KPCB2	1
1	90	CPEJP101 Load log8				KPCB2	1
1	91	CPEJP102,10				KPCB2	1
1	92	CPEAR102				KPCB2	1
1	93	CPEAR104,10				KPCB2	1
1	94	CPEAR105,10				KPCB2	1
1	95 X	~~HEX~~ CNXAL101,100 BB 12/23/98				KPCB2	1
1	96	~~1660 C110,,2 F~~ Hex Inj 12/23/98BB				KPCB2	1
1	97 X	1660 C110,,2 F				KPCB2	1
1	98	1660 C110,,2 F				KPCB2	1
1	99					KPCB2	1
1	100					KPCB2	1

Sequence: C:\HPCHEM\2\SEQUENCE\81223C.SEQ

Operator: 0595

Sequence preparation date: 23 Dec 98 05:29 PM

Data File Names: Auto

Data File Subdirectory: 81223C

Part of methods to run: full method

On a barcode mismatch: inject anyway

Comment:

QUANTERRA NORTH CANTON

FRONT COLUMN:RTX-CLP PESTICIDES REAR COLUMN: DB-5.625
FRONT DETECTOR: ECD REAR DETECTOR: ECD
INJECTOR TEMP: 225 DETECTOR TEMP: 300
PROGRAM:
INITIAL TEMP:135C INITIAL TIME: 0.65
RATE 1: 25/M FINAL TEMP: 200 FINAL TIME: 0.75
RATE 2: 8/M FINAL TEMP: 280 FINAL TIME: 4.00
INJECTION AMOUNT: KPCB2-2UL KPCB24UL-4UL

Sequence Table

Inj.	Seq. Line	Cal. Line	Method Name	From Vial	To Vial	Inj/ Vial
FRONT						
	1					
REAR						
	1		KPCB2	1	100	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
FRONT								
1								
REAR								
1	1	HEX					KPCB2	1
1	2	HEX					KPCB2	
1	3	HEX					KPCB2	
1	4	HEX					KPCB2	1
1	5	HEX					KPCB2	1
1	6	HEX					KPCB2	1

Inj 12-23-98 BLS

23 Dec 98 05:29 PM
Sequence: C:\HPCHEM\2\SEQUENCE\81223C.SEQ

Sample Log Table

inj 12-23-98

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
1	7	1660 C110,,2					KPCB2	1
1	8	2154 C061,,2					KPCB2	1
1	9	1248 C056,,2					KPCB2	1
1	10	1242 C051,,2					KPCB2	1
1	11	1232 C046,,2					KPCB2	1
1	12	CP4DC102					KPCB2	1
1	13	CP4DH102					KPCB2	1
1	14	CNXAC101,100					KPCB2	1
1	15	CNXAG101,50					KPCB2	1
1	16	CPHV9102					KPCB2	1
1	17	CPHVA102,10					KPCB2	1
1	18	CPHVC102,10					KPCB2	1
1	19	CPHVD102,10					KPCB2	1
1	20	CPHVE102,50					KPCB2	1
1	21	CPJ0X101					KPCB2	1
1	22	HEX					KPCB2	1
1	23	1660 C110,,2					KPCB2	1
1	24	1660 C110,,2					KPCB2	1
1	25	CPJ0X102					KPCB2	1
1	26	CPJ0X103					KPCB2	1
1	27	CP9VX103					KPCB2	1
1	28	CPA01103,10					KPCB2	1
1	29	CPGFP101					KPCB2	1
1	30	CPGFP102					KPCB2	1
1	31	CPGFP103					KPCB2	1
1	32	CP4DJ101					KPCB2	1
1	33	CP4DJ102					KPCB2	1
1	34	CP3JG102,20					KPCB2	1
1	35	HEX					KPCB2	1
1	36	1660 C110,,2					KPCB2	1
1	37	1660 C110,,2					KPCB2	1
1	38	CP3JG106,20					KPCB2	1
1	39	CP3JG107,20					KPCB2	1
1	40	CP3JH102					KPCB2	1
1	41	CP3JK102					KPCB2	1
1	42	CP3JW102					KPCB2	1
1	43	CP3K4102					KPCB2	1
1	44	CP3K6102					KPCB2	1
1	45	CP3K7102					KPCB2	1
1	46	CP3KN102,5					KPCB2	1
1	47	CP3KQ102					KPCB2	1

Pass f

Pass f

inj 12-24-98

Pass f

POLYCHLORINATED BIPHENYLS
ORGANIC EXTRACTION
LOG SHEETS

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:59

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 100001 Walsh Cooper
MM Walsh Cooper
NP Walsh Cooper
Concentrationist: 009625 Lee J. Nelmes

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

Reviewer/Date: SALMONSR / 12/10/98

PCBs (8082)
SONICATION w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-014 CNW6H-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-022 CNW6T-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-023 CNW6V-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-024 CNW6W-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-025 CNW6X-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-031 CNW7A-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-032 CNW7C-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:59

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/16/98	A8L020132-033 CNW7E-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-034 CNW7G-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-035 CNW7H-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-026 CNW71-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-027 CNW73-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-028 CNW74-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-029 CNW76-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	12/16/98	A8L020132-030 CNW78-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-002 CNXA5-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-003 CNXA6-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/10/98
Time: 8:48:59

****
* QC BATCH: 8338112 *
****

PREP DATE: 12/04/98
COMP DATE: 12/04/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-001 CNX9X-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-01B		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-02C		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 10PPM #3491 1.0ML 2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L040000-112 CP07R-1-03L	DR	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1.0ML 2/.2 #3529
COMMENTS:															

DCM #M38270 ACE #H451-KXKC HEX #M22300 NA2S04 #8024-KXRR
S/S BY C.W. DONE AS SOXHLETS

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
*

NUMBER OF WORK ORDERS IN BATCH: 21

322

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/13/98
Time: 17:55:03

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 001163 Donny E. Williamson
100001 Walsh Cooper
MM Walsh Cooper
Concentrationist: 009625 Lee J. Nelmes
990005 Charles L. Miller

****
* QC BATCH: 8338126 *
****

PREP DATE: 12/04/98
COMP DATE: 12/05/98

Reviewer/Date: NELMESL / 12/13/98

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-004 CNXAC-1-01	D	63	QH	SOLID	30.05g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-005 CNXAD-1-01	D	63	QH	SOLID	30.17g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-006 CNXAG-1-01	D	63	QH	SOLID	30.16g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-007 CNXAJ-1-01	D	63	QH	SOLID	30.04g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-008 CNXAL-1-01	D	63	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-009 CNXAN-1-01	D	63	QH	SOLID	30.17g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-010 CNXAR-1-01	D	63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/13/98
Time: 17:55:03

QC BATCH: 8338126

PREP DATE: 12/04/98
COMP DATE: 12/05/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJT	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-011 CNXAT-1-01	D	63	QH	SOLID	30.15g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-012 CNXAW-1-01	D	63	QH	SOLID	30.04g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-014 CNXCD-1-01	D	63	QH	SOLID	30.09g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-015 CNXCF-1-01	D	63	QH	SOLID	30.02g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-016 CNXCH-1-01	D	63	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-017 CNXCL-1-01	D	63	QH	SOLID	30.06g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-018 CNXCM-1-01	D	63	QH	SOLID	30.14g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-019 CNXCN-1-01	D	63	QH	SOLID	30.18g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-020 CNXCP-1-01	D	63	QH	SOLID	30.14g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-021 CNXCQ-1-01	D	63	QH	SOLID	30.18g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/13/98
Time: 17:55:03

****
* QC BATCH: 8338126 *
****

PREP DATE: 12/04/98
COMP DATE: 12/05/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-022 CNXCR-1-01	D	63	QH	SOLID	30.07g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-013 CNXC1-1-01	D	63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-023 CNXD0-1-01	D	63	QH	SOLID	30.06g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	0/00/00	A8L040000-126 CP08N-1-01B		63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	0/00/00	A8L040000-126 CP08N-1-02C		63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML 10PPM #3491 1ML .2/.2 #3529
COMMENTS:															
12/16/98	0/00/00	A8L040000-126 CP08N-1-03L	DR	63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML 10PPM #3491 1ML .2/.2 #3529
COMMENTS:															

DCM# M38270 ACE# H451-KXRD NA2SO4# 8024-KXRR HEX# M22300
S/S BY DW

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 23

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/09/98
Time: 21:39:16

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: NP
001163 Donny E. Williamson

Concentrationist: 009625 Lee J. Nelmes
JA Lee J. Nelmes

Reviewer/Date: NELMESL / 12/09/98

****
* QC BATCH: 8342110 *
****

PREP DATE: 12/08/98
COMP DATE: 12/09/98

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/98	12/17/98	A8L030146-024 CNXD1-1-01	D	63	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-025 CNXD2-1-01	D	63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/16/98	12/17/98	A8L030146-026 CNXD3-1-01	D	63	QH	SOLID	30.17g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-036 CP0TA-1-0FS	DR	63	QH	SOLID	30.14g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML 10PPM #3491 1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-036 CP0TA-1-0GD	DR	63	QH	SOLID	30.10g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML 10PPM #3491 1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-036 CP0TA-1-01	DR	63	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-037 CP0TC-1-01	DR	63	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 12/09/98
Time: 21:39:16

QC BATCH: 8342110

PREP DATE: 12/08/98
COMP DATE: 12/09/98

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/15/98	12/14/98	A8L040127-038 CP0TD-1-01	DR	63	QH	SOLID	30.14g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-039 CP0TF-1-01	DR	63	QH	SOLID	30.03g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	12/14/98	A8L040127-040 CP0TG-1-01	DR	63	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L080000-110 CP35A-1-01B		63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML .2/.2 #3529
COMMENTS:															
12/15/98	0/00/00	A8L080000-110 CP35A-1-02C		63	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	200.0	HEXANE	50.0	1ML 10PPM #3491 1ML .2/.2 #3529
COMMENTS:															

DCM# M38270 ACE# H451-KXRD NA2SO4# 8024-KXRB HEX# M22300
S/S BY DW

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
:

NUMBER OF WORK ORDERS IN BATCH: 12

GENERAL CHEMISTRY
LOG SHEETS

			Quanterra, North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	% SOLIDS				Batch	8338290
Prep Date	12/4/98	Time In	3.00PM		Analyst	CKK/EKD
Anal date	12/7/98	Time Out	11:00		RL	0.1%
Sample	Tare	Sample	Final	diff	Result TS	Result MS
Id	wt	g	wt	g	%	%
BLANK	1.0601	0	1.0589	-0.0012	ND	ND
CNX9X	1.0596	1.0843	2.0746	1.015	93.609	6.391
CNXA5	1.0651	1.0437	2.0348	0.9697	92.910	7.090
CNXA6	1.0501	1.1229	2.0773	1.0272	91.477	8.523
CNXAC	1.0538	1.0676	2.0231	0.9693	90.792	9.208
CNXAD	1.0713	1.2371	2.2109	1.1396	92.119	7.881
CNXAG	1.0402	1.1501	2.0886	1.0484	91.157	8.843
CNXAJ	1.0628	1.1304	2.0965	1.0337	91.446	8.554
CNXAL	1.0509	1.1649	2.0774	1.0265	88.119	11.881
CNXAN	1.0587	1.2234	2.1332	1.0745	87.829	12.171
CNXAR	1.0673	1.0921	2.016	0.9487	86.869	13.131
CNXAR-X	1.0432	1.0998	1.9968	0.9536	86.707	13.293
CNXAT	1.0617	1.0159	1.9131	0.8514	83.807	16.193
CNXAW	1.0677	1.3717	2.3392	1.2715	92.695	7.305
CNXC1	1.0697	1.1521	2.1222	1.0525	91.355	8.645
CNXCD	1.0499	1.3219	2.2338	1.1839	89.560	10.440
CNXCF	1.0404	1.0918	1.9865	0.9461	86.655	13.345
CNXCH	1.0494	1.0971	2.0072	0.9578	87.303	12.697
CNXCL	1.0703	1.2245	2.1396	1.0693	87.325	12.675
CNXCM	1.0621	1.2605	2.2233	1.1612	92.122	7.878
CNXCN	1.0784	1.6742	2.6363	1.5579	93.053	6.947
CNXCP	1.0514	1.4189	2.3113	1.2599	88.794	11.206
CNXCP-X	1.0714	1.6666	2.5568	1.4854	89.128	10.872
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): Percent Solids

Batch(es): 8338290

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Calibration/standardization performed per SOP and within specified limits?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?			✓	
B. Sample Results				
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	
2. All reported results bracketed by in control QC ?	✓			
3. Sample analyses done within holding time ?	✓			
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ? *(LCSD, where applicable)*			✓	
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			
3. MS/MSD run at required frequency and within limits ? MS/MSD reported properly and calculated correctly?			✓	
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			
D. Other				
1. Are all nonconformances documented appropriately ?	✓			
2. Calculations checked for error ?	✓			
3. Transcriptions checked for error ?	✓			
4. All client/project specific requirements met ?	✓			
5. Date/time of analysis verified as correct ?	✓			
6. Units verified as correct?	✓			
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	

Level I Analyst: Erin Drummond Date: 12/7/98

Comments:

Level II Reviewer: [signature] Date: 921208

Comments:

			Quanterra, North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	% SOLIDS				Batch	8338292
Prep Date	12/4/98	Time In	3.00PM		Analyst	CKK/EKD
Anal date	12/7/98	Time Out	12:00		RL	0.1 %
Sample	Tare	Sample	Final	diff	Result TS	Result MS
Id	wt	g	wt	g	%	%
BLANK	1.0623	0	1.0614	-0.0009	ND	ND
CNXCQ	1.0657	1.1739	2.2107	1.145	97.538	2.462
CNXCR	1.0502	1.1662	2.1097	1.0595	90.851	9.149
CNXDO	1.0705	1.1928	2.1504	1.0799	90.535	9.465
CNXD1	1.0698	1.3777	2.3296	1.2598	91.442	8.558
CNXD2	1.0625	1.2359	2.226	1.1635	94.142	5.858
CNXD3	1.0387	1.3415	2.245	1.2063	89.922	10.078
CNXD3-X	1.0543	1.7689	2.6544	1.6001	90.457	9.543
CN9RG	1.0451	5.3738	6.4079	5.3628	99.795	0.205
CNHXF	1.0447	5.1928	5.3617	4.317	83.134	16.866
CNHXG	1.0403	5.3994	5.0561	4.0158	74.375	25.625
CNHXH	1.0556	5.0905	4.9186	3.863	75.886	24.114
CNHXM	1.0633	5.1753	5.1365	4.0732	78.705	21.295
CNHXL	1.0382	5.4543	5.0338	3.9956	73.256	26.744
CNHXK	1.0393	5.3234	4.5925	3.5532	66.747	33.253
CNJMP	1.0671	5.4767	4.619	3.5519	64.855	35.145
CNJMR	1.0389	5.2189	5.0404	4.0015	76.673	23.327
CNJMT	1.0712	5.7877	5.2844	4.2132	72.796	27.204
CNJPO	1.0674	5.2299	5.618	4.5506	87.011	12.989
CNJPH	1.0669	5.3668	5.8641	4.7972	89.387	10.613
CNJPM	1.0641	5.5374	6.1781	5.114	92.354	7.646
CNJPP	1.0604	5.0836	5.637	4.5766	90.027	9.973
CNJPP-X	1.0709	5.1971	5.6776	4.6067	88.640	11.360
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): Percent Solids

Batch(es): 8338292

Review Items

A. Calibration/Instrument Run QC	Yes	No	N/A	2nd Level
1. Calibration/standardization performed per SOP and within specified limits?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	
3. ICB/CCB analyzed at appropriate frequency and within +/- RL ?			✓	
B. Sample Results				
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	
2. All reported results bracketed by in control QC ?	✓			
3. Sample analyses done within holding time ?	✓			
C. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits ? *(LCSD, where applicable)*			✓	
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			
3. MS/MSD run at required frequency and within limits ? MS/MSD reported properly and calculated correctly?			✓	
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			
D. Other				
1. Are all nonconformances documented appropriately ?	✓			
2. Calculations checked for error ?	✓			
3. Transcriptions checked for error ?	✓			
4. All client/project specific requirements met ?	✓			
5. Date/time of analysis verified as correct ?	✓			
6. Units verified as correct?	✓			
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓

Level I Analyst: Erin Drummond Date: 12/7/98

Comments:

Level II Reviewer: P. [illegible] Date: 981208

Comments:

COOLER RECEIPT FORM

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client: CRA Project: Caterpillar Quote#: _____
Cooler Received on: 12-3-98 Opened on: 12-3-98 by: Jenny Grand (Signature)

Fedx [X] Client Drop Off [ ] UPS [ ] Airborne [ ]
Other: _____

Cooler [ ] Safe [ ] Foam Box [ ] Client Cooler [X] Other: _____
Quanterra Shipper No#: _____

1. Were custody seals on the outside of the cooler and intact? Yes [X] No [X] JG 12/8/2003
   If YES, Quantity 1 Location over lid
   Were the custody seals signed and dated? Yes [X] No [ ] NA [X] JG 12/8/2003
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
Peanuts [ ] Bubble Wrap [ ] Vermiculite [ ] Foam [ ] None [X] Other : _____
6. Cooler temperature upon receipt 0.1 °C (see back of form for multiple coolers/temp)
METHOD: Temperature Vial [ ] Coolant [X] Against Bottles [ ]
COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [ ]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [X]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [ ] NA [X]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]
Contacted PM _____ Date: _____ by: _____ via Voice Mail [ ] Verbal [ ] Other [ ]
Concerning: _____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
√	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ ° C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

INTERNAL CHAIN-OF-CUSTODY

RSR280

Client: 1628

Lot #: A8L030146

Case Number/SDG: 13307

Storage Location: W19

Quanterra Incorporated
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
CNX9X	GIRARDJ	12/03/98	Yes		Storage	
CNXA5	GIRARDJ	12/03/98	Yes		Storage	
CNXA6	GIRARDJ	12/03/98	Yes		Storage	
CNXAC	GIRARDJ	12/03/98	Yes		Storage	
CNXAD	GIRARDJ	12/03/98	Yes		Storage	
CNXAG	GIRARDJ	12/03/98	Yes		Storage	
CNXAJ	GIRARDJ	12/03/98	Yes		Storage	
CNXAL	GIRARDJ	12/03/98	Yes		Storage	
CNXAN	GIRARDJ	12/03/98	Yes		Storage	
CNXAR	GIRARDJ	12/03/98	Yes		Storage	
CNXAT	GIRARDJ	12/03/98	Yes		Storage	
CNXAW	GIRARDJ	12/03/98	Yes		Storage	
CNXC1	GIRARDJ	12/03/98	Yes		Storage	
CNXCD	GIRARDJ	12/03/98	Yes		Storage	
CNXCF	GIRARDJ	12/03/98	Yes		Storage	
CNXCH	GIRARDJ	12/03/98	Yes		Storage	
CNXCL	GIRARDJ	12/03/98	Yes		Storage	
CNXCM	GIRARDJ	12/03/98	Yes		Storage	
CNXCN	GIRARDJ	12/03/98	Yes		Storage	
CNXCP	GIRARDJ	12/03/98	Yes		Storage	
CNXCQ	GIRARDJ	12/03/98	Yes		Storage	
CNXCR	GIRARDJ	12/03/98	Yes		Storage	
CNXD0	GIRARDJ	12/03/98	Yes		Storage	

RSR280

Quanterra Incorporated
Sample Control Record

Client: 1628

Lot #: A8L030146

Case Number/SDG: 13307

Storage Location: W19

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
CNXD1	GIRARDJ	12/03/98	Yes		Storage	
CNXD2	GIRARDJ	12/03/98	Yes		Storage	
CNXD3	GIRARDJ	12/03/98	Yes		Storage	

LOT NUMBER	SAMPLE	SAMPLE SUFFIX	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	DATE OF TRANSFER	TRANSFERRED BY	ANALYSIS DATE	ANALYST
A8L030146	1		CNX9X101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L030146	2		CNXA5101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L030146	3		CNXA6101	GC8082_S	12/04/98	Eric Miller	12/10/98	Riley Salmons	12/17/98	Raymond Risden
A8L030146	4		CNXAC101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/23/98	Raymond Risden
A8L030146	5		CNXAD101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	6		CNXAG101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/23/98	Raymond Risden
A8L030146	7		CNXAJ101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	8		CNXAL101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	9		CNXAN101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	10		CNXAR101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	11		CNXAT101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	12		CNXAW101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	13		CNXC1101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	14		CNXCD101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	15		CNXCF101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	16		CNXCH101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	17		CNXCL101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	18		CNXCM101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	19		CNXCN101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	20		CNXCP101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	21		CNXCQ101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	22		CNXCR101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	23		CNXD0101	GC8082_S	12/04/98	Thomas Fausnight	12/13/98	Lee Nelmes	12/22/98	Raymond Risden
A8L030146	24		CNXD1101	GC8082_S	12/08/98	Thomas Fausnight	12/09/98	Lee Nelmes	12/15/98	Raymond Risden
A8L030146	25		CNXD2101	GC8082_S	12/08/98	Thomas Fausnight	12/09/98	Lee Nelmes	12/15/98	Raymond Risden

LOT NUMBER	SAMPLE	SAMPLE SUFFIX	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	DATE OF TRANSFER	TRANSFERRED BY	ANALYSIS DATE	ANALYST
ABL030146	26		CNXD31D1	GC8082_S	12/08/98	Thomas Fausnight	12/09/98	Lee Welmes	12/17/98	Raymond Risden

*** END OF REPORT ***

LOT NUMBER	SAMPLE	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	ANALYSIS DATE	ANALYST
A8L030146	1	CNXX9X102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	2	CNXA5102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	3	CNXA6102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	4	CNXAC102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	5	CNXAD102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	6	CNXAG102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	7	CNXAJ102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	8	CNXAL102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	9	CNXAN102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	10	CNXAR102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	11	CNXAT102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	12	CNXAW102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	13	CNXC1102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	14	CNXCD102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	15	CNXCF102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	16	CNXCH102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	17	CNXCL102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	18	CNXCM102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	19	CNXCN102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	20	CNXCP102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	21	CNXCQ102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	22	CNXCR102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	23	CNXD0102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	24	CNXD1102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond
A8L030146	25	CNXD2102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond

LOT NUMBER	SAMPLE	LAB ID	ANALYSIS TYPE	PREP DATE	PREP. ANALYST	ANALYSIS DATE	ANALYST
ABL030146	26	CN003102	TS	12/04/98	Kumudu Kulasekere	12/07/98	Erin Drummond

*** END OF REPORT ***

D

CHAIN-OF-CUSTODY

p1 of 2

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): QuanTerra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCBs	REMARKS
	12/2/98		S-120298-JH-036	soil	1	✓	Extract & Archive
			037		1	✓	
			038		1	✓	
			039		1	✓	
			040		1	✓	
			041		1	✓	
			042		1	✓	
			043		1	✓	
			044		1	✓	
			045		1	✓	
			046		1	✓	
			047		1	✓	
			048		1	✓	
			049		1	✓	
			050		1	✓	
			TOTAL NUMBER OF CONTAINERS		15		

RELINQUISHED BY: ① John Hargens	DATE: 12/2/98 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 808686399248

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Jerry Guard
DATE: 98/12/05 TIME: 9:45

4046

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

p 2 of 2

CRA
CONESTOGA–ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380–9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	12/2/98		S-120298-SH-051	Soil	1	✓	Extract & Archive
			052		1	✓	
			053		1	✓	
			054		1	✓	
			055		1	✓	
			056		1	✓	
			057		1	✓	
			058		1	✓	
			059		1	✓	
			060		1	✓	
			061		1	✓	

TOTAL NUMBER OF CONTAINERS 11 +15 = 26

RELINQUISHED BY: ① John Hargens	DATE: 12/2/98 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 808686399248

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Jenny Guard
DATE: 98/12/03 TIME: 9:45

4047

1001(FOR OCT 24/96–REV.0–(C)(F–01)

Quanterra Incorporated
4101 Shuffel Drive, NW
North Canton, Ohio 44720

330 497-9396 Telephone
330 497-0772 Fax

MAR 1 9 1999
RECEIVED

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR MAPLETON

Lot #: A9B240116

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Amy L. McCormick
Project Manager

March 15, 1999

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General Chemistry
- **Log Sheets**

Cooler Receipt Form
Internal Chain-of-Custody
Chain-of-Custody

2012

CASE NARRATIVE

CASE NARRATIVE

The following report contains the analytical results for twenty solid samples submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar-Mapleton Site, project number 13307. The samples were received February 24, 1999, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Results were provided by facsimile transmission to Steve Day on March 10, 1999. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

GC SEMIVOLATILES

Due to insufficient sample volume, the client requested matrix spike/matrix spike duplicate on sample JH-078 could not be performed.

QA/QC PROGRAM ELEMENTS

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

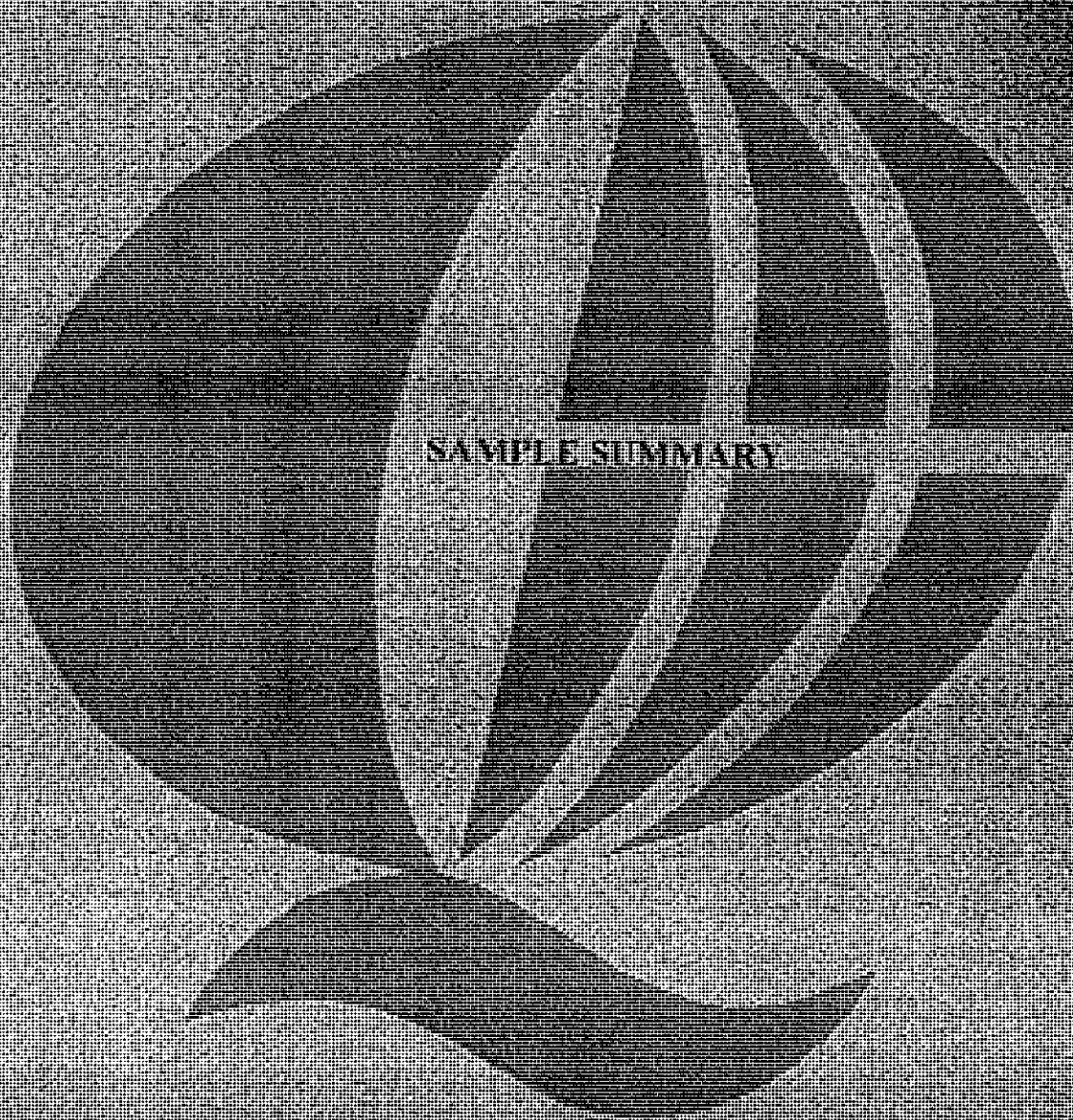
At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*



SAMPLE SUMMARY

SAMPLE SUMMARY

A9B240116

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CR2RC	001	S-022399-JH-062	02/23/99	
CR2RE	002	S-022399-JH-063	02/23/99	
CR2RF	003	S-022399-JH-064	02/23/99	
CR2RG	004	S-022399-JH-065	02/23/99	
CR2RH	005	S-022399-JH-066	02/23/99	
CR2RJ	006	S-022399-JH-067	02/23/99	
CR2RL	007	S-022399-JH-068	02/23/99	
CR2RM	008	S-022399-JH-069	02/23/99	
CR2RN	009	S-022399-JH-070	02/23/99	
CR2RP	010	S-022399-JH-071	02/23/99	
CR2RR	011	S-022399-JH-072	02/23/99	
CR2RT	012	S-022399-JH-073	02/23/99	
CR2RV	013	S-022399-JH-074	02/23/99	
CR2RX	014	S-022399-JH-075	02/23/99	
CR2T0	015	S-022399-JH-076	02/23/99	
CR2T1	016	S-022399-JH-077	02/23/99	
CR2T2	017	S-022399-JH-078	02/23/99	
CR2T4	018	S-022399-JH-079	02/23/99	
CR2T5	019	S-022399-JH-080	02/23/99	
CR2T6	020	S-022399-JH-081	02/23/99	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

07

METHOD REFERENCE

ANALYTICAL METHODS SUMMARY

A9B240116

PARAMETER	ANALYTICAL METHOD
PCBs	SW846 8082
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

POLYCHLORINATED BIPHENYLS
QC SUMMARY DATA

SW846 8082 SURROGATE RECOVERY

La ame: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN QESSDG:

Lot #: A9B240116

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-022399-JH-062	86 D	152D	01
02	S-022399-JH-063	76 D	129D	00
03	S-022399-JH-064	78	104	00
04	S-022399-JH-065	55	111	00
05	S-022399-JH-066	83 D	340D	01
06	S-022399-JH-067	289D	186D	02
07	S-022399-JH-068	544D	180D	02
08	S-022399-JH-069	440D	182D	02
09	S-022399-JH-070	82 D	166D	01
10	S-022399-JH-071	71	102	00
11	S-022399-JH-072	287D	359D	02
12	S-022399-JH-073	52	105	00
13	S-022399-JH-074	81	110	00
14	S-022399-JH-075	55	97	00
15	022399-JH-076	27	77	00
16	S-022399-JH-077	81	105	00
17	S-022399-JH-078	130D	370D	02
18	S-022399-JH-079	927D	305D	02
19	S-022399-JH-080	382D	178D	02
20	S-022399-JH-081	124D	301D	02
21	METHOD BLK. CR30K101	83	120	00
22	LCS CR30K103	74	123	00
23	LCSD CR30K104	69	130	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-129)
SRG02	= Decachlorobiphenyl	(10-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: QUANTERRA Client: CONESTOGA-ROVERS & ASSOCIATES INC

Lab Code: QESCAN SDG No: .

Lot #: A9B240000 WO #: CR30K103
BATCH: 9055185

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	270	81	60- 133	
Aroclor 1260	330	360	107	59- 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: QUANTERRA

Client: CONESTOGA-ROVERS & ASSOCIATES INC

La. ode: QESCAN

SDG No: -

Lot #: A9B240000

WO #: CR30K104
BATCH: 9055185

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	290	87	60- 133	
Aroclor 1260	330	370	112	59- 129	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

C. ENTS:

FORM III

BLANK WORKORDER NO.

CR30K101

SW846 8082 METHOD BLANK SUMMARY

Lab Name: QUANTERRA

Lab Code: QESCAN

SDG Number:

Lab File ID: f048f4801

Lot Number: A9B240116

Matrix: SOLID

Extraction Method: 3550

Date Extracted: 02/24/99

Date Analyzed(1): 03/06/99

Date Analyzed(2): N/A

Time Analyzed(1): 04:43

Time Analyzed(2): N/A

Instrument ID(1): P2

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-022399-JH-062	CR2RC101	03/05/99	N/A
02	S-022399-JH-063	CR2RE101	03/05/99	N/A
03	S-022399-JH-064	CR2RF101	03/05/99	N/A
04	S-022399-JH-065	CR2RG101	03/05/99	N/A
05	S-022399-JH-066	CR2RH101	03/05/99	N/A
06	S-022399-JH-067	CR2RJ101	03/05/99	N/A
07	S-022399-JH-068	CR2RL101	03/05/99	N/A
08	S-022399-JH-069	CR2RM101	03/05/99	N/A
09	S-022399-JH-070	CR2RN101	03/05/99	N/A
10	S-022399-JH-071	CR2RP101	03/05/99	N/A
11	S-022399-JH-072	CR2RR101	03/06/99	N/A
12	S-022399-JH-073	CR2RT101	03/06/99	N/A
13	S-022399-JH-074	CR2RV101	03/06/99	N/A
14	S-022399-JH-075	CR2RX101	03/06/99	N/A
15	S-022399-JH-076	CR2T0101	03/06/99	N/A
16	S-022399-JH-077	CR2T1101	03/06/99	N/A
17	S-022399-JH-078	CR2T2101	03/06/99	N/A
18	S-022399-JH-079	CR2T4101	03/06/99	N/A
19	S-022399-JH-080	CR2T5101	03/06/99	N/A
20	S-022399-JH-081	CR2T6101	03/06/99	N/A
21	CHECK SAMPLE	CR30K103 C	03/06/99	N/A
22	DUPLICATE CHECK	CR30K104 L	03/06/99	N/A

COMMENTS:

FORM IV

POLYCHLORINATED BIPHENYLS
SAMPLE DATA

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 001

Sample WT/Vol: 30 / g
Work Order: CR2RC101
Dilution factor: 10
Moisture %:13

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-062

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	380	U
11104-28-2	Aroclor 1221	380	U
11141-16-5	Aroclor 1232	380	U
53469-21-9	Aroclor 1242	550	
12672-29-6	Aroclor 1248	380	U
11097-69-1	Aroclor 1254	380	U
11096-82-5	Aroclor 1260	380	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f022f2201.d
Report Date: 08-Mar-1999 12:28

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f022f2201.d
Lab Smp Id: CR2RC101 Client Smp ID: S-022399-JH-062
Inj Date : 05-MAR-1999 21:29
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RC101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 22
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	1597755	0.00172	5.748	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.048	2.095	-0.047	575563	0.05290	176.3	80.00- 120.00	100.00(M)
2.352	2.352	0.000	1857081	0.09899	330.0	124.30- 207.17	322.65
2.484	2.501	-0.017	1712718	0.13771	459.0	71.73- 119.55	297.57
2.695	2.695	0.000	4766228	0.12628	420.9	230.56- 384.27	828.10
3.113	3.113	0.000	4934375	0.29827	994.2	104.79- 174.65	857.31
Average of Peak Concentrations =					476.1		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.352	2.349	0.003	1857081	0.10711	623.7	80.00- 120.00	100.00(M)
2.695	2.694	0.001	4766228	0.19989	666.3	161.32- 268.53	256.65
2.953	2.950	0.003	5676698	0.22483	749.4	119.97- 199.95	305.00
3.113	3.112	0.001	4934375	0.17744	591.4	186.75- 311.24	265.71

BLS 3-8-9
possible
of 1242+12
pattern best
fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f022f2201.d
Report Date: 08-Mar-1999 12:28

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.127	4.126	0.001	1902105	0.12795	426.5	101.05- 168.42	102.42
Average of Peak Concentrations =					611.5		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	1490532	0.00304	10.14	80.00- 120.00	100.00

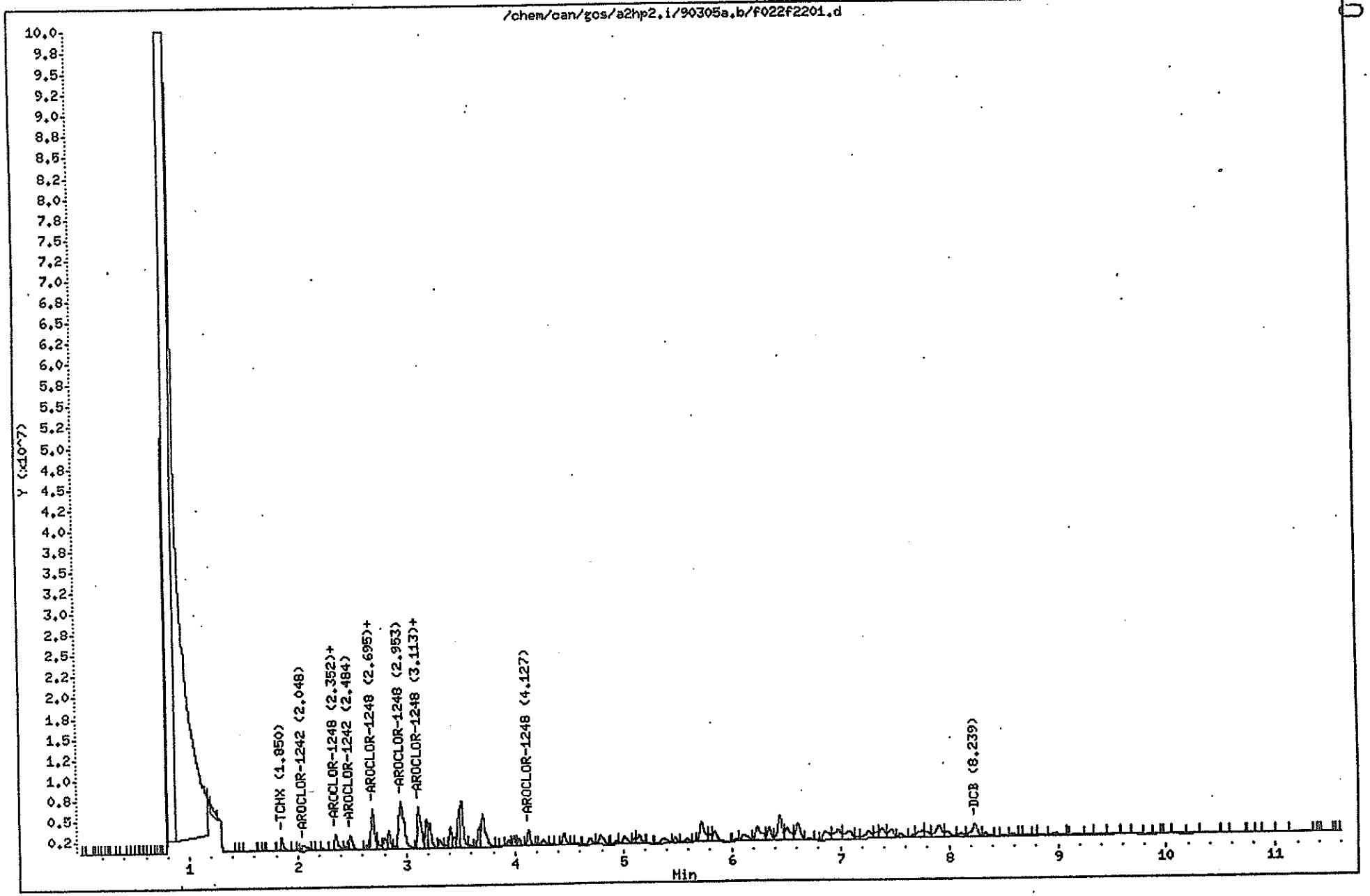
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gos/a2hp2.i/90305a.b/f022f2201.d
Date : 05-MAR-1999 21:29
Client ID: S-022399-JH-062
Sample Info: CR2RC101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



U18

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 002

Sample WT/Vol: 30.19 / g
Work Order: CR2RE101
Dilution factor: 10
Moisture %:11

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-063

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	370	U
11104-28-2	Aroclor 1221	370	U
11141-16-5	Aroclor 1232	370	U
53469-21-9	Aroclor 1242	620	
12672-29-6	Aroclor 1248	370	U
11097-69-1	Aroclor 1254	370	U
11096-82-5	Aroclor 1260	370	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f023f2301.d
Report Date: 08-Mar-1999 12:28

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f023f2301.d
Lab Smp Id: CR2RE101 Client Smp ID: S-022399-JH-063
Inj Date : 05-MAR-1999 21:45
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RE101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 23
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.190	initial volume

CONCENTRATIONS

RT	EXP RT	DLT RT	RESPONSE	ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	1412658	0.00152	5.050	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	1091029	0.10027	332.1	80.00- 120.00	100.00(M)
2.353	2.352	0.001	3383461	0.18036	597.4	124.30- 207.17	310.12
2.500	2.501	-0.001	2099954	0.16884	559.3	71.73- 119.55	192.47
2.695	2.695	0.000	4974609	0.13180	436.6	230.56- 384.27	455.96
3.113	3.113	0.000	4034704	0.24388	807.8	104.79- 174.65	369.81
		Average of Peak Concentrations =			546.6		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.353	2.349	0.004	3383461	0.34091	1129	80.00- 120.00	100.00(M)
2.695	2.694	0.001	4974609	0.20863	691.0	161.12- 268.53	147.03
2.959	2.950	0.009	16263536	0.64414	2134	119.97- 199.95	480.68
3.113	3.112	0.001	4034704	0.14509	480.6	186.75- 311.24	119.25

BLS 3-8-99
possible m
of 1242 124
pattern best
fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f023f2301.d
Report Date: 08-Mar-1999 12:28

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.125	4.126	-0.001	1418243	0.09540	316.0	101.05- 168.42	41.92
Average of Peak Concentrations =					950.1		
$ 9 DCB					CAS #: 2051-24-3		
8.237	8.238	-0.001	1268808	0.00259	8.579	80.00- 120.00	100.00

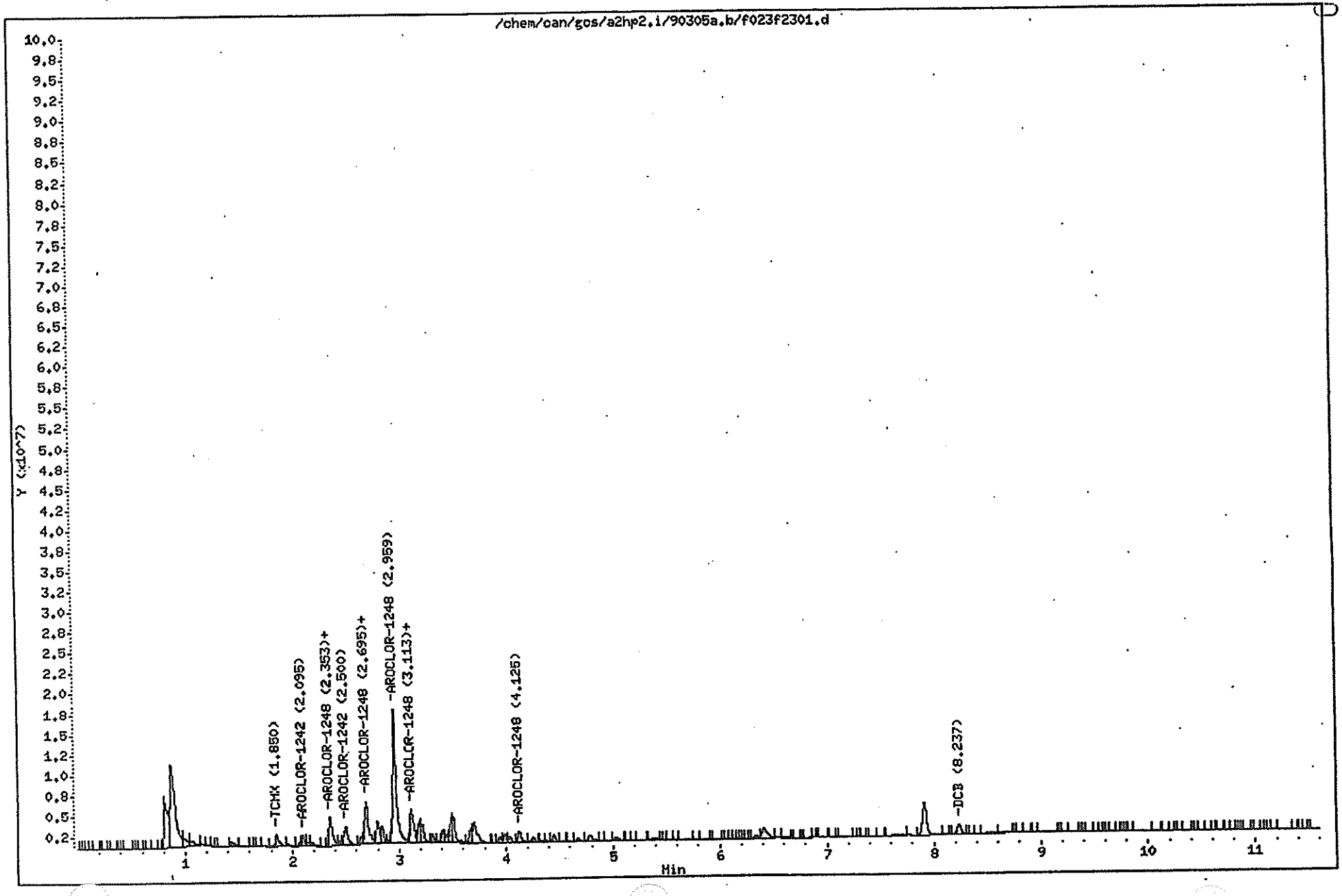
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hp2.i/90305a.b/f023f2301.d
Date : 05-MAR-1999 21:45
Client ID: S-022399-JH-063
Sample Info: CR2RE101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



022

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 003

Sample WT/Vol: 30 / g
Work Order: CR2RF101
Dilution factor: 1
Moisture %:7.2

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-064

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	36	U
11104-28-2	Aroclor 1221	36	U
11141-16-5	Aroclor 1232	36	U
53469-21-9	Aroclor 1242	36	U
12672-29-6	Aroclor 1248	36	U
11097-69-1	Aroclor 1254	36	U
11096-82-5	Aroclor 1260	36	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f024f2401.d
Report Date: 08-Mar-1999 12:28

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f024f2401.d
Lab Smp Id: CR2RF101 Client Smp ID: S-022399-JH-064
Inj Date : 05-MAR-1999 22:02
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RF101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

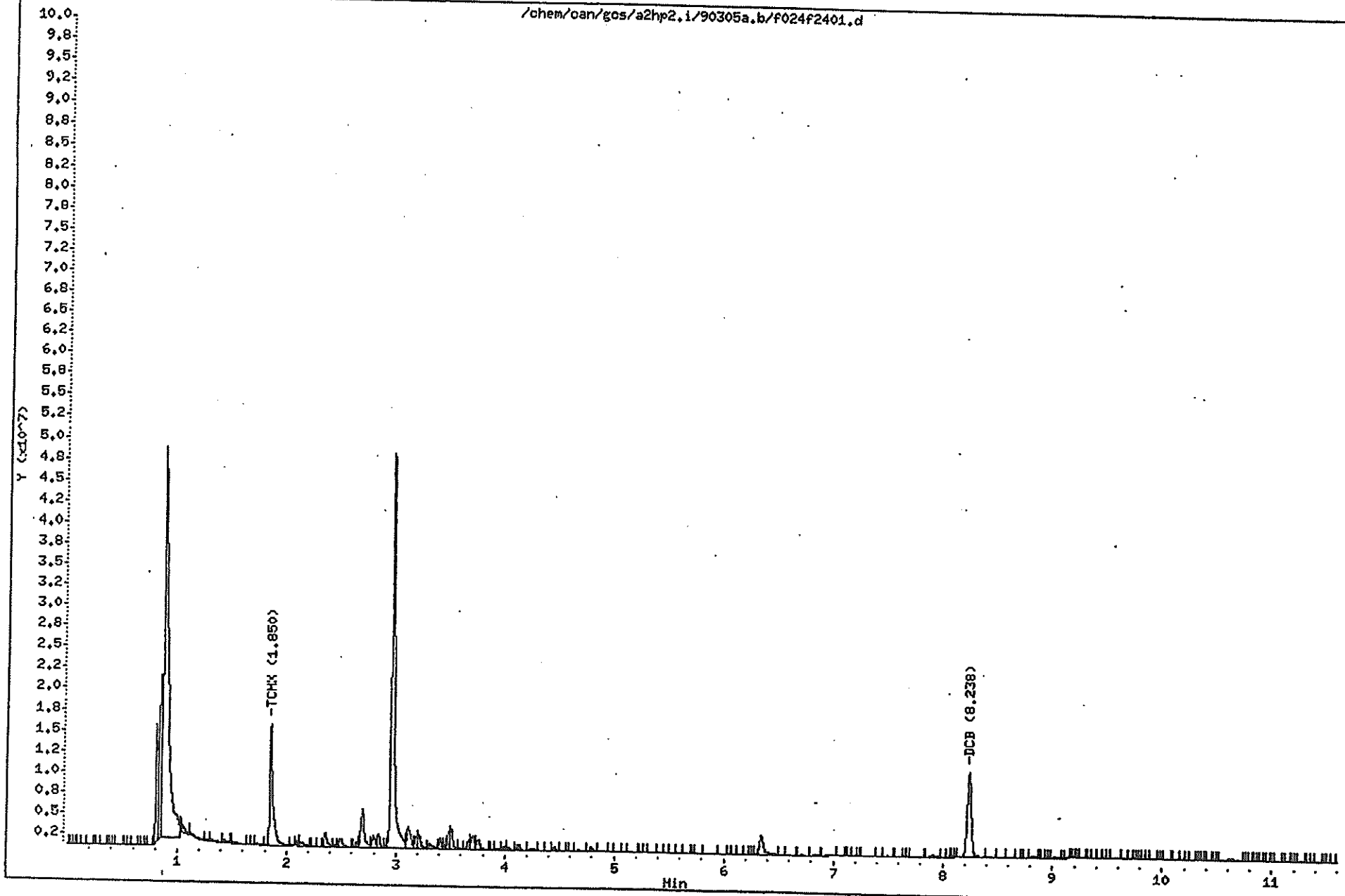
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	14437642	0.01558	5.194	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.238	0.000	10189152	0.02080	6.933	80.00- 120.00	100.00

File: /chem/oan/gos/a2hp2.i/90305a.b/f024f2401.d
Date: 05-MAR-1999 22:02
Client ID: S-022399-JH-064
Sample Info: CR2RF101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 004

Sample WT/Vol: 30.09 / g
Work Order: CR2RG101
Dilution factor: 1
Moisture %:15

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-065

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f025f2501.d
Report Date: 08-Mar-1999 12:28

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f025f2501.d
Lab Smp Id: CR2RG101 Client Smp ID: S-022399-JH-065
Inj Date : 05-MAR-1999 22:19
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RG101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	10151189	0.01096	3.641	80.00- 120.00	100.00(R)
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	10916501	0.02228	7.406	80.00- 120.00	100.00

QC Flag Legend

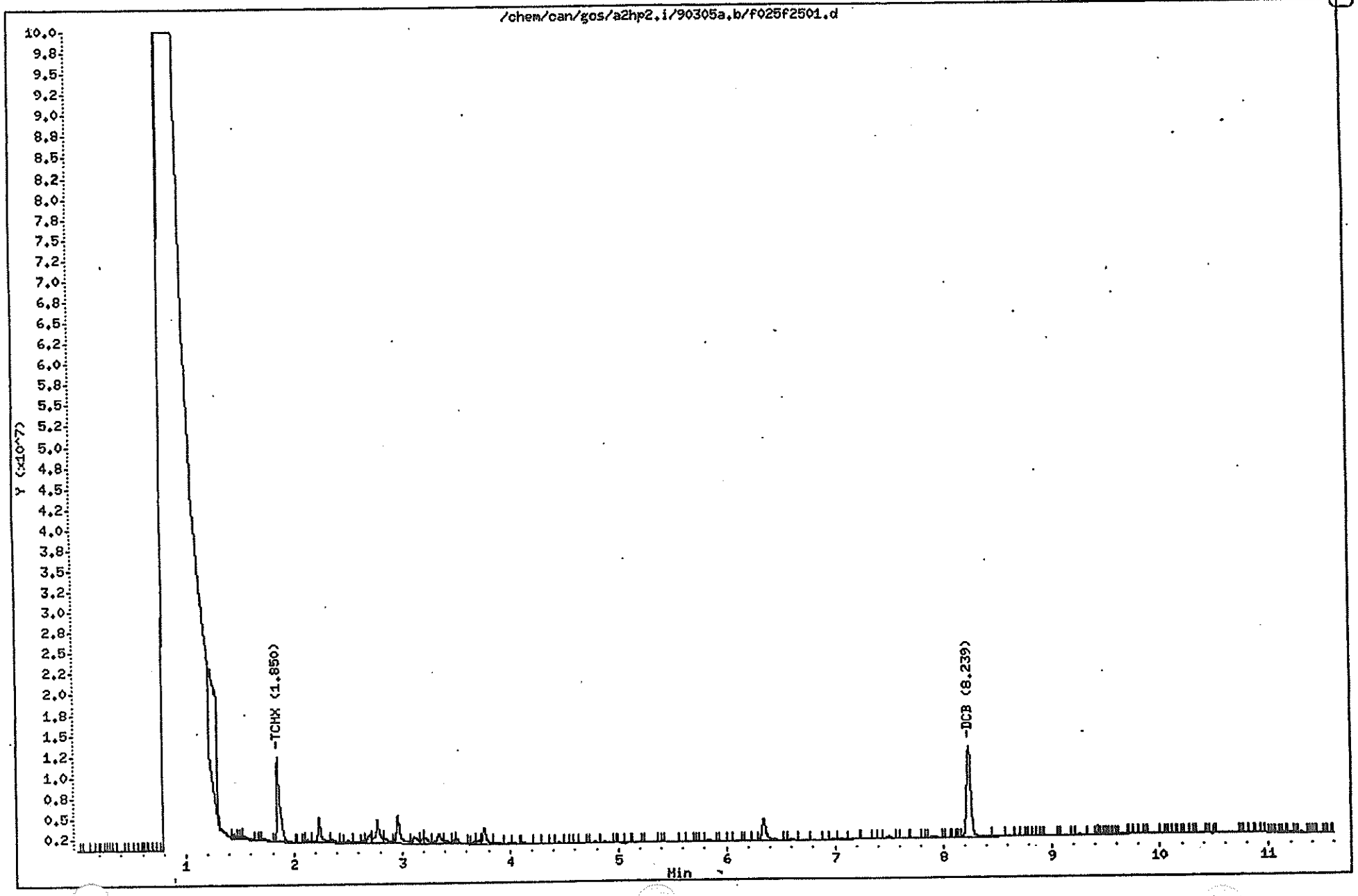
R - Spike/Surrogate failed recovery limits.

Data File: /chem/can/gos/a2hp2.i/90305a.b/f025f2501.d
Date : 05-MAR-1999 22:19
Client ID: S-022399-JH-065
Sample Info: CR2RG101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

028



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 005

Sample WT/Vol: 30 / g
Work Order: CR2RH101
Dilution factor: 10
Moisture %:6.2

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-066

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	350	U
11104-28-2	Aroclor 1221	350	U
11141-16-5	Aroclor 1232	350	U
53469-21-9	Aroclor 1242	3200	
12672-29-6	Aroclor 1248	350	U
11097-69-1	Aroclor 1254	350	U
11096-82-5	Aroclor 1260	350	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f026f2601.d
Report Date: 08-Mar-1999 12:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f026f2601.d
Lab Smp Id: CR2RH101 Client Smp ID: S-022399-JH-066
Inj Date : 05-MAR-1999 22:35
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RH101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 26
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	1538373	0.00166	5.534	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	2192704	0.20152	671.7	80.00- 120.00	100.00(M)
2.354	2.352	0.002	11292554	0.60197	2006	124.30- 207.17	515.01
2.486	2.501	-0.015	11111148	0.89338	2978	71.73- 119.55	506.73
2.696	2.695	0.001	35355041	0.93669	3122	230.56- 384.27	1612.39
3.114	3.113	0.001	30173648	1.82389	6080	104.79- 174.65	1376.09
Average of Peak Concentrations =					2972		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.354	2.349	0.005	11292554	1.13781	3793	80.00- 120.00	100.00(M)
2.696	2.694	0.002	35355041	1.48272	4942	161.12- 268.53	313.08
2.959	2.950	0.009	89745703	3.55452	11850	119.97- 199.95	794.73
3.114	3.112	0.002	30173648	1.08502	3617	186.75- 311.24	267.20

BLS 3-8-99
possible mix
of 1242 + 12
pattern best
fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f026f2601.d
Report Date: 08-Mar-1999 12:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	10432804	0.70179	2339	101.05- 168.42	92.39
Average of Peak Concentrations =					5308		
$ 9 DCB					CAS #: 2051-24-3		
8.252	8.238	0.014	3334974	0.00681	22.69	80.00- 120.00	100.00(R)

QC Flag Legend

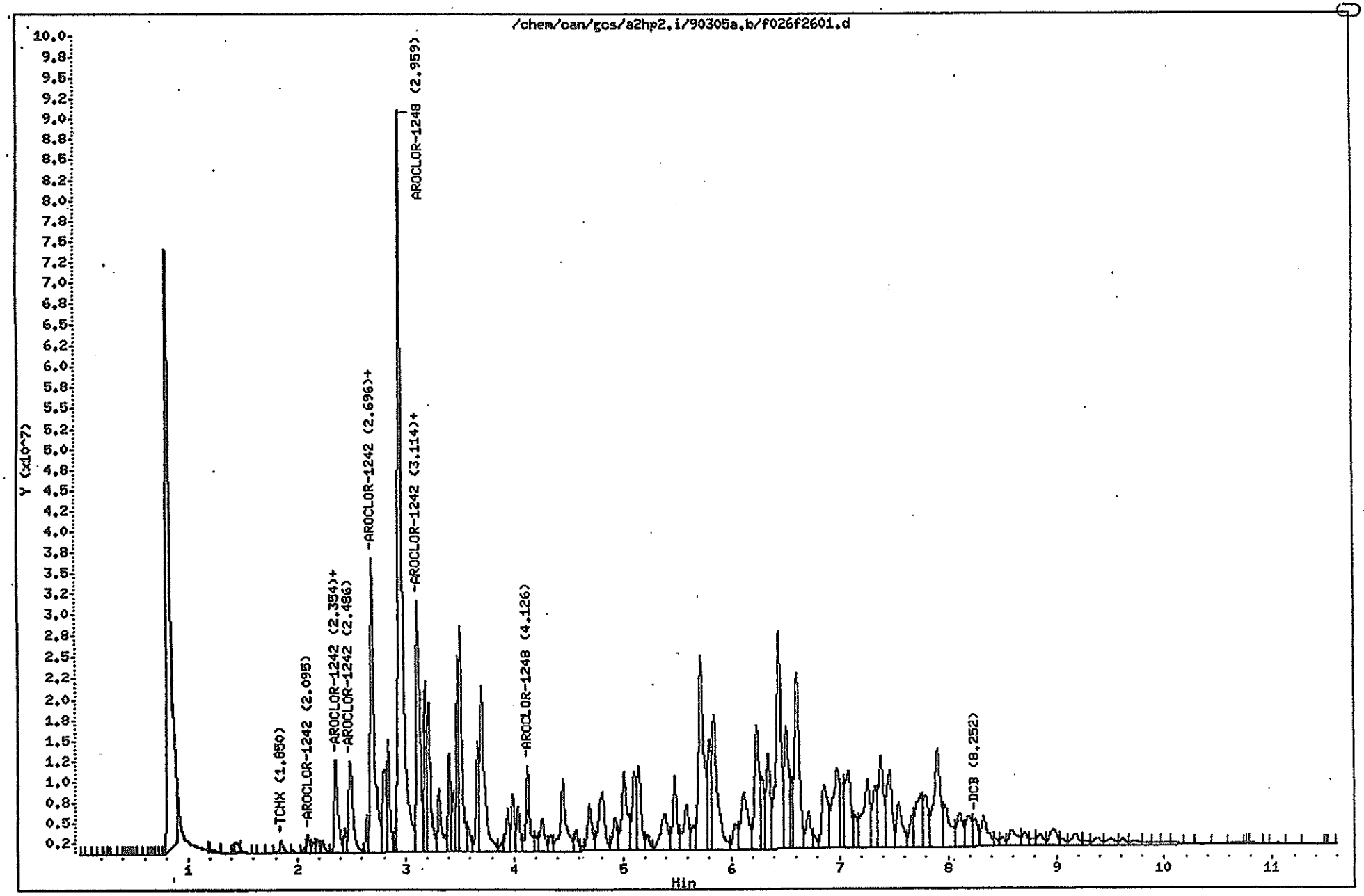
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data /chem/can/gcs/a2hp2.i/90305a.b/f026f2601.d
Date MAR-1999 22:35
Client ID: S-022399-JH-066
Sample Info: CR2RH101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

032



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 006

Sample WT/Vol: 30 / g
Work Order: CR2RJ101
Dilution factor: 100
Moisture %:11

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-067

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	Aroclor 1242	40000	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f027f2701.d
Report Date: 08-Mar-1999 12:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f027f2701.d
Lab Smp Id: CR2RJ101 Client Smp ID: S-022399-JH-067
Inj Date : 05-MAR-1999 22:52
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RJ101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 27
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.823	1.848	-0.025	535540	0.000578	19.27	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.093	2.095	-0.002	3124863	0.28718	9573	80.00- 120.00	100.00(M)
2.350	2.352	-0.002	23179541	1.23562	41190	124.30- 207.17	741.78
2.500	2.501	-0.001	13883381	1.11628	37210	71.73- 119.55	444.29
2.695	2.695	0.000	49606470	1.31426	43810	230.56- 384.27	1587.48
3.112	3.113	-0.001	23461812	1.41819	47270	104.79- 174.65	750.81
Average of Peak Concentrations =					35810		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.350	2.349	0.001	23179541	2.33551	77850	80.00- 120.00	100.00(M)
2.695	2.694	0.001	49606470	2.08040	69350	161.12- 268.53	214.01
2.950	2.950	0.000	19223417	0.76137	25380	119.97- 199.95	82.93
3.112	3.112	0.000	23461812	0.84367	28120	186.75- 311.24	101.22

RLS 3-8-99
possible mi of 1242 + 1248 pattern best fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f027f2701.d
Report Date: 08-Mar-1999 12:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	5419972	0.36459	12150	101.05- 168.42	23.38
Average of Peak Concentrations =					42570		
$ 9 DCB					CAS #: 2051-24-3		
8.237	8.238	-0.001	182346	0.000372	12.41	80.00- 120.00	100.00(R)

QC Flag Legend

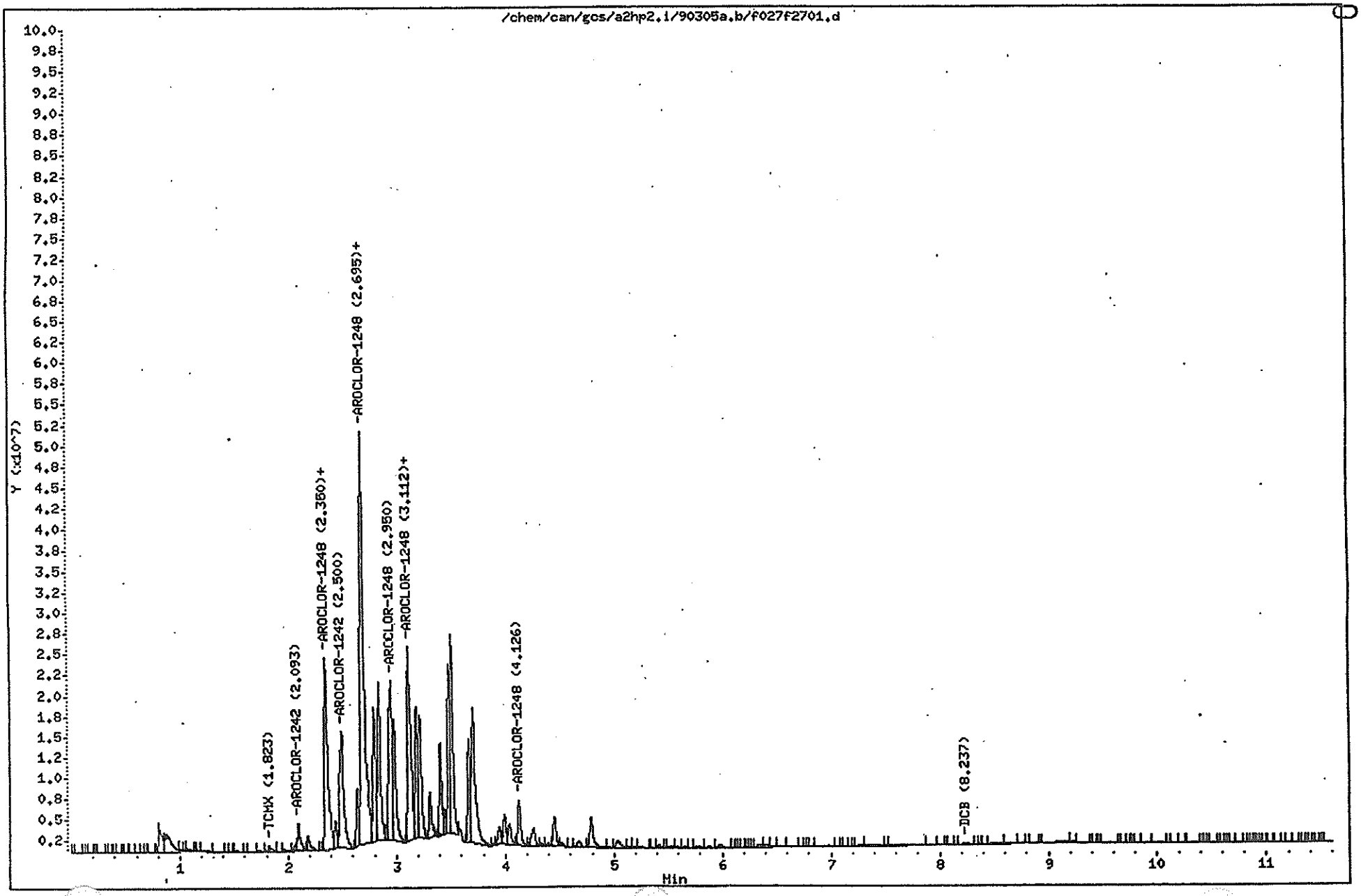
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f027f2701.d
Date : 05-MAR-1999 22:52
Client ID: S-022399-JH-067
Sample Info: CR2RJ101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

036



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 007

Sample WT/Vol: 30.1 / g
Work Order: CR2RL101
Dilution factor: 100
Moisture %:7.7

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-068

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3600	U
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	Aroclor 1242	38000	
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f028f2801.d
Report Date: 08-Mar-1999 12:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f028f2801.d
Lab Smp Id: CR2RL101 Client Smp ID: S-022399-JH-068
Inj Date : 05-MAR-1999 23:09
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RL101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 28
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.824	1.848	-0.024	1007783	0.00109	36.14	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	9159417	0.84178	27960	80.00- 120.00	100.00(M)
2.353	2.352	0.001	20924050	1.11539	37060	124.30- 207.17	228.44
2.500	2.501	-0.001	13232422	1.06394	35350	71.73- 119.55	144.47
2.695	2.695	0.000	41426272	1.09754	36460	230.56- 384.27	452.28
3.113	3.113	0.000	18688335	1.12965	37530	104.79- 174.65	204.03
Average of Peak Concentrations =					34870		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.353	2.349	0.004	20924050	2.10825	70040	80.00- 120.00	100.00(M)
2.695	2.694	0.001	41426272	1.73734	57720	161.12- 268.53	197.98
2.957	2.950	0.007	32650567	1.29318	42960	119.97- 199.95	156.04
3.113	3.112	0.001	18688335	0.67202	22330	186.75- 311.24	89.32

BLS 3-8-99
possible mi
of 1242 + 12
pattern best
fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f028f2801.d
Report Date: 08-Mar-1999 12:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.127	4.126	0.001	4918204	0.33084	10990	101.05- 168.42	23.51
Average of Peak Concentrations =					40810		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	175942	0.000359	11.93	80.00- 120.00	100.00(R)

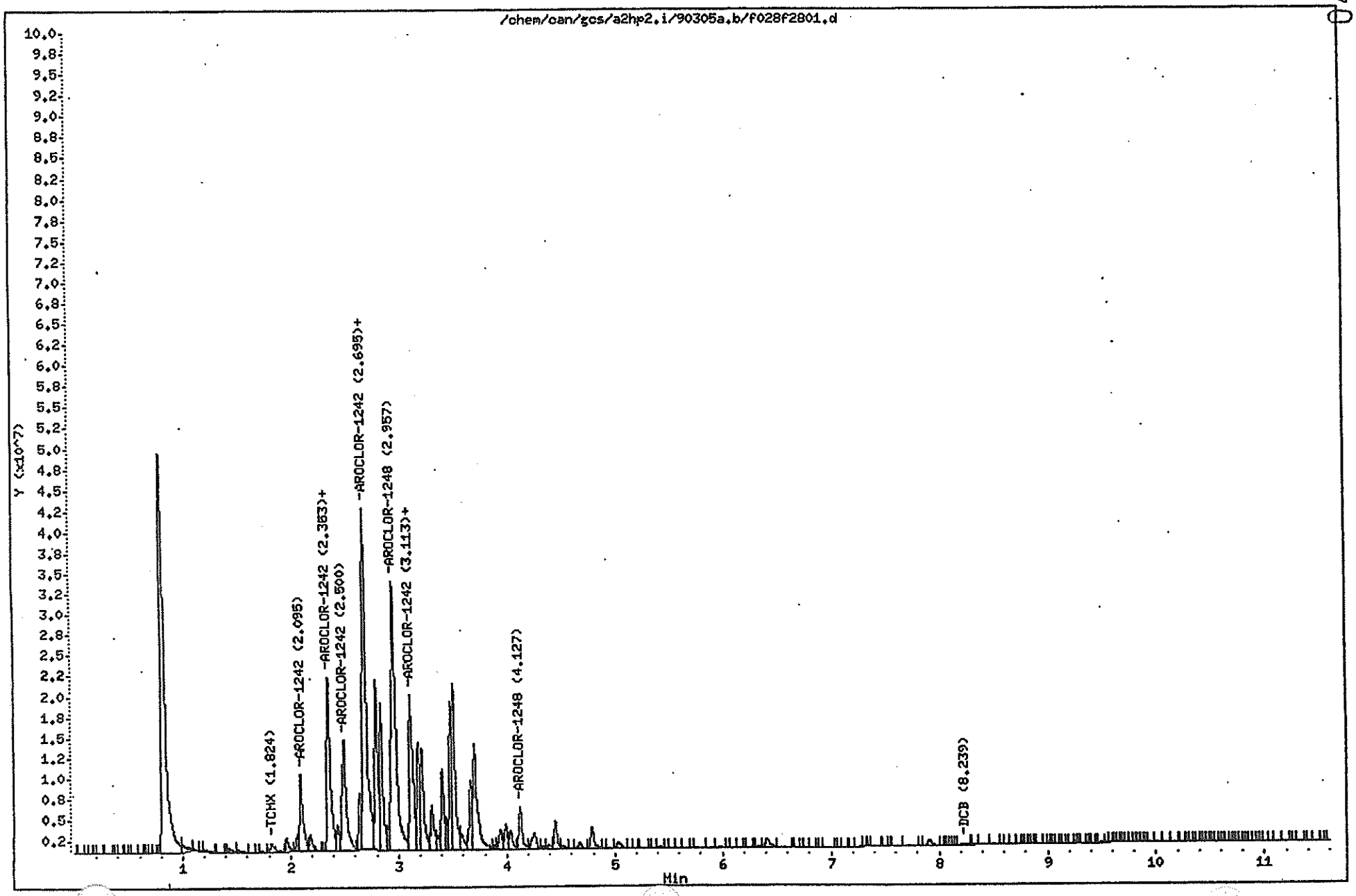
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f028f2801.d
Date : 05-MAR-1999 23:09
Client ID: S-022399-JH-068
Sample Info: CR2RL101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 008

Sample WT/Vol: 30.04 / g
Work Order: CR2RM101
Dilution factor: 100
Moisture %:15

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-069

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3900	U
11104-28-2	Aroclor 1221	3900	U
11141-16-5	Aroclor 1232	3900	U
53469-21-9	Aroclor 1242	36000	
12672-29-6	Aroclor 1248	3900	U
11097-69-1	Aroclor 1254	3900	U
11096-82-5	Aroclor 1260	3900	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f029f2901.d
Report Date: 10-Mar-1999 13:10

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f029f2901.d
Lab Smp Id: CR2RM101 Client Smp ID: S-022399-JH-069
Inj Date : 05-MAR-1999 23:25
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RM101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 29
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.824	1.848	-0.024	815319	0.00088	29.29	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.094	2.095	-0.001	8840538	0.81247	27050	80.00- 120.00	100.00(M)
2.354	2.352	0.002	20358664	1.08525	36130	124.30- 207.17	230.29
2.495	2.501	-0.006	9890583	0.79524	26470	71.73- 119.55	111.88
2.694	2.695	-0.001	40278157	1.06712	35520	230.56- 384.27	455.61
3.112	3.113	-0.001	13492531	0.81558	27150	104.79- 174.65	152.62
Average of Peak Concentrations =					30460		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.354	2.349	0.005	20358664	2.05129	68280	80.00- 120.00	100.00(M)
2.694	2.694	0.000	40278157	1.68919	56230	161.12- 268.53	197.84
2.956	2.950	0.006	21379285	0.84676	28190	119.97- 199.95	105.01
3.112	3.112	0.000	13492531	0.48518	16150	186.75- 311.24	66.27

BLS 3-9-9
possible m
of 1242 &
1248
pattern be
fits 124

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f029f2901.d
Report Date: 10-Mar-1999 13:10

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	2387720	0.16062	5347	101.05- 168.42	11.73
Average of Peak Concentrations =					34840		

$ 9 DCB CAS #: 2051-24-3

8.238	8.238	0.000	178360	0.000364	12.12	80.00- 120.00	100.00(R)

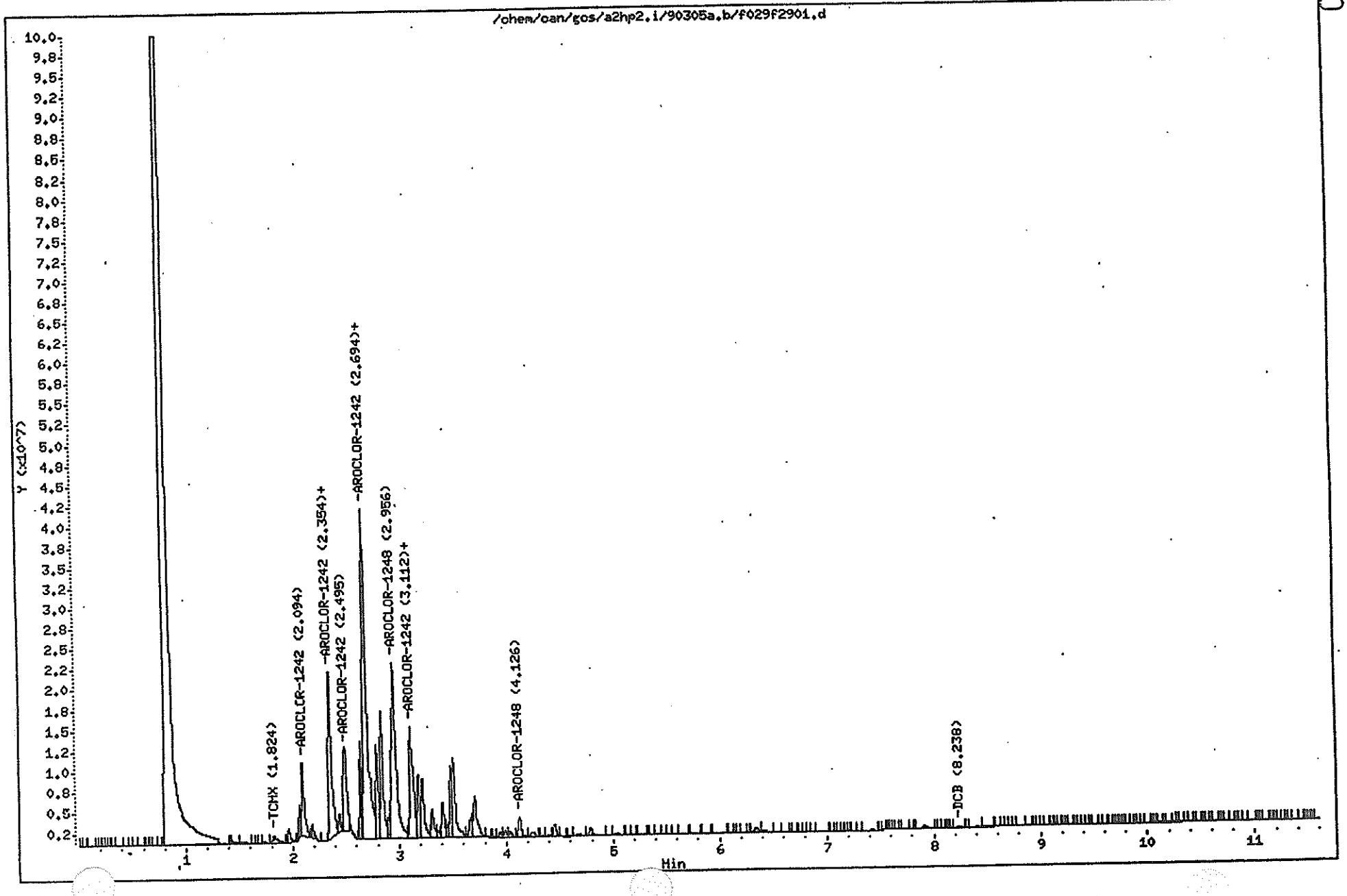
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f029f2901.d
Date : 05-MAR-1999 23:25
Client ID: S-022399-JH-069
Sample Info: CR2RH101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



044

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 009

Sample WT/Vol: 30.01 / g
Work Order: CR2RN101
Dilution factor: 10
Moisture %:30

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-070

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	470	U
11104-28-2	Aroclor 1221	470	U
11141-16-5	Aroclor 1232	470	U
53469-21-9	Aroclor 1242	1600	
12672-29-6	Aroclor 1248	470	U
11097-69-1	Aroclor 1254	470	U
11096-82-5	Aroclor 1260	470	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f030f3001.d
Report Date: 08-Mar-1999 12:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f030f3001.d
Lab Smp Id: CR2RN101 — Client Smp ID: S-022399-JH-070
Inj Date : 05-MAR-1999 23:42
Operator : 1808 — Inst ID: a2hp2.i
Smp Info : CR2RN101,10
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb — Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 — Cal File: f028f1101.d
Als bottle: 30
Dil Factor: 10.00000
Integrator: Falcon — Compound Sublist: REG.sub
Target Version: 3.40 — Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	1516474	0.00164	5.454	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.094	2.095	-0.001	851238	0.07823	260.7	80.00- 120.00	100.00(M)
2.352	2.352	0.000	1968615	0.10494	349.7	124.30- 207.17	231.26
2.501	2.501	0.000	0			71.73- 119.55	0.00
2.695	2.695	0.000	5659616	0.14994	499.6	230.56- 384.27	664.87
2.959	3.113	-0.154	17374747	1.05024	3500	104.79- 174.65	2041.12
Average of Peak Concentrations =					1152		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.352	2.349	0.003	1968615	0.19835	661.0	80.00- 120.00	100.00(M)
2.695	2.694	0.001	5659616	0.23735	790.9	161.12- 268.53	287.49
2.959	2.950	0.009	17374747	0.68815	2293	119.97- 199.95	882.59
3.114	3.112	0.002	5324589	0.19147	638.0	186.75- 311.24	270.47

BLS 3-8-99
possible mix of 1242 + 12
pattern best fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f030f3001.d
Report Date: 08-Mar-1999 12:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	2782014	0.18714	623.6	101.05- 168.42	141.32
Average of Peak Concentrations =					1001		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	1621082	0.00331	11.03	80.00- 120.00	100.00

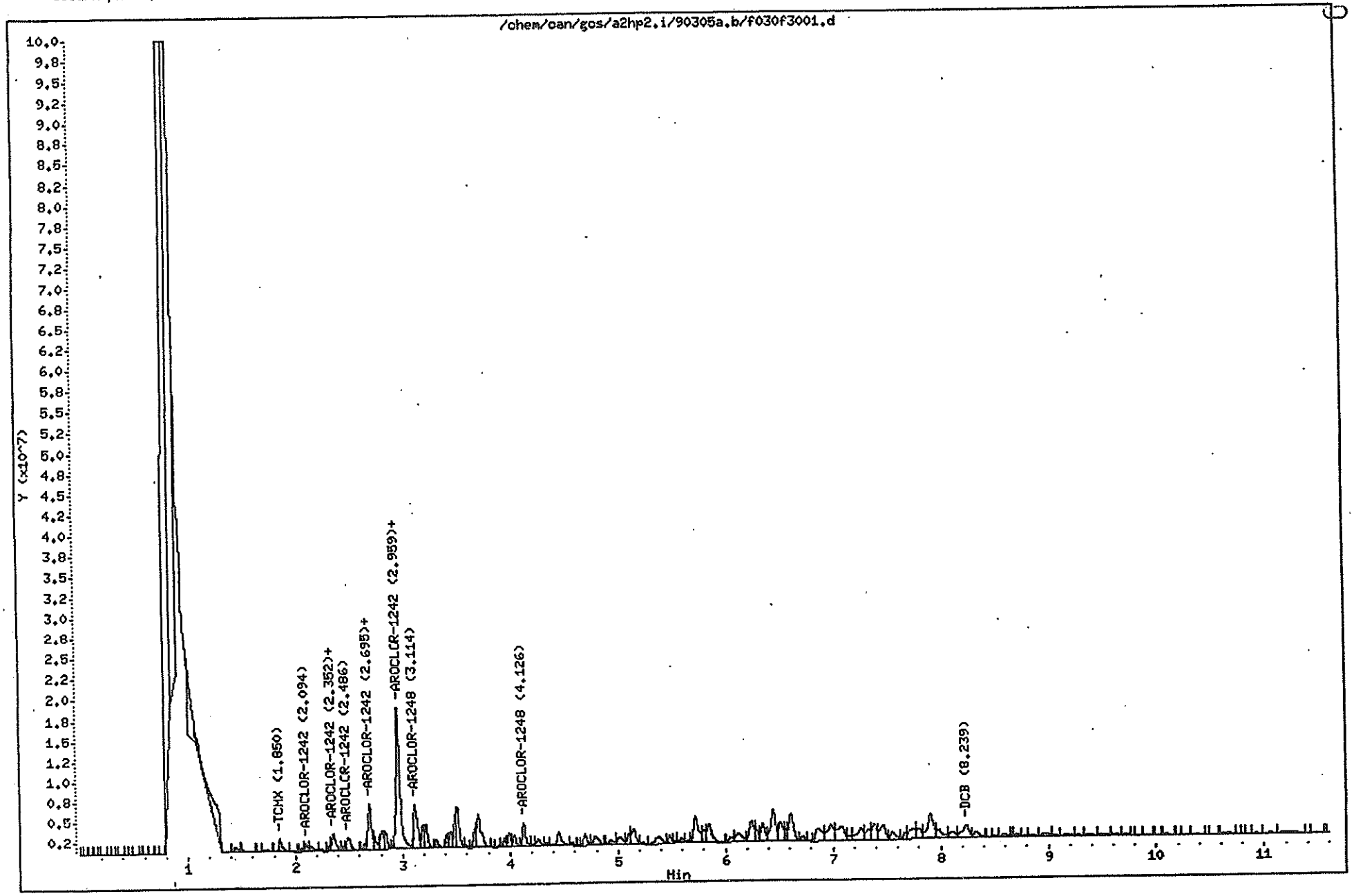
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/oan/gos/a2hp2.i/90305a.b/f030f3001.d
Date : 05-MAR-1999 23:42
Client ID: S-022399-JH-070
Sample Info: CR2RH101,10
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 010

Sample WT/Vol: 30.15 / g
Work Order: CR2RP101
Dilution factor: 1
Moisture %:12

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/05/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-071

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	80	
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f031f3101.d
Report Date: 08-Mar-1999 12:29

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f031f3101.d
Lab Smp Id: CR2RP101 Client Smp ID: S-022399-JH-071
Inj Date : 05-MAR-1999 23:59
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RP101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 31
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.150	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	13147911	0.01419	4.706	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.093	2.095	-0.002	1317130	0.12105	40.15	80.00- 120.00	100.00 (M)
2.351	2.352	-0.001	4571647	0.24370	80.83	124.30- 207.17	347.09
2.500	2.501	-0.001	2928613	0.23547	78.10	71.73- 119.55	222.35
2.695	2.695	0.000	8026569	0.21265	70.53	230.56- 384.27	609.40
3.181	3.113	0.068	4064531	0.24569	81.49	104.79- 174.65	308.59
		Average of Peak Concentrations =			70.22		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.351	2.349	0.002	4571647	0.46063	152.8	80.00- 120.00	100.00 (M)
2.695	2.694	0.001	8026569	0.33662	111.6	161.12- 268.53	175.57
2.950	2.950	0.000	0			119.97- 199.95	0.00
3.181	3.112	0.069	4064531	0.14616	48.48	186.75- 311.24	88.91

BLS 3-8-99
possible m
of 1242+124
pattern bes-
fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f031f3101.d
Report Date: 08-Mar-1999 12:29

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	1479973	0.09955	33.02	101.05- 168.42	32.37
Average of Peak Concentrations =					86.48		
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.238	0.000	9978466	0.02037	6.756	80.00- 120.00	100.00

QC Flag Legend

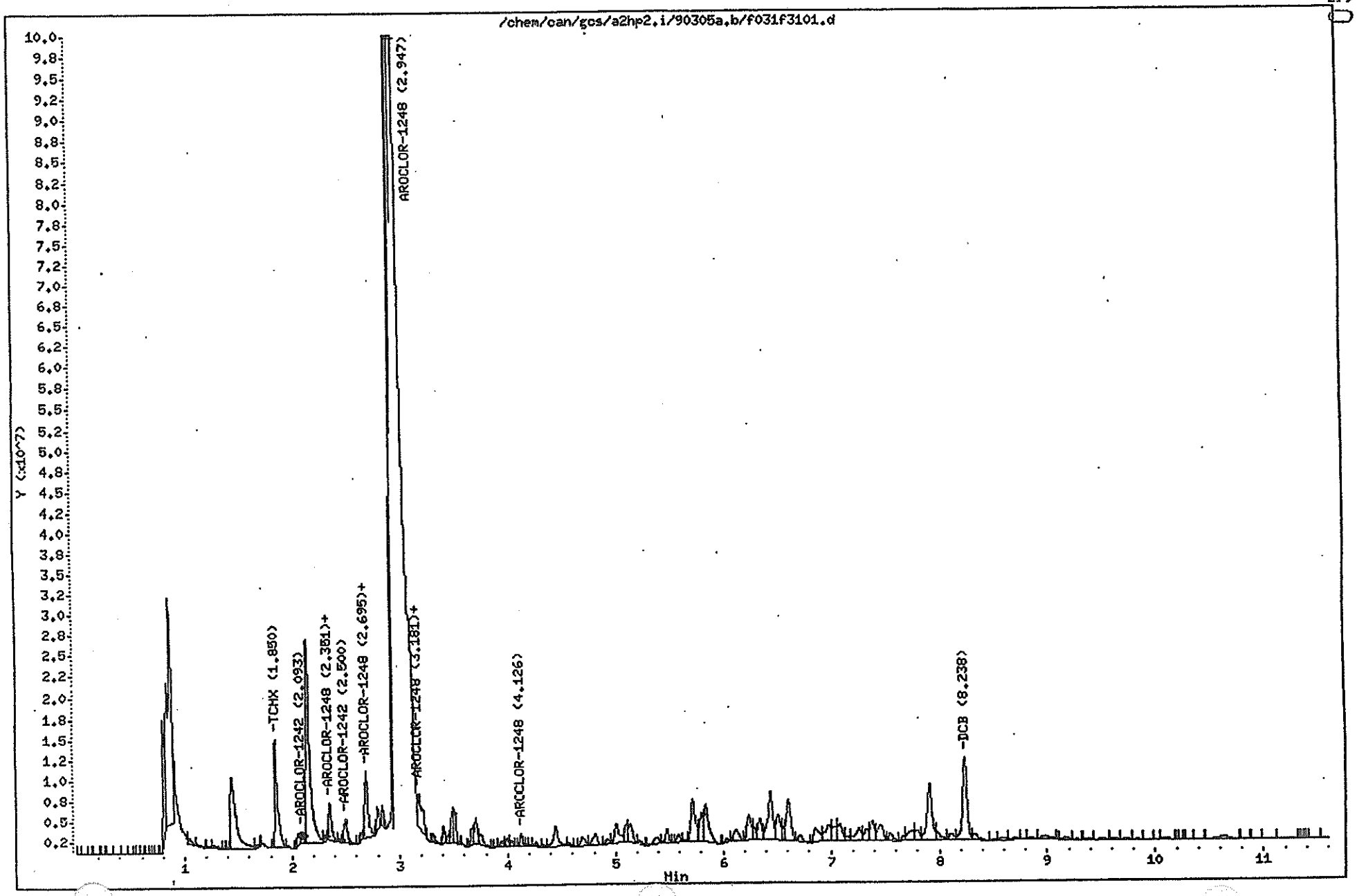
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f031f3101.d
Date : 05-MAR-1999 23:59
Client ID: S-022399-JH-071
Sample Info: CR2RP101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

052



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 011

Sample WT/Vol: 30.03 / g
Work Order: CR2RR101
Dilution factor: 100
Moisture %:7.4

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-072

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3600	U
11104-28-2	Aroclor 1221	3600	U
11141-16-5	Aroclor 1232	3600	U
53469-21-9	Aroclor 1242	17000	
12672-29-6	Aroclor 1248	3600	U
11097-69-1	Aroclor 1254	3600	U
11096-82-5	Aroclor 1260	3600	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f035f3501.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f035f3501.d
Lab Smp Id: CR2RR101 Client Smp ID: S-022399-JH-072
Inj Date : 06-MAR-1999 01:06
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RR101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 35
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.824	1.848	-0.024	531726	0.000574	19.11	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.094	2.095	-0.001	4480099	0.41173	13710	80.00- 120.00	100.00(M)
2.352	2.352	0.000	9103148	0.48526	16160	124.30- 207.17	203.19
2.500	2.501	-0.001	5441568	0.43752	14570	71.73- 119.55	121.46
2.694	2.695	-0.001	17697596	0.46888	15610	230.56- 384.27	395.03
3.113	3.113	0.000	8225084	0.49718	16560	104.79- 174.65	183.59
Average of Peak Concentrations =					15320		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.352	2.349	0.003	9103148	0.91721	30540	80.00- 120.00	100.00(M)
2.694	2.694	0.000	17697596	0.74220	24720	161.12- 268.53	194.41
2.979	2.950	0.029	5298233	0.20984	6988	119.97- 199.95	58.20
3.113	3.112	0.001	8225084	0.29577	9849	186.75- 311.24	90.35

ALS 3-8-99
possible mix of 1242 + 1248
pattern best fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f035f3501.d
Report Date: 08-Mar-1999 12:30

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.126	4.126	0.000	2296993	0.15451	5145	101.05- 168.42	25.23
Average of Peak Concentrations =					15450		
$ 9 DCB					CAS #: 2051-24-3		
8.255	8.238	0.017	351797	0.000718	23.91	80.00- 120.00	100.00(R)

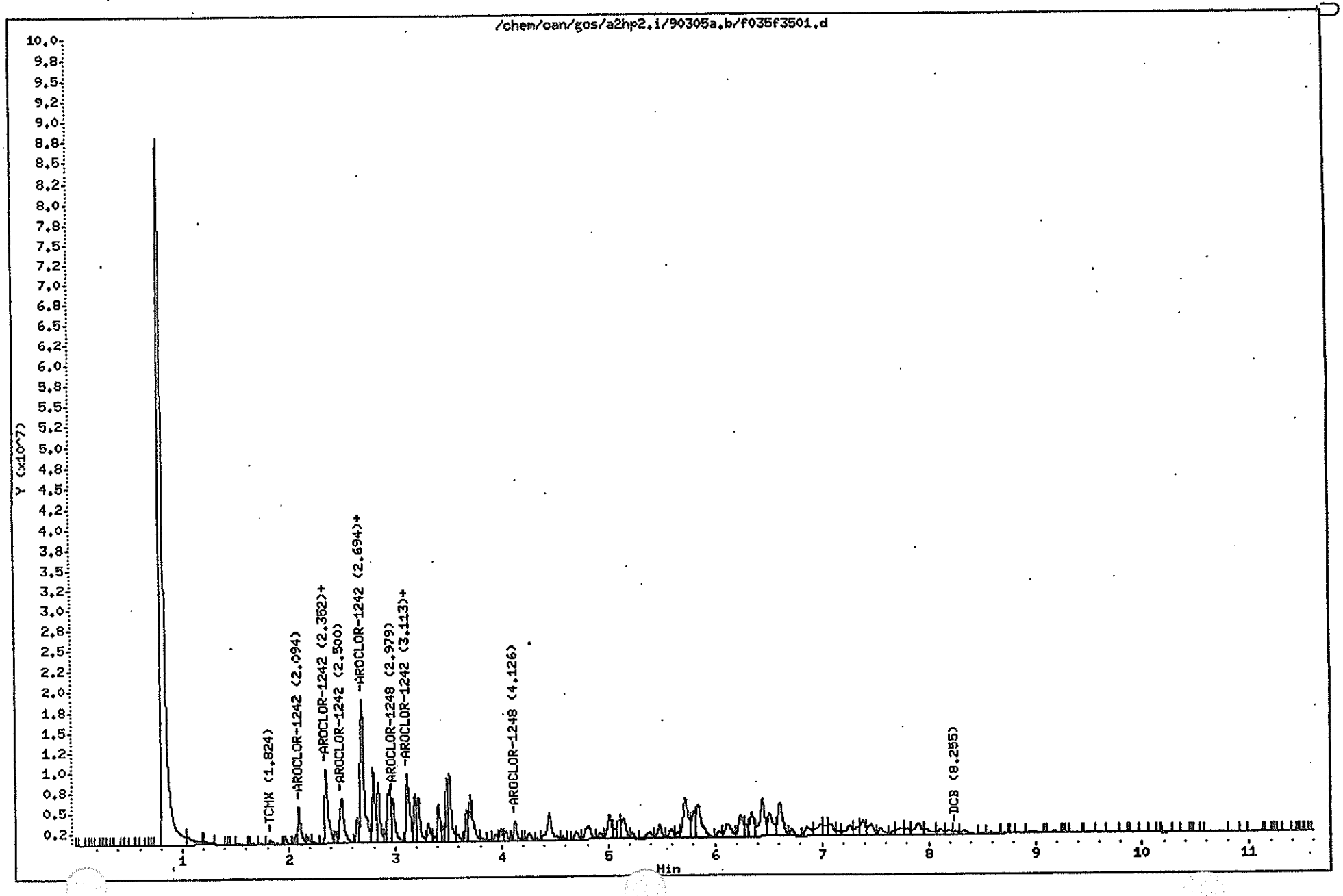
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gos/a2hp2.i/90305a.b/f035f3501.d
Date : 06-MAR-1999 01:06
Client ID: S-022399-JH-072
Sample Info: CR2RR101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 012

Sample WT/Vol: 30.02 / g
Work Order: CR2RT101
Dilution factor: 1
Moisture %:9.8

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-073

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	37	U
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	370	
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U
11096-82-5	Aroclor 1260	37	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f036f3601.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f036f3601.d
Lab Smp Id: CR2RT101 Client Smp ID: S-022399-JH-073
Inj Date : 06-MAR-1999 01:22
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RT101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 36
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	9704511	0.01047	3.489	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.065	2.095	-0.030	1500509	0.13790	45.94	80.00- 120.00	100.00(M)
2.350	2.352	-0.002	23384728	1.24656	415.2	124.30- 207.17	1558.45
2.500	2.501	-0.001	13879275	1.11595	371.7	71.73- 119.55	924.97
2.694	2.695	-0.001	24629989	0.65254	217.4	230.56- 384.27	1641.44
3.111	3.113	-0.002	30643415	1.85229	617.0	104.79- 174.65	2042.20
Average of Peak Concentrations =					333.5		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.350	2.349	0.001	23384728	2.35619	784.9	80.00- 120.00	100.00(M)
2.694	2.694	0.000	24629989	1.03294	344.1	161.12- 268.53	105.33
2.945	2.950	-0.005	0			119.97- 199.96	0.00
3.111	3.112	-0.001	30643415	1.10192	367.1	186.75- 311.24	131.04

MLS 3-8-99
possible mix
of 1242 &
1248 patter
best fits
1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f036f3601.d
Report Date: 08-Mar-1999 12:30

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.125	4.126	-0.001	7080645	0.47630	158.7	101.05- 168.42	30.28
Average of Peak Concentrations =					413.7		
$ 9 DCB					CAS #: 2051-24-3		
8.240	8.238	0.002	10272428	0.02097	6.985	80.00- 120.00	100.00

QC Flag Legend

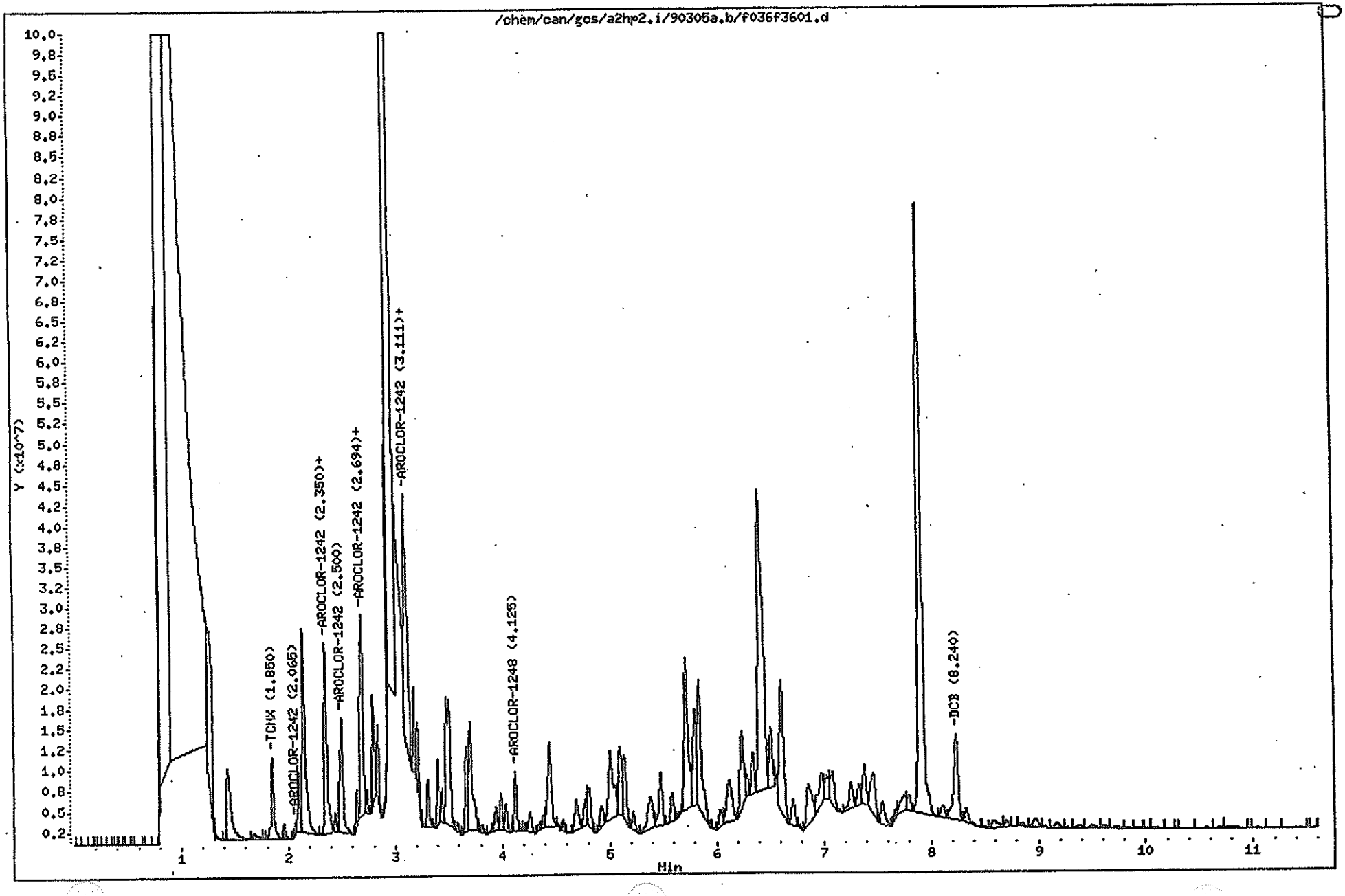
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f036f3601.d
Date : 06-MAR-1999 01:22
Client ID: S-022399-JH-073
Sample Info: CR2RT101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

060



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 013

Sample WT/Vol: 30.19 / g
Work Order: CR2RV101
Dilution factor: 1
Moisture %:13

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-074

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38	U
11104-28-2	Aroclor 1221	38	U
11141-16-5	Aroclor 1232	38	U
53469-21-9	Aroclor 1242	38	U
12672-29-6	Aroclor 1248	38	U
11097-69-1	Aroclor 1254	38	U
11096-82-5	Aroclor 1260	38	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f037f3701.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f037f3701.d
Lab Smp Id: CR2RV101 Client Smp ID: S-022399-JH-074
Inj Date : 06-MAR-1999 01:39
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RV101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 37
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

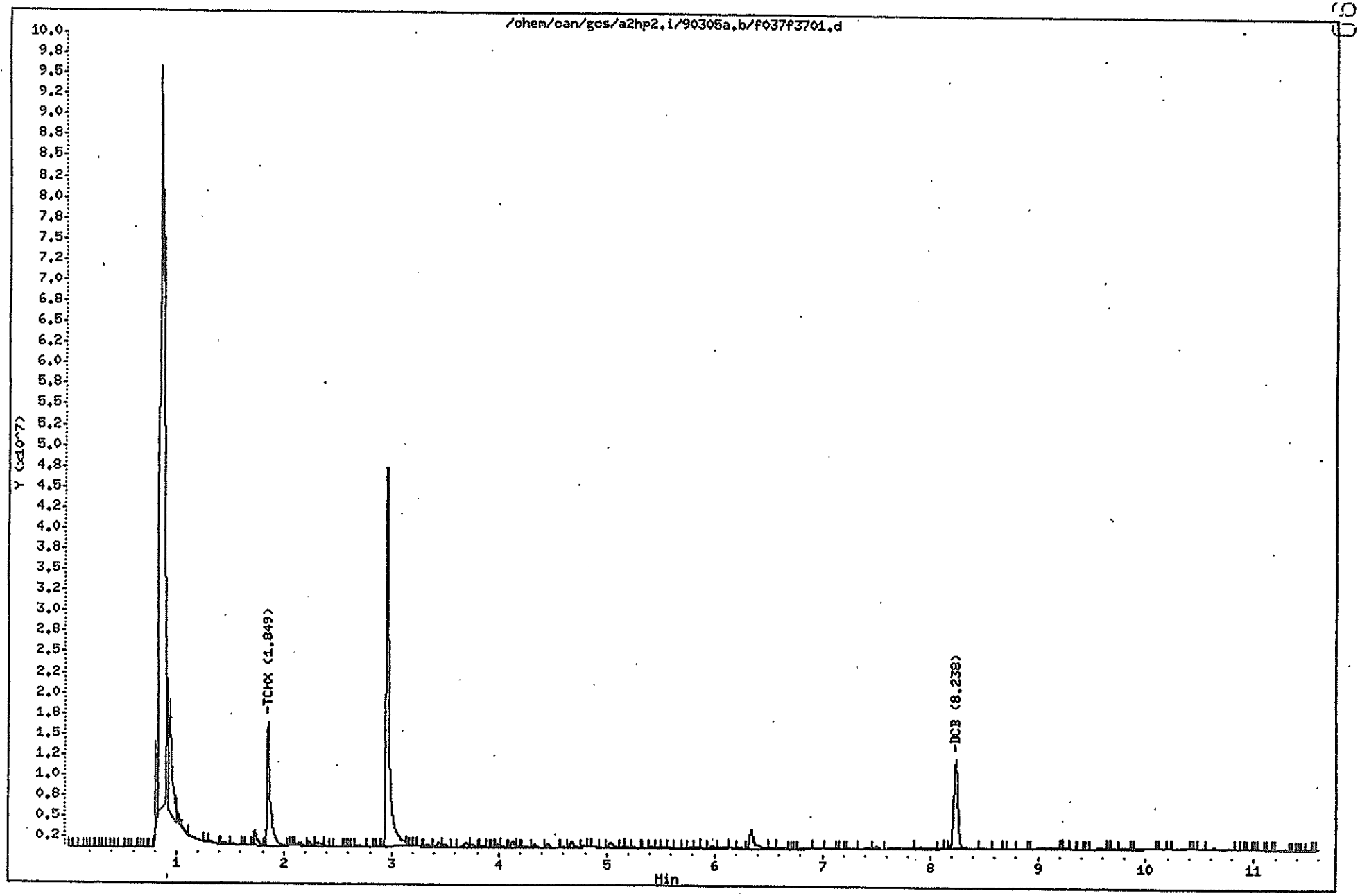
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.190	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.849	1.848	0.001	15012769	0.01620	5.367	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.238	0.000	10764849	0.02197	7.278	80.00- 120.00	100.00

Da le: /ohem/oan/gos/a2hp2.i/90305a.b/f037f3701.d
Date . 06-MAR-1999 01:39
Client ID: S-022399-JH-074
Sample Info: CR2RV101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 014

Sample WT/Vol: 30.06 / g
Work Order: CR2RX101
Dilution factor: 1
Moisture %:0.63

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-075

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f038f3801.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f038f3801.d
Lab Smp Id: CR2RX101 Client Smp ID: S-022399-JH-075
Inj Date : 06-MAR-1999 01:56
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2RX101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 38
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

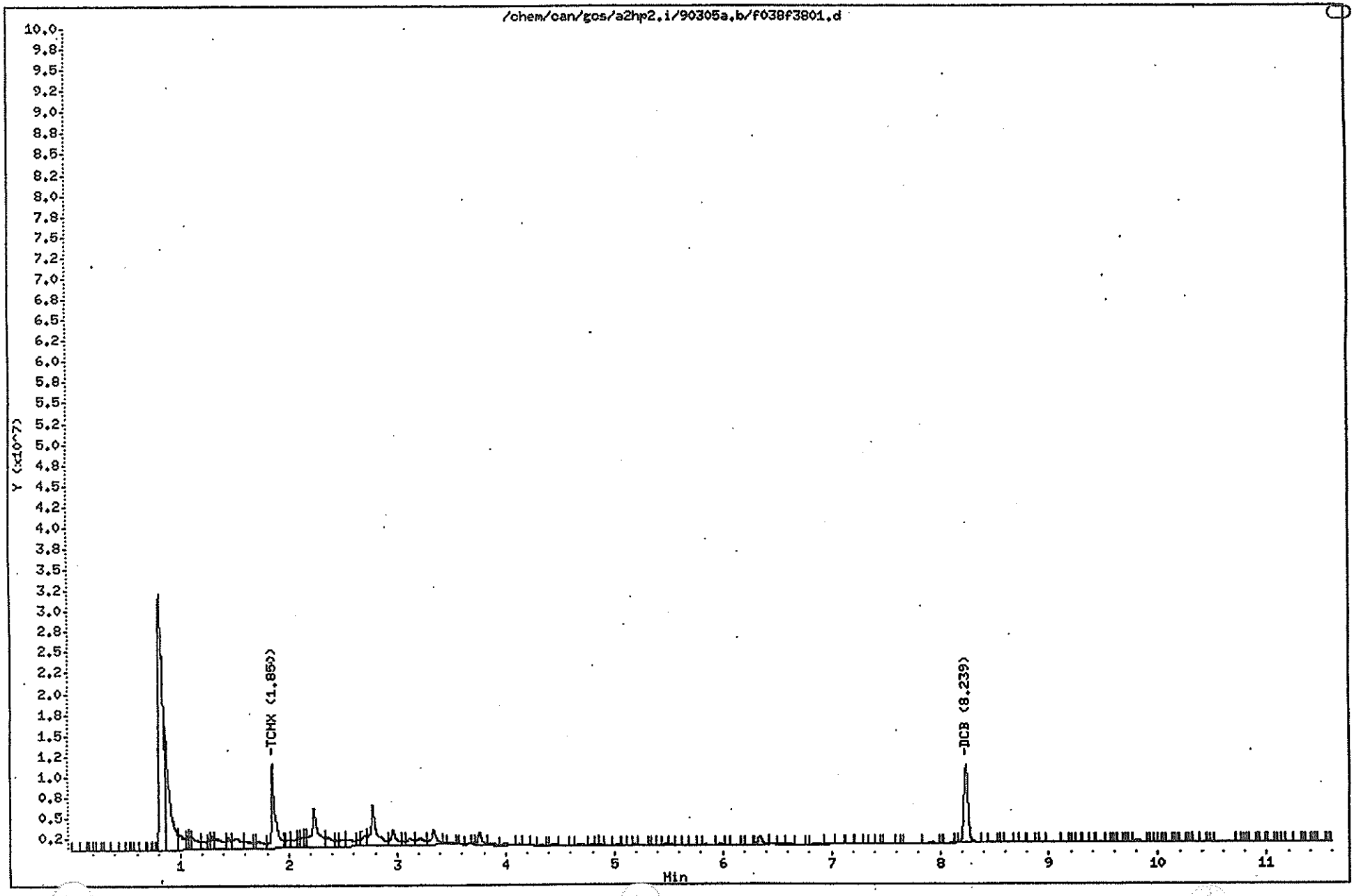
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	10194756	0.01100	3.660	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	9494846	0.01938	6.448	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f038f3801.d
Date : 06-MAR-1999 01:56
Client ID: S-022399-JH-075
Sample Info: CR2RX101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 015

Sample WT/Vol: 30.08 / g
Work Order: CR2T0101
Dilution factor: 1
Moisture %:16

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-076

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f039f3901.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f039f3901.d
Lab Smp Id: CR2T0101 Client Smp ID: S-022399-JH-076
Inj Date : 06-MAR-1999 02:12
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T0101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 39
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.851	1.848	0.003	5052680	0.00545	1.813	80.00- 120.00	100.00(R)
$ 9 DCB					CAS #: 2051-24-3		
8.240	8.238	0.002	7524056	0.01536	5.106	80.00- 120.00	100.00

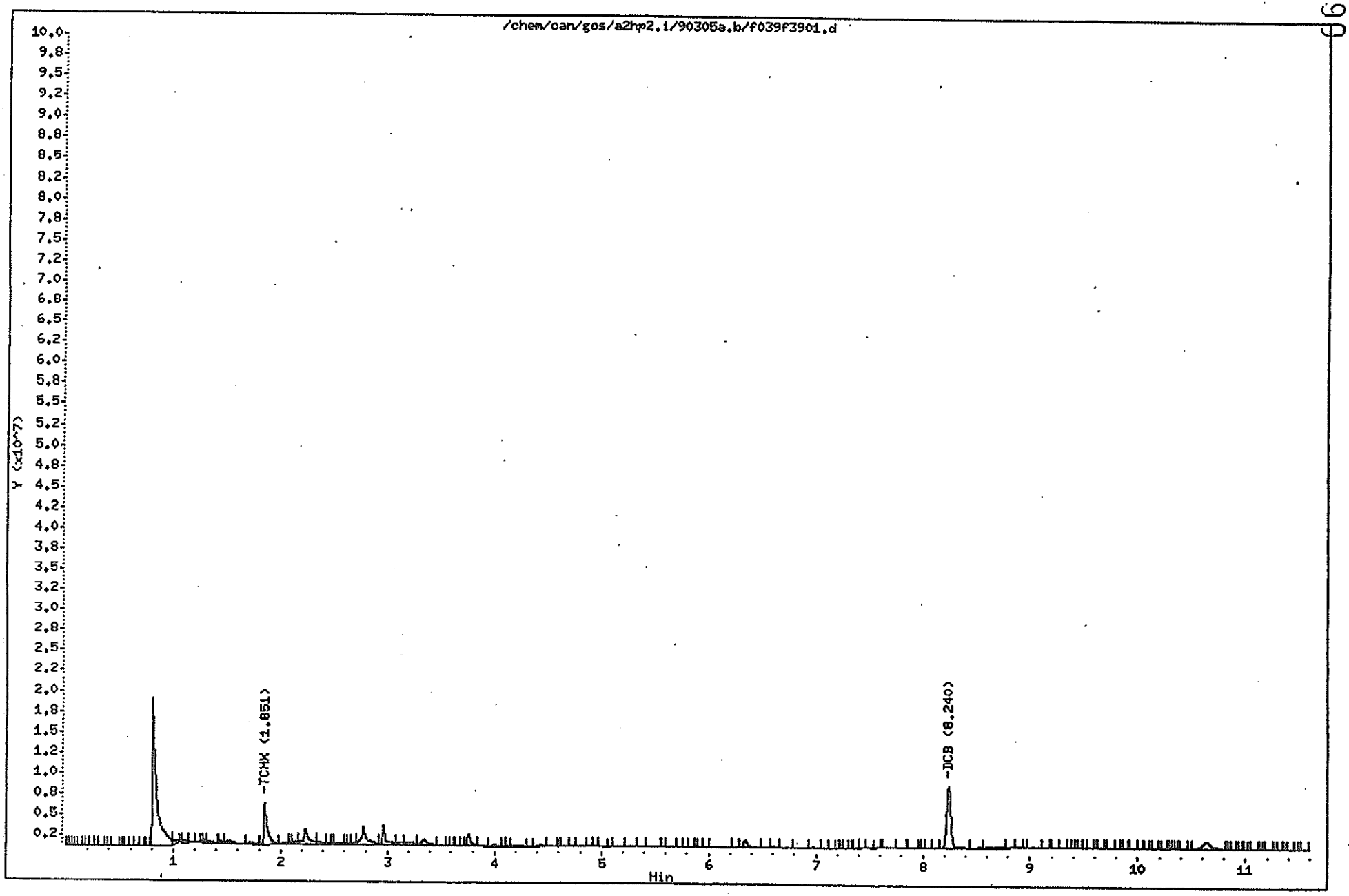
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

D ile: /chem/can/gos/a2hp2.i/90305a.b/f039f3901.d
Date : 06-MAR-1999 02:12
Client ID: S-022399-JH-076
Sample Info: CR2T0101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 016

Sample WT/Vol: 30.11 / g
Work Order: CR2T1101
Dilution factor: 1
Moisture %:16

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-077

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	39	U
11104-28-2	Aroclor 1221	39	U
11141-16-5	Aroclor 1232	39	U
53469-21-9	Aroclor 1242	39	U
12672-29-6	Aroclor 1248	39	U
11097-69-1	Aroclor 1254	39	U
11096-82-5	Aroclor 1260	39	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f040f4001.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f040f4001.d
Lab Smp Id: CR2T1101 Client Smp ID: S-022399-JH-077
Inj Date : 06-MAR-1999 02:29
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T1101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 40
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

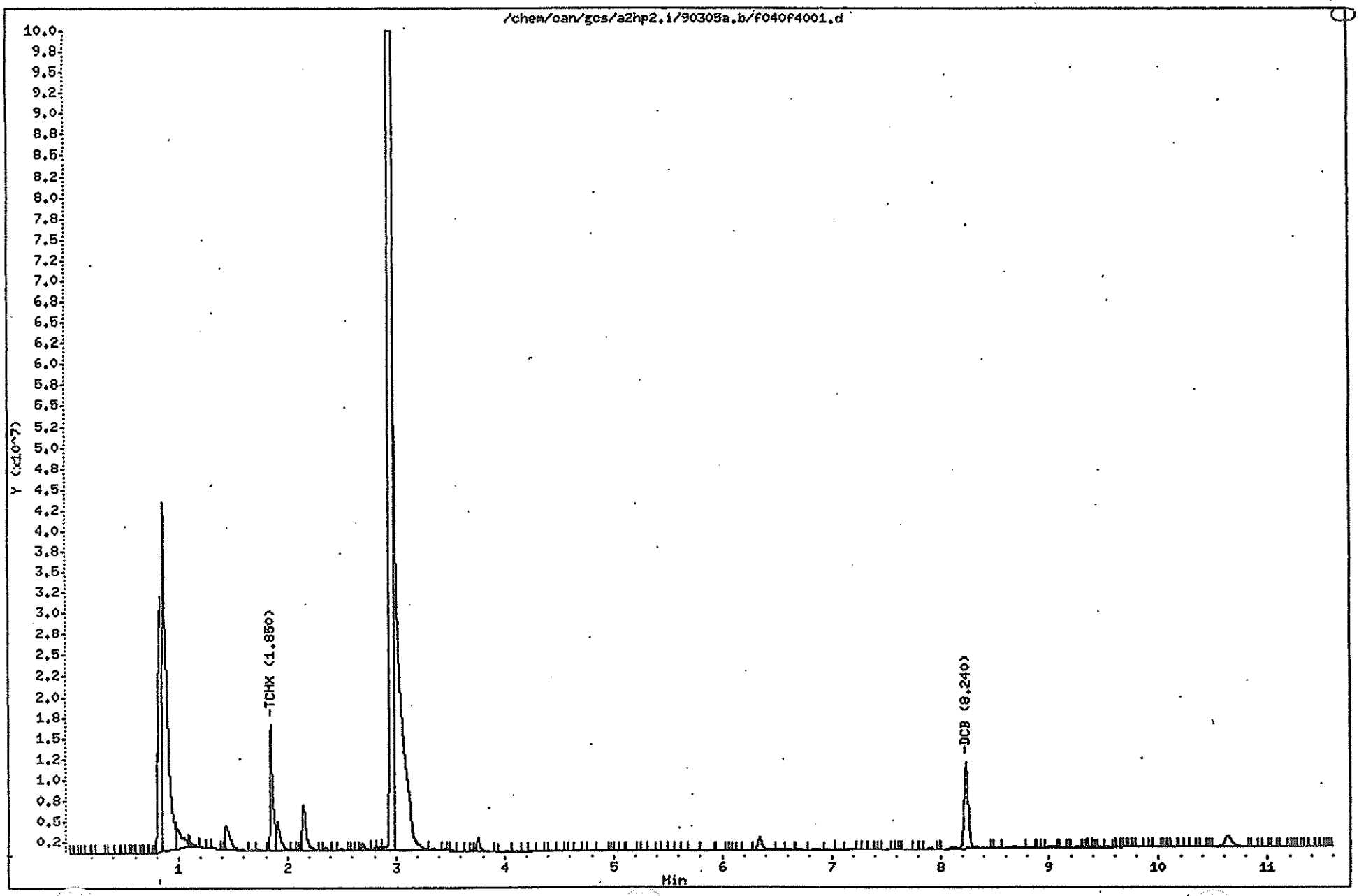
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	15071389	0.01627	5.402	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
8.240	8.238	0.002	10311232	0.02105	6.990	80.00- 120.00	100.00

Data File: /chem/oan/gos/a2hp2.i/90305a.b/f040f4001.d
Date : 06-MAR-1999 02:29
Client ID: S-022399-JH-077
Sample Info: CR2T1101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



072

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number: -

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 017

Sample WT/Vol: 30.19 / g
Work Order: CR2T2101
Dilution factor: 100
Moisture %:10

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-078

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3700	U
11104-28-2	Aroclor 1221	3700	U
11141-16-5	Aroclor 1232	3700	U
53469-21-9	Aroclor 1242	17000	
12672-29-6	Aroclor 1248	3700	U
11097-69-1	Aroclor 1254	3700	U
11096-82-5	Aroclor 1260	3700	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f041f4101.d
Report Date: 08-Mar-1999 12:30

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f041f4101.d
Lab Smp Id: CR2T2101 Client Smp ID: S-022399-JH-078
Inj Date : 06-MAR-1999 02:46
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T2101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 41
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.190	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	240058	0.000259	8.582	80.00- 120.00	100.00
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	2039311	0.18742	6208	80.00- 120.00	100.00(M)
2.352	2.352	0.000	8131117	0.43344	14360	124.30- 207.17	398.72
2.485	2.501	-0.016	4759602	0.38269	12680	71.73- 119.55	233.39
2.695	2.695	0.000	20553758	0.54455	18040	230.56- 384.27	1007.88
3.113	3.113	0.000	11606046	0.70155	23240	104.79- 174.65	569.12
Average of Peak Concentrations =					14900		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.352	2.349	0.003	8131117	0.81927	27140	80.00- 120.00	100.00(M)
2.695	2.694	0.001	20553758	0.86199	20550	161.12- 268.53	252.78
2.953	2.950	0.003	12427748	0.49222	16300	119.97- 199.95	152.84
3.113	3.112	0.001	11606046	0.41735	13820	186.75- 311.24	142.74

MLS 3-8-99
possible mix of 1242's
1248 pattern best fits 1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f041f4101.d
Report Date: 08-Mar-1999 12:30

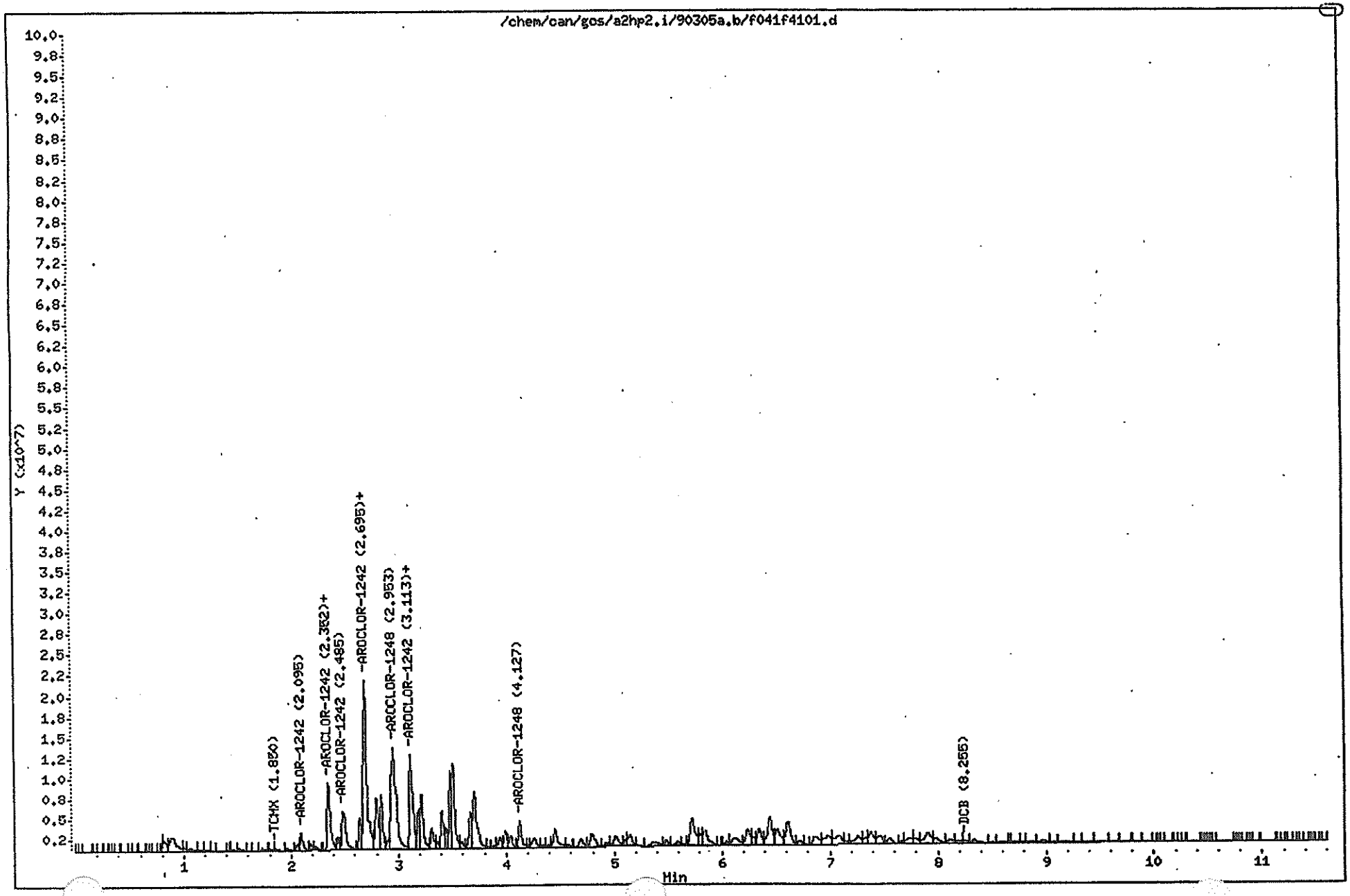
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.127	4.126	0.001	3174315	0.21353	7073	101.05- 168.42	39.04
Average of Peak Concentrations =					18580		
$ 9 DCB					CAS #: 2051-24-3		
8.255	8.238	0.017	362695	0.00074	24.52	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f041f4101.d
Date : 06-MAR-1999 02:46
Client ID: S-022399-JH-078
Sample Info: CR2T2101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 018

Sample WT/Vol: 30.01 / g
Work Order: CR2T4101
Dilution factor: 500
Moisture %:7.8

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-079

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	18000	U
11104-28-2	Aroclor 1221	18000	U
11141-16-5	Aroclor 1232	18000	U
53469-21-9	Aroclor 1242	58000	
12672-29-6	Aroclor 1248	18000	U
11097-69-1	Aroclor 1254	18000	U
11096-82-5	Aroclor 1260	18000	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f042f4201.d
Report Date: 08-Mar-1999 12:31

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f042f4201.d
Lab Smp Id: CR2T4101 Client Smp ID: S-022399-JH-079
Inj Date : 06-MAR-1999 03:03
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T4101,500
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 42
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.821	1.848	-0.027	343501	0.000371	61.77	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.092	2.095	-0.003	3104802	0.28534	47540	80.00- 120.00	100.00(M)
2.350	2.352	-0.002	6703356	0.35733	59540	124.30- 207.17	215.90
2.498	2.501	-0.003	3780044	0.30393	50640	71.73- 119.55	121.75
2.693	2.695	-0.002	12272702	0.32515	54170	230.56- 384.27	395.28
3.111	3.113	-0.002	5593042	0.33808	56330	104.79- 174.65	180.14
Average of Peak Concentrations =					53640		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.350	2.349	0.001	~~6703356~~	~~0.67541~~	~~112500~~	~~80.00- 120.00~~	~~100.00(M)~~
2.693	2.694	-0.001	12272702	0.51469	~~85750~~	~~161.12- 268.53~~	183.08
2.949	2.950	-0.001	4575929	0.18124	30200	119.97- 199.95	68.26
3.111	3.112	-0.001	5593042	0.20112	33510	186.75- 311.24	83.44

PLS 3-8-99
possible m
of 1242 -
1248 patte
best fits
1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f042f4201.d
Report Date: 08-Mar-1999 12:31

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.125	4.126	-0.001	1537548	0.10343	17230	101.05- 168.42	22.94
Average of Peak Concentrations =					55840		
$ 9 DCB					CAS #: 2051-24-3		
8.255	8.238	0.017	59749	0.000122	20.32	80.00- 120.00	100.00(R)

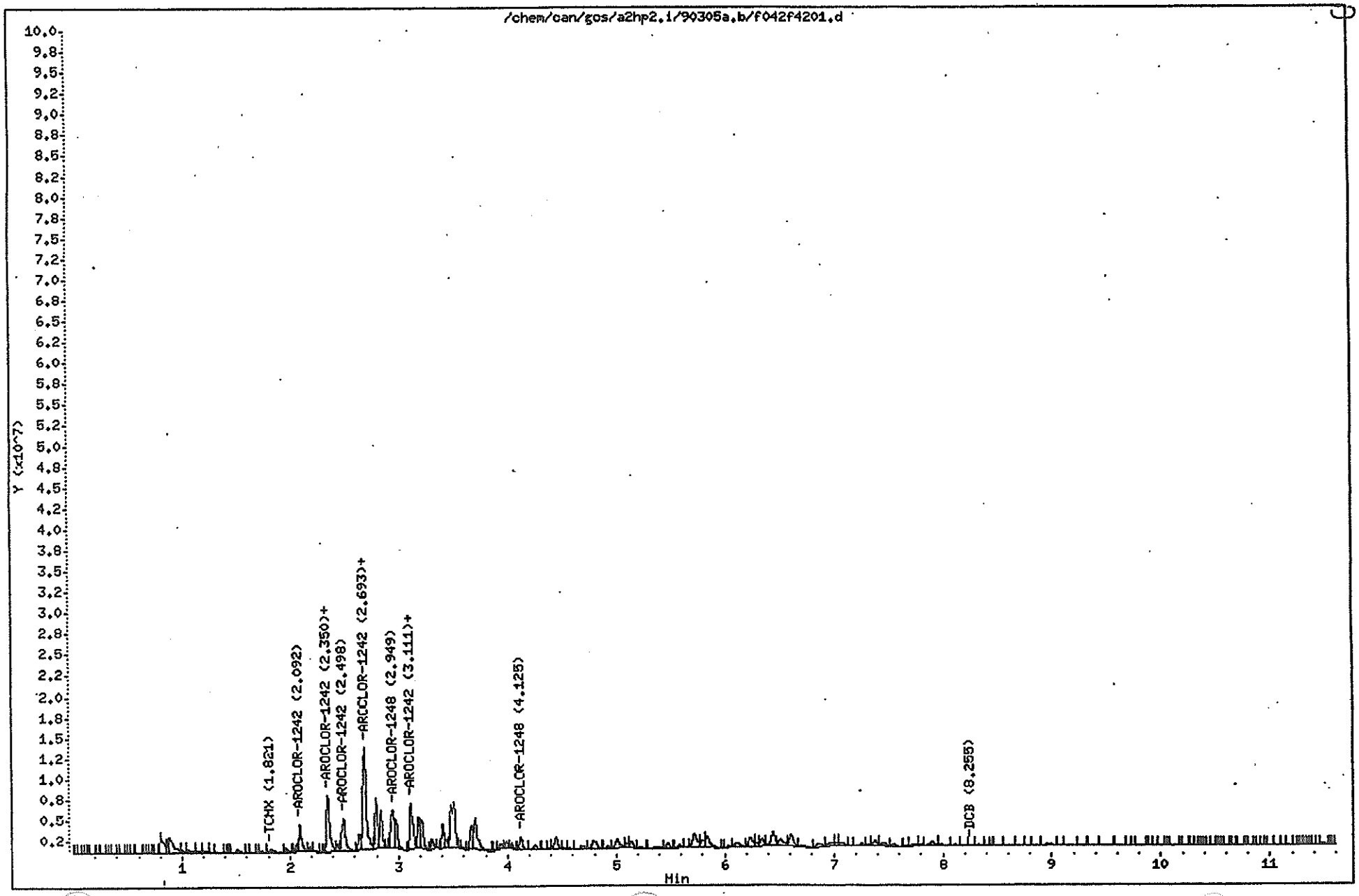
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gos/a2hp2.i/90305a.b/f042f4201.d
Date : 06-MAR-1999 03:03
Client ID: S-022399-JH-079
Sample Info: CR2T4101,500
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



080

CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 019

Sample WT/Vol: 30.1 / g
Work Order: CR2T5101
Dilution factor: 100
Moisture %:5.2

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-080

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	3500	U
11104-28-2	Aroclor 1221	3500	U
11141-16-5	Aroclor 1232	3500	U
53469-21-9	Aroclor 1242	13000	
12672-29-6	Aroclor 1248	3500	U
11097-69-1	Aroclor 1254	3500	U
11096-82-5	Aroclor 1260	3500	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f043f4301.d
Report Date: 08-Mar-1999 12:31

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f043f4301.d
Lab Smp Id: CR2T5101 Client Smp ID: S-022399-JH-080
Inj Date : 06-MAR-1999 03:19
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T5101,100
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 43
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.823	1.848	-0.025	707446	0.000764	25.37	80.00- 120.00	100.00(R)
$ AROCLOR-1242					CAS #: 53469-21-9		
2.094	2.095	-0.001	4324805	0.39746	13200	80.00- 120.00	100.00(M)
2.352	2.352	0.000	9559898	0.50961	16930	124.30- 207.17	221.05
2.499	2.501	-0.002	4978008	0.40025	13300	71.73- 119.55	115.10
2.694	2.695	-0.001	10489942	0.27792	9233	230.56- 384.27	242.55
3.113	3.113	0.000	4711692	0.28481	9462	104.79- 174.65	108.95
Average of Peak Concentrations =					12420		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.352	2.349	0.003	~~9559898~~	~~0.96323~~	32000	80.00- 120.00	100.00(M)
2.694	2.694	0.000	10489942	0.43993	~~14620~~	~~161.12- 268.53~~	109.73
2.950	2.950	0.000	4613573	0.18273	6071	119.97- 199.95	~~48.26~~
3.113	3.112	0.001	4711692	0.16943	5629	186.75- 311.24	49.29

BLS 3-8-9
possible mi
of 1242-
1248 path
best fits
1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f043f4301.d
Report Date: 08-Mar-1999 12:31

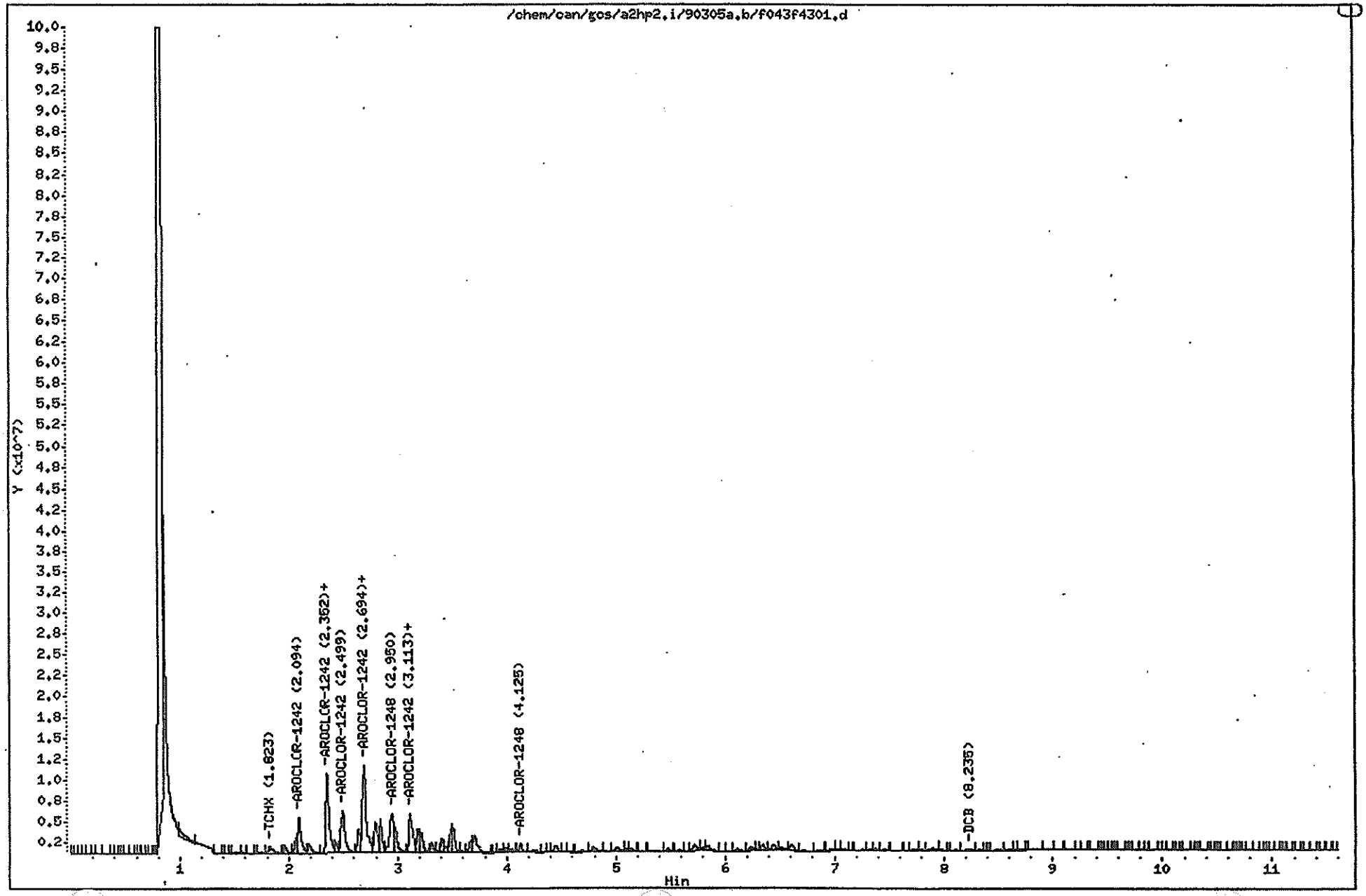
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.125	4.126	-0.001	1003668	0.06751	2243	101.05- 168.42	10.50
Average of Peak Concentrations =					12110		
$ 9 DCB					CAS #: 2051-24-3		
8.235	8.238	-0.003	174236	0.000356	11.82	80.00- 120.00	100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/can/gos/a2hp2.i/90305a.b/f043f4301.d
Date : 06-MAR-1999 03:19
Client ID: S-022399-JH-080
Sample Info: CR2T5101,100
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



CONESTOGA-ROVERS & ASSOCIATES INC

Lab Name:QUANTERRA

SDG Number: -

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240116 020

Sample WT/Vol: 30.04 / g
Work Order: CR2T6101
Dilution factor: 1000
Moisture %:14

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: S-022399-JH-081

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	38000	U
11104-28-2	Aroclor 1221	38000	U
11141-16-5	Aroclor 1232	38000	U
53469-21-9	Aroclor 1242	180000	
12672-29-6	Aroclor 1248	38000	U
11097-69-1	Aroclor 1254	38000	U
11096-82-5	Aroclor 1260	38000	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f044f4401.d
Report Date: 08-Mar-1999 12:31

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f044f4401.d
Lab Smp Id: CR2T6101 Client Smp ID: S-022399-JH-081
Inj Date : 06-MAR-1999 03:36
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR2T6101,1000
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 44
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.822	1.848	-0.026	2300000	0.00248	826.3	80.00- 120.00	100.00(R)
5 AROCLOR-1242					CAS #: 53469-21-9		
2.093	2.095	-0.002	10834547	0.99572	331500	80.00- 120.00	100.00(M)
2.357	2.352	0.005	10047203	0.53558	178300	124.30- 207.17	92.73
2.483	2.501	-0.018	7942805	0.63863	212600	71.73- 119.55	73.31
2.678	2.695	-0.017	1602886	0.04247	14140	230.56- 384.27	14.79
3.133	3.113	0.020	1103750	0.06672	22210	104.79- 174.65	10.19
Average of Peak Concentrations =					151700		
6 AROCLOR-1248					CAS #: 12672-29-6		
2.357	2.349	0.008	10047203	~~1.01233~~	337000	80.00- 120.00	100.00(M)
2.678	2.694	-0.016	1602886	0.06722	22380	~~161.12- 268.53~~	15.95
2.975	2.950	0.025	4252829	0.16844	56070	119.97- 199.95	42.33
3.133	3.112	0.021	1103750	0.03969	13210	186.75- 311.24	10.99

ALS 3-8-99
possible m
of 1242-
1248 patte
best fits
1242

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f044f4401.d
Report Date: 08-Mar-1999 12:31

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248 (continued)							
4.125	4.126	-0.001	105885	0.00712	2371	101.05- 168.42	1.05
Average of Peak Concentrations =					86200		
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.238	0.000	29511	<0.0	20.05	80.00- 120.00	100.00(R)

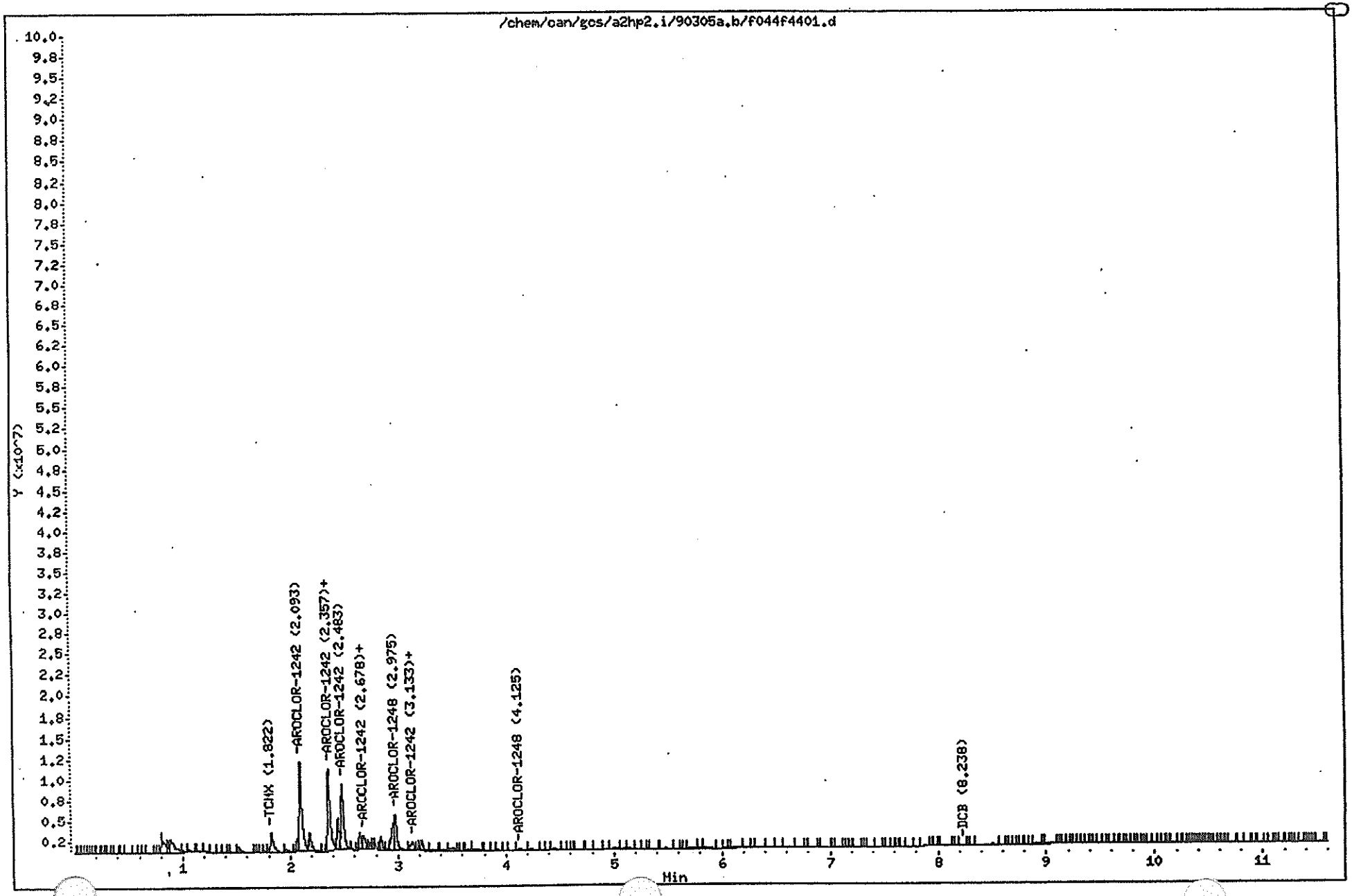
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /chem/oan/gcs/a2hp2.i/90305a.b/f044f4401.d
Date : 06-MAR-1999 03:36
Client ID: S-022399-JH-081
Sample Info: CR2T6101,1000
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
STANDARD DATA

Report Date : 04-Mar-1999 15:28

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 05-FEB-1999 10:01
End Cal Date : 05-FEB-1999 17:50
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Cal Date : 03-Mar-1999 09:44 a
Curve Type : Average

Calibration File Names:
Level 1: /chem/can/gcs/a2hp2.i/90205a.b/f024f0701.d
Level 2: /chem/can/gcs/a2hp2.i/90205a.b/f025f0801.d
Level 3: /chem/can/gcs/a2hp2.i/90205a.b/f026f0901.d
Level 4: /chem/can/gcs/a2hp2.i/90205a.b/f027f1001.d
Level 5: /chem/can/gcs/a2hp2.i/90205a.b/f028f1101.d

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221 (1)	8607930	10219030	9659562	7814153	7586954	8777526	13.027
(2)	6330870	7124795	6437752	5229857	4970157	6018686	14.903
(3)	23073690	25801740	24139482	20664962	19911142	22718203	10.726
3 AROCLOR-1016 (1)	16185890	15935755	14599002	15368362	12195376	14856877	10.823
(2)	27736710	27709690	26667280	26200593	23082882	26279431	7.256
(3)	56012490	55320960	51826012	50674945	48022182	52371318	6.336
(4)	25732680	25772495	24717196	23970112	22303657	24499228	5.876
(5)	23163500	23127835	21766504	20871536	19760960	21738067	6.755
4 AROCLOR-1232 (1)	19875390	16195415	18216640	14806445	13837076	16586193	14.877
(2)	13027220	10977520	11568390	10434993	9518926	11105410	11.818
(3)	22664660	21044180	22678854	21319380	19862942	21514003	5.532
(4)	11648400	10275075	10785620	9889187	9148306	10349318	9.087
(5)	8098570	7389230	7905108	7318774	6852490	7512834	6.608
5 AROCLOR-1242 (1)	11319750	10447090	10882090	11445157	10311236	10881065	4.649
(2)	19876230	19384100	18026992	19073332	17436193	18759369	5.346
(3)	13260610	12778010	12518602	12044066	11584844	12437226	5.214
(4)	38341160	38759915	38094758	37296301	36231810	37744789	2.649
(5)	17478750	17450660	16177998	16202202	15408090	16543540	5.438
6 AROCLOR-1248 (1)	11754790	9649880	9801726	8744982	9672748	9924825	11.146
(2)	25639430	23392820	24992002	22371593	22827473	23844664	5.911
(3)	29276130	26467525	25554542	22602451	22341044	25248338	11.420
(4)	30678750	26948310	28666126	25742691	27010180	27809212	6.874
(5)	16253410	14446750	15487000	13947100	14195556	14865963	6.539
7 AROCLOR-1254 (1)	30140900	30027225	27856724	27314728	25790230	28225961	6.583
(2)	28461950	27022900	22897906	26695987	25512274	26118203	7.982
(3)	50109040	50239485	40542450	47827595	45136248	46770964	8.669
(4)	33823510	33647950	26573694	32457824	30423024	31385200	9.597
(5)	31367250	31081560	24375040	28582817	26822412	28445816	10.355

Report Date : 04-Mar-1999 15:28

QUANTERRA-NORTH CANTON

INITIAL CALIBRATION DATA

Start Cal Date : 05-FEB-1999 10:01
End Cal Date : 05-FEB-1999 17:50
Quant Method : ESTD
Origin : Disabled
Target Version : 3.40
Integrator : Falcon
Method file : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Cal Date : 03-Mar-1999 09:44 a
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD	
8 AROCLOR-1260 (1)	39174250	38629730	35736660	34405500	32413920	36072012	7.894	
(2)	54469040	54174275	50681216	48844142	46140844	50861904	6.977	
(3)	45150460	45685250	43402792	41720100	40246982	43241117	5.289	
(4)	56551940	58395975	54461798	53813084	51802580	55005075	4.623	
(5)	30357370	31150210	28852334	28318320	27279323	29191511	5.343	
10 AROCLOR-1262 (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
11 AROCLOR-1268 (1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 1 TCMX	917803600	971209800	954506200	1.019e+09	769962820	926549248	10.234	
$ 9 DCB	532323000	553316700	477183840	444449120	442206800	489895892	10.370	

Report Date: 05-Mar-1999 08:02

Calibration History

Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Start Cal Date: 05-FEB-1999 10:01
End Cal Date : 05-FEB-1999 17:50

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.1000		
05-FEB-1999 16:43	AR1660td	f024f0701.d
05-FEB-1999 15:20	AR2154	f019f0201.d
05-FEB-1999 12:48	AR1248	f014f1401.d
05-FEB-1999 11:25	AR1242	f009f0901.d
05-FEB-1999 10:01	AR1232	f004f0401.d
Cal Level: 2 , Cal Amount: 0.2000		
05-FEB-1999 17:00	AR1660td	f025f0801.d
05-FEB-1999 15:37	AR2154	f020f0301.d
05-FEB-1999 14:10	AR1248	f015f0201.d
05-FEB-1999 11:41	AR1242	f010f1001.d
05-FEB-1999 10:18	AR1232	f005f0501.d
Cal Level: 3 , Cal Amount: 0.5000		
05-FEB-1999 17:17	AR1660td	f026f0901.d
05-FEB-1999 15:53	AR2154	f021f0401.d
05-FEB-1999 14:27	AR1248	f016f0301.d
05-FEB-1999 11:58	AR1242	f011f1101.d
05-FEB-1999 10:35	AR1232	f006f0601.d
Cal Level: 4 , Cal Amount: 1.000		
05-FEB-1999 17:33	AR1660td	f027f1001.d
05-FEB-1999 16:10	AR2154	f022f0501.d
05-FEB-1999 14:43	AR1248	f017f0401.d
05-FEB-1999 12:15	AR1242	f012f1201.d
05-FEB-1999 10:51	AR1232	f007f0701.d
Cal Level: 5 , Cal Amount: 2.000		
05-FEB-1999 17:50	AR1660td	f028f1101.d
05-FEB-1999 16:27	AR2154	f023f0601.d
05-FEB-1999 15:03	AR1248	f018f0101.d
05-FEB-1999 12:31	AR1242	f013f1301.d
05-FEB-1999 11:08	AR1232	f008f0801.d

Continuing Calibration

05-FEB-1999 17:17	AR1660td	f026f0901.d
05-FEB-1999 15:53	AR2154	f021f0401.d
05-FEB-1999 14:27	AR1248	f016f0301.d
05-FEB-1999 11:58	AR1242	f011f1101.d
05-FEB-1999 10:35	AR1232	f006f0601.d

Data File: /chem/can/gcs/a2hp2.i/90205a.b/f004f0401.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f004f0401.d
Lab Smp Id: 1232 0.1
Inj Date : 05-FEB-1999 10:01 Inst ID: a2hp2.i
Operator : 1808
Smp Info : 1232 0.1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 10:01 Cal File: f004f0401.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: None

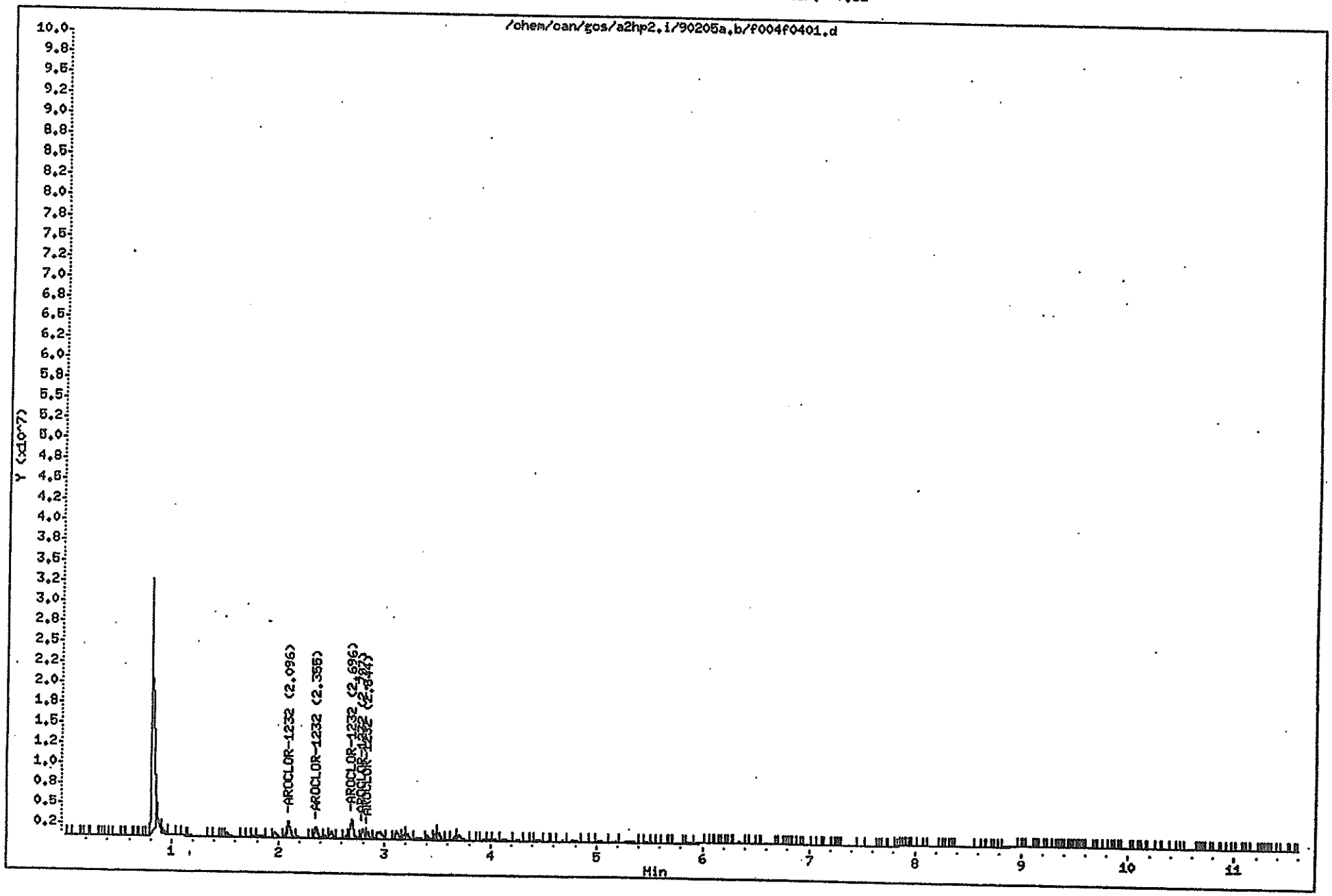
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.096	2.097	-0.001	1987539	0.10000	0.1000	75.00- 125.00	100.00
2.355	2.359	-0.004	1302722	0.10000	0.1000	47.63- 79.38	65.54
2.696	2.697	-0.001	2266466	0.10000	0.1000	93.37- 155.62	114.03
2.797	2.800	-0.003	1164840	0.10000	0.1000	44.41- 74.01	58.61
2.844	2.847	-0.003	809857	0.10000	0.1000	32.55- 54.24	40.75
Average of Peak Amounts =					0.1		

Data : /chem/oan/gos/a2hp2.i/90205a.b/f004f0401.d
Date : 05-FEB-1999 10:01
Client ID:
Sample Info: 1232 0.1

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f005f0501.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f005f0501.d
Lab Smp Id: 1232 0.2
Inj Date : 05-FEB-1999 10:18
Operator : 1808
Smp Info : 1232 0.2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 10:18
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f005f0501.d
Calibration Sample, Level: 2

Compound Sublist: AR1232.sub
Sample Matrix: None

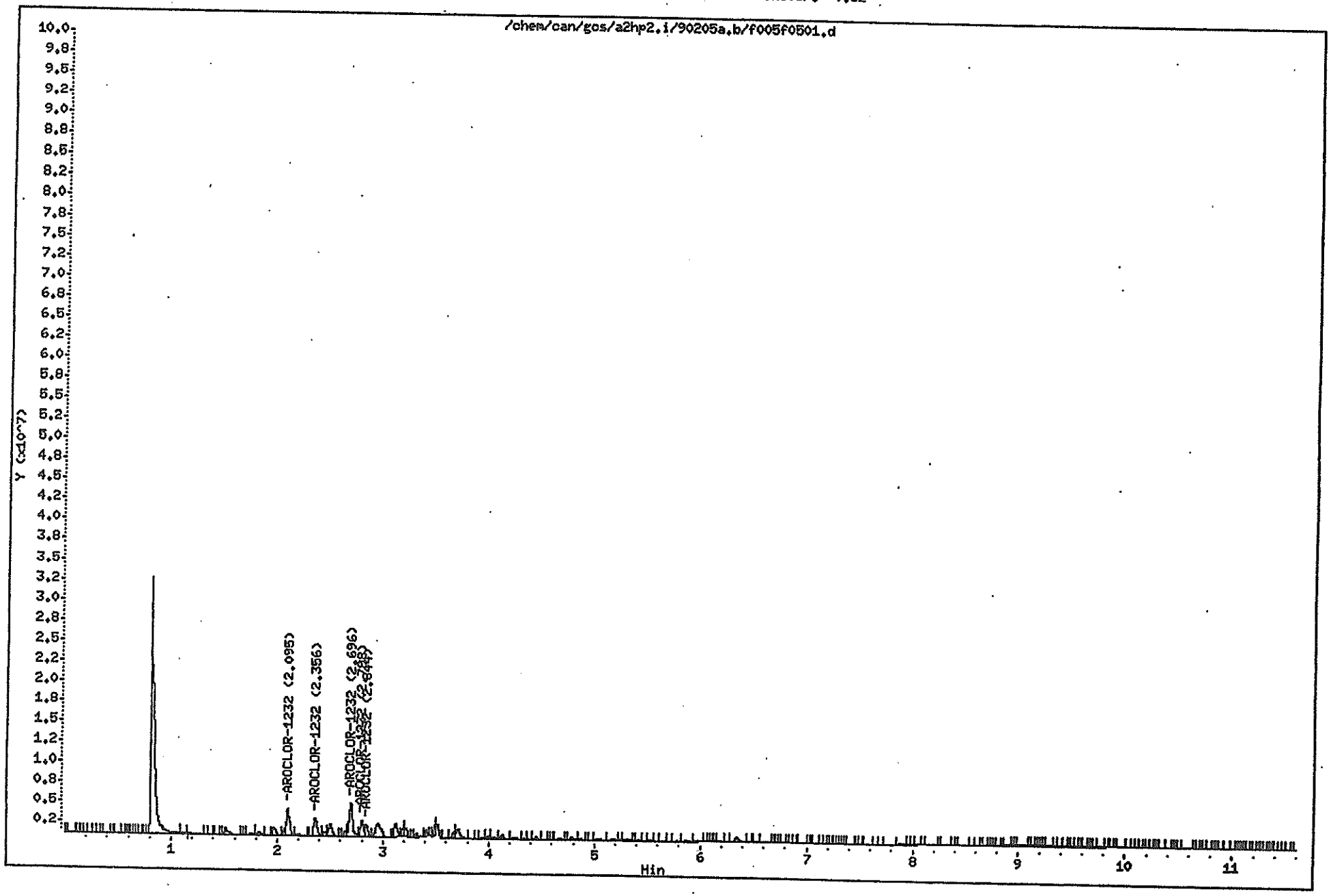
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.095	2.097	-0.002	3239083	0.20000	0.1796	75.00- 125.00	100.00
2.356	2.359	-0.003	2195504	0.20000	0.1829	47.63- 79.38	67.78
2.696	2.697	-0.001	4208836	0.20000	0.1926	93.37- 155.62	129.94
2.798	2.800	-0.002	2055015	0.20000	0.1875	44.41- 74.01	63.44
2.844	2.847	-0.003	1477846	0.20000	0.1908	32.55- 54.24	45.63
Average of Peak Amounts =					0.187		

Data . . .e: /chem/can/gos/a2hp2.i/90205a.b/f005f0501.d
Date : 05-FEB-1999 10:18
Client ID:
Sample Info: 1232 0.2

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f006f0601.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f006f0601.d
Lab Smp Id: 1232 0.5
Inj Date : 05-FEB-1999 10:35
Operator : 1808
Smp Info : 1232 0.5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 10:35
Als bottle: 6
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f006f0601.d
Calibration Sample, Level: 3

Compound Sublist: AR1232.sub
Sample Matrix: None

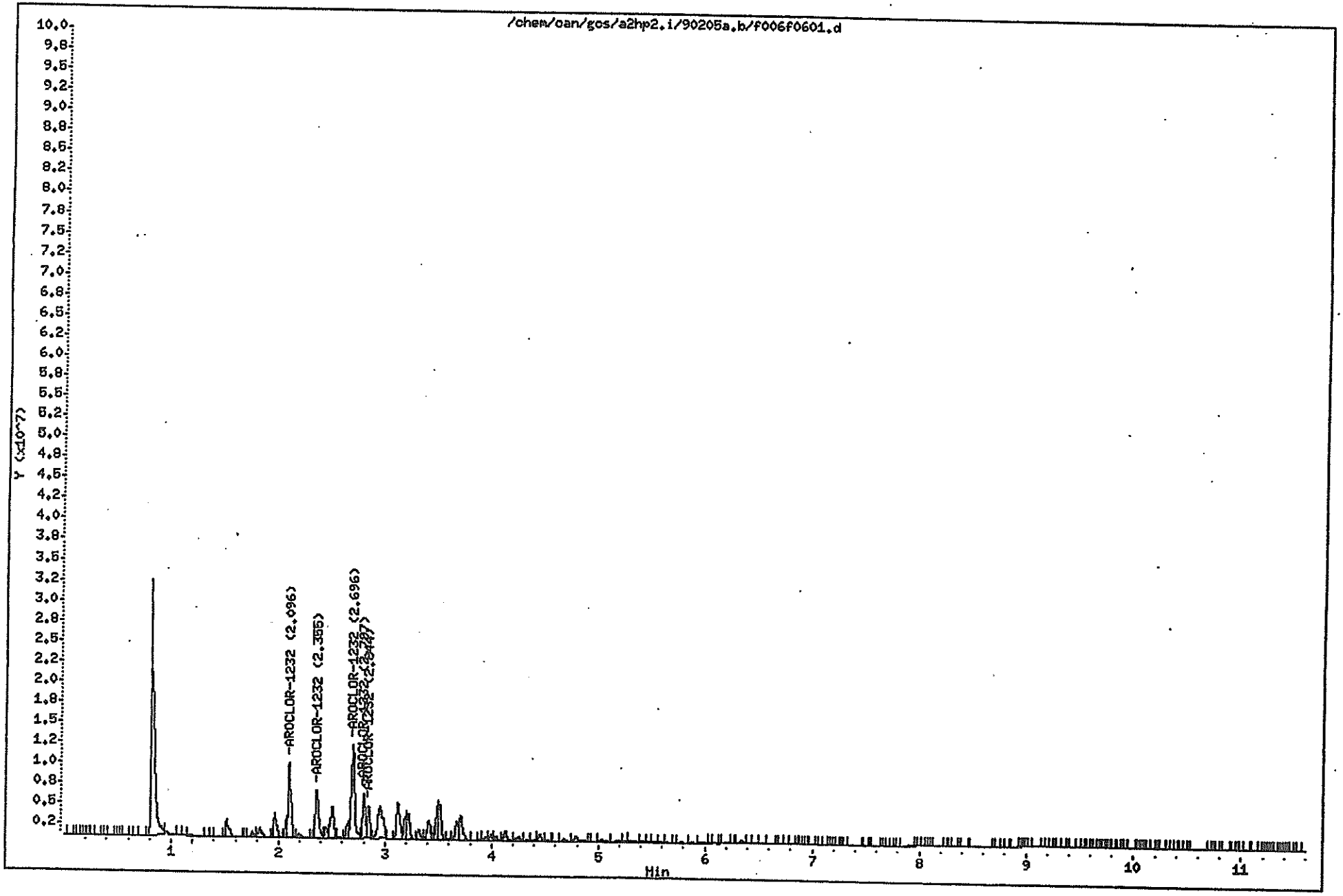
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.096	2.097	-0.001	9108320	0.50000	0.5033	75.00- 125.00	100.00
2.355	2.359	-0.004	5784195	0.50000	0.4878	47.63- 79.38	63.50
2.696	2.697	-0.001	11339427	0.50000	0.5124	93.37- 155.62	124.50
2.797	2.800	-0.003	5392810	0.50000	0.4946	44.41- 74.01	59.21
2.844	2.847	-0.003	3952554	0.50000	0.5069	32.55- 54.24	43.39
Average of Peak Amounts =					0.501		

Data File: /chem/oan/gos/a2hp2.i/90205a.b/f006f0601.d
Date : 05-FEB-1999 10:35
Client ID:
Sample Info: 1232 0.5

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f007f0701.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f007f0701.d
Lab Smp Id: 1232 1.0
Inj Date : 05-FEB-1999 10:51
Operator : 1808
Smp Info : 1232 1.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 10:51
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f007f0701.d
Calibration Sample, Level: 4

Compound Sublist: AR1232.sub
Sample Matrix: None

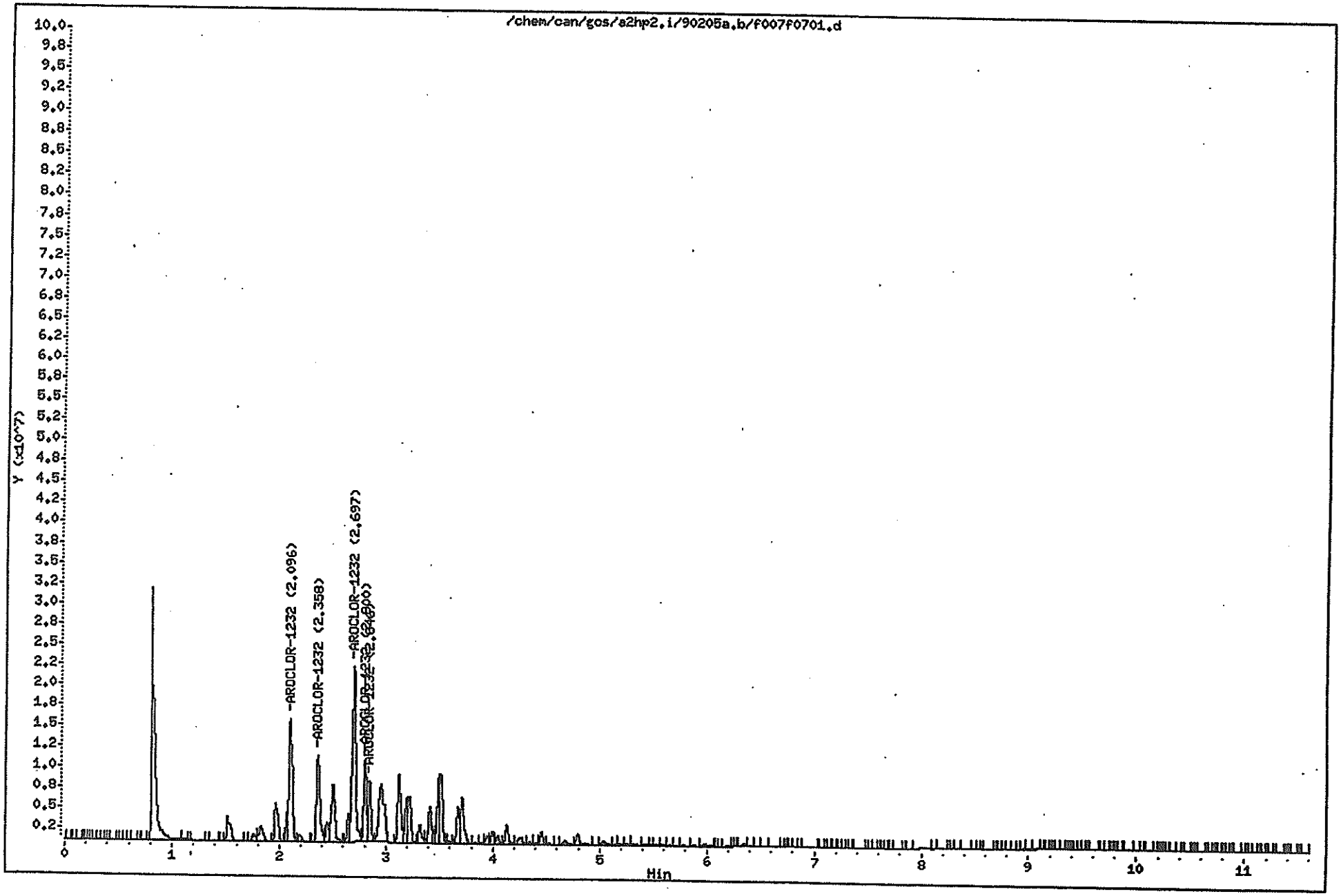
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.096	2.097	-0.001	14806445	1.00000	0.8572	75.00- 125.00	100.00
2.358	2.359	-0.001	10434993	1.00000	0.9072	47.63- 79.38	70.48
2.697	2.697	0.000	21319380	1.00000	0.9723	93.37- 155.62	143.99
2.800	2.800	0.000	9889187	1.00000	0.9286	44.41- 74.01	66.79
2.846	2.847	-0.001	7318774	1.00000	0.9532	32.55- 54.24	49.43
Average of Peak Amounts =					0.924		

Data : /chem/can/gos/a2hp2.i/90205a.b/f007f0701.d
Date : 05-FEB-1999 10:51
Client ID:
Sample Info: 1232 1.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f008f0801.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f008f0801.d
Lab Smp Id: 1232 2.0
Inj Date : 05-FEB-1999 11:08
Operator : 1808
Smp Info : 1232 2.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 11:08
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f008f0801.d
Calibration Sample, Level: 5

Compound Sublist: AR1232.sub
Sample Matrix: None

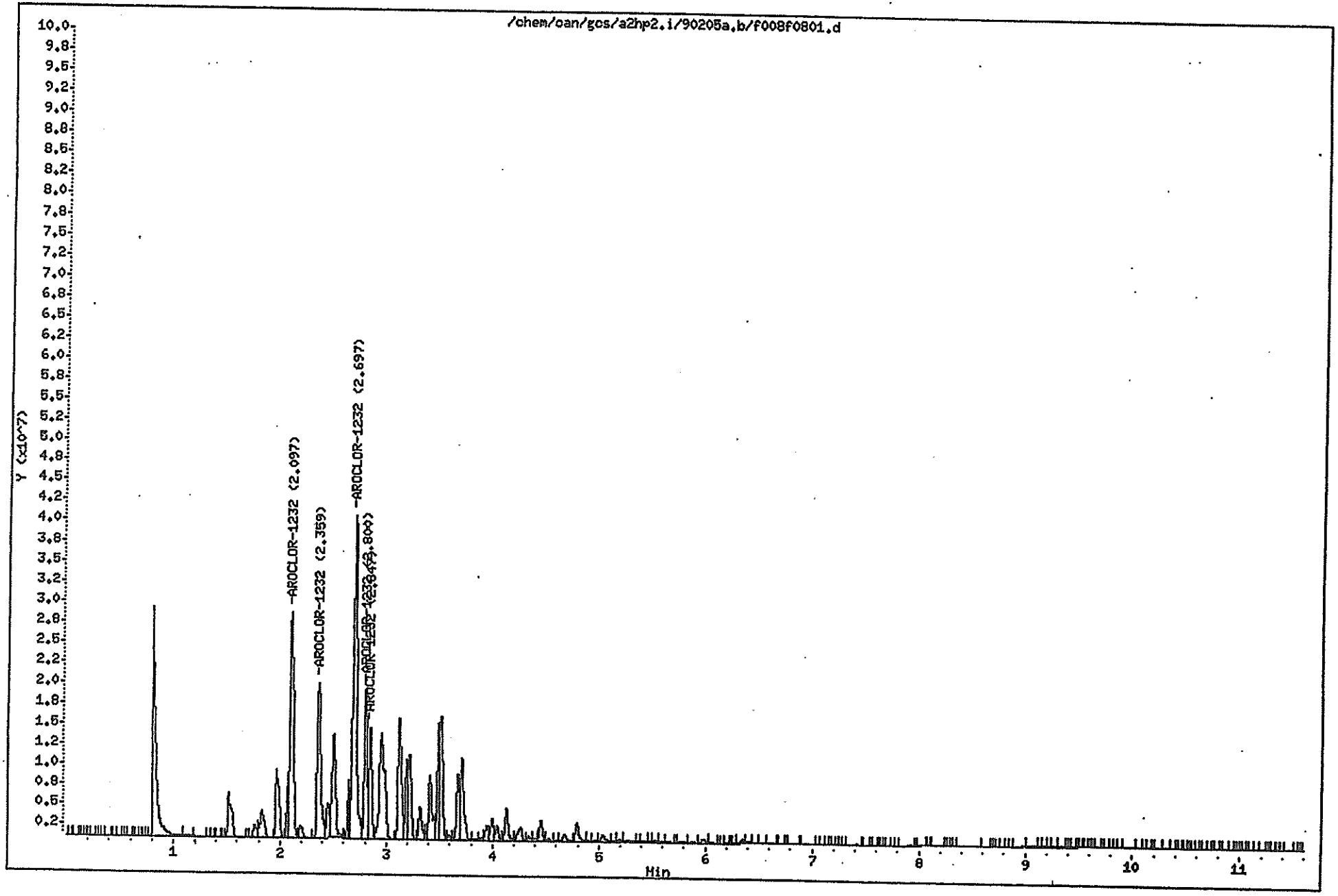
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.097	2.097	0.000	27674153	2.00000	1.668	75.00- 125.00	100.00
2.359	2.359	0.000	19037851	2.00000	1.714	47.63- 79.38	68.79
2.697	2.697	0.000	39725883	2.00000	1.846	93.37- 155.62	143.55
2.800	2.800	0.000	18296613	2.00000	1.768	44.41- 74.01	66.11
2.847	2.847	0.000	13704981	2.00000	1.824	32.55- 54.24	49.52
			Average of Peak Amounts =		1.76		

Data File: /chem/oan/gcs/a2hp2.i/90205a.b/f008f0801.d
Date : 05-FEB-1999 11:08
Client ID:
Sample Info: 1232 2.0

Instrument: a2hp2.i

Operator: 1809
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f009f0901.d
Report Date: 05-Mar-1999 10:14

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f009f0901.d
Lab Smp Id: 1242 0.1
Inj Date : 05-FEB-1999 11:25
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 0.1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 11:25 Cal File: f009f0901.d
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None

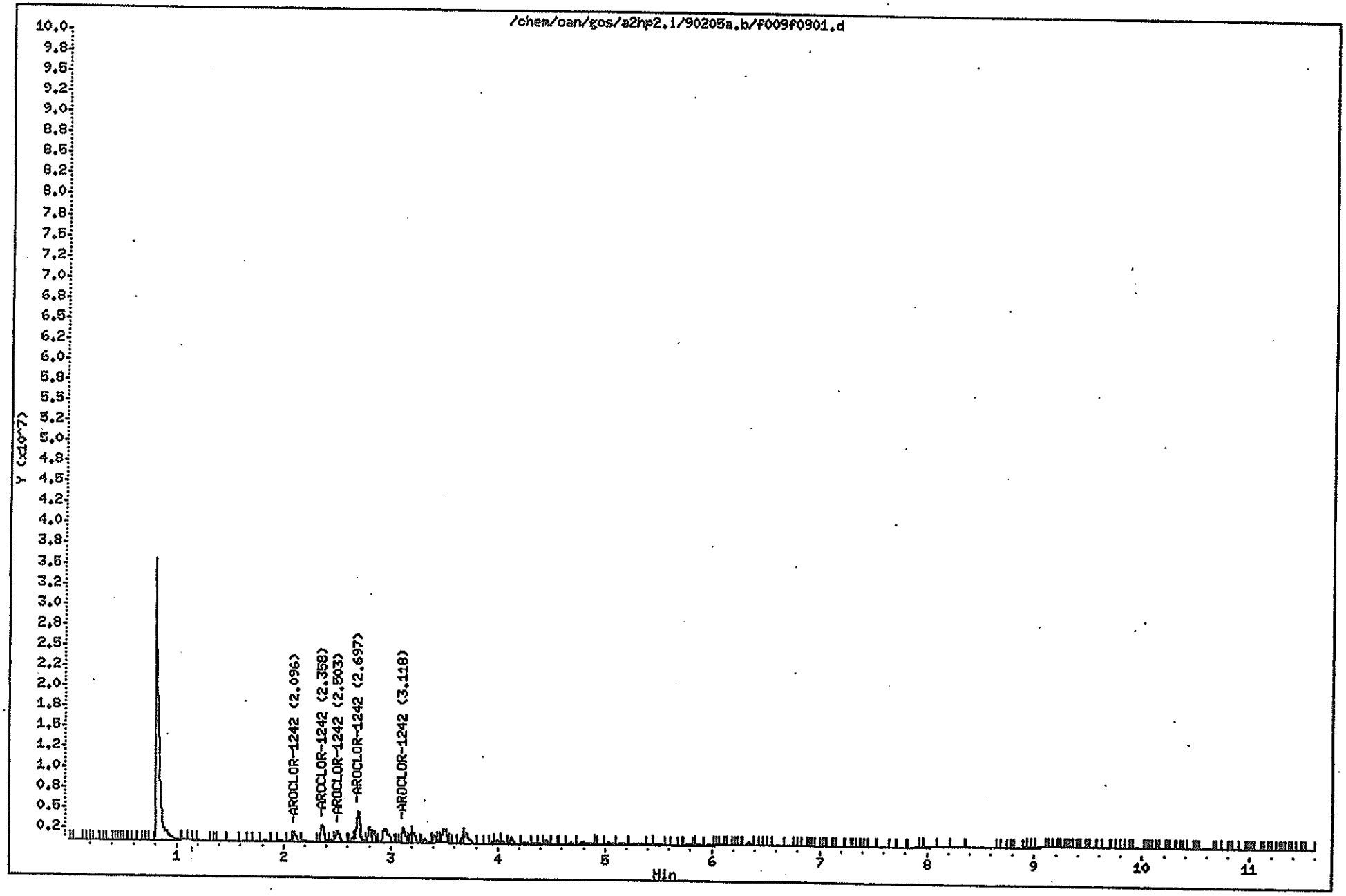
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.096	2.095	0.001	1131975	0.10000	0.1000	75.00- 125.00	100.00
2.358	2.354	0.004	1987623	0.10000	0.1000	124.24- 207.07	175.59
2.503	2.503	0.000	1326061	0.10000	0.1000	86.28- 143.80	117.15
2.697	2.696	0.001	3834116	0.10000	0.1000	262.55- 437.59	338.71
3.118	3.116	0.002	1747875	0.10000	0.1000	111.50- 185.83	154.41
Average of Peak Amounts =					0.1		

Data File: /chem/oan/gcs/a2hp2.i/90205a.b/f009f0901.d
Date : 05-FEB-1999 11:25
Client ID:
Sample Info: 1242 0.1

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f010f1001.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f010f1001.d
Lab Smp Id: 1242 0.2
Inj Date : 05-FEB-1999 11:41
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 0.2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 11:41 Cal File: f010f1001.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None

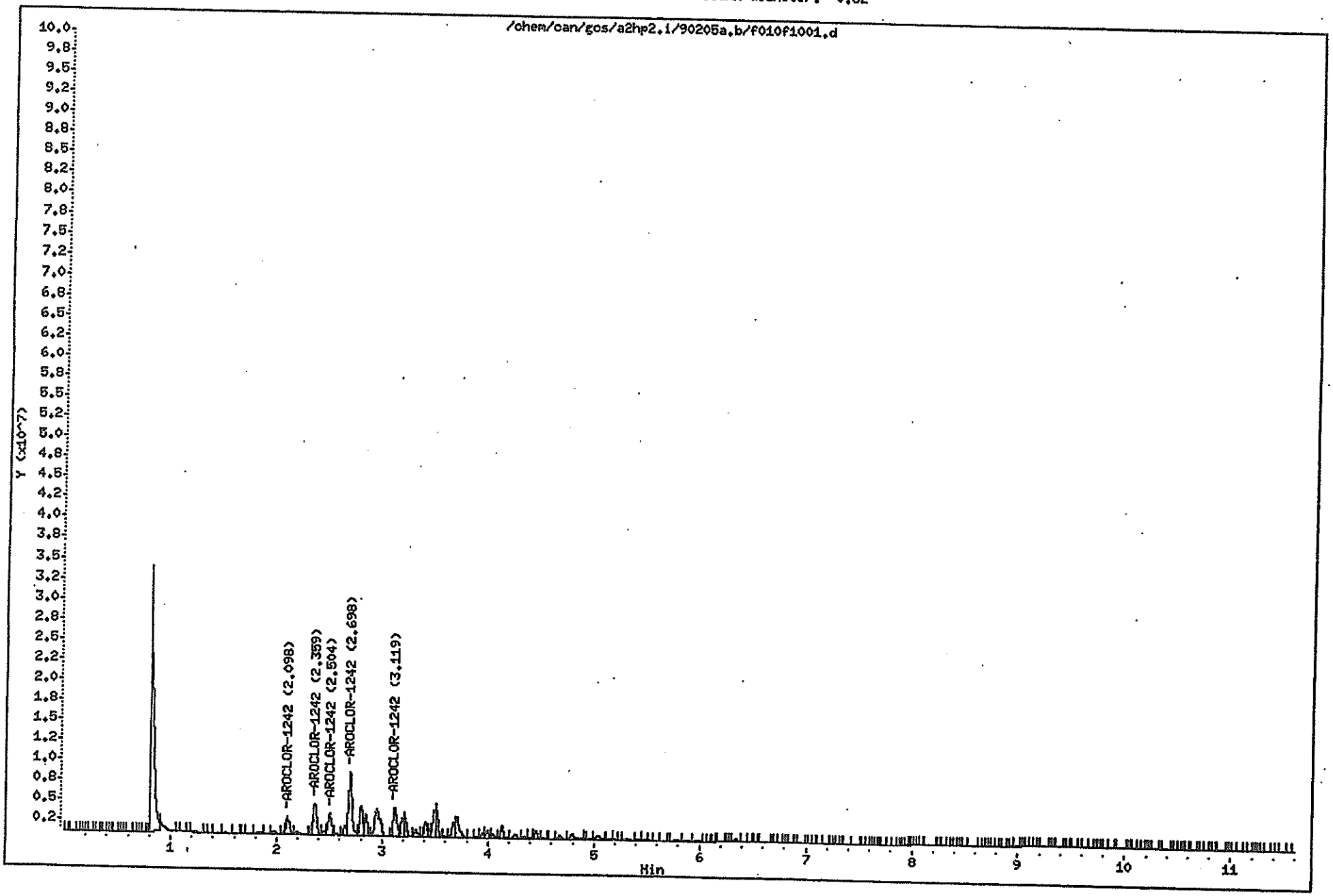
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.098	2.095	0.003	2089418	0.20000	0.1920	75.00- 125.00	100.00
2.359	2.354	0.005	3876820	0.20000	0.1975	124.24- 207.07	185.55
2.504	2.503	0.001	2555602	0.20000	0.1963	86.28- 143.80	122.31
2.698	2.696	0.002	7751983	0.20000	0.2011	262.55- 437.59	371.01
3.119	3.116	0.003	3490132	0.20000	0.1998	111.50- 185.83	167.04
Average of Peak Amounts =					0.197		

Data : /chem/oan/gos/a2hp2.i/90205a.b/f010f1001.d
Date : 05-FEB-1999 11:41
Client ID:
Sample Info: 1242 0.2

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f011f1101.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f011f1101.d
Lab Smp Id: 1242 0.5
Inj Date : 05-FEB-1999 11:58
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 0.5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 11:58 Cal File: f011f1101.d
Als bottle: 11 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None

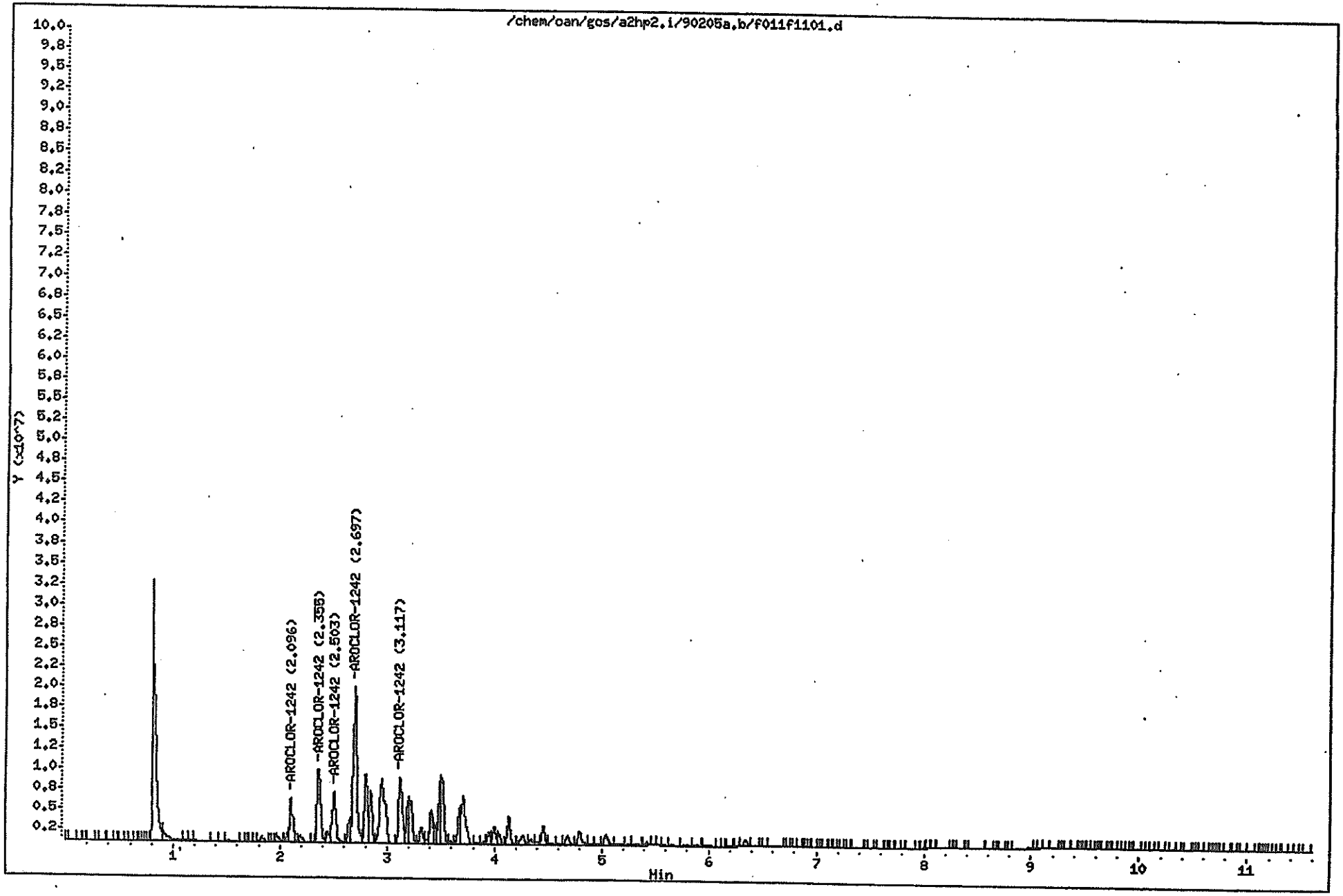
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.096	2.095	0.001	5441045	0.50000	0.5000	75.00- 125.00	100.00
2.355	2.354	0.001	9013496	0.50000	0.4720	124.24- 207.07	165.66
2.503	2.503	0.000	6259301	0.50000	0.4870	86.28- 143.80	115.04
2.697	2.696	0.001	19047379	0.50000	0.4960	262.55- 437.59	350.07
3.117	3.116	0.001	8088999	0.50000	0.4748	111.50- 185.83	148.67
Average of Peak Amounts =					0.486		

Data .e: /chem/oan/gos/a2hp2.i/90205a.b/f011f1101.d
Date : 05-FEB-1999 11:58
Client ID:
Sample Info: 1242 0.5

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f012f1201.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f012f1201.d
Lab Smp Id: 1242 1.0
Inj Date : 05-FEB-1999 12:15
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 1.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 12:15 Cal File: f012f1201.d
Als bottle: 12 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None

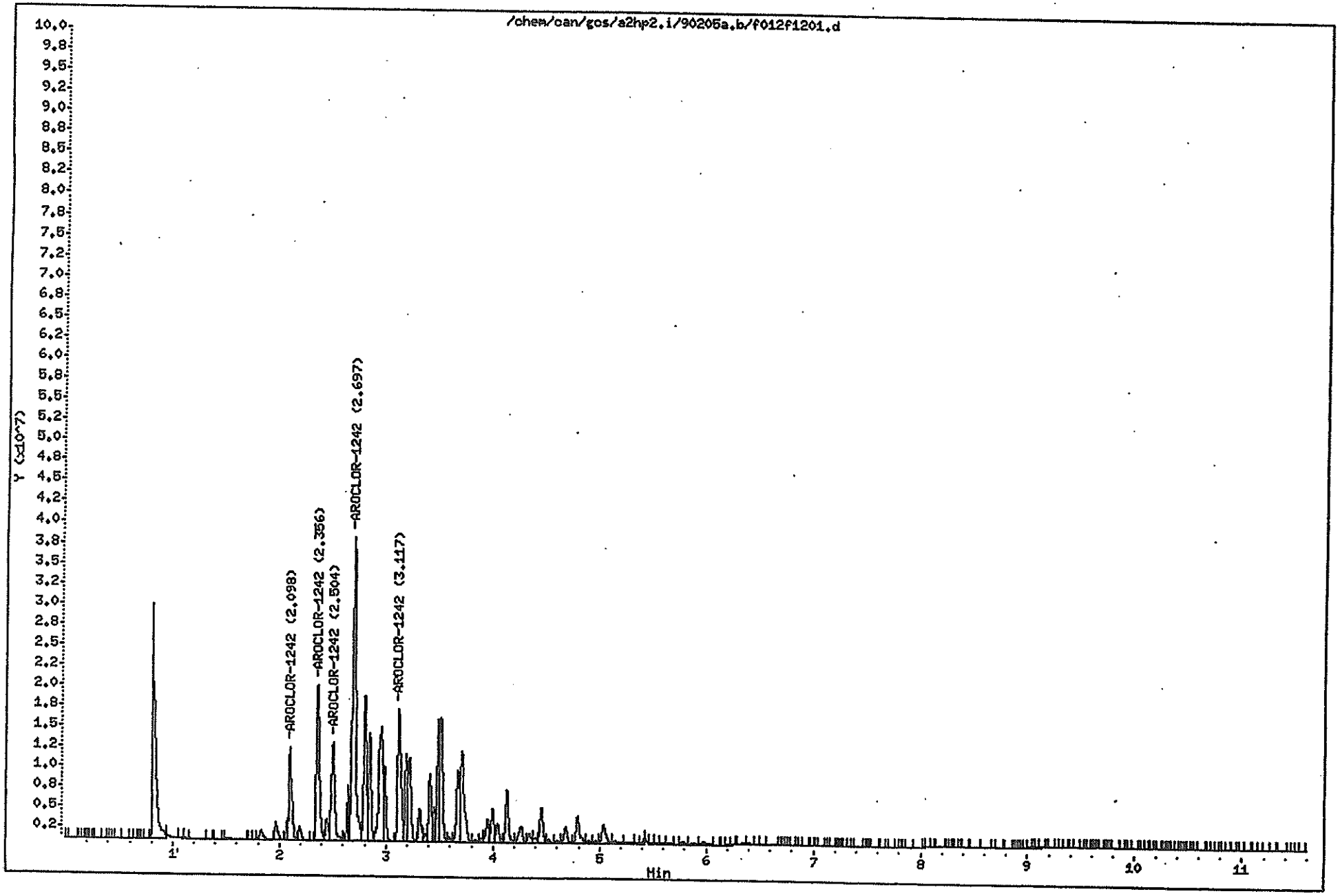
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.098	2.095	0.003	11445157	1.00000	1.038	75.00- 125.00	100.00
2.356	2.354	0.002	19073332	1.00000	0.9991	124.24- 207.07	166.65
2.504	2.503	0.001	12044066	1.00000	0.9521	86.28- 143.80	105.23
2.697	2.696	0.001	37296301	1.00000	0.9783	262.55- 437.59	325.87
3.117	3.116	0.001	16202202	1.00000	0.9628	111.50- 185.83	141.56
Average of Peak Amounts =					0.986		

Dat e: /chem/can/gcs/a2hp2.i/90205a.b/f012f1201.d
Date : 05-FEB-1999 12:16
Client ID:
Sample Info: 1242 1.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f013f1301.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f013f1301.d
Lab Smp Id: 1242 2.0
Inj Date : 05-FEB-1999 12:31
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 2.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 12:31 Cal File: f013f1301.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: None

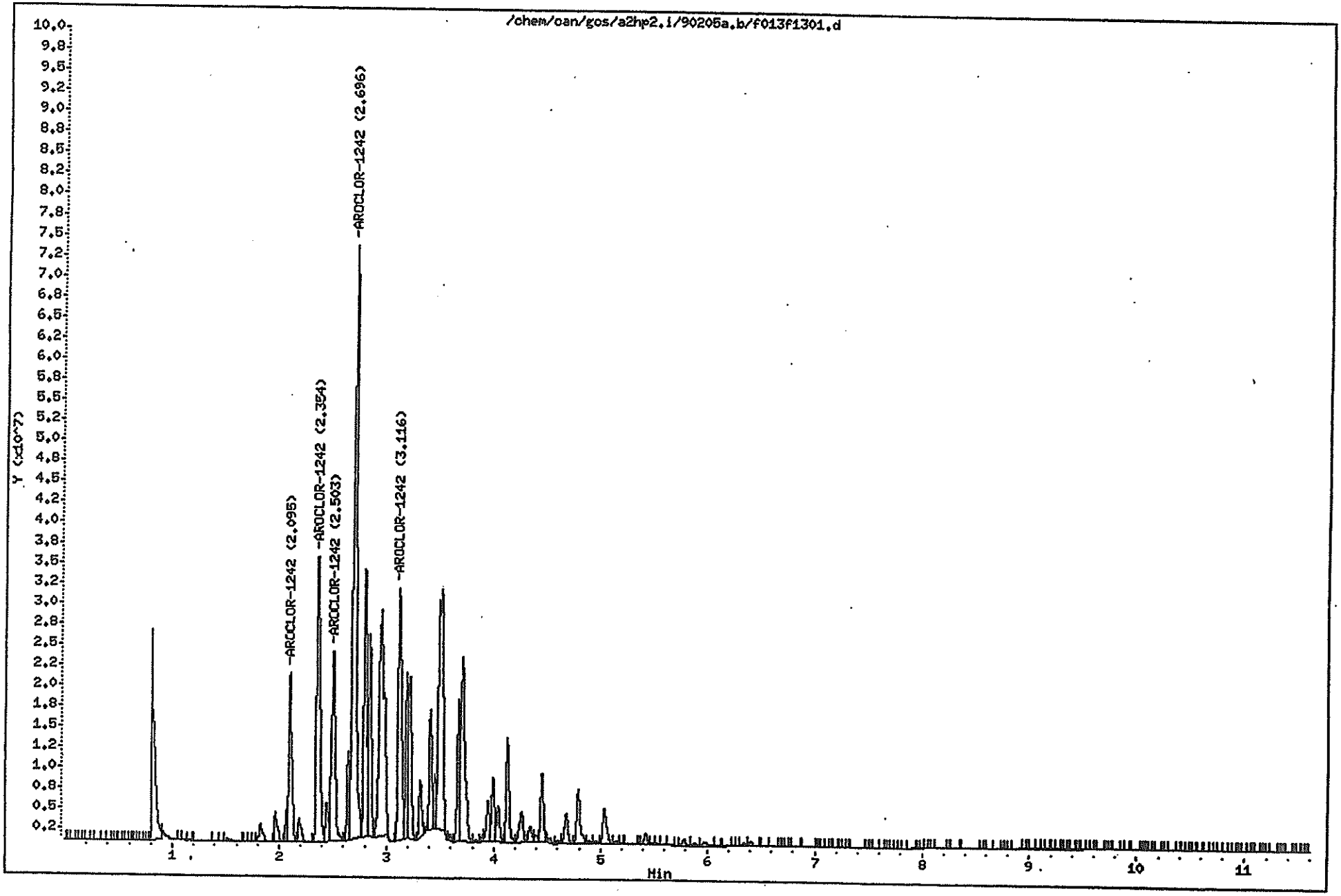
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	20622473	2.00000	1.895	75.00- 125.00	100.00
2.354	2.354	0.000	34872386	2.00000	1.859	124.24- 207.07	169.10
2.503	2.503	0.000	23169687	2.00000	1.863	86.28- 143.80	112.35
2.696	2.696	0.000	72463619	2.00000	1.920	262.55- 437.59	351.38
3.116	3.116	0.000	30816181	2.00000	1.863	111.50- 185.83	149.43
Average of Peak Amounts =					1.88		

Data : /chem/can/gas/a2hp2.i/90205a.b/f013f1301.d
Date : 05-FEB-1999 12:31
Client ID:
Sample Info: 1242 2.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f014f1401.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f014f1401.d
Lab Smp Id: 1248 0.1
Inj Date : 05-FEB-1999 12:48
Operator : 1808
Smp Info : 1248 0.1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 12:48
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f014f1401.d
Calibration Sample, Level: 1

Compound Sublist: AR1248.sub
Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.353	2.356	-0.003	1175479	0.10000	0.1000	75.00- 125.00	100.00
2.696	2.699	-0.003	2563943	0.10000	0.1000	191.23- 318.72	218.12
2.952	2.955	-0.003	2927613	0.10000	0.1000	195.54- 325.89	249.06
3.116	3.120	-0.004	3067875	0.10000	0.1000	219.34- 365.57	260.99
4.130	4.134	-0.004	1625341	0.10000	0.1000	118.50- 197.50	138.27

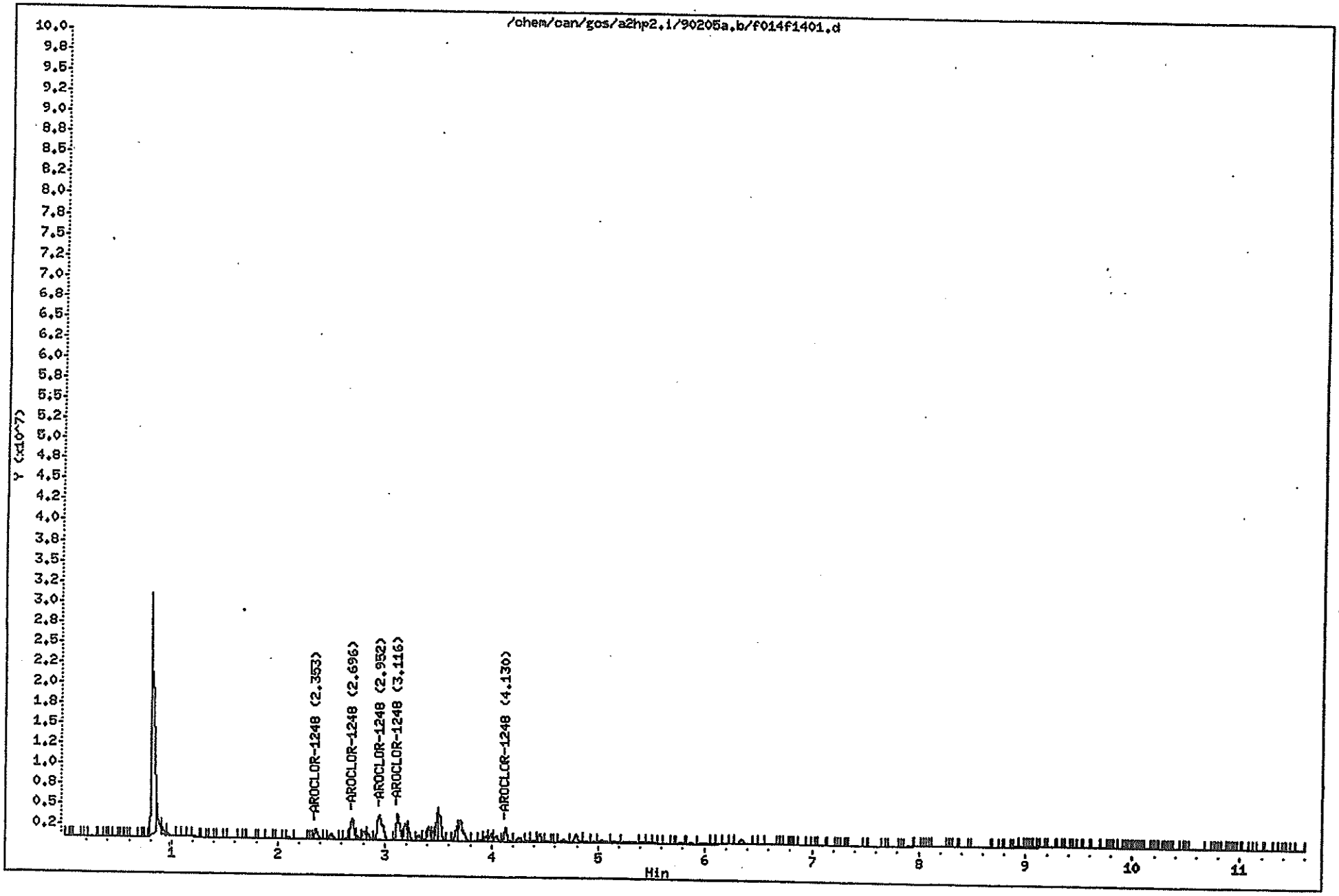
Average of Peak Amounts = 0.1

Dat. .le: /chem/oan/gos/a2hp2.i/90205a.b/f014f1401.d
Date : 05-FEB-1999 12:48
Client ID:
Sample Info: 1248 0.1

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f015f0201.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f015f0201.d
Lab Smp Id: 1248 0.2
Inj Date : 05-FEB-1999 14:10
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1248 0.2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 14:10 Cal File: f015f0201.d
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None

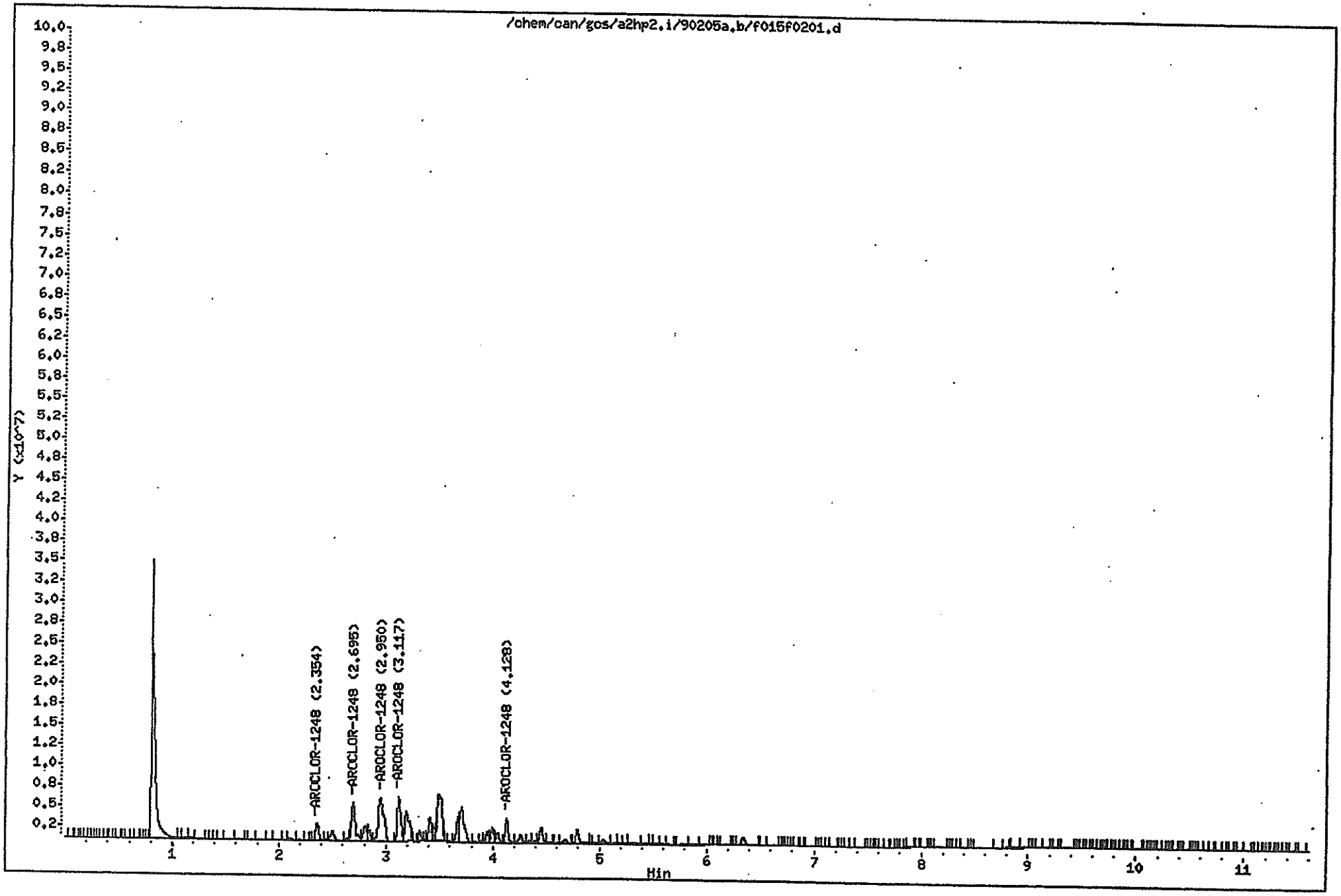
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.354	2.356	-0.002	1929976	0.20000	0.1803	75.00- 125.00	100.00
2.695	2.699	-0.004	4678564	0.20000	0.1908	191.23- 318.72	242.42
2.950	2.955	-0.005	5293505	0.20000	0.1899	195.54- 325.89	274.28
3.117	3.120	-0.003	5389662	0.20000	0.1870	219.34- 365.57	279.26
4.128	4.134	-0.006	2889350	0.20000	0.1882	118.50- 197.50	149.71
Average of Peak Amounts =					0.187		

Data .e: /chem/can/gcs/a2hp2.i/90205a.b/f015f0201.d
Date : 05-FEB-1999 14:10
Client ID:
Sample Info: 1248 0.2

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f016f0301.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f016f0301.d
Lab Smp Id: 1248 0.5
Inj Date : 05-FEB-1999 14:27
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1248 0.5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 14:27 Cal File: f016f0301.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None

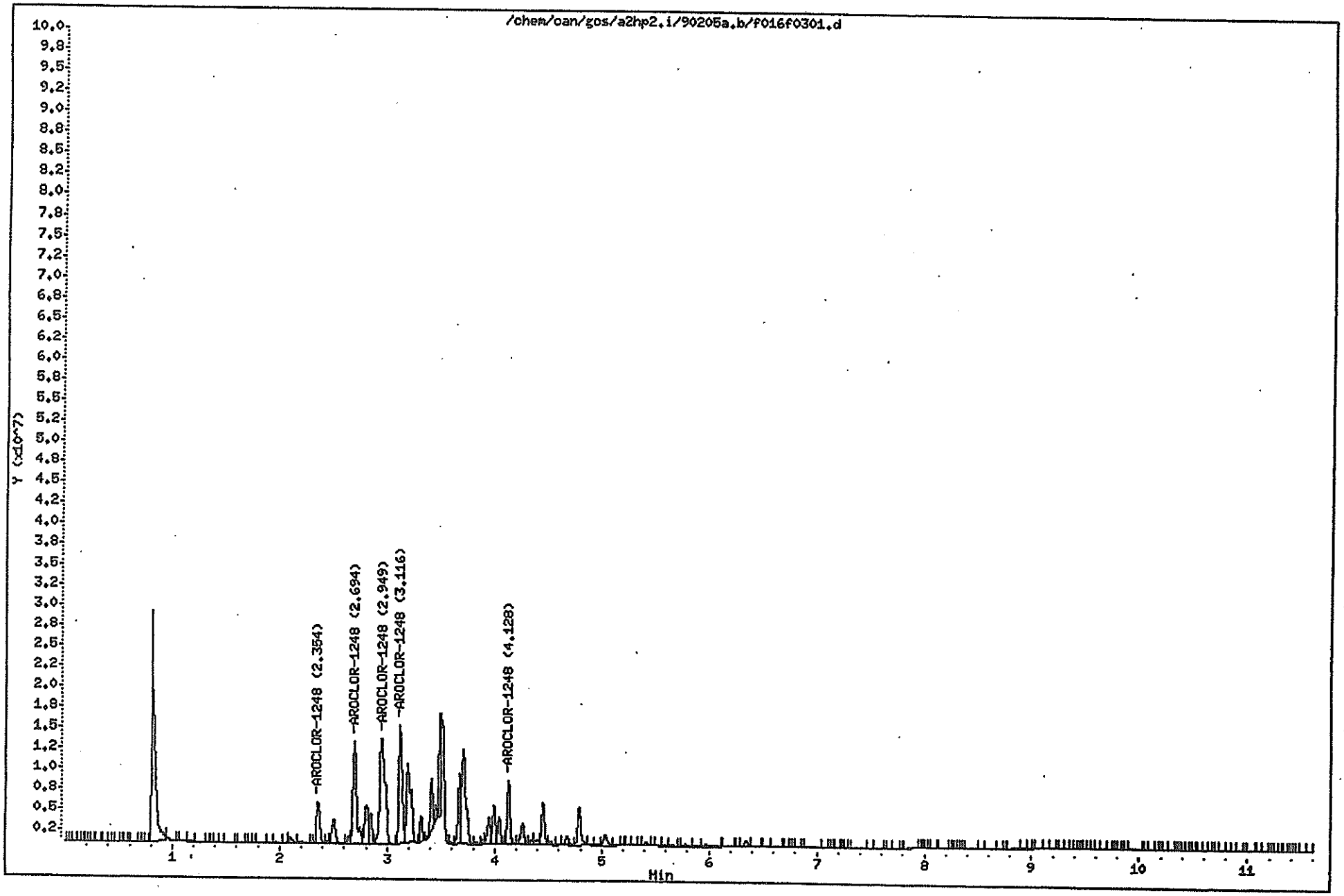
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.354	2.356	-0.002	4900863	0.50000	0.4711	75.00- 125.00	100.00
2.694	2.699	-0.005	12496001	0.50000	0.5064	191.23- 318.72	254.98
2.949	2.955	-0.006	12777271	0.50000	0.4715	195.54- 325.89	260.71
3.116	3.120	-0.004	14333063	0.50000	0.4983	219.34- 365.57	292.46
4.128	4.134	-0.006	7743500	0.50000	0.5030	118.50- 197.50	158.00
Average of Peak Amounts =					0.49		

Data : /chem/oan/gos/a2hp2.i/90205a.b/f016f0301.d
Date : 05-FEB-1999 14:27
Client ID:
Sample Info: 1248 0.5

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f017f0401.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f017f0401.d
Lab Smp Id: 1248 1.0
Inj Date : 05-FEB-1999 14:43
Operator : 1808
Smp Info : 1248 1.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 14:43
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f017f0401.d
Calibration Sample, Level: 4

Compound Sublist: AR1248.sub
Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.353	2.356	-0.003	8744982	1.00000	0.8756	75.00- 125.00	100.00
2.696	2.699	-0.003	22371593	1.00000	0.9283	191.23- 318.72	255.82
2.950	2.955	-0.005	22602451	1.00000	0.8702	195.54- 325.89	258.46
3.116	3.120	-0.004	25742691	1.00000	0.9191	219.34- 365.57	294.37
4.129	4.134	-0.005	13947100	1.00000	0.9277	118.50- 197.50	159.49

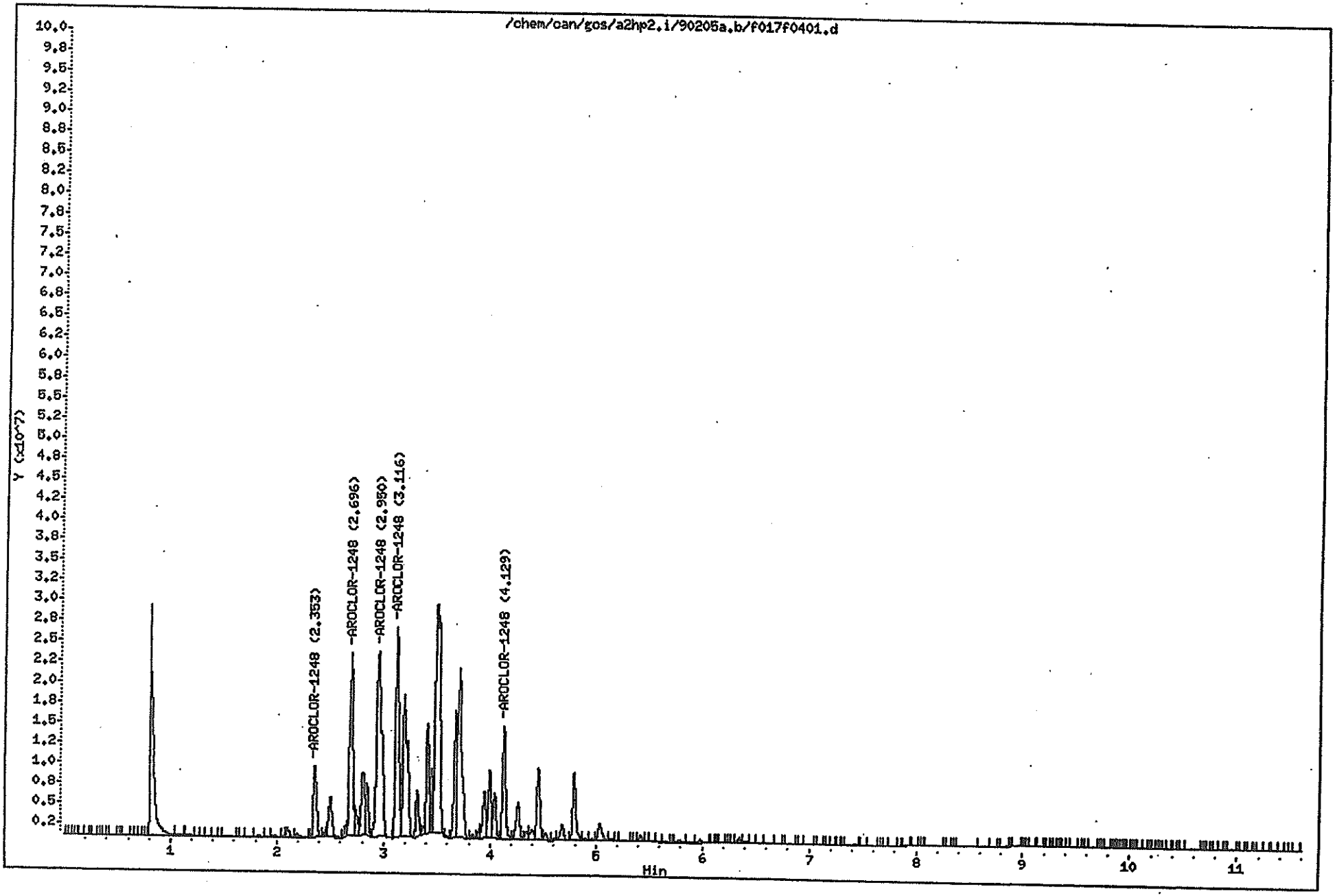
Average of Peak Amounts = 0.904

Dat le: /chem/oan/gos/a2hp2.i/90205a.b/f017f0401.d
Date : 05-FEB-1999 14:43
Client ID:
Sample Info: 1248 1.0

Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f018f0101.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f018f0101.d
Lab Smp Id: 1248 2.0
Inj Date : 05-FEB-1999 15:03
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1248 2.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 15:03 Cal File: f018f0101.d
Als bottle: 18 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: None

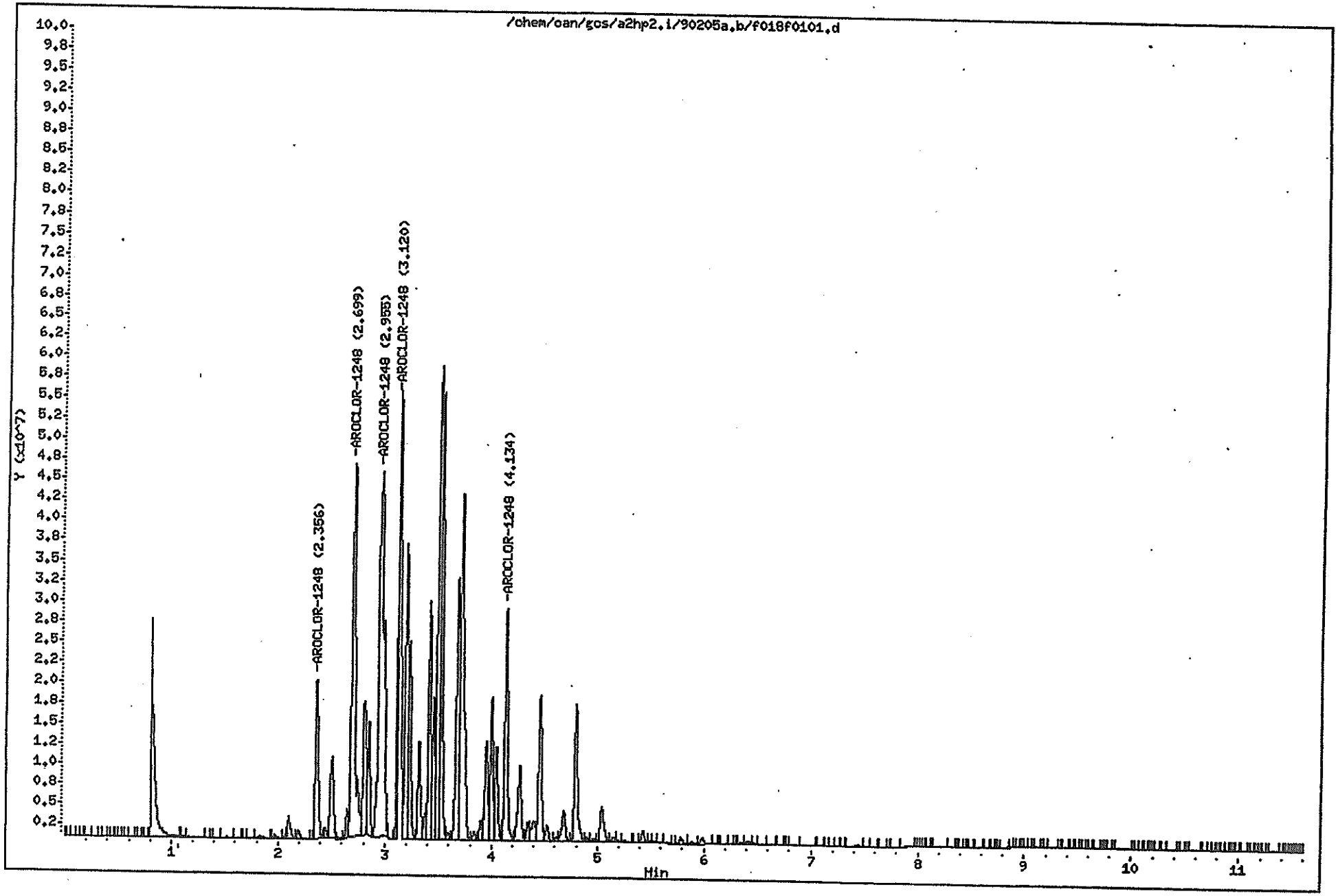
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.356	2.356	0.000	19345497	2.00000	1.949	75.00- 125.00	100.00
2.699	2.699	0.000	45654946	2.00000	1.915	191.23- 318.72	236.00
2.955	2.955	0.000	44682089	2.00000	1.770	195.54- 325.89	230.97
3.120	3.120	0.000	54020361	2.00000	1.942	219.34- 365.57	279.24
4.134	4.134	0.000	28391112	2.00000	1.910	118.50- 197.50	146.76
Average of Peak Amounts =					1.9		

Data : /chem/oan/gos/a2hp2.i/90205a.b/f018f0101.d
Date : 05-FEB-1999 16:03
Client ID:
Sample Info: 1248 2.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f019f0201.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f019f0201.d
Lab Smp Id: 2154 0.1
Inj Date : 05-FEB-1999 15:20
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 0.1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 15:20 Cal File: f019f0201.d
Als bottle: 19 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None

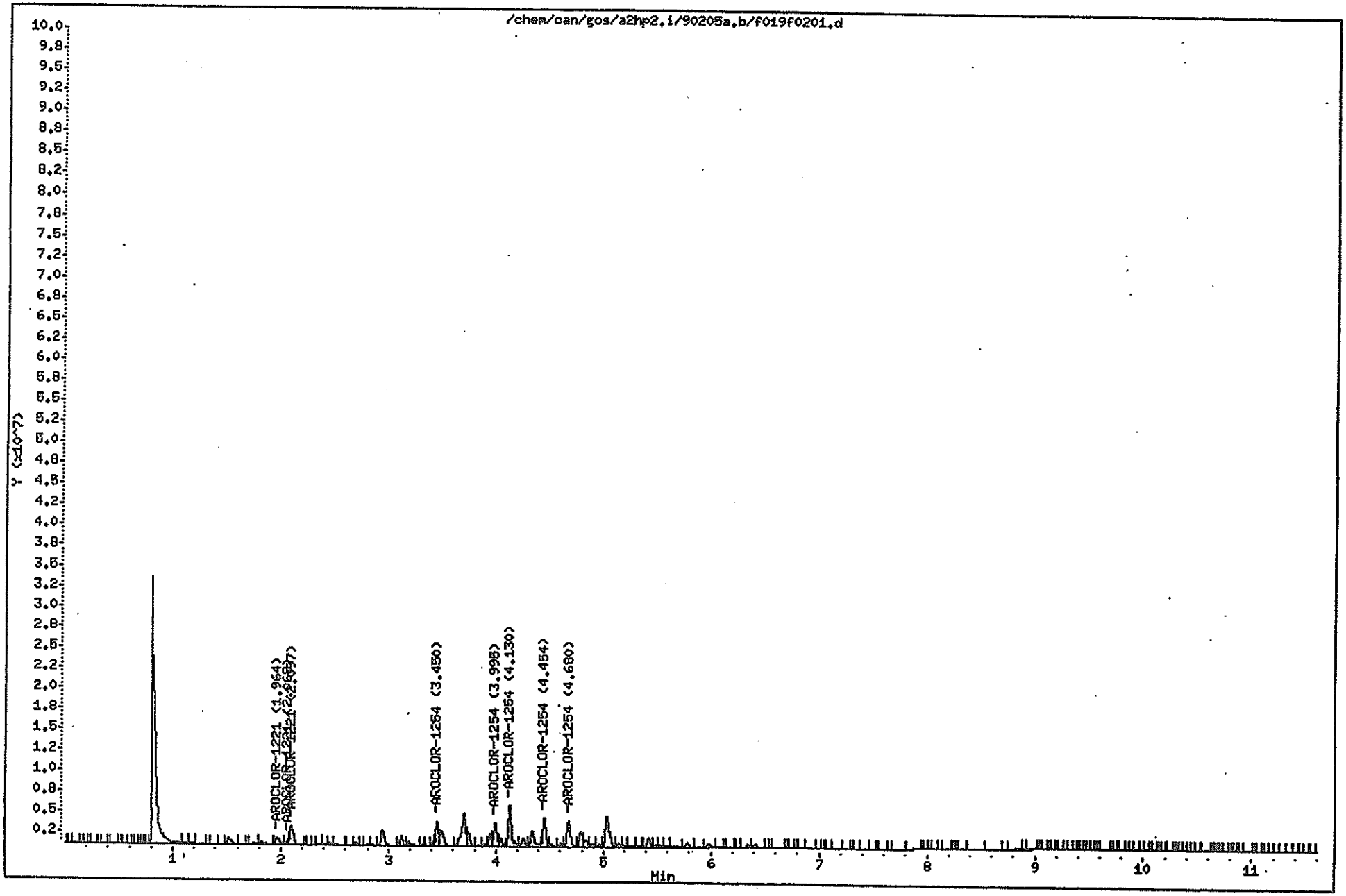
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.450	3.450	0.000	3014090	0.10000	0.1000	75.00- 125.00	100.00
3.995	3.996	-0.001	2846195	0.10000	0.1000	61.65- 102.75	94.43
4.130	4.131	-0.001	5010904	0.10000	0.1000	109.15- 181.92	166.25
4.454	4.454	0.000	3382351	0.10000	0.1000	71.55- 119.24	112.22
4.680	4.680	0.000	3136725	0.10000	0.1000	65.63- 109.38	104.07
Average of Peak Amounts =					0.1		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.964	1.964	0.000	860793	0.10000	0.1000	75.00- 125.00	100.00
2.068	2.068	0.000	633087	0.10000	0.1000	49.98- 83.31	73.55
2.097	2.097	0.000	2307369	0.10000	0.1000	187.43- 312.38	268.05
Average of Peak Amounts =					0.1		

Data : /chem/can/gcs/a2hp2.i/90205a.b/f019f0201.d
Date : 05-FEB-1999 15:20
Client ID:
Sample Info: 2154 0.1

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f020f0301.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f020f0301.d
Lab Smp Id: 2154 0.2
Inj Date : 05-FEB-1999 15:37
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 0.2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 15:37 Cal File: f020f0301.d
Als bottle: 20 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None

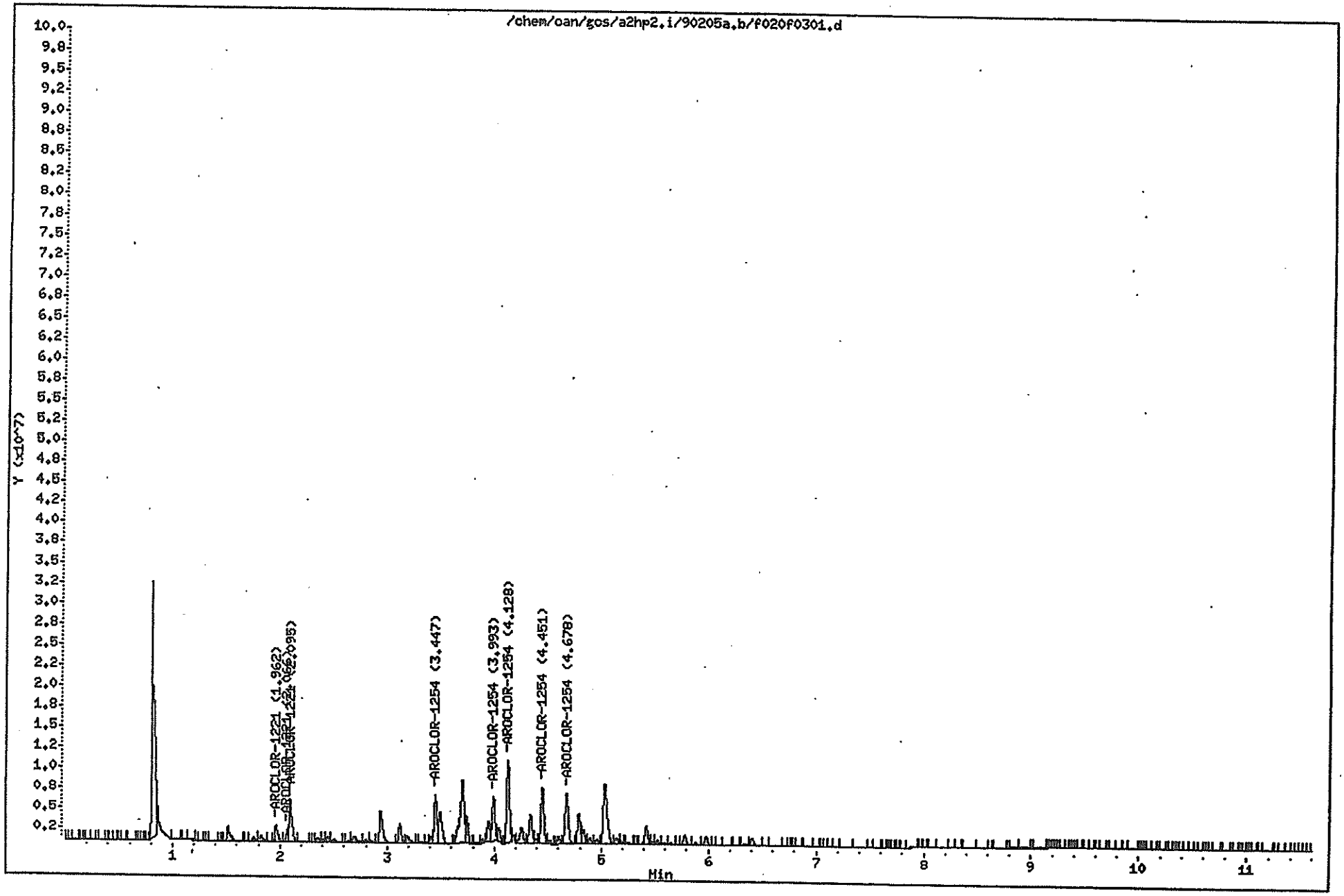
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.447	3.450	-0.003	6005445	0.20000	0.1996	75.00- 125.00	100.00
3.993	3.996	-0.003	5404580	0.20000	0.1948	61.65- 102.75	89.99
4.128	4.131	-0.003	10047897	0.20000	0.2002	109.15- 181.92	167.31
4.451	4.454	-0.003	6729590	0.20000	0.1995	71.55- 119.24	112.06
4.678	4.680	-0.002	6216312	0.20000	0.1991	65.63- 109.38	103.51
Average of Peak Amounts =					0.199		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.962	1.964	-0.002	2043806	0.20000	0.2171	75.00- 125.00	100.00
2.066	2.068	-0.002	1424959	0.20000	0.2118	49.98- 83.31	69.72
2.095	2.097	-0.002	5160348	0.20000	0.2112	187.43- 312.38	252.49
Average of Peak Amounts =					0.213		

Data : : /chem/oan/gos/a2hp2.i/90205a.b/f020f0301.d
Date : 05-FEB-1999 15:37
Client ID:
Sample Info: 2154 0.2

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f021f0401.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f021f0401.d
Lab Smp Id: 2154 0.5
Inj Date : 05-FEB-1999 15:53
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 0.5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 15:53 Cal File: f021f0401.d
Als bottle: 21 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None

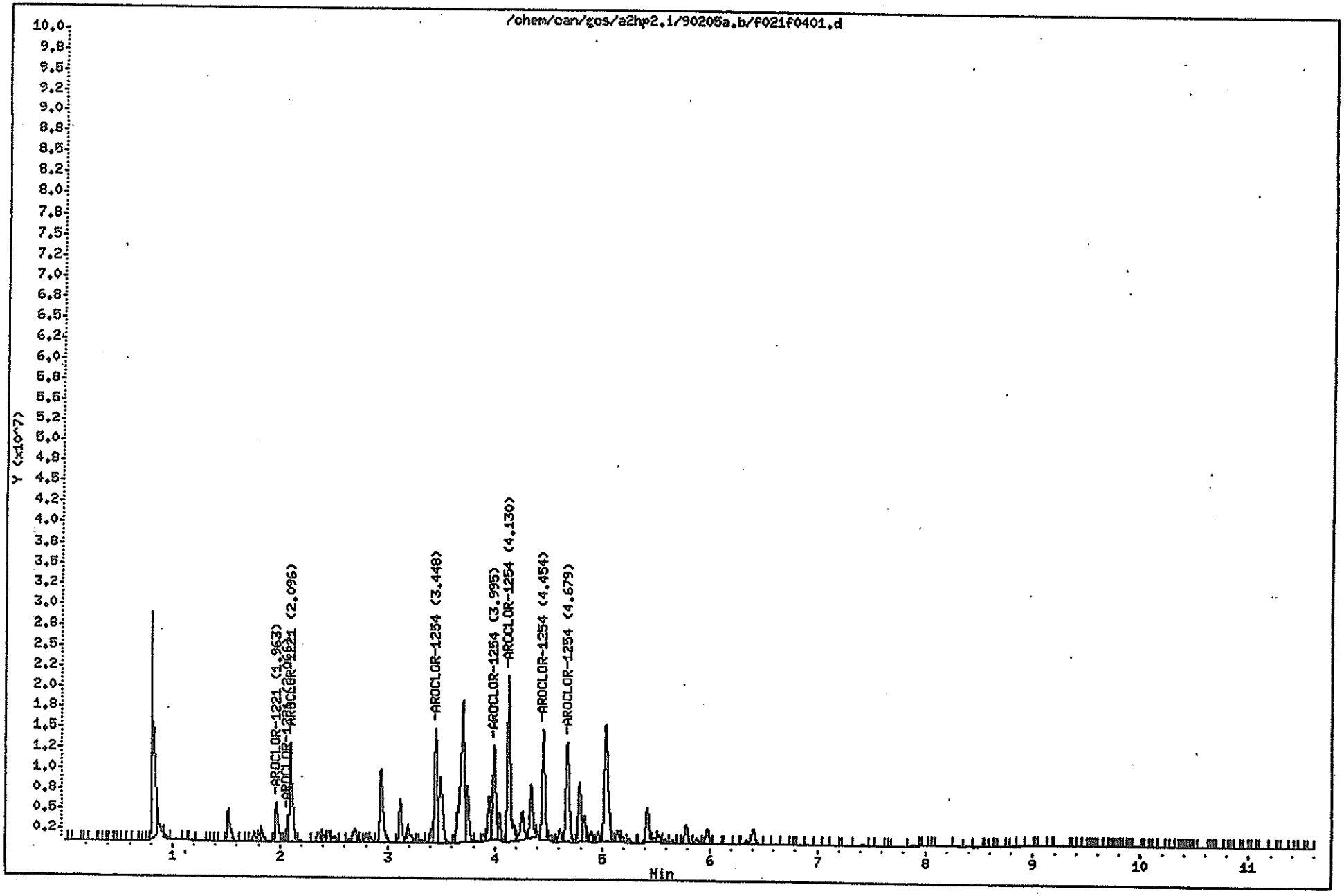
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.448	3.450	-0.002	13928362	0.50000	0.4747	75.00- 125.00	100.00
3.995	3.996	-0.001	11448953	0.50000	0.4382	61.65- 102.75	82.20
4.130	4.131	-0.001	20271225	0.50000	0.4316	109.15- 181.92	145.54
4.454	4.454	0.000	13286847	0.50000	0.4238	71.55- 119.24	95.39
4.679	4.680	-0.001	12187520	0.50000	0.4211	65.63- 109.38	87.50
Average of Peak Amounts =					0.438		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.963	1.964	-0.001	4829781	0.50000	0.5086	75.00- 125.00	100.00
2.066	2.068	-0.002	3218876	0.50000	0.4654	49.98- 83.31	66.65
2.096	2.097	-0.001	12069741	0.50000	0.4959	187.43- 312.38	249.90
Average of Peak Amounts =					0.497		

Data : /chem/oan/gos/a2hp2.i/90205a.b/f021f0401.d
Date : 05-FEB-1999 16:53
Client ID:
Sample Info: 2154 0.5

Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f022f0501.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f022f0501.d
Lab Smp Id: 2154 1.0
Inj Date : 05-FEB-1999 16:10
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 1.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 22 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.450	3.450	0.000	27314728	1.00000	0.9677	75.00- 125.00	100.00
3.996	3.996	0.000	26695987	1.00000	1.022	61.65- 102.75	97.73
4.131	4.131	0.000	47827595	1.00000	1.022	109.15- 181.92	175.10
4.454	4.454	0.000	32457824	1.00000	1.034	71.55- 119.24	118.83
4.680	4.680	0.000	28582817	1.00000	1.005	65.63- 109.38	104.64
Average of Peak Amounts =					1.01		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.964	1.964	0.000	7814153	1.00000	0.8902	75.00- 125.00	48.36(M)
2.068	2.068	0.000	5229857	1.00000	0.8689	49.98- 83.31	32.37
2.097	2.097	0.000	20664962	1.00000	0.9096	187.43- 312.38	127.89
Average of Peak Amounts =					0.89		

QC Flag Legend

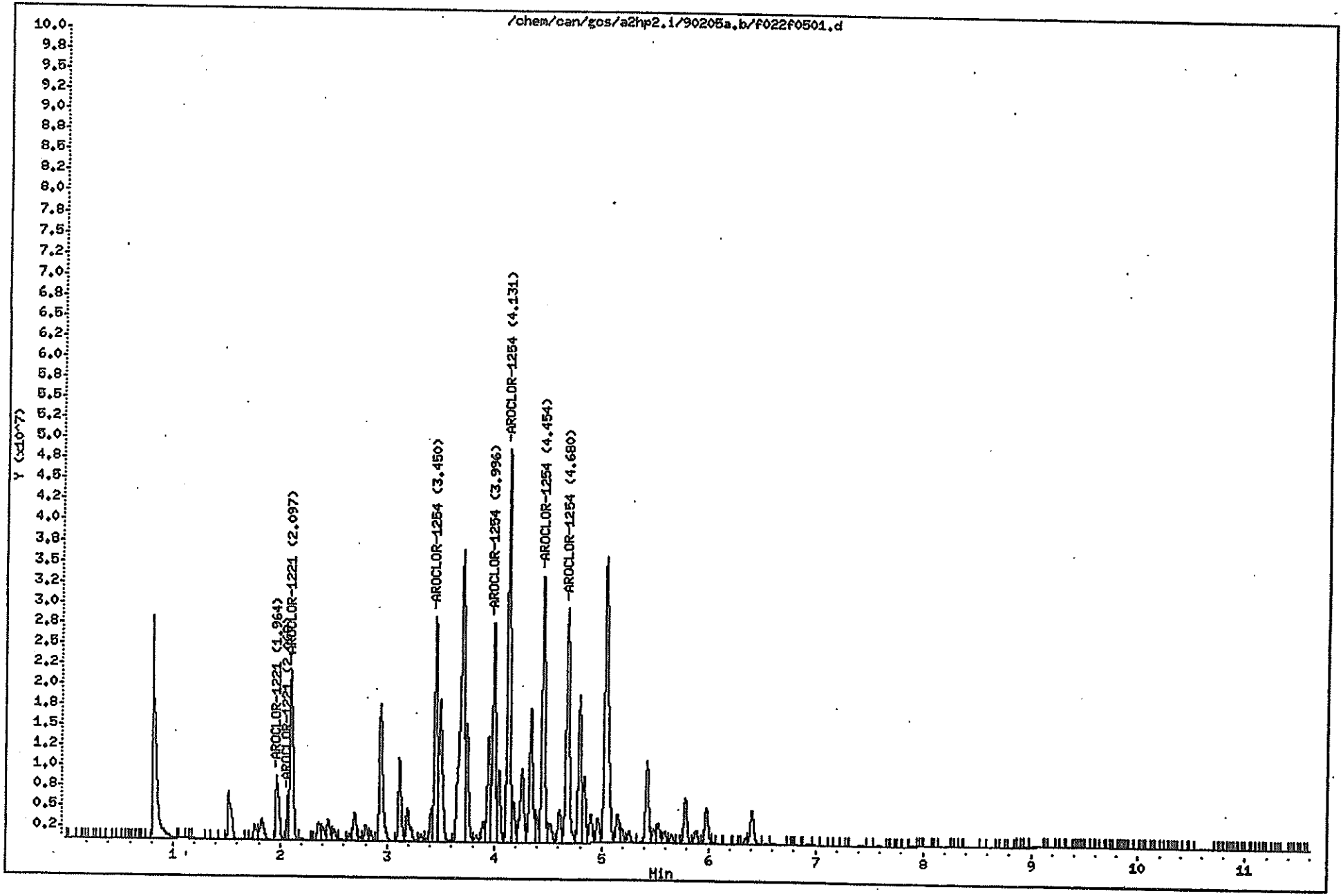
M - Compound response manually integrated.

Data : /chem/can/gcs/a2hp2.i/90205a.b/f022f0501.d
Date : 05-FEB-1999 16:10
Client ID:
Sample Info: 2154 1.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f023f0601.d
Report Date: 05-Mar-1999 10:15

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f023f0601.d
Lab Smp Id: 2154 2.0
Inj Date : 05-FEB-1999 16:27
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 2.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 16:27 Cal File: f023f0601.d
Als bottle: 23 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: None

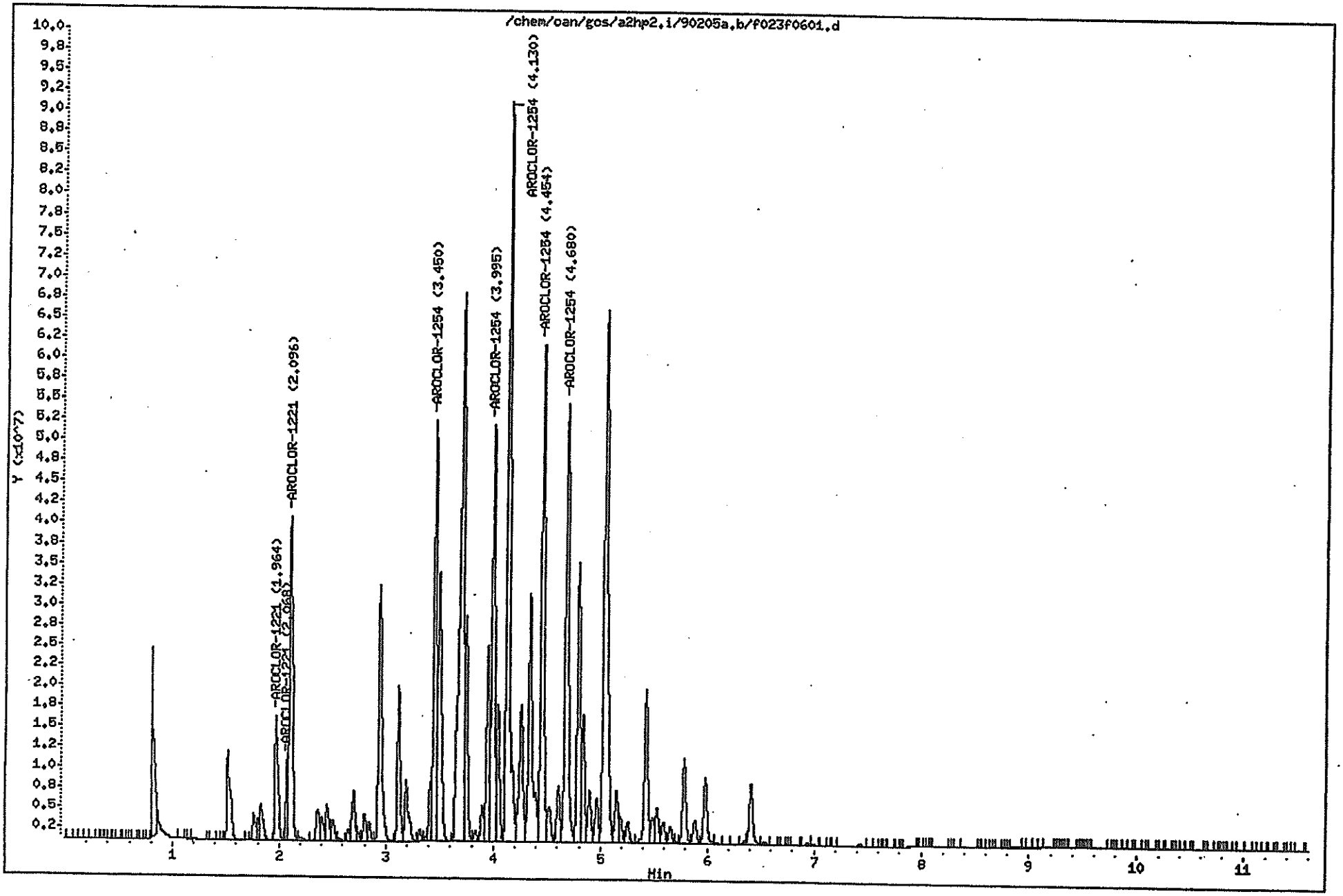
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.450	3.450	0.000	51580459	2.00000	1.827	75.00- 125.00	100.00
3.995	3.996	-0.001	51024547	2.00000	1.954	61.65- 102.75	98.92
4.130	4.131	-0.001	90272495	2.00000	1.930	109.15- 181.92	175.01
4.454	4.454	0.000	60846049	2.00000	1.939	71.55- 119.24	117.96
4.680	4.680	0.000	53644825	2.00000	1.886	65.63- 109.38	104.00
Average of Peak Amounts =					1.91		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.964	1.964	0.000	15173908	2.00000	1.682	75.00- 125.00	100.00
2.068	2.068	0.000	9940314	2.00000	1.599	49.98- 83.31	65.51
2.096	2.097	-0.001	39822283	2.00000	1.714	187.43- 312.38	262.44
Average of Peak Amounts =					1.67		

Data File: /chem/oan/gos/a2hp2.i/90205a.b/f023f0601.d
Date : 05-FEB-1999 16:27
Client ID:
Sample Info: 2154 2.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f024f0701.d
Report Date: 05-Mar-1999 10:16

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f024f0701.d
Lab Smp Id: 1660 0.1
Inj Date : 05-FEB-1999 16:43
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1660 0.1
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a Quant Type: ESTD
Cal Date : 05-FEB-1999 16:43 Cal File: f024f0701.d
Als bottle: 24 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: None

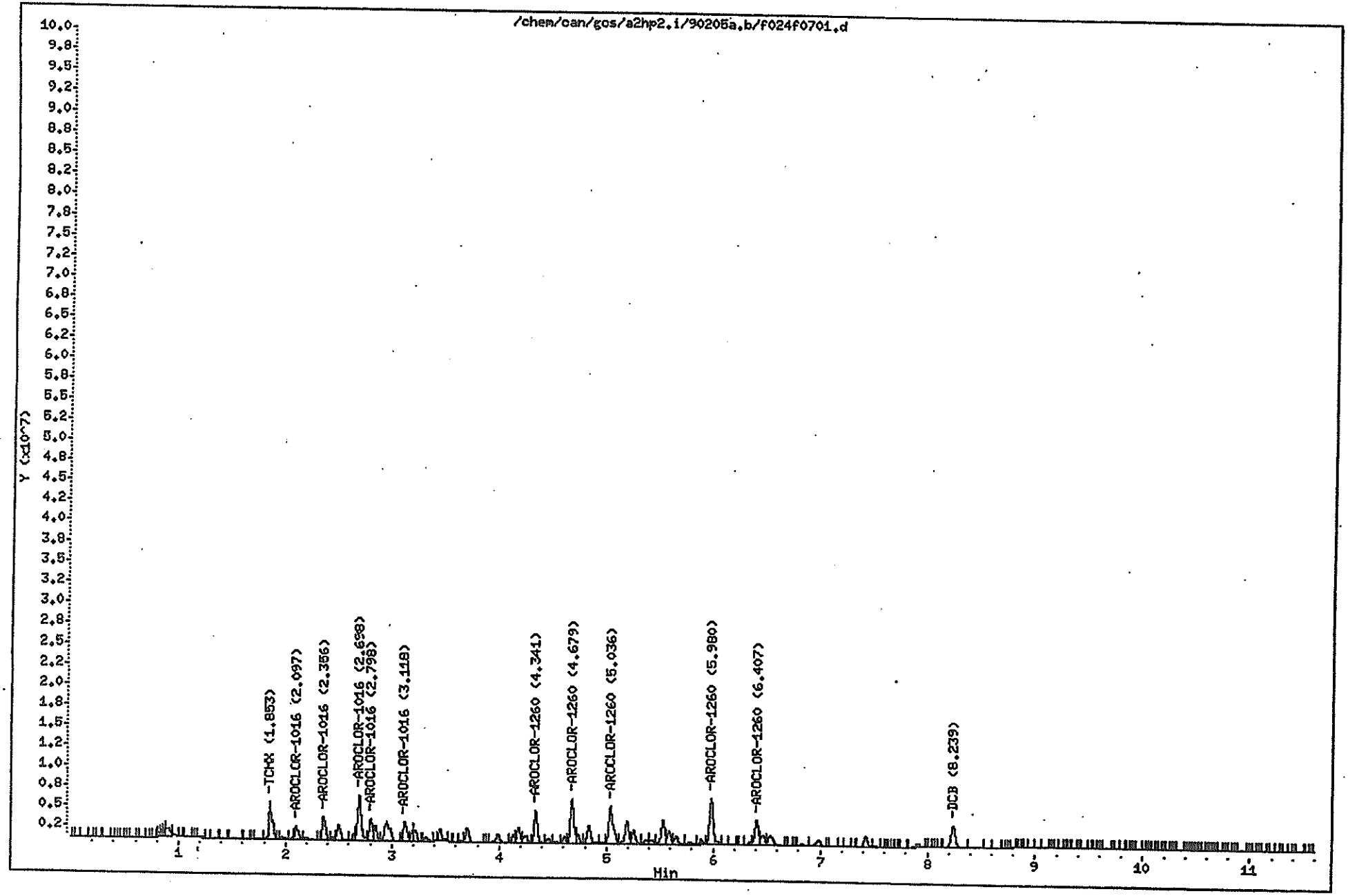
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.853	1.852	0.001	4589018	0.00500	0.005000	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.097	2.097	0.000	1618589	0.10000	0.1000	75.00- 125.00	100.00
2.356	2.357	-0.001	2773671	0.10000	0.1000	137.00- 228.33	171.36
2.698	2.697	0.001	5601249	0.10000	0.1000	266.25- 443.75	346.06
2.798	2.799	-0.001	2573268	0.10000	0.1000	126.98- 211.63	158.98
3.118	3.118	0.000	2316350	0.10000	0.1000	111.82- 186.37	143.11
Average of Peak Amounts =					0.1		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.341	4.340	0.001	3917425	0.10000	0.1000	75.00- 125.00	100.00
4.679	4.678	0.001	5446904	0.10000	0.1000	106.36- 177.27	139.04
5.036	5.036	0.000	4515046	0.10000	0.1000	91.09- 151.81	115.26
5.980	5.980	0.000	5655194	0.10000	0.1000	114.30- 190.50	144.36
6.407	6.406	0.001	3035737	0.10000	0.1000	60.55- 100.92	77.49
Average of Peak Amounts =					0.1		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.239	0.000	2661615	0.00500	0.005000	75.00- 125.00	100.00

Data : /chem/can/gos/a2hp2.i/90205a.b/f024f0701.d
Date : 05-FEB-1999 16:43
Client ID:
Sample Info: 1660 0.1

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f025f0801.d
Report Date: 05-Mar-1999 10:16

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f025f0801.d
Lab Smp Id: 1660 0.2
Inj Date : 05-FEB-1999 17:00
Operator : 1808
Smp Info : 1660 0.2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 17:00
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f025f0801.d
Calibration Sample, Level: 2

Compound Sublist: AR1660td.sub
Sample Matrix: None

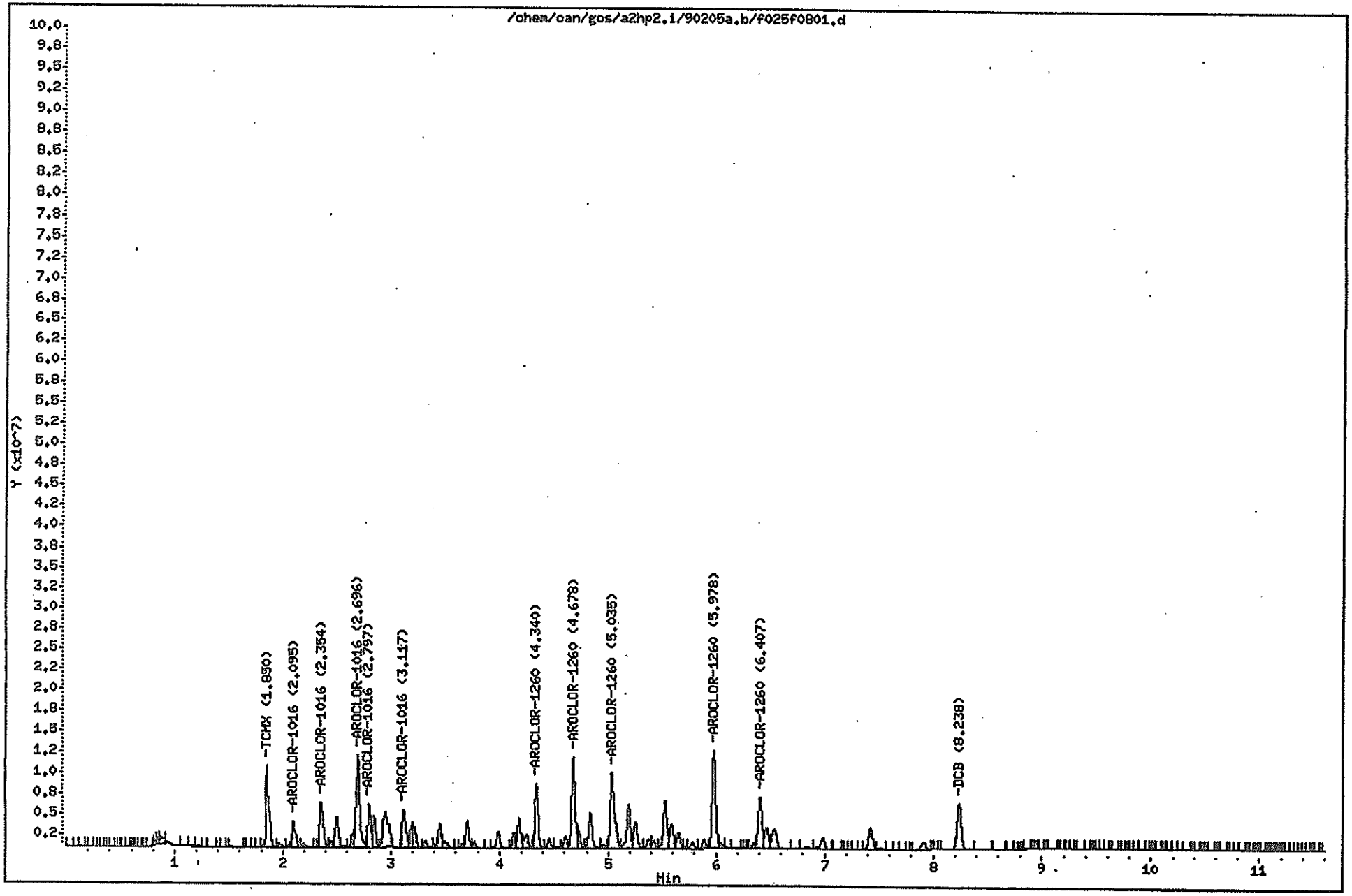
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
1 TCMX					CAS #: 877-09-8		
1.850	1.852	-0.002	9712098	0.01000	0.01028	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.095	2.097	-0.002	3187151	0.20000	0.1984	75.00- 125.00	100.00
2.354	2.357	-0.003	5541938	0.20000	0.1999	137.00- 228.33	173.88
2.696	2.697	-0.001	11064192	0.20000	0.1988	266.25- 443.75	347.15
2.797	2.799	-0.002	5154499	0.20000	0.2002	126.98- 211.63	161.73
3.117	3.118	-0.001	4625567	0.20000	0.1998	111.82- 186.37	145.13
Average of Peak Amounts =					0.199		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.340	4.340	0.000	7725946	0.20000	0.1986	75.00- 125.00	100.00
4.678	4.678	0.000	10834855	0.20000	0.1994	106.36- 177.27	140.24
5.035	5.036	-0.001	9137050	0.20000	0.2012	91.09- 151.81	118.26
5.978	5.980	-0.002	11679195	0.20000	0.2032	114.30- 190.50	151.17
6.407	6.406	0.001	6230042	0.20000	0.2026	60.55- 100.92	80.64
Average of Peak Amounts =					0.201		
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.239	-0.001	5533167	0.01000	0.01019	75.00- 125.00	100.00

Data F. . /chem/can/gcs/a2hp2.i/90205a.b/f025f0801.d
Date : 05-FEB-1999 17:00
Client ID:
Sample Info: 1660 0.2

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f026f0901.d
Report Date: 05-Mar-1999 10:16

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f026f0901.d
Lab Smp Id: 1660 0.5
Inj Date : 05-FEB-1999 17:17
Operator : 1808
Smp Info : 1660 0.5
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 17:17
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f026f0901.d
Calibration Sample, Level: 3

Compound Sublist: AR1660td.sub
Sample Matrix: None

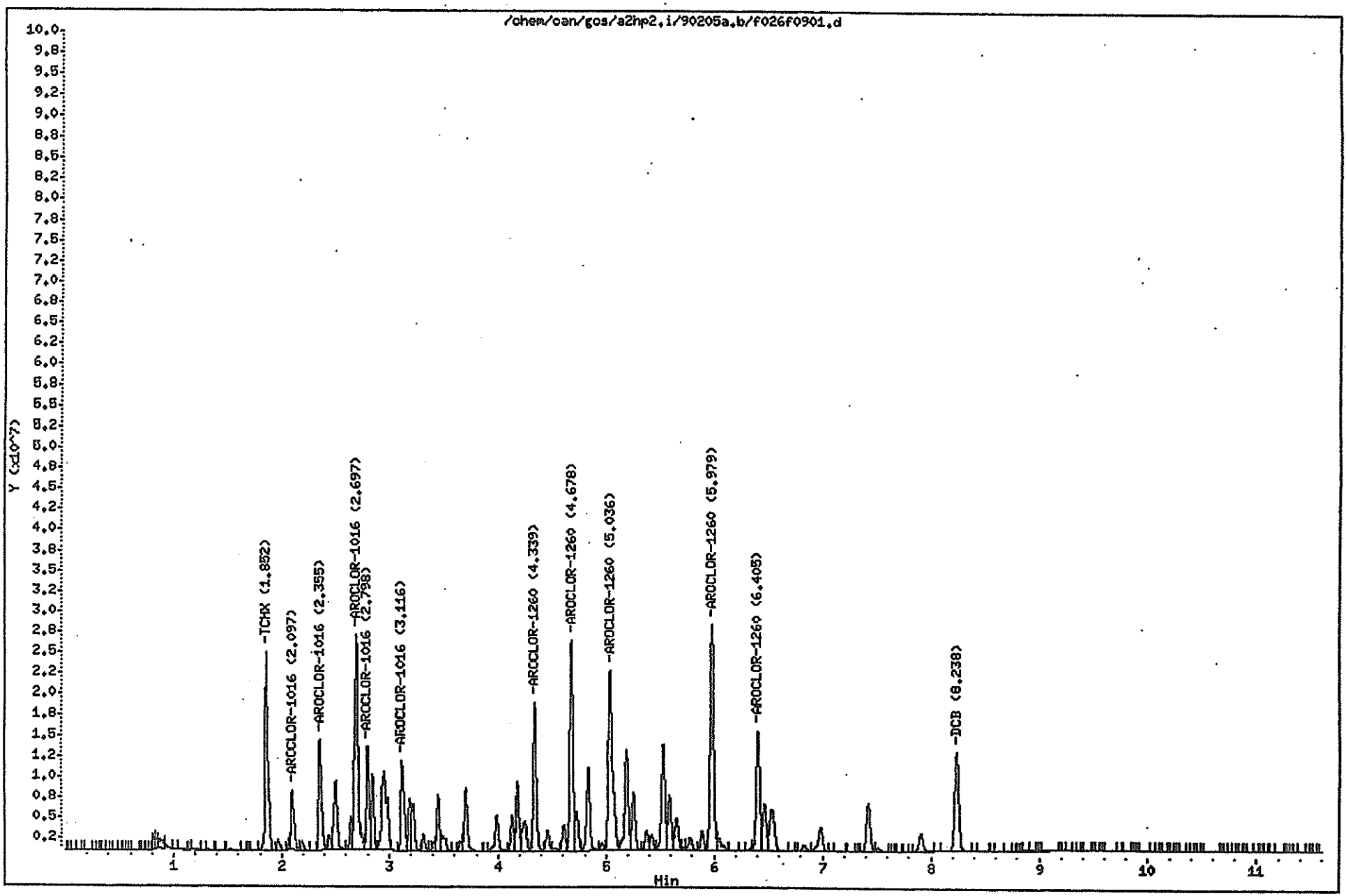
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.852	1.852	0.000	23862655	0.02500	0.02518	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.097	2.097	0.000	7299501	0.50000	0.4687	75.00- 125.00	100.00
2.355	2.357	-0.002	13333640	0.50000	0.4871	137.00- 228.33	182.67
2.697	2.697	0.000	25913006	0.50000	0.4765	266.25- 443.75	355.00
2.798	2.799	-0.001	12358598	0.50000	0.4864	126.98- 211.63	169.31
3.116	3.118	-0.002	10883252	0.50000	0.4797	111.82- 186.37	149.10
Average of Peak Amounts =					0.48		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.339	4.340	-0.001	17868330	0.50000	0.4721	75.00- 125.00	100.00
4.678	4.678	0.000	25340608	0.50000	0.4772	106.36- 177.27	141.82
5.036	5.036	0.000	21701396	0.50000	0.4850	91.09- 151.81	121.45
5.979	5.980	-0.001	27230899	0.50000	0.4822	114.30- 190.50	152.40
6.405	6.406	-0.001	14426167	0.50000	0.4790	60.55- 100.92	80.74
Average of Peak Amounts =					0.479		
$ 9 DCB					CAS #: 2051-24-3		
8.238	8.239	-0.001	11929596	0.02500	0.02290	75.00- 125.00	100.00

Data File: /chem/oan/gos/a2hp2.i/90205a.b/f026f0901.d
Date : 05-FEB-1999 17:17
Client ID:
Sample Info: 1660 0.5

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



Data File: /chem/can/gcs/a2hp2.i/90205a.b/f027f1001.d
Report Date: 05-Mar-1999 10:16

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f027f1001.d
Lab Smp Id: 1660 1.0
Inj Date : 05-FEB-1999 17:33
Operator : 1808
Smp Info : 1660 1.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 17:33
Als bottle: 27
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f027f1001.d
Calibration Sample, Level: 4

Compound Sublist: AR1660td.sub
Sample Matrix: None

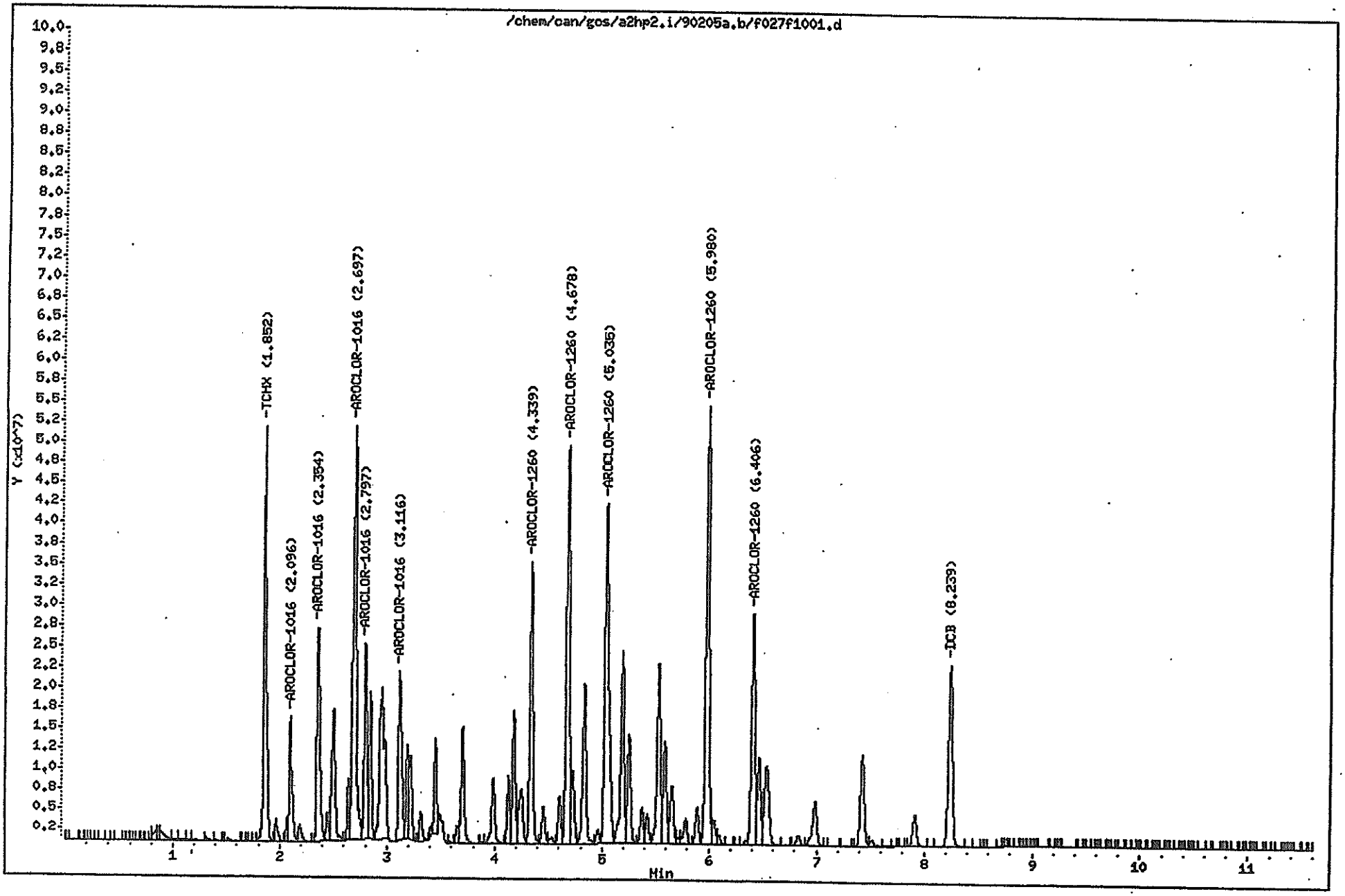
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
1 TCMX					CAS #: 877-09-8		
1.852	1.852	0.000	50963191	0.05000	0.05277	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.096	2.097	-0.001	15368362	1.00000	0.9901	75.00- 125.00	100.00
2.354	2.357	-0.003	26200593	1.00000	0.9676	137.00- 228.33	170.48
2.697	2.697	0.000	50674945	1.00000	0.9479	266.25- 443.75	329.74
2.797	2.799	-0.002	23970112	1.00000	0.9570	126.98- 211.63	155.97
3.116	3.118	-0.002	20871536	1.00000	0.9388	111.82- 186.37	135.81
Average of Peak Amounts =					0.96		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.339	4.340	-0.001	34405500	1.00000	0.9302	75.00- 125.00	100.00
4.678	4.678	0.000	48844142	1.00000	0.9385	106.36- 177.27	141.97
5.035	5.036	-0.001	41720100	1.00000	0.9484	91.09- 151.81	121.26
5.980	5.980	0.000	53813084	1.00000	0.9643	114.30- 190.50	156.41
6.406	6.406	0.000	28318320	1.00000	0.9544	60.55- 100.92	82.31
Average of Peak Amounts =					0.947		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.239	0.000	22222456	0.05000	0.04428	75.00- 125.00	100.00

Data : /chem/can/gos/a2hp2.i/90205a.b/f027f1001.d
Date : 05-FEB-1999 17:33
Client ID:
Sample Info: 1660 1.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



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Data File: /chem/can/gcs/a2hp2.i/90205a.b/f028f1101.d
Report Date: 05-Mar-1999 10:16

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90205a.b/f028f1101.d
Lab Smp Id: 1660 2.0
Inj Date : 05-FEB-1999 17:50
Operator : 1808
Smp Info : 1660 2.0
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90205a.b/hp2fpcb.m
Meth Date : 03-Mar-1999 09:44 a
Cal Date : 05-FEB-1999 17:50
Als bottle: 28
Dil Factor: 1.00000
Integrator: Falcon
Target Version: 3.40

Inst ID: a2hp2.i

Quant Type: ESTD
Cal File: f028f1101.d
Calibration Sample, Level: 5

Compound Sublist: AR1660td.sub
Sample Matrix: None

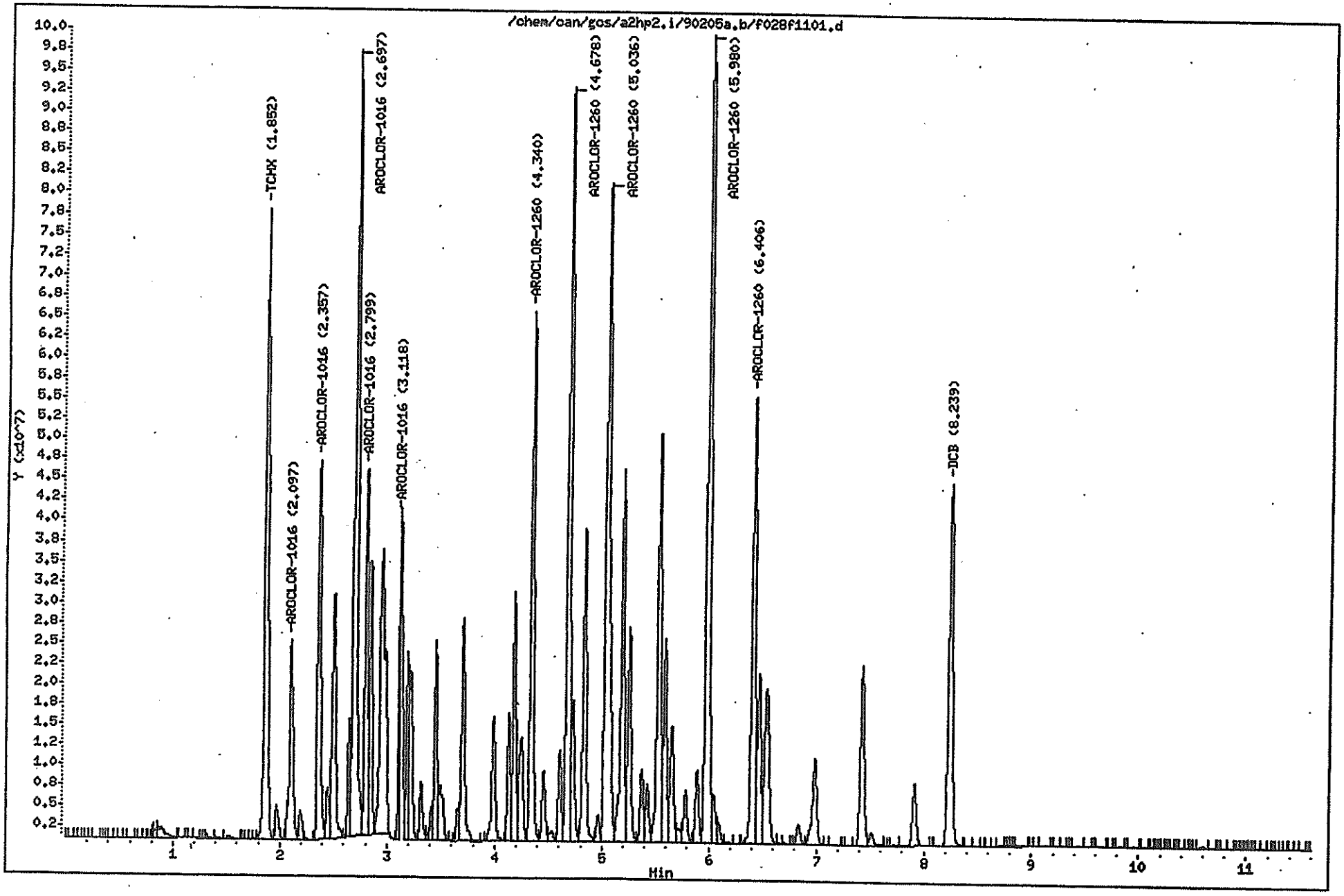
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
1 TCMX					CAS #: 877-09-8		
1.852	1.852	0.000	76996282	0.10000	0.08310	75.00- 125.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.097	2.097	0.000	24390752	2.00000	1.642	75.00- 125.00	100.00
2.357	2.357	0.000	46165764	2.00000	1.757	137.00- 228.33	189.28
2.697	2.697	0.000	96044363	2.00000	1.834	266.25- 443.75	393.77
2.799	2.799	0.000	44607314	2.00000	1.821	126.98- 211.63	182.89
3.118	3.118	0.000	39521921	2.00000	1.818	111.82- 186.37	162.04
Average of Peak Amounts =					1.77		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.340	4.340	0.000	64827839	2.00000	1.797	75.00- 125.00	100.00
4.678	4.678	0.000	92281689	2.00000	1.814	106.36- 177.27	142.35
5.036	5.036	0.000	80493965	2.00000	1.862	91.09- 151.81	124.17
5.980	5.980	0.000	103605159	2.00000	1.884	114.30- 190.50	159.82
6.406	6.406	0.000	54558646	2.00000	1.869	60.55- 100.92	84.16
Average of Peak Amounts =					1.85		
$ 9 DCB					CAS #: 2051-24-3		
8.239	8.239	0.000	44220680	0.10000	0.09026	75.00- 125.00	100.00

Data File: /chem/oan/gos/a2hp2.i/90205a.b/f028f1101.d
Date : 05-FEB-1999 17:50
Client ID:
Sample Info: 1660 2.0

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

Column phase: RTX-CLP PESTICIDES



FORM 8
PCB ANALYTICAL SEQUENCE

Lab Name: QUANTERRA, INC. Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: A9B240116

GC Column: RTX-CLP PESTICIDES ID: 0.32 (mm) Init. Calib. Date(s): 02/05/99 02/05

Instrument ID: A2HP2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01		2154 C157	03/05/99	1645		
02		1248 C151	03/05/99	1702		
03		1242 C146	03/05/99	1718		
04		1232 C141	03/05/99	1735		
05		1660 C162	03/05/99	2112		
06	S-022399-JH-	CR2RC101	03/05/99	2129		
07	S-022399-JH-	CR2RE101	03/05/99	2145		
08	S-022399-JH-	CR2RF101	03/05/99	2202		
09	S-022399-JH-	CR2RG101	03/05/99	2219		
10	S-022399-JH-	CR2RH101	03/05/99	2235		
11	S-022399-JH-	CR2RJ101	03/05/99	2252		
12	S-022399-JH-	CR2RL101	03/05/99	2309		
13	S-022399-JH-	CR2RM101	03/05/99	2325		
14	S-022399-JH-	CR2RN101	03/05/99	2342		
15	S-022399-JH-	CR2RP101	03/05/99	2359		
16		1660 C162	03/06/99	0032		
17	S-022399-JH-	CR2RR101	03/06/99	0106		
18	S-022399-JH-	CR2RT101	03/06/99	0122		
19	S-022399-JH-	CR2RV101	03/06/99	0139		
20	S-022399-JH-	CR2RX101	03/06/99	0156		
21	S-022399-JH-	CR2T0101	03/06/99	0212		
22	S-022399-JH-	CR2T1101	03/06/99	0229		
23	S-022399-JH-	CR2T2101	03/06/99	0246		
24	S-022399-JH-	CR2T4101	03/06/99	0303		
25	S-022399-JH-	CR2T5101	03/06/99	0319		
26	S-022399-JH-	CR2T6101	03/06/99	0336		
27		1660 C162	03/06/99	0409		
28	INTRA-LAB BL	CR30K101	03/06/99	0443		
29	INTRA-LAB CH	CR30K103	03/06/99	0500		
30	INTRA-LAB CH	CR30K104	03/06/99	0516		
31		1660 C162	03/06/99	0747		
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f005f0501.d
Report Date: 08-Mar-1999 07:02

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f005f0501.d
Lab Smp Id: 2154 C157
Inj Date : 05-MAR-1999 16:45
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 2154 C157,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 5 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR2154.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

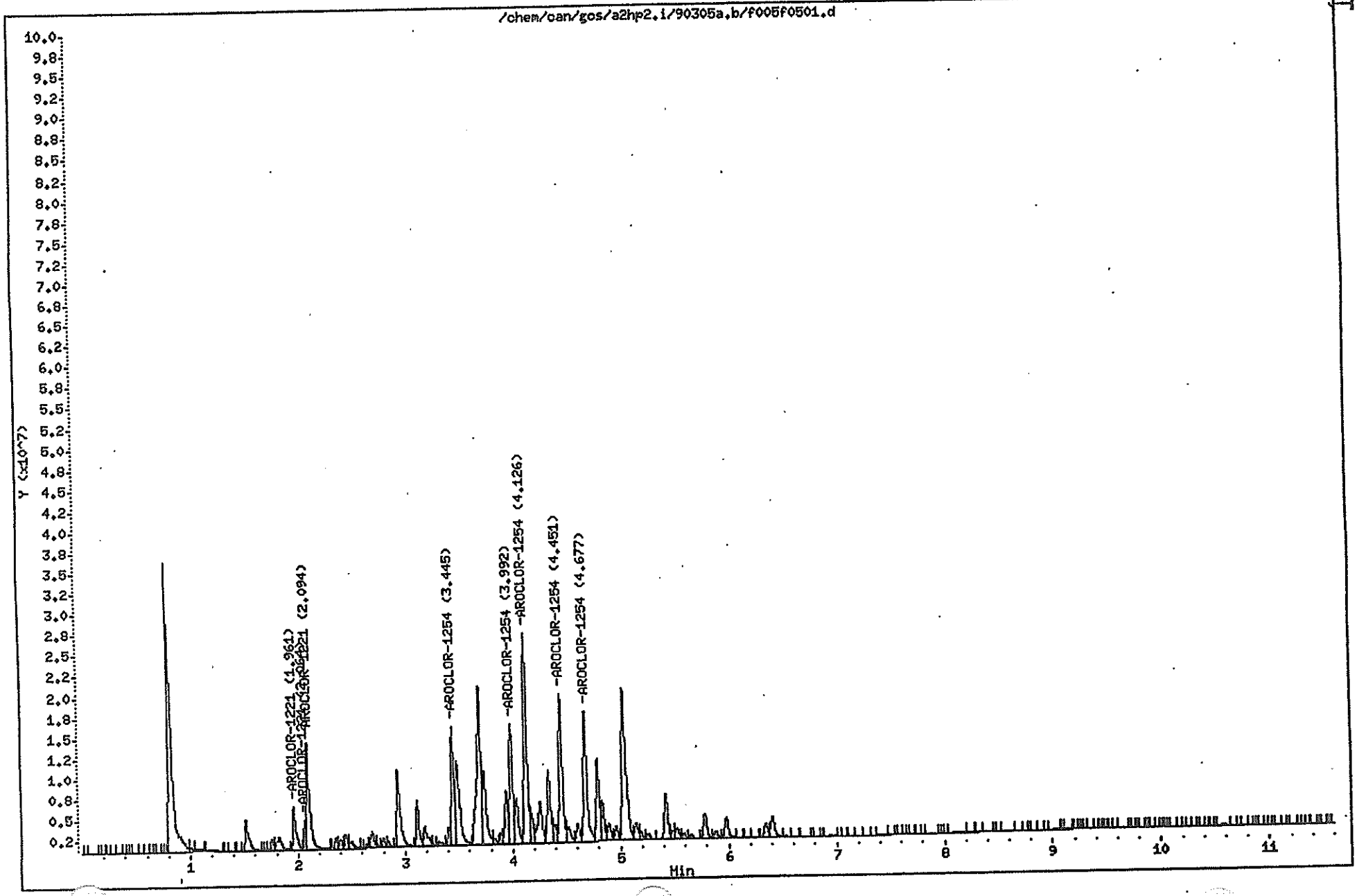
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.445	3.445	0.000	14395270	0.50000	0.5100	80.00- 120.00	100.00
3.992	3.992	0.000	14537769	0.50000	0.5566	75.74- 126.24	100.99
4.126	4.126	0.000	25537458	0.50000	0.5460	133.05- 221.75	177.40
4.451	4.451	0.000	17945893	0.50000	0.5718	93.50- 155.83	124.67
4.677	4.677	0.000	15823605	0.50000	0.5563	82.44- 137.40	109.92
Average of Peak Amounts =					0.548		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.961	1.961	0.000	5107585	0.50000	0.5819	80.00- 120.00	100.00
2.064	2.064	0.000	3485082	0.50000	0.5790	51.18- 85.29	68.23
2.094	2.094	0.000	12872817	0.50000	0.5666	189.03- 315.04	252.03
Average of Peak Amounts =					0.576		

Data File: /chem/can/gos/a2hp2.i/90305a.b/f005f0501.d
Date : 05-MAR-1999 16:45
Client ID:
Sample Info: 2154 C157,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

146



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Report Date: 08-Mar-1999 07:02

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f006f0601.d
Lab Smp Id: 1248 C151
Inj Date : 05-MAR-1999 17:02
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1248 C151,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1248.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

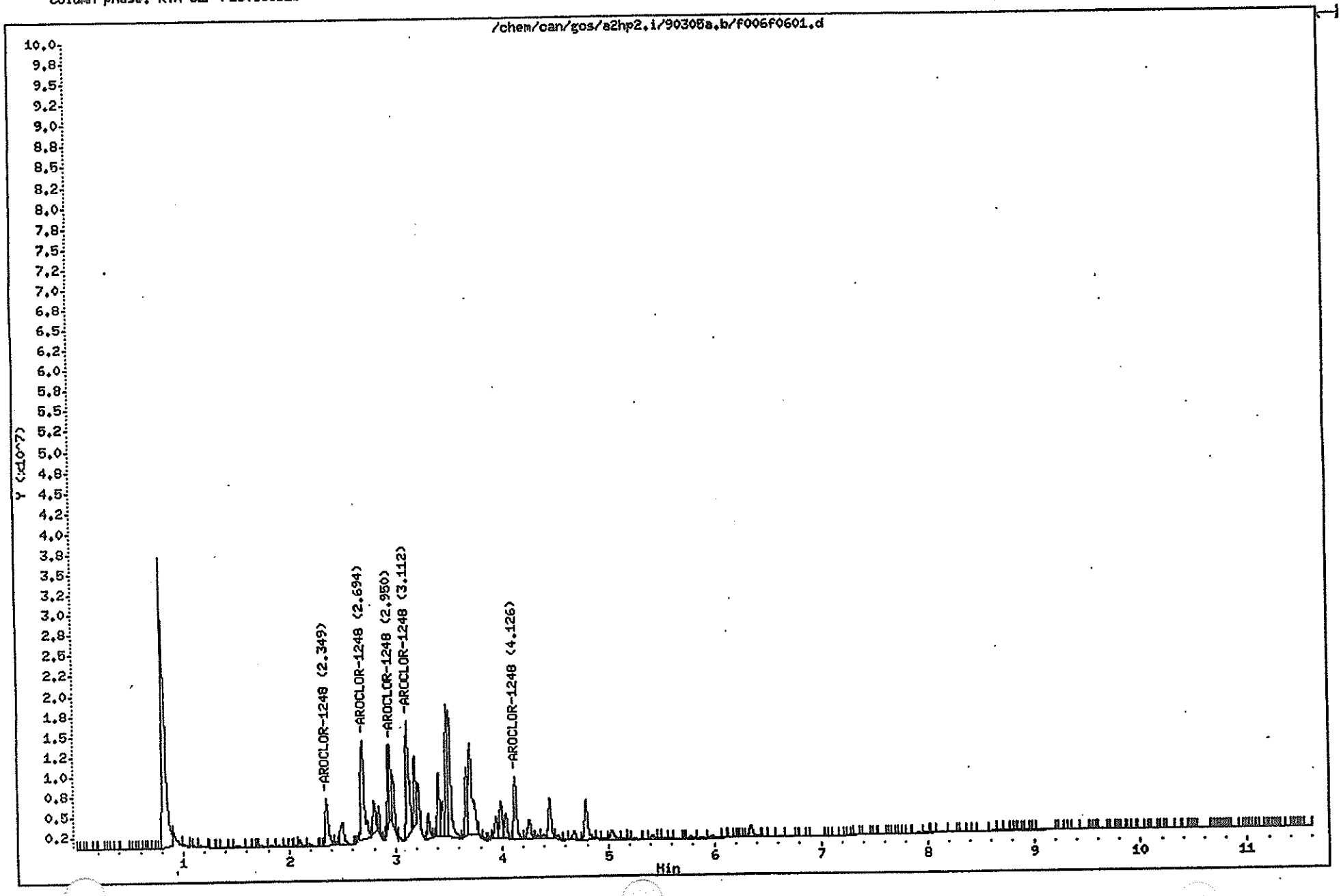
Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.349	2.349	0.000	5712898	0.50000	0.5756	80.00- 120.00	100.00
2.694	2.694	0.000	12272889	0.50000	0.5147	161.12- 268.53	214.83
2.950	2.950	0.000	9138179	0.50000	0.3619	119.97- 199.95	159.96
3.112	3.112	0.000	14224814	0.50000	0.5115	186.75- 311.24	248.99
4.126	4.126	0.000	7697336	0.50000	0.5178	101.05- 168.42	134.74
Average of Peak Amounts =					0.496		

Data File: /chem/can/gos/a2hp2.i/90305a.b/f006f0601.d
Date : 05-MAR-1999 17:02
Client ID:
Sample Info: 1248 C151,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



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Report Date: 08-Mar-1999 07:02

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f007f0701.d
Lab Smp Id: 1242 C146
Inj Date : 05-MAR-1999 17:18
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1242 C146,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1242.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

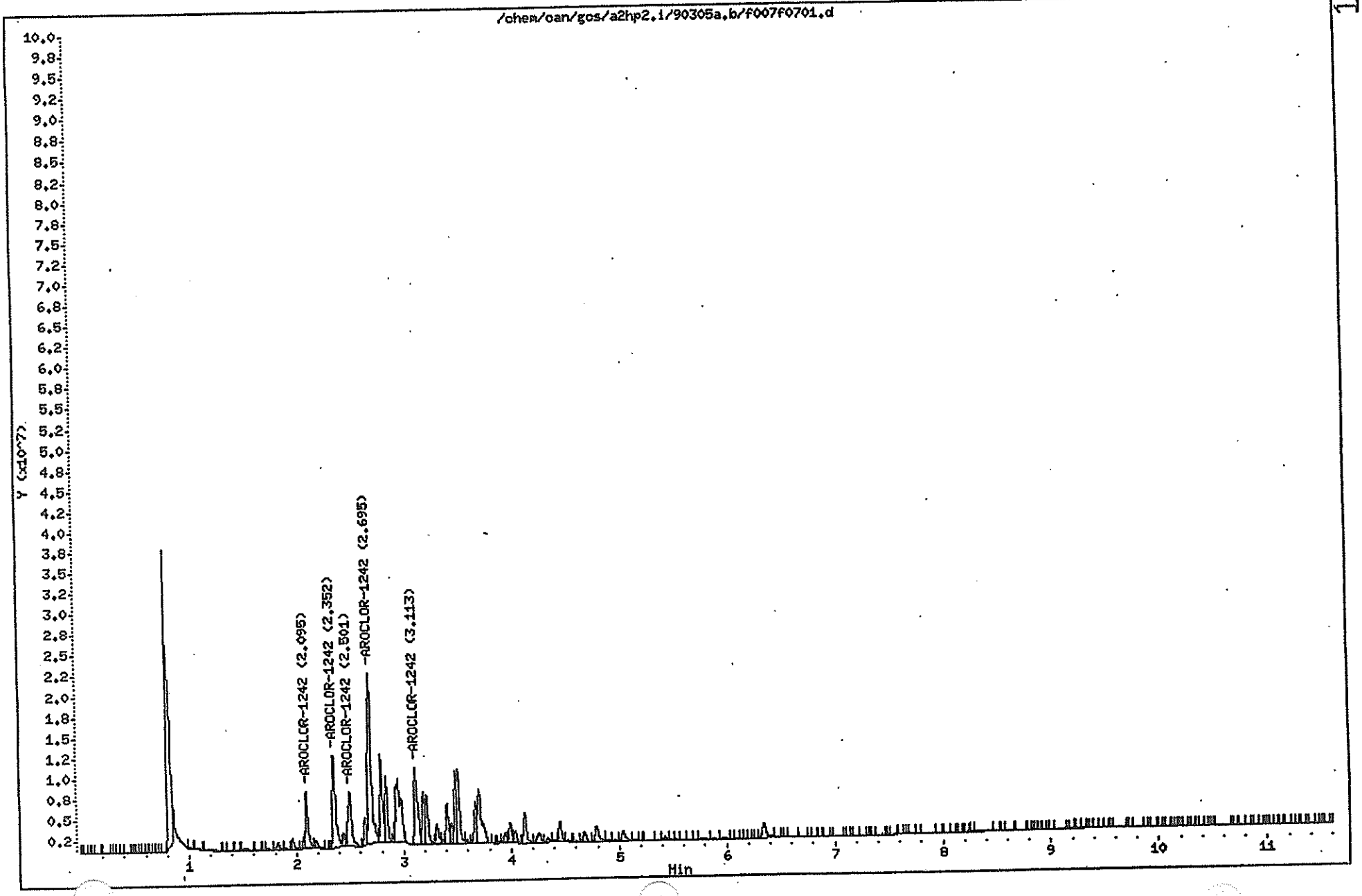
Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.095	2.095	0.000	6724994	0.50000	0.6180	80.00- 120.00	100.00
2.352	2.352	0.000	11145666	0.50000	0.5941	124.30- 207.17	165.73
2.501	2.501	0.000	6432052	0.50000	0.5172	71.73- 119.55	95.64
2.695	2.695	0.000	20673529	0.50000	0.5477	230.56- 384.27	307.41
3.113	3.113	0.000	9396364	0.50000	0.5680	104.79- 174.65	139.72
Average of Peak Amounts =					0.569		

Data File: /chem/oan/gcs/a2hp2.i/90305a.b/f007f0701.d
Date : 05-MAR-1999 17:18
Client ID:
Sample Info: 1242 C146,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



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Report Date: 08-Mar-1999 07:02

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f008f0801.d
Lab Smp Id: 1232 C141
Inj Date : 05-MAR-1999 17:35
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1232 C141,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 8 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1232.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

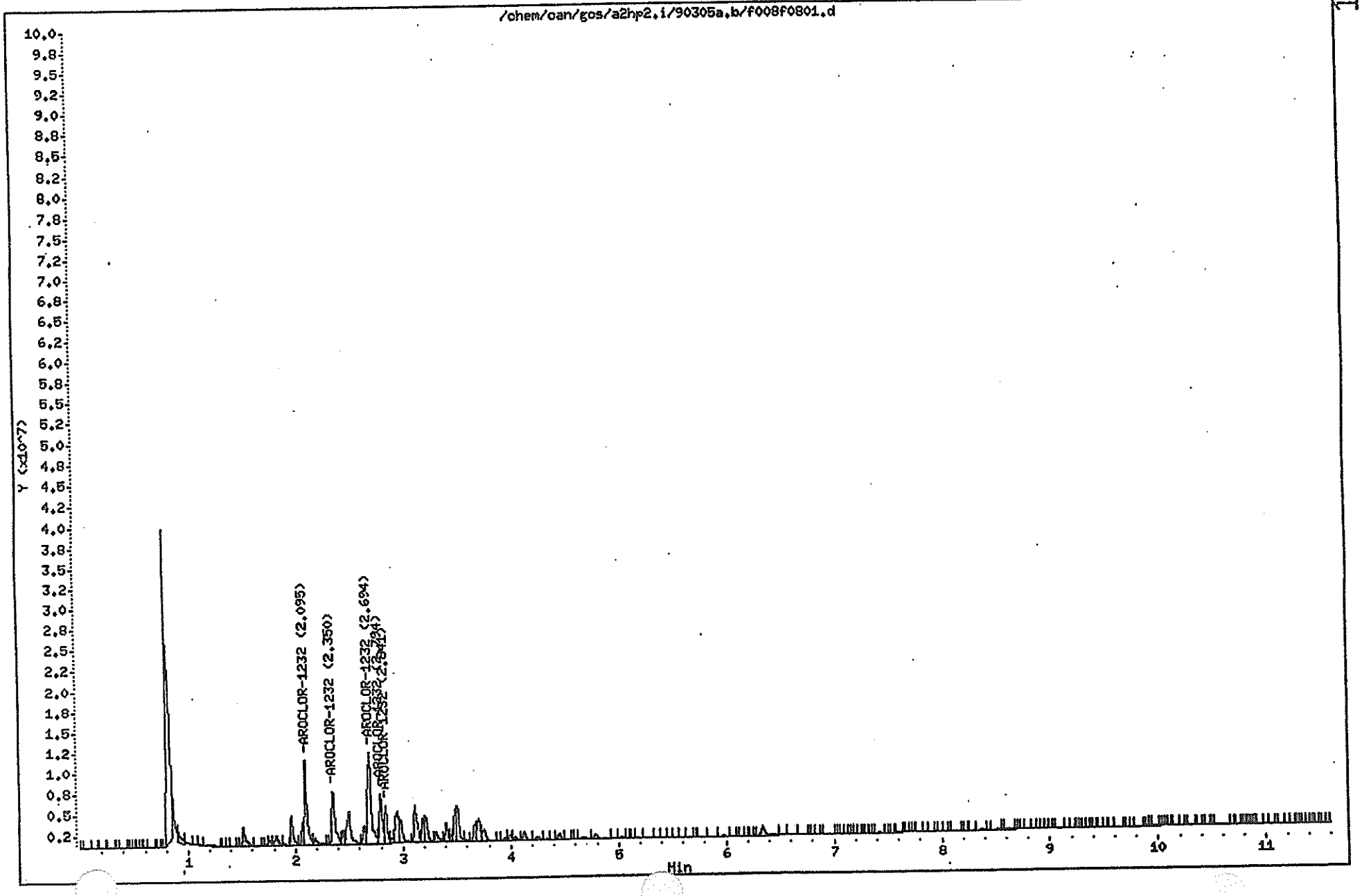
Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.095	2.095	0.000	10081607	0.50000	0.6078	80.00- 120.00	100.00
2.350	2.350	0.000	6309819	0.50000	0.5682	46.94- 78.23	62.59
2.694	2.694	0.000	10880331	0.50000	0.5057	80.94- 134.90	107.92
2.794	2.794	0.000	5878045	0.50000	0.5680	43.73- 72.88	58.30
2.841	2.841	0.000	4445642	0.50000	0.5917	33.07- 55.12	44.10
		Average of Peak Amounts =			0.568		

Data File: /chem/oan/gos/a2hp2.i/90305a.b/f008f0801.d
Date : 05-MAR-1999 17:35
Client ID:
Sample Info: 1232 C141,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hp2.i/90305a.b/f021f2101.d
Report Date: 03/07/1999

CONTINUING CALIBRATION REPORT

Instrument ID: a2hp2.i
Lab File ID: f021f2101.d
Analysis Type: WATER

Injection Date: 05-MAR-1999 21:12
Lab Sample ID: 1660 C162
Method File: /chem/can/gcs/a2hp2.i/90305a.b/hp2fpc

COMPOUND	%D
TCMX	11.3
AROCLOR-1016	4.8
AROCLOR-1260	2.3
DCB	10.0

The average of %D's in the continuing calibration is 7.1

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f021f2101.d
Report Date: 08-Mar-1999 07:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f021f2101.d
Lab Smp Id: 1660 C162
Inj Date : 05-MAR-1999 21:12
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1660 C162,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 21 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

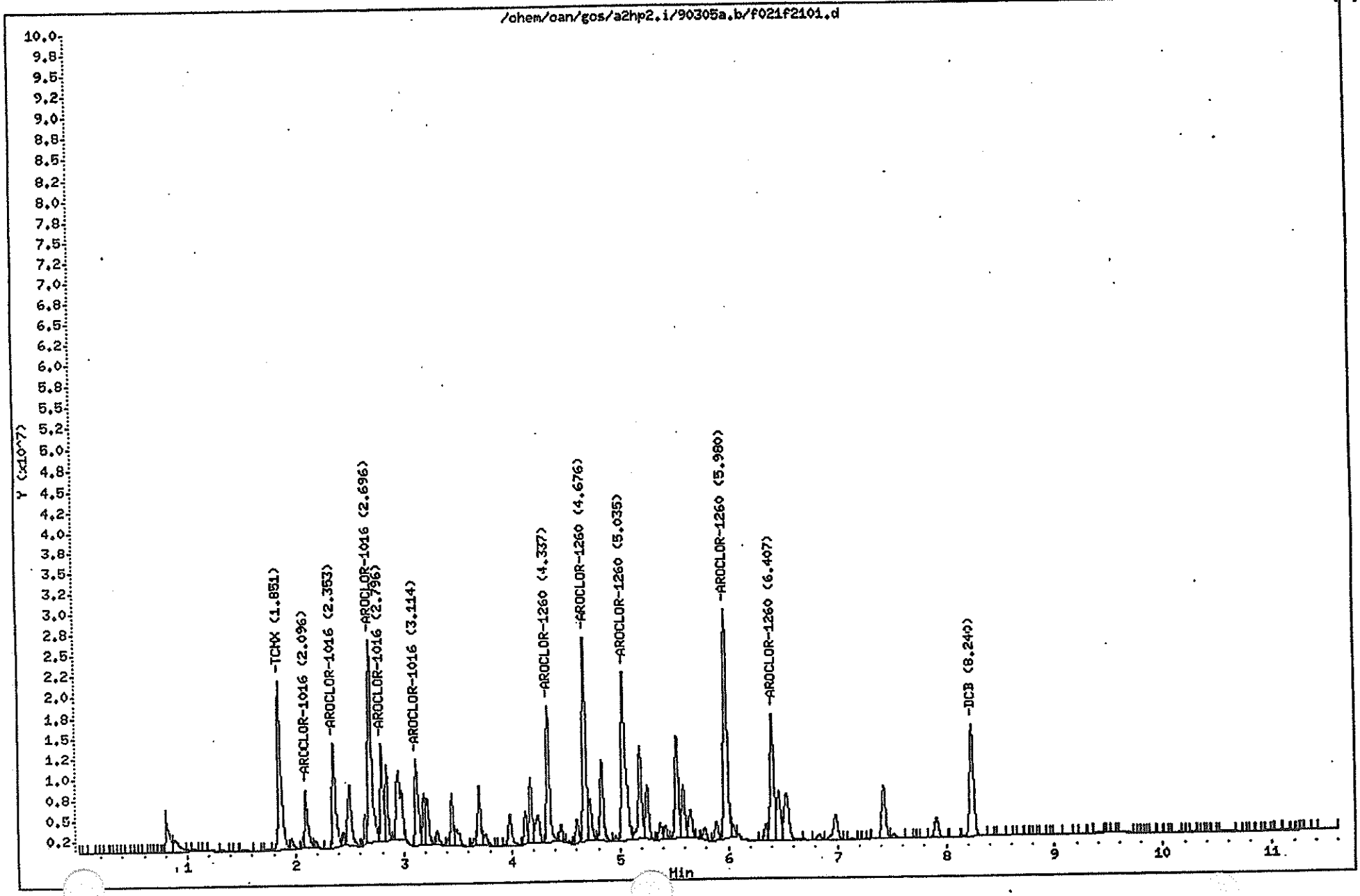
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.851	1.848	0.003	20539056	0.02500	0.02217	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.096	2.093	0.003	6993976	0.50000	0.4708	80.00- 120.00	100.00
2.353	2.350	0.003	12633585	0.50000	0.4807	124.12- 206.86	180.64
2.696	2.693	0.003	24595561	0.50000	0.4696	254.85- 424.75	351.67
2.796	2.794	0.002	11840299	0.50000	0.4833	129.82- 216.37	169.29
3.114	3.112	0.002	10356832	0.50000	0.4764	102.68- 171.13	148.08
Average of Peak Amounts =					0.476		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.335	0.002	16562792	0.50000	0.4592	80.00- 120.00	100.00
4.676	4.674	0.002	24604432	0.50000	0.4037	110.81- 184.68	148.55
5.035	5.031	0.004	20394410	0.50000	0.4716	91.96- 153.26	123.13
5.980	5.978	0.002	27638189	0.50000	0.5025	128.99- 214.98	166.87

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f021f2101.d
Report Date: 08-Mar-1999 07:03

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
6.407	6.404	0.003	15327568	0.50000	0.5251	70.79- 117.98	92.54
Average of Peak Amounts =					0.488		
$ 9 DCB					CAS #: 2051-24-3		
8.240	8.238	0.002	13476500	0.02500	0.02751	80.00- 120.00	100.00

Data File: /chem/oan/gos/a2hp2.i/90305a.b/f021f2101.d
Date : 05-MAR-1999 21:12
Client ID:
Sample Info: 1660 C162,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hp2.i/90305a.b/f033f3301.d
Report Date: 03/07/1999

CONTINUING CALIBRATION REPORT

Instrument ID: a2hp2.i
Lab File ID: f033f3301.d
Analysis Type: WATER

Injection Date: 06-MAR-1999 00:32
Lab Sample ID: 1660 C162
Method File: /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcl

COMPOUND	%D
TCMX	13.3
AROCLOR-1016	15.7
AROCLOR-1260	5.6
DCB	14.7

The average of %D's in the continuing calibration is 12.3

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f033f3301.d
Report Date: 08-Mar-1999 07:03

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f033f3301.d
Lab Smp Id: 1660 C162
Inj Date : 06-MAR-1999 00:32
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1660 C162,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 33 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	26241344	0.02500	0.02832	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.094	2.093	0.001	8685358	0.50000	0.5846	80.00- 120.00	100.00
2.352	2.350	0.002	14999855	0.50000	0.5708	124.12- 206.86	172.70
2.694	2.693	0.001	29170128	0.50000	0.5570	254.85- 424.75	335.85
2.795	2.794	0.001	15087736	0.50000	0.6158	129.82- 216.37	173.71
3.113	3.112	0.001	12257192	0.50000	0.5638	102.68- 171.13	141.12
Average of Peak Amounts =					0.578		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.335	0.002	19114953	0.50000	0.5299	80.00- 120.00	100.00
4.676	4.674	0.002	27279799	0.50000	0.5364	110.81- 184.68	142.71
5.034	5.031	0.003	22035989	0.50000	0.5096	91.96- 153.26	115.28
5.980	5.970	0.002	29158595	0.50000	0.5301	128.99- 214.98	152.54

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f033f3301.d
Report Date: 08-Mar-1999 07:03

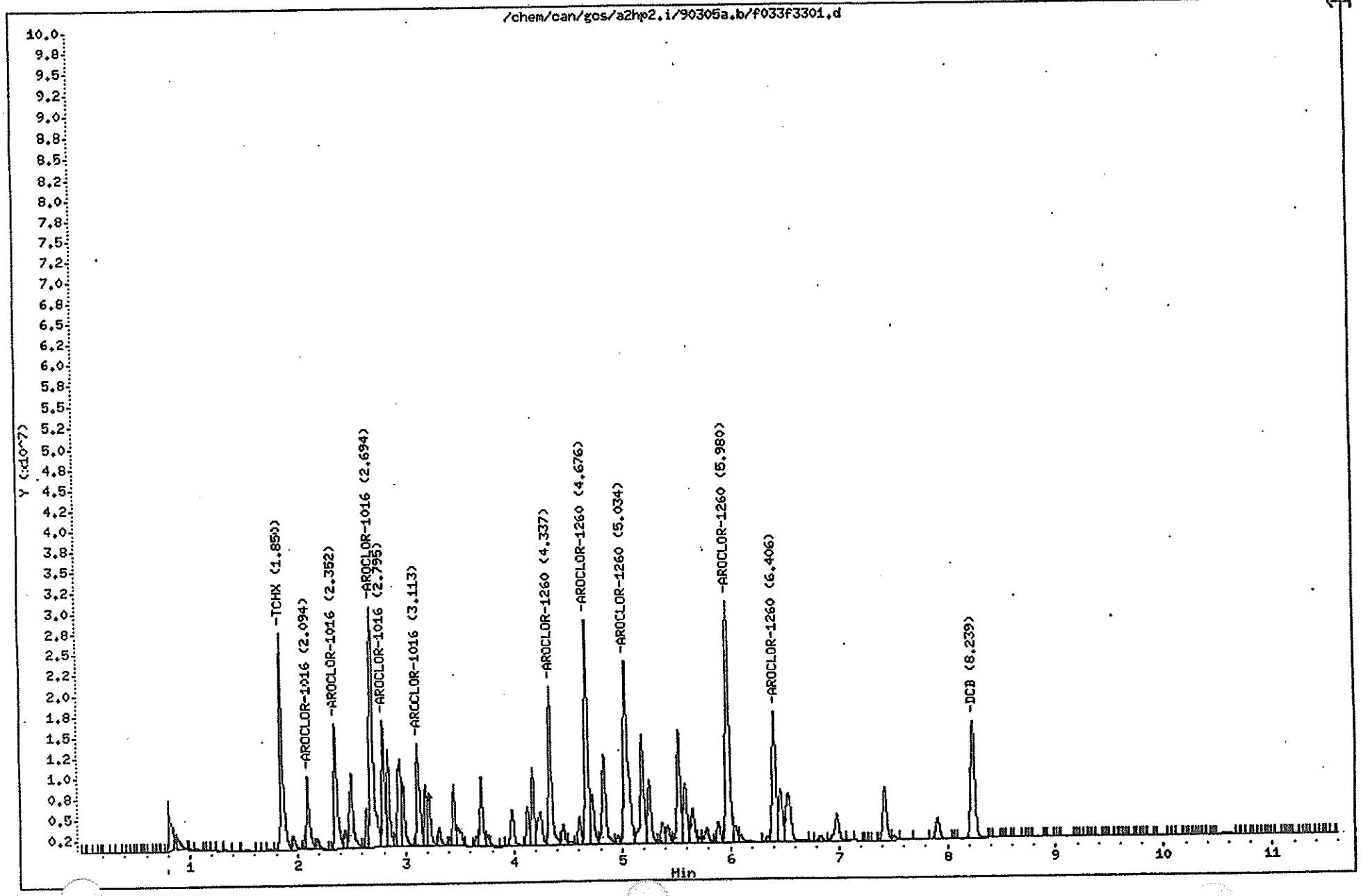
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
6.406	6.404	0.002	15554718	0.50000	0.5328	70.79- 117.98	81.37
Average of Peak Amounts =					0.528		
S 9 DCB					CAS #: 2051-24-3		
8.239	8.238	0.001	14042997	0.02500	0.02866	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f033f3301.d
Date : 06-MAR-1999 00:32
Client ID:
Sample Info: 1660 C162,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32

160



Data File: /chem/can/gcs/a2hp2.i/90305a.b/f046f4601.d
Report Date: 03/07/1999

CONTINUING CALIBRATION REPORT

Instrument ID: a2hp2.i
Lab File ID: f046f4601.d
Analysis Type: WATER

Injection Date: 06-MAR-1999 04:09
Lab Sample ID: 1660 C162
Method File: /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcl

COMPOUND	%D
TCMX	0.6
AROCLOR-1016	7.2
AROCLOR-1260	9.3
DCB	26.0

The average of %D's in the continuing calibration is 10.8

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f046f4601.d
Report Date: 08-Mar-1999 07:04

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f046f4601.d
Lab Smp Id: 1660 C162
Inj Date : 06-MAR-1999 04:09
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1660 C162,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 46 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.848	1.848	0.000	23304600	0.02500	0.02515	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.093	2.093	0.000	7916929	0.50000	0.5329	80.00- 120.00	100.00
2.349	2.350	-0.001	13944201	0.50000	0.5306	124.12- 206.86	176.13
2.692	2.693	-0.001	27655729	0.50000	0.5281	254.85- 424.75	349.32
2.793	2.794	-0.001	13901713	0.50000	0.5674	129.82- 216.37	175.59
3.111	3.112	-0.001	11304288	0.50000	0.5200	102.68- 171.13	142.79
Average of Peak Amounts =					0.536		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.334	4.335	-0.001	18466100	0.50000	0.5119	80.00- 120.00	100.00
4.673	4.674	-0.001	27144997	0.50000	0.5337	110.81- 184.68	147.00
5.029	5.031	-0.002	22724317	0.50000	0.5255	91.96- 153.26	123.06
5.977	5.978	-0.001	31718444	0.50000	0.5766	128.99- 214.98	171.77

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f046f4601.d
Report Date: 08-Mar-1999 07:04

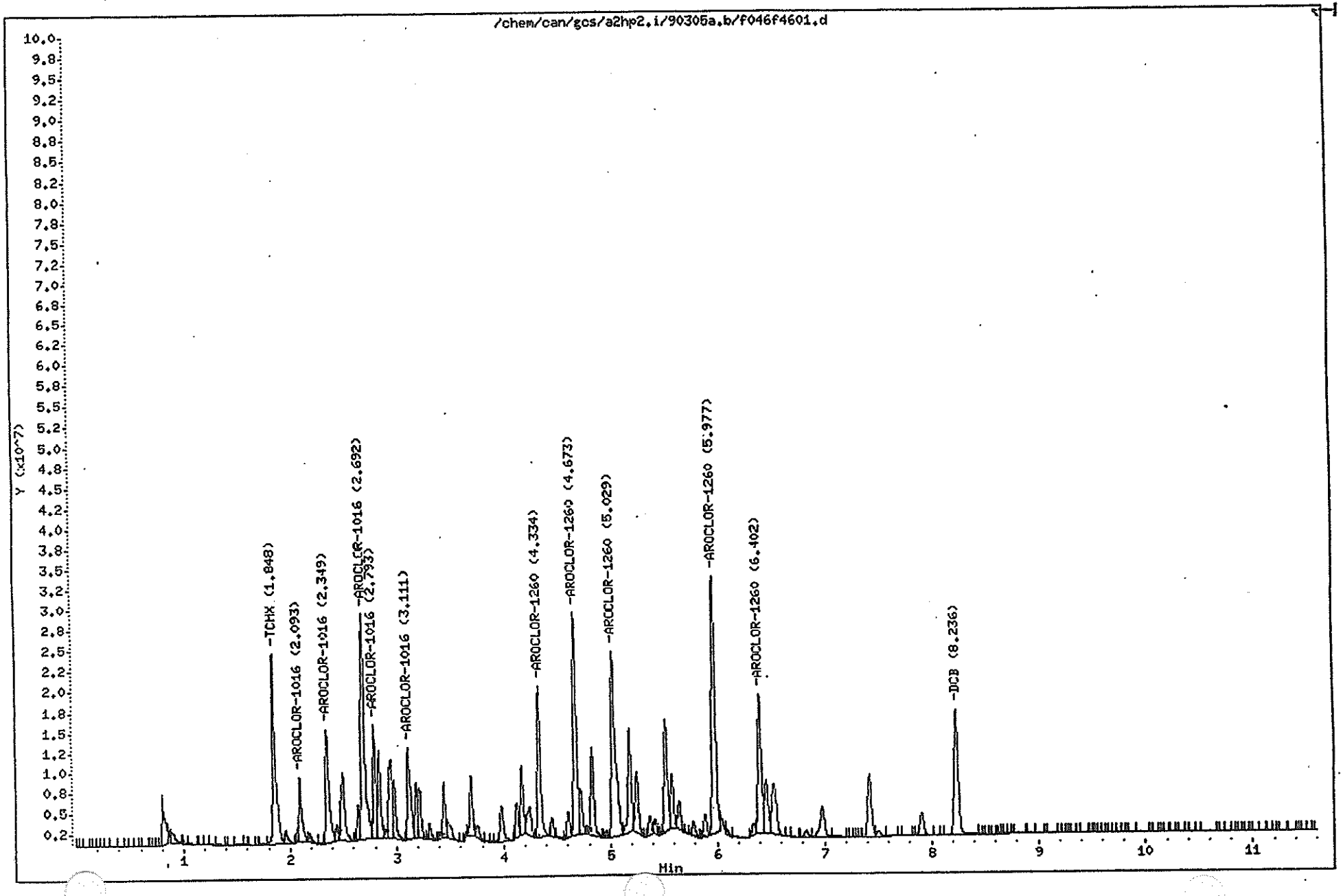
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
**	======	========	========	=======	=======	==========	=====
8 AROCLOR-1260 (continued)							
6.402	6.404	-0.002	17077995	0.50000	0.5850	70.79- 117.98	92.48
Average of Peak Amounts =					0.547		

$ 9 DCB					CAS #: 2051-24-3		
8.236	8.238	-0.002	15430770	0.02500	0.03150	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f046f4601.d
Date : 06-MAR-1999 04:09
Client ID:
Sample Info: 1660 C162,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



Data File: /chem/can/gcs/a2hp2.i/90305a.b/f059f5901.d
Report Date: 03/07/1999

CONTINUING CALIBRATION REPORT

Instrument ID: a2hp2.i
Lab File ID: f059f5901.d
Analysis Type: WATER

Injection Date: 06-MAR-1999 07:47
Lab Sample ID: 1660 C162
Method File: /chem/can/gcs/a2hp2.i/90305a.b/hp2fpc

COMPOUND	%D
TCMX	7.2
AROCLOR-1016	2.1
AROCLOR-1260	4.0
DCB	22.1

The average of %D's in the continuing calibration is 8.9

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f059f5901.d
Report Date: 08-Mar-1999 07:05

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f059f5901.d
Lab Smp Id: 1660 C162
Inj Date : 06-MAR-1999 07:47
Operator : 1808 Inst ID: a2hp2.i
Smp Info : 1660 C162,,2
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 07-Mar-1999 08:12 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 59 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AR1660td.sub
Target Version: 3.40 Sample Matrix: WATER

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	5000.000	final volume
Vo	1000.000	intitial volume

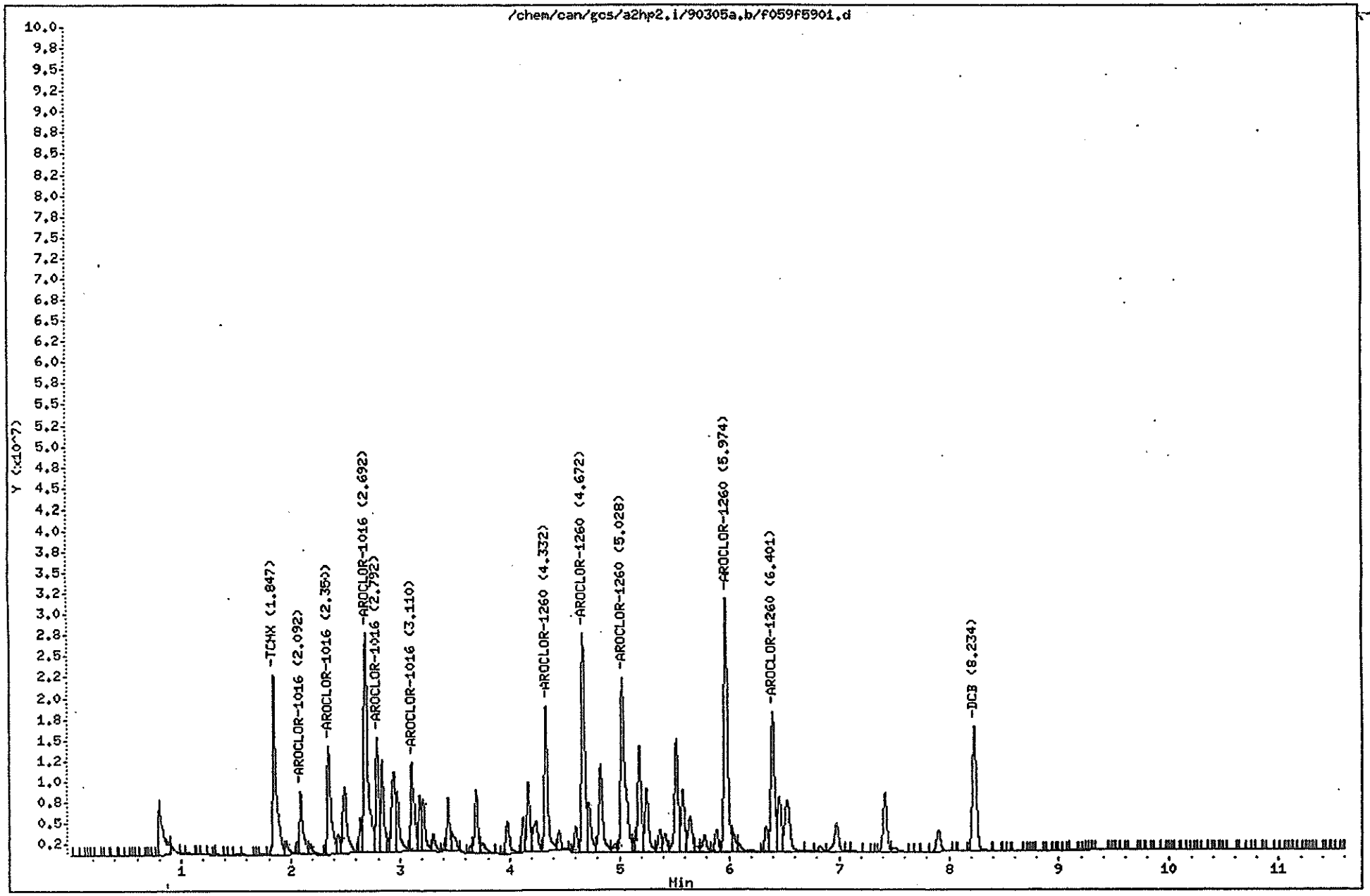
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.847	1.848	-0.001	21492318	0.02500	0.02320	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.092	2.093	-0.001	7454710	0.50000	0.5018	80.00- 120.00	100.00
2.350	2.350	0.000	13016510	0.50000	0.4953	124.12- 206.86	174.61
2.692	2.693	-0.001	26249618	0.50000	0.5012	254.85- 424.75	352.12
2.792	2.794	-0.002	13786416	0.50000	0.5627	129.82- 216.37	184.94
3.110	3.112	-0.002	10686092	0.50000	0.4916	102.68- 171.13	143.35
Average of Peak Amounts =					0.511		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.332	4.335	-0.003	17424474	0.50000	0.4830	80.00- 120.00	100.00
4.672	4.674	-0.002	26145373	0.50000	0.5140	110.81- 184.68	150.05
5.028	5.031	-0.003	20776188	0.50000	0.4805	91.96- 153.26	119.24
5.974	5.978	-0.004	30306979	0.50000	0.5510	128.99- 214.98	173.93

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f059f5901.d
Report Date: 08-Mar-1999 07:05

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
6.401	6.404	-0.003	16714792	0.50000	0.5726	70.79- 117.98	95.93
Average of Peak Amounts =					0.52		
$ 9 DCB					CAS #: 2051-24-3		
8.234	8.238	-0.004	14956208	0.02500	0.03053	80.00- 120.00	100.00

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f059f5901.d
Date : 06-MAR-1999 07:47
Client ID:
Sample Info: 1660 C162,,2
Purge Volume: 1000.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
RAW QC DATA

CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240000 185

Sample WT/Vol: 30 / g
Work Order: CR30K103
Dilution factor: 1
Moisture %:NA

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	270	
11096-82-5	Aroclor 1260	360	

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f049f4901.d
Report Date: 15-Mar-1999 09:12

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f049f4901.d
Lab Smp Id: CR30K103 Client Smp ID: INTRA-LAB CHECK
Inj Date : 06-MAR-1999 05:00
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR30K103
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 49 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.848	1.848	0.000	13704844	0.01479	4.930	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.093	2.093	0.000	10938420	0.73625	245.4	80.00- 120.00	100.00
2.350	2.350	0.000	20471371	0.77899	259.7	124.12- 206.86	187.15
2.694	2.693	0.001	43096112	0.82290	274.3	254.85- 424.75	393.99
2.794	2.794	0.000	21352614	0.87156	290.5	129.82- 216.37	195.21
3.111	3.112	-0.001	18662774	0.85853	286.2	102.68- 171.13	170.62
Average of Peak Concentrations =					271.2		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.335	4.335	0.000	35574252	0.98620	328.7	80.00- 120.00	100.00
4.674	4.674	0.000	53294343	1.04782	349.3	110.81- 184.68	149.81
5.031	5.031	0.000	43491167	1.00578	335.3	91.96- 153.26	122.25
5.977	5.978	-0.001	62126147	1.12946	376.5	128.99- 214.98	174.64

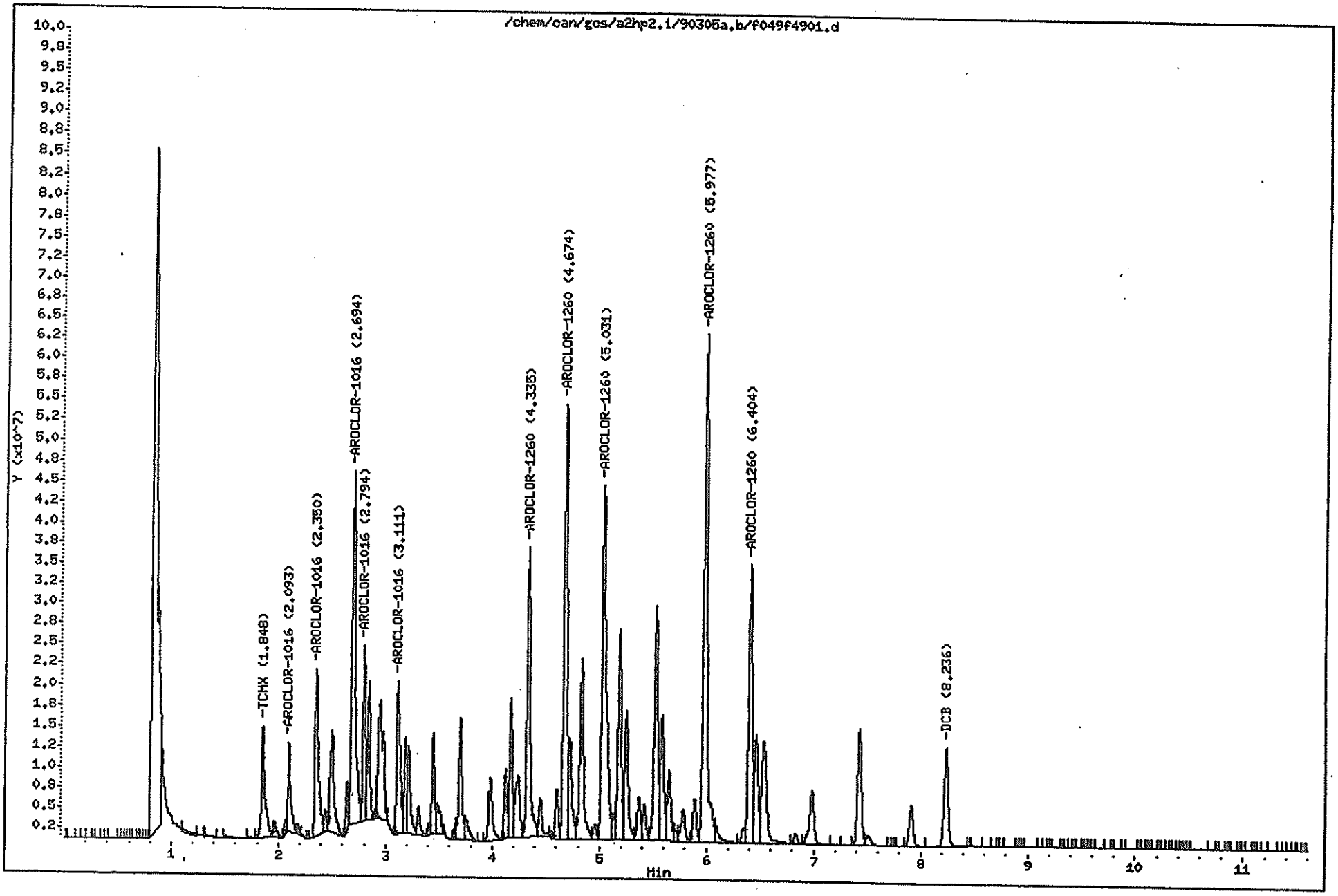
Data File: /chem/can/gcs/a2hp2.i/90305a.b/f049f4901.d
Report Date: 15-Mar-1999 09:12

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
8 AROCLOR-1260 (continued)							
6.404	6.404	0.000	34111007	1.16852	389.5	70.79- 117.98	95.89
Average of Peak Concentrations =					355.8		
$ 9 DCB					CAS #: 2051-24-3		
8.236	8.238	-0.002	12062918	0.02462	8.208	80.00- 120.00	100.00

Data : /chem/oan/gcs/a2hp2.i/90305a.b/f049f4901.d
Date : 06-MAR-1999 05:00
Client ID: INTRA-LAB CHECK
Sample Info: CR30K103
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



173

CONESTOGA-ROVERS & ASSOCIATES INC
CHECK SAMPLE DUPLICATE COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240000 185

Sample WT/Vol: 30 / g
Work Order: CR30K104
Dilution factor: 1
Moisture %:NA

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: DUPLICATE CHECK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	290	
11096-82-5	Aroclor 1260	370	

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f050f5001.d
Report Date: 15-Mar-1999 09:12

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f050f5001.d
Lab Smp Id: CR30K104 Client Smp ID: INTRA-LAB CHECK
Inj Date : 06-MAR-1999 05:16
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR30K104
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 50 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.849	1.848	0.001	12742674	0.01375	4.584	80.00- 120.00	100.00
3 AROCLOR-1016					CAS #: 12674-11-2		
2.093	2.093	0.000	11296625	0.76036	253.4	80.00- 120.00	100.00(M)
2.350	2.350	0.000	22083119	0.84032	280.1	124.12- 206.86	195.48
2.693	2.693	0.000	46951553	0.89651	298.8	254.85- 424.75	415.62
2.793	2.794	-0.001	23040508	0.94046	313.5	129.82- 216.37	203.96
3.110	3.112	-0.002	20003621	0.92021	306.7	102.68- 171.13	177.08
Average of Peak Concentrations =					290.5		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.332	4.335	-0.003	37128181	1.02928	343.1	80.00- 120.00	100.00
4.671	4.674	-0.003	55183293	1.08496	361.6	110.81- 184.68	148.63
5.029	5.031	-0.002	46596450	1.07760	359.2	91.96- 153.26	125.50
5.975	5.978	-0.003	65016525	1.18201	394.0	128.99- 214.98	175.11

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f050f5001.d
Report Date: 15-Mar-1999 09:12

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
**	======	========	========	=======	=======	==========	=====
8 AROCLOR-1260 (continued)							
6.400	6.404	-0.004	35274672	1.20839	402.8	70.79- 117.98	95.01
		Average of Peak Concentrations =			372.1		
$ 9 DCB					CAS #: 2051-24-3		
8.234	8.238	-0.004	12780017	0.02609	8.696	80.00- 120.00	100.00

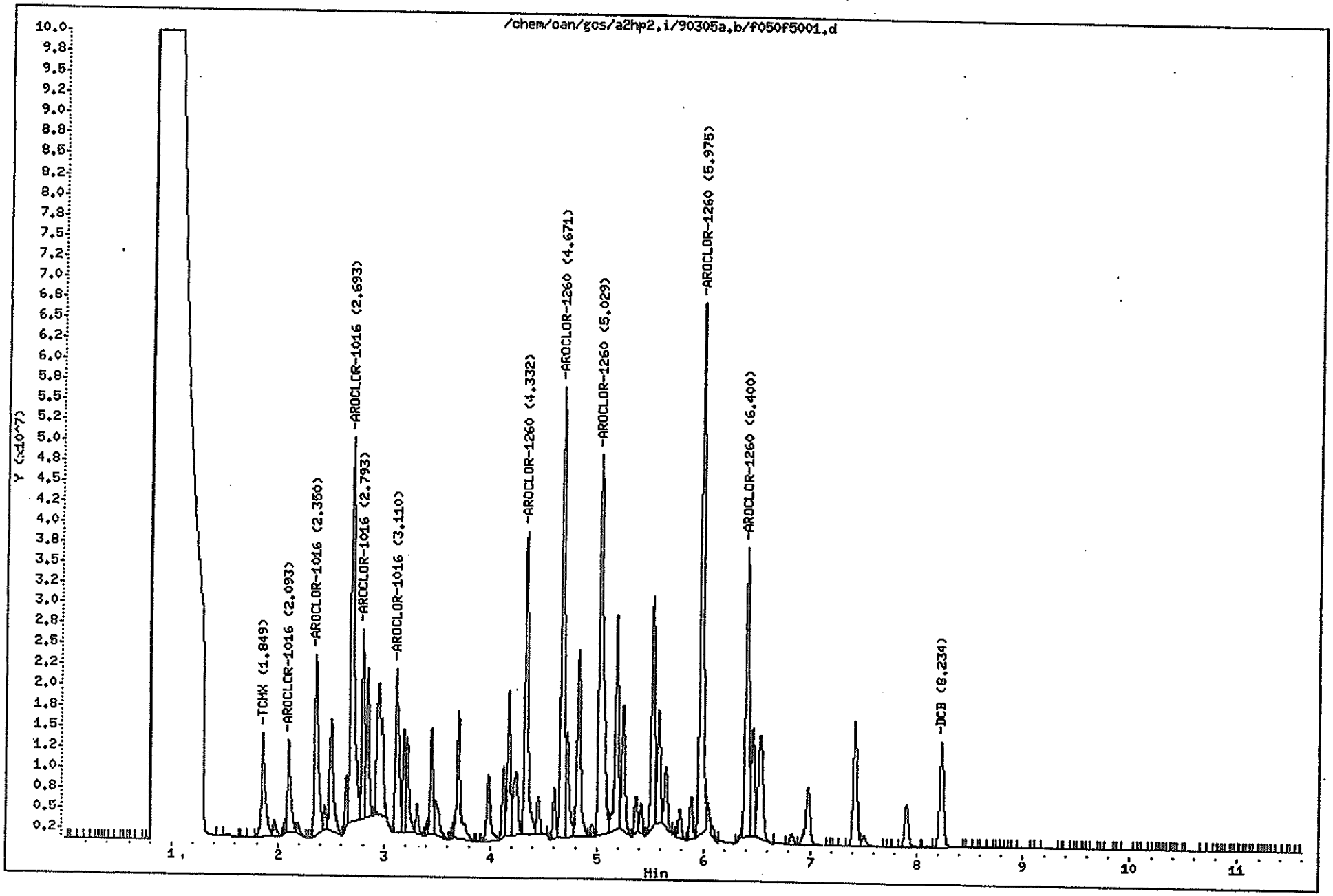
QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f050f5001.d
Date : 06-MAR-1999 05:16
Client ID: INTRA-LAB CHECK
Sample Info: CR30K104
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i

Operator: 1808
Column diameter: 0.32



177

CONESTOGA-ROVERS & ASSOCIATES INC
METHOD BLANK COMPOUNDS

Lab Name:QUANTERRA

SDG Number:

Matrix: (soil/water) SOLID
Method: SW846 8082
PCBs (8082)

Lab Sample ID:A9B240000 185

Sample WT/Vol: 30 / g
Work Order: CR30K101
Dilution factor: 1
Moisture %:NA

Date Received: 02/24/99
Date Extracted:02/24/99
Date Analyzed: 03/06/99

QC Batch: 9055185

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor 1016	33	U
11104-28-2	Aroclor 1221	33	U
11141-16-5	Aroclor 1232	33	U
53469-21-9	Aroclor 1242	33	U
12672-29-6	Aroclor 1248	33	U
11097-69-1	Aroclor 1254	33	U
11096-82-5	Aroclor 1260	33	U

FORM I

Data File: /chem/can/gcs/a2hp2.i/90305a.b/f048f4801.d
Report Date: 15-Mar-1999 09:11

QUANTERRA-NORTH CANTON

Data file : /chem/can/gcs/a2hp2.i/90305a.b/f048f4801.d
Lab Smp Id: CR30K101 Client Smp ID: INTRA-LAB BLANK
Inj Date : 06-MAR-1999 04:43
Operator : 1808 Inst ID: a2hp2.i
Smp Info : CR30K101
Misc Info :
Comment :
Method : /chem/can/gcs/a2hp2.i/90305a.b/hp2fpcb.m
Meth Date : 08-Mar-1999 09:29 beldingb Quant Type: ESTD
Cal Date : 05-FEB-1999 17:50 Cal File: f028f1101.d
Als bottle: 48 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: REG.sub
Target Version: 3.40 Sample Matrix: SOIL

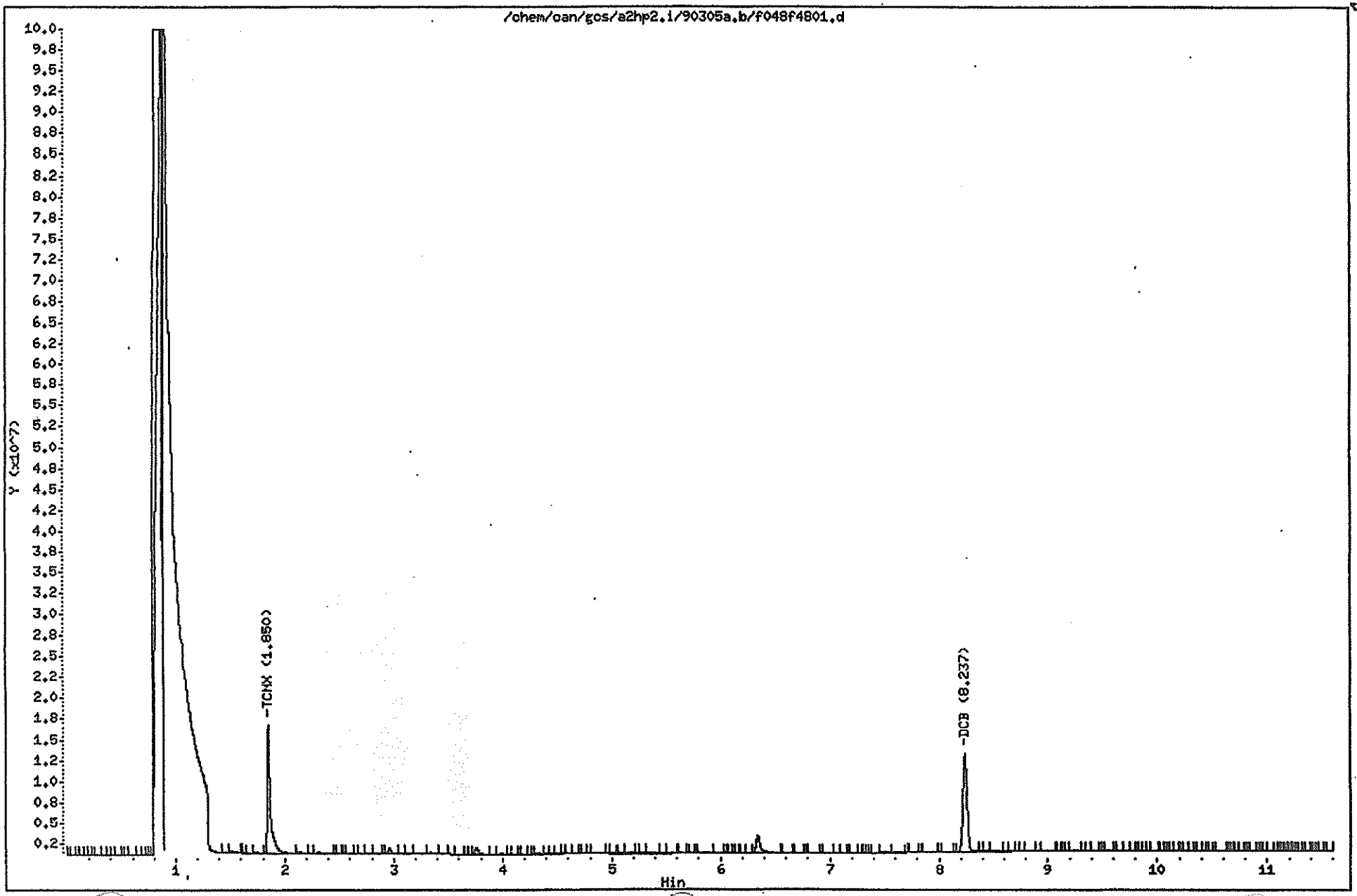
Concentration Formula: Amt * DF * Vt/Vo

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.850	1.848	0.002	15360240	0.01658	5.526	80.00- 120.00	100.00
$ 9 DCB					CAS #: 2051-24-3		
8.237	8.238	-0.001	11756071	0.02400	7.999	80.00- 120.00	100.00

Data File: /chem/oan/gcs/a2hp2.i/90305a.b/f048f4801.d
Date : 06-MAR-1999 04:43
Client ID: INTRA-LAB BLANK
Sample Info: CR30K101
Volume Injected (uL): 1.0
Column phase: RTX-CLP PESTICIDES

Instrument: a2hp2.i
Operator: 1808
Column diameter: 0.32



POLYCHLORINATED BIPHENYLS
INSTRUMENT LOG SHEETS

Method Information

pest test

Method Change History

Operator	Date	Change Information
06531	2/4/99 8:34:12 AM	
06531	2/4/99 9:34:15 AM	
06531	2/5/99 9:10:17 AM	
06531	2/7/99 11:47:52 AM	
06531	2/10/99 12:29:35 PM	TURN OFF AUTOMATIC REPORTING

Run Time Checklist

Pre-Run Cmd/Macro: off

Data Acquisition: on

Standard Data Analysis: on

Customized Data Analysis: off

Save GLP Data: off

Post-Run Cmd/Macro: on
Name: macro "autohp2.mac", go

Save Method with Data: off

Injection Source and Location

Injection Source: HP GC Injector

Injection Location: Front

Method: C:\HPCHEM\2\METHODS\PCBTEST.M of 2/10/99 12:29:35 PM

==========

HP6890 GC METHOD

==========

OVEN

Initial temp: 170 'C (On)
Initial time: 0.65 min
Ramps:

#	Rate	Final temp	Final time
1	25.00	225	0.75
2	9.00	270	3.00
3	0.0(Off)		

Post temp: 170 'C
Post time: 0.00 min
Run time: 11.60 min

Maximum temp: 330 'C
Equilibration time: 2.00 min

FRONT INLET (UNKNOWN)

Mode: Splitless
Initial temp: 225 'C (On)
Pressure: 6.00 psi (On)
Purge flow: 40.0 mL/min
Purge time: 0.50 min
Total flow: 68.4 mL/min
Gas saver: Off
Gas type: Hydrogen

BACK INLET ()

COLUMN 1

Capillary Column
Model Number: RESTEK ???
CLP1
Max temperature: 330 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: constant pressure
Pressure: 6.00 psi
Nominal initial flow: 11.1 mL/min
Average velocity: 103 cm/sec
Inlet: Front Inlet
Outlet: Front Detector
Outlet pressure: ambient

COLUMN 2

Capillary Column
Model Number: RESTEK ???
CLP2
Max temperature: 330 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: (see column 1)
Pressure: 6.00 psi
Nominal initial flow: 11.1 mL/min
Average velocity: 103 cm/sec
Inlet: Front Inlet
Outlet: Back Detector
Outlet pressure: ambient

FRONT DETECTOR (μECD)

Temperature: 300 'C (On)
Mode: Constant column+makeup flow
Combined flow: 60.0 mL/min
Makeup flow: On
Makeup Gas Type: Nitrogen
Electrometer: On

BACK DETECTOR (μECD)

Temperature: 300 'C (On)
Mode: Constant column+makeup flow
Combined flow: 60.0 mL/min
Makeup flow: On
Makeup Gas Type: Nitrogen
Electrometer: On

SIGNAL 1

Data rate: 20 Hz
Type: front detector
Save Data: On
Zero: 0.0 (Off)
Range: 0

SIGNAL 2

Data rate: 20 Hz
Type: back detector
Save Data: On
Zero: 0.0 (Off)
Range: 0

Method: C:\HPCHEM\2\METHODS\PCBTEST.M of 2/10/99 12:29:35 PM

Fast Peaks: Off
Attenuation: 0

Fast Peaks: Off
Attenuation: 0

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

7673 Injector

Front Injector:

Sample Washes	4
Sample Pumps	2
Injection Volume	1.0 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	4
PostInj Solvent B Washes	4
Viscosity Delay	0 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

Back Injector:
No parameters specified

Method: C:\HPCHEM\2\METHODS\PCBTEST.M of 2/10/99 12:29:35 PM

Integration Events

Results will be produced with the enhanced integrator.

Default Integration Event Table "Event"

Event	Value	Time
Initial Slope Sensitivity	1.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.700	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_TCD"

Event	Value	Time
Initial Slope Sensitivity	100.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_ADC"

Event	Value	Time
Initial Slope Sensitivity	20.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_FID"

Event	Value	Time
Initial Slope Sensitivity	50.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Method: C:\HPCHEM\2\METHODS\PCBTEST.M of 2/10/99 12:29:35 PM

Detector Default Integration Event Table "Event_ECD"

Event	Value	Time
Initial Slope Sensitivity	100.000	Initial
Initial Peak Width	0.080	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_NPD"

Event	Value	Time
Initial Slope Sensitivity	500.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_FPD"

Event	Value	Time
Initial Slope Sensitivity	50.000	Initial
Initial Peak Width	0.040	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Detector Default Integration Event Table "Event_uECD"

Event	Value	Time
Initial Slope Sensitivity	500.000	Initial
Initial Peak Width	0.080	Initial
Initial Area Reject	1.000	Initial
Initial Height Reject	1.000	Initial
Initial Shoulders	OFF	Initial

Apply Manual Integration Events: No

Calibration Table

Calib. Data Modified :

Calculate : Area Percent

Method: C:\HPCHEM\2\METHODS\PCBTEST.M of 2/10/99 12:29:35 PM

```
Rel. Reference Window :      5.000 %
Abs. Reference Window :      0.000 min
Rel. Non-ref. Window  :      5.000 %
Abs. Non-ref. Window  :      0.000 min
Uncalibrated Peaks    :      not reported
Partial Calibration   :      Yes, identified peaks are recalibrated
Correct All Ret. Times:      No, only for identified peaks

Curve Type            :      Linear
Origin                :      Included
Weight                :      Equal

Recalibration Settings:
Average Response      :      Average all calibrations
Average Retention Time:      Floating Average New 75%

Calibration Report Options :
    Printout of recalibrations within a sequence:
        Calibration Table after Recalibration
        Normal Report after Recalibration
    If the sequence is done with bracketing:
        Results of first cycle (ending previous bracket)

Signal 1: ECD1 A,
Signal 2: ECD2 B,

=====================================================================
                            Peak Sum Table
=====================================================================

***No Entries in table***
=====================================================================
```

Sequence Parameters:

Operator:	0595
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	90205A
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none
Sequence Comment:	

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	1	HEX				
2	2	HEX				
3	3	HEX				
4	4	1232 0.1				
5	5	1232 0.2				
6	6	1232 0.5				
7	7	1232 1.0				
8	8	1232 2.0				
9	9	1242 0.1				
10	10	1242 0.2				
11	11	1242 0.5				
12	12	1242 1.0				
13	13	1242 2.0				
14	14	1248 0.1				
15	15	1248 0.2				
16	16	1248 0.5				
17	17	1248 1.0				
18	18	1248 2.0				
19	19	2154 0.1				
20	20	2154 0.2				
21	21	2154 0.5				
22	22	2154 1.0				
23	23	2154 2.0				
24	24	1660 0.1				
25	25	1660 0.2				

ICAL

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
26	26	1660 0.5				
27	27	1660 1.0				
28	28	1660 2.0				
29	29	PIBLK				
30	30	1232 0.05				
31	31	1232 0.05				
32	32	1232 0.05				
33	33	1232 0.05				
34	34	1232 0.05				
35	35	1232 0.05				
36	36	1232 0.05				
37	37	1242 0.05				
38	38	1242 0.05				
39	39	1242 0.05				
40	40	1242 0.05				
41	41	1242 0.05				
42	42	1242 0.05				
43	43	1242 0.05				
44	44	1248 0.05				
45	45	1248 0.05				
46	46	1248 0.05				
47	47	1248 0.05				
48	48	1248 0.05				
49	49	1248 0.05				
50	50	1248 0.05				
51	51	2154 0.05				
52	52	2154 0.05				
53	53	2154 0.05				
54	54	2154 0.05				
55	55	2154 0.05				
56	56	2154 0.05				
57	57	2154 0.05				
58	58	1660 0.05				
59	59	1660 0.05				
60	60	1660 0.05				
61	61	1660 0.05				
62	62	1660 0.05				
63	63	1660 0.05				
64	64	1660 0.05				

ICAL

IDL's

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR): No
Dest of individual reports for each run: as specified in Method

Sequence Summary Parameters:

Sequence Parameters:

Operator:	0595
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	90305A
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none
Sequence Comment:	

Sequence Table (Front Injector):

Calibration Part:

Line	Vial	SampleName	Method	CalLev	Update RF	Update RT	Interval

Quantification Part:

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
1	1	HEX				
2	2	HEX				
3	3	HEX				
4	4	1660 C162,,2				
5	5	2154 C157,,2				
6	6	1248 C151,,2				
7	7	1242 C146,,2				
8	8	1232 C141,,2				
9	9	CR9MJ101				
10	10	CR9MJ102,10				
11	11	CR9MJ103,10				
12	12	CR1TA20E,10				
13	13	CR1TG20E				
14	14	CR1TK20E,10				
15	15	CR1TM20E,20				
16	16	CR1TT20E,10				
17	17	CR1V520E				
18	18	CR1T220E,20				
19	19	HEX				
20	20	1660 C162,,2				
21	21	1660 C162,,2				
22	22	CR2RC101,10				
23	23	CR2RE101,10				
24	24	CR2RF101				
25	25	CR2RG101				

inj 3-5-99 A

Pass f+r

Pass f+r

Sequence: C:\HPCHEM\2\SEQUENCE\90305A.S

Line	Vial	SampleName	SampleAmount	ISTDAmt	Multiplier	Dilution
26	26	CR2RH101,10			inj 3-5-99	
27	27	CR2RJ101,100				
28	28	CR2RL101,100				
29	29	CR2RM101,100				
30	30	CR2RN101,10				
31	31	CR2RP101				
32	32	HEX				
33	33	1660 C162,,2] Pass f+r			inj 3-6-99	
34	34	1660 C162,,2				
35	35	CR2RR101,100				
36	36	CR2RT101				
37	37	CR2RV101				
38	38	CR2RX101				
39	39	CR2T0101				
40	40	CR2T1101				
41	41	CR2T2101,100				
42	42	CR2T4101,500				
43	43	CR2T5101,100				
44	44	CR2T6101,1000				
45	45	HEX				
46	46	1660 C162,,2] Pass f+r				
47	47	1660 C162,,2				
48	48	CR30K101				
49	49	CR30K103				
50	50	CR30K104				
51	51	CR579103				
52	52	CR57C105				
53	53	CR57D105				
54	54	CR7VD102				
55	55	CR7VE104				
56	56	CR7VE105				
57	57	CR7VE106				
58	58	HEX				
59	59	1660 C162,,2] Pass f+r				
60	60	1660 C162,,2				
61	61	CR7VF102				
62	62	CR96K101				
63	63	CR96K102,2				
64	64	CR7R7103				
65	65	CR8TL103				
66	66	CR8TM103				
67	67	CR8TN103				
68	68	CR8TQ103				
69	69	CR8TR103				
70	70	CR8TT103				
71	71	HEX				
72	72	1660 C162,,2] pass f+r				
73	73	1660 C162,,2				
74	74	CR8TV103				
75	75	CR8TW103				
76	76	CR8V2103				
77	77	CR8J6102				
78	78	CR8J6107,2				
79	79	CR4CQ103				
80	80	CR6TK101				
81	81	CR6TK102,2				

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POLYCHLORINATED BIPHENYLS
ORGANIC EXTRACTION
LOG SHEETS

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 3/08/99
Time: 8:15:02

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 100001 Walsh Cooper
K.R. Walsh Cooper

Concentrationist: 009625 Lee J. Nelmes
001163 Donny E. Williamson

Reviewer/Date: NELMESL / 3/01/99

QC BATCH: 9055185

PREP DATE: 2/24/99
COMP DATE: 2/24/99

PCBs (8082)
SONICATION w/ACID STRIP (PCB)

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH*S INIT	PH*S ADJ1	PH*S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/09/99	3/10/99	A9B240116-001 CR2RC-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-002 CR2RE-1-01	D	71	QH	SOLID	30.19g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-003 CR2RF-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-004 CR2RG-1-01	D	71	QH	SOLID	30.09g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-005 CR2RH-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-006 CR2RJ-1-01	D	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-007 CR2RL-1-01	D	71	QH	SOLID	30.10g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 3/08/99
Time: 8:15:02

QC BATCH: 9055185

PREP DATE: 2/24/99
COMP DATE: 2/24/99

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/09/99 COMMENTS:	3/10/99	A9B240116-008 CR2RM-1-01	D	71	QH	SOLID	30.04g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-009 CR2RN-1-01	D	71	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-010 CR2RP-1-01	D	71	QH	SOLID	30.15g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-011 CR2RR-1-01	D	71	QH	SOLID	30.03g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-012 CR2RT-1-01	D	71	QH	SOLID	30.02g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-013 CR2RV-1-01	D	71	QH	SOLID	30.19g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-014 CR2RX-1-01	D	71	QH	SOLID	30.06g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-015 CR2T0-1-01	D	71	QH	SOLID	30.08g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-016 CR2T1-1-01	D	71	QH	SOLID	30.11g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
3/09/99 COMMENTS:	3/10/99	A9B240116-017 CR2T2-1-01	D	71	QH	SOLID	30.19g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562

RQC058

Quanterra Incorporated
EXTRACTION BENCH WORKSHEET

Run Date: 3/08/99
Time: 8:15:02

****
* QC BATCH: 9055185 *
****

PREP DATE: 2/24/99
COMP DATE: 2/24/99

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
3/09/99	3/10/99	A9B240116-018 CR2T4-1-01	D	71	QH	SOLID	30.01g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-019 CR2T5-1-01	D	71	QH	SOLID	30.10g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	3/10/99	A9B240116-020 CR2T6-1-01	D	71	QH	SOLID	30.04g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	0/00/00	A9B240000-185 CR30K-1-01B		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML .2/.2 #3562
COMMENTS:															
3/09/99	0/00/00	A9B240000-185 CR30K-1-03C		71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML 10PPM #3541 1ML .2/.2 #3562
COMMENTS:															
3/09/99	0/00/00	A9B240000-185 CR30K-1-04L	R	71	QH	SOLID	30.00g 10.00mL	NA	NA	NA	DCM/ACE	300.0	HEXANE	50.0	1ML 10PPM #3541 1ML .2/.2 #3562
COMMENTS:															

ACE #M47274 DCM #M44306 HEX #M4521 NA2S04 #8024-M48623
S/S BY C.W. WITNESSED BY K.R.

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
:

NUMBER OF WORK ORDERS IN BATCH: 23

GENERAL CHEMISTRY
LOG SHEETS

A9B240116

			Quanterra, North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	% SOLIDS				Batch	9060284
Prep Date	3/1/99	Time In	17:00		Analyst	EKD
Anal date	3/2/99	Time Out	10:00		RL	
Sample Id	Tare wt	Sample g	Final wt	diff g	Result TS %	Result MS %
CR823 B	1.0951	0	1.0946	-0.0005	ND	ND
CR5WA	1.0941	5.6227	5.8946	4.8005	85.377	14.623
CR5WA X	1.0412	6.397	6.4967	5.4555	85.282	14.718
CR5WC	1.0978	7.7607	7.9411	6.8433	88.179	11.821
CR5WE	1.0409	8.1641	8.1369	7.096	86.917	13.083
CR5WH	1.0866	7.8774	7.781	6.6944	84.982	15.018
CR5WJ	1.0882	8.739	8.6392	7.551	86.406	13.594
CQXN1	1.0899	9.1151	9.9192	8.8293	96.865	3.135
CR6GJ	1.1112	8.9286	8.5043	7.3931	82.802	17.198
CQV0K	1.0796	7.9158	8.0305	6.9509	87.810	12.190
CQV0T	1.067	7.7573	8.1522	7.0852	91.336	8.664
CQV12	1.0991	7.5427	7.2634	6.1643	81.725	18.275
CQV16	1.0638	8.3138	8.3259	7.2621	87.350	12.650
CQV17	1.089	7.7144	6.7866	5.6976	73.857	26.143
CQV1A	1.0686	4.8236	4.9928	3.9242	81.354	18.646
CQV1C	1.0621	7.0551	6.7433	5.6812	80.526	19.474
CQV1D	1.1003	7.7535	7.4282	6.3279	81.613	18.387
CQV1E	1.1082	5.4268	5.1205	4.0123	73.935	26.065
CQV1F	1.0711	8.1847	7.8163	6.7452	82.412	17.588
CR2RC	1.1057	1.4383	2.3528	1.2471	86.707	13.293
CR2RE	1.1035	2.3718	3.2087	2.1052	88.760	11.240
CR2RF	1.0937	1.3702	2.3646	1.2709	92.753	7.247
CR2RF X	1.0941	1.7289	2.6923	1.5982	92.440	7.560
				#VALUE!	#VALUE!	#VALUE!
	1.0941			#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): % Solids

Batch(es): 9060284

Method #/SOP#: 160.3 / NC-WC-0004

Review Items	Level I Review			Level II Review		
	YES	NO	N/A	YES	NO	N/A
A. Initial Calibration						
1. Initial calibration correlation coefficient ≥ 0.995?			✓			X
2. Calibration curve consist of the minimum number of calibration standards?			✓			X
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			X
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			X
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			X
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			X
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			X
2. All reported results bracketed by in control QC ?	✓					X
3. Sample analyses done within holding time ?	✓			X		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			X
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			X		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			X
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			X		
E. Titrant						
1. Titrant standardized?			✓			X
2. If no, standardization expires _____						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			X
2. Calculations checked for error ?	✓			X		
3. Transcriptions checked for error ?	✓			X		
4. All client/project specific requirements met ?	✓			X		
5. Date/time of preparation and analysis verified as correct ?	✓			X		
6. Units verified as correct?	✓			X		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			X
8. SOP followed?	✓			X		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			X		
10. All reagent and standard numbers recorded in logbook?	✓			X		
11. Edits dated and initialed	✓			X		

Comment on any "NO" response(s): _____

Level I reviewer: Erin Drummond Date: 990302

Level II Reviewer: Sarah Cox Date: 990303

Quanterra, North Canton

Percent Total Solid/Percent Moisture Logsheet

Analysis	TS				Batch	9061246
Prep Date	3/2/99	Time In	4.30PM		Analyst	CKK
Anal date	3/3/99	Time Out	4.00PM		RL	0.1

Sample Id	Tare wt	Sample g	Final wt	diff g	Result TS %	Result MS %
CR8VQB	1.0875	0	1.0873	-0.0002	ND	ND
CR2RG	1.0833	5.1364	5.4685	4.3852	85.375	✓ 14.625
CR2RGX	1.0944	5.5381	5.829	4.7346	85.491	14.509
CR2RH	1.093	5.1043	5.879	4.786	93.764	6.236
CR2RJ	1.0797	5.2833	5.7731	4.6934	88.835	11.165
CR2RL	1.0883	6.1297	6.7451	5.6568	92.285	7.715
CR2RM	1.0646	5.5631	5.8186	4.754	85.456	14.544
CR2RN	1.0737	5.0529	4.6085	3.5348	69.956	✓ 30.044
CR2RP	1.0538	5.0633	5.5022	4.4484	87.856	12.144
CR2RR	1.0485	5.3463	5.9983	4.9498	92.584	7.416
CR2RT	1.0757	5.4519	5.9941	4.9184	90.214	9.786
CR2RV	1.1023	5.2298	5.6418	4.5395	86.801	13.199
CR2RX	1.0778	5.0714	6.1175	5.0397	99.375	✓ 0.625
CR2T0	1.0878	5.097	5.3666	4.2788	83.947	16.053
CR2T1	1.0904	5.3775	5.619	4.5286	84.214	15.786
CR2T2	1.1014	5.1899	5.7734	4.672	90.021	9.979
CR2T4	1.0928	5.1451	5.8355	4.7427	92.179	✓ 7.821
CR2T5	1.1075	5.1238	5.9663	4.8588	94.828	5.172
CR2T6	1.0671	6.0629	6.3032	5.2361	86.363	13.637
CR3D4	1.0616	5.3482	6.0621	5.0005	93.499	6.501
CR3DD	1.1039	7.0226	7.7433	6.6394	94.543	✓ 5.457
CR3DE	1.0737	6.5671	7.1116	6.0379	91.942	✓ 8.058
CR3DEX	1.1188	6.2127	6.8852	5.7664	92.816	7.184
TS0302A				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!
				#VALUE!	#VALUE!	#VALUE!

Quanterra General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 9061246

Method #/SOP#: NC-WC-0004 / 160.1

Review Items	Level I Review			Level II Review		
	YES	NO	N/A	YES	NO	N/A
A. Initial Calibration						
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			✓
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires _____			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?			✓			✓
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s): _____

Level I reviewer: [signature] **Date:** 03-03-99

Level II Reviewer: L. Wood **Date:** 3-4-99

VOID

COOLER RECEIPT FORM

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client: CRA Project: Catepillar Quote#: _____
Cooler Received on: 2-24-99 Opened on: 2-24-99 by: Jenny Stewart (Signature)

edx [X] Client Drop Off [ ] UPS [ ] Airborne [ ]
Other: _____

Cooler [ ] Safe [ ] Foam Box [ ] Client Cooler [X] Other: _____
Quanterra Shipper No#: _____

1. Were custody seals on the outside of the cooler and intact? Yes [ ] No [X]
   If YES, Quantity _____ Location _____
   Were the custody seals signed and dated? Yes [ ] No [ ] NA [X]
2. Shipper's packing slip attached to this form? Yes [X] No [ ]
3. Were custody papers included inside the cooler and relinquished? Yes [X] No [ ]
4. Did you sign the custody papers in the appropriate place? Yes [X] No [ ]
5. Packing material used:
   Peanuts [ ] Bubble Wrap [ ] Vermiculite [ ] Foam [ ] None [X] Other: _____
6. Cooler temperature upon receipt 0.0 °C (see back of form for multiple coolers/temp)
   METHOD: Temperature Vial [ ] Coolant [X] Against Bottles [ ]
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] None [ ]
7. Were all the bottles sealed in separate plastic bags? Yes [ ] No [X]
8. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
9. Did all bottle labels and tags agree with the custody papers? Yes [X] No [ ]
10. Were samples at the correct pH? Yes [ ] No [ ] NA [X]
11. Were correct bottles used for the tests indicated? Yes [X] No [ ]
12. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [ ] NA [X]
13. Was a sufficient amount of sample sent in each bottle? Yes [X] No [ ]

Contacted PM _____ Date: _____ by: _____ via Voice Mail [ ] Verbal [ ] Other [ ]
Concerning: _____

Check √	MACRO	MACRO
1. CHAIN OF CUSTODY		
√	SR1A	Samples were received under proper custody procedures and without discrepancies.
	SR1B	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) _____ were received with insufficient volume
	SR2C	Sample(s) _____ were received in a broken container.
3. SAMPLE PRESERVATION		
√	SR3A	The temperature of the cooler was _____ ° C
	SR3C	Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving.
	SR3D	Sample(s) _____ were received incorrectly preserved and split off in sample receiving.
	SR3E	Samples (s) _____ were received incorrectly preserved and were unable to be analyzed.
	SR3F	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	N/A	See back for other anomalies

Quanterra ® Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Comments

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

204

INTERNAL CHAIN-OF-CUSTODY

RSR280

Client: 1628

Lot #: A9B240116

Case Number/SDG: 13307

Storage Location: C9

Quanterra Incorporated
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
CR2RC	GIRARDJ	2/24/99	Yes		Storage	
CR2RE	GIRARDJ	2/24/99	Yes		Storage	
CR2RF	GIRARDJ	2/24/99	Yes		Storage	
CR2RG	GIRARDJ	2/24/99	Yes		Storage	
CR2RH	GIRARDJ	2/24/99	Yes		Storage	
CR2RJ	GIRARDJ	2/24/99	Yes		Storage	
CR2RL	GIRARDJ	2/24/99	Yes		Storage	
CR2RM	GIRARDJ	2/24/99	Yes		Storage	
CR2RN	GIRARDJ	2/24/99	Yes		Storage	
CR2RP	GIRARDJ	2/24/99	Yes		Storage	
CR2RR	GIRARDJ	2/24/99	Yes		Storage	
CR2RT	GIRARDJ	2/24/99	Yes		Storage	
CR2RV	GIRARDJ	2/24/99	Yes		Storage	
CR2RX	GIRARDJ	2/24/99	Yes		Storage	
CR2T0	GIRARDJ	2/24/99	Yes		Storage	
CR2T1	GIRARDJ	2/24/99	Yes		Storage	
CR2T2	GIRARDJ	2/24/99	Yes		Storage	
CR2T4	GIRARDJ	2/24/99	Yes		Storage	
CR2T5	GIRARDJ	2/24/99	Yes		Storage	
CR2T6	GIRARDJ	2/24/99	Yes		Storage	

LOT NUMBER	SAMPLE	SAMPLE SUFFIX	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	DATE OF TRANSFER	TRANSFERRED BY	ANALYSIS DATE	ANALYST
A9B240116	1		CR2RC101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	2		CR2RE101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	3		CR2RF101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	4		CR2RG101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	5		CR2RH101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	6		CR2RJ101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	7		CR2RL101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	8		CR2RM101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	9		CR2RN101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	10		CR2RP101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/05/99	Raymond Risden
A9B240116	11		CR2RR101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	12		CR2RT101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	13		CR2RV101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	14		CR2RX101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	15		CR2T0101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	16		CR2T1101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	17		CR2T2101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	18		CR2T4101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	19		CR2T5101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden
A9B240116	20		CR2T6101	GC8082_S	2/24/99	Thomas Fausnight	3/01/99	Lee Nelmes	3/06/99	Raymond Risden

*** E N D O F R E P O R T ***

03/09/99 13:05:36 Sample Control Chain of Custody - Quanterra North Canton PAGE 1

LOT NUMBER	SAMPLE	LAB ID	ANALYSIS TYPE	PREP DATE	PREP ANALYST	ANALYSIS DATE	ANALYST
A9B240116	1	CR2RC102	TS	3/01/99	Erin Drummond	3/02/99	Erin Drummond
A9B240116	2	CR2RE102	TS	3/01/99	Erin Drummond	3/02/99	Erin Drummond
A9B240116	3	CR2RF102	TS	3/01/99	Erin Drummond	3/02/99	Erin Drummond
A9B240116	4	CR2RG102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	5	CR2RH102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	6	CR2RJ102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	7	CR2RL102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	8	CR2RM102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	9	CR2RN102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	10	CR2RP102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	11	CR2RR102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	12	CR2RT102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	13	CR2RV102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	14	CR2RX102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	15	CR2T0102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	16	CR2T1102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	17	CR2T2102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	18	CR2T4102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	19	CR2T5102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere
A9B240116	20	CR2T6102	TS	3/02/99	Kumudu Kulasekere	3/03/99	Kumudu Kulasekere

*** END OF REPORT ***

CHAIN-OF-CUSTODY

p1 of 2

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS PCB	REMARKS
	2/23/99		S-022399-JH-062	Soil	2	✓	
			063		2	✓	
			064		2	✓	
			065		2	✓	
			066		2	✓	
			067		2	✓	
			068		2	✓	
			069		2	✓	
			070		2	✓	
			071		2	✓	
			072		2	✓	
			073		2	✓	
			074		2	✓	
			075		1	✓	
			076		2	✓	
			TOTAL NUMBER OF CONTAINERS		29		

RELINQUISHED BY: ① John Hargens	DATE: 2/23/99 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed Ex AIR BILL No. 808686399557

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Jenny Sicard
DATE: 990224 TIME: 10:00

3208

1001(FORMS)--OCT 24/96-REV.0-(C)(F-01)

210

CRA
CONESTOGA–ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380–9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	2/23/99		S-022399-SH-077	soil	2	✓	
			078		2	✓	MS/MSD
			079		2	✓	
			080		2	✓	
			081		2	✓	
			TOTAL NUMBER OF CONTAINERS		10	+29 = 39	

RELINQUISHED BY: ① John Hargens	DATE: 2/23/99 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed EX AIR BILL No. 808686399557

White –Fully Executed Copy
Yellow –Receiving Laboratory Copy
Pink –Shipper Copy
Goldenrod –Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Jennifer Ward
DATE: 990224 TIME: 10:00

2062

209

1001(FORMS)–OCT 24/96–REV.0–(C)(F–01)

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR MAPLETON

Lot #: A9I150209

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Ken Kyer for
Amy L. McCormick
Project Manager

October 12, 1999

CASE NARRATIVE

The following report contains the analytical results for fifty-nine solid samples submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar Mapleton Site, project number 13307. The samples were received September 15, 1999, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the analytical methods summary page in accordance with the methods indicated. Preliminary results were provided by facsimile transmission to Steve Day on September 30, 1999. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

SUPPLEMENTAL QC INFORMATION

GC SEMIVOLATILES

Matrix spikes/matrix spike duplicates associated with samples JH-089 and JH-126 failed spike recovery and/or RPD criteria. The laboratory control samples and method blanks associated with these batches were in control; therefore, no corrective action was necessary.

SAMPLE SUMMARY

A9I150209

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D2GAN	001	S-091399-JH-082	09/13/99	
D2GCG	002	S-091399-JH-083	09/13/99	
D2GCL	003	S-091399-JH-084	09/13/99	
D2GCM	004	S-091399-JH-085	09/13/99	
D2GCQ	005	S-091399-JH-086	09/13/99	
D2GCT	006	S-091399-JH-087	09/13/99	
D2GCV	007	S-091399-JH-088	09/13/99	
D2GD3	008	S-091399-JH-089	09/13/99	
D2GDM	009	S-091499-JH-090	09/14/99	
D2GDQ	010	S-091499-JH-091	09/14/99	
D2GDR	011	S-091499-JH-092	09/14/99	
D2GDW	012	S-091499-JH-093	09/14/99	
D2GDX	013	S-091499-JH-094	09/14/99	
D2GE0	014	S-091499-JH-095	09/14/99	
D2GE3	015	S-091499-JH-096	09/14/99	
D2GE5	016	S-091499-JH-097	09/14/99	
D2GE7	017	S-091499-JH-098	09/14/99	
D2GE8	018	S-091499-JH-099	09/14/99	
D2GEC	019	S-091499-JH-100	09/14/99	
D2GED	020	S-091499-JH-101	09/14/99	
D2GEE	021	S-091499-JH-102	09/14/99	
D2GEF	022	S-091499-JH-103	09/14/99	
D2GEG	023	S-091499-JH-104	09/14/99	
D2GEH	024	S-091499-JH-105	09/14/99	
D2GEJ	025	S-091499-JH-106	09/14/99	
D2GEK	026	S-091499-JH-107	09/14/99	
D2GEN	027	S-091499-JH-108	09/14/99	
D2GEP	028	S-091499-JH-109	09/14/99	
D2GET	029	S-091499-JH-110	09/14/99	
D2GEV	030	S-091499-JH-111	09/14/99	
D2GEW	031	S-091499-JH-112	09/14/99	
D2GF3	032	S-091499-JH-113	09/14/99	
D2GF5	033	S-091499-JH-114	09/14/99	
D2GF7	034	S-091499-JH-115	09/14/99	
D2GF8	035	S-091499-JH-116	09/14/99	
D2GF9	036	S-091499-JH-117	09/14/99	

(Continued on next page)

SAMPLE SUMMARY

A9I150209

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D2GFA	037	S-091499-JH-118	09/14/99	
D2GFC	038	S-091499-JH-119	09/14/99	
D2GFD	039	S-091499-JH-120	09/14/99	
D2GFE	040	S-091499-JH-121	09/14/99	
D2GFF	041	S-091499-JH-122	09/14/99	
D2GFJ	042	S-091499-JH-123	09/14/99	
D2GFK	043	S-091499-JH-124	09/14/99	
D2GFM	044	S-091499-JH-125	09/14/99	
D2GFN	045	S-091499-JH-126	09/14/99	
D2GFP	046	S-091499-JH-127	09/14/99	
D2GFQ	047	S-091499-JH-128	09/14/99	
D2GFR	048	S-091499-JH-129	09/14/99	
D2GFV	049	S-091499-JH-130	09/14/99	
D2GFX	050	S-091499-JH-131	09/14/99	
D2GG0	051	S-091499-JH-132	09/14/99	
D2GG1	052	S-091499-JH-133	09/14/99	
D2GG2	053	S-091499-JH-134	09/14/99	
D2GG3	054	S-091499-JH-135	09/14/99	
D2GG5	055	S-091499-JH-136	09/14/99	
D2GG6	056	S-091499-JH-137	09/14/99	
D2GG7	057	S-091499-JH-138	09/14/99	
D2GGA	058	S-091499-JH-139	09/14/99	
D2GGK	059	S-091499-JH-140	09/14/99	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-082

GC Semivolatiles

Lot-Sample #...: A9I150209-001
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 10

Work Order #...: D2GAN101
Date Received..: 09/15/99
Analysis Date..: 09/29/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	68	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	62	(10 - 129)
Decachlorobiphenyl	88	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-083

GC Semivolatiles

Lot-Sample #...: A9I150209-002
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 13

Work Order #...: D2GCG101
Date Received..: 09/15/99
Analysis Date..: 09/22/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	110	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	60	(10 - 129)
Decachlorobiphenyl	80	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-084

GC Semivolatiles

Lot-Sample #...: A9I150209-003
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 12

Work Order #...: D2GCL101
Date Received..: 09/15/99
Analysis Date..: 09/22/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	160	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	53	(10 - 129)
Decachlorobiphenyl	75	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-085

GC Semivolatiles

Lot-Sample #...: A9I150209-004
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 12

Work Order #...: D2GCM101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	240	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 129)
Decachlorobiphenyl	86	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-086

GC Semivolatiles

Lot-Sample #...: A9I150209-005
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 10
% Moisture.....: 5.6

Work Order #...: D2GCQ101
Date Received..: 09/15/99
Analysis Date..: 09/29/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	350	ug/kg
Aroclor 1221	ND	350	ug/kg
Aroclor 1232	ND	350	ug/kg
Aroclor 1242	ND	350	ug/kg
Aroclor 1248	1300	350	ug/kg
Aroclor 1254	ND	350	ug/kg
Aroclor 1260	ND	350	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100 DIL	(10 - 129)
Decachlorobiphenyl	116 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-087

GC Semivolatiles

Lot-Sample #...: A9I150209-006
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 7.8

Work Order #...: D2GCT101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	320	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(10 - 129)
Decachlorobiphenyl	93	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-088

GC Semivolatiles

Lot-Sample #...: A9I150209-007 Work Order #...: D2GCV101 Matrix.....: SOLID
Date Sampled...: 09/13/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	550	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	69	(10 - 129)
Decachlorobiphenyl	97	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091399-JH-089

GC Semivolatiles

Lot-Sample #...: A9I150209-008
Date Sampled...: 09/13/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 5
% Moisture.....: 9.5

Work Order #...: D2GD3101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	180	ug/kg
Aroclor 1221	ND	180	ug/kg
Aroclor 1232	ND	180	ug/kg
Aroclor 1242	ND	180	ug/kg
Aroclor 1248	1600	180	ug/kg
Aroclor 1254	ND	180	ug/kg
Aroclor 1260	ND	180	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77 DIL	(10 - 129)
Decachlorobiphenyl	106 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-090

GC Semivolatiles

Lot-Sample #...: A9I150209-009
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 6.9

Work Order #...: D2GDM101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-091

GC Semivolatiles

Lot-Sample #...: A9I150209-010
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 8.4

Work Order #...: D2GDQ101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(10 - 129)
Decachlorobiphenyl	104	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-092

GC Semivolatiles

Lot-Sample #...: A9I150209-011
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 9.8

Work Order #...: D2GDR101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(10 - 129)
Decachlorobiphenyl	97	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-093

GC Semivolatiles

Lot-Sample #...: A9I150209-012
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 17

Work Order #...: D2GDW101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	71	(10 - 129)
Decachlorobiphenyl	95	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-094

GC Semivolatiles

Lot-Sample #...: A9I150209-013
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 12

Work Order #...: D2GDX101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 129)
Decachlorobiphenyl	99	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-095

GC Semivolatiles

Lot-Sample #...: A9I150209-014
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 12

Work Order #...: D2GE0101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-096

GC Semivolatiles

Lot-Sample #...: A9I150209-015
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 13

Work Order #...: D2GE3101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 129)
Decachlorobiphenyl	109	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-097

GC Semivolatiles

Lot-Sample #...: A9I150209-016
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 13

Work Order #...: D2GE5101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	82	(10 - 129)
Decachlorobiphenyl	99	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-098

GC Semivolatiles

Lot-Sample #...: A9I150209-017
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 13

Work Order #...: D2GE7101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 129)
Decachlorobiphenyl	109	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-099

GC Semivolatiles

Lot-Sample #...: A9I150209-018
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 15

Work Order #...: D2GE8101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 129)
Decachlorobiphenyl	106	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-100

GC Semivolatiles

Lot-Sample #...: A9I150209-019
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 14

Work Order #...: D2GEC101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(10 - 129)
Decachlorobiphenyl	100	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-101

GC Semivolatiles

Lot-Sample #...: A9I150209-020
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 12

Work Order #...: D2GED101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 129)
Decachlorobiphenyl	114	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-102

GC Semivolatiles

Lot-Sample #...: A9I150209-021 Work Order #...: D2GEE101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 14 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 129)
Decachlorobiphenyl	114	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-103

GC Semivolatiles

Lot-Sample #...: A9I150209-022
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 1
% Moisture.....: 7.5

Work Order #...: D2GEF101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	360	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(10 - 129)
Decachlorobiphenyl	95	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-104

GC Semivolatiles

Lot-Sample #...: A9I150209-023
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 5
% Moisture.....: 11

Work Order #...: D2GEG101
Date Received..: 09/15/99
Analysis Date..: 09/29/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	190	ug/kg
Aroclor 1221	ND	190	ug/kg
Aroclor 1232	ND	190	ug/kg
Aroclor 1242	ND	190	ug/kg
Aroclor 1248	840	190	ug/kg
Aroclor 1254	ND	190	ug/kg
Aroclor 1260	ND	190	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76 DIL	(10 - 129)
Decachlorobiphenyl	90 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-10S

GC Semivolatiles

Lot-Sample #...: A9I150209-024
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 5
% Moisture.....: 11

Work Order #...: D2GEH101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	190	ug/kg
Aroclor 1221	ND	190	ug/kg
Aroclor 1232	ND	190	ug/kg
Aroclor 1242	ND	190	ug/kg
Aroclor 1248	640	190	ug/kg
Aroclor 1254	ND	190	ug/kg
Aroclor 1260	ND	190	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76 DIL	(10 - 129)
Decachlorobiphenyl	84 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-106

GC Semivolatiles

Lot-Sample #...: A9I150209-025 Work Order #...: D2GEJ101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 4.0 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	ND	34	ug/kg
Aroclor 1248	78	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 129)
Decachlorobiphenyl	82	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-107

GC Semivolatiles

Lot-Sample #...: A9I150209-026
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 11

Work Order #...: D2GEK101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	120	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-108

GC Semivolatiles

Lot-Sample #...: A9I150209-027 Work Order #...: D2GEN101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 2.6 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	ND	34	ug/kg
Aroclor 1248	140	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 129)
Decachlorobiphenyl	96	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-109

GC Semivolatiles

Lot-Sample #...: A9I150209-028
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 2.9

Work Order #...: D2GEP101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	ND	34	ug/kg
Aroclor 1248	49	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	66	(10 - 129)
Decachlorobiphenyl	98	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-110

GC Semivolatiles

Lot-Sample #...: A9I150209-029
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 9.6

Work Order #...: D2GET101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 129)
Decachlorobiphenyl	105	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-111

GC Semivolatiles

Lot-Sample #...: A9I150209-030
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 15

Work Order #...: D2GEV101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	70	(10 - 129)
Decachlorobiphenyl	99.	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-112

GC Semivolatiles

Lot-Sample #...: A9I150209-031
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 8.1

Work Order #...: D2GEW101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	360	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102	(10 - 129)
Decachlorobiphenyl	83	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-113

GC Semivolatiles

Lot-Sample #...: A9I150209-032
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 10

Work Order #...: D2GF3101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	45	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	200	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	49	(10 - 129)
Decachlorobiphenyl	80	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern matches have been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-114

GC Semivolatiles

Lot-Sample #...: A9I150209-033
Date Sampled...: 09/14/99
Prep Date.....: 09/22/99
Prep Batch #...: 9265113
Dilution Factor: 1
% Moisture.....: 19

Work Order #...: D2GF5101
Date Received..: 09/15/99
Analysis Date..: 09/25/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	41	ug/kg
Aroclor 1221	ND	41	ug/kg
Aroclor 1232	ND	41	ug/kg
Aroclor 1242	ND	41	ug/kg
Aroclor 1248	200	41	ug/kg
Aroclor 1254	ND	41	ug/kg
Aroclor 1260	ND	41	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-115

GC Semivolatiles

Lot-Sample #...: A9I150209-034
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 5.0

Work Order #...: D2GF7101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	170	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	75	(10 - 129)
Decachlorobiphenyl	92	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-116

GC Semivolatiles

Lot-Sample #...: A9I150209-035
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 13

Work Order #...: D2GF8101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(10 - 129)
Decachlorobiphenyl	82	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-117

GC Semivolatiles

Lot-Sample #...:	A9I150209-036	Work Order #...:	D2GF9101	Matrix.....:	SOLID
Date Sampled...:	09/14/99	Date Received..:	09/15/99		
Prep Date.....:	09/16/99	Analysis Date..:	09/23/99		
Prep Batch #...:	9258339				
Dilution Factor:	1				
% Moisture.....:	9.6	Method.....:	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	43	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	64	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-118

GC Semivolatiles

Lot-Sample #...: A9I150209-037 Work Order #...: D2GFA101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 10 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	46	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	108	(10 - 129)
Decachlorobiphenyl	89	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-119

GC Semivolatiles

Lot-Sample #...: A9I150209-038
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 5.1

Work Order #...: D2GFC101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(10 - 129)
Decachlorobiphenyl	100	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-120

GC Semivolatiles

Lot-Sample #...: A9I150209-039 Work Order #...: D2GFD101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 5.2 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(10 - 129)
Decachlorobiphenyl	104	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-121

GC Semivolatiles

Lot-Sample #...: A9I150209-040
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 6.5

Work Order #...: D2GFE101
Date Received..: 09/15/99
Analysis Date..: 09/21/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	430	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(10 - 129)
Decachlorobiphenyl	106	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-122

GC Semivolatiles

Lot-Sample #...: A9I150209-041 Work Order #...: D2GFF101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 11 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	580	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	72	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-123

GC Semivolatiles

Lot-Sample #...: A9I150209-042
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 8.6

Work Order #...: D2GFJ101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	63	(10 - 129)
Decachlorobiphenyl	71	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-124

GC Semivolatiles

Lot-Sample #...: A9I150209-043 Work Order #...: D2GFK101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 14 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	46	(10 - 129)
Decachlorobiphenyl	57	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-125

GC Semivolatiles

Lot-Sample #...: A9I150209-044
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 2
% Moisture.....: 6.4

Work Order #...: D2GFM101
Date Received..: 09/15/99
Analysis Date..: 09/29/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	70	ug/kg
Aroclor 1221	ND	70	ug/kg
Aroclor 1232	ND	70	ug/kg
Aroclor 1242	ND	70	ug/kg
Aroclor 1248	910	70	ug/kg
Aroclor 1254	ND	70	ug/kg
Aroclor 1260	ND	70	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	39	(10 - 129)
Decachlorobiphenyl	39	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-126

GC Semivolatiles

Lot-Sample #...: A9I150209-045 Work Order #...: D2GFN101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 7.1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	140	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	52	(10 - 129)
Decachlorobiphenyl	58	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-127

GC Semivolatiles

Lot-Sample #...: A9I150209-046
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 7.8

Work Order #...: D2GFP101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	41	(10 - 129)
Decachlorobiphenyl	57	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-128

GC Semivolatiles

Lot-Sample #...: A9I150209-047 Work Order #...: D2GFQ101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 7.0 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	480	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	67	(10 - 129)
Decachlorobiphenyl	79	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-129

GC Semivolatiles

Lot-Sample #...: A9I150209-048
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 11

Work Order #...: D2GFR101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	65	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	46	(10 - 129)
Decachlorobiphenyl	56	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-130

GC Semivolatiles

Lot-Sample #...: A9I150209-049 Work Order #...: D2GFV101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 13 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	43	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	62	(10 - 129)
Decachlorobiphenyl	88	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-131

GC Semivolatiles

Lot-Sample #...: A9I150209-050
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 14

Work Order #...: D2GFX101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 129)
Decachlorobiphenyl	92	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-132

GC Semivolatiles

Lot-Sample #...: A9I150209-051 Work Order #...: D2GG0101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 11 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	360	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	119	(10 - 129)
Decachlorobiphenyl	82	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-133

GC Semivolatiles

Lot-Sample #...: A9I150209-052
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 14

Work Order #...: D2GG1101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	590	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	62	(10 - 129)
Decachlorobiphenyl	88	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-134

GC Semivolatiles

Lot-Sample #...:	A9I150209-053	Work Order #...:	D2GG2101	Matrix.....:	SOLID
Date Sampled...:	09/14/99	Date Received..:	09/15/99		
Prep Date.....:	09/16/99	Analysis Date..:	09/29/99		
Prep Batch #...:	9258337				
Dilution Factor:	2				
% Moisture.....:	14	Method.....:	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	77	ug/kg
Aroclor 1221	ND	77	ug/kg
Aroclor 1232	ND	77	ug/kg
Aroclor 1242	ND	77	ug/kg
Aroclor 1248	900	77	ug/kg
Aroclor 1254	ND	77	ug/kg
Aroclor 1260	ND	77	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 129)
Decachlorobiphenyl	105	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantituted.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-135

GC Semivolatiles

Lot-Sample #...: A9I150209-054
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258337
Dilution Factor: 10
% Moisture.....: 12

Work Order #...: D2GG3101
Date Received..: 09/15/99
Analysis Date..: 09/29/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	370	ug/kg
Aroclor 1221	ND	370	ug/kg
Aroclor 1232	ND	370	ug/kg
Aroclor 1242	ND	370	ug/kg
Aroclor 1248	2200	370	ug/kg
Aroclor 1254	ND	370	ug/kg
Aroclor 1260	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97 DIL	(10 - 129)
Decachlorobiphenyl	132 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-136

GC Semivolatiles

Lot-Sample #...: A9I150209-055
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 10
% Moisture.....: 10

Work Order #...: D2GG5101
Date Received..: 09/15/99
Analysis Date..: 09/22/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	370	ug/kg
Aroclor 1221	ND	370	ug/kg
Aroclor 1232	ND	370	ug/kg
Aroclor 1242	ND	370	ug/kg
Aroclor 1248	2300	370	ug/kg
Aroclor 1254	ND	370	ug/kg
Aroclor 1260	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85 DIL	(10 - 129)
Decachlorobiphenyl	87 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-137

GC Semivolatiles

Lot-Sample #...: A9I150209-056
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1
% Moisture.....: 9.2

Work Order #...: D2GG6101
Date Received..: 09/15/99
Analysis Date..: 09/22/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	220	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(10 - 129)
Decachlorobiphenyl	103	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-138

GC Semivolatiles

Lot-Sample #...: A9I150209-057 Work Order #...: D2GG7101 Matrix.....: SOLID
Date Sampled...: 09/14/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/29/99
Prep Batch #...: 9258339
Dilution Factor: 10
% Moisture.....: 7.1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	360	ug/kg
Aroclor 1221	ND	360	ug/kg
Aroclor 1232	ND	360	ug/kg
Aroclor 1242	ND	360	ug/kg
Aroclor 1248	1700	360	ug/kg
Aroclor 1254	ND	360	ug/kg
Aroclor 1260	ND	360	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85 DIL	(10 - 129)
Decachlorobiphenyl	95 DIL	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-139

GC Semivolatiles

Lot-Sample #...: A9I150209-058
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1
% Moisture.....: 11

Work Order #...: D2GGA101
Date Received..: 09/15/99
Analysis Date..: 09/23/99

Matrix.....: SOLID

Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	37	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	61	(10 - 129)
Decachlorobiphenyl	87	(10 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: S-091499-JH-140

GC Semivolatiles

Lot-Sample #...:	A9I150209-059	Work Order #...:	D2GGK101	Matrix.....:	SOLID
Date Sampled...:	09/14/99	Date Received..:	09/15/99		
Prep Date.....:	09/16/99	Analysis Date..:	09/29/99		
Prep Batch #...:	9258339				
Dilution Factor:	20				
% Moisture.....:	10	Method.....:	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	740	ug/kg
Aroclor 1221	ND	740	ug/kg
Aroclor 1232	ND	740	ug/kg
Aroclor 1242	ND	740	ug/kg
Aroclor 1248	**8200**	**740**	**ug/kg**
Aroclor 1254	ND	740	ug/kg
Aroclor 1260	ND	740	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90 DIL	(10 - 129)
Decachlorobiphenyl	159 DIL,*	(10 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Mixture of more than one aroclor may be present. The best pattern match has been quantitated.

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). Failure of the RPDs to fall within the laboratory-generated acceptance windows requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the MS/MSD RPDs are within acceptance criteria, the batch is acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209 Work Order #...: D2GMM102 Matrix.....: SOLID
LCS Lot-Sample#: A9I150000-337
Prep Date.....: 09/16/99 Analysis Date..: 09/22/99
Prep Batch #...: 9258337
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	86	(60 - 133)	SW846 8082
Aroclor 1260	89	(59 - 129)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(10 - 129)
Decachlorobiphenyl	107	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209 Work Order #...: D2GMX102 Matrix.....: SOLID
LCS Lot-Sample#: A9I150000-338
Prep Date.....: 09/16/99 Analysis Date..: 09/21/99
Prep Batch #...: 9258338
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	72	(60 - 133)	SW846 8082
Aroclor 1260	76	(59 - 129)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(10 - 129)
Decachlorobiphenyl	99	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209 Work Order #...: D2GN4102 Matrix.....: SOLID
LCS Lot-Sample#: A9I150000-339
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	83	(60 - 133)	SW846 8082
Aroclor 1260	84	(59 - 129)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(10 - 129)
Decachlorobiphenyl	100	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209
LCS Lot-Sample#: A9I220000-113
Prep Date.....: 09/22/99
Prep Batch #...: 9265113
Dilution Factor: 1

Work Order #...: D2PCL102

Analysis Date..: 09/25/99

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1260	85	(59 - 129)	SW846 8082
Aroclor 1016	84	(60 - 133)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 129)
Decachlorobiphenyl	102	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9I150209 Work Order #...: D2GMM101 Matrix.....: SOLID
MB Lot-Sample #: A9I150000-337

Prep Date.....: 09/16/99
Analysis Date..: 09/22/99 Prep Batch #...: 9258337
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(10 - 129)
Decachlorobiphenyl	99	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MB Lot-Sample #: A9I150000-338

Work Order #...: D2GMX101

Matrix.....: SOLID

Prep Date.....: 09/16/99
Prep Batch #...: 9258338

Analysis Date..: 09/21/99
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 129)
Decachlorobiphenyl	102	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MB Lot-Sample #: A9I150000-339
Work Order #...: D2GN4101
Matrix.....: SOLID
Prep Date.....: 09/16/99
Analysis Date..: 09/23/99
Prep Batch #...: 9258339
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(10 - 129)
Decachlorobiphenyl	94	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MB Lot-Sample #: A9I220000-113

Work Order #...: D2PCL101

Matrix.....: SOLID

Analysis Date..: 09/25/99
Dilution Factor: 1

Prep Date.....: 09/22/99
Prep Batch #...: 9265113

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 129)
Decachlorobiphenyl	100	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209 Work Order #...: D2GD3102-MS Matrix.....: SOLID
MS Lot-Sample #: A9I150209-008 D2GD3103-MSD
Date Sampled...: 09/13/99 Date Received..: 09/15/99
Prep Date.....: 09/16/99 Analysis Date..: 09/23/99
Prep Batch #...: 9258337
Dilution Factor: 5 % Moisture.....: 9.5

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	108	(44 - 139)			SW846 8082
	199 a,p	(44 - 139)	59	(0-28)	SW846 8082
Aroclor 1260	95	(44 - 139)			SW846 8082
	91	(44 - 139)	5.1	(0-28)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	72 DIL	(10 - 129)
	85 DIL	(10 - 129)
Decachlorobiphenyl	123 DIL	(10 - 138)
	113 DIL	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MS Lot-Sample #: A9I150209-030
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258338
Dilution Factor: 1

Work Order #...: D2GEV102-MS
D2GEV103-MSD
Date Received..: 09/15/99
Analysis Date..: 09/21/99

% Moisture.....: 15

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	90	(44 - 139)			SW846 8082
	76	(44 - 139)	16	(0-28)	SW846 8082
Aroclor 1260	91	(44 - 139)			SW846 8082
	85	(44 - 139)	6.9	(0-28)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 129)
	73	(10 - 129)
Decachlorobiphenyl	109	(10 - 138)
	107	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MS Lot-Sample #: A9I150209-045
Date Sampled...: 09/14/99
Prep Date.....: 09/16/99
Prep Batch #...: 9258339
Dilution Factor: 1

Work Order #...: D2GFN102-MS
D2GFN103-MSD
Date Received..: 09/15/99
Analysis Date..: 09/23/99
% Moisture.....: 7.1

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	92	(44 - 139)			SW846 8082
	66 p	(44 - 139)	32	(0-28)	SW846 8082
Aroclor 1260	69	(44 - 139)			SW846 8082
	48 p	(44 - 139)	35	(0-28)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(10 - 129)
	46	(10 - 129)
Decachlorobiphenyl	86	(10 - 138)
	56	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9I150209
MS Lot-Sample #: A9I210186-002
Date Sampled...: 09/15/99 13:45
Prep Date.....: 09/22/99
Prep Batch #...: 9265113
Dilution Factor: 1

Work Order #...: D2NTF10F-MS
D2NTF10G-MSD
Date Received..: 09/16/99
Analysis Date..: 09/25/99

% Moisture.....: 7.9

Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	80	(44 - 139)			SW846 8082
	83	(44 - 139)	3.9	(0-28)	SW846 8082
Aroclor 1260	90	(44 - 139)			SW846 8082
	89	(44 - 139)	0.47	(0-28)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 129)
	85	(10 - 129)
Decachlorobiphenyl	100	(10 - 138)
	101	(10 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p 1 of 4

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra N. Canton

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCBs	REMARKS
	9/13/99		S-091399-JH-082	soil	2	✓	
			083		2	✓	
			084		2	✓	
			085		2	✓	
			086		2	✓	
			087		2	✓	
			088		2	✓	
			089		2	✓	
9/14/99	9/14/99		S-091499-JH-090		2	✓	ms/msd
			-091		2	✓	
			092		2	✓	
			093		2	✓	
			094		2	✓	
			095		2	✓	
			096		2	✓	
			TOTAL NUMBER OF CONTAINERS		30		

RELINQUISHED BY: ① John Hargens	DATE: 9/14/99 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed EX AIR BILL No. 812 337 689 403

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Red Roberson
DATE: 9/15/99 TIME: 1052

4962

1001(FORMS)--OCT 24/96--REV.0-(C)(F-01)

p 2 of 4

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): QuanTerra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Mapleton

SAMPLER'S SIGNATURE: John Hargens

PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS PCB	REMARKS
	9/14/99		S-041499-JH-097	Soil	2	✓	
			098		2	✓	
			099		2	✓	
			100		2	✓	
			101		2	✓	
			102		2	✓	
			103		2	✓	
			104		2	✓	
			105		2	✓	
			106		2	✓	
			107		2	✓	
			108		2	✓	
			109		2	✓	
			110		2	✓	
			111		2	✓	ms/msd
			TOTAL NUMBER OF CONTAINERS		30		

RELINQUISHED BY: ① John Hargens	DATE: 9/14/99 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X

AIR BILL No. 812 337 689 403

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Rich Roberson

DATE: 9/15/99 TIME: 10:27

4915

1001(FORMS)-OCT. 24/96-REV.0-(C)(F-01)

p3 of 4

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quantera

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Napleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	9/14/99		S-091499-JH-112	soil	2	✓	
			113		2	✓	
			114		2	✓	
			115		2	✓	
			116		2	✓	
			117		2	✓	
			118		2	✓	
			119		2	✓	
			120		2	✓	
			121		2	✓	
			122		2	✓	
			123		2	✓	
			124		2	✓	
			125		2	✓	
			126		2	✓	MS/MSD
			TOTAL NUMBER OF CONTAINERS		30		

RELINQUISHED BY: ① John Hargens DATE: 9/14/99 TIME: 1600 RECEIVED BY: ② DATE: TIME:

RELINQUISHED BY: ② DATE: TIME: RECEIVED BY: ③ DATE: TIME:

RELINQUISHED BY: ③ DATE: TIME: RECEIVED BY: ④ DATE: TIME:

METHOD OF SHIPMENT: Fed-X AIR BILL No. 812337689403

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Rick Robertson
DATE: 9/15/99 TIME: 10:27

4980

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

p 4 of 4

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: caterpillar mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	9/14/99		S-091499-SH-127	soil	2	✓	
			128		2	✓	
			129		2	✓	
			130		2	✓	
			131		2	✓	
			132		2	✓	
			133		2	✓	
			134		2	✓	
			135		2	✓	
			136		2	✓	
			137		2	✓	
			138		2	✓	
			139		2	✓	
			140		2	✓	
			~~141~~			✓	
			TOTAL NUMBER OF CONTAINERS		28	+30+30+30= 118	

RELINQUISHED BY: ① John Hargens	DATE: 9/14/99 TIME: 1900	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X AIR BILL No. 812 337 689 403

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Rick Robertson
DATE: 9/15/99 TIME: 10:27

4981

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

ANALYTICAL REPORT

PROJECT NO. 13307

CAT. MAPLETON

Lot #: A0A080117

Steve Day

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Ken Kyger for

Amy L. McCormick
Project Manager

January 20, 2000

CASE NARRATIVE

The following report contains the analytical results for one water sample submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Cat. Mapleton Site, project number 13307. The sample was received January 8, 2000, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided to Steve Day on January 14, 2000 . A summary of QC data for this analysis is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

ANALYTICAL METHODS SUMMARY

A0A080117

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A0A080117

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D77KJ	001	GW-010600-JH-001	01/06/00	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: GW-010600-JH-001

GC Semivolatiles

Lot-Sample #...: A0A080117-001 Work Order #...: D77KJ101 Matrix.....: WATER
Date Sampled...: 01/06/00 Date Received..: 01/08/00
Prep Date.....: 01/11/00 Analysis Date..: 01/13/00
Prep Batch #...: 0010384
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	56	(45 - 120)
Decachlorobiphenyl	34	(24 - 128)

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

Quanterra Incorporated – North Canton Facility, Certifications and Approvals:
Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225) – Florida CompQAPP (#890651G), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit

Revision 4,07/02/99
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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A0A080117 Work Order #...: D78J2102-LCS Matrix.....: WATER
LCS Lot-Sample#: A0A100000-384 D78J2103-LCSD
Prep Date.....: 01/11/00 Analysis Date..: 01/13/00
Prep Batch #...: 0010384
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	86	(61 - 118)			SW846 8082
	76	(61 - 118)	12	(0-16)	SW846 8082
Aroclor 1260	76	(61 - 124)			SW846 8082
	70	(61 - 124)	8.8	(0-27)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(45 - 120)
	64	(45 - 120)
Decachlorobiphenyl	37	(24 - 128)
	30	(24 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A0A080117 Work Order #...: D78J2101 Matrix.....: WATER
MB Lot-Sample #: A0A100000-384

Prep Date.....: 01/11/00
Analysis Date..: 01/13/00 Prep Batch #...: 0010384
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	55	(45 - 120)
Decachlorobiphenyl	82	(24 - 128)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Cat. Mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	PARAMETERS: Temp	REMARKS
	1/6/00		GW-010600-JH-001	water	2	✓		1-Week Turn
			Temp Blank		1		✓	
			TOTAL NUMBER OF CONTAINERS		3			

RELINQUISHED BY: ① John Hargens	DATE: 01/06/00 TIME: 1400	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X AIR BILL No.

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Jennifer Gerald
DATE: 1-8-00 TIME: 10:15A

5633

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

ANALYTICAL REPORT

PROJECT NO. 13307

CATERPILLAR MAPLETON

Lot #: A9L180149

Steve Castagneri

Conestoga-Rovers & Associates

QUANTERRA INCORPORATED

Amy L. McCormick
Project Manager

January 7, 2000

CASE NARRATIVE

The following report contains the analytical results for three water samples submitted to Quanterra-North Canton by Conestoga-Rovers & Associates, Inc. from the Caterpillar Mapleton Site, project number 13307. The samples were received December 18, 1999, according to documented sample acceptance procedures.

Quanterra utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter listed on the analytical methods summary page in accordance with the method indicated. Preliminary results were provided by facsimile transmission to Steve Castagneri on January 6, 2000. A summary of QC data for these analyses is included at the rear of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan. All data have been found to be compliant with laboratory protocol.

ANALYTICAL METHODS SUMMARY

A9L180149

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A9L180149

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D6KEJ	001	GW-121699-WP-001	12/16/99	09:30
D6KEK	002	GW-121699-WP-002	12/16/99	09:35
D6KEL	003	GW-121699-WP-003	12/16/99	11:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: GW-121699-WP-001

GC Semivolatiles

Lot-Sample #...: A9L180149-001 Work Order #...: D6KEJ101 Matrix.....: WATER
Date Sampled...: 12/16/99 09:30 Date Received..: 12/18/99
Prep Date.....: 12/20/99 Analysis Date..: 01/03/00
Prep Batch #...: 9353105
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(24 - 137)
Decachlorobiphenyl	49	(10 - 137)

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: GW-121699-WP-002

GC Semivolatiles

Lot-Sample #...: A9L180149-002 Work Order #...: D6KEK101 Matrix.....: WATER
Date Sampled...: 12/16/99 09:35 Date Received..: 12/18/99
Prep Date.....: 12/20/99 Analysis Date..: 01/03/00
Prep Batch #...: 9353105
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(24 - 137)
Decachlorobiphenyl	43	(10 - 137)

CONESTOGA-ROVERS & ASSOCIATES INC

Client Sample ID: GW-121699-WP-003

GC Semivolatiles

Lot-Sample #...: A9L180149-003 Work Order #...: D6KEL101 Matrix.....: WATER
Date Sampled...: 12/16/99 11:45 Date Received..: 12/18/99
Prep Date.....: 12/20/99 Analysis Date..: 12/30/99
Prep Batch #...: 9353105
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1.0	ug/L
Aroclor 1221	ND	1.0	ug/L
Aroclor 1232	ND	1.0	ug/L
Aroclor 1242	ND	1.0	ug/L
Aroclor 1248	ND	1.0	ug/L
Aroclor 1254	ND	1.0	ug/L
Aroclor 1260	ND	1.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(24 - 137)
Decachlorobiphenyl	26	(10 - 137)

QUALITY CONTROL SECTION

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

Quanterra® Incorporated conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. Quanterra requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except for the common laboratory contaminants indicated below.

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

** for analyses run on TJA Trace ICP or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

The listed volatile and semivolatile compounds may be present in concentrations up to 5 times the reporting limits. The listed metals may be present in concentrations up to 2 times the reporting limit or must be twenty fold less than the results of the environmental samples. Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. When these values fail to meet acceptance criteria, the data is reviewed to determine the cause. If, in the analyst's judgment, sample matrix effects are indicated, no corrective action is performed. Otherwise, the MS/MSD and the environmental sample used to prepare them are reprepared and reanalyzed.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample are spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported. If the LCS, LCSD, or the Method Blank surrogates fail to meet recovery criteria (exception for dilutions), the entire batch of samples is reprepared and reanalyzed.

If the surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank and the associated sample(s) are ND, the batch is acceptable. If the surrogate recoveries are outside criteria for environmental or MS/MSD samples, the batch may be acceptable based on the analyst's judgment that sample matrix effects are indicated.

For the GC/MS BNA methods, the surrogate criteria is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide/PCB, PAH, TPH, and Herbicide methods, the surrogate criteria is that one of two surrogate compounds meet acceptance criteria.

Quanterra Incorporated – North Canton Facility, Certifications and Approvals:
Alabama (#41170), California (#2157), Connecticut (#PH-0590), Florida (#E87225) – Florida CompQAPP (#890651G), Kentucky (#90021), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), Missouri (#6090), New Jersey (#74001), New York (#10975), North Dakota (#R-156), Ohio (#6090), OhioVAP (#CL0024), Pennsylvania (#68-340), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), West Virginia (#210), Wisconsin (#999518190), NAVY, ARMY, USDA Soil Permit

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9L180149 Work Order #...: D6KVV102 Matrix.....: WATER
LCS Lot-Sample#: A9L190000-105
Prep Date.....: 12/20/99 Analysis Date..: 12/30/99
Prep Batch #...: 9353105
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**87**	**(56 - 124)**	**SW846 8082**
Aroclor 1260	**89**	**(65 - 130)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(24 - 137)
Decachlorobiphenyl	41	(10 - 137)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A9L180149 Work Order #...: D6KVV101 Matrix.....: WATER
MB Lot-Sample #: A9L190000-105

Prep Date.....: 12/20/99
Analysis Date..: 12/30/99 Prep Batch #...: 9353105
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	1.0	ug/L	SW846 8082
Aroclor 1221	ND	1.0	ug/L	SW846 8082
Aroclor 1232	ND	1.0	ug/L	SW846 8082
Aroclor 1242	ND	1.0	ug/L	SW846 8082
Aroclor 1248	ND	1.0	ug/L	SW846 8082
Aroclor 1254	ND	1.0	ug/L	SW846 8082
Aroclor 1260	ND	1.0	ug/L	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(24 - 137)
Decachlorobiphenyl	95	(10 - 137)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A9L180149 Work Order #...: D6KEL102-MS Matrix.....: WATER
MS Lot-Sample #: A9L180149-003 D6KEL103-MSD
Date Sampled...: 12/16/99 11:45 Date Received..: 12/18/99
Prep Date.....: 12/20/99 Analysis Date..: 12/30/99
Prep Batch #...: 9353105
Dilution Factor: 2

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	82	(29 - 139)			SW846 8082
	102	(29 - 139)	22	(0-29)	SW846 8082
Aroclor 1260	78	(10 - 164)			SW846 8082
	91	(10 - 164)	16	(0-38)	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	74	(24 - 137)
	99	(24 - 137)
Decachlorobiphenyl	46	(10 - 137)
	53	(10 - 137)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

CRA
CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631 (773)380-9933

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Quanterra

REFERENCE NUMBER: 13307

PROJECT NAME: Caterpillar Mapleton

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Walter Pochron

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCBs	REMARKS
1	12/16/99	0930	GW-121699-WP-001	Water	2	X	
2	↓	0935	GW-121699-WP-002	↓	2	X	
3	↓	1145	GW-121699-WP-003	↓	6	X	MS/MSD
			Temp Blank		1		
					11		
			TOTAL NUMBER OF CONTAINERS		10	WSP 12/16/99	

RELINQUISHED BY: ① [signature]	DATE: 12/16/99 TIME: 13:30	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X AIR BILL No. 815299755240

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: W. Pochron

RECEIVED FOR LABORATORY BY: Jenny Guard
DATE: 991218 TIME: 10:00A

5127

1001(FORMS)-OCT 24/96-REV.0-(C)(F-01)

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 13307

CAT MAPLETON
SDG #: 5C02144

Michael Richardson

Conestoga Rovers & Associates,
1811 Executive Drive
Suite O
Indianapolis, IN 46241

SEVERN TRENT LABORATORIES, INC.

Amy L. McCormick
Project Manager

March 24, 2005

SEVERN TRENT STL

CASE NARRATIVE

CASE NARRATIVE

5C02144

The following report contains the analytical results for seventy-five solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Cat Mapleton Site, project number 13307. The samples were received March 2 and 3, 2005, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Michael Richardson on March 17 and 21, 2005. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 2.9 and 3.2°C.

CASE NARRATIVE (continued)

POLYCHLORINATED BIPHENYLS-8082

The matrix spike/matrix spike duplicate(s) for S-030205-JH-039 and S-030205-JH-068 had RPD's and recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

The matrix spike/matrix spike duplicate(s) for batch(es) 5062344 had RPD's outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

Quality control acceptance criteria requires that one of two surrogates must meet recovery limits.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), North Carolina (#39702), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

SEVERN TRENT STL

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C020144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030105-JH-001 03/01/05 11:00 001				
Aroclor 1248	16000	1900	ug/kg	SW846 8082
Percent Solids	88.7	10.0	%	MCAWW 160.3 MOD
S-030105-JH-002 03/01/05 11:05 002				
Aroclor 1242	29000	1900	ug/kg	SW846 8082
Percent Solids	89.0	10.0	%	MCAWW 160.3 MOD
S-030105-JH-003 03/01/05 11:10 003				
Aroclor 1242	81000	18000	ug/kg	SW846 8082
Percent Solids	90.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-004 03/01/05 11:15 004				
Aroclor 1242	15000	1900	ug/kg	SW846 8082
Percent Solids	87.4	10.0	%	MCAWW 160.3 MOD
S-030105-JH-005 03/01/05 11:20 005				
Aroclor 1248	17000	3600	ug/kg	SW846 8082
Percent Solids	90.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-006 03/01/05 11:25 006				
Aroclor 1248	8600	1800	ug/kg	SW846 8082
Percent Solids	90.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-007 03/01/05 11:30 007				
Percent Solids	85.4	10.0	%	MCAWW 160.3 MOD
S-030105-JH-008 03/01/05 11:35 008				
Aroclor 1248	280	74	ug/kg	SW846 8082
Percent Solids	89.2	10.0	%	MCAWW 160.3 MOD
S-030105-JH-009 03/01/05 11:45 009				
Aroclor 1248	8700	1900	ug/kg	SW846 8082
Percent Solids	86.6	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C020144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030105-JH-010 03/01/05 13:00 010				
Aroclor 1248	5700	1800	ug/kg	SW846 8082
Percent Solids	89.2	10.0	%	MCAWW 160.3 MOD
S-030105-JH-011 03/01/05 13:05 011				
Aroclor 1242	28000	7500	ug/kg	SW846 8082
Percent Solids	88.6	10.0	%	MCAWW 160.3 MOD
S-030105-JH-012 03/01/05 13:10 012				
Aroclor 1242	22000	7400	ug/kg	SW846 8082
Percent Solids	88.9	10.0	%	MCAWW 160.3 MOD
S-030105-JH-013 03/01/05 13:15 013				
Aroclor 1242	13000	3700	ug/kg	SW846 8082
Percent Solids	89.0	10.0	%	MCAWW 160.3 MOD
S-030105-JH-014 03/01/05 13:20 014				
Aroclor 1248	12000	3600	ug/kg	SW846 8082
Percent Solids	91.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-015 03/01/05 13:25 015				
Aroclor 1248	11000	1800	ug/kg	SW846 8082
Percent Solids	89.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-016 03/01/05 13:30 016				
Aroclor 1232	140	35	ug/kg	SW846 8082
Percent Solids	95.5	10.0	%	MCAWW 160.3 MOD
S-030105-JH-017 03/01/05 13:35 017				
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD
S-030105-JH-018 03/01/05 13:40 018				
Aroclor 1242	37	34	ug/kg	SW846 8082
Percent Solids	96.4	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C020144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030105-JH-019 03/01/05 13:45 019				
Aroclor 1248	2500	720	ug/kg	SW846 8082
Percent Solids	91.9	10.0	%	MCAWW 160.3 MOD
S-030105-JH-020 03/01/05 13:50 020				
Percent Solids	95.0	10.0	%	MCAWW 160.3 MOD
S-030105-JH-021 03/01/05 13:55 021				
Percent Solids	94.9	10.0	%	MCAWW 160.3 MOD
S-030105-JH-022 03/01/05 14:00 022				
Aroclor 1242	41000	3700	ug/kg	SW846 8082
Percent Solids	89.4	10.0	%	MCAWW 160.3 MOD
S-030105-JH-023 03/01/05 14:05 023				
Aroclor 1242	62	38	ug/kg	SW846 8082
Percent Solids	87.7	10.0	%	MCAWW 160.3 MOD
S-030105-JH-024 03/01/05 14:10 024				
Aroclor 1248	85000	19000	ug/kg	SW846 8082
Percent Solids	88.6	10.0	%	MCAWW 160.3 MOD
S-030105-JH-025 03/01/05 14:15 025				
Aroclor 1248	75	47	ug/kg	SW846 8082
Percent Solids	70.4	10.0	%	MCAWW 160.3 MOD
S-030105-JH-026 03/01/05 14:20 026				
Percent Solids	90.6	10.0	%	MCAWW 160.3 MOD
S-030105-JH-027 03/01/05 14:25 027				
Aroclor 1248	3300	750	ug/kg	SW846 8082
Percent Solids	88.3	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C020144

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030105-JH-028 03/01/05 14:30 028				
Aroclor 1248	600	190	ug/kg	SW846 8082
Percent Solids	88.8	10.0	%	MCAWW 160.3 MOD
S-030105-JH-029 03/01/05 14:35 029				
Aroclor 1248	120	35	ug/kg	SW846 8082
Percent Solids	94.7	10.0	%	MCAWW 160.3 MOD
S-030105-JH-030 03/01/05 14:45 030				
Aroclor 1248	280	69	ug/kg	SW846 8082
Percent Solids	95.4	10.0	%	MCAWW 160.3 MOD
S-030105-JH-031 03/01/05 15:00 031				
Aroclor 1248	77000	19000	ug/kg	SW846 8082
Percent Solids	88.0	10.0	%	MCAWW 160.3 MOD
S-030105-JH-032 03/01/05 15:05 032				
Aroclor 1248	46000	7600	ug/kg	SW846 8082
Percent Solids	86.4	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C030182

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030205-JH-033 03/02/05 08:05 001				
Aroclor 1248	46000	7500	ug/kg	SW846 8082
Percent Solids	88.1	10.0	%	MCAWW 160.3 MOD
S-030205-JH-034 03/02/05 08:10 002				
Aroclor 1242	11000	1800	ug/kg	SW846 8082
Percent Solids	90.1	10.0	%	MCAWW 160.3 MOD
S-030205-JH-035 03/02/05 08:15 003				
Aroclor 1242	21000	3800	ug/kg	SW846 8082
Percent Solids	86.9	10.0	%	MCAWW 160.3 MOD
S-030205-JH-036 03/02/05 08:20 004				
Aroclor 1242	18000	1900	ug/kg	SW846 8082
Percent Solids	87.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-037 03/02/05 08:25 005				
Aroclor 1248	3700	710	ug/kg	SW846 8082
Percent Solids	93.5	10.0	%	MCAWW 160.3 MOD
S-030205-JH-038 03/02/05 08:30 006				
Aroclor 1242	51000	19000	ug/kg	SW846 8082
Percent Solids	88.1	10.0	%	MCAWW 160.3 MOD
S-030205-JH-039 03/02/05 08:35 007				
Aroclor 1242	260000	36000	ug/kg	SW846 8082
Percent Solids	91.1	10.0	%	MCAWW 160.3 MOD
S-030205-JH-040 03/02/05 08:40 008				
Aroclor 1242	1200000	74000	ug/kg	SW846 8082
Percent Solids	89.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-041 03/02/05 08:45 009				
Aroclor 1248	4900	1800	ug/kg	SW846 8082
Percent Solids	90.3	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C030182

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030205-JH-042 03/02/05 08:50 010				
Aroclor 1242	50000	7400	ug/kg	SW846 8082
Percent Solids	88.9	10.0	%	MCAWW 160.3 MOD
S-030205-JH-043 03/02/05 08:55 011				
Aroclor 1242	56000	18000	ug/kg	SW846 8082
Percent Solids	93.7	10.0	%	MCAWW 160.3 MOD
S-030205-JH-044 03/02/05 09:00 012				
Aroclor 1242	77000	7300	ug/kg	SW846 8082
Percent Solids	89.9	10.0	%	MCAWW 160.3 MOD
S-030205-JH-045 03/02/05 09:05 013				
Aroclor 1242	70	40	ug/kg	SW846 8082
Percent Solids	83.4	10.0	%	MCAWW 160.3 MOD
S-030205-JH-046 03/02/05 09:10 014				
Aroclor 1242	29000	1800	ug/kg	SW846 8082
Percent Solids	89.4	10.0	%	MCAWW 160.3 MOD
S-030205-JH-047 03/02/05 09:15 015				
Aroclor 1242	18000	1800	ug/kg	SW846 8082
Percent Solids	90.2	10.0	%	MCAWW 160.3 MOD
S-030205-JH-048 03/02/05 09:20 016				
Aroclor 1248	43000	7400	ug/kg	SW846 8082
Percent Solids	89.7	10.0	%	MCAWW 160.3 MOD
S-030205-JH-049 03/02/05 09:25 017				
Aroclor 1248	46	40	ug/kg	SW846 8082
Percent Solids	83.5	10.0	%	MCAWW 160.3 MOD
S-030205-JH-050 03/02/05 09:30 018				
Aroclor 1248	170	68	ug/kg	SW846 8082
Percent Solids	96.8	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C030182

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030205-JH-051 03/02/05 09:35 019				
Aroclor 1248	280	35	ug/kg	SW846 8082
Aroclor 1260	56	35	ug/kg	SW846 8082
Percent Solids	94.1	10.0	%	MCAWW 160.3 MOD
S-030205-JH-052 03/02/05 09:40 020				
Percent Solids	86.7	10.0	%	MCAWW 160.3 MOD
S-030205-JH-053 03/02/05 09:45 021				
Aroclor 1248	55	37	ug/kg	SW846 8082
Percent Solids	88.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-054 03/02/05 09:50 022				
Percent Solids	89.3	10.0	%	MCAWW 160.3 MOD
S-030205-JH-055 03/02/05 10:20 023				
Percent Solids	87.8	10.0	%	MCAWW 160.3 MOD
S-030205-JH-056 03/02/05 10:25 024				
Percent Solids	81.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-057 03/02/05 10:30 025				
Aroclor 1248	3100	370	ug/kg	SW846 8082
Percent Solids	88.3	10.0	%	MCAWW 160.3 MOD
S-030205-JH-058 03/02/05 10:35 026				
Aroclor 1248	3300	740	ug/kg	SW846 8082
Percent Solids	88.8	10.0	%	MCAWW 160.3 MOD
S-030205-JH-059 03/02/05 10:40 027				
Aroclor 1248	5000	740	ug/kg	SW846 8082
Percent Solids	89.5	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C030182

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030205-JH-060 03/02/05 10:45 028				
Aroclor 1248	320	200	ug/kg	SW846 8082
Percent Solids	84.5	10.0	%	MCAWW 160.3 MOD
S-030205-JH-061 03/02/05 10:50 029				
Aroclor 1248	5300	740	ug/kg	SW846 8082
Percent Solids	88.7	10.0	%	MCAWW 160.3 MOD
S-030205-JH-062 03/02/05 11:00 030				
Aroclor 1248	23000	1900	ug/kg	SW846 8082
Percent Solids	88.8	10.0	%	MCAWW 160.3 MOD
S-030205-JH-063 03/02/05 11:10 031				
Aroclor 1242	3000	750	ug/kg	SW846 8082
Percent Solids	88.2	10.0	%	MCAWW 160.3 MOD
S-030205-JH-064 03/02/05 13:00 032				
Aroclor 1248	480	200	ug/kg	SW846 8082
Percent Solids	83.5	10.0	%	MCAWW 160.3 MOD
S-030205-JH-065 03/02/05 13:05 033				
Aroclor 1248	2000	380	ug/kg	SW846 8082
Percent Solids	87.7	10.0	%	MCAWW 160.3 MOD
S-030205-JH-066 03/02/05 13:10 034				
Aroclor 1242	4500	1900	ug/kg	SW846 8082
Percent Solids	87.5	10.0	%	MCAWW 160.3 MOD
S-030205-JH-067 03/02/05 13:15 035				
Aroclor 1242	4400	1900	ug/kg	SW846 8082
Percent Solids	87.4	10.0	%	MCAWW 160.3 MOD
S-030205-JH-068 03/02/05 13:20 036				
Aroclor 1248	1600	370	ug/kg	SW846 8082
Percent Solids	89.4	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

5C02144 : A5C030182

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
S-030205-JH-069 03/02/05 13:25 037				
Aroclor 1248	1100	360	ug/kg	SW846 8082
Percent Solids	90.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-070 03/02/05 13:30 038				
Aroclor 1248	1900	350	ug/kg	SW846 8082
Percent Solids	93.6	10.0	%	MCAWW 160.3 MOD
S-030205-JH-071 03/02/05 13:35 039				
Aroclor 1248	380	71	ug/kg	SW846 8082
Percent Solids	93.3	10.0	%	MCAWW 160.3 MOD
S-030205-JH-072 03/02/05 13:40 040				
Aroclor 1248	2100	380	ug/kg	SW846 8082
Percent Solids	87.3	10.0	%	MCAWW 160.3 MOD
S-030205-JH-073 03/02/05 13:45 041				
Aroclor 1248	2100	380	ug/kg	SW846 8082
Percent Solids	86.3	10.0	%	MCAWW 160.3 MOD
S-030205-JH-074 03/02/05 13:50 042				
Aroclor 1248	7100	1900	ug/kg	SW846 8082
Percent Solids	87.0	10.0	%	MCAWW 160.3 MOD
S-030205-JH-075 03/02/05 13:55 043				
Aroclor 1248	250	76	ug/kg	SW846 8082
Percent Solids	86.8	10.0	%	MCAWW 160.3 MOD

SEVERN TRENT STL

METHOD SUMMARY

ANALYTICAL METHODS SUMMARY

5C02144

PARAMETER	ANALYTICAL METHOD
PCBs by SW-846 8082	SW846 8082
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SEVERN TRENT STL

SAMPLE SUMMARY

SAMPLE SUMMARY

5C02144 : A5C020144

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G5C75	001	S-030105-JH-001	03/01/05	11:00
G5C76	002	S-030105-JH-002	03/01/05	11:05
G5C77	003	S-030105-JH-003	03/01/05	11:10
G5C78	004	S-030105-JH-004	03/01/05	11:15
G5C79	005	S-030105-JH-005	03/01/05	11:20
G5C8A	006	S-030105-JH-006	03/01/05	11:25
G5C8C	007	S-030105-JH-007	03/01/05	11:30
G5C8D	008	S-030105-JH-008	03/01/05	11:35
G5C8E	009	S-030105-JH-009	03/01/05	11:45
G5C8F	010	S-030105-JH-010	03/01/05	13:00
G5C8G	011	S-030105-JH-011	03/01/05	13:05
G5C8K	012	S-030105-JH-012	03/01/05	13:10
G5C8L	013	S-030105-JH-013	03/01/05	13:15
G5C8M	014	S-030105-JH-014	03/01/05	13:20
G5C8N	015	S-030105-JH-015	03/01/05	13:25
G5C8R	016	S-030105-JH-016	03/01/05	13:30
G5C8T	017	S-030105-JH-017	03/01/05	13:35
G5C8V	018	S-030105-JH-018	03/01/05	13:40
G5C8W	019	S-030105-JH-019	03/01/05	13:45
G5C82	020	S-030105-JH-020	03/01/05	13:50
G5C83	021	S-030105-JH-021	03/01/05	13:55
G5C85	022	S-030105-JH-022	03/01/05	14:00
G5C86	023	S-030105-JH-023	03/01/05	14:05
G5C87	024	S-030105-JH-024	03/01/05	14:10
G5C88	025	S-030105-JH-025	03/01/05	14:15
G5C89	026	S-030105-JH-026	03/01/05	14:20
G5C9A	027	S-030105-JH-027	03/01/05	14:25
G5C9C	028	S-030105-JH-028	03/01/05	14:30
G5C9D	029	S-030105-JH-029	03/01/05	14:35
G5C9E	030	S-030105-JH-030	03/01/05	14:45
G5C9F	031	S-030105-JH-031	03/01/05	15:00
G5C9G	032	S-030105-JH-032	03/01/05	15:05

NOTE(S):

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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

(Continued on next page)

SAMPLE SUMMARY

5C02144 : A5C030182

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G5F75	001	S-030205-JH-033	03/02/05	08:05
G5F78	002	S-030205-JH-034	03/02/05	08:10
G5F79	003	S-030205-JH-035	03/02/05	08:15
G5F8C	004	S-030205-JH-036	03/02/05	08:20
G5F8D	005	S-030205-JH-037	03/02/05	08:25
G5F8E	006	S-030205-JH-038	03/02/05	08:30
G5F8F	007	S-030205-JH-039	03/02/05	08:35
G5F8G	008	S-030205-JH-040	03/02/05	08:40
G5F8H	009	S-030205-JH-041	03/02/05	08:45
G5F8J	010	S-030205-JH-042	03/02/05	08:50
G5F8K	011	S-030205-JH-043	03/02/05	08:55
G5F8L	012	S-030205-JH-044	03/02/05	09:00
G5F8M	013	S-030205-JH-045	03/02/05	09:05
G5F8N	014	S-030205-JH-046	03/02/05	09:10
G5F8P	015	S-030205-JH-047	03/02/05	09:15
G5F8Q	016	S-030205-JH-048	03/02/05	09:20
G5F8R	017	S-030205-JH-049	03/02/05	09:25
G5F8T	018	S-030205-JH-050	03/02/05	09:30
G5F8V	019	S-030205-JH-051	03/02/05	09:35
G5F8W	020	S-030205-JH-052	03/02/05	09:40
G5F8X	021	S-030205-JH-053	03/02/05	09:45
G5F80	022	S-030205-JH-054	03/02/05	09:50
G5F81	023	S-030205-JH-055	03/02/05	10:20
G5F83	024	S-030205-JH-056	03/02/05	10:25
G5F84	025	S-030205-JH-057	03/02/05	10:30
G5F85	026	S-030205-JH-058	03/02/05	10:35
G5F86	027	S-030205-JH-059	03/02/05	10:40
G5F88	028	S-030205-JH-060	03/02/05	10:45
G5F89	029	S-030205-JH-061	03/02/05	10:50
G5F9C	030	S-030205-JH-062	03/02/05	11:00
G5F9D	031	S-030205-JH-063	03/02/05	11:10
G5F9E	032	S-030205-JH-064	03/02/05	13:00
G5F9F	033	S-030205-JH-065	03/02/05	13:05
G5F9G	034	S-030205-JH-066	03/02/05	13:10
G5F9H	035	S-030205-JH-067	03/02/05	13:15
G5F9J	036	S-030205-JH-068	03/02/05	13:20

(Continued on next page)

SAMPLE SUMMARY

5C02144 : A5C030182

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
G5F9K	037	S-030205-JH-069	03/02/05	13:25
G5F9L	038	S-030205-JH-070	03/02/05	13:30
G5F9M	039	S-030205-JH-071	03/02/05	13:35
G5F9N	040	S-030205-JH-072	03/02/05	13:40
G5F9P	041	S-030205-JH-073	03/02/05	13:45
G5F9Q	042	S-030205-JH-074	03/02/05	13:50
G5F9R	043	S-030205-JH-075	03/02/05	13:55

NOTE(S):

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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SEVERN TRENT STL

SHIPPING AND RECEIVING DOCUMENTS

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL N. Canton

24

REFERENCE NUMBER: 13307

PROJECT NAME: CoT Mapleton

SAMPLER'S SIGNATURE: John Hargens PRINTED NAME: John Hargens

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	3/1/05	1100	S-030105-JH-001	Soil	1	✓	
		1105	002		1	✓	
		1110	003		1	✓	
		1115	004		1	✓	
		1120	005		1	✓	
		1125	006		1	✓	
		1130	007		1	✓	
		1135	008		1	✓	
		1145	009		1	✓	
		1300	010		1	✓	
		1305	011		1	✓	
		1310	012		1	✓	
		1315	013		1	✓	
		1320	014		1	✓	
		1325	015		1	✓	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: ① John Hargens	DATE: 3/1/05 TIME: 1830	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-x AIR BILL No.

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SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Ann Maddup DATE: 3/2/05 TIME: 10:20Am

13005

STL North Canton

1001-00(SOURCE)GN-CO004

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): STL N. Canton

25

REFERENCE NUMBER: 13307

PROJECT NAME: cat mapleton

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hargens **PRINTED NAME:** John Hargens

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	3/1/05	1330	S-030105-JH-016	Soil	1	✓	
		1335	017		1	✓	
		1340	018		2	✓	ms/msd
		1345	019		1	✓	
		1350	020		1	✓	
		1355	021		1	✓	
		1400	022		1	✓	
		1405	023		1	✓	
		1410	024		1	✓	
		1415	025		1	✓	
		1420	026		1	✓	
		1425	027		1	✓	
		1430	028		1	✓	
		1435	029		1	✓	
		1445	030		1	✓	
TOTAL NUMBER OF CONTAINERS							

RELINQUISHED BY: ① John Hargens	DATE: 3/1/05 TIME: 1430	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X **AIR BILL No.**

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Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Lynn Meadows 13006
DATE: 3/2/05 TIME: 10:20am

STL North Canton

1001-00(SOURCE)GN-CO004

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Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL N. Canton

REFERENCE NUMBER: 13307

PROJECT NAME: cat mapleton

SAMPLER'S SIGNATURE: John Hargen **PRINTED NAME:** John Hargen

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	03/01/05	1500	S-030105-JH-031	soil	1	✓	
	↓	1505	↓ 032		1	✓	
			Temp Blank	water	1		
			TOTAL NUMBER OF CONTAINERS				

RELINQUISHED BY: ① John Hargen	DATE: 3/1/05 TIME: 1830	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X **AIR BILL No.** 8 490 1342 6920

White	-Fully Executed Copy
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Goldenrod	-Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Ann Meddings 12380
DATE: 3/2/05 TIME: 10:20am

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STL North Canton

Page 1

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(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL N. Canton

REFERENCE NUMBER: 13307

PROJECT NAME: Cat Mapleton

SAMPLER'S SIGNATURE: John Hargens **PRINTED NAME:** John Hargens

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	3/2/05	805	S-030205-JH-033	SOIL	1	✓	
		810	034		1		
		815	035		1		
		820	036		1		
		825	037		1		
		830	038		1		
		835	039		2		MS/MSD
		840	040		1		
		845	041		1		
		850	042		1		
		855	043		1		
		900	044		1		
		905	045		1		
		910	046		1		
		915	047		1		
TOTAL NUMBER OF CONTAINERS					16		

RELINQUISHED BY: ① John Hargens	DATE: 3/2/02 TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X **AIR BILL No.**

White -Fully Executed Copy
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Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Ann Medding
DATE: 3/3/05 TIME: 10:05am

12381

STL North Canton

1001-00(SOURCE)GN-CO004

CONESTOGA-ROVERS & ASSOCIATES
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Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): STL N. Canton

REFERENCE NUMBER: 13307

PROJECT NAME: Cat Mapleton

SAMPLER'S SIGNATURE: John Hargens **PRINTED NAME:** John Hargens

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS PCB	REMARKS
	3/2/05	920	S-030205-JH-048	soil	1	✓	
		925	049		1	✓	
		930	050		1	✓	
		935	051		1	✓	
		940	052		1	✓	
		945	053		1	✓	
		950	054		1	✓	
		1020	055		2	✓	ms msd
		1025	056		1	✓	
		1030	057		1	✓	
		1035	058		1	✓	
		1040	059		1	✓	
		1045	060		1	✓	
		1050	061		1	✓	
		1100	062		1	✓	
			TOTAL NUMBER OF CONTAINERS		16		

RELINQUISHED BY: ① John Hargens	DATE: 3/2/05 TIME:	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X **AIR BILL No.**

White -Fully Executed Copy
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Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: [signature]
DATE: 3/3/05 TIME: 10:05am

12382

1001-00(SOURCE)GN-CO004

STL North Canton

28

CONESTOGA-ROVERS & ASSOCIATES
8615 W. Bryn Mawr Avenue
Chicago, Illinois 60631
(773)380-9933 phone
(773)380-6421 fax

SHIPPED TO (Laboratory Name): STL N. Canton

REFERENCE NUMBER: 13307

PROJECT NAME: Cat Maple Tor

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: John Hargens **PRINTED NAME:** John Hargens

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: PCB	REMARKS
	3/2/05	1110	S-030205-JH-063	soil	1	✓	
		1300	064		1	✓	
		1305	065		1	✓	
		1310	066		1	✓	
		1315	067		1	✓	
		1320	068		2	✓	
		1325	069		1	✓	
		1330	070		1	✓	
		1335	071		1	✓	
		1340	072		1	✓	
		1345	073		1	✓	
		1350	074		1	✓	
		1355	075		1	✓	
			Temp Blank	water	1		
TOTAL NUMBER OF CONTAINERS					15	+16 +16 = 47	

RELINQUISHED BY: ① John Hargens	DATE: 3/2/05 TIME: 1700	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: Fed-X **AIR BILL No.** 844740865460

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY: Ann Maddump 12384
DATE: 3/3/05 TIME: 10:05am

1001-00(SOURCE)GN-CO004

STL North Canton

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 1351424

Lot #: A5C020144

Case Number/SDG: 13307

Storage Location: W17

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
G5C75	STILLERJ	3/02/05	Yes		Storage	
G5C76	STILLERJ	3/02/05	Yes		Storage	
G5C77	STILLERJ	3/02/05	Yes		Storage	
G5C78	STILLERJ	3/02/05	Yes		Storage	
G5C79	STILLERJ	3/02/05	Yes		Storage	
G5C8A	STILLERJ	3/02/05	Yes		Storage	
G5C8C	STILLERJ	3/02/05	Yes		Storage	
G5C8D	STILLERJ	3/02/05	Yes		Storage	
G5C8E	STILLERJ	3/02/05	Yes		Storage	
G5C8F	STILLERJ	3/02/05	Yes		Storage	
G5C8G	STILLERJ	3/02/05	Yes		Storage	
G5C8K	STILLERJ	3/02/05	Yes		Storage	
G5C8L	STILLERJ	3/02/05	Yes		Storage	
G5C8M	STILLERJ	3/02/05	Yes		Storage	
G5C8N	STILLERJ	3/02/05	Yes		Storage	
G5C8R	STILLERJ	3/02/05	Yes		Storage	
G5C8T	STILLERJ	3/02/05	Yes		Storage	
G5C8V	STILLERJ	3/02/05	Yes		Storage	
G5C8W	STILLERJ	3/02/05	Yes		Storage	
G5C82	STILLERJ	3/02/05	Yes		Storage	
G5C83	STILLERJ	3/02/05	Yes		Storage	
G5C85	STILLERJ	3/02/05	Yes		Storage	
G5C86	STILLERJ	3/02/05	Yes		Storage	

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 1351424

Lot #: A5C020144

Case Number/SDG: 13307

Storage Location: W17

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
G5C87	STILLERJ	3/02/05	Yes		Storage	
G5C88	STILLERJ	3/02/05	Yes		Storage	
G5C89	STILLERJ	3/02/05	Yes		Storage	
G5C9A	STILLERJ	3/02/05	Yes		Storage	
G5C9C	STILLERJ	3/02/05	Yes		Storage	
G5C9D	STILLERJ	3/02/05	Yes		Storage	
G5C9E	STILLERJ	3/02/05	Yes		Storage	
G5C9F	STILLERJ	3/02/05	Yes		Storage	
G5C9G	STILLERJ	3/02/05	Yes		Storage	

RSR280

Severn Trent Laboratories, Inc.
Sample Control Record

Client: 1351424

Lot #: A5C030182

Case Number/SDG: 13307

Storage Location: W26

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
G5F75	STILLERJ	3/03/05	Yes		Storage	
G5F78	STILLERJ	3/03/05	Yes		Storage	
G5F79	STILLERJ	3/03/05	Yes		Storage	
G5F8C	STILLERJ	3/03/05	Yes		Storage	
G5F8D	STILLERJ	3/03/05	Yes		Storage	
G5F8E	STILLERJ	3/03/05	Yes		Storage	
G5F8F	STILLERJ	3/03/05	Yes		Storage	
G5F8G	STILLERJ	3/03/05	Yes		Storage	
G5F8H	STILLERJ	3/03/05	Yes		Storage	
G5F8J	STILLERJ	3/03/05	Yes		Storage	
G5F8K	STILLERJ	3/03/05	Yes		Storage	
G5F8L	STILLERJ	3/03/05	Yes		Storage	
G5F8M	STILLERJ	3/03/05	Yes		Storage	
G5F8N	STILLERJ	3/03/05	Yes		Storage	
G5F8P	STILLERJ	3/03/05	Yes		Storage	
G5F8Q	STILLERJ	3/03/05	Yes		Storage	
G5F8R	STILLERJ	3/03/05	Yes		Storage	
G5F8T	STILLERJ	3/03/05	Yes		Storage	
G5F8V	STILLERJ	3/03/05	Yes		Storage	
G5F8W	STILLERJ	3/03/05	Yes		Storage	
G5F8X	STILLERJ	3/03/05	Yes		Storage	
G5F80	STILLERJ	3/03/05	Yes		Storage	
G5F81	STILLERJ	3/03/05	Yes		Storage	

RSR280

Client: 1351424

Lot #: A5C030182

Case Number/SDG: 13307

Storage Location: W26

Severn Trent Laboratories, Inc.
Sample Control Record

Laboratory Sample I.D.	Transferred By	Date	Entered	Removed	Reason	Date Returned
G5F83	STILLERJ	3/03/05	Yes		Storage	
G5F84	STILLERJ	3/03/05	Yes		Storage	
G5F85	STILLERJ	3/03/05	Yes		Storage	
G5F86	STILLERJ	3/03/05	Yes		Storage	
G5F88	STILLERJ	3/03/05	Yes		Storage	
G5F89	STILLERJ	3/03/05	Yes		Storage	
G5F9C	STILLERJ	3/03/05	Yes		Storage	
G5F9D	STILLERJ	3/03/05	Yes		Storage	
G5F9E	STILLERJ	3/03/05	Yes		Storage	
G5F9F	STILLERJ	3/03/05	Yes		Storage	
G5F9G	STILLERJ	3/03/05	Yes		Storage	
G5F9H	STILLERJ	3/03/05	Yes		Storage	
G5F9J	STILLERJ	3/03/05	Yes		Storage	
G5F9K	STILLERJ	3/03/05	Yes		Storage	
G5F9L	STILLERJ	3/03/05	Yes		Storage	
G5F9M	STILLERJ	3/03/05	Yes		Storage	
G5F9N	STILLERJ	3/03/05	Yes		Storage	
G5F9P	STILLERJ	3/03/05	Yes		Storage	
G5F9Q	STILLERJ	3/03/05	Yes		Storage	
G5F9R	STILLERJ	3/03/05	Yes		Storage	

STL Cooler Receipt Form/Narrative **Lot Number:** ASC02044
North Canton Facility

Client: CRA Project: Cat Mapleton Quote#: _____
Cooler Received on: 3-2-05 Opened on: 3-2-05 by: Ann Maddux (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other: _____
STL Cooler No# K442 Foam Box ☐ Client Cooler ☐ Other ____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity _____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other: _____
6. Cooler temperature upon receipt 2.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

√

1. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot # 101104HNO3; Sulfuric Acid Lot # 102804-H2SO4; Sodium Hydroxide Lot # -100504-NaOH; Hydrochloric Acid Lot # 100504-HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604-CH3COO2ZN/NaOH*

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

STL Cooler Receipt Form/Narrative **Lot Number:** ASC030182
North Canton Facility

Client: CRA Project: Cat. Mapleton Quote#: 62979
Cooler Received on: 3-03-05 Opened on: 3-03-05 by: Ann Maddux (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:_____
STL Cooler No# J878 Foam Box ☐ Client Cooler ☐ Other____

1. Were custody seals on the outside of the cooler? Yes ☐ No ☑ Intact? Yes ☐ No ☐ NA ☑
   If YES, Quantity_____
   Were the custody seals signed and dated? Yes ☐ No ☐ NA ☑
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☐ Foam ☐ None ☑ Other :_____
6. Cooler temperature upon receipt 3.2°C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date:_____ by:_____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning:_____

√

1. CHAIN OF CUSTODY

√ The following discrepancies occurred:
Test not marked for -034 through -047, will log for test listed on COC. JGD 3-3-05

2. SAMPLE CONDITION

Sample(s)_____ were received after the recommended holding time had expired.
Sample(s)_____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot # 101104HNO3; Sulfuric Acid Lot # 102804-H2SO4; Sodium Hydroxide Lot # -100504-NaOH; Hydrochloric Acid Lot # 100504-HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604-CH3COO2ZN/NaOH*
Sample(s)_____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

POLYCHLORINATED BIPHENYLS DATA

SEVERN TRENT STL

QC SUMMARY DATA

SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C020144

Extraction: XXA63QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-030105-JH-001	213D	642D	02
02	S-030105-JH-002	214D	113D	02
03	S-030105-JH-003	86 D	158D	01
04	S-030105-JH-004	232D	355D	02
05	S-030105-JH-005	61 D	925D	01
06	S-030105-JH-006	99 D	203D	01
07	S-030105-JH-007	93	90	00
08	S-030105-JH-008	98	102	00
09	S-030105-JH-009	114D	145D	01
10	S-030105-JH-010	106D	182D	01
11	S-030105-JH-011	131D	442D	01
12	S-030105-JH-012	129D	395D	01
13	S-030105-JH-013	137D	312D	01
14	S-030105-JH-014	109D	336D	01
15	S-030105-JH-015	160D	236D	01
16	S-030105-JH-016	89	89	00
17	S-030105-JH-017	78	77	00
18	S-030105-JH-018	84	91	00
19	S-030105-JH-019	101D	127D	00
20	S-030105-JH-020	81	84	00
21	S-030105-JH-021	86	79	00
22	S-030105-JH-022	123D	121D	01
23	S-030105-JH-023	83	88	00
24	S-030105-JH-024	102D	103D	01
25	S-030105-JH-025	54	84	00
26	S-030105-JH-026	73	78	00
27	S-030105-JH-027	5.5D	116D	01

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C020144

Extraction: XXA63QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-030105-JH-028	88 D	103D	00
02	S-030105-JH-029	93	91	00
03	S-030105-JH-030	91	85	00
04	S-030105-JH-031	102D	407D	01
05	S-030105-JH-032	131D	590D	01
06	METHOD BLK. G5D5F1AA	84	95	00
07	METHOD BLK. G5D6R1AA	86	80	00
08	LCS G5D5F1AC	87	96	00
09	LCS G5D6R1AC	89	92	00
10	S-030105-JH-018 D	81	87	00
11	LCSD G5D5F1AD	95	89	00
12	S-030105-JH-018 S	89	90	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-172)
SRG02	= Decachlorobiphenyl	(40-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030182

Extraction: XXA63QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-030205-JH-037	109D	223D	01
02	S-030205-JH-038	67 D	134D	01
03	S-030205-JH-039	198D	254D	02
04	S-030205-JH-040	102D	381D	02
05	S-030205-JH-041	62 D	255D	01
06	S-030205-JH-042	133D	284D	01
07	S-030205-JH-043	163D	381D	01
08	S-030205-JH-044	146D	193D	01
09	S-030205-JH-045	101	90	00
10	S-030205-JH-046	274D	195D	02
11	S-030205-JH-047	253D	667D	02
12	S-030205-JH-048	148D	328D	01
13	S-030205-JH-049	95	93	00
14	S-030205-JH-050	99	110	00
15	S-030205-JH-051	107	132	00
16	S-030205-JH-052	77	73	00
17	S-030205-JH-053	100	93	00
18	S-030205-JH-055	88	71	00
19	S-030205-JH-056	95	88	00
20	S-030205-JH-062	300D	358D	02
21	S-030205-JH-063	134D	162D	01
22	S-030205-JH-064	101D	102D	00
23	S-030205-JH-065	108D	122D	00
24	S-030205-JH-066	175*	221*	02
25	S-030205-JH-067	144D	618D	01
26	S-030205-JH-068	106D	104D	00
27	S-030205-JH-069	91 D	109D	00

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030182

Extraction: XXA63QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	S-030205-JH-070	99 D	111D	00
02	S-030205-JH-071	99	91	00
03	S-030205-JH-072	108D	124D	00
04	S-030205-JH-073	89 D	103D	00
05	S-030205-JH-074	109D	121D	00
06	S-030205-JH-075	93	99	00
07	METHOD BLK. G5G141AA	96	89	00
08	METHOD BLK. G5G2A1AA	94	76	00
09	LCS G5G141AC	94	103	00
10	LCS G5G2A1AC	92	75	00
11	S-030205-JH-039 D	203D	931D	02
12	S-030205-JH-055 D	93	81	00
13	S-030205-JH-068 D	99 D	104D	00
14	S-030205-JH-039 S	90 D	227D	01
15	S-030205-JH-055 S	97	85	00
16	S-030205-JH-068 S	102D	114D	00

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-172)
SRG02	= Decachlorobiphenyl	(40-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030182

Extraction: XXA71QH01

	CLIENT ID.	SRG01	SRG02	TOT OUT
01	INTRA-LAB QC	75	96	00
02	S-030205-JH-033	124D	572D	01
03	S-030205-JH-034	116D	221D	01
04	S-030205-JH-035	127D	113D	01
05	S-030205-JH-036	132D	406D	01
06	S-030205-JH-054	92	94	00
07	S-030205-JH-057	106D	119D	00
08	S-030205-JH-058	113D	263D	01
09	S-030205-JH-059	106D	141D	01
10	S-030205-JH-060	95 D	107D	00
11	S-030205-JH-061	127D	292D	01
12	METHOD BLK. G5G1L1AA	136	84	00
13	LCS G5G1L1AC	171	105	00
14	LAB MS/MSD D	94	74	00
15	LAB MS/MSD S	183*	100	01

SURROGATES		QC LIMITS
SRG01	= Tetrachloro-m-xylene	(10-172)
SRG02	= Decachlorobiphenyl	(40-138)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C020000 WO #: G5D5F1AC
BATCH: 5061335

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	300	90	41- 130	
Aroclor 1260	330	330	98	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 CHECK SAMPLE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C020000 WO #: G5D5F1AD
BATCH: 5061335

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	320	96	41- 130	
Aroclor 1260	330	320	96	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C020000 WO #: G5D6R1AC
BATCH: 5061334

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	290	86	41- 130	
Aroclor 1260	330	310	93	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030000 WO #: G5G1L1AC
BATCH: 5062344

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	380	113	41- 130	
Aroclor 1260	330	340	102	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030000 WO #: G5G141AC
BATCH: 5062354

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	320	97	41- 130	
Aroclor 1260	330	350	104	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Lot #: A5C030000 WO #: G5G2A1AC
BATCH: 5062356

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	% REC	QC LIMITS REC	QUAL
Aroclor 1016	330	300	91	41- 130	
Aroclor 1260	330	270	81	42- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030105-JH-018

Lot #: A5C020144 WO #: G5C8V1AF
BATCH: 5061334

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	350	ND	310	88	10- 200	
Aroclor 1260	350	ND	310	91	10- 200	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030105-JH-018

Lot #: A5C020144 WO #: G5C8V1AG
BATCH: 5061334

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	350	290	84	5.0	30	10- 200	
Aroclor 1260	350	310	89	2.2	30	10- 200	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: LAB MS/MSD Level:(low/med) LOW

Lot #: A5C030101 WO #: G5FJ21AF
BATCH: 5062344

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	360	ND	400	112	10- 200	
Aroclor 1260	360	ND	340	87	10- 200	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: LAB MS/MSD Level: (low/med) LOW

Lot #: A5C030101 WO #: G5FJ21AG
BATCH: 5062344

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	360	280	78	35	*	30	10- 200	p
Aroclor 1260	360	260	64	27		30	10- 200	

NOTES(S):

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-039

Lot #: A5C030182 WO #: G5F8F1AF
BATCH: 5062354

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	360	ND	300000	500*	10- 200	DIL a
Aroclor 1260	360	ND		280*	10- 200	DIL a

NOTES(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 2 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-039

Lot #: A5C030182 WO #: G5F8F1AG
BATCH: 5062354

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD		QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	370	170000	800*	55	*	30	10- 200	DIL a p
Aroclor 1260	370		810*	45	*	30	10- 200	DIL a p

NOTES(S):

DIL The concentration is estimated or not reported due to dilution or the presence of *interfering analytes*.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 2 out of 2 outside limits
Spike Recovery: 2 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-055

Lot #: A5C030182 WO #: G5F811AF
BATCH: 5062356

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	380	ND	360	96	10- 200	
Aroclor 1260	380	ND	330	87	10- 200	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-055

Lot #: A5C030182 WO #: G5F811AG
BATCH: 5062356

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	380	350	92	4.5	30	10- 200	
Aroclor 1260	380	310	83	5.0	30	10- 200	

NOTES(S):

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-068

Lot #: A5C030182 WO #: G5F9J1AF
BATCH: 5062356

COMPOUND	SPIKE ADDED (ug/kg)	SAMPLE CONCENT. (ug/kg)	MS CONCENT. (ug/kg)	MS % REC	LIMITS REC	QUAL
Aroclor 1016	370	ND	1600	425*	10- 200	DIL a
Aroclor 1260	370	ND	440	117	10- 200	DIL

NOTES (S) :

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 1 out of 2 outside limits

COMMENTS:

SW846 8082 MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: Conestoga-Rovers & Associates, Inc.

Lab Code: STLCAN SDG No: 5C02144

Matrix Spike ID: S-030205-JH-068

Lot #: A5C030182 WO #: G5F9J1AG
BATCH: 5062356

COMPOUND	SPIKE ADDED (ug/kg)	MSD CONCENT. (ug/kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	QUAL
Aroclor 1016	370	1400	386*	9.6	30	10- 200	DIL a
Aroclor 1260	370	410	110	6.0	30	10- 200	DIL

NOTES(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 2 outside limits
Spike Recovery: 1 out of 2 outside limits

COMMENTS:

BLANK WORKORDER NO.

G5D6R1AA

SW846 8082 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLCAN

SDG Number:5C02144

Lab File ID: 040F4001.

Lot Number: A5C020144

Matrix: SOLID

Extraction Method:

Date Extracted: 03/03/05

Date Analyzed(1): 03/12/05

Date Analyzed(2): N/A

Time Analyzed(1): 00:41

Time Analyzed(2): N/A

Instrument ID(1): P5

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-030105-JH-001	G5C751AA	03/11/05	N/A
02	S-030105-JH-002	G5C761AA	03/11/05	N/A
03	S-030105-JH-003	G5C771AA	03/11/05	N/A
04	S-030105-JH-004	G5C781AA	03/11/05	N/A
05	S-030105-JH-005	G5C791AA	03/11/05	N/A
06	S-030105-JH-006	G5C8A1AA	03/11/05	N/A
07	S-030105-JH-007	G5C8C1AA	03/11/05	N/A
08	S-030105-JH-008	G5C8D1AA	03/11/05	N/A
09	S-030105-JH-009	G5C8E1AA	03/11/05	N/A
10	S-030105-JH-010	G5C8F1AA	03/11/05	N/A
11	S-030105-JH-011	G5C8G1AA	03/11/05	N/A
12	S-030105-JH-012	G5C8K1AA	03/11/05	N/A
13	S-030105-JH-013	G5C8L1AA	03/11/05	N/A
14	S-030105-JH-014	G5C8M1AA	03/11/05	N/A
15	S-030105-JH-015	G5C8N1AA	03/11/05	N/A
16	S-030105-JH-016	G5C8R1AA	03/11/05	N/A
17	S-030105-JH-017	G5C8T1AA	03/11/05	N/A
18	S-030105-JH-018	G5C8V1AA	03/11/05	N/A
19	S-030105-JH-018	G5C8V1AF S	03/11/05	N/A
20	S-030105-JH-018	G5C8V1AG D	03/12/05	N/A
21	S-030105-JH-019	G5C8W1AA	03/12/05	N/A
22	S-030105-JH-020	G5C821AA	03/12/05	N/A
23	CHECK SAMPLE	G5D6R1AC C	03/12/05	N/A

COMMENTS:

BLANK WORKORDER NO.

G5D5F1AA

SW846 8082 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLCAN

SDG Number:5C02144

Lab File ID: 038F3401.

Lot Number: A5C020144

Matrix: SOLID

Extraction Method:

Date Extracted: 03/02/05

Date Analyzed(1): 03/14/05

Date Analyzed(2): N/A

Time Analyzed(1): 23:08

Time Analyzed(2): N/A

Instrument ID(1): P5

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-030105-JH-021	G5C831AA	03/14/05	N/A
02	S-030105-JH-022	G5C851AA	03/14/05	N/A
03	S-030105-JH-023	G5C861AA	03/14/05	N/A
04	S-030105-JH-024	G5C871AA	03/14/05	N/A
05	S-030105-JH-025	G5C881AA	03/14/05	N/A
06	S-030105-JH-026	G5C891AA	03/14/05	N/A
07	S-030105-JH-027	G5C9A1AA	03/14/05	N/A
08	S-030105-JH-028	G5C9C1AA	03/14/05	N/A
09	S-030105-JH-029	G5C9D1AA	03/14/05	N/A
10	S-030105-JH-030	G5C9E1AA	03/14/05	N/A
11	S-030105-JH-031	G5C9F1AA	03/14/05	N/A
12	S-030105-JH-032	G5C9G1AA	03/14/05	N/A
13	CHECK SAMPLE	G5D5F1AC C	03/14/05	N/A
14	DUPLICATE CHECK	G5D5F1AD L	03/14/05	N/A
15				
16				
17				
18				
19				
20				

COMMENTS:

BLANK WORKORDER NO.

G5G1L1AA

SW846 8082 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLCAN

SDG Number: 5C02144

Lab File ID: 032F2101.

Lot Number: A5C030182

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 03/03/05

Date Analyzed(1): 03/08/05

Date Analyzed(2): N/A

Time Analyzed(1): 23:39

Time Analyzed(2): N/A

Instrument ID(1): P2

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	INTRA-LAB QC	G5FJ21AC	03/09/05	N/A
02	LAB MS/MSD	G5FJ21AF S	03/08/05	N/A
03	LAB MS/MSD	G5FJ21AG D	03/08/05	N/A
04	S-030205-JH-033	G5F751AA	03/12/05	N/A
05	S-030205-JH-034	G5F781AA	03/12/05	N/A
06	S-030205-JH-035	G5F791AA	03/12/05	N/A
07	S-030205-JH-036	G5F8C1AA	03/12/05	N/A
08	S-030205-JH-054	G5F801AA	03/12/05	N/A
09	S-030205-JH-057	G5F841AA	03/12/05	N/A
10	S-030205-JH-058	G5F851AA	03/12/05	N/A
11	S-030205-JH-059	G5F861AA	03/12/05	N/A
12	S-030205-JH-060	G5F881AA	03/12/05	N/A
13	S-030205-JH-061	G5F891AA	03/12/05	N/A
14	CHECK SAMPLE	G5G1L1AC C	03/08/05	N/A
15				
16				
17				
18				
19				
20				

COMMENTS:

BLANK WORKORDER NO.

G5G141AA

SW846 8082 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLCAN

SDG Number:5C02144

Lab File ID: 082F8201.

Lot Number: A5C030182

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 03/04/05

Date Analyzed(1): 03/12/05

Date Analyzed(2): N/A

Time Analyzed(1): 09:15

Time Analyzed(2): N/A

Instrument ID(1): P5

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-030205-JH-037	G5F8D1AA	03/12/05	N/A
02	S-030205-JH-038	G5F8E1AA	03/12/05	N/A
03	S-030205-JH-039	G5F8F1AA	03/12/05	N/A
04	S-030205-JH-039	G5F8F1AF S	03/12/05	N/A
05	S-030205-JH-039	G5F8F1AG D	03/12/05	N/A
06	S-030205-JH-040	G5F8G1AA	03/15/05	N/A
07	S-030205-JH-041	G5F8H1AA	03/12/05	N/A
08	S-030205-JH-042	G5F8J1AA	03/12/05	N/A
09	S-030205-JH-043	G5F8K1AA	03/12/05	N/A
10	S-030205-JH-044	G5F8L1AA	03/12/05	N/A
11	S-030205-JH-045	G5F8M1AA	03/12/05	N/A
12	S-030205-JH-046	G5F8N1AA	03/12/05	N/A
13	S-030205-JH-047	G5F8P1AA	03/12/05	N/A
14	S-030205-JH-048	G5F8Q1AA	03/12/05	N/A
15	S-030205-JH-049	G5F8R1AA	03/12/05	N/A
16	S-030205-JH-050	G5F8T1AA	03/12/05	N/A
17	S-030205-JH-051	G5F8V1AA	03/12/05	N/A
18	S-030205-JH-052	G5F8W1AA	03/12/05	N/A
19	S-030205-JH-053	G5F8X1AA	03/12/05	N/A
20	S-030205-JH-056	G5F831AA	03/12/05	N/A
21	S-030205-JH-062	G5F9C1AA	03/12/05	N/A
22	CHECK SAMPLE	G5G141AC C	03/12/05	N/A

COMMENTS:

BLANK WORKORDER NO.

G5G2A1AA

SW846 8082 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLCAN

SDG Number: 5C02144

Lab File ID: 020F2001.

Lot Number: A5C030182

Matrix: SOLID

Extraction Method: 3550B/3665A

Date Extracted: 03/04/05

Date Analyzed(1): 03/18/05

Date Analyzed(2): N/A

Time Analyzed(1): 02:31

Time Analyzed(2): N/A

Instrument ID(1): P2

Instrument ID(2): N/A

GC Column(1): N/A ID: N/A GC Column(2): N/A ID: N/A

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	DATE ANALYZED(1)	DATE ANALYZED(2)
01	S-030205-JH-055	G5F811AA	03/18/05	N/A
02	S-030205-JH-055	G5F811AF S	03/18/05	N/A
03	S-030205-JH-055	G5F811AG D	03/18/05	N/A
04	S-030205-JH-063	G5F9D1AA	03/18/05	N/A
05	S-030205-JH-064	G5F9E1AA	03/18/05	N/A
06	S-030205-JH-065	G5F9F1AA	03/18/05	N/A
07	S-030205-JH-066	G5F9G1AA	03/18/05	N/A
08	S-030205-JH-067	G5F9H1AA	03/18/05	N/A
09	S-030205-JH-068	G5F9J1AA	03/18/05	N/A
10	S-030205-JH-068	G5F9J1AF S	03/18/05	N/A
11	S-030205-JH-068	G5F9J1AG D	03/18/05	N/A
12	S-030205-JH-069	G5F9K1AA	03/18/05	N/A
13	S-030205-JH-070	G5F9L1AA	03/18/05	N/A
14	S-030205-JH-071	G5F9M1AA	03/18/05	N/A
15	S-030205-JH-072	G5F9N1AA	03/18/05	N/A
16	S-030205-JH-073	G5F9P1AA	03/18/05	N/A
17	S-030205-JH-074	G5F9Q1AA	03/21/05	N/A
18	S-030205-JH-075	G5F9R1AA	03/21/05	N/A
19	CHECK SAMPLE	G5G2A1AC C	03/18/05	N/A
20				

COMMENTS:

SEVERN TRENT STL

SAMPLE DATA

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-001

GC Semivolatiles

Lot-Sample #...:	A5C020144-001	**Work Order #...:**	G5C751AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:00	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	ND	1900	ug/kg
Aroclor 1248	**16000**	**1900**	**ug/kg**
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	213 DIL,*	(10 - 172)
Decachlorobipheny1	642 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 017F1701.D
Report Date: 14-Mar-2005 15:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\017F1701.D
Lab Smp Id: G5C751AA Client Smp ID: S-030105-JH-001
Inj Date : 11-MAR-2005 20:00
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C751AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 17
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	192177	0.00085	14.15		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

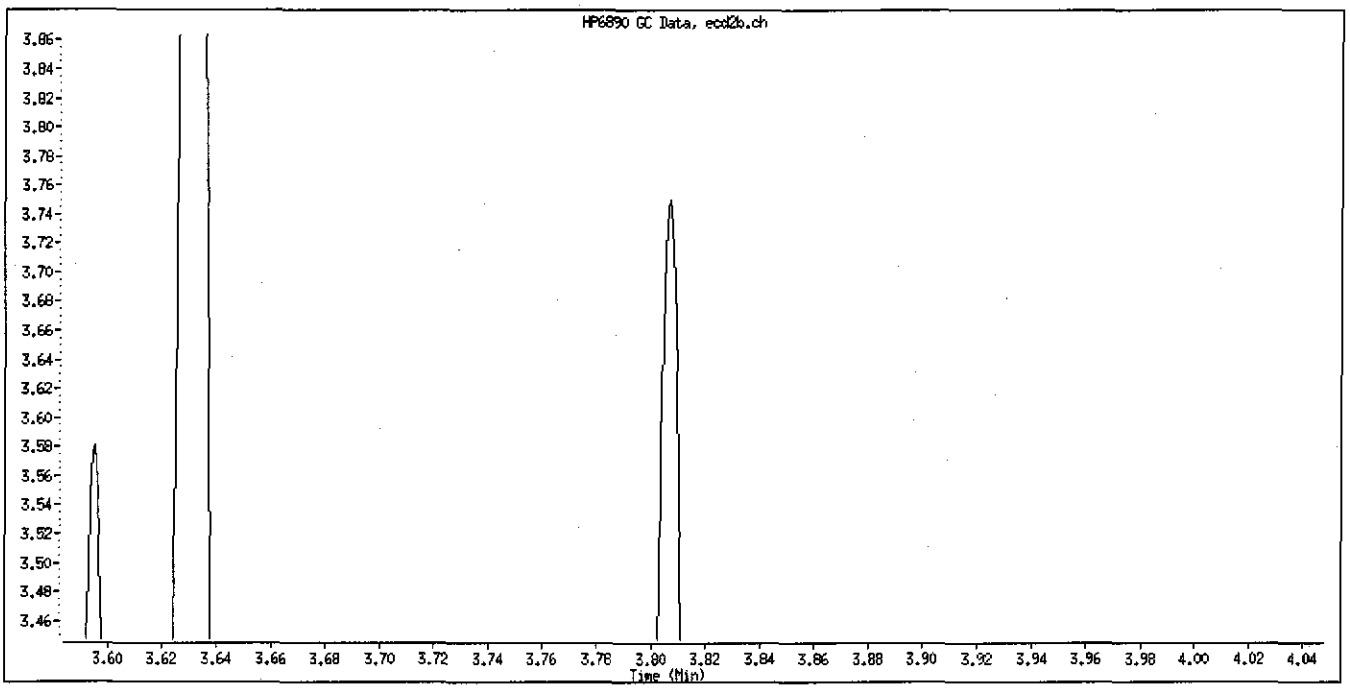
Data File: 017F1701.D
Report Date: 14-Mar-2005 15:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	1535755	0.78542	13070	75.00- 125.00	100.00(M)
2.849	2.846	0.003	6110052	1.51959	25290	157.16- 261.93	397.85
3.305	3.306	-0.001	3278927	0.67563	11240	189.24- 315.41	213.51
3.595	3.596	-0.001	2798675	0.54772	9116	193.23- 322.06	182.23
3.806	3.808	-0.002	2888549	0.63149	10510	173.06- 288.43	188.09
Average of Peak Concentrations =					13850		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.316	4.335	-0.019	343232	0.06985	1163	80.00- 120.00	100.00(M)
4.555	4.545	0.010	119742	0.02112	351.4	87.22- 145.36	34.89
4.953	4.942	0.011	84831	0.01550	258.0	86.81- 144.68	24.72
5.321	5.364	-0.043	167936	0.04478	745.3	57.97- 96.61	48.93
6.006	5.997	0.009	761939	0.14040	2337	85.17- 141.95	221.99
Average of Peak Concentrations =					970.9		
$ 9 DCB					CAS #: 2051-24-3		
7.150	7.135	0.015	242592	0.00257	42.72		(R)

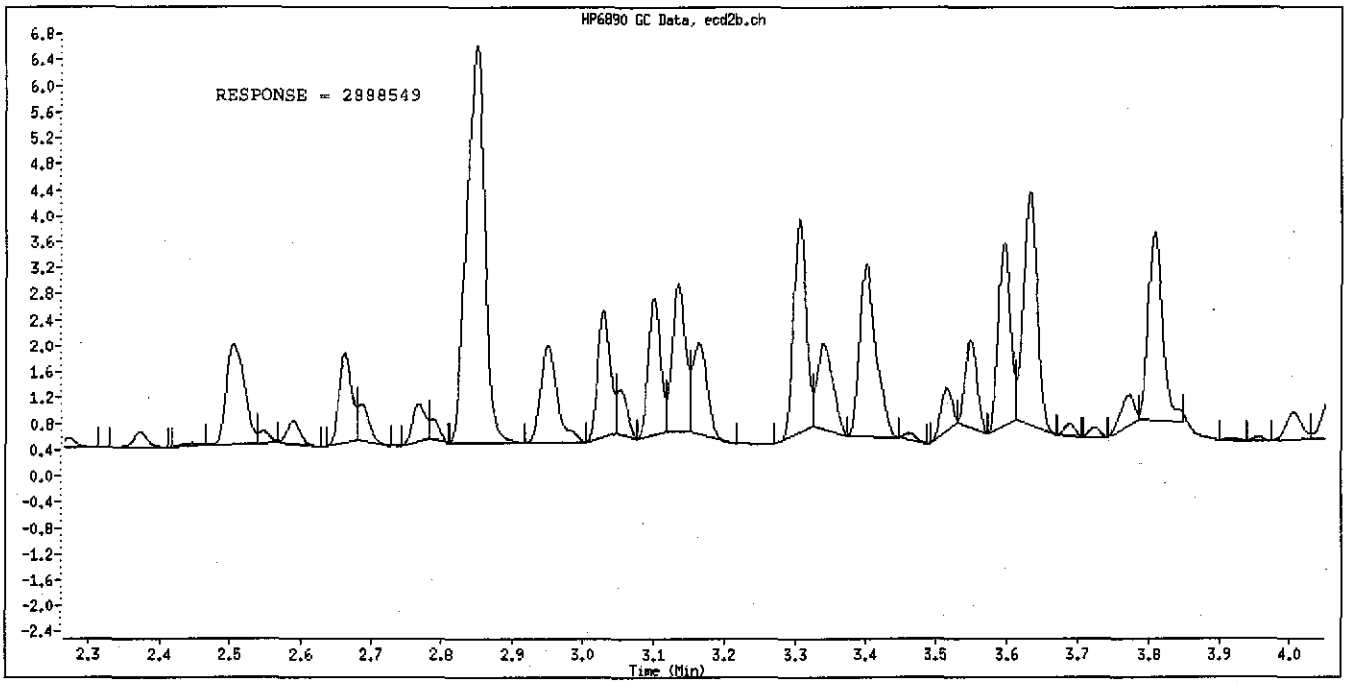
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 20:00
Instrument ID: a2hp5.i
Client ID: S-030105-JH-001
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



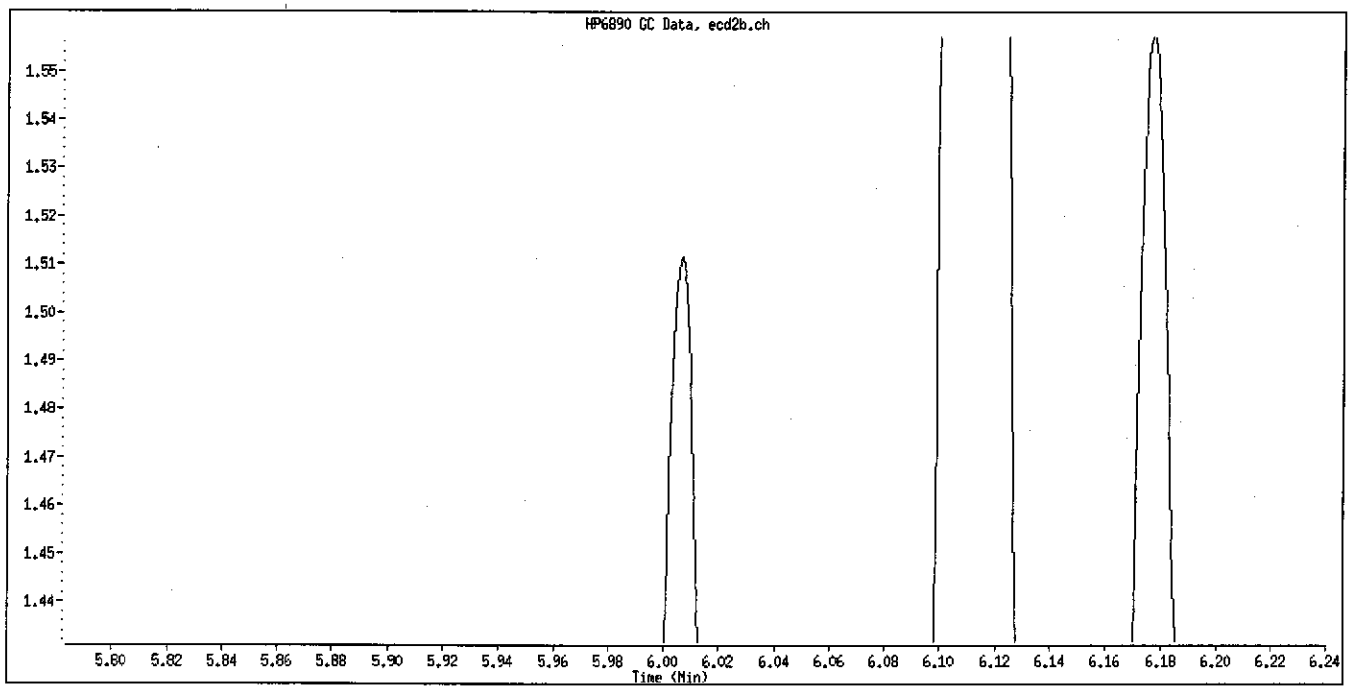
Original Integration



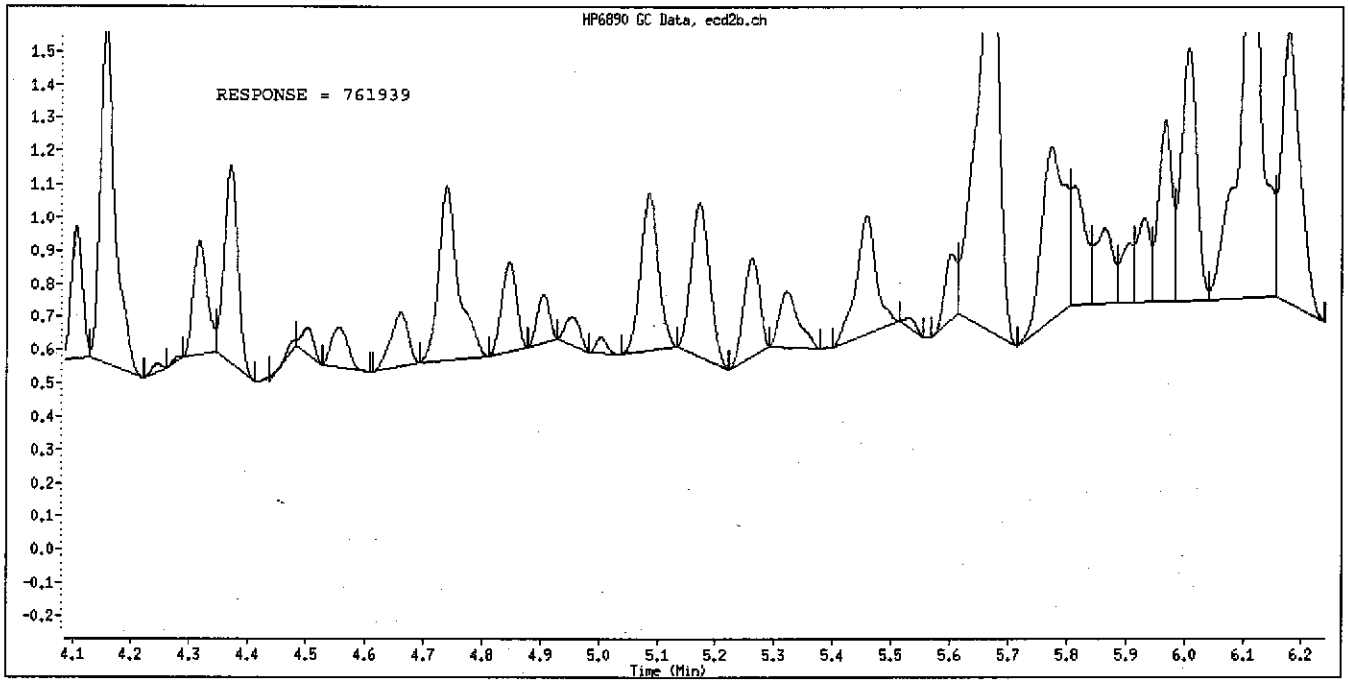
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 20:00
Instrument ID: a2hp5.i
Client ID: S-030105-JH-001
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



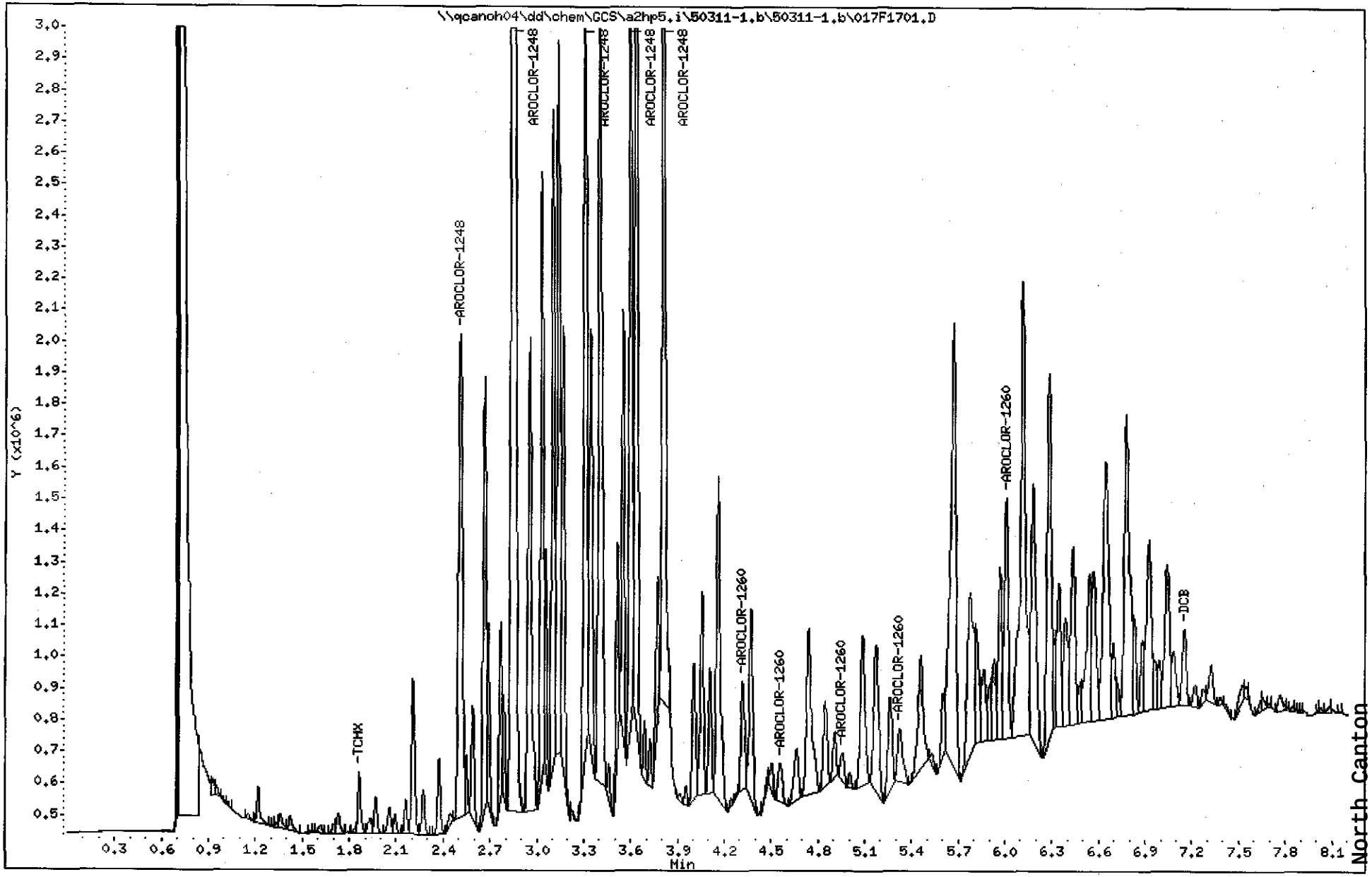
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\017F1701.D
Date : 11-MAR-2005 20:00
Client ID: S-030105-JH-001
Sample Info: G5C751AA.50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample *ID: S-030105-JH-002*

GC Semivolatiles

Lot-Sample #...:	A5C020144-002	**Work Order #...:**	G5C761AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:05	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.19 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	**29000**	**1900**	**ug/kg**
Aroclor 1248	ND	1900	ug/kg
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	214 DIL,*	(10 - 172)
Decachlorobiphenyl	1130 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 018F1801.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\018F1801.D
Lab Smp Id: G5C761AA Client Smp ID: S-030105-JH-002
Inj Date : 11-MAR-2005 20:12
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C761AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 18
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.190	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.861	1.860	0.001	193894	9e-004	14.20			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Operator disabled compound identification.								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.204	2.206	-0.002	3752304	1.41265	23400	75.00- 125.00	100.00	(M)
2.504	2.505	-0.001	5806311	1.60016	26500	101.31- 168.85	154.74	
2.848	2.850	-0.002	11566100	1.78707	29600	185.46- 309.11	308.24	
2.950	2.952	-0.002	5001520	1.45743	24140	95.29- 158.82	133.29	
3.305	3.307	-0.002	4558021	1.64924	27310	76.10- 126.84	121.47	
Average of Peak Concentrations =					26190			

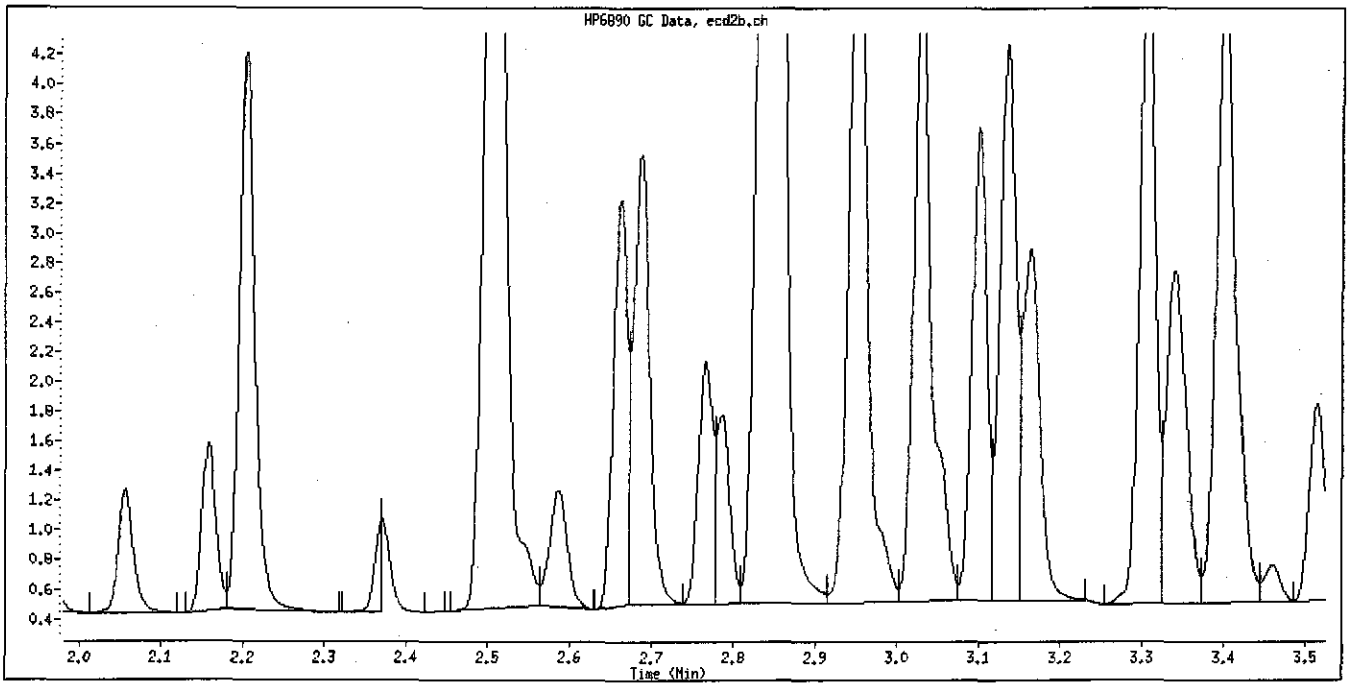
Data File: 018F1801.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.316	4.335	-0.019	379763	0.07729	1280	80.00- 120.00	100.00(M)
4.557	4.545	0.012	148083	0.02611	432.5	87.22- 145.36	38.99
4.952	4.942	0.010	121300	0.02217	367.1	86.81- 144.68	31.94
5.350	5.364	-0.014	219375	0.05849	968.7	57.97- 96.61	57.77
6.005	5.997	0.008	1392492	0.25659	4250	85.17- 141.95	366.67
		Average of Peak Concentrations =			1460		
$ 9 DCB					CAS #: 2051-24-3		
7.150	7.135	0.015	427875	0.00453	74.98		(R)

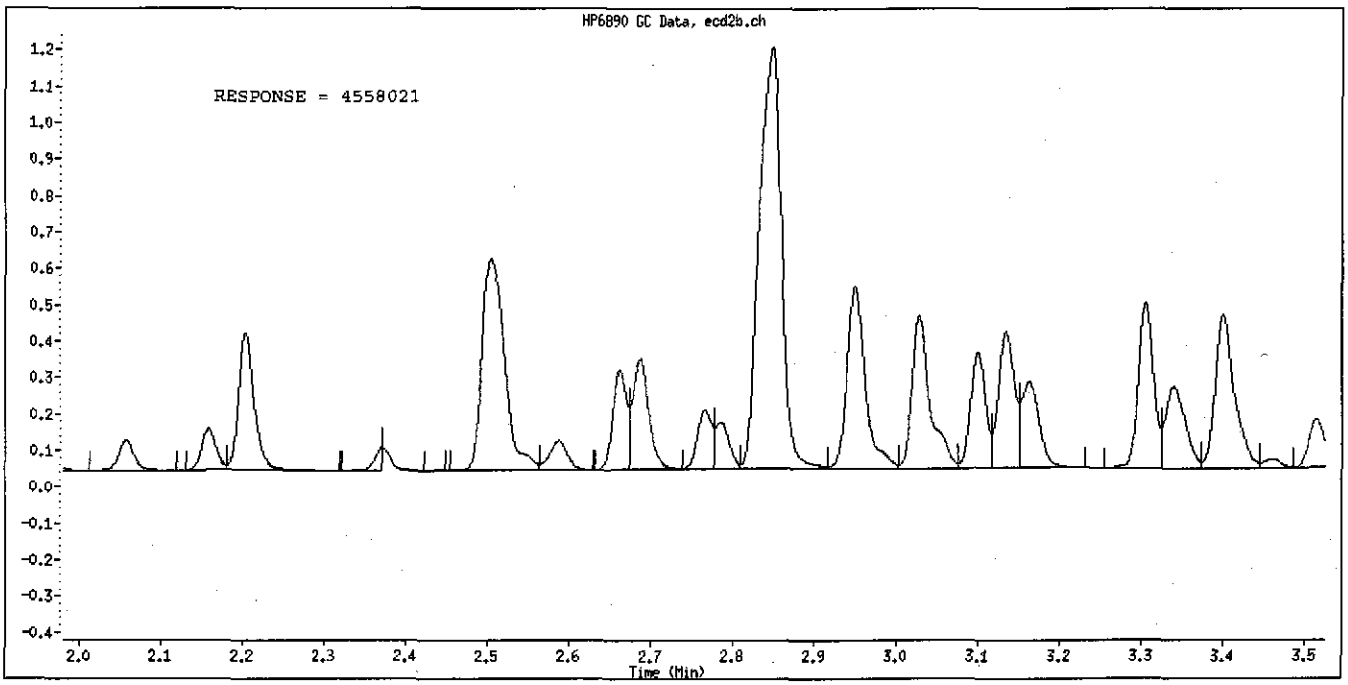
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 20:12
Instrument ID: a2hp5.i
Client ID: S-030105-JH-002
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



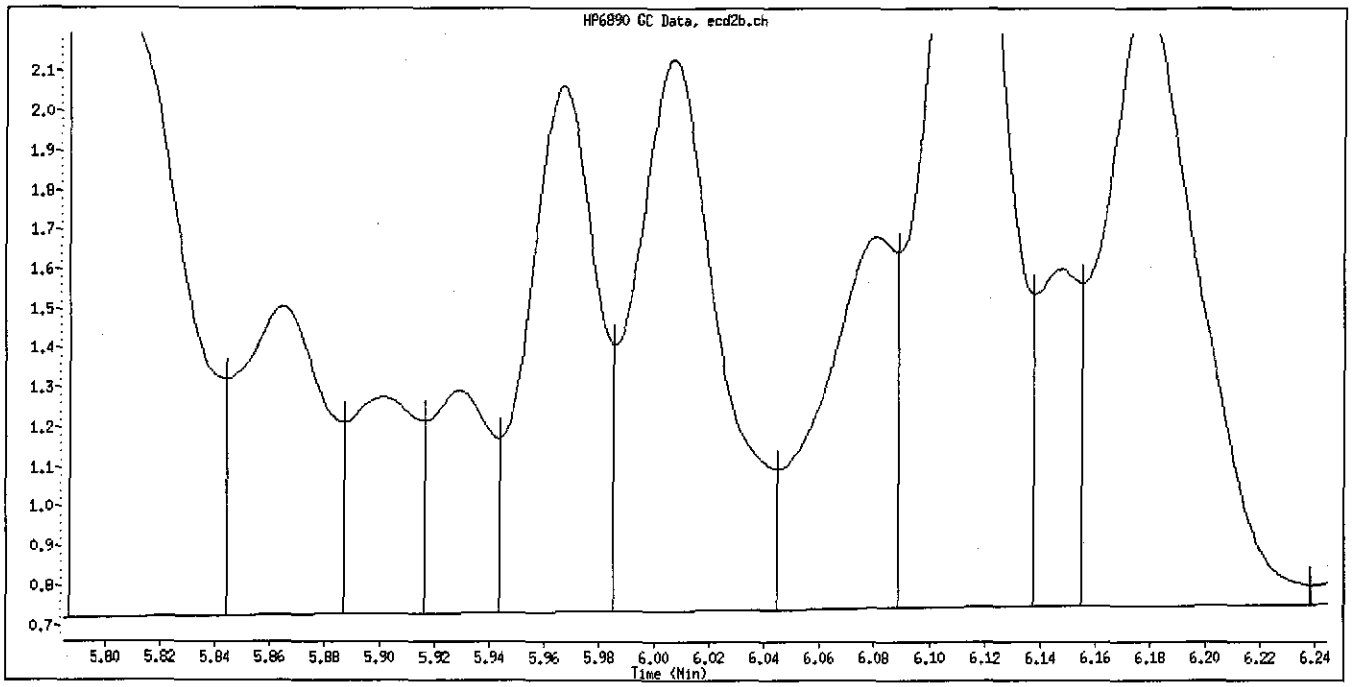
Original Integration



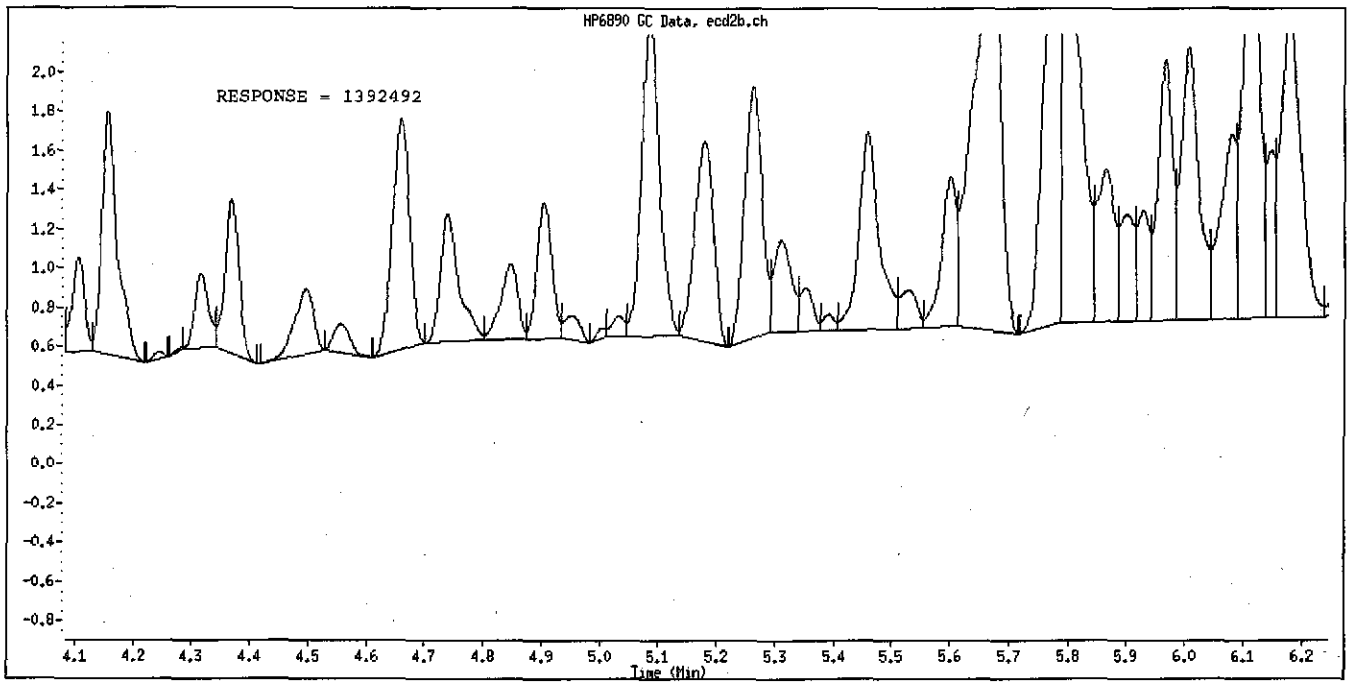
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 20:12
Instrument ID: a2hp5.i
Client ID: S-030105-JH-002
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



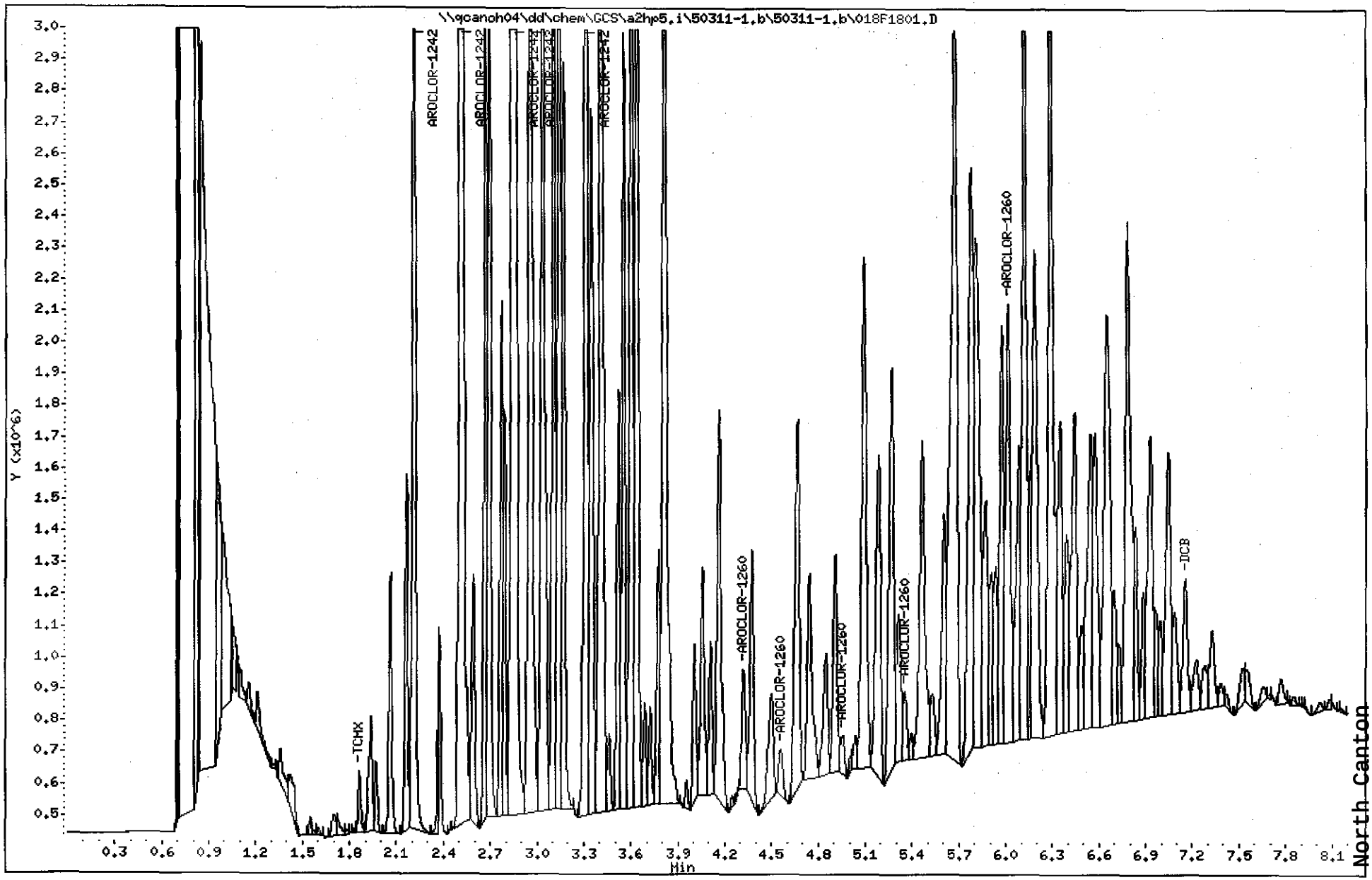
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\018F1801.D
Date : 11-MAR-2005 20:12
Client ID: S-030105-JH-002
Sample Info: C5C761AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-003

GC Semivolatiles

Lot-Sample #...:	A5C020144-003	**Work Order #...:**	G5C771AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:10	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	500	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	18000	ug/kg
Aroclor 1221	ND	18000	ug/kg
Aroclor 1232	ND	18000	ug/kg
Aroclor 1242	**81000**	**18000**	**ug/kg**
Aroclor 1248	ND	18000	ug/kg
Aroclor 1254	ND	18000	ug/kg
Aroclor 1260	ND	18000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86 DIL	(10 - 172)
Decachlorobiphenyl	1580 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 019F1901.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\019F1901.D
Lab Smp Id: G5C771AA Client Smp ID: S-030105-JH-003
Inj Date : 11-MAR-2005 20:24
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C771AA,500
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 19
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	7741	3e-005	5.675		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	2294044	0.86365	143100	75.00- 125.00	100.00(M)
2.512	2.505	0.007	1770532	0.48794	80860	101.31- 168.85	77.18
2.849	2.850	-0.001	3688371	0.56989	94450	185.46- 309.11	160.78
2.946	2.952	-0.006	403690	0.11763	19500	95.29- 158.82	17.60
3.304	3.307	-0.003	514470	0.18615	30850	76.10- 126.84	22.43
		Average of Peak Concentrations =			73760		

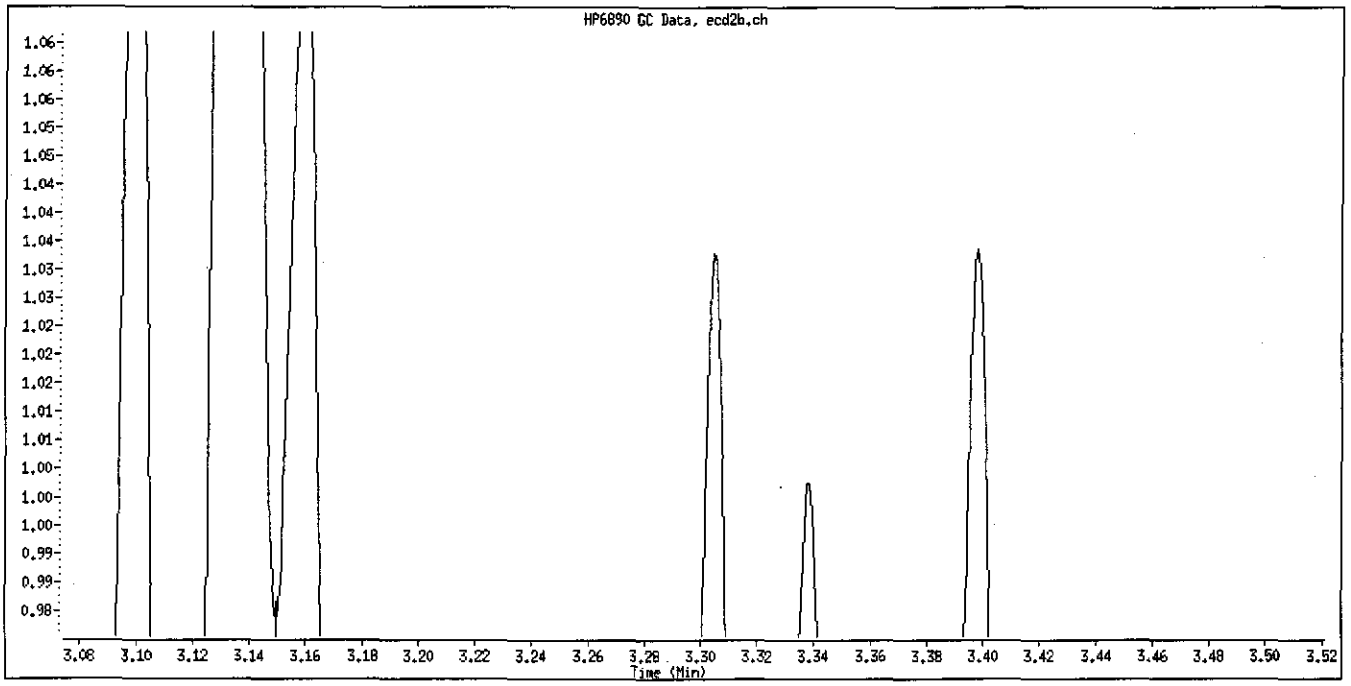
Data File: 019F1901.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Compound Not Detected								
$ 9 DCB					CAS #: 2051-24-3			
7.153	7.135	0.018	59901	6e-004	105.0			(R)

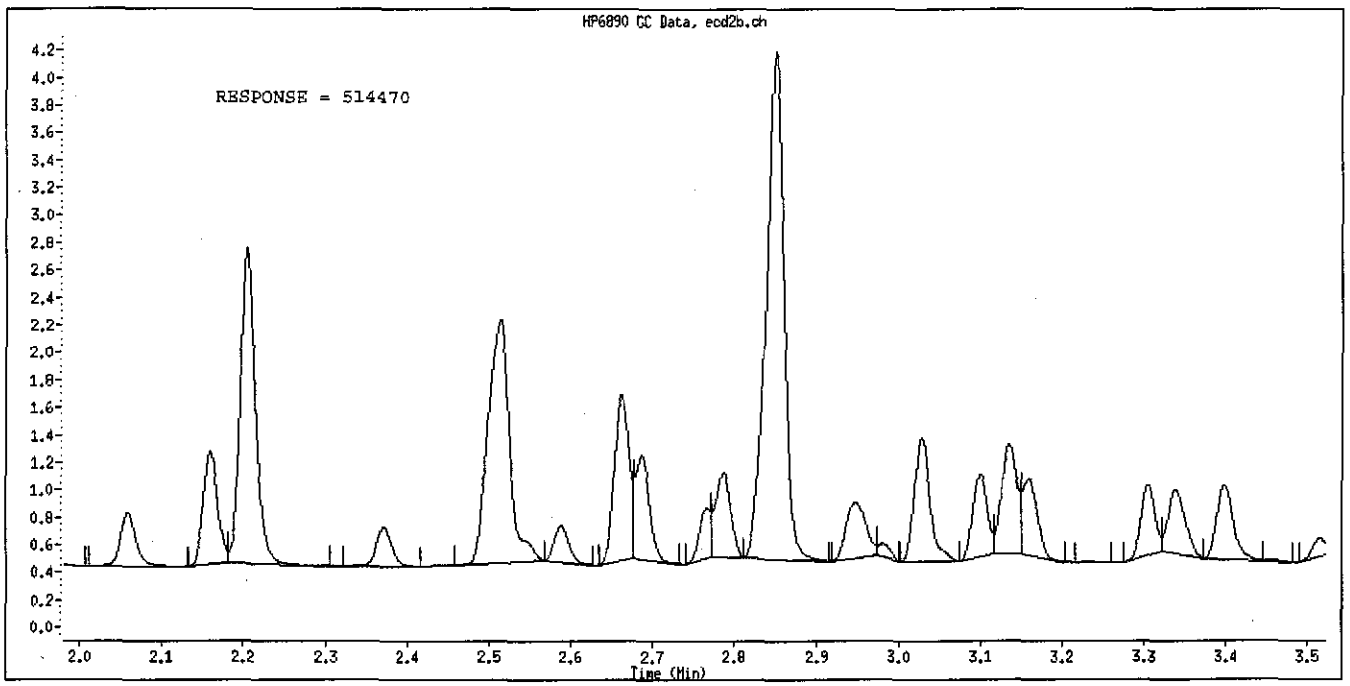
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 20:24
Instrument ID: a2hp5.i
Client ID: S-030105-JH-003
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



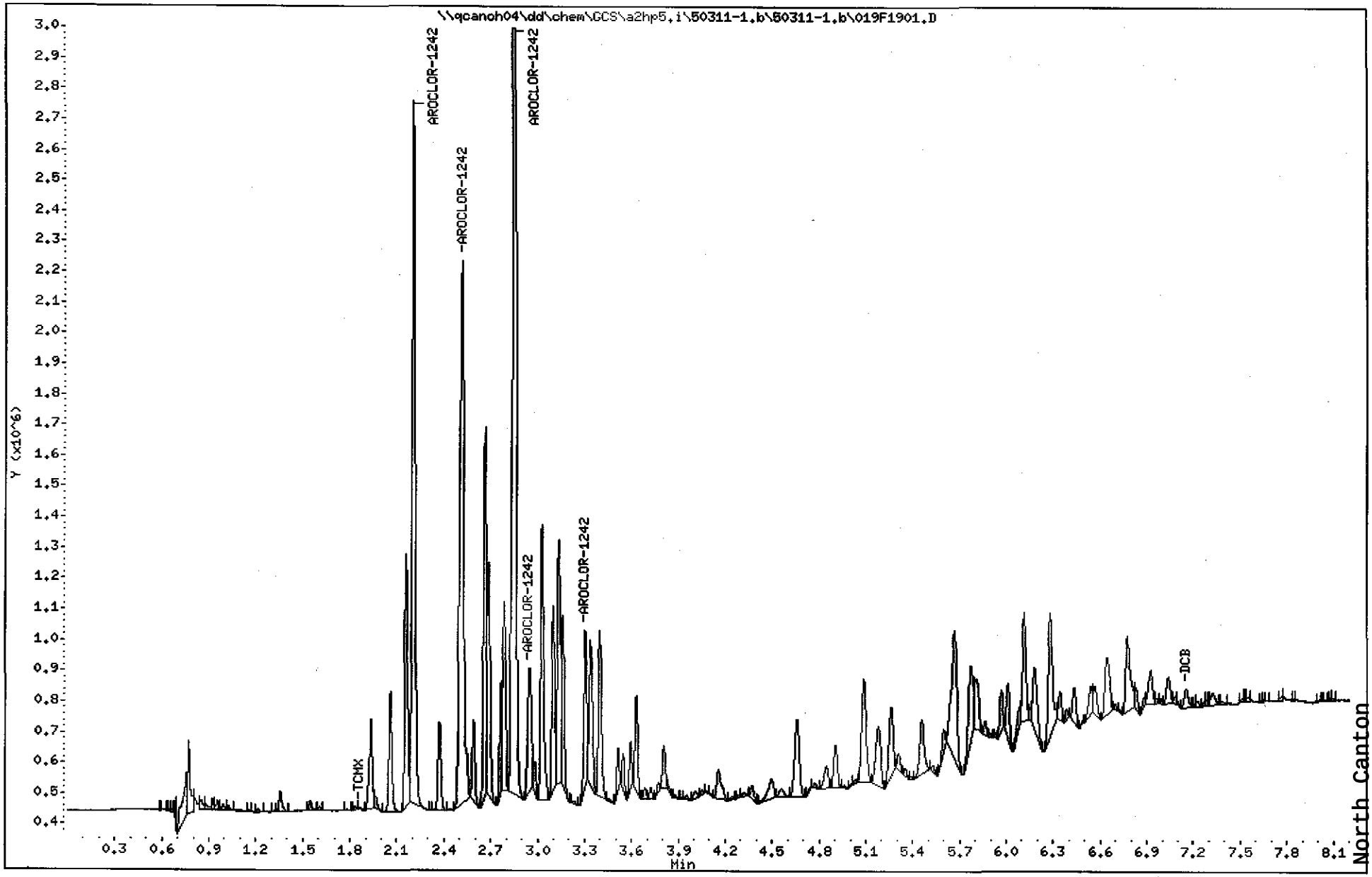
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\019F1901.D
Date : 11-MAR-2005 20:24
Client ID: S-030105-JH-003
Sample Info: G5C771AA,500
Volume Injected (uL): 1.0
Column phase: restek pest olpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-004

GC Semivolatiles

Lot-Sample #...:	A5C020144-004	**Work Order #...:**	G5C781AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:15	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.16 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	**15000**	**1900**	**ug/kg**
Aroclor 1248	ND	1900	ug/kg
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	232 DIL,*	(10 - 172)
Decachlorobiphenyl	355 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 020F2001.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\020F2001.D
Lab Smp Id: G5C781AA Client Smp ID: S-030105-JH-004
Inj Date : 11-MAR-2005 20:37
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C781AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 20
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.160	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.861	1.860	0.001	209798	9e-004	15.39			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.203	2.206	-0.003	2482097	0.93445	15490	75.00- 125.00	100.00	(M)
2.503	2.505	-0.002	3549961	0.97834	16220	101.31- 168.85	143.02	
2.847	2.850	-0.003	4812430	0.74356	12330	185.46- 309.11	193.89	
2.949	2.952	-0.003	2057275	0.59949	9938	95.29- 158.82	82.88	
3.304	3.307	-0.003	1814416	0.65652	10880	76.10- 126.84	73.10	
		Average of Peak Concentrations =			12970			

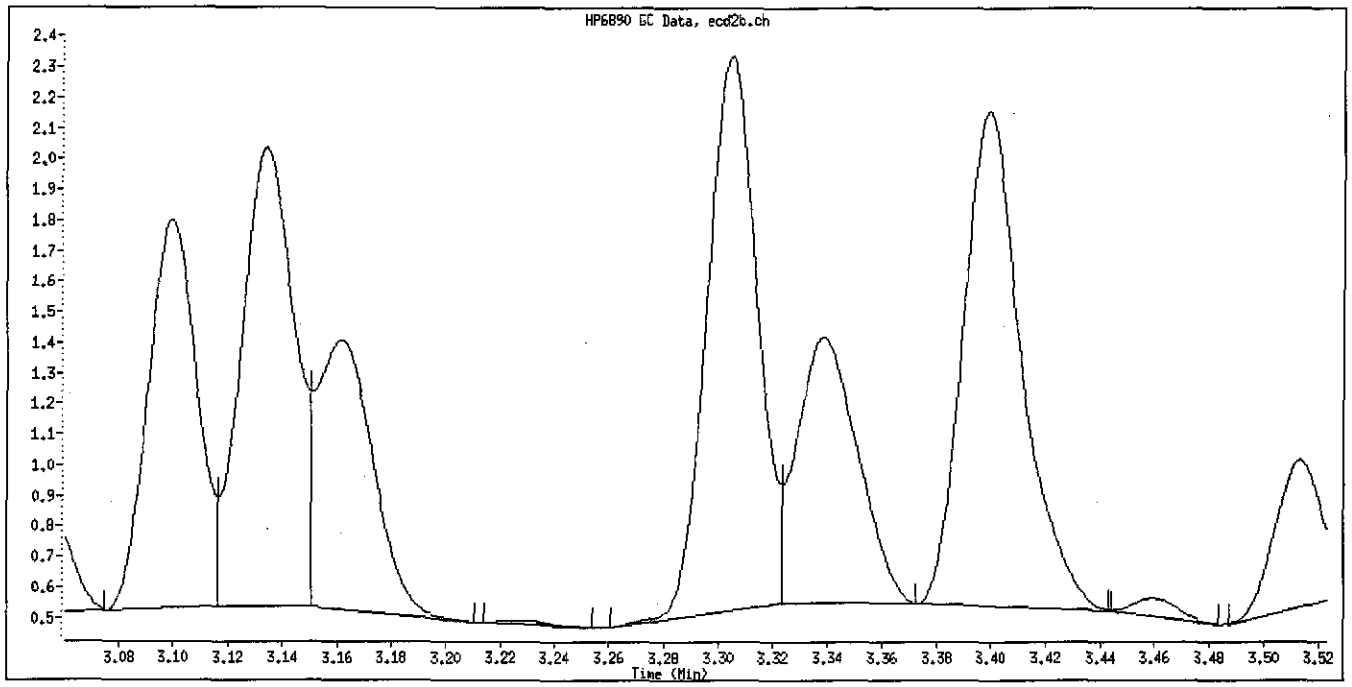
Data File: 020F2001.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
7.145	7.135	0.010	134320	0.00142	23.56		(R)

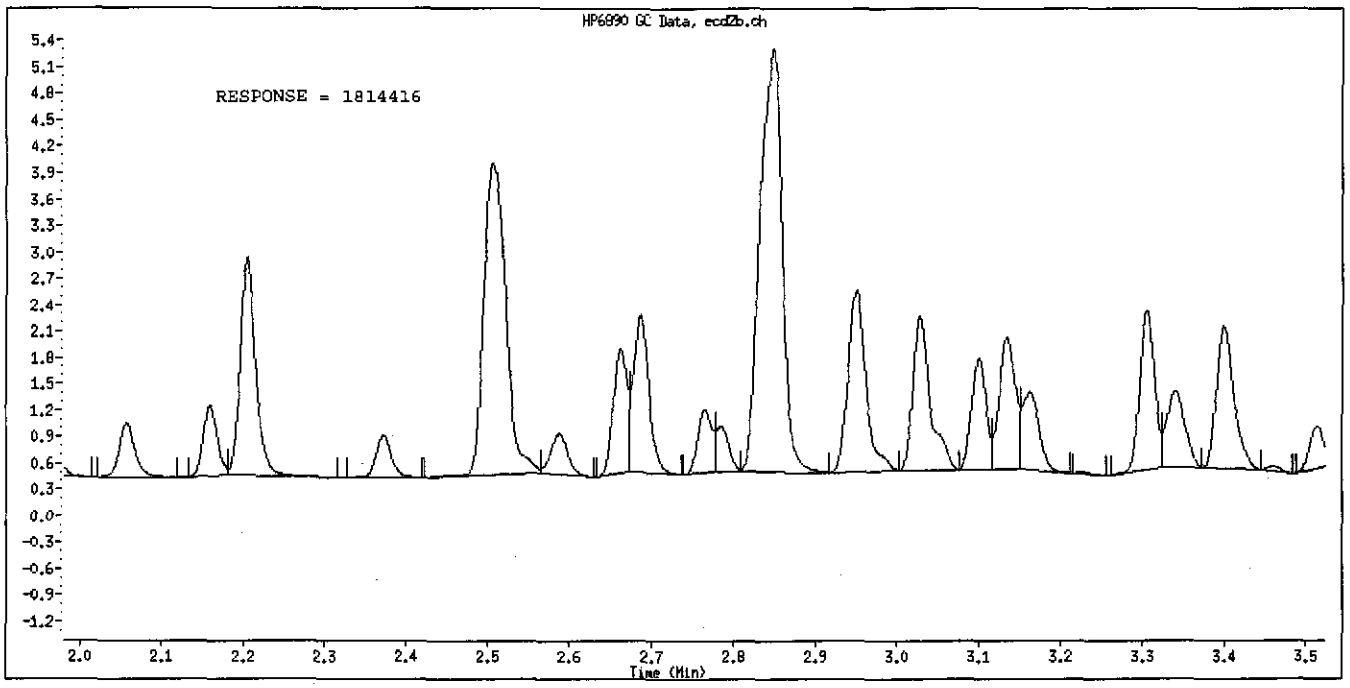
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 20:37
Instrument ID: a2hp5.i
Client ID: S-030105-JH-004
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



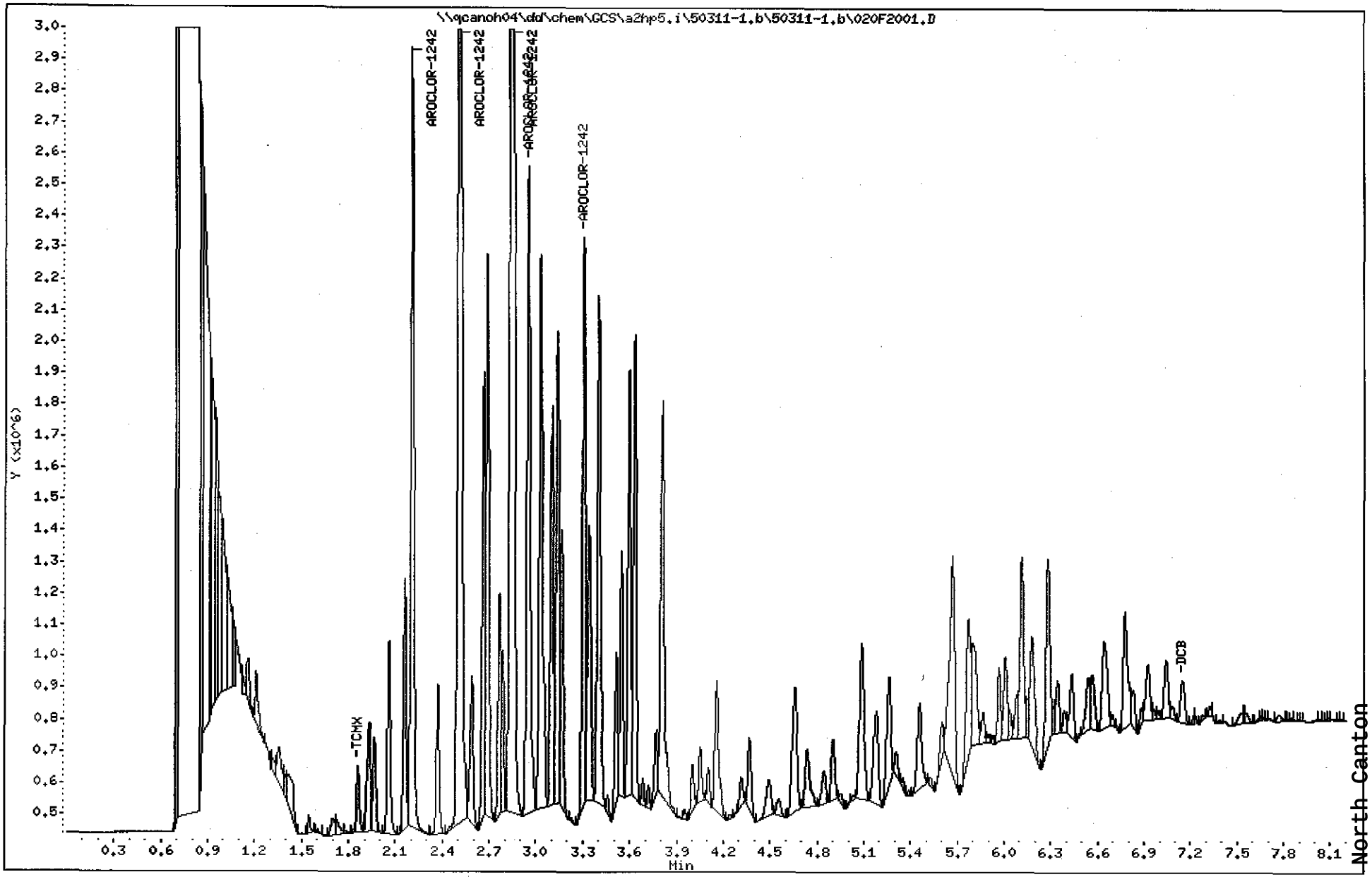
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\020F2001.D
Date : 11-MAR-2005 20:37
Client ID: S-030105-JH-004
Sample Info: G5C781AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-005

GC Semivolatiles

Lot-Sample #...:	A5C020144-005	**Work Order #...:**	G5C791AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:20	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	100	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	3600	ug/kg
Aroclor 1221	ND	3600	ug/kg
Aroclor 1232	ND	3600	ug/kg
Aroclor 1242	ND	3600	ug/kg
Aroclor 1248	**17000**	**3600**	**ug/kg**
Aroclor 1254	ND	3600	ug/kg
Aroclor 1260	ND	3600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	61 DIL	(10 - 172)
Decachlorobiphenyl	925 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 021F2101.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\021F2101.D
Lab Smp Id: G5C791AA Client Smp ID: S-030105-JH-005
Inj Date : 11-MAR-2005 20:49
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C791AA,100
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 21
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	27394	1e-004	4.027		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

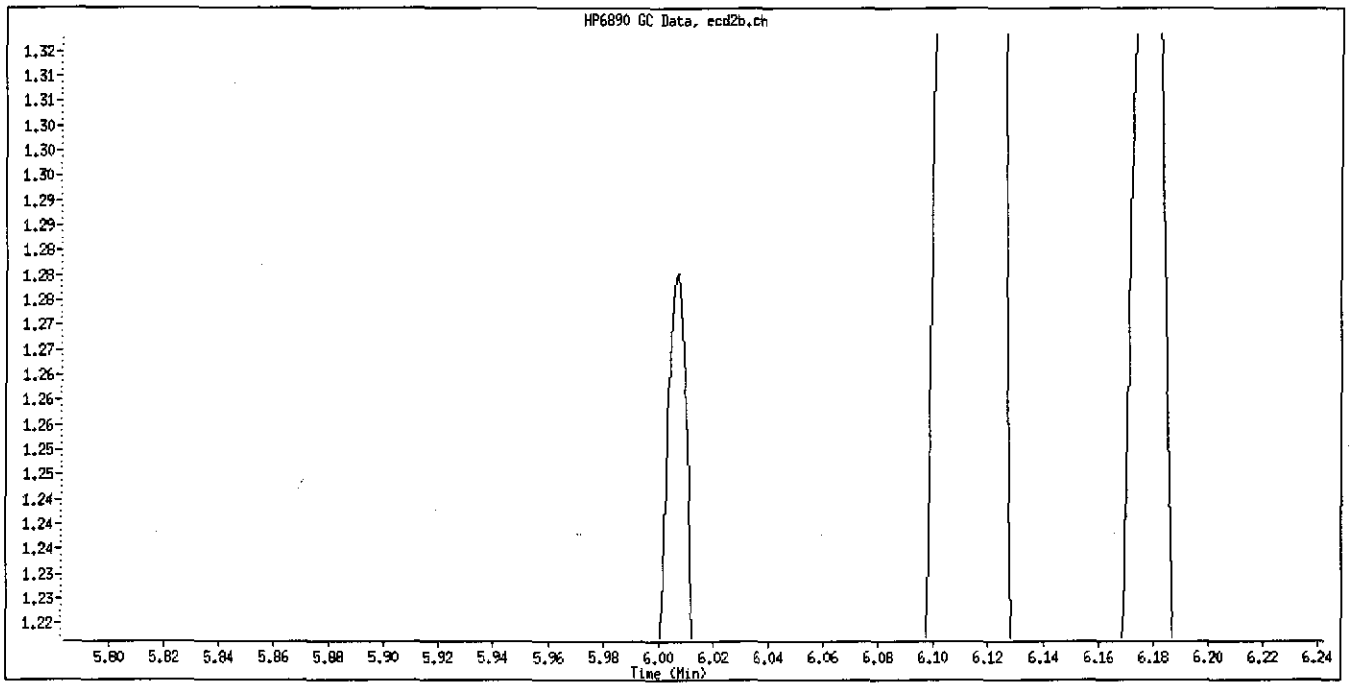
Data File: 021F2101.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	470907	0.24083	8004	75.00- 125.00	100.00(M)
2.848	2.846	0.002	3407632	0.84749	28160	157.16- 261.93	723.63
3.304	3.306	-0.002	1836127	0.37834	12570	189.24- 315.41	389.91
3.594	3.596	-0.002	1852846	0.36262	12050	193.23- 322.06	393.46
3.806	3.808	-0.002	2062357	0.45087	14980	173.06- 288.43	437.95
Average of Peak Concentrations =					15160		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.317	4.335	-0.018	215037	0.04376	1454	80.00- 120.00	100.00(M)
4.554	4.545	0.009	87335	0.01540	511.8	87.22- 145.36	40.61
4.957	4.942	0.015	66094	0.01208	401.4	86.81- 144.68	30.74
5.321	5.364	-0.043	130462	0.03478	1156	57.97- 96.61	60.67
6.007	5.997	0.010	558316	0.10288	3419	85.17- 141.95	259.64
Average of Peak Concentrations =					1388		
$ 9 DCB					CAS #: 2051-24-3		
7.152	7.135	0.017	174822	0.00185	61.47		(R)

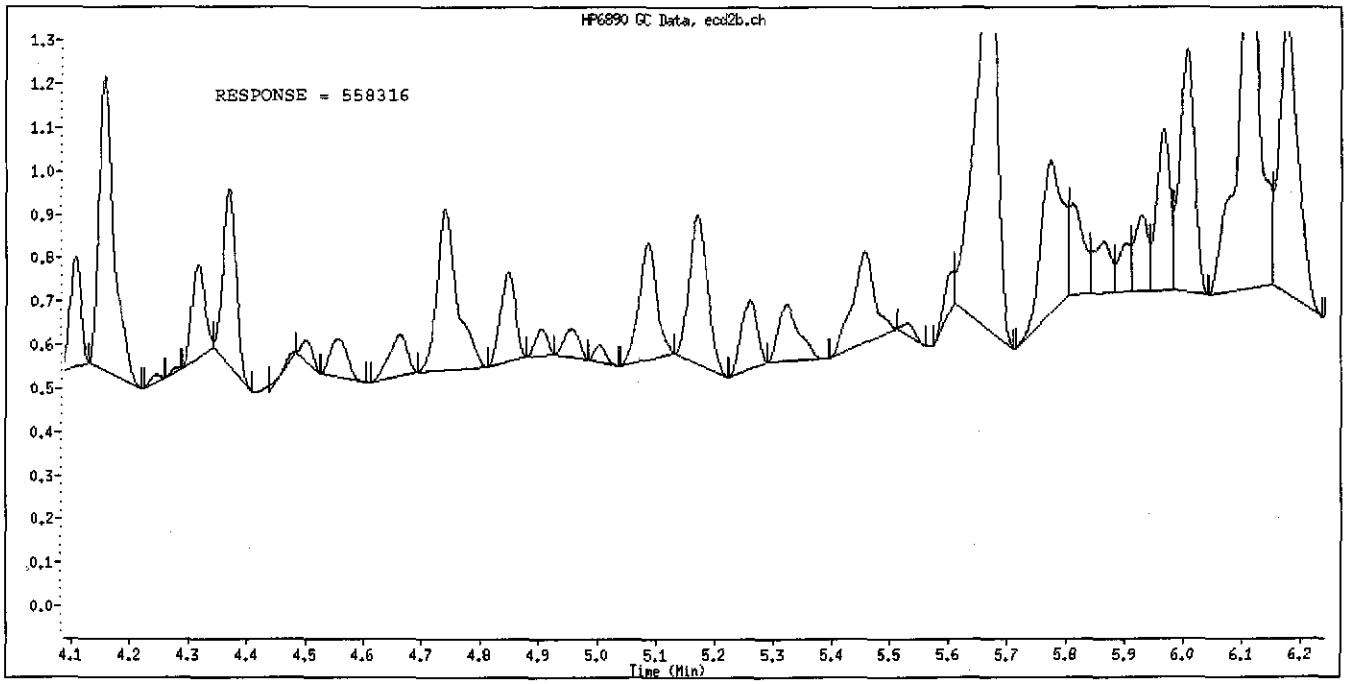
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 20:49
Instrument ID: a2hp5.i
Client ID: S-030105-JH-005
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



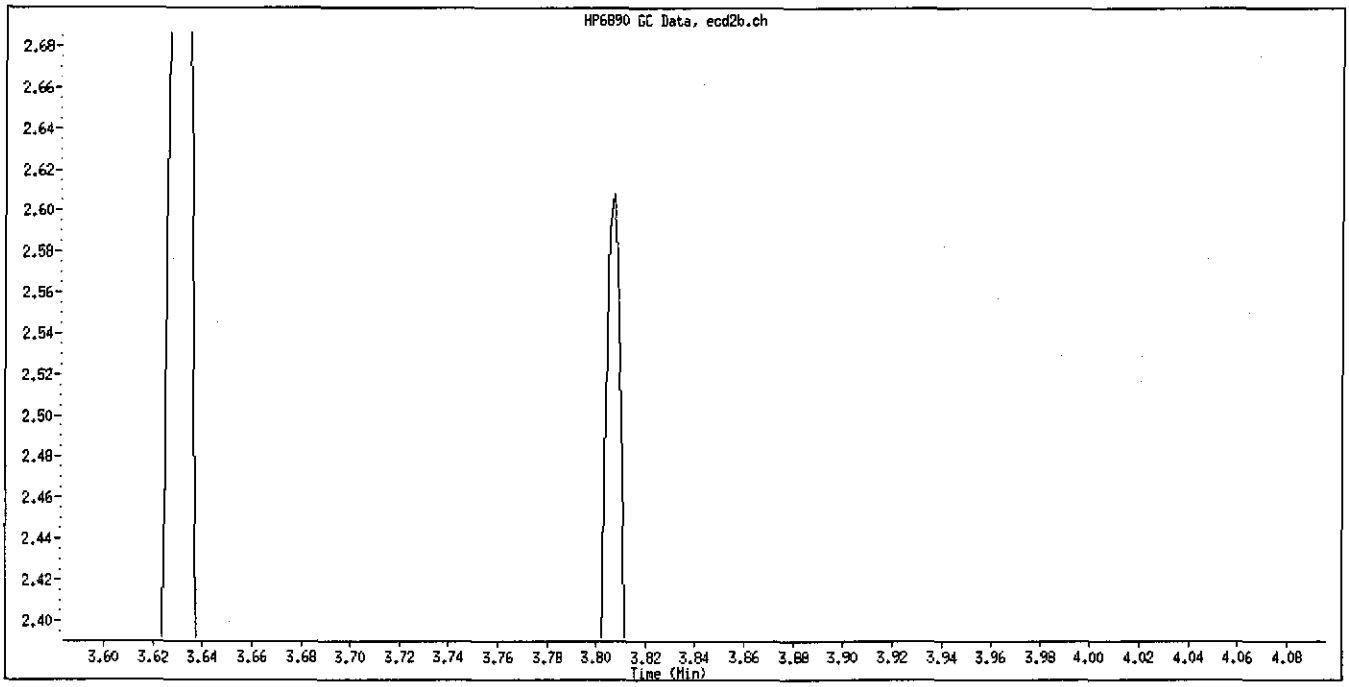
Original Integration



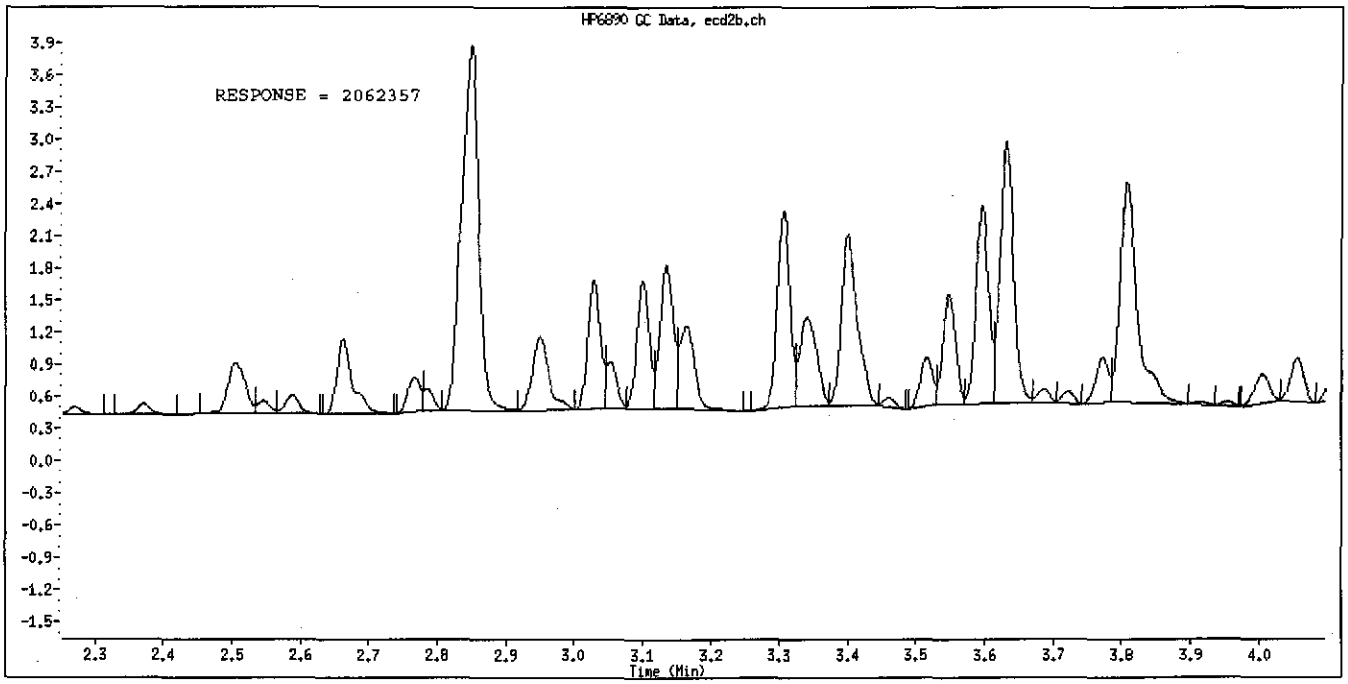
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 20:49
Instrument ID: a2hp5.i
Client ID: S-030105-JH-005
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



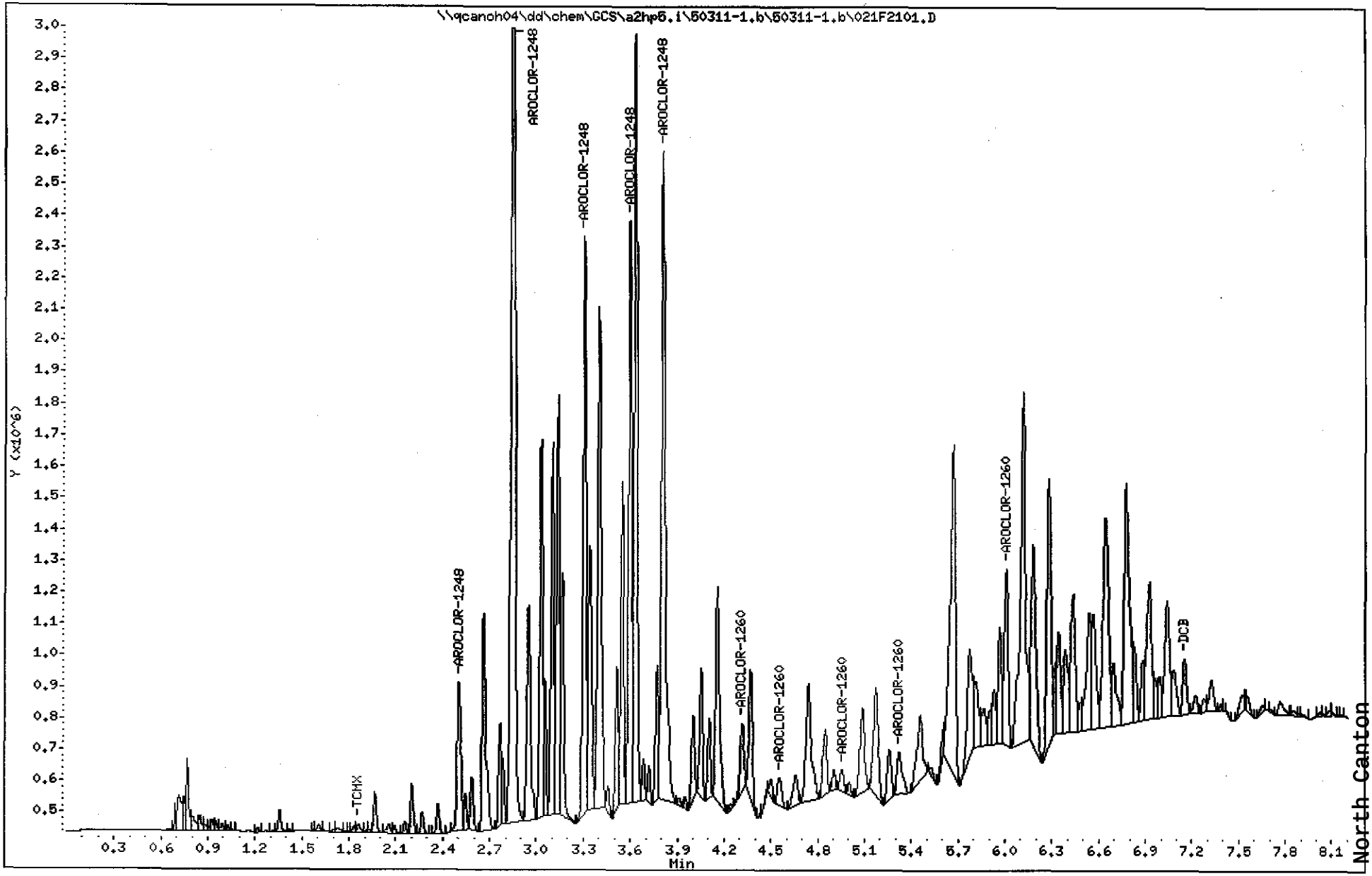
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\021F2101.D
Date : 11-MAR-2006 20:49
Client ID: S-030105-JH-005
Sample Info: G5C791AA,100
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-006

GC Semivolatiles

Lot-Sample #...:	A5C020144-006	**Work Order #...:**	G5C8A1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:25	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.6	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	ND	1800	ug/kg
Aroclor 1248	**8600**	**1800**	**ug/kg**
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99 DIL	(10 - 172)
Decachlorobiphenyl	203 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 022F2201.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\022F2201.D
Lab Smp Id: G5C8A1AA Client Smp ID: S-030105-JH-006
Inj Date : 11-MAR-2005 21:01
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8A1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 22
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	89612	4.e-004	6.585		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

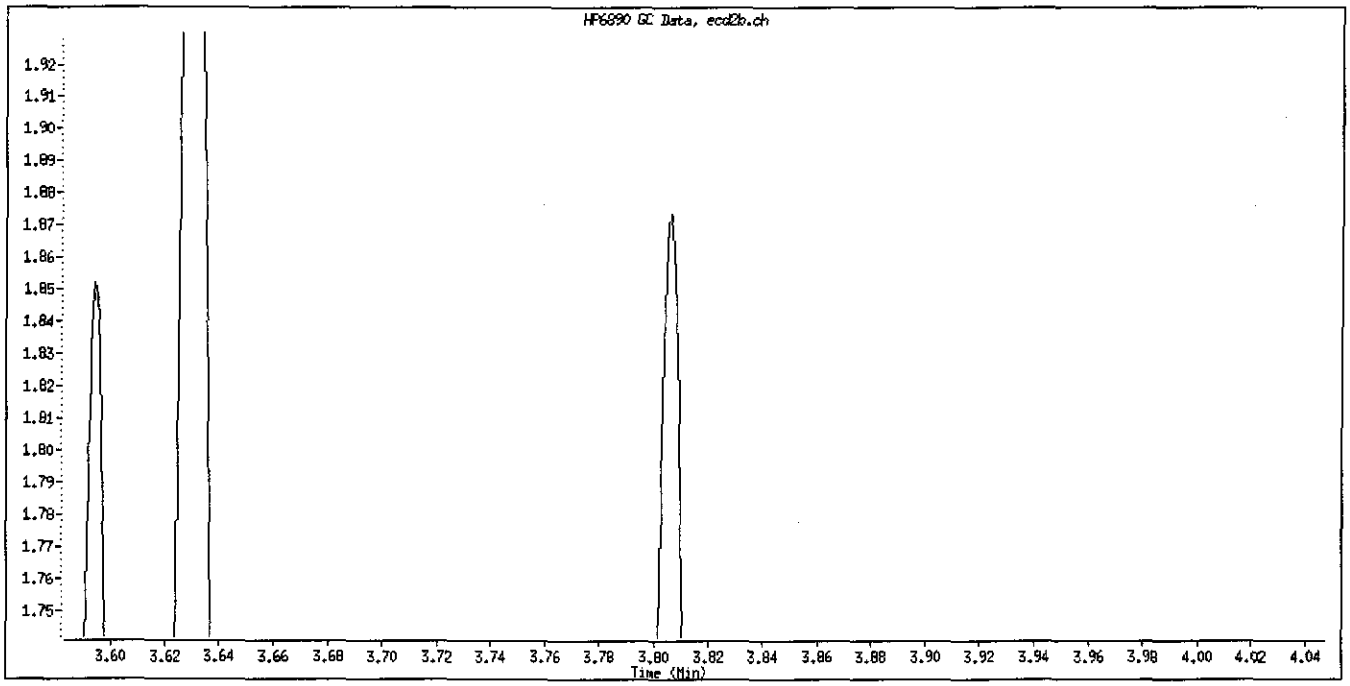
Data File: 022F2201.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.502	2.503	-0.001	1507965	0.77120	12810	75.00- 125.00	100.00(M)
2.847	2.846	0.001	2939475	0.73106	12140	157.16- 261.93	194.93
3.303	3.306	-0.003	1580261	0.32562	5409	189.24- 315.41	104.79
3.593	3.596	-0.003	1279547	0.25042	4160	193.23- 322.06	84.85
3.805	3.808	-0.003	1254472	0.27425	4556	173.06- 288.43	83.19
Average of Peak Concentrations =					7816		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.315	4.335	-0.020	136100	0.02770	460.1	80.00- 120.00	100.00(M)
4.553	4.545	0.008	42391	0.00748	124.2	87.22- 145.36	31.15
4.947	4.942	0.005	25059	0.00458	76.07	86.81- 144.68	18.41
5.349	5.364	-0.015	9367	0.00250	41.49	57.97- 96.61	6.88
6.006	5.997	0.009	178688	0.03293	546.9	85.17- 141.95	131.29
Average of Peak Concentrations =					249.8		
$ 9 DCB					CAS #: 2051-24-3		
7.148	7.135	0.013	76728	8e-004	13.48		(R)

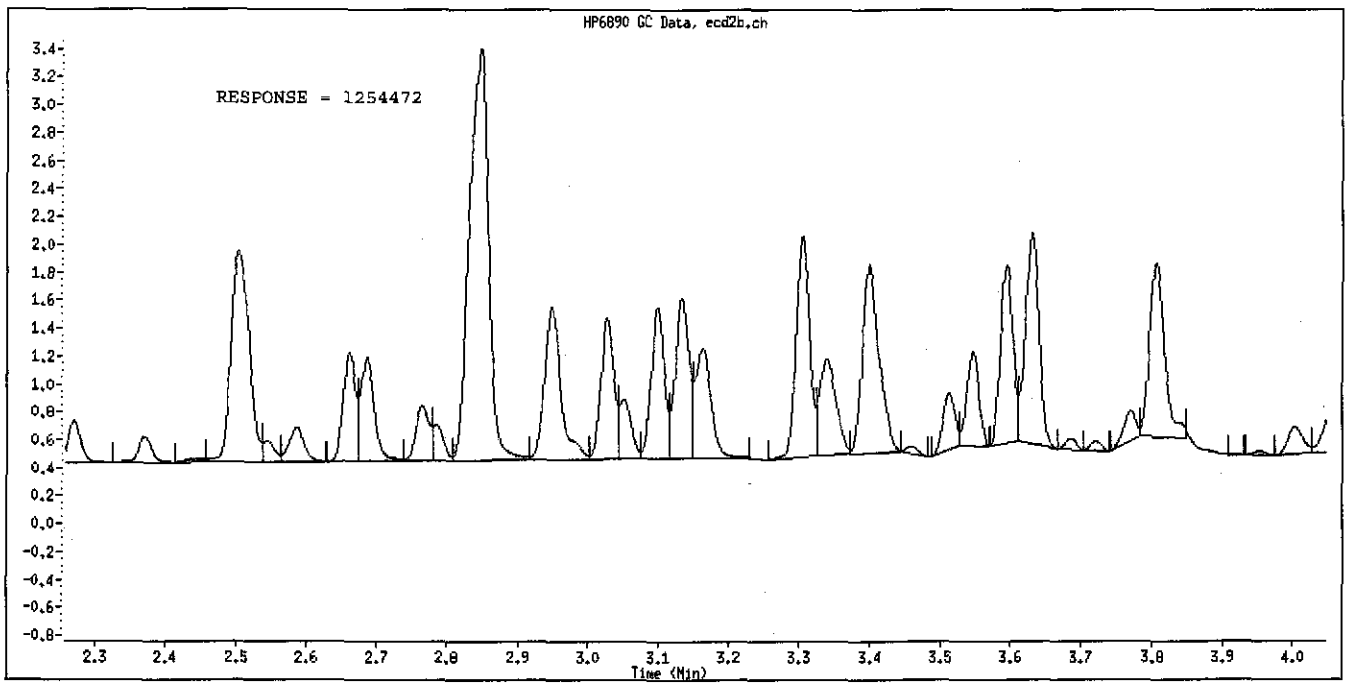
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 21:01
Instrument ID: a2hp5.i
Client ID: S-030105-JH-006
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



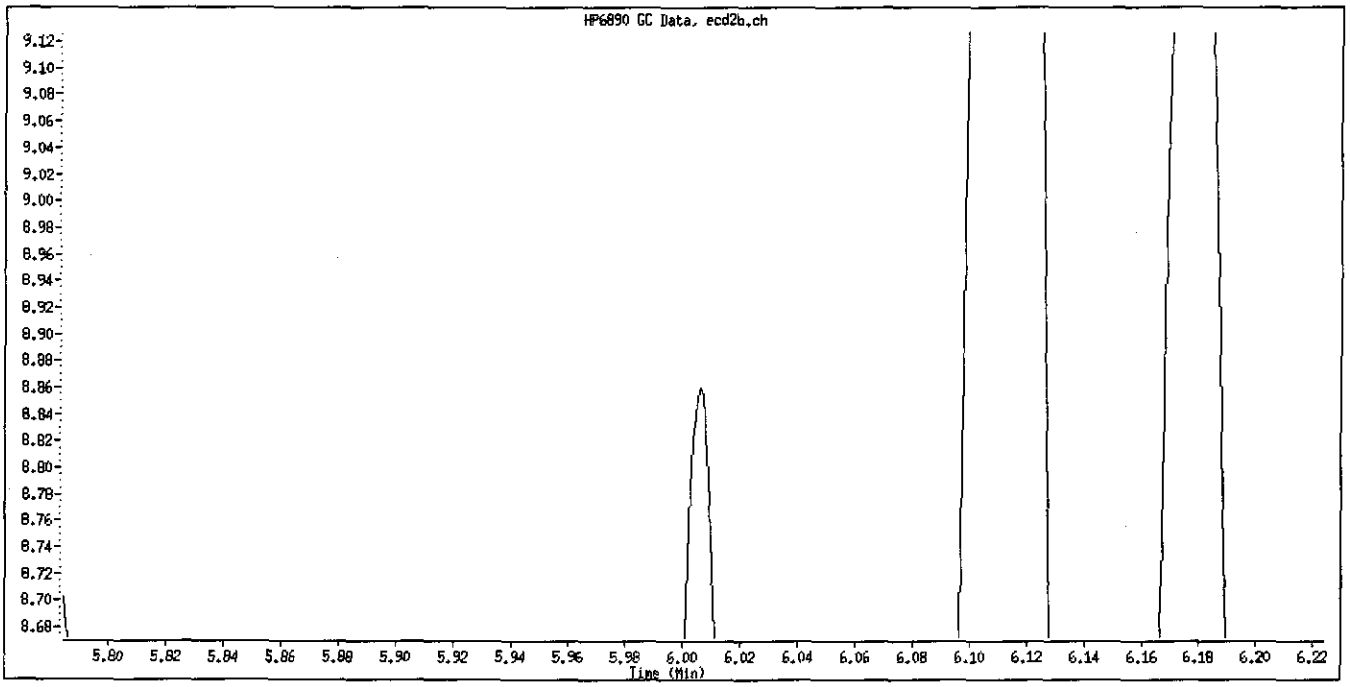
Original Integration



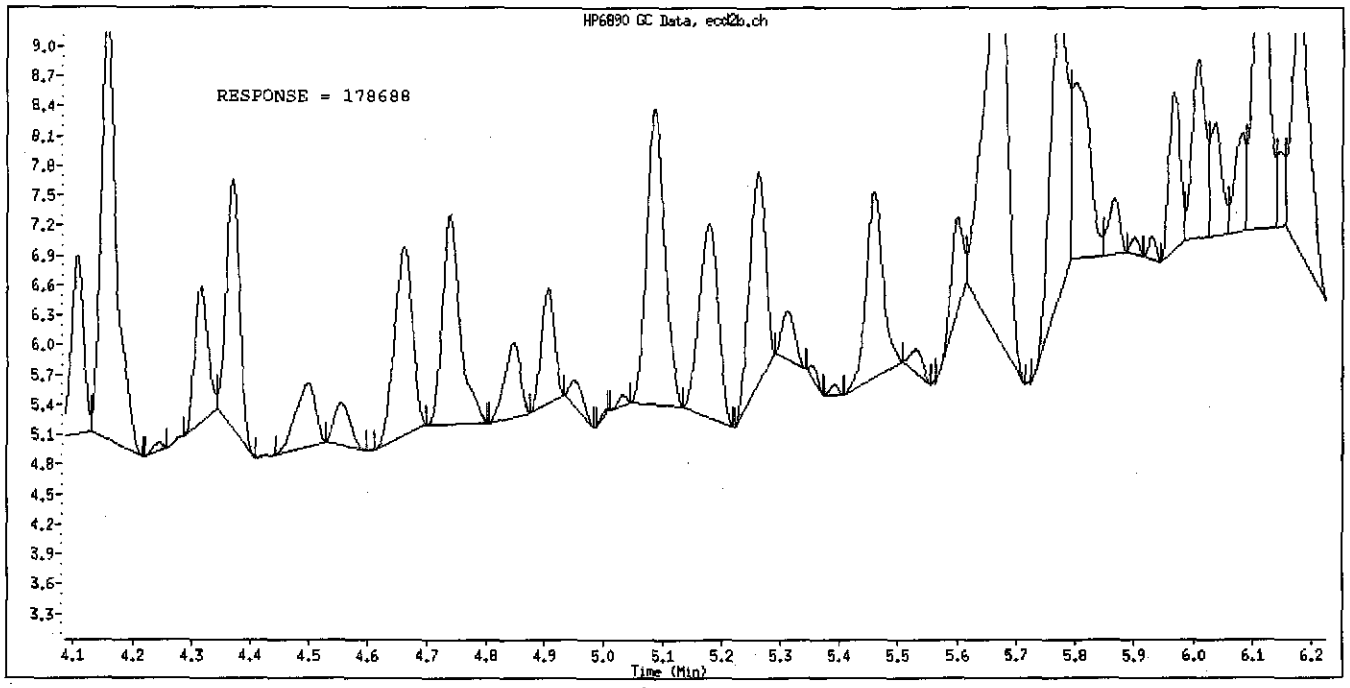
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File Name: [illegible]
Inj. Date and Time: 11-MAR-2005 21:01
Instrument ID: a2hp5.i
Client ID: S-030105-JH-006
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

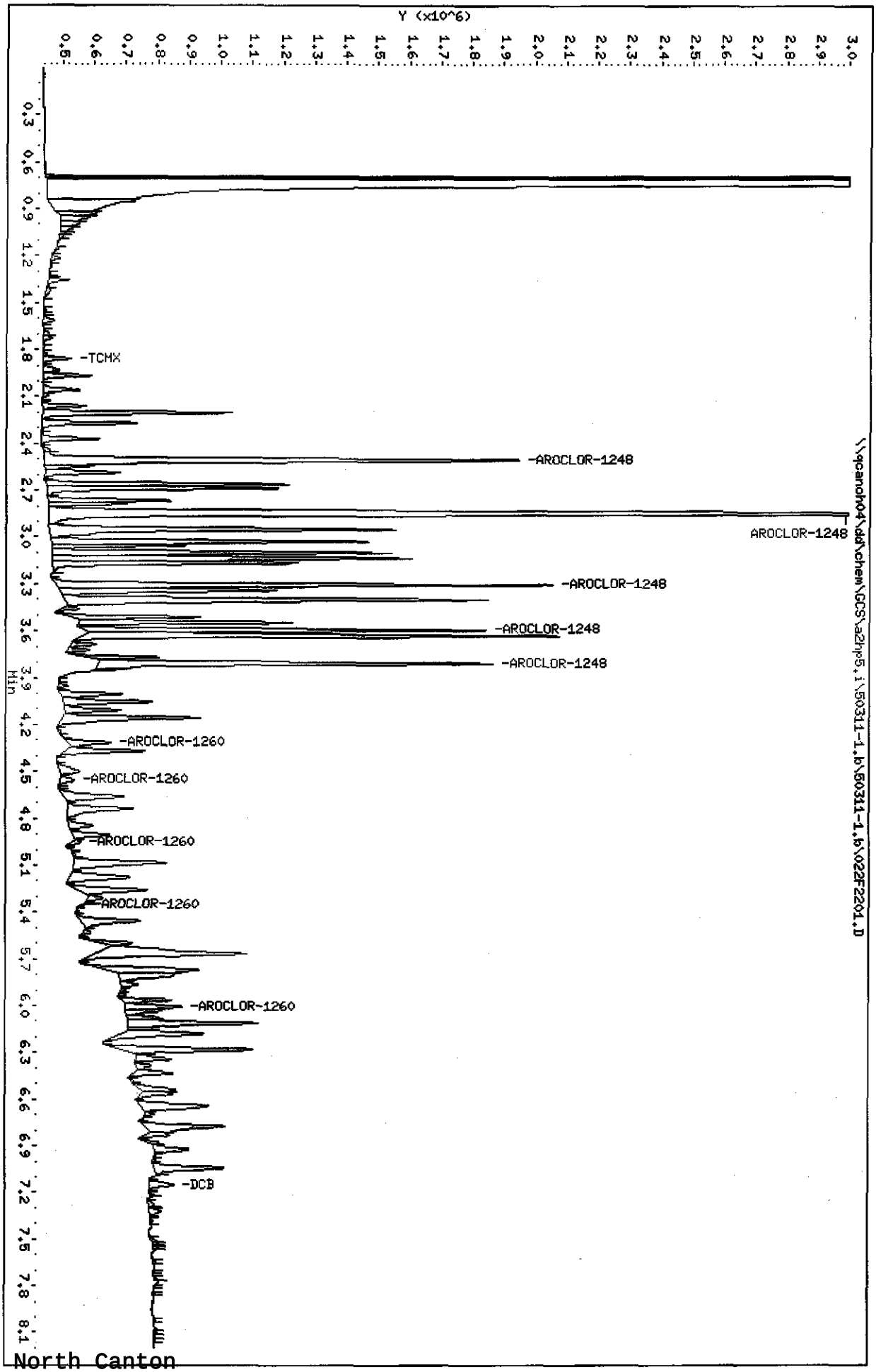


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\022F2201.D
Date : 11-MAR-2005 21:01
Client ID: S-030105-JH-006
Sample Info: GSCBA1AA.50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-007

GC Semivolatiles

Lot-Sample #...: A5C020144-007 **Work Order #...:** G5C8C1AA **Matrix.....:** SO
Date Sampled...: 03/01/05 11:30 **Date Received..:** 03/02/05
Prep Date.....: 03/03/05 **Analysis Date..:** 03/11/05
Prep Batch #...: 5061334
Dilution Factor: 1 **Initial Wgt/Vol:** 30.2 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 15 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	39	ug/kg
Aroclor 1221	ND	39	ug/kg
Aroclor 1232	ND	39	ug/kg
Aroclor 1242	ND	39	ug/kg
Aroclor 1248	ND	39	ug/kg
Aroclor 1254	ND	39	ug/kg
Aroclor 1260	ND	39	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 172)
Decachlorobiphenyl	90	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 024F2401.D
Report Date: 14-Mar-2005 15:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\024F2401.D
Lab Smp Id: G5C8C1AA Client Smp ID: S-030105-JH-007
Inj Date : 11-MAR-2005 21:26
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8C1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4199140	0.01858	6.151		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Operator disabled compound identification.							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	157388	0.05925	19.62	75.00- 125.00	100.00(M)
2.505	2.505	0.000	274347	0.07561	25.04	101.31- 168.85	174.31
2.848	2.850	-0.002	302717	0.04677	15.49	185.46- 309.11	192.34
2.958	2.952	0.006	175689	0.05120	16.95	95.29- 158.82	111.63
3.304	3.307	-0.003	127559	0.04616	15.28	76.10- 126.84	81.05
Average of Peak Concentrations =					18.48		

Data File: 024F2401.D
Report Date: 14-Mar-2005 15:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.335	0.002	132547	0.02698	8.932	80.00- 120.00	100.00(M)
4.548	4.545	0.003	115599	0.02038	6.750	87.22- 145.36	87.21
4.946	4.942	0.004	184549	0.03373	11.17	86.81- 144.68	139.23
5.333	5.364	-0.031	50070	0.01335	4.420	57.97- 96.61	37.78
6.000	5.997	0.003	195453	0.03602	11.92	85.17- 141.95	147.46
		Average of Peak Concentrations =			8.639		
$ 9 DCB					CAS #: 2051-24-3		
7.137	7.135	0.002	1698000	0.01797	5.949		

QC Flag Legend

M - Compound response manually integrated.

Data File Name: [illegible]

Inj. Date and Time: 11-MAR-2005 21:26

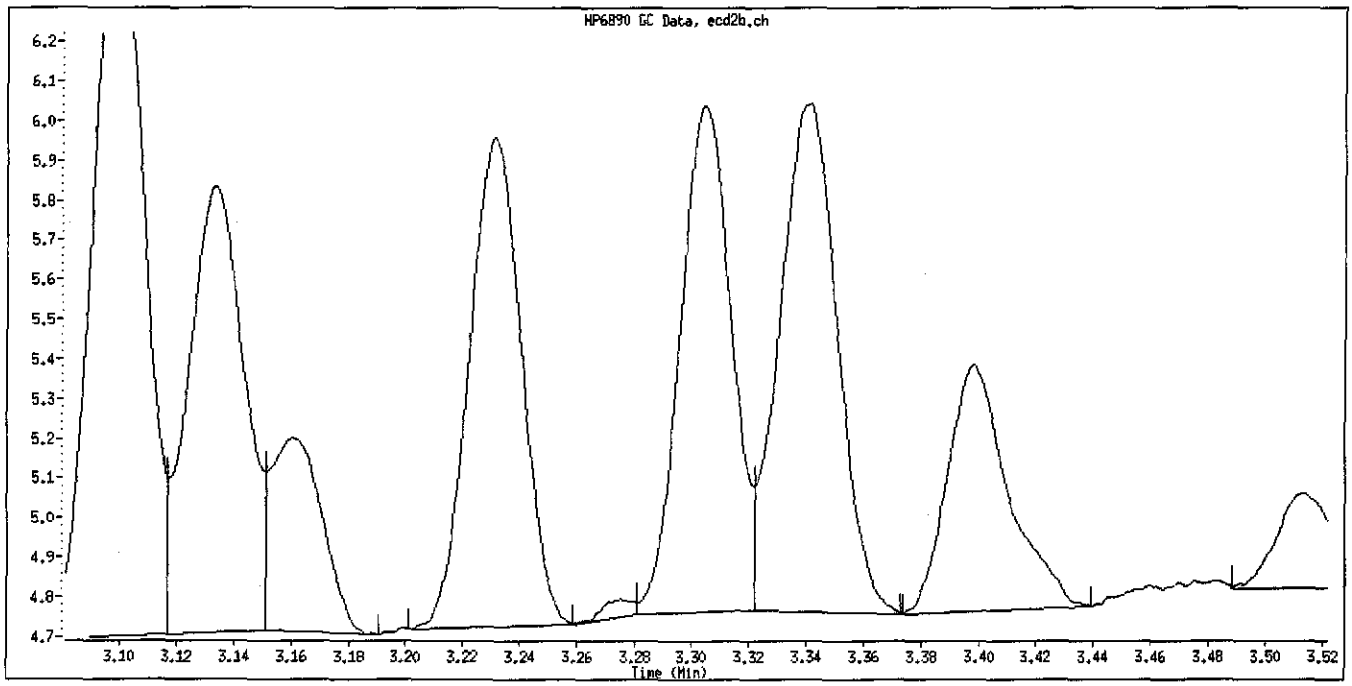
Instrument ID: a2hp5.i

Client ID: S-030105-JH-007

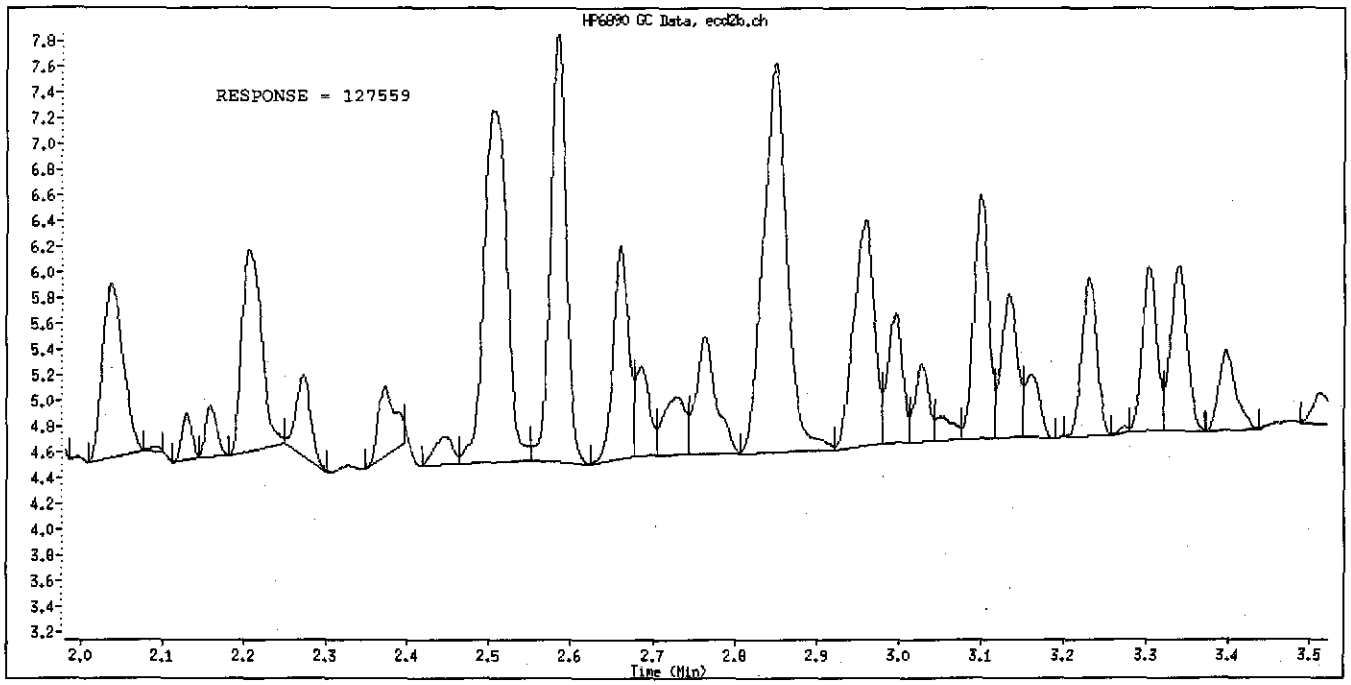
Compound Name: AROCLOR-1242

CAS #: 53469-21-9

Report Date: 03/14/2005



Original Integration



Manual Integration

Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File Name: [illegible]

Inj. Date and Time: 11-MAR-2005 21:26

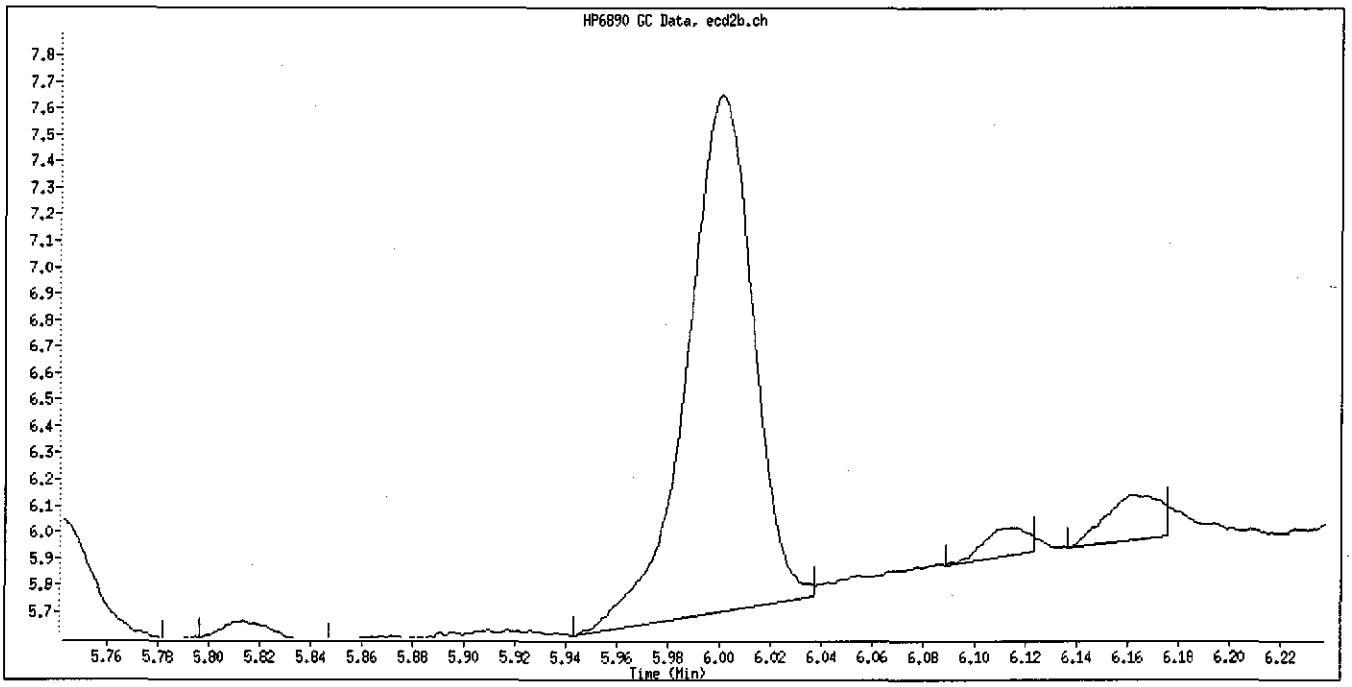
Instrument ID: a2hp5.i

Client ID: S-030105-JH-007

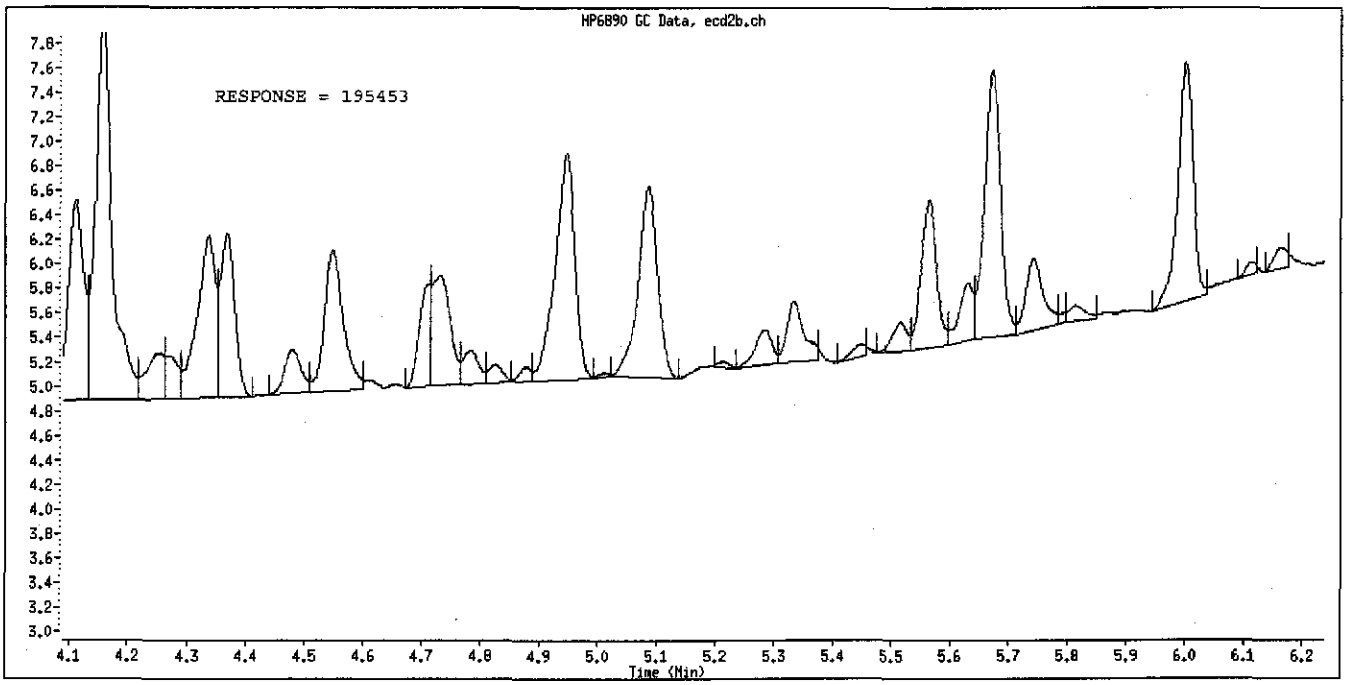
Compound Name: AROCLOR-1260

CAS #: 11096-82-5

Report Date: 03/14/2005



Original Integration



Manual Integration

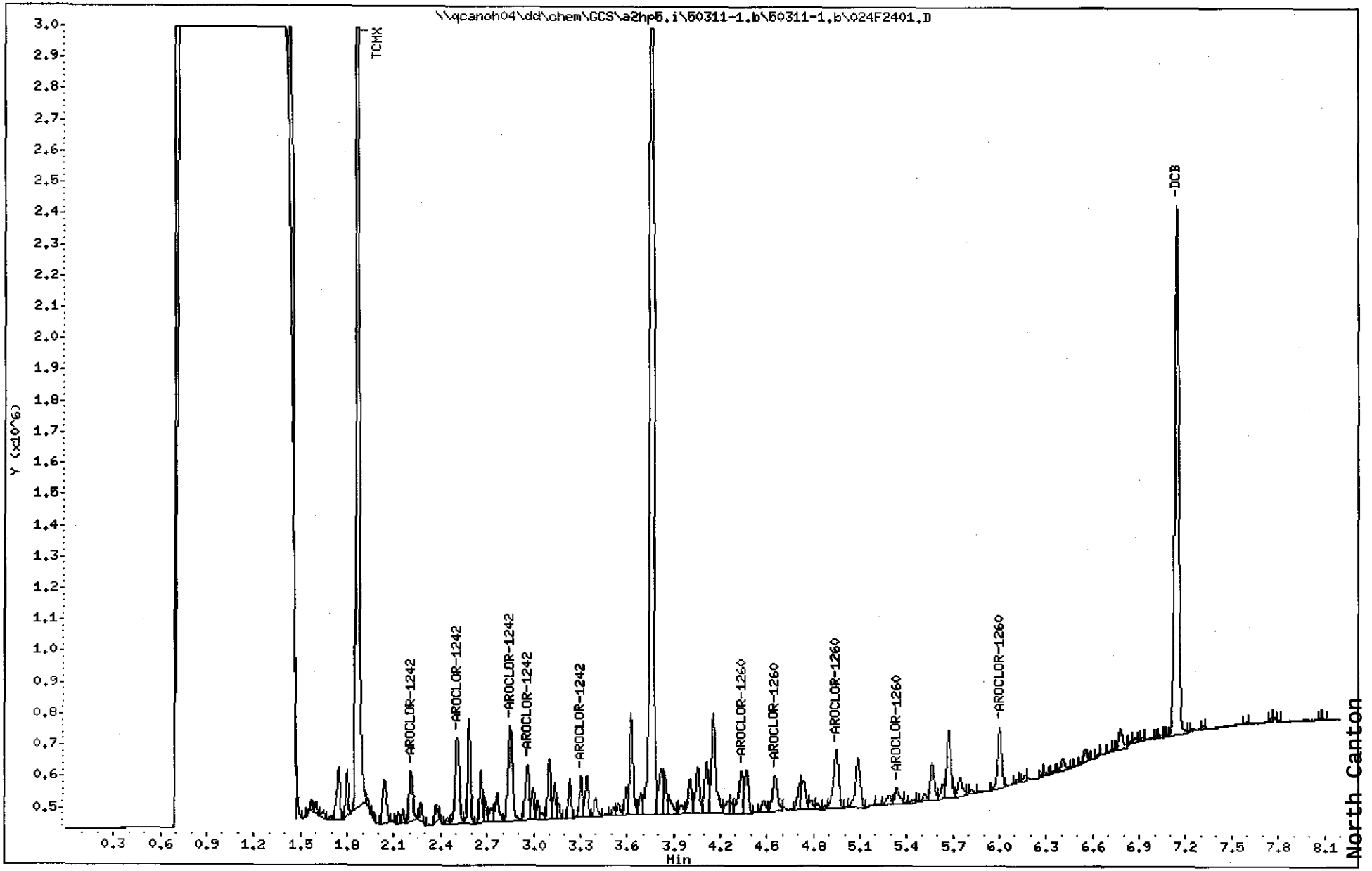
Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\024F2401.D
Date : 11-MAR-2005 21:26
Client ID: S-030105-JH-007
Sample Info: C5C8C1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-008

GC Semivolatiles

Lot-Sample #...:	A5C020144-008	**Work Order #...:**	G5C8D1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:35	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	2	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	74	ug/kg
Aroclor 1221	ND	74	ug/kg
Aroclor 1232	ND	74	ug/kg
Aroclor 1242	ND	74	ug/kg
Aroclor 1248	**280**	**74**	**ug/kg**
Aroclor 1254	ND	74	ug/kg
Aroclor 1260	ND	74	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(10 - 172)
Decachlorobiphenyl	102	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 025F2501.D
Report Date: 14-Mar-2005 15:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\025F2501.D
Lab Smp Id: G5C8D1AA Client Smp ID: S-030105-JH-008
Inj Date : 11-MAR-2005 21:38
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8D1AA,2
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 25
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	2220753	0.00982	6.538		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

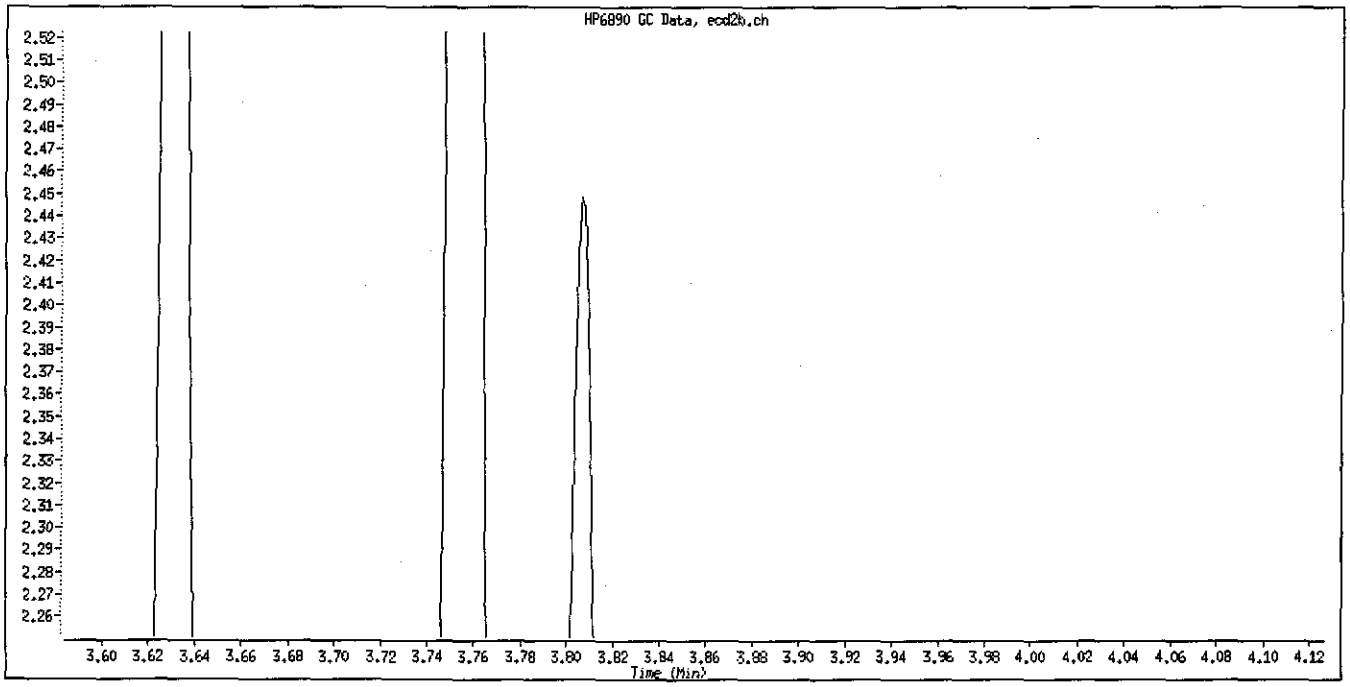
Data File: 025F2501.D
Report Date: 14-Mar-2005 15:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Operator disabled compound identification.							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	381734	0.19523	129.9	75.00- 125.00	100.00(M)
2.849	2.846	0.003	2683942	0.66750	444.3	157.16- 261.93	703.09
3.304	3.306	-0.002	1512836	0.31172	207.5	189.24- 315.41	396.31
3.594	3.596	-0.002	1524708	0.29840	198.6	193.23- 322.06	399.42
3.806	3.808	-0.002	1882818	0.41162	274.0	173.06- 288.43	493.23
Average of Peak Concentrations =					250.8		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.315	4.335	-0.020	226750	0.04615	30.71	80.00- 120.00	100.00(M)
4.547	4.545	0.002	98845	0.01743	11.60	87.22- 145.36	43.59
4.950	4.942	0.008	81579	0.01491	9.922	86.81- 144.68	35.98
5.384	5.364	0.020	20322	0.00542	3.606	57.97- 96.61	8.96
6.003	5.997	0.006	132679	0.02445	16.27	85.17- 141.95	58.51
Average of Peak Concentrations =					14.42		
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	968069	0.01024	6.817		

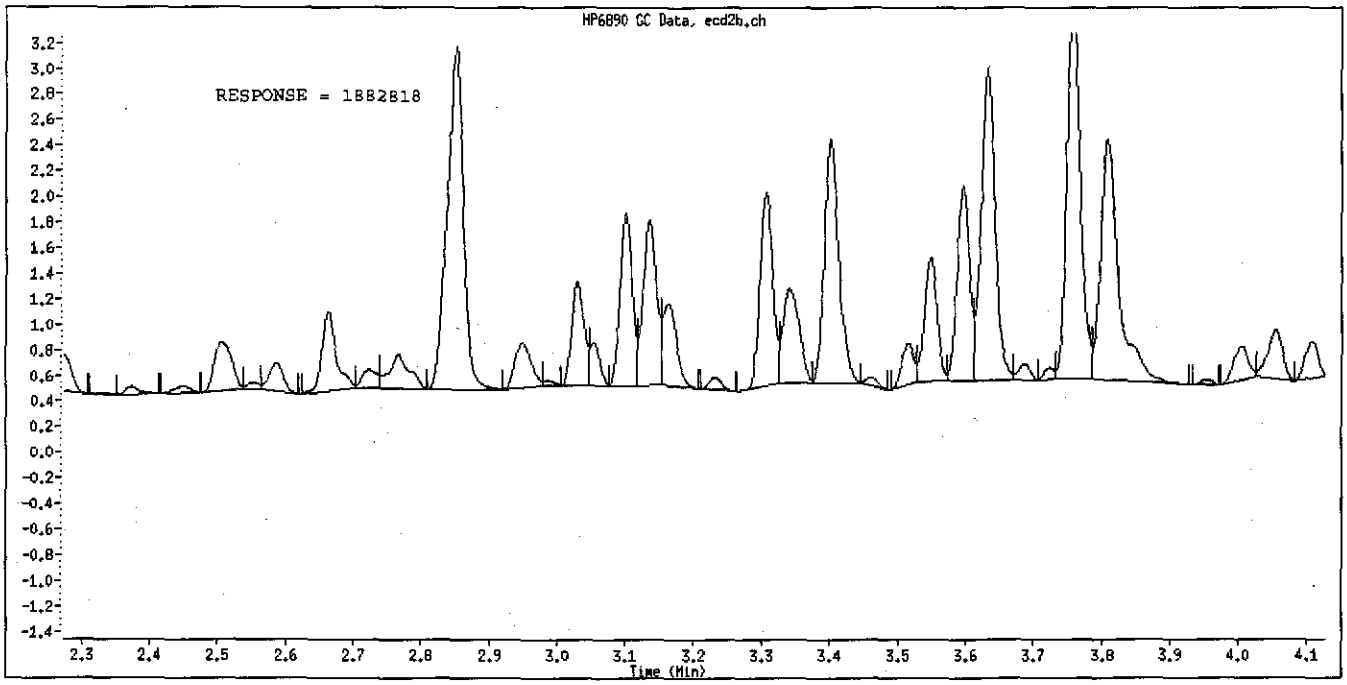
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 21:38
Instrument ID: a2hp5.i
Client ID: S-030105-JH-008
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



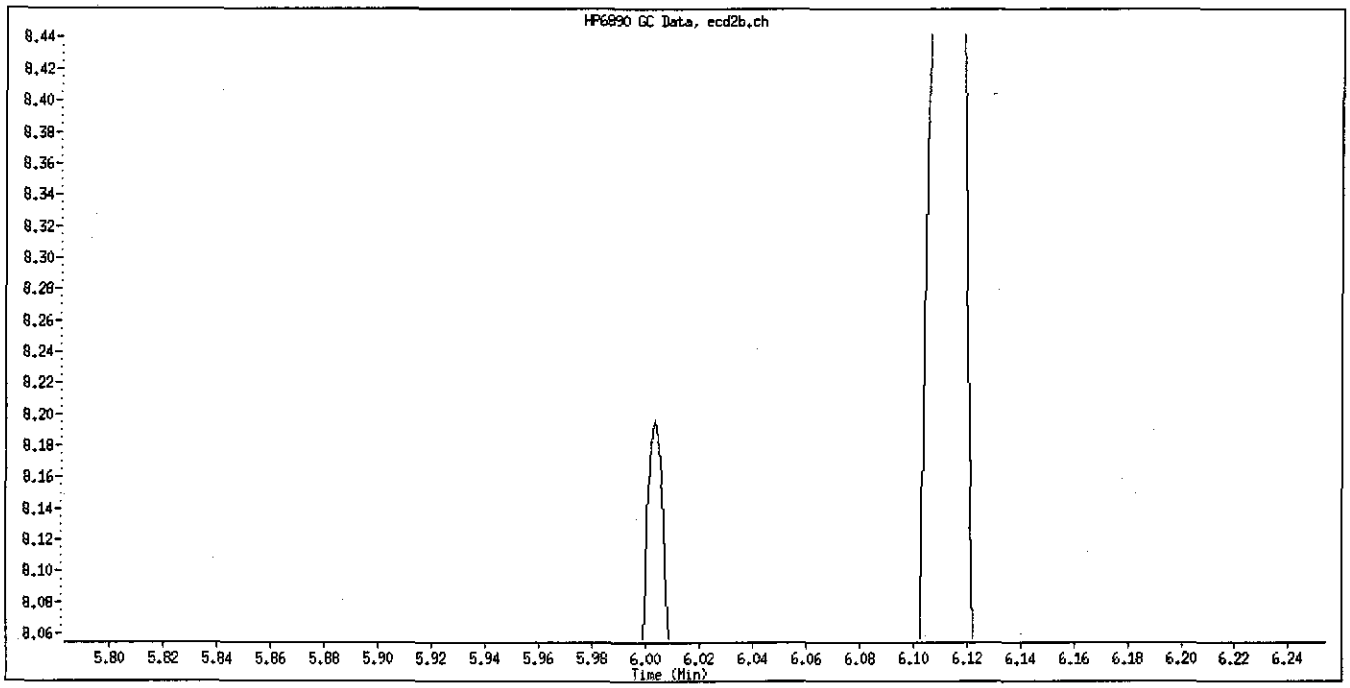
Original Integration



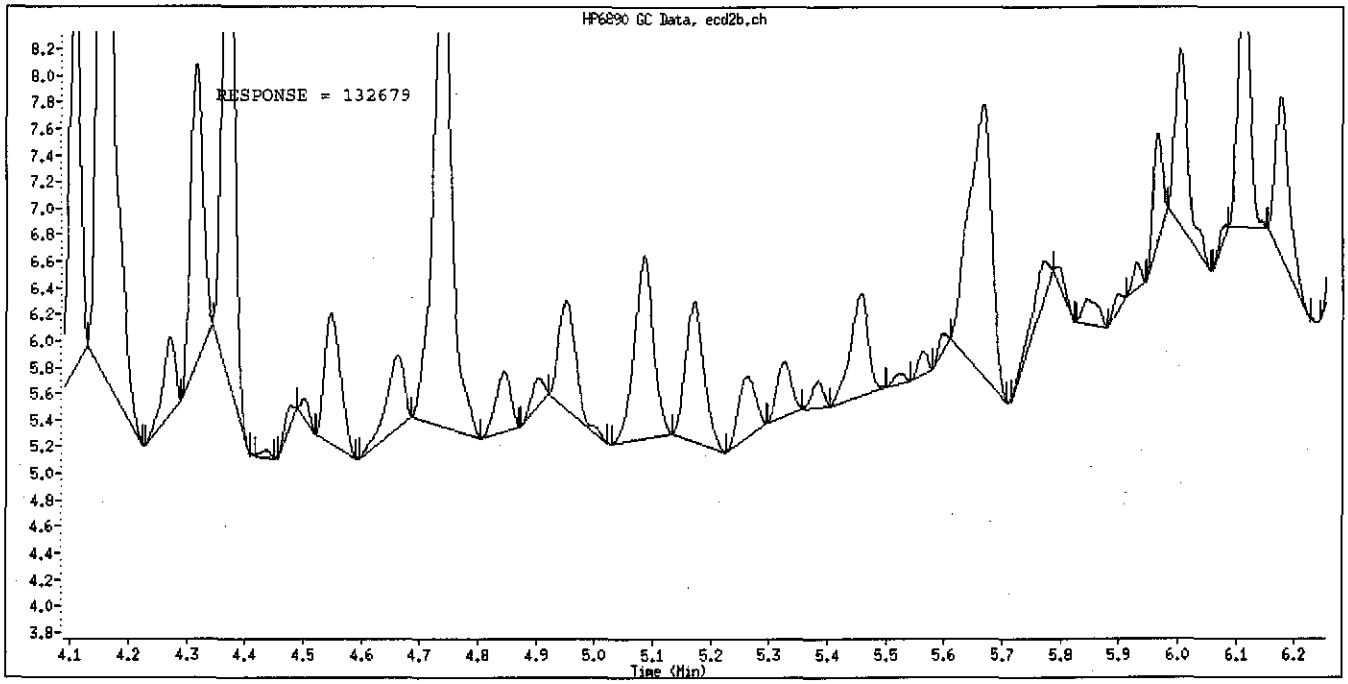
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 21:38
Instrument ID: a2hp5.i
Client ID: S-030105-JH-008
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



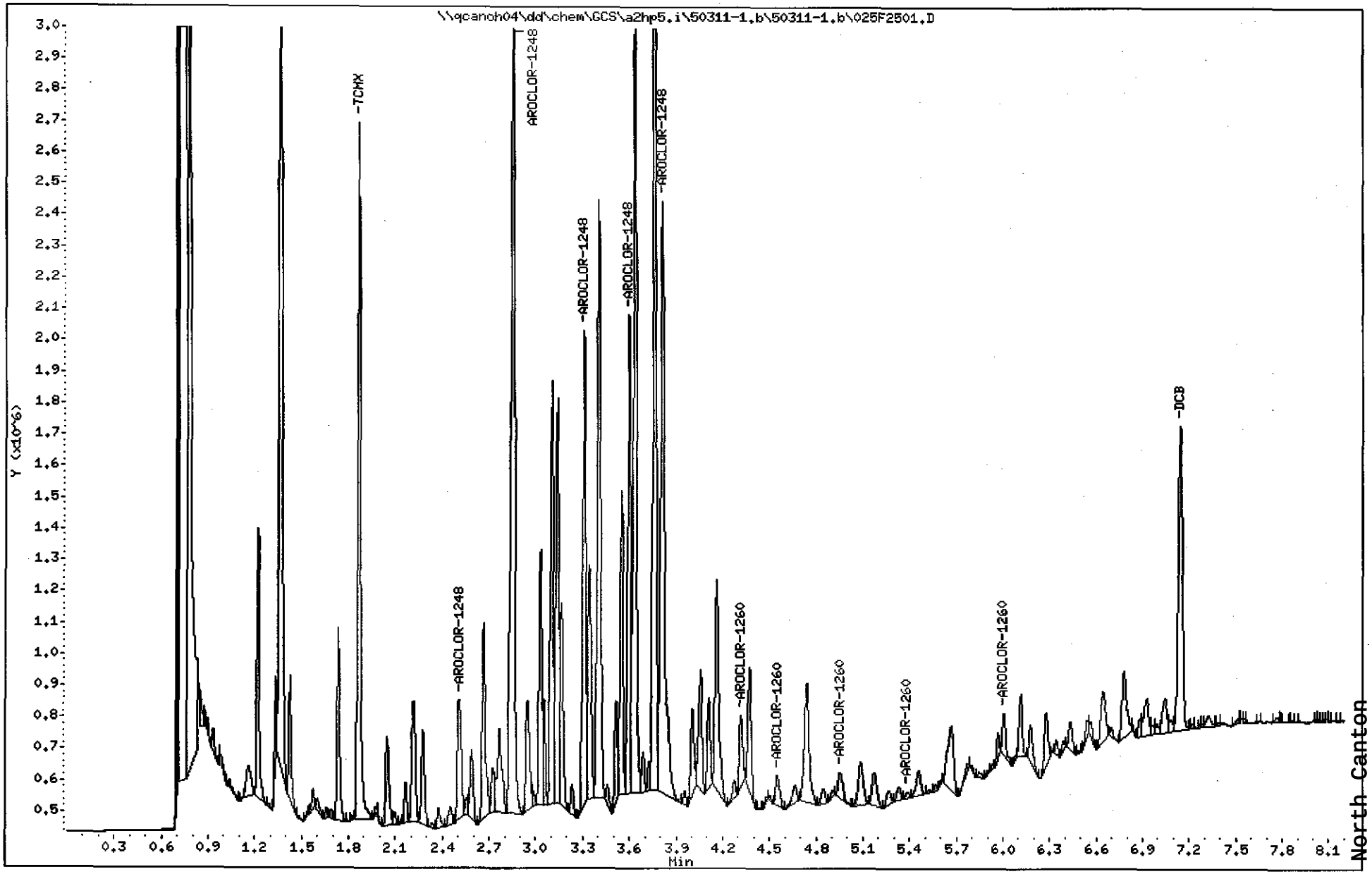
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\025F2501.D
Date : 11-MAR-2005 21:38
Client ID: S-030105-JH-008
Sample Info: G5C8D1AA,2
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-009

GC Semivolatiles

Lot-Sample #...:	A5C020144-009	**Work Order #...:**	G5C8E1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 11:45	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	ND	1900	ug/kg
Aroclor 1248	**8700**	**1900**	**ug/kg**
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	114 DIL	(10 - 172)
Decachlorobiphenyl	145 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 026F2601.D
Report Date: 14-Mar-2005 15:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\026F2601.D
Lab Smp Id: G5C8E1AA Client Smp ID: S-030105-JH-009
Inj Date : 11-MAR-2005 21:50
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8E1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 26
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.863	1.860	0.003	103418	5e-004	7.600		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

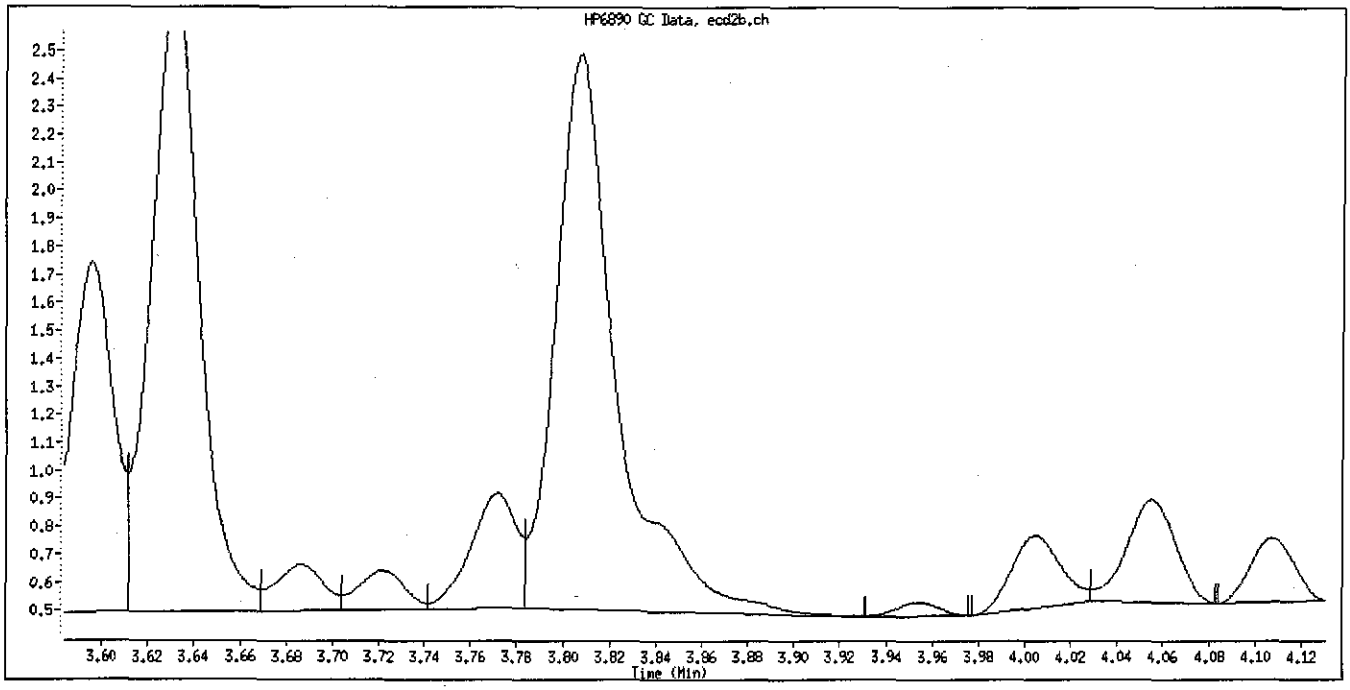
Data File: 026F2601.D
Report Date: 14-Mar-2005 15:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.509	2.503	0.006	705915	0.36102	5997	75.00- 125.00	100.00(M)
2.850	2.846	0.004	3510543	0.87308	14500	157.16- 261.93	497.30
3.305	3.306	-0.001	1678558	0.34587	5745	189.24- 315.41	237.78
3.595	3.596	-0.001	1249206	0.24448	4061	193.23- 322.06	176.96
3.807	3.808	-0.001	1984418	0.43383	7206	173.06- 288.43	281.11
Average of Peak Concentrations =					7502		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.316	4.335	-0.019	188587	0.03838	637.6	80.00- 120.00	100.00(M)
4.553	4.545	0.008	40510	0.00714	118.7	87.22- 145.36	21.48
4.948	4.942	0.006	42669	0.00780	129.5	86.81- 144.68	22.63
5.391	5.364	0.027	5104	0.00136	22.60	57.97- 96.61	2.71
6.007	5.997	0.010	106165	0.01956	325.0	85.17- 141.95	56.29
Average of Peak Concentrations =					246.7		
$ 9 DCB					CAS #: 2051-24-3		
7.146	7.135	0.011	54953	6e-004	9.658		

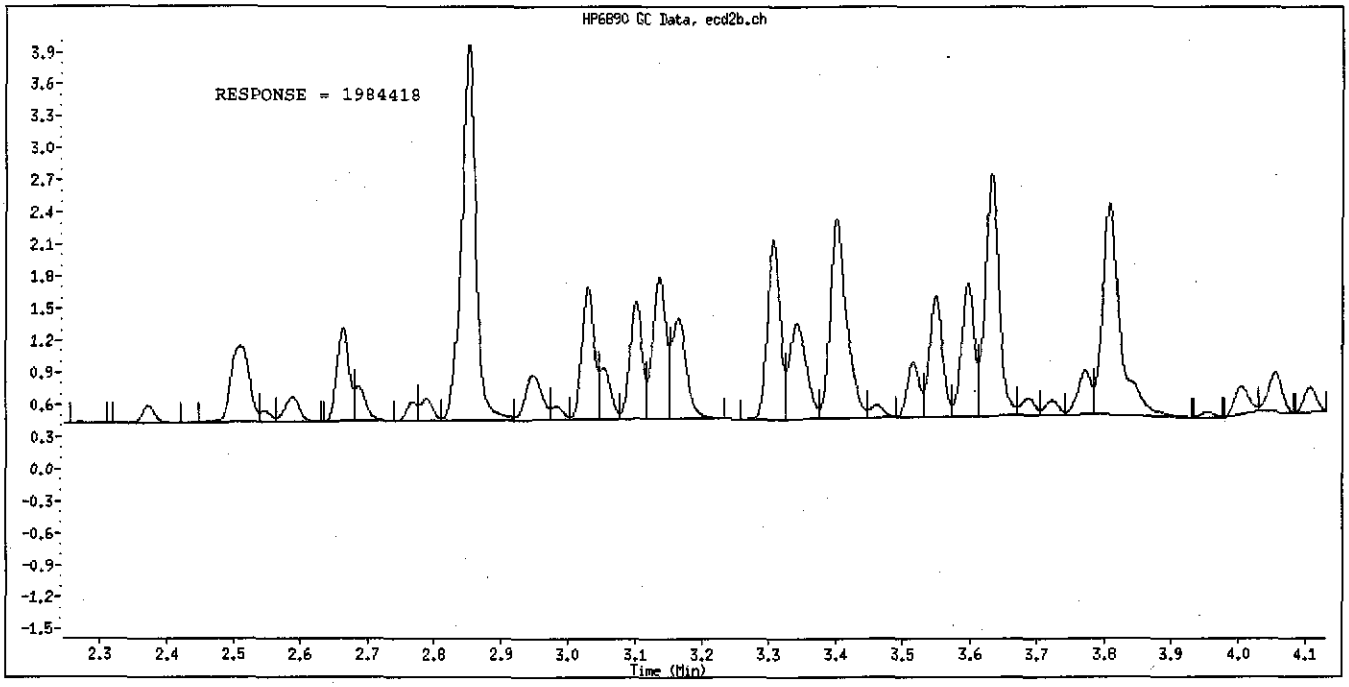
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 21:50
Instrument ID: a2hp5.i
Client ID: S-030105-JH-009
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



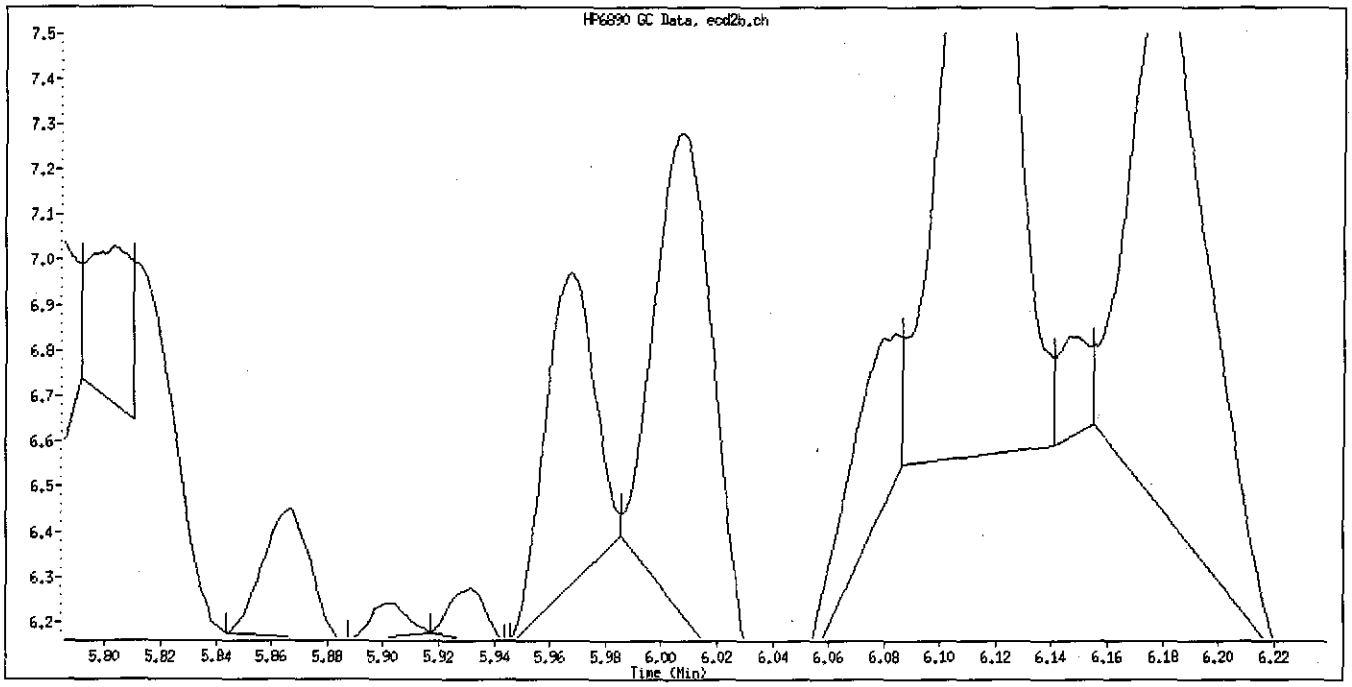
Original Integration



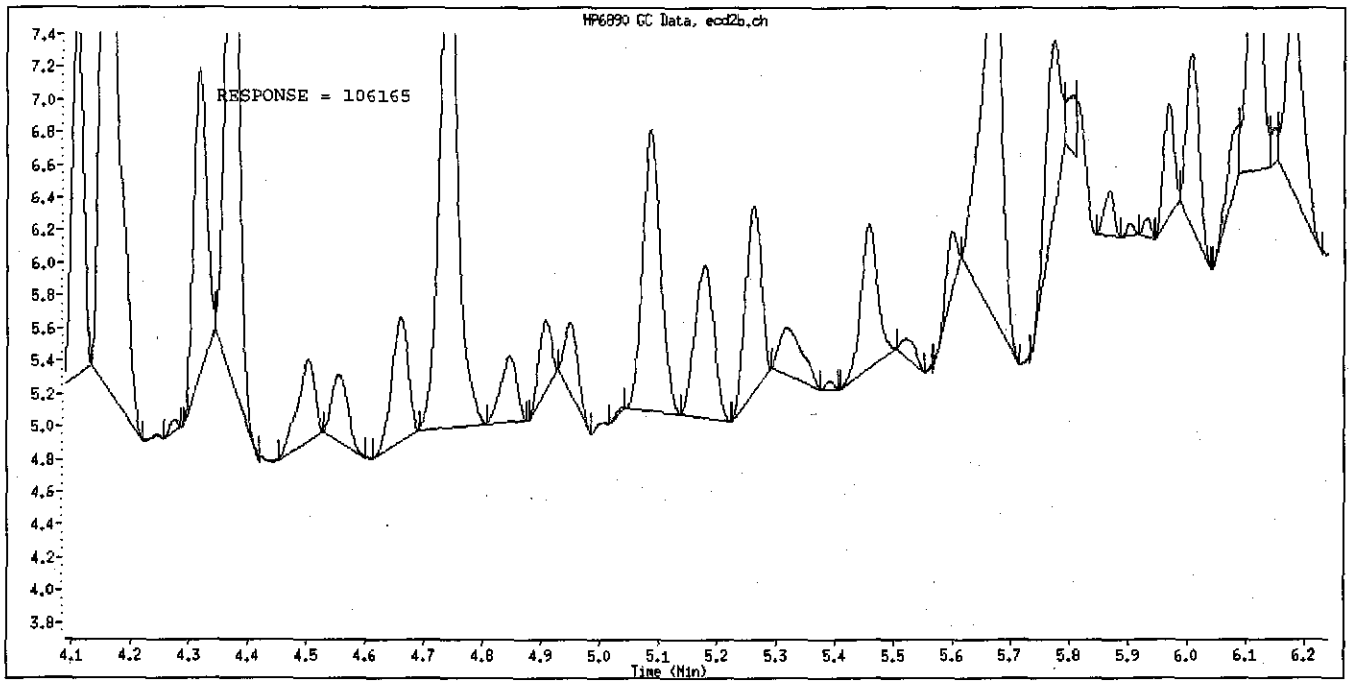
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 21:50
Instrument ID: a2hp5.i
Client ID: S-030105-JH-009
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

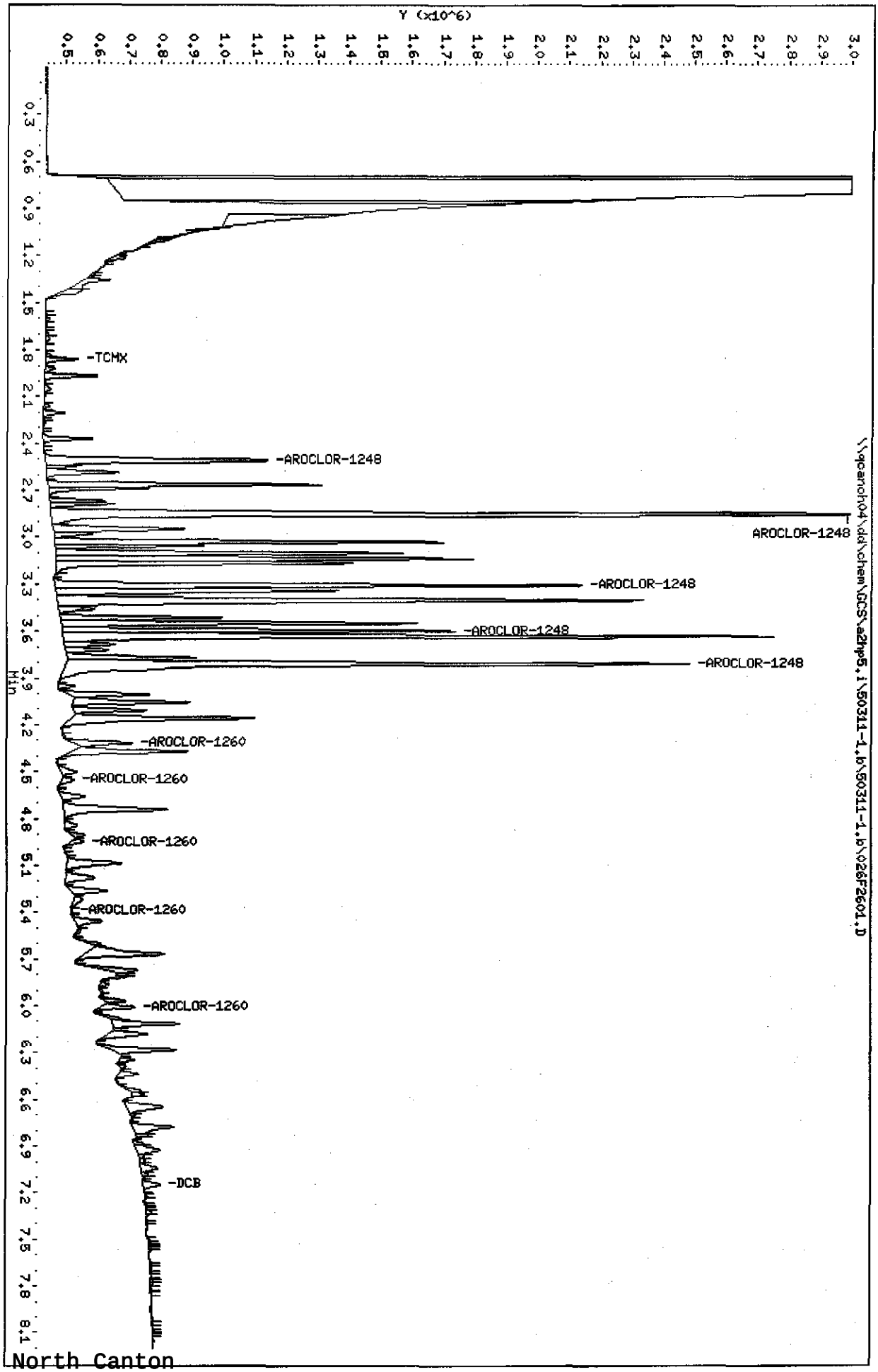


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\026F2601.D
Date : 11-MAR-2005 21:50
Client ID: S-030105-JH-009
Sample Info: G5CBE1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-010

GC Semivolatiles

Lot-Sample #...:	A5C020144-010	**Work Order #...:**	G5C8F1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:00	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.12 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	ND	1800	ug/kg
Aroclor 1248	**5700**	**1800**	**ug/kg**
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	106 DIL	(10 - 172)
Decachlorobiphenyl	182 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 027F2701.D
Report Date: 14-Mar-2005 15:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\027F2701.D
Lab Smp Id: G5C8F1AA Client Smp ID: S-030105-JH-010
Inj Date : 11-MAR-2005 22:03
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8F1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 27
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.120	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	95654	4e-004	7.024		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

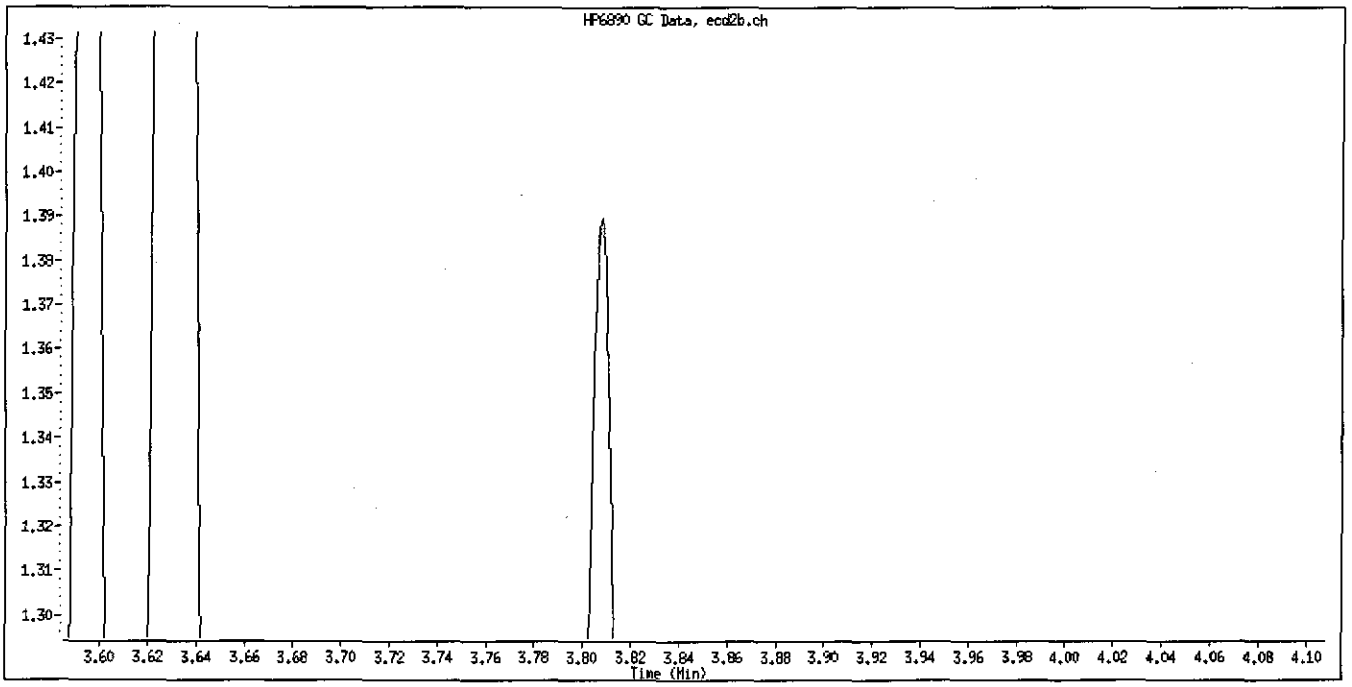
Data File: 027F2701.D
Report Date: 14-Mar-2005 15:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	454935	0.23266	3862	75.00- 125.00	100.00(M)
2.849	2.846	0.003	2498276	0.62133	10310	157.16- 261.93	549.15
3.305	3.306	-0.001	1207610	0.24883	4131	189.24- 315.41	265.45
3.594	3.596	-0.002	1133465	0.22183	3682	193.23- 322.06	249.15
3.807	3.808	-0.001	903471	0.19751	3279	173.06- 288.43	198.59
Average of Peak Concentrations =					5054		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.317	4.335	-0.018	105597	0.02149	356.8	80.00- 120.00	100.00(M)
4.660	4.545	0.115	42083	0.00742	123.2	87.22- 145.36	39.85
4.949	4.942	0.007	31006	0.00567	94.06	86.81- 144.68	29.36
5.386	5.364	0.022	3119	8e-004	13.80	57.97- 96.61	2.95
6.005	5.997	0.008	178267	0.03285	545.3	85.17- 141.95	168.82
Average of Peak Concentrations =					226.6		
$ 9 DCB					CAS #: 2051-24-3		
7.146	7.135	0.011	68932	7e-004	12.11		(R)

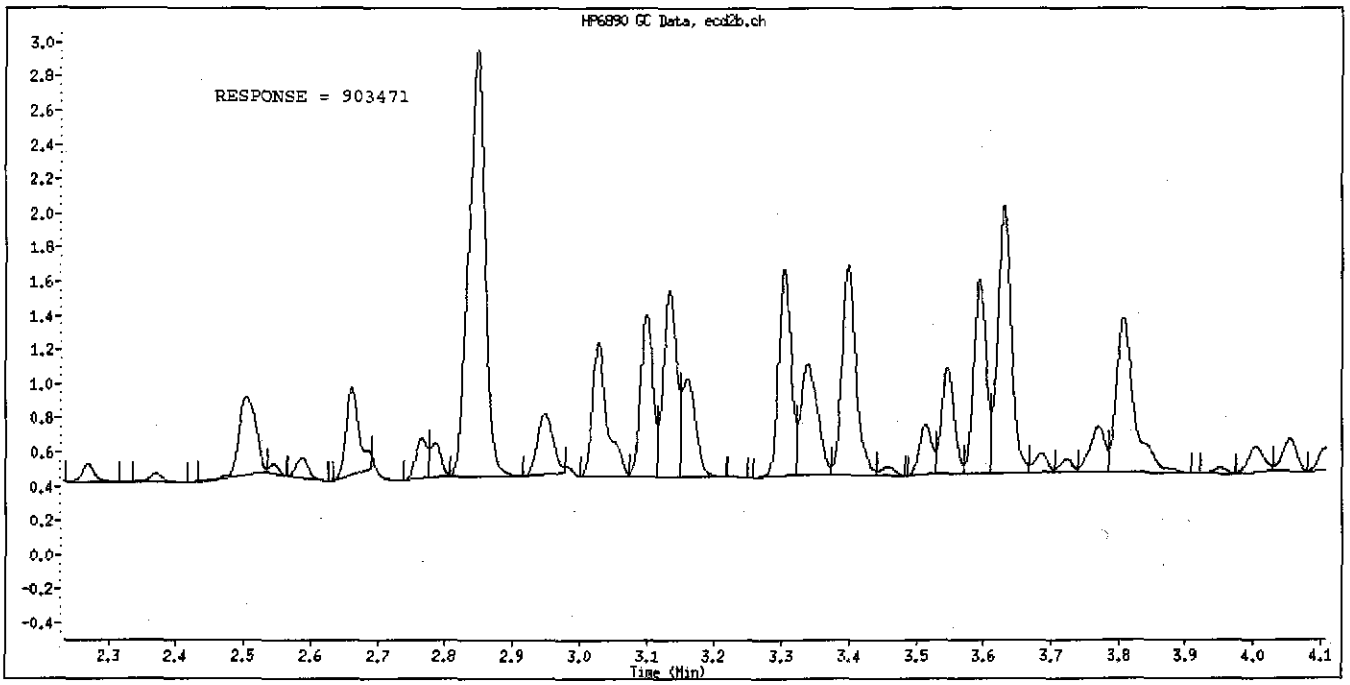
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 22:03
Instrument ID: a2hp5.i
Client ID: S-030105-JH-010
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



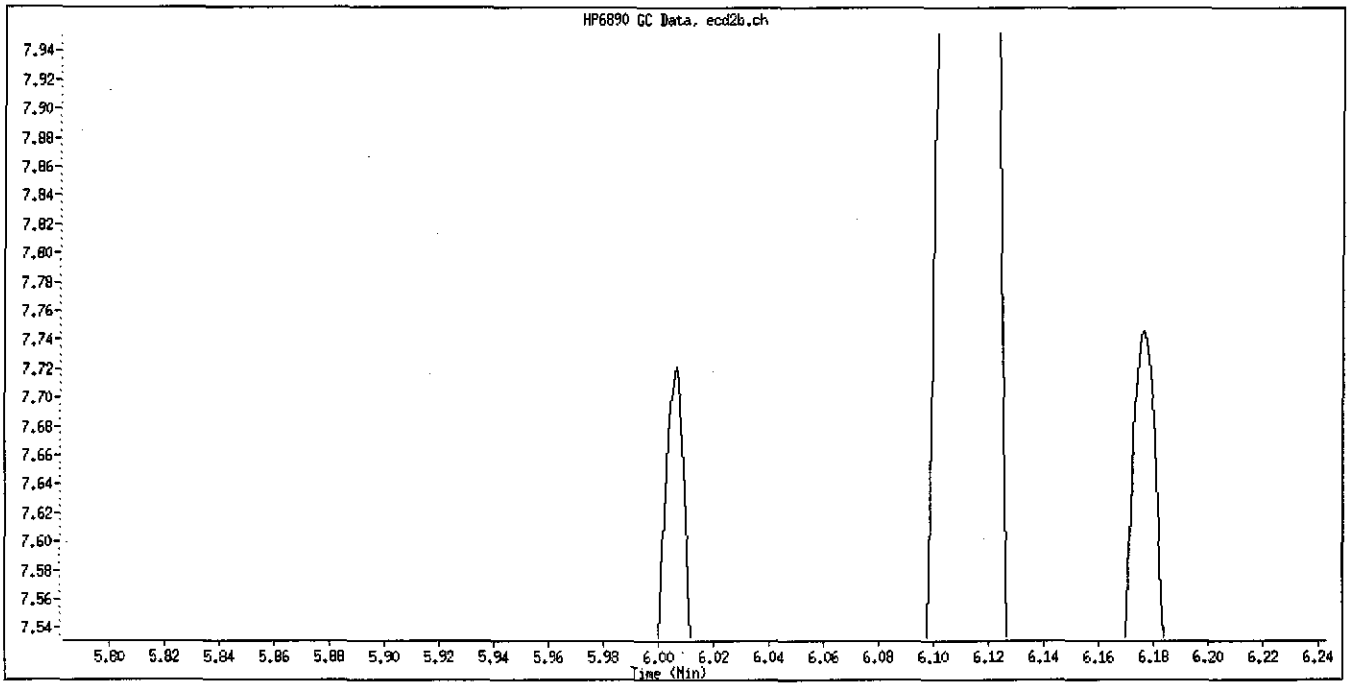
Original Integration



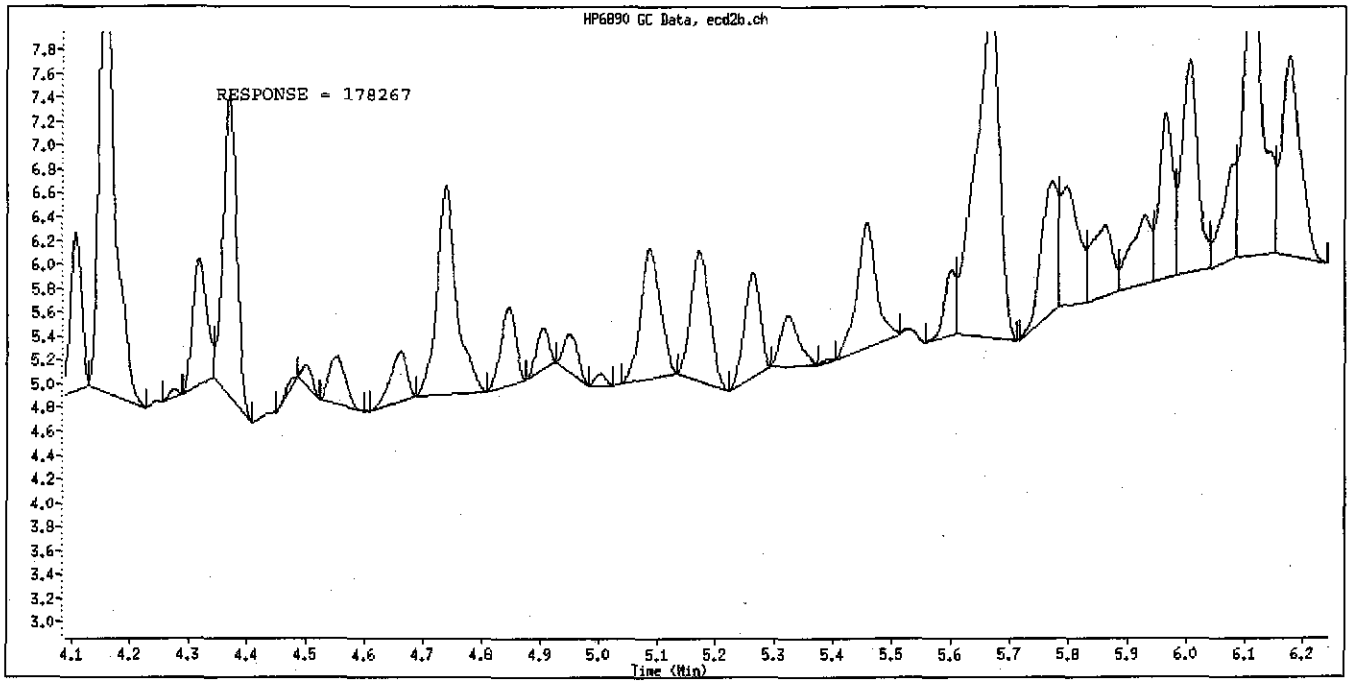
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 22:03
Instrument ID: a2hp5.i
Client ID: S-030105-JH-010
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

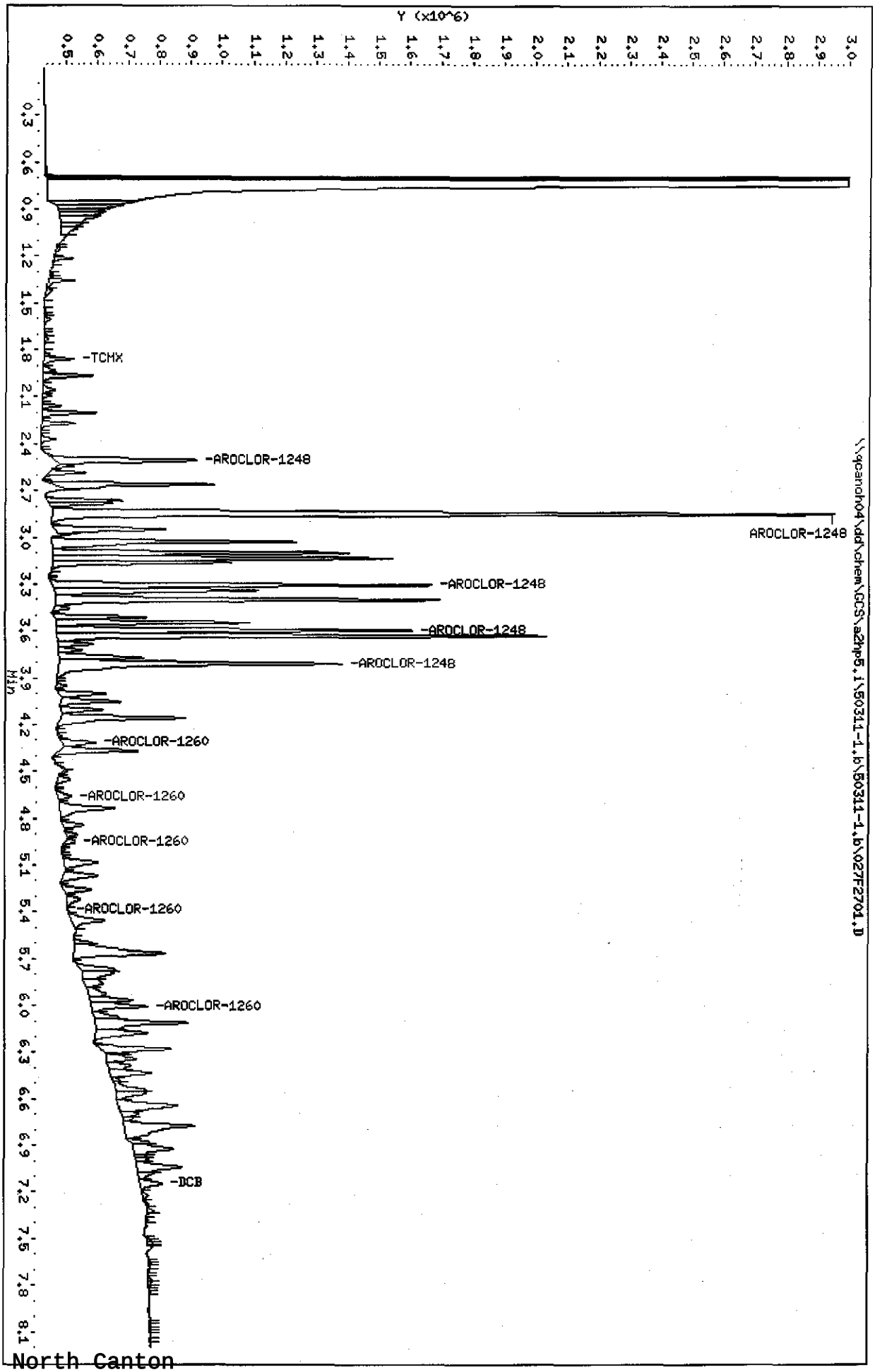


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\027F2701.D
Date : 11-MAR-2005 22:03
Client ID: S-030105-JH-010
Sample Info: C5C8F1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-011

GC Semivolatiles

Lot-Sample #...:	A5C020144-011	**Work Order #...:**	G5C8G1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:05	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7500	ug/kg
Aroclor 1221	ND	7500	ug/kg
Aroclor 1232	ND	7500	ug/kg
Aroclor 1242	**28000**	**7500**	**ug/kg**
Aroclor 1248	ND	7500	ug/kg
Aroclor 1254	ND	7500	ug/kg
Aroclor 1260	ND	7500	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	131 DIL	(10 - 172)
Decachlorobiphenyl	442 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 028F2801.D
Report Date: 14-Mar-2005 15:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\028F2801.D
Lab Smp Id: G5C8G1AA Client Smp ID: S-030105-JH-011
Inj Date : 11-MAR-2005 22:15
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8G1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 28
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	29714	1e-004	8.705		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.204	2.206	-0.002	1198318	0.45114	29880	75.00- 125.00	100.00(M)
2.505	2.505	0.000	1608977	0.44342	29360	101.31- 168.85	134.27
2.848	2.850	-0.002	3828519	0.59154	39170	185.46- 309.11	319.49
2.948	2.952	-0.004	710388	0.20701	13710	95.29- 158.82	59.28
3.305	3.307	-0.002	554853	0.20076	13300	76.10- 126.84	46.30
Average of Peak Concentrations =					25080		

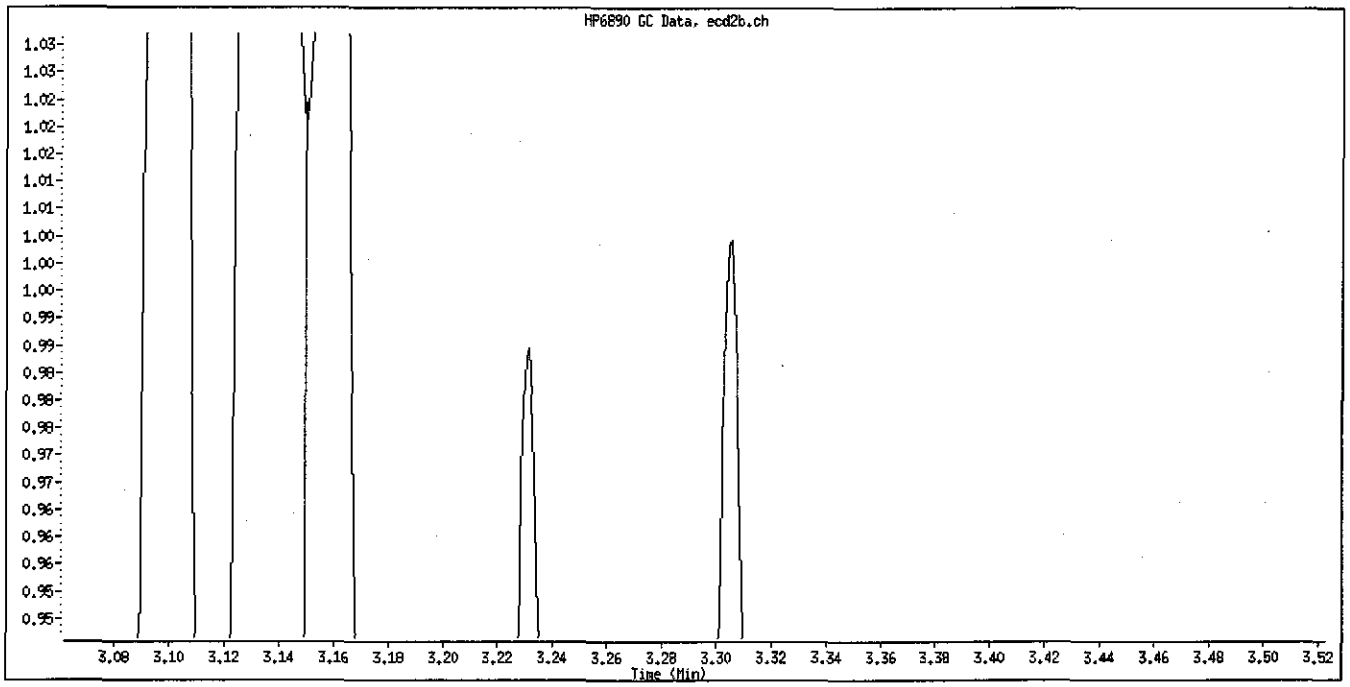
Data File: 028F2801.D
Report Date: 14-Mar-2005 15:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
4.315	4.335	-0.020	25007	0.00509	337.0	80.00- 120.00	100.00	(M)
4.552	4.545	0.007	23556	0.00415	275.1	87.22- 145.36	94.20	
4.943	4.942	0.001	12095	0.00221	146.4	86.81- 144.68	48.37	
5.355	5.364	-0.009	16411	0.00438	289.8	57.97- 96.61	65.63	
6.005	5.997	0.008	101716	0.01874	1241	85.17- 141.95	406.75	
Average of Peak Concentrations =					457.9			
$ 9 DCB					CAS #: 2051-24-3			
7.146	7.135	0.011	41823	4e-004	29.30			(R)

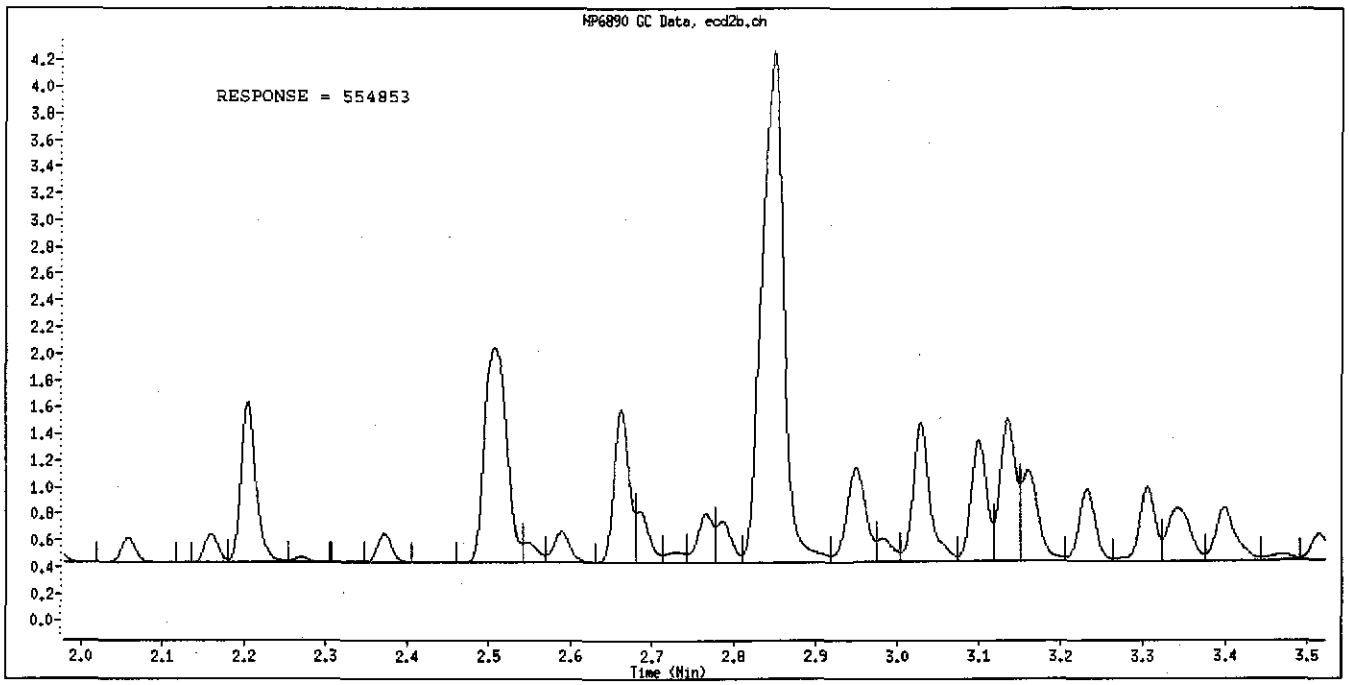
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 22:15
Instrument ID: a2hp5.i
Client ID: S-030105-JH-011
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



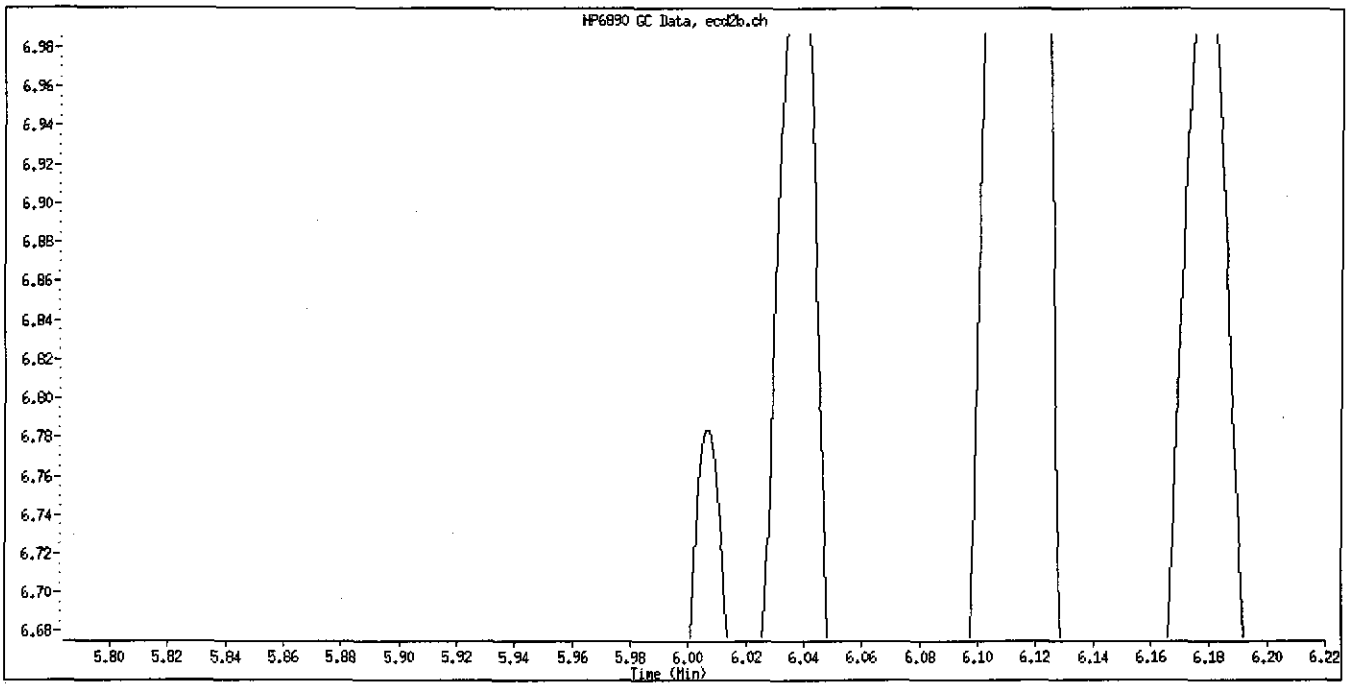
Original Integration



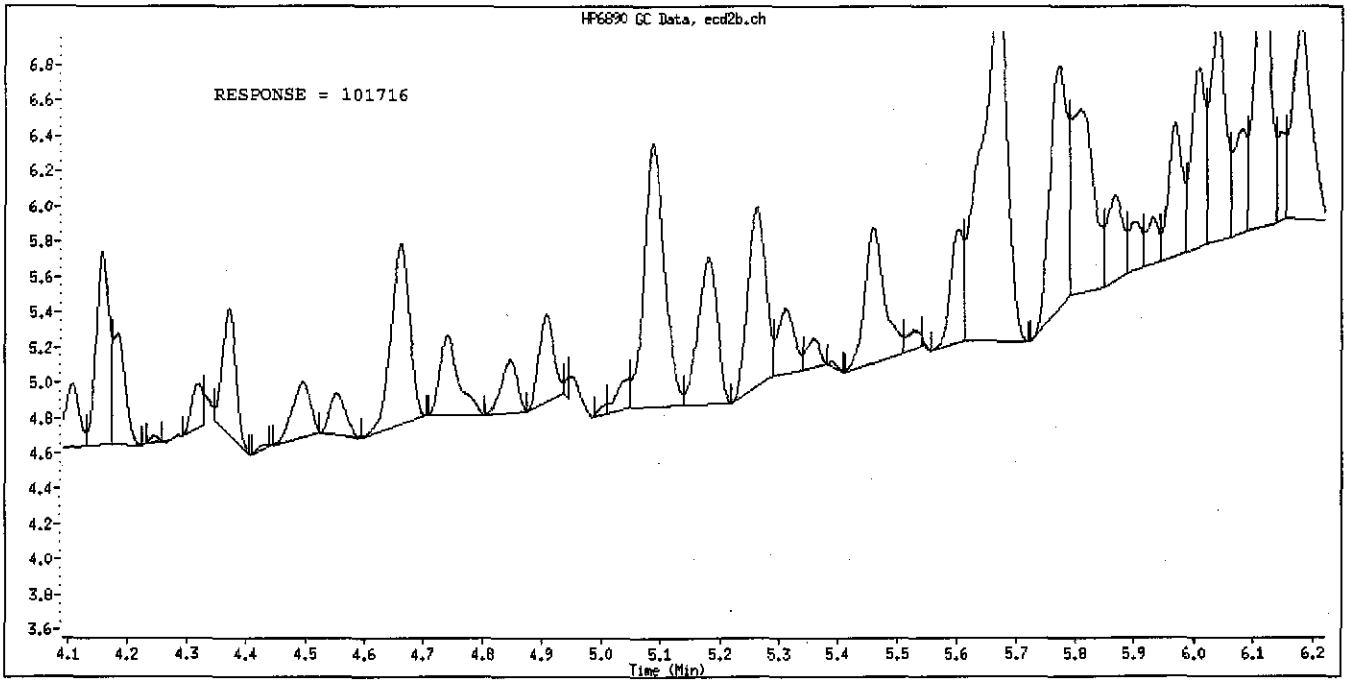
Manual Integration

Manually Integrated By: L1C
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 11-MAR-2005 22:15
Instrument ID: a2hp5.i
Client ID: S-030105-JH-011
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

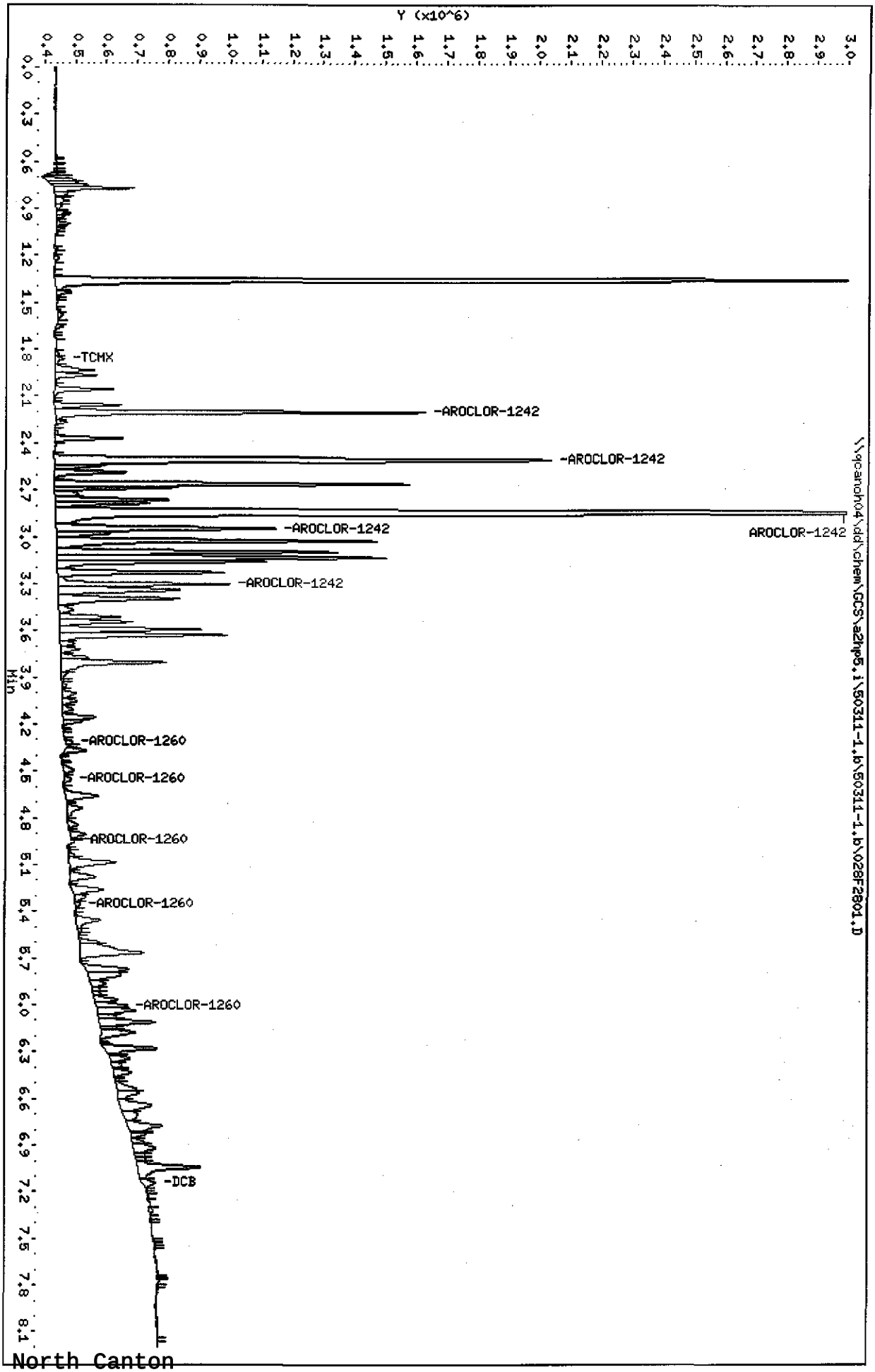


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\028F2801.D
Date : 11-MAR-2005 22:15
Client ID: S-030105-JM-011
Sample Info: C5C8C1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-012

GC Semivolatiles

Lot-Sample #...:	A5C020144-012	**Work Order #...:**	G5C8K1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:10	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7400	ug/kg
Aroclor 1221	ND	7400	ug/kg
Aroclor 1232	ND	7400	ug/kg
Aroclor 1242	**22000**	**7400**	**ug/kg**
Aroclor 1248	ND	7400	ug/kg
Aroclor 1254	ND	7400	ug/kg
Aroclor 1260	ND	7400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	129 DIL	(10 - 172)
Decachlorobiphenyl	395 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 029F2901.D
Report Date: 14-Mar-2005 15:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\029F2901.D
Lab Smp Id: G5C8K1AA Client Smp ID: S-030105-JH-012
Inj Date : 11-MAR-2005 22:27
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8K1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 29
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	29106	1e-004	8.575		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.204	2.206	-0.002	781894	0.29436	19600	75.00- 125.00	100.00(M)
2.505	2.505	0.000	1329457	0.36639	24400	101.31- 168.85	170.03
2.848	2.850	-0.002	3012951	0.46553	31000	185.46- 309.11	385.34
2.948	2.952	-0.004	531288	0.15482	10310	95.29- 158.82	67.95
3.304	3.307	-0.003	522899	0.18920	12600	76.10- 126.84	66.88
Average of Peak Concentrations =					19580		

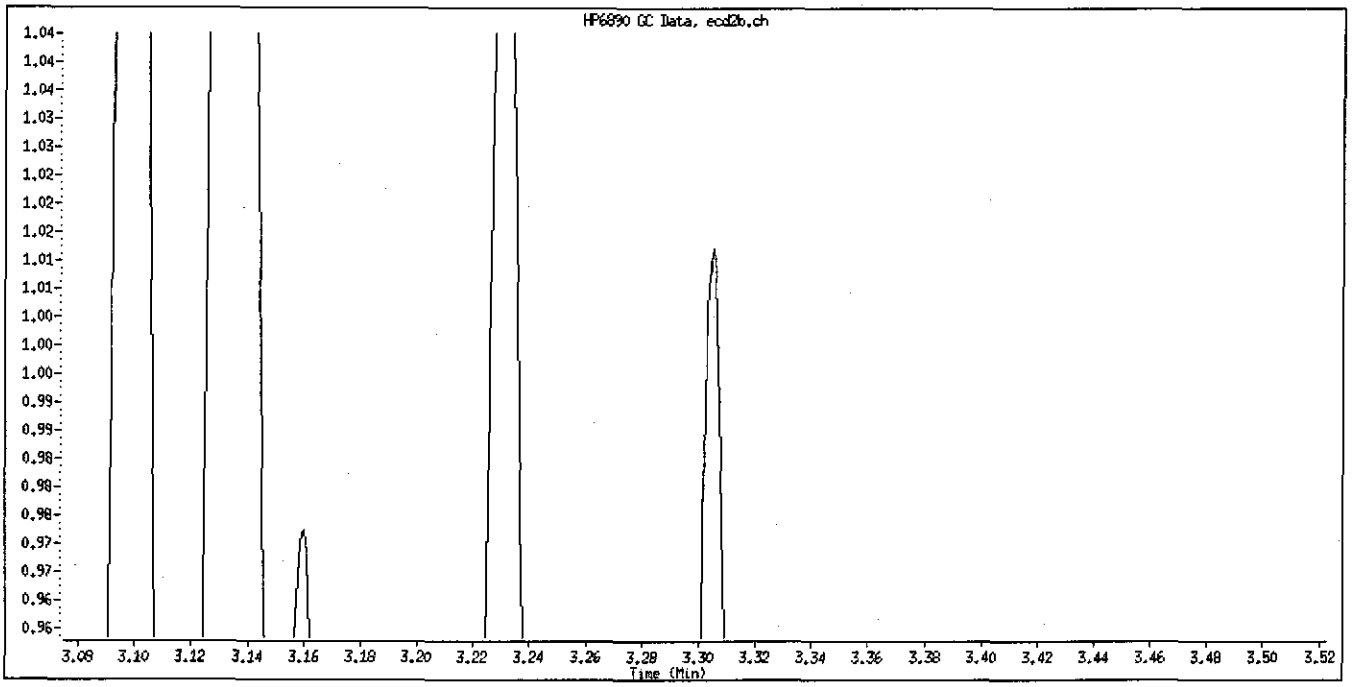
Data File: 029F2901.D
Report Date: 14-Mar-2005 15:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
7.149	7.135	0.014	37363	4.e-004	26.33		(R)

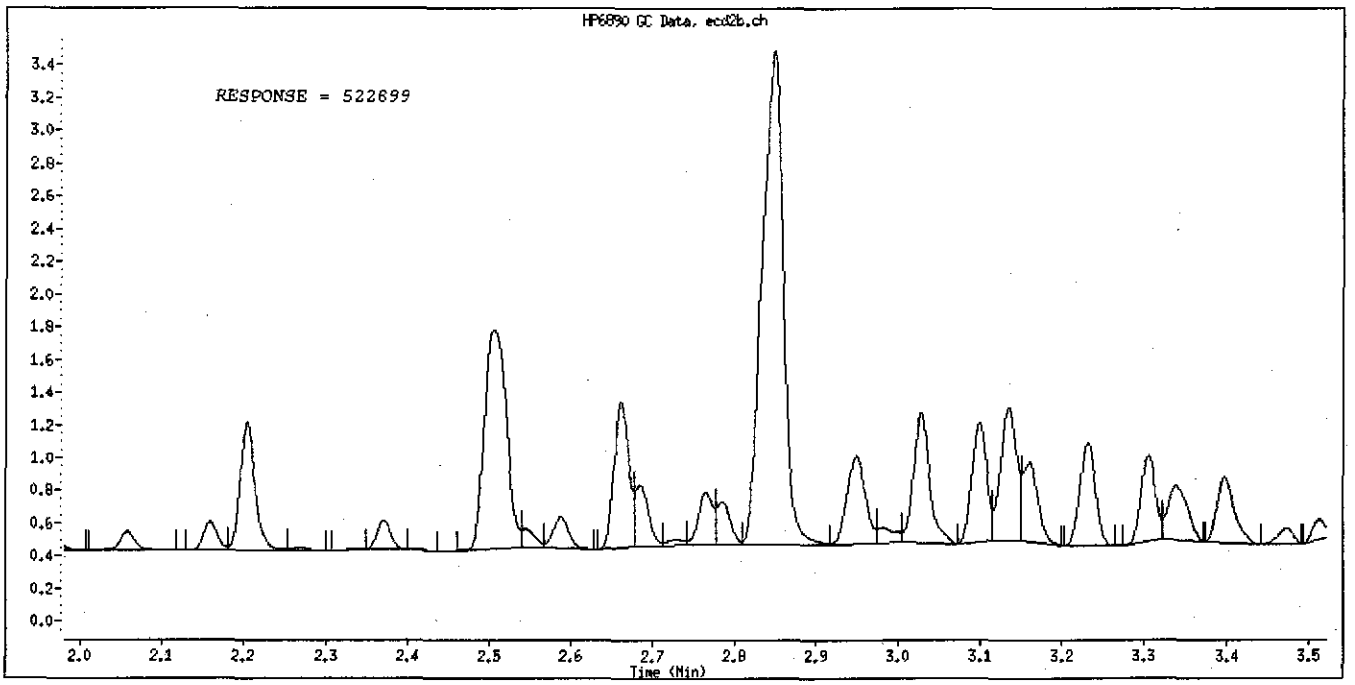
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 22:27
Instrument ID: a2hp5.i
Client ID: S-030105-JH-012
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration

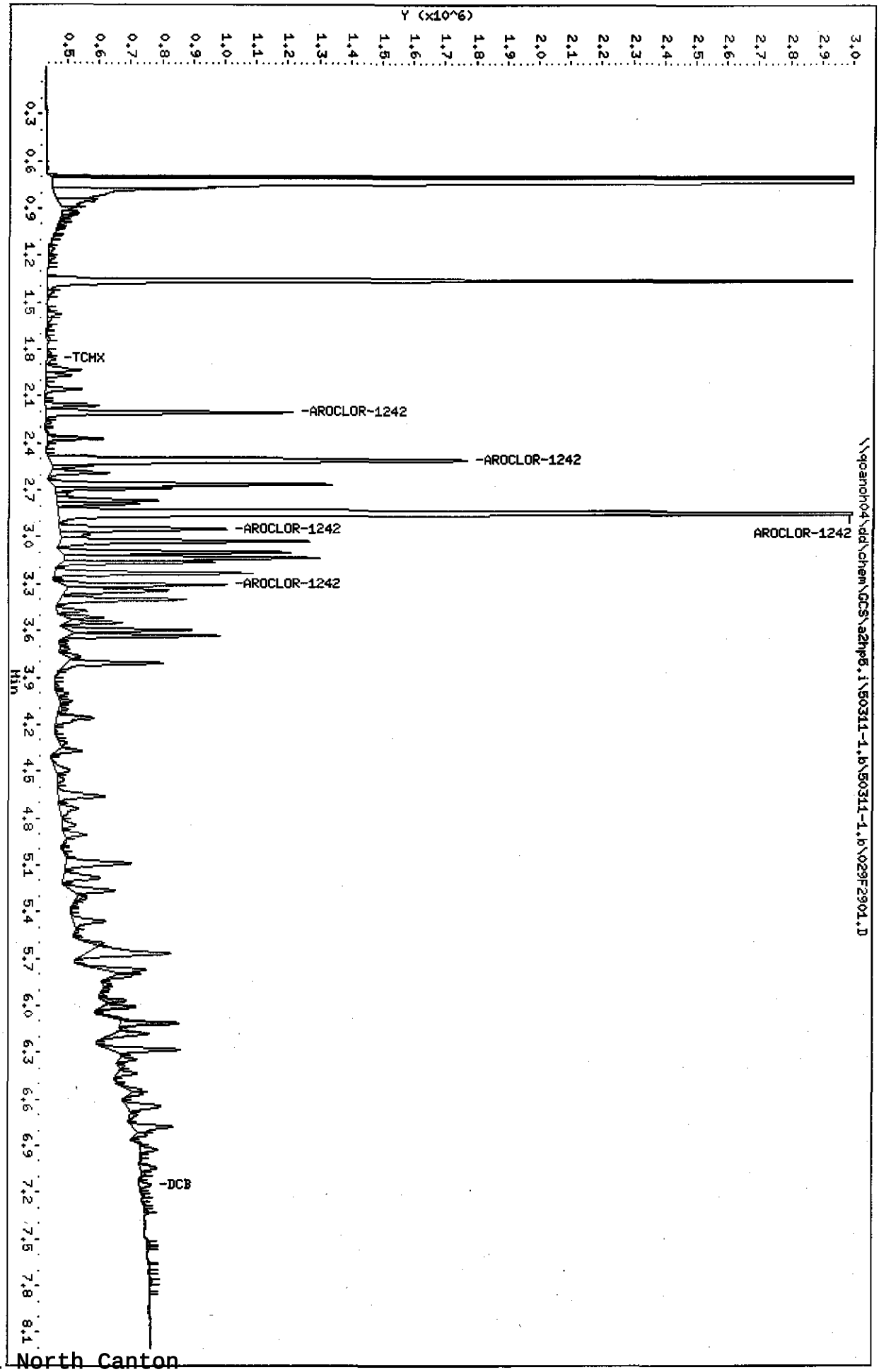


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\029F2901.D
Date : 11-MAR-2005 22:27
Client ID: S-030105-JH-012
Sample Info: G5C8K1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-013

GC Semivolatiles

Lot-Sample #...:	A5C020144-013	**Work Order #...:**	G5C8L1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:15	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	100	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	3700	ug/kg
Aroclor 1221	ND	3700	ug/kg
Aroclor 1232	ND	3700	ug/kg
Aroclor 1242	**13000**	**3700**	**ug/kg**
Aroclor 1248	ND	3700	ug/kg
Aroclor 1254	ND	3700	ug/kg
Aroclor 1260	ND	3700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	137 DIL	(10 - 172)
Decachlorobiphenyl	312 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 030F3001.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\030F3001.D
Lab Smp Id: G5C8L1AA Client Smp ID: S-030105-JH-013
Inj Date : 11-MAR-2005 22:39
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8L1AA,100
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 30
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.857	1.860	-0.003	61910	3e-004	9.120		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	646238	0.24329	8102	75.00- 125.00	100.00(M)
2.502	2.505	-0.003	1411359	0.38896	12950	101.31- 168.85	218.40
2.847	2.850	-0.003	2474513	0.38233	12730	185.46- 309.11	382.91
2.949	2.952	-0.003	1183025	0.34473	11480	95.29- 158.82	183.06
3.304	3.307	-0.003	1057210	0.38253	12740	76.10- 126.84	163.59
Average of Peak Concentrations =					11600		

Data File: 030F3001.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

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7 AROCLOR-1254 CAS #: 11097-69-1

Compound Not Detected

---

8 AROCLOR-1260 CAS #: 11096-82-5

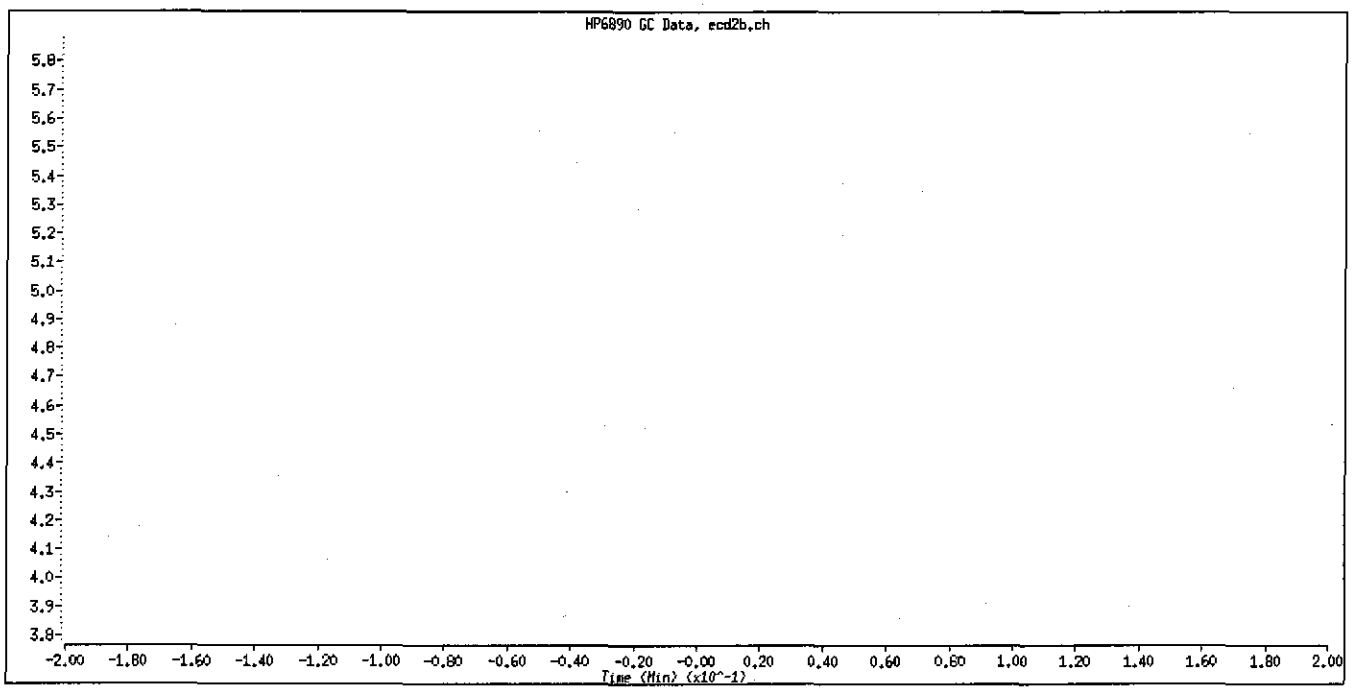
Operator disabled compound identification.

$ 9 DCB					CAS #: 2051-24-3		
7.148	7.135	0.013	58926	6e-004	20.76		(R)

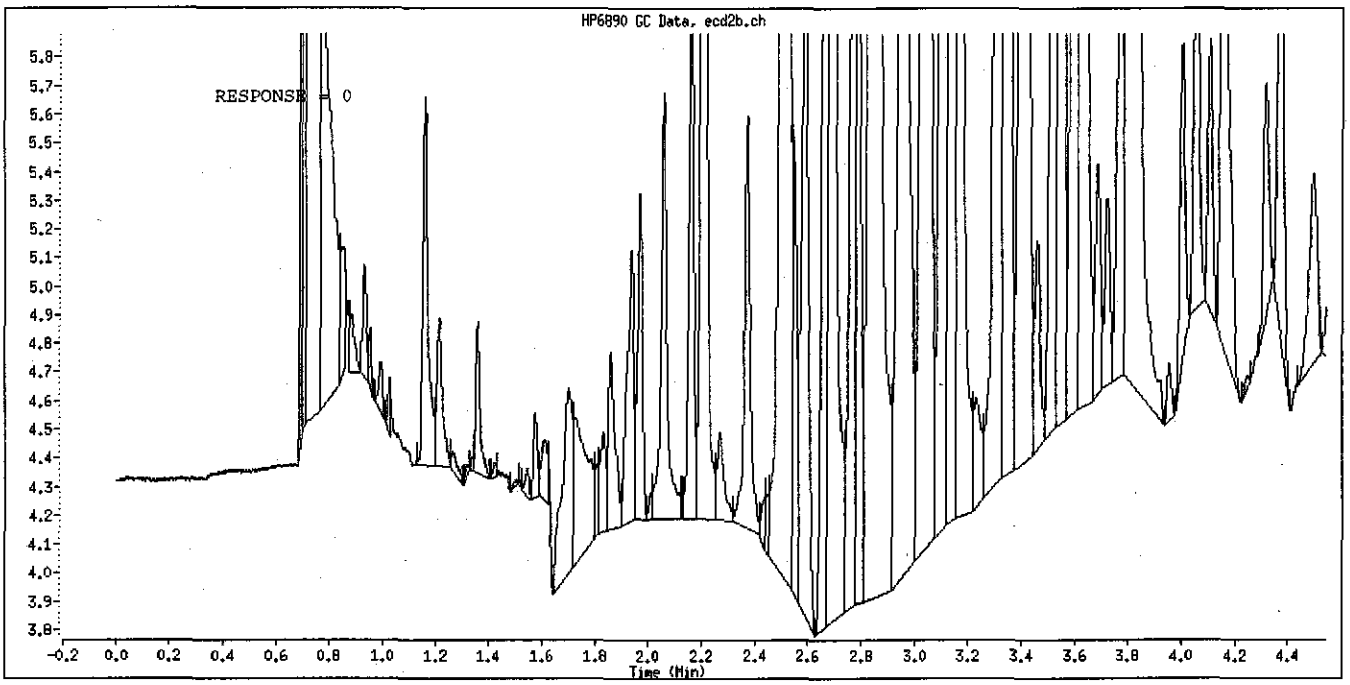
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 22:39
Instrument ID: a2hp5.i
Client ID: S-030105-JH-013
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



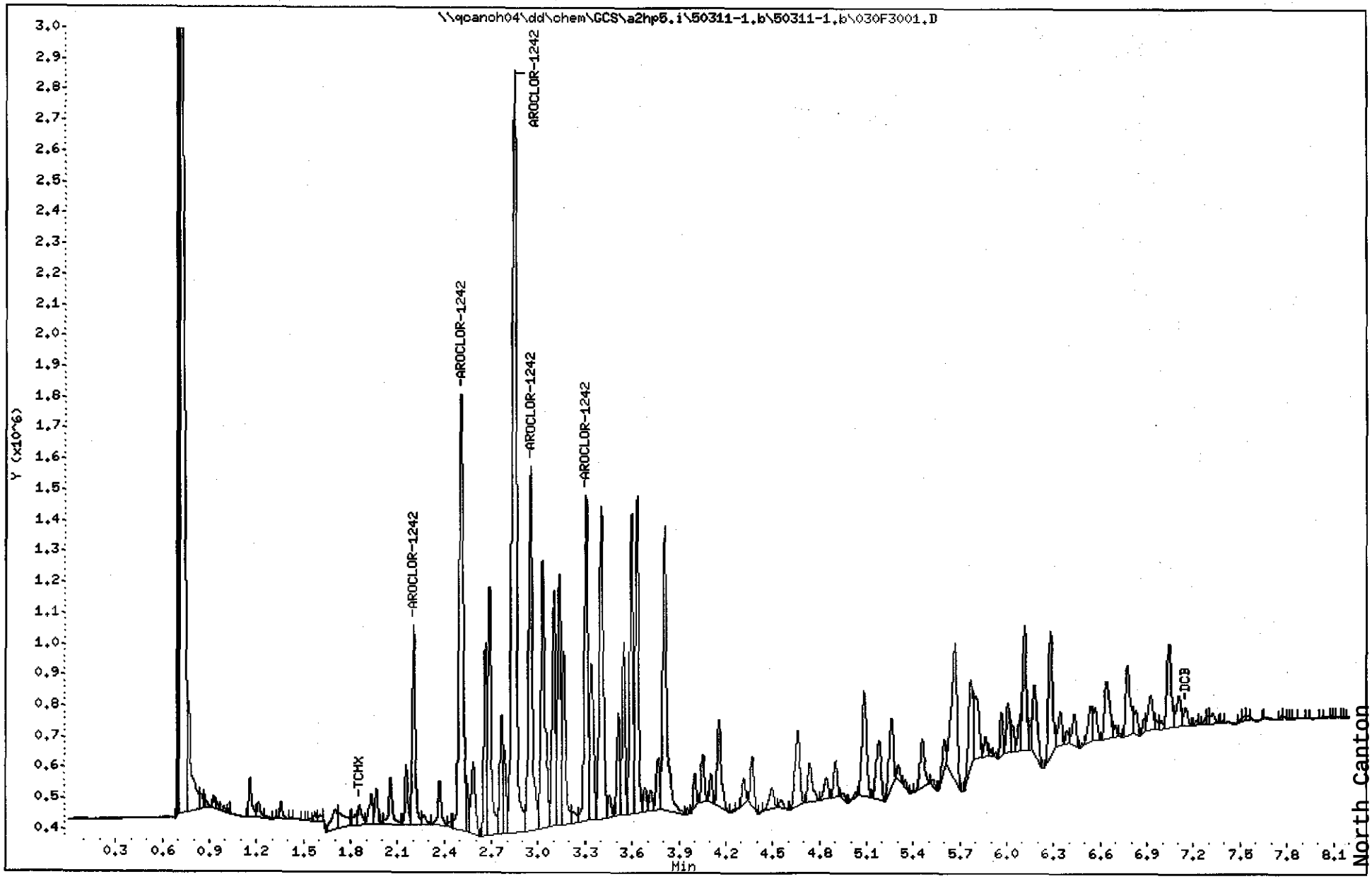
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\030F3001.D
Date : 11-MAR-2005 22:39
Client ID: S-030105-JH-013
Sample Info: G5C8L1AA,100
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-014

GC Semivolatiles

Lot-Sample #...:	A5C020144-014	**Work Order #...:**	G5C8M1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:20	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	100	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	3600	ug/kg
Aroclor 1221	ND	3600	ug/kg
Aroclor 1232	ND	3600	ug/kg
Aroclor 1242	ND	3600	ug/kg
Aroclor 1248	**12000**	**3600**	**ug/kg**
Aroclor 1254	ND	3600	ug/kg
Aroclor 1260	ND	3600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	109 DIL	(10 - 172)
Decachlorobiphenyl	336 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 031F3101.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\031F3101.D
Lab Smp Id: G5C8M1AA Client Smp ID: S-030105-JH-014
Inj Date : 11-MAR-2005 22:52
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8M1AA,100
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 31
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	49433	2e-004	7.241		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: 031F3101.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	695583	0.35574	11780	75.00- 125.00	100.00(M)
2.849	2.846	0.003	2403792	0.59783	19800	157.16- 261.93	345.58
3.304	3.306	-0.002	1176855	0.24249	8030	189.24- 315.41	169.19
3.594	3.596	-0.002	968911	0.18962	6279	193.23- 322.06	139.29
3.806	3.808	-0.002	1079994	0.23611	7818	173.06- 288.43	155.26
Average of Peak Concentrations =					10740		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.316	4.335	-0.019	106030	0.02158	714.5	80.00- 120.00	100.00(M)
4.555	4.545	0.010	39718	0.00700	231.9	87.22- 145.36	37.46
4.951	4.942	0.009	24125	0.00441	146.0	86.81- 144.68	22.75
5.390	5.364	0.026	7059	0.00188	62.32	57.97- 96.61	6.66
6.006	5.997	0.009	208505	0.03842	1272	85.17- 141.95	196.65
Average of Peak Concentrations =					485.4		
$ 9 DCB					CAS #: 2051-24-3		
7.152	7.135	0.017	63536	7e-004	22.26		(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File Name: [illegible]

Inj. Date and Time: 11-MAR-2005 22:52

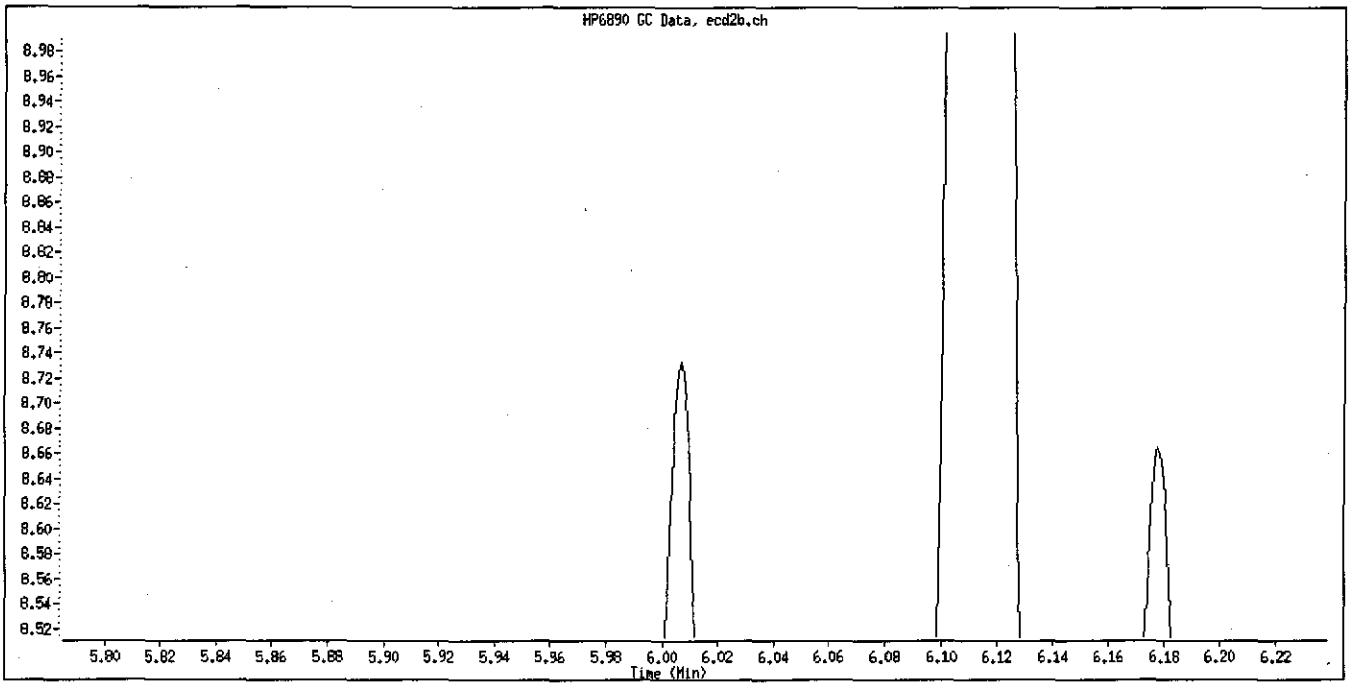
Instrument ID: a2hp5.i

Client ID: S-030105-JH-014

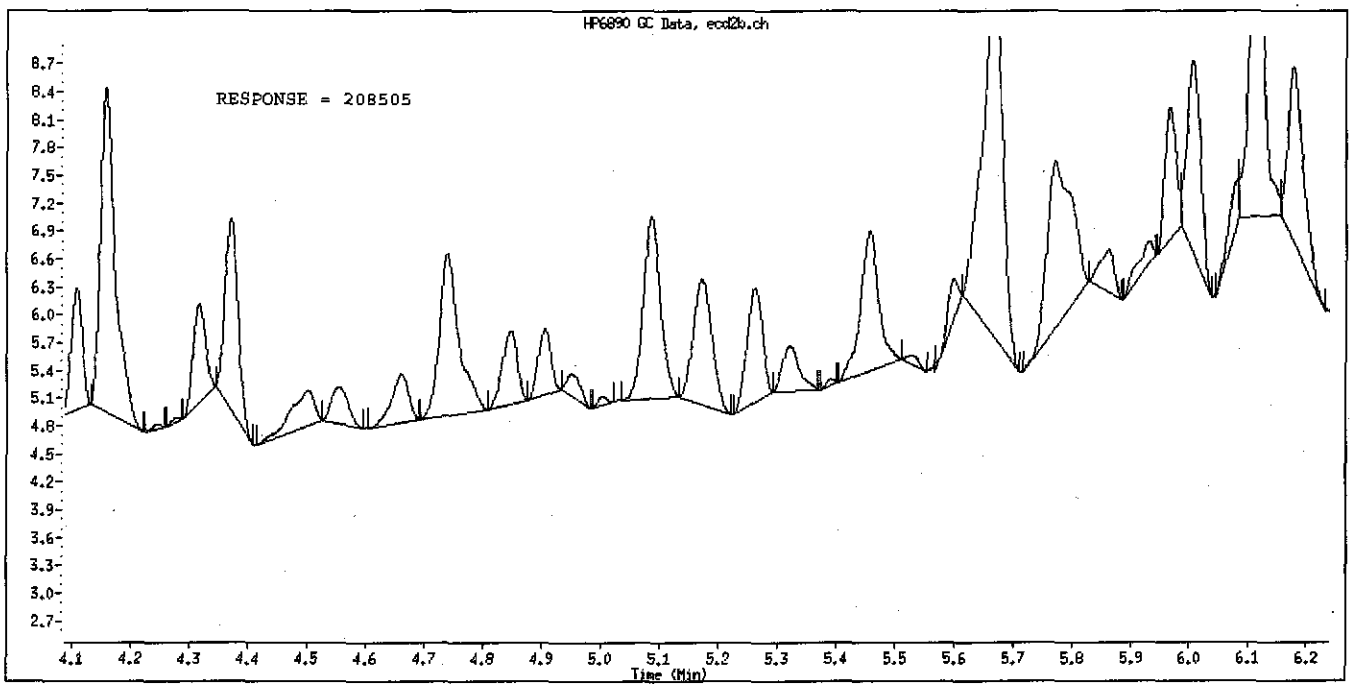
Compound Name: AROCLOR-1260

CAS #: 11096-82-5

Report Date: 03/14/2005



Original Integration



Manual Integration

Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File Name: [illegible]

Inj. Date and Time: 11-MAR-2005 22:52

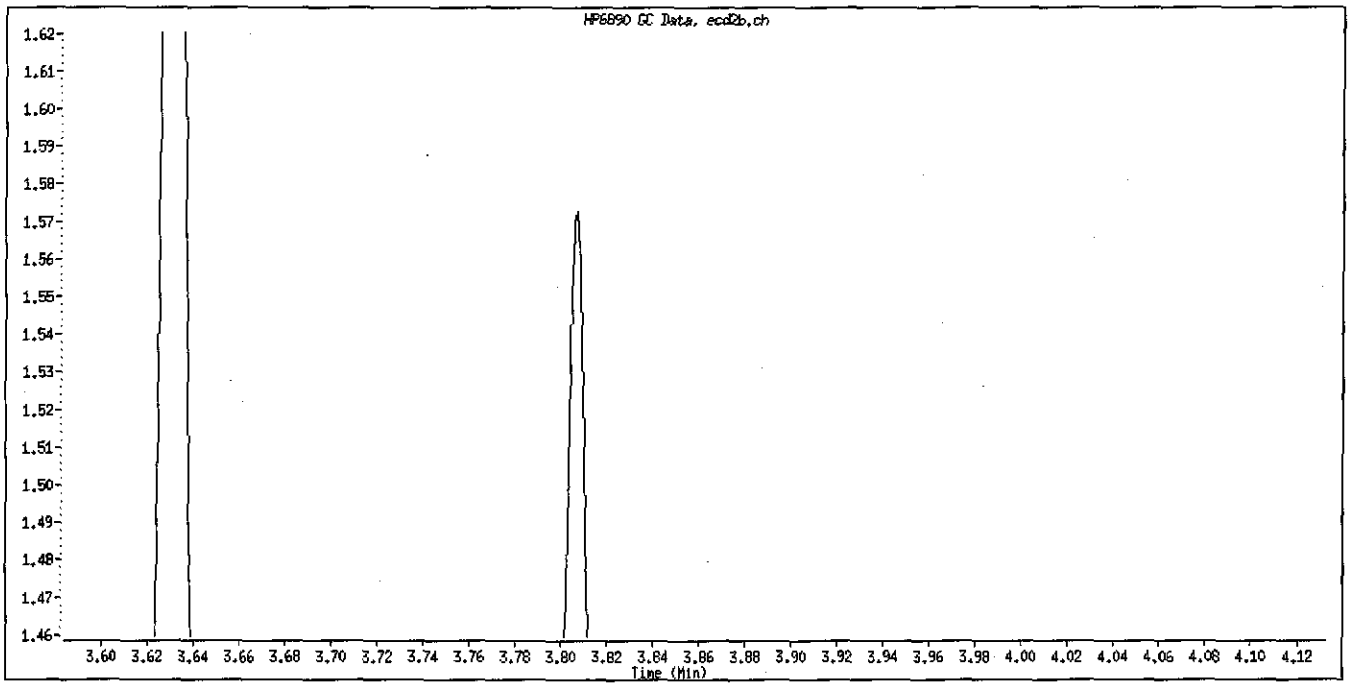
Instrument ID: a2hp5.i

Client ID: S-030105-JH-014

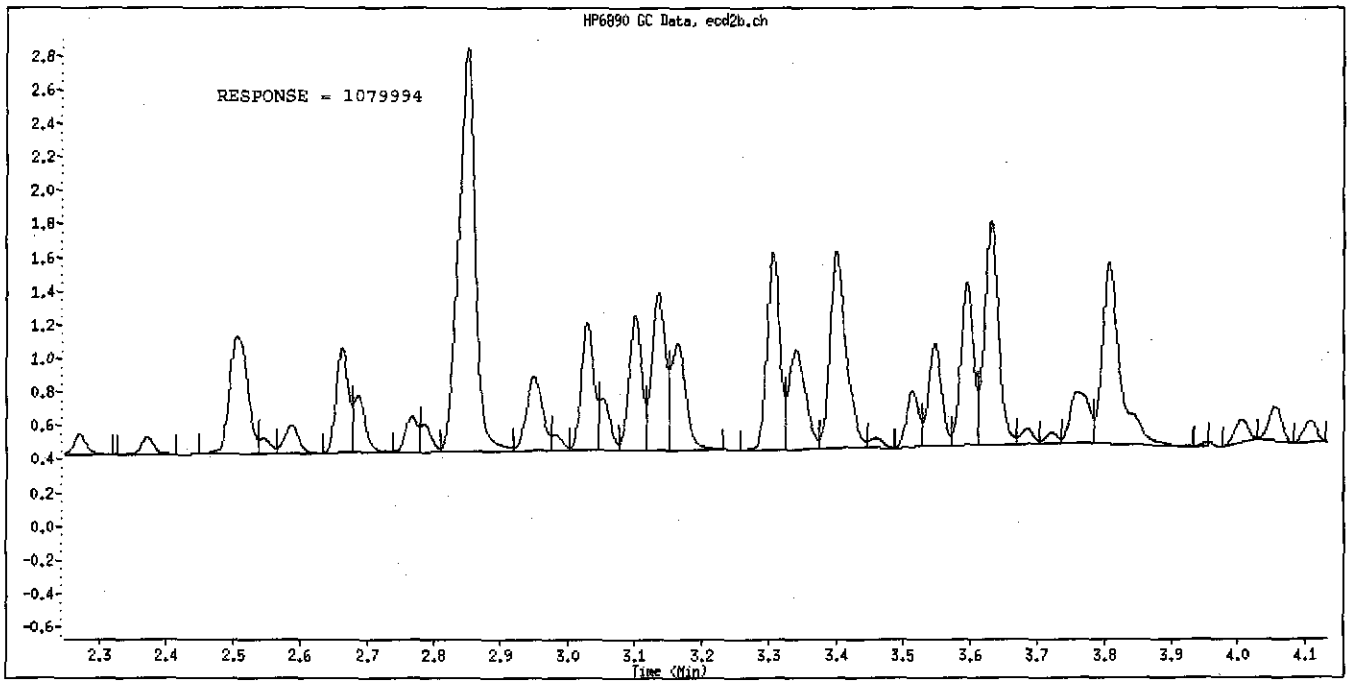
Compound Name: AROCLOR-1248

CAS #: 12672-29-6

Report Date: 03/14/2005



Original Integration



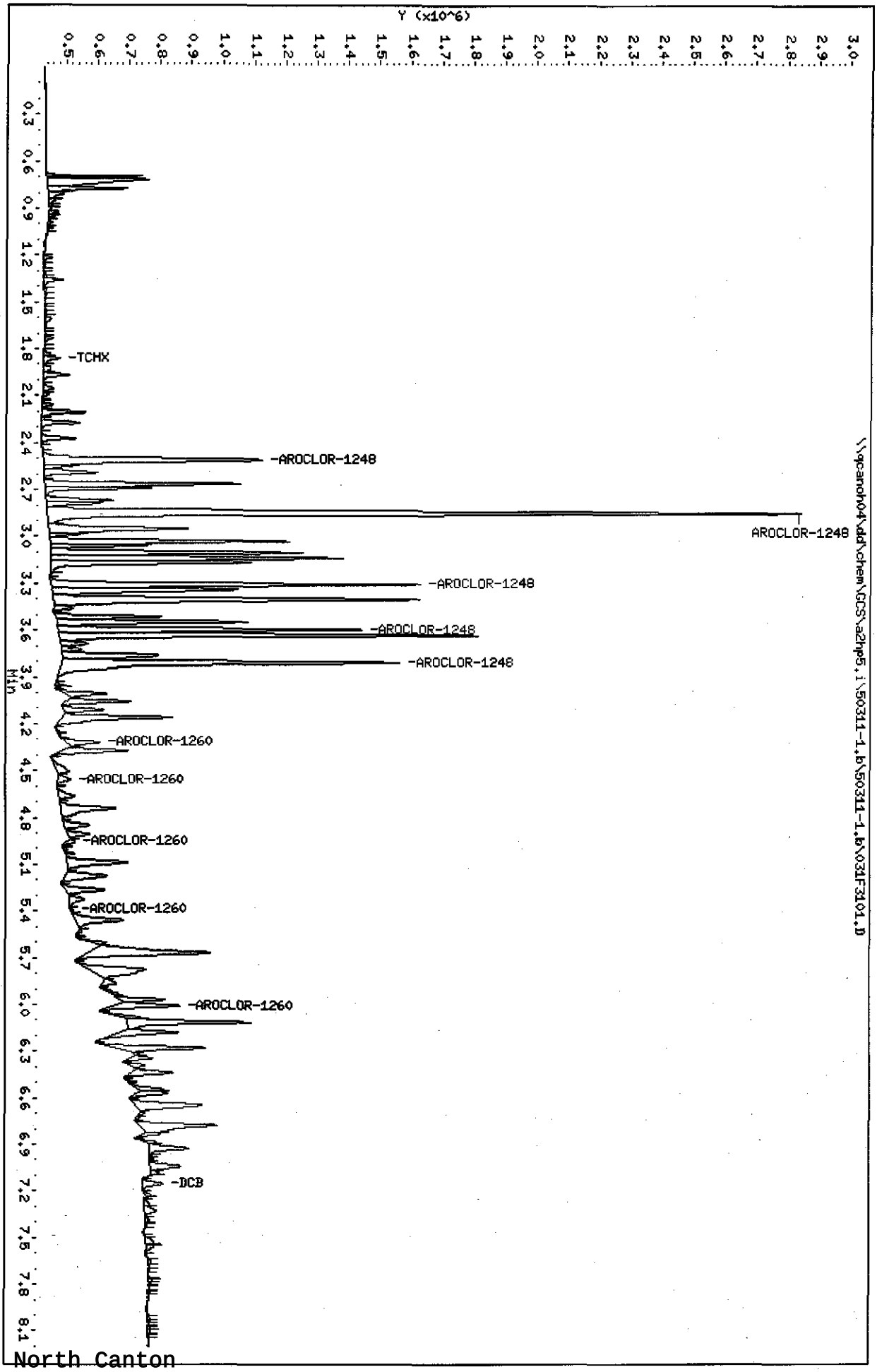
Manual Integration

Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\031F3101.D
Date : 11-MAR-2005 22:52
Client ID: S-030105-JH-014
Sample Info: C5CBH1AA.100
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-015

GC Semivolatiles

Lot-Sample #...: A5C020144-015 **Work Order #...:** G5C8N1AA **Matrix.....:** SO
Date Sampled...: 03/01/05 13:25 **Date Received..:** 03/02/05
Prep Date.....: 03/03/05 **Analysis Date..:** 03/11/05
Prep Batch #...: 5061334
Dilution Factor: 50 **Initial Wgt/Vol:** 30.11 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 11 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	ND	1800	ug/kg
Aroclor 1248	**11000**	**1800**	**ug/kg**
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	160 DIL	(10 - 172)
Decachlorobiphenyl	236 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 032F3201.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\032F3201.D
Lab Smp Id: G5C8N1AA Client Smp ID: S-030105-JH-015
Inj Date : 11-MAR-2005 23:04
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8N1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 32
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	144718	0.00064	10.63		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

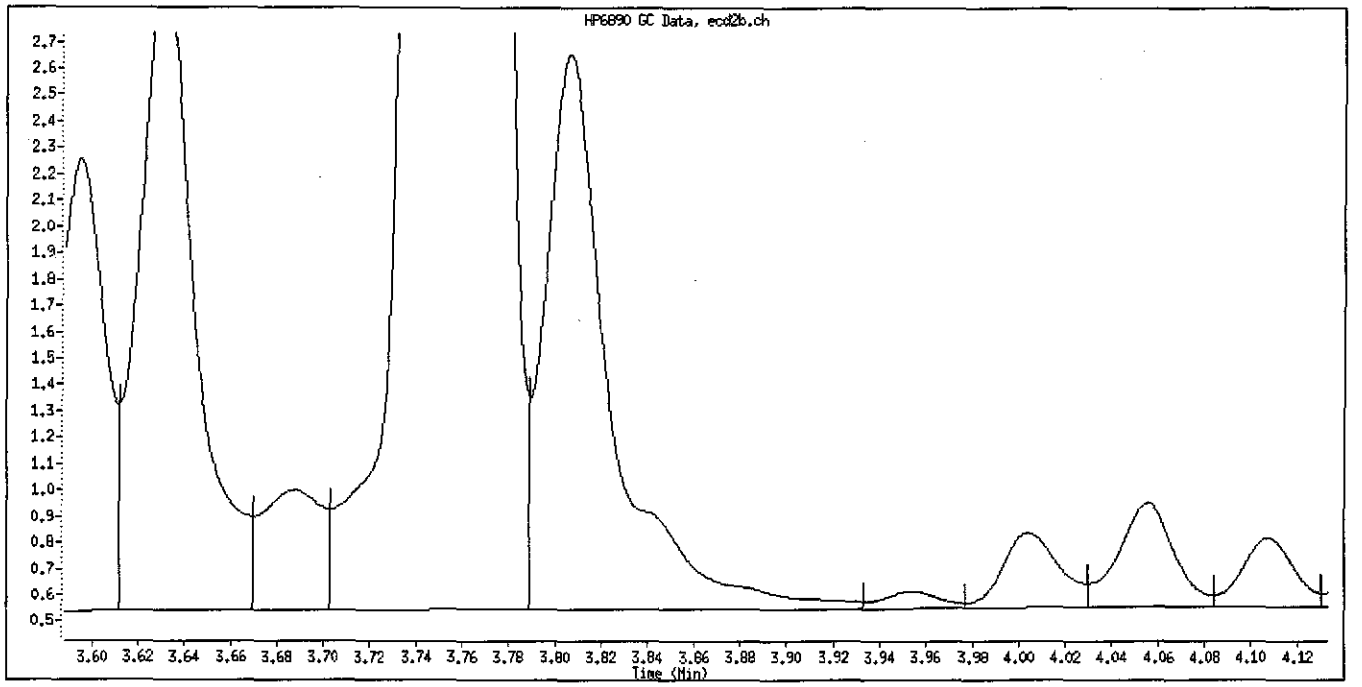
Data File: 032F3201.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Compound Not Detected								
6 AROCLOR-1248					CAS #: 12672-29-6			
2.512	2.503	0.009	1207669	0.61763	10260	75.00- 125.00	100.00	(M)
2.849	2.846	0.003	3938685	0.97956	16270	157.16- 261.93	326.14	
3.305	3.306	-0.001	2114648	0.43573	7236	189.24- 315.41	175.10	
3.594	3.596	-0.002	1719170	0.33645	5587	193.23- 322.06	142.35	
3.806	3.808	-0.002	2108615	0.46098	7655	173.06- 288.43	174.60	
Average of Peak Concentrations =					9400			
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
7.148	7.135	0.013	89385	9e-004	15.70			(R)

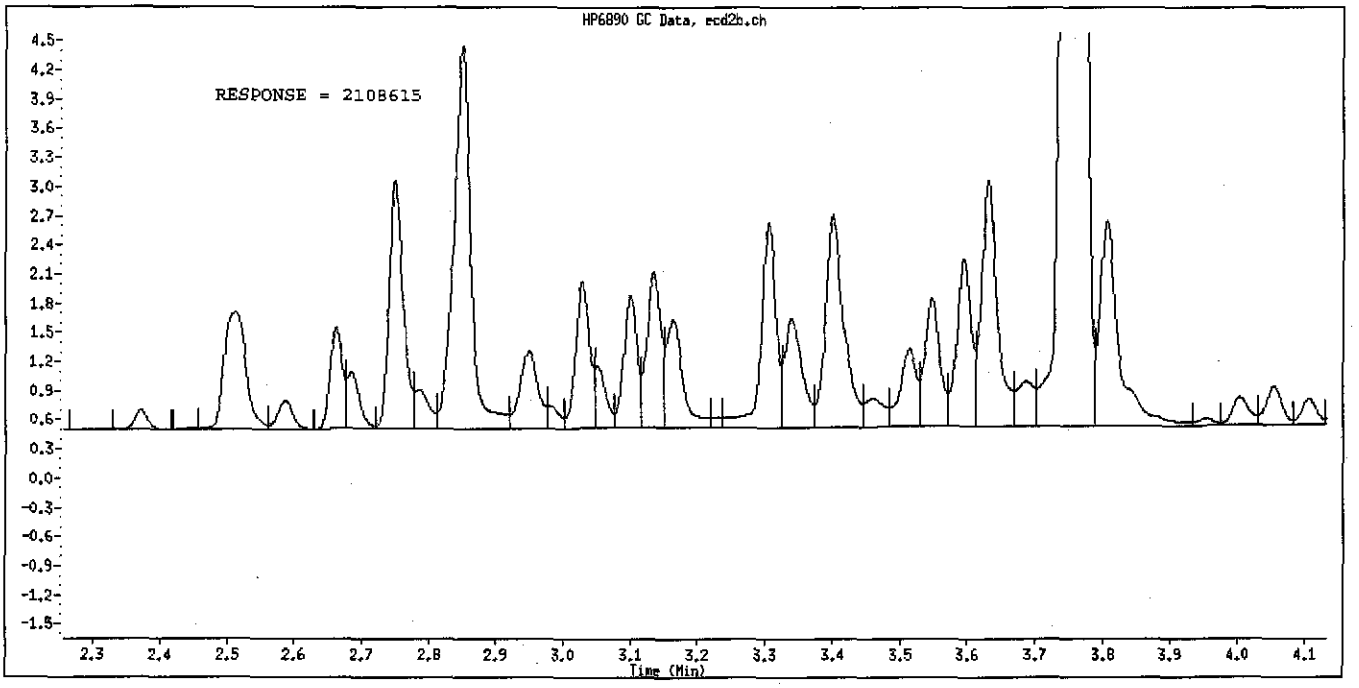
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 23:04
Instrument ID: a2hp5.i
Client ID: S-030105-JR-015
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



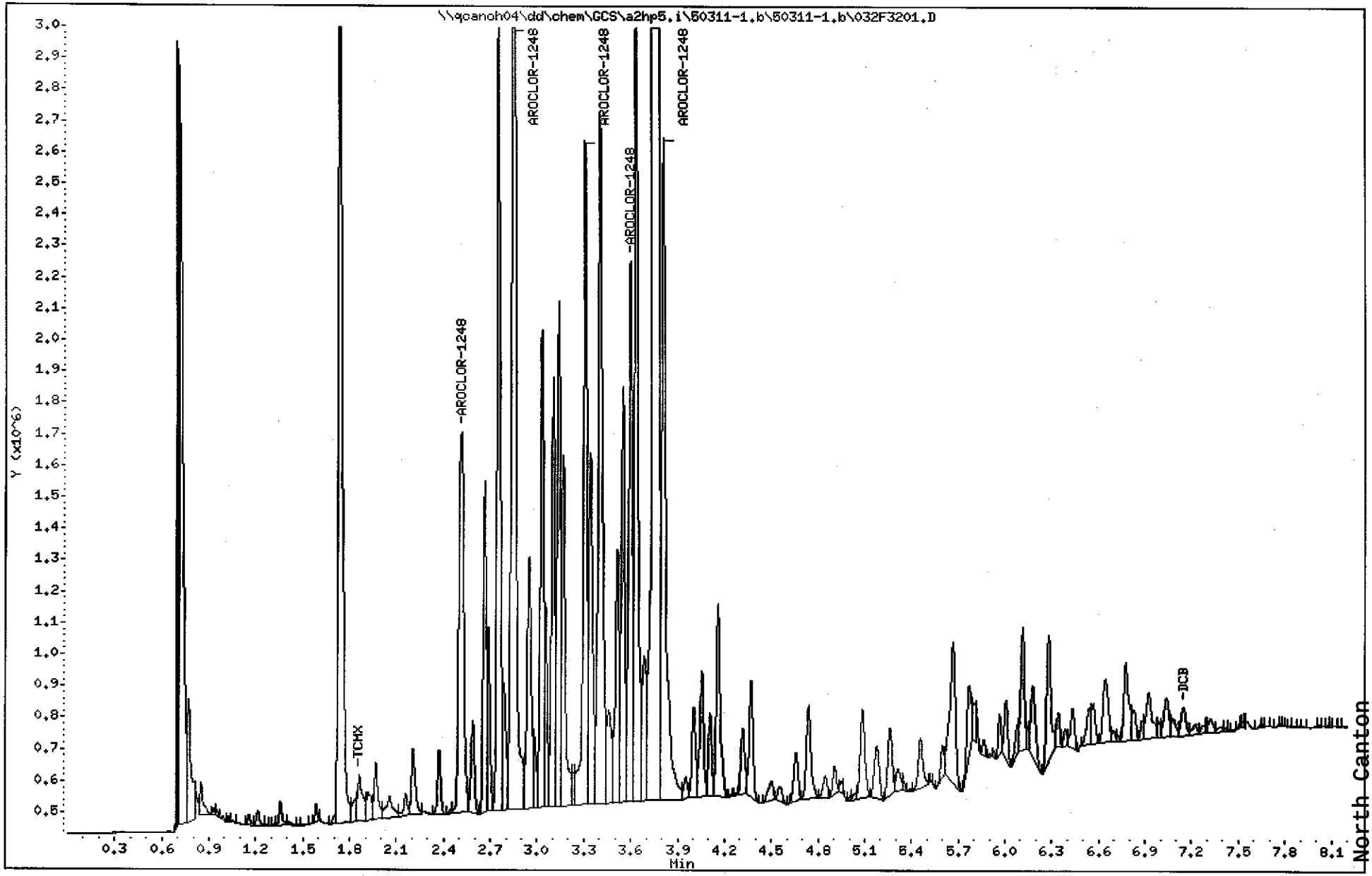
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\032F3201.D
Date : 11-MAR-2005 23:04
Client ID: S-030105-JH-015
Sample Info: G5C8N1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-016

GC Semivolatiles

Lot-Sample #...:	A5C020144-016	**Work Order #...:**	G5C8R1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:30	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	4.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	**140**	**35**	**ug/kg**
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
Decachlorobiphenyl	89	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 033F3301.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\033F3301.D
Lab Smp Id: G5C8R1AA Client Smp ID: S-030105-JH-016
Inj Date : 11-MAR-2005 23:16
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8R1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 33
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	4020232	0.01778	5.912		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
2.203	2.206	-0.003	1803852	0.52749	175.4	75.00- 125.00	100.00(M)
2.511	2.506	0.005	1251475	0.58649	195.0	46.65- 77.76	69.38
2.849	2.851	-0.002	1374608	0.37804	125.7	78.78- 131.30	76.20
2.955	2.953	0.002	366028	0.18629	61.93	42.72- 71.20	20.29
3.027	3.031	-0.004	364736	0.26935	89.54	28.97- 48.28	20.22
Average of Peak Concentrations =					129.5		

Data File: 033F3301.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

5 AROCLOR-1242 CAS #: 53469-21-9

Operator disabled compound identification.

---

6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

---

7 AROCLOR-1254 CAS #: 11097-69-1

Compound Not Detected

---

8 AROCLOR-1260 CAS #: 11096-82-5

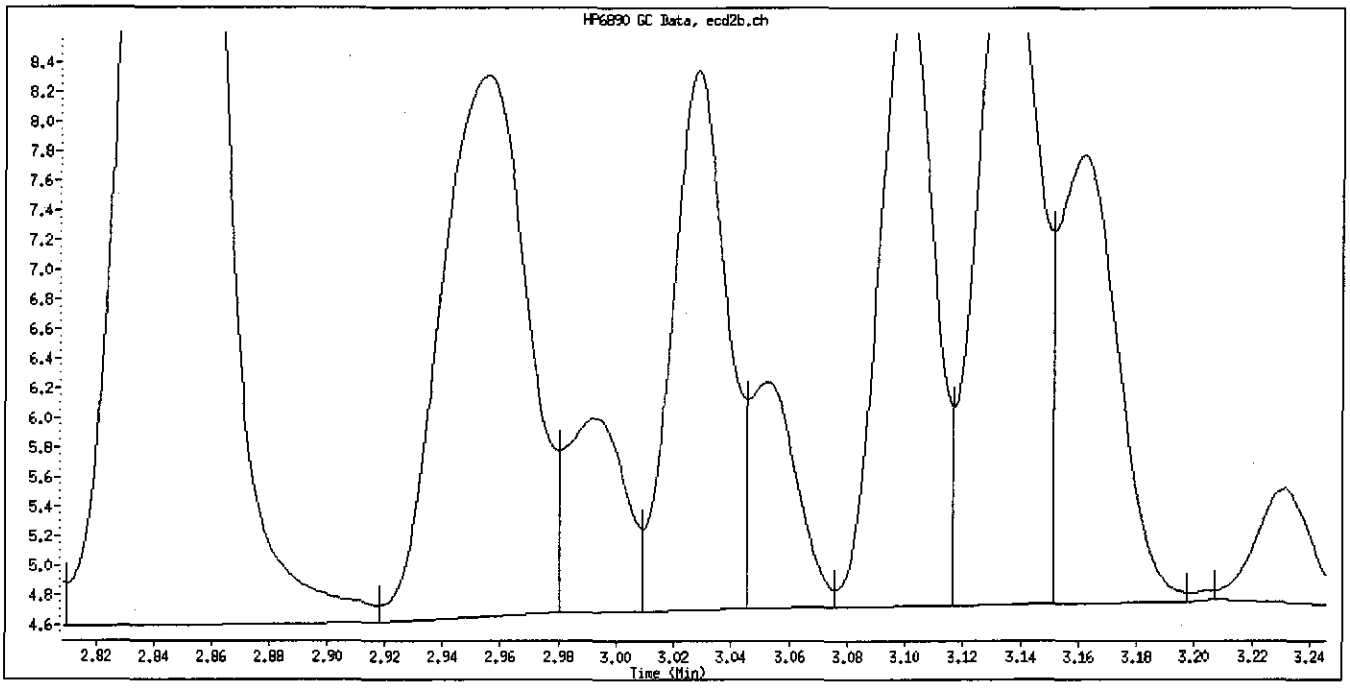
Compound Not Detected

$	9 DCB					CAS #: 2051-24-3	
7.137	7.135	0.002	1681047	0.01779	5.913		

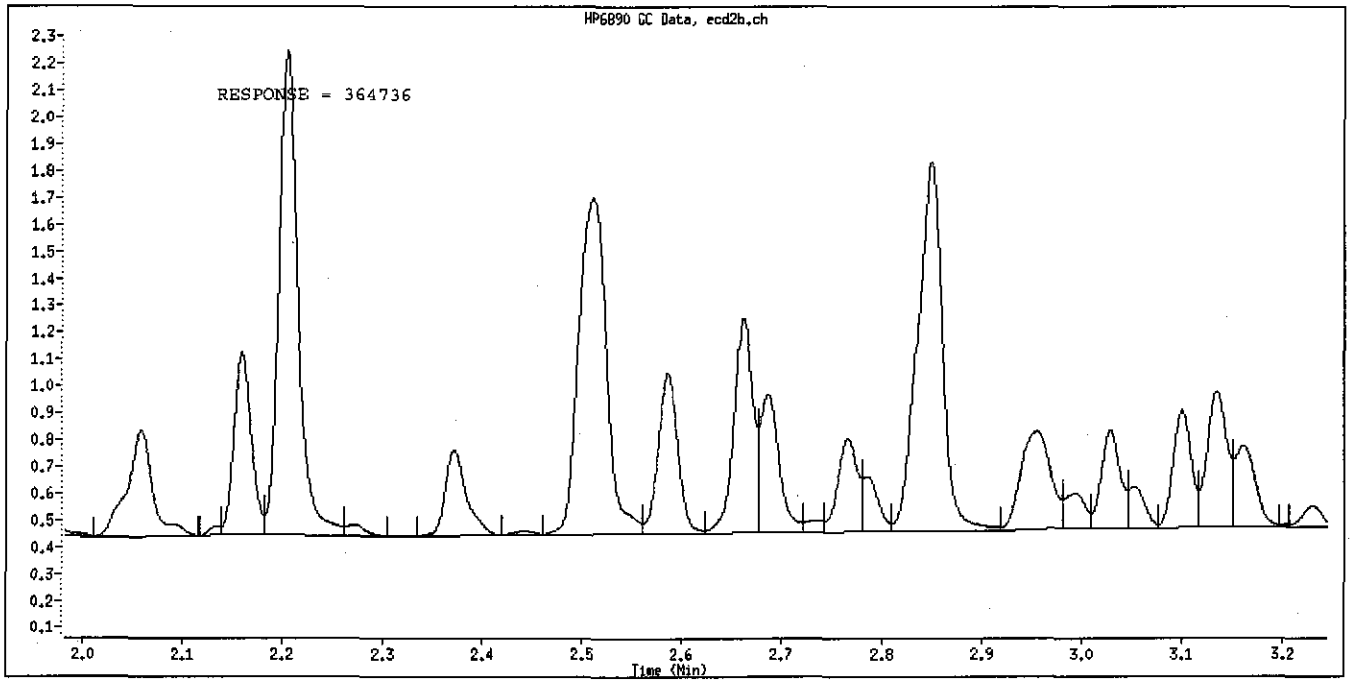
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 23:16
Instrument ID: a2hp5.i
Client ID: S-030105-JH-016
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/14/2005



Original Integration



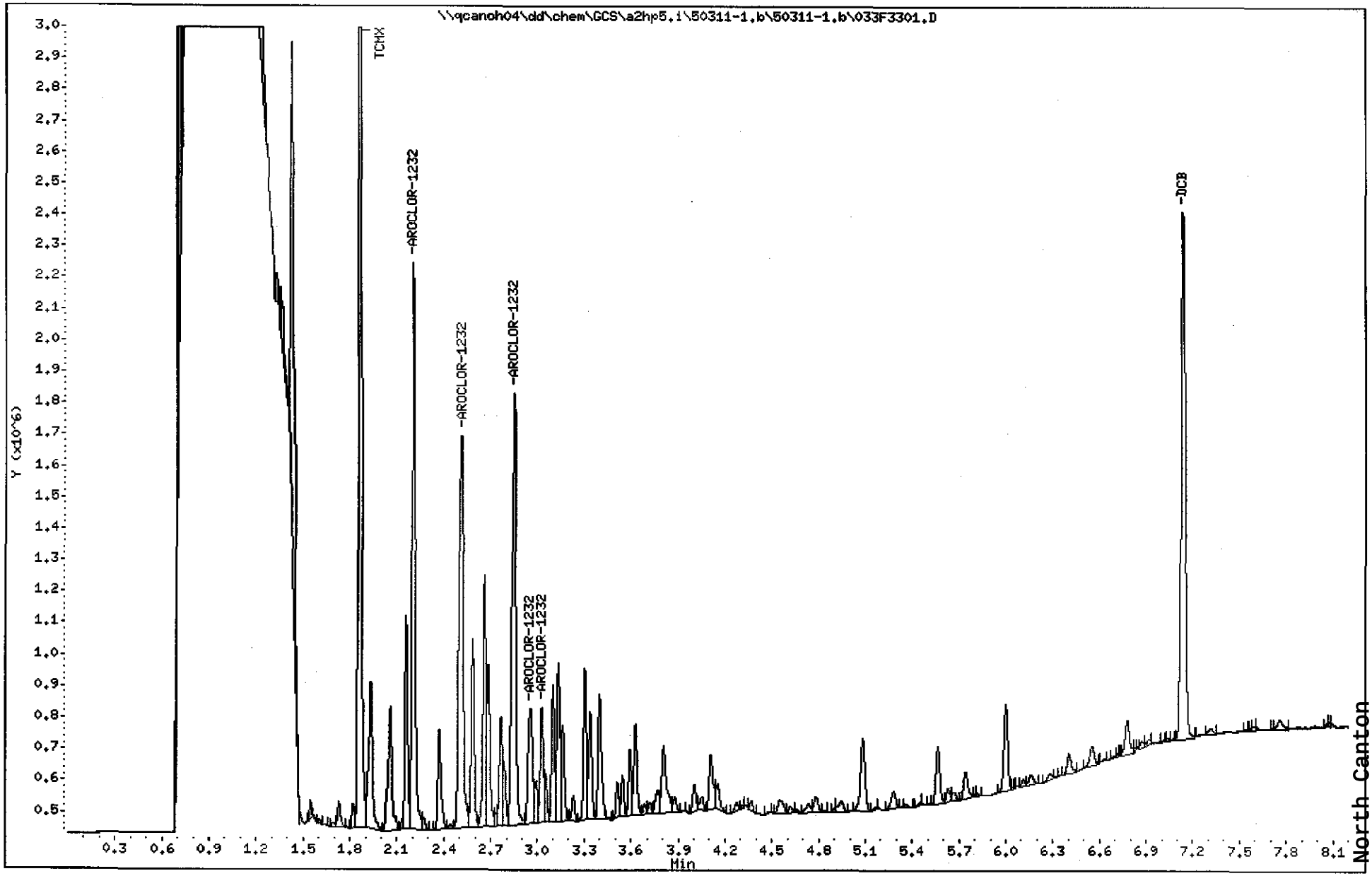
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\033F3301.D
Date : 11-MAR-2005 23:16
Client ID: S-030105-JH-016
Sample Info: C5C8R1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-017

GC Semivolatiles

Lot-Sample #...:	A5C020144-017	**Work Order #...:**	G5C8T1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:35	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	3.2	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	ND	34	ug/kg
Aroclor 1248	ND	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	78	(10 - 172)
Decachlorobiphenyl	77	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 034F3401.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\034F3401.D
Lab Smp Id: G5C8T1AA Client Smp ID: S-030105-JH-017
Inj Date : 11-MAR-2005 23:28
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8T1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	3517194	0.01556	5.181		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.205	2.206	-0.001	24965	0.00940	3.130	75.00- 125.00	100.00(M)
2.505	2.505	0.000	64658	0.01782	5.934	101.31- 168.85	258.99
2.848	2.850	-0.002	150035	0.02318	7.720	185.46- 309.11	600.98
2.956	2.952	0.004	105212	0.03066	10.21	95.29- 158.82	421.44
3.304	3.307	-0.003	53382	0.01932	6.432	76.10- 126.84	213.83
		Average of Peak Concentrations =			6.685		

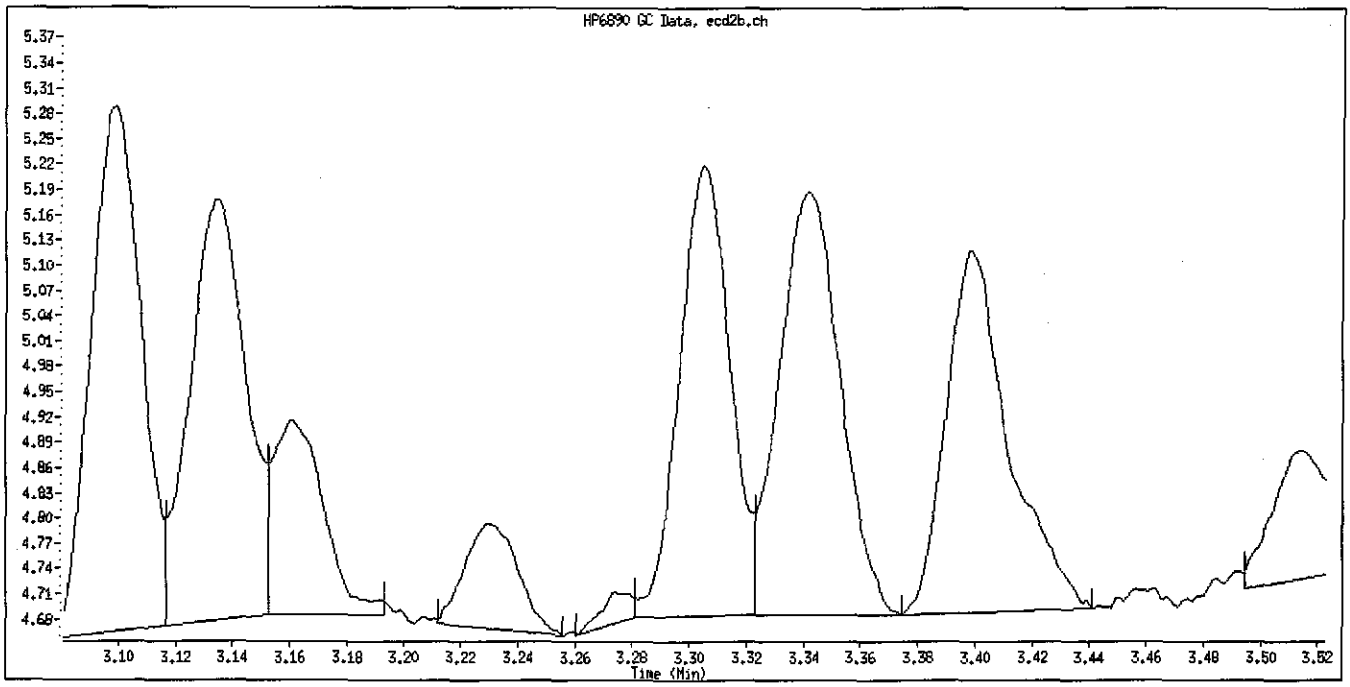
Data File: 034F3401.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.137	7.135	0.002	1460965	0.01546	5.148		

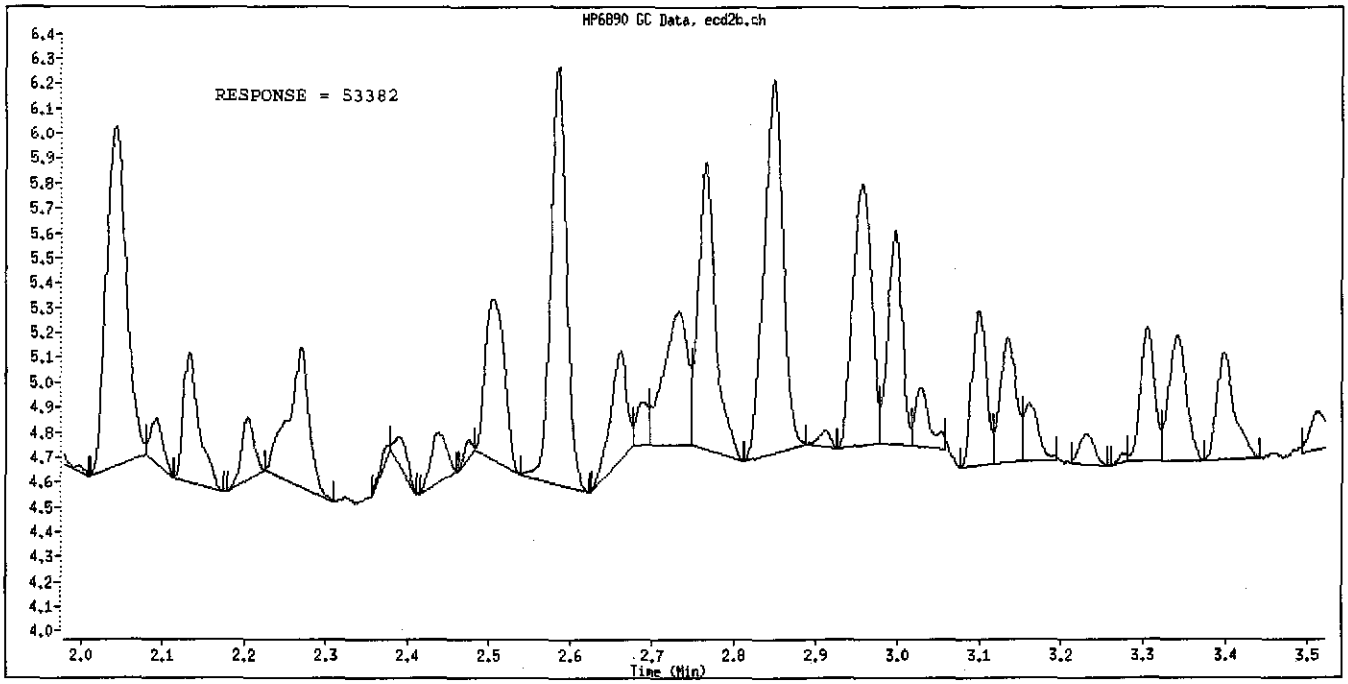
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 23:28
Instrument ID: a2hp5.i
Client ID: S-030105-JH-017
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



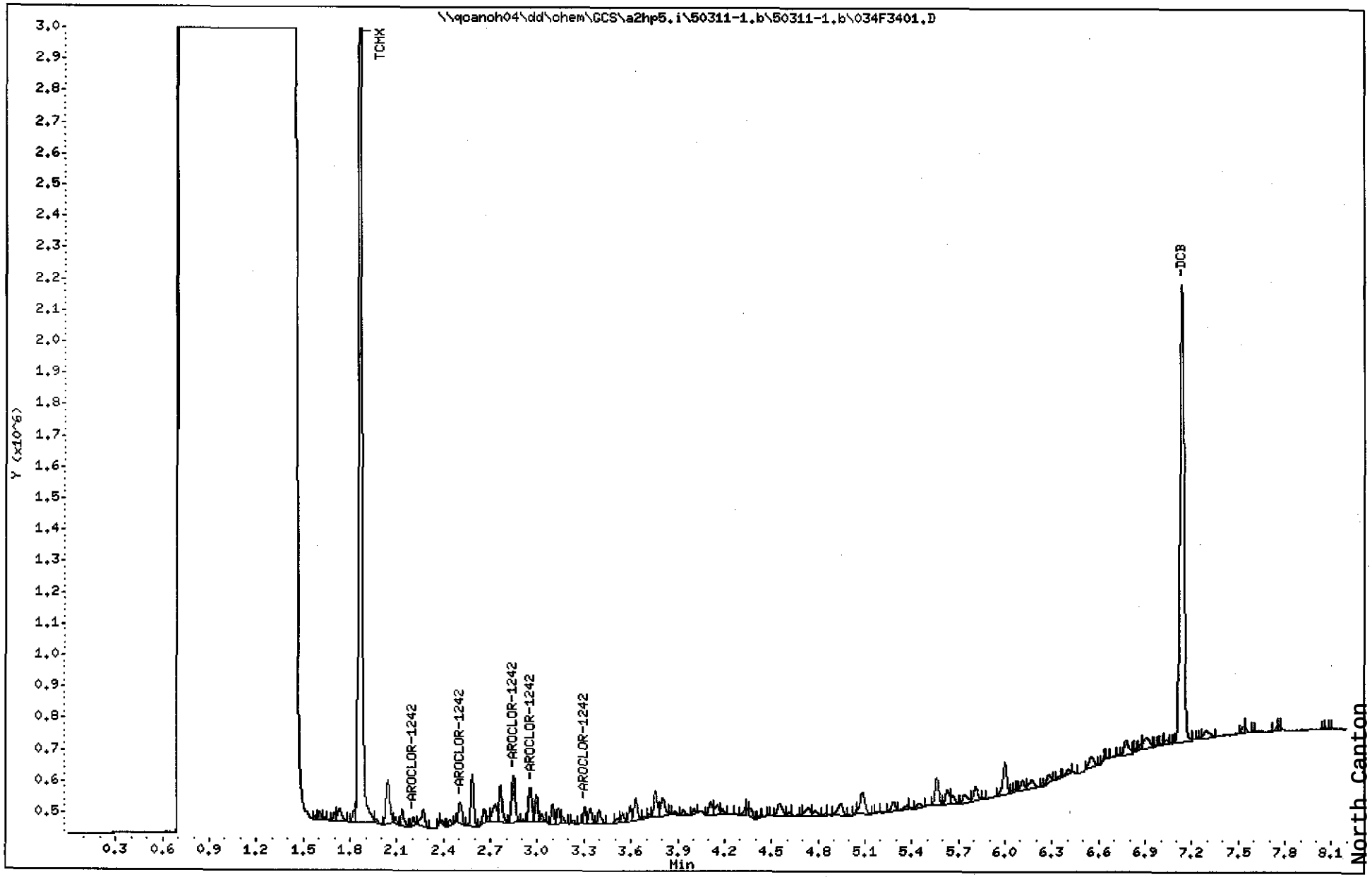
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\034F3401.D
Date : 11-MAR-2005 23:28
Client ID: S-030105-JH-017
Sample Info: G5C8T1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-018

GC Semivolatiles

Lot-Sample #...:	A5C020144-018	**Work Order #...:**	G5C8V1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:40	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/11/05		
Prep Batch #...:	5061334				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	3.6	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	34	ug/kg
Aroclor 1221	ND	34	ug/kg
Aroclor 1232	ND	34	ug/kg
Aroclor 1242	**37**	**34**	**ug/kg**
Aroclor 1248	ND	34	ug/kg
Aroclor 1254	ND	34	ug/kg
Aroclor 1260	ND	34	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 172)
Decachlorobiphenyl	91	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 035F3501.D
Report Date: 14-Mar-2005 15:56

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\035F3501.D
Lab Smp Id: G5C8V1AA Client Smp ID: S-030105-JH-018
Inj Date : 11-MAR-2005 23:40
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8V1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 35
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	3780767	0.01673	5.564		
2 AROCLOR-1221					CAS #: 11104-28-2		
Operator disabled compound identification.							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.207	2.206	0.001	196849	0.07411	24.65	75.00- 125.00	100.00(M)
2.507	2.505	0.002	385938	0.10636	35.38	101.31- 168.85	196.06
2.849	2.850	-0.001	1012558	0.15645	52.04	185.46- 309.11	514.38
2.951	2.952	-0.001	273900	0.07981	26.55	95.29- 158.82	139.14
3.305	3.307	-0.002	344125	0.12452	41.42	76.10- 126.84	174.82
Average of Peak Concentrations =					36.01		

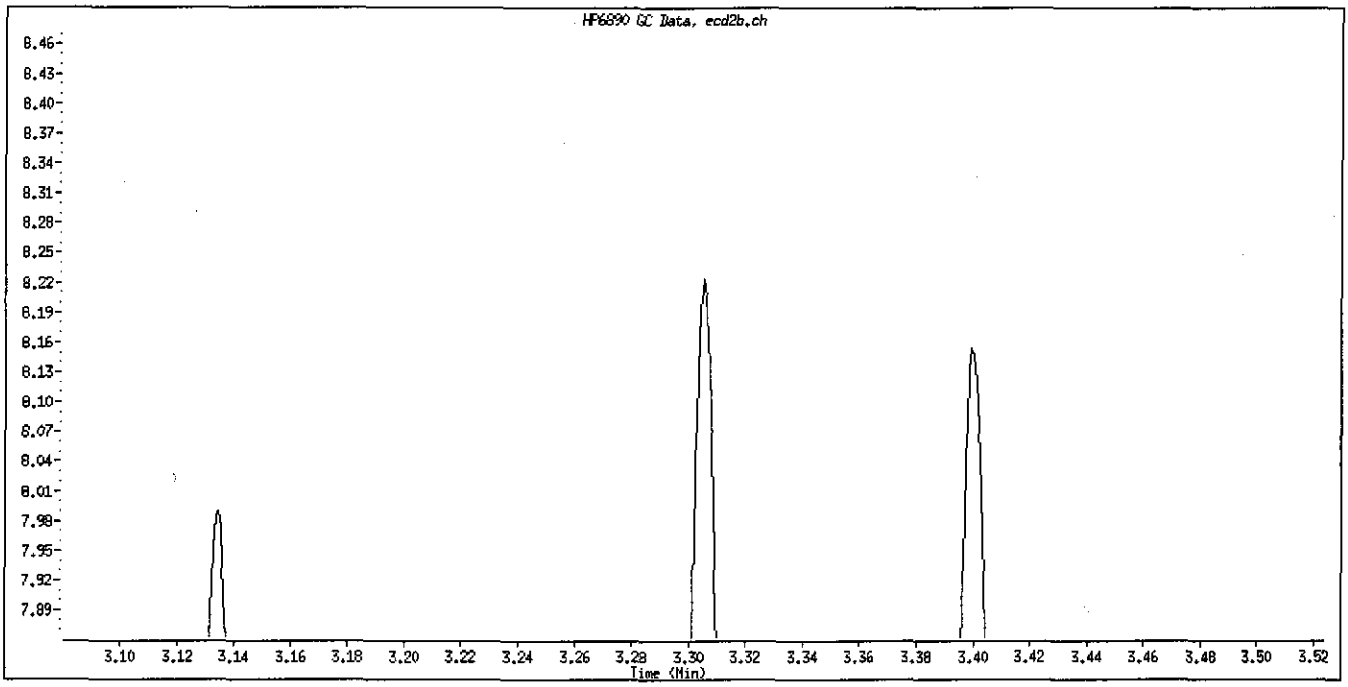
Data File: 035F3501.D
Report Date: 14-Mar-2005 15:56

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	1719464	0.01819	6.052		

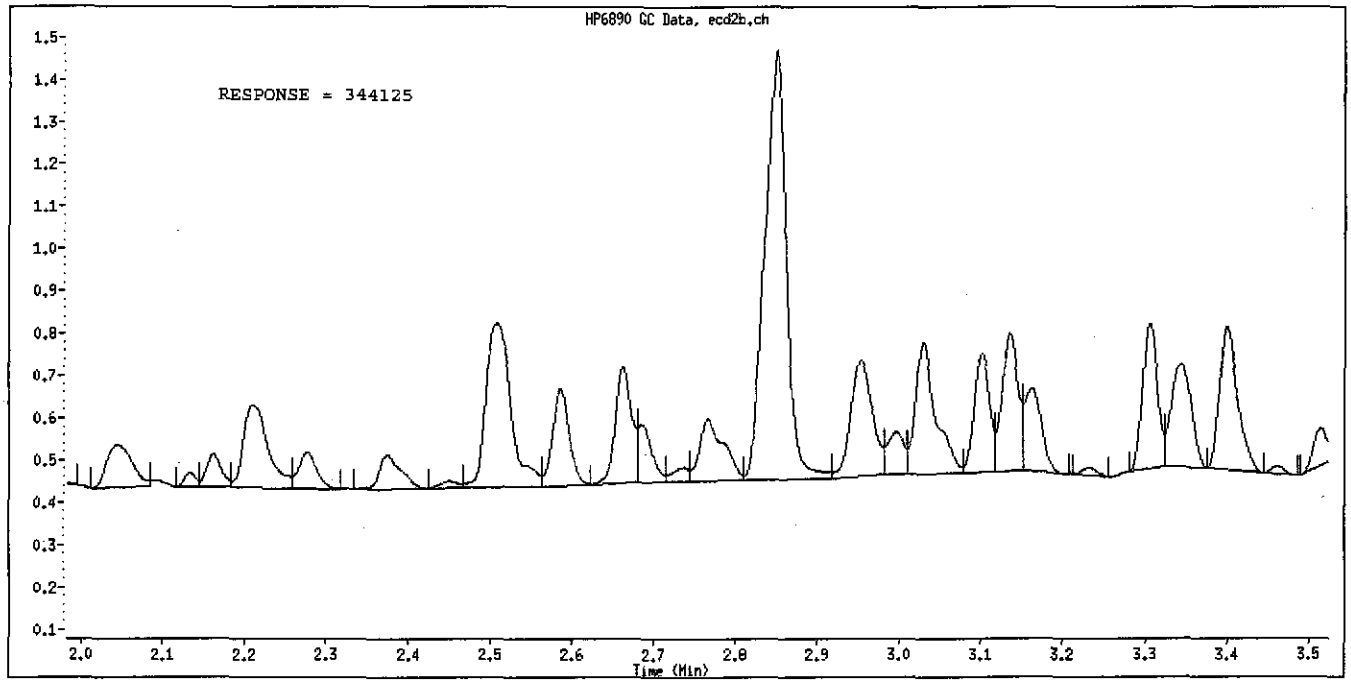
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 11-MAR-2005 23:40
Instrument ID: a2hp5.i
Client ID: S-030105-JH-018
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration

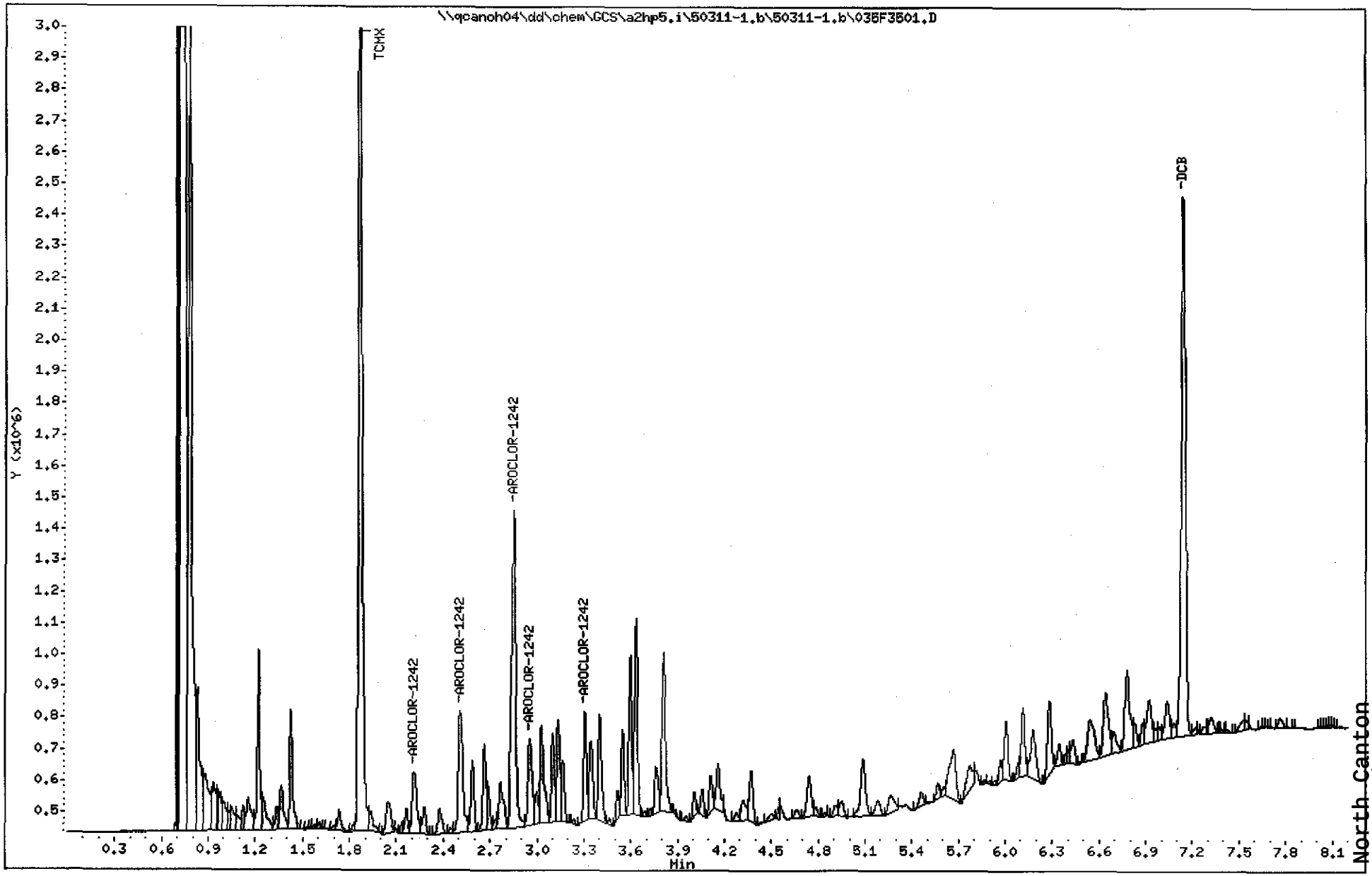


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\035F3501.D
Date : 11-MAR-2005 23:40
Client ID: S-030105-JH-018
Sample Info: C5C8V1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-019

GC Semivolatiles

Lot-Sample #...:	A5C020144-019	**Work Order #...:**	G5C8W1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:45	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5061334				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	720	ug/kg
Aroclor 1221	ND	720	ug/kg
Aroclor 1232	ND	720	ug/kg
Aroclor 1242	ND	720	ug/kg
Aroclor 1248	**2500**	**720**	**ug/kg**
Aroclor 1254	ND	720	ug/kg
Aroclor 1260	ND	720	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101 DIL	(10 - 172)
Decachlorobiphenyl	127 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 038F3801.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\038F3801.D
Lab Smp Id: G5C8W1AA Client Smp ID: S-030105-JH-019
Inj Date : 12-MAR-2005 00:17
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8W1AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 38
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	229352	0.00101	6.755		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

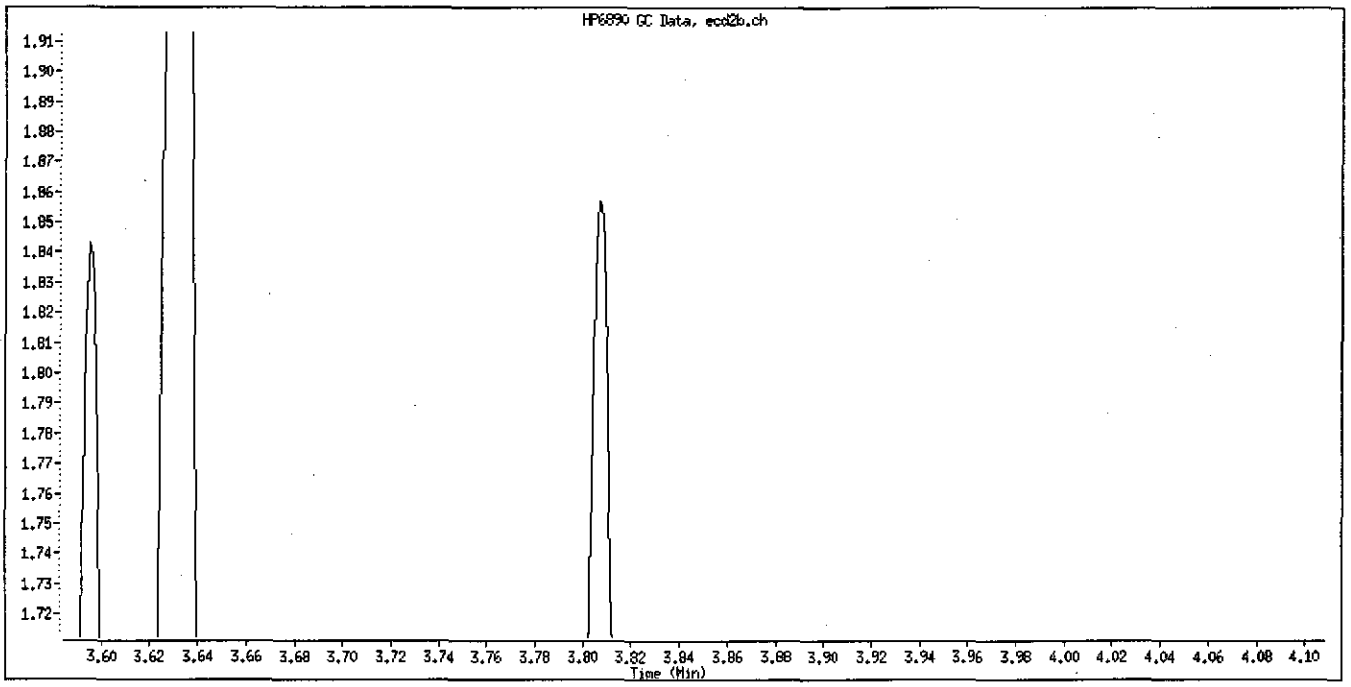
Data File: 038F3801.D
Report Date: 14-Mar-2005 15:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	542305	0.27735	1846	75.00- 125.00	100.00(M)
2.849	2.846	0.003	2486901	0.61850	4118	157.16- 261.93	458.58
3.305	3.306	-0.001	1306759	0.26926	1793	189.24- 315.41	240.96
3.595	3.596	-0.001	1370957	0.26831	1786	193.23- 322.06	252.80
3.806	3.808	-0.002	1379301	0.30154	2008	173.06- 288.43	254.34
Average of Peak Concentrations =					2310		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.142	7.135	0.007	119673	0.00127	8.430		

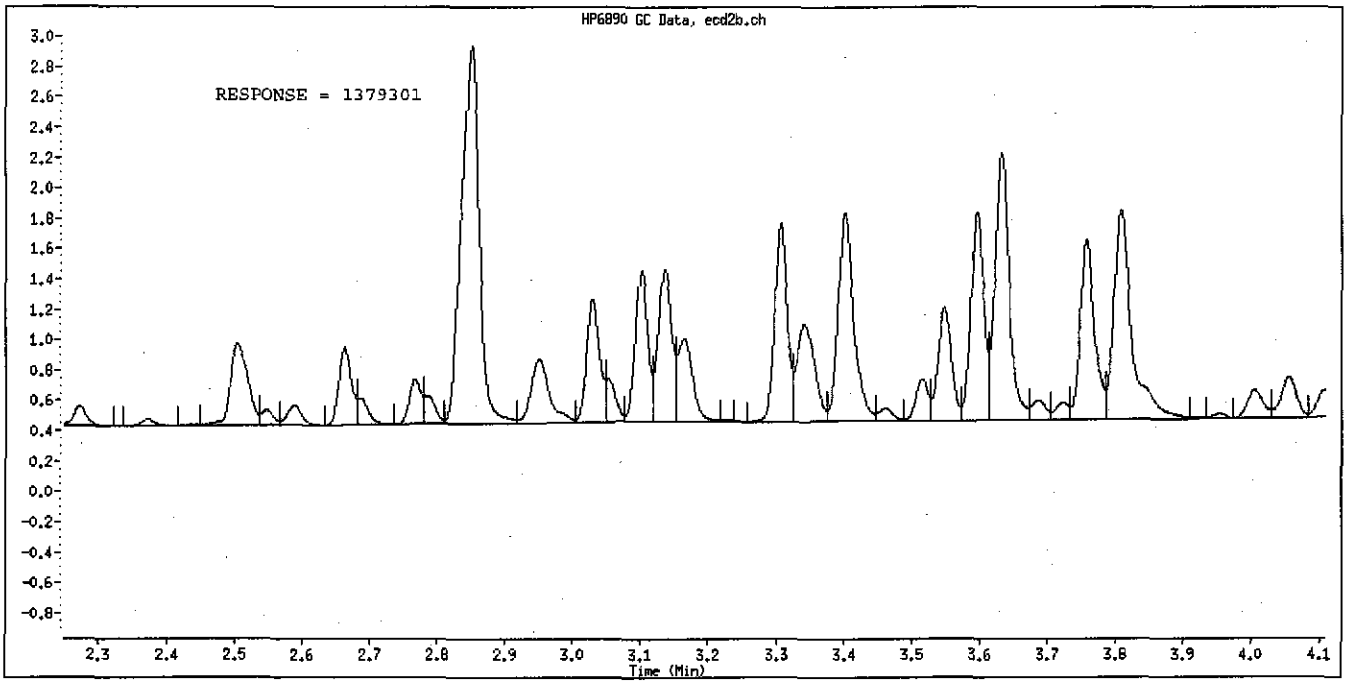
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 00:17
Instrument ID: a2hp5.i
Client ID: S-030105-JH-019
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



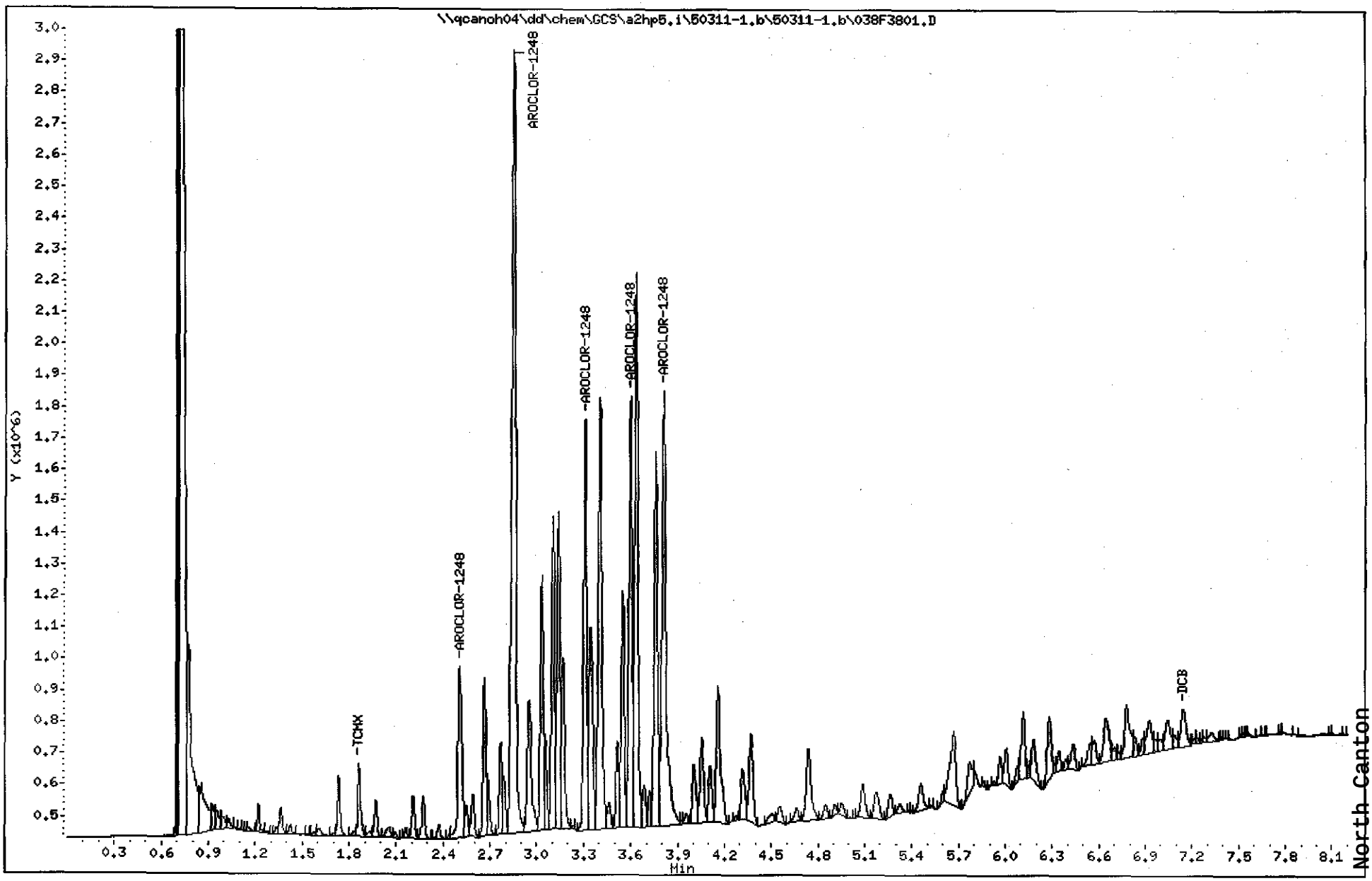
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\038F3801.D
Date : 12-MAR-2005 00:17
Client ID: S-030105-JH-019
Sample Info: G5C8W1AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-020

GC Semivolatiles

Lot-Sample #...:	A5C020144-020	**Work Order #...:**	G5C821AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:50	**Date Received..:**	03/02/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5061334				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	5.0	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	81	(10 - 172)
Decachlorobiphenyl	84	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 039F3901.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\039F3901.D
Lab Smp Id: G5C821AA Client Smp ID: S-030105-JH-020
Inj Date : 12-MAR-2005 00:29
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C821AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 39
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	3684563	0.01630	5.408		
2 AROCLOR-1221					CAS #: 11104-28-2		
Operator disabled compound identification.							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.217	2.206	0.011	244822	0.09217	30.58	75.00- 125.00	100.00(M)
2.505	2.505	0.000	183285	0.05051	16.76	101.31- 168.85	74.86
2.849	2.850	-0.001	384182	0.05936	19.69	185.46- 309.11	156.92
2.960	2.952	0.008	222052	0.06471	21.47	95.29- 158.82	90.70
3.305	3.307	-0.002	169902	0.06148	20.40	76.10- 126.84	69.40
Average of Peak Concentrations =					21.78		

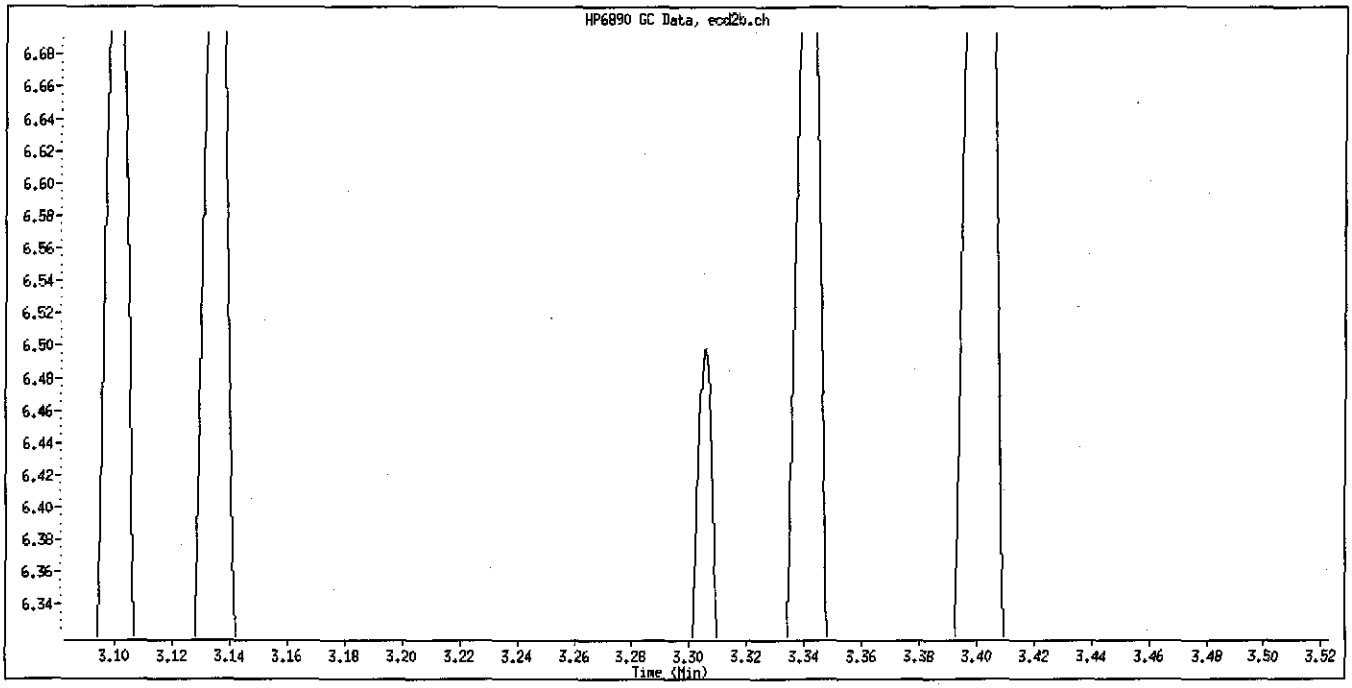
Data File: 039F3901.D
Report Date: 14-Mar-2005 15:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.139	7.135	0.004	1588458	0.01681	5.576		

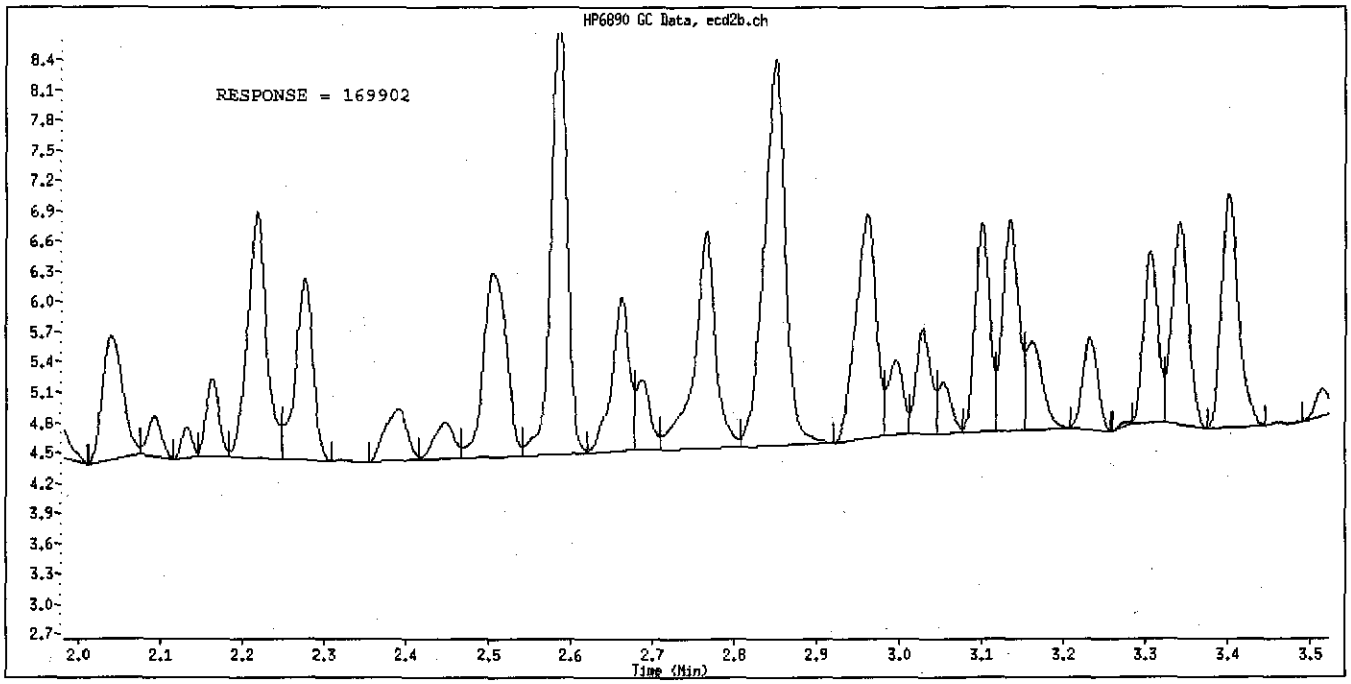
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 00:29
Instrument ID: a2hp5.i
Client ID: S-030105-JH-020
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



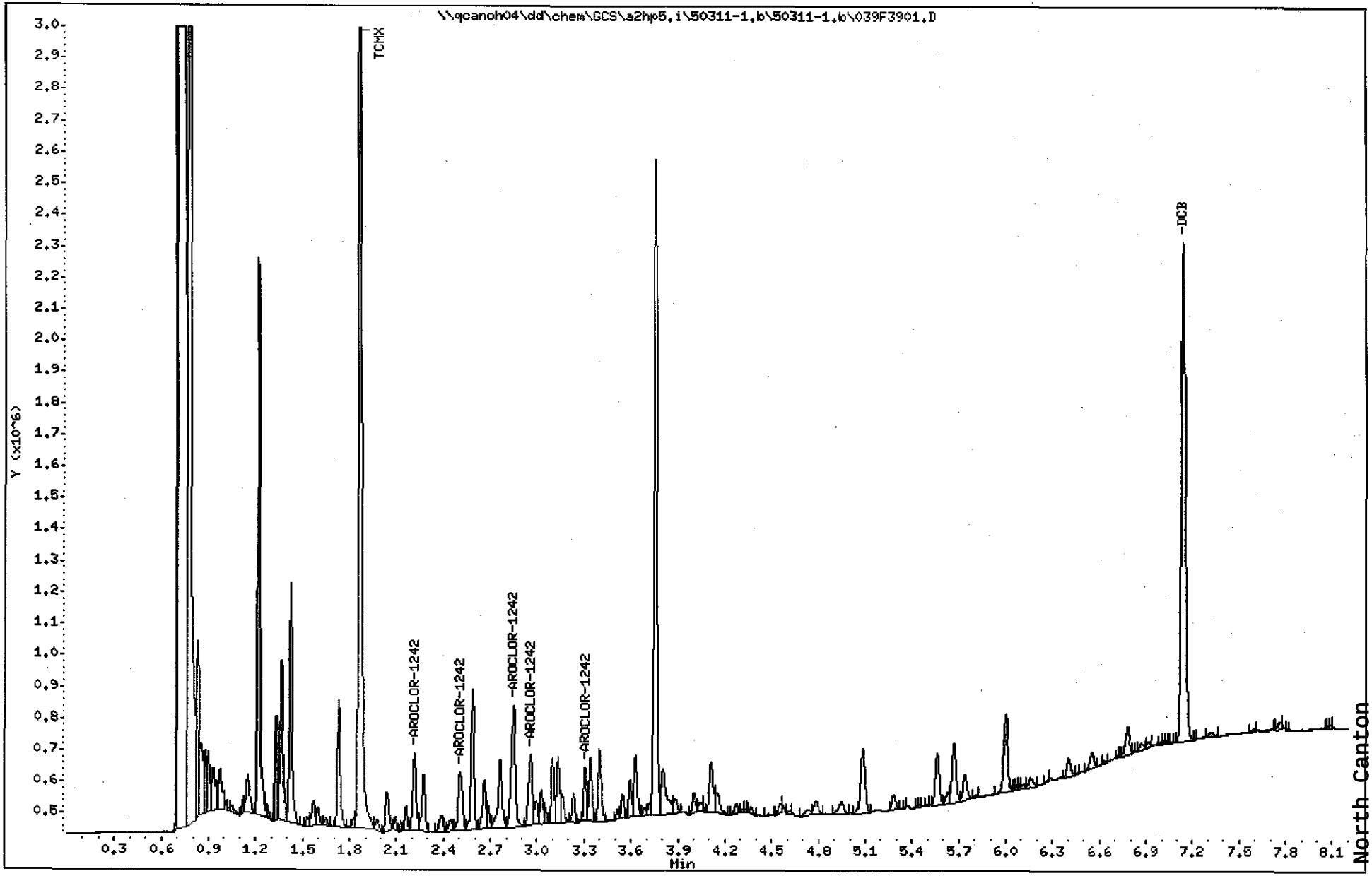
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\039F3901.D
Date : 12-MAR-2005 00:29
Client ID: S-030105-JH-020
Sample Info: G5C821AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-021

GC Semivolatiles

Lot-Sample #...:	A5C020144-021	**Work Order #...:**	G5C831AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 13:55	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	5.1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	ND	35	ug/kg
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 172)
Decachlorobiphenyl	79	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 026F2201.D
Report Date: 15-Mar-2005 14:12

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\026F2201.D
Lab Smp Id: G5C831AA Client Smp ID: S-030105-JH-021
Inj Date : 14-MAR-2005 20:41
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C831AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 26
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	3890210	0.01721	5.715		
2 AROCLOR-1221					CAS #: 11104-28-2		
Operator disabled compound identification.							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.216	2.206	0.010	351495	0.13233	43.95	75.00- 125.00	100.00(M)
2.504	2.505	-0.001	362676	0.09995	33.19	101.31- 168.85	103.18
2.849	2.850	-0.001	610414	0.09431	31.32	185.46- 309.11	173.66
2.947	2.952	-0.005	158276	0.04612	15.32	95.29- 158.82	45.03
3.304	3.307	-0.003	223731	0.08095	26.88	76.10- 126.84	63.65
Average of Peak Concentrations =					30.13		

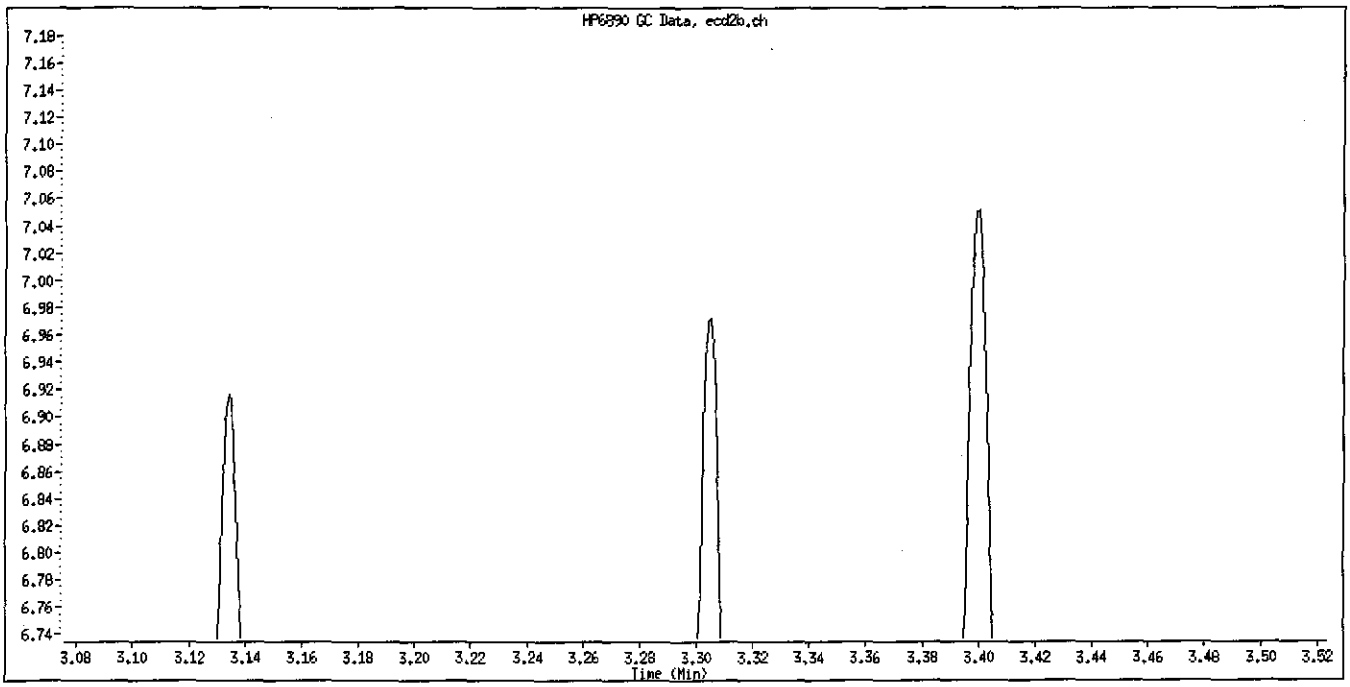
Data File: 026F2201.D
Report Date: 15-Mar-2005 14:12

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1496710	0.01584	5.259		

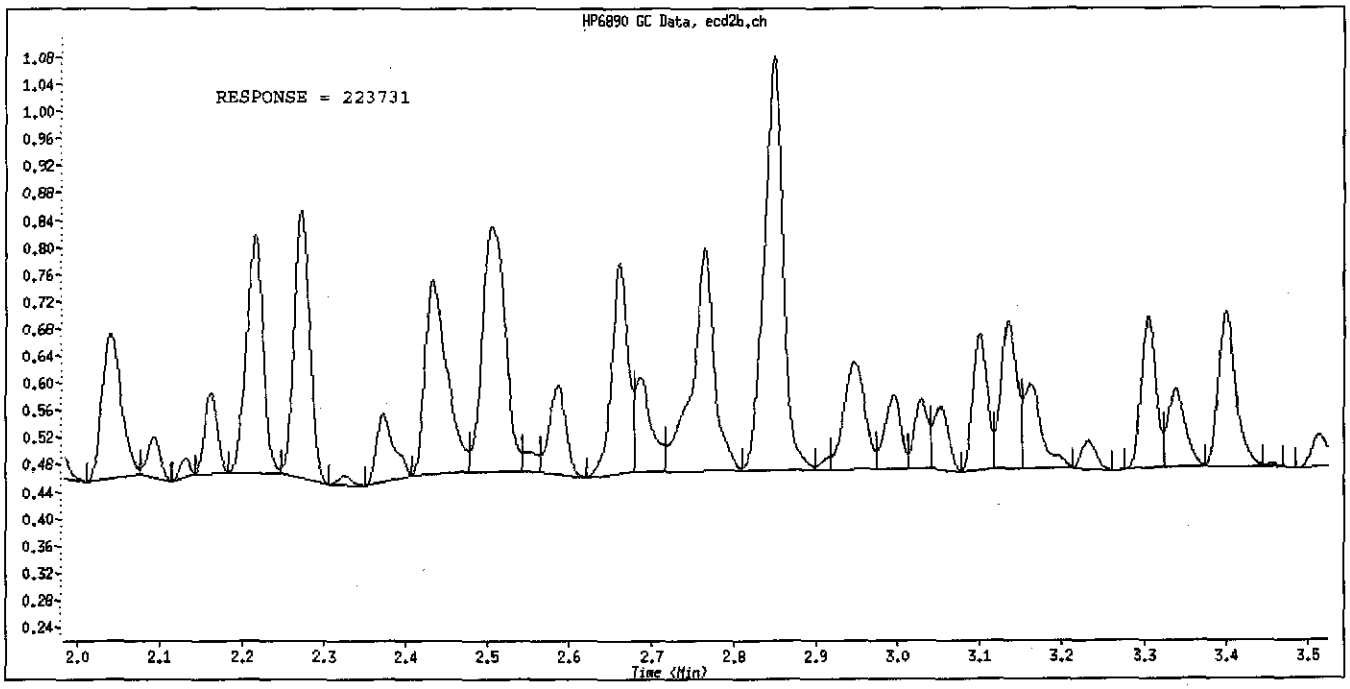
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 20:41
Instrument ID: a2hp5.i
Client ID: S-030105-JH-021
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration

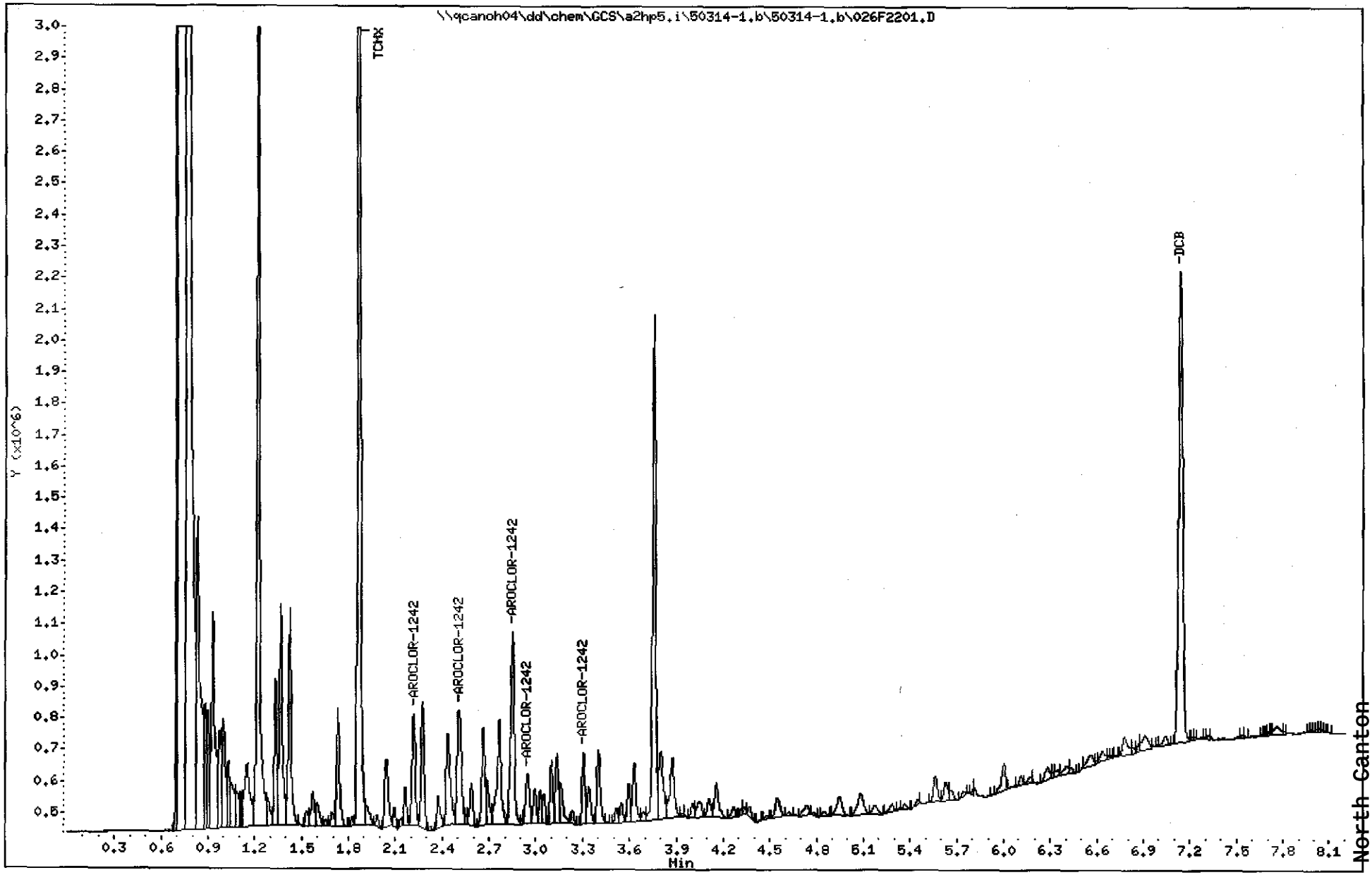


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\026F2201.D
Date : 14-MAR-2005 20:41
Client ID: S-030105-JH-021
Sample Info: G5C831AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-022

GC Semivolatiles

Lot-Sample #...:	A5C020144-022	**Work Order #...:**	G5C851AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:00	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	100	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	3700	ug/kg
Aroclor 1221	ND	3700	ug/kg
Aroclor 1232	ND	3700	ug/kg
Aroclor 1242	**41000**	**3700**	**ug/kg**
Aroclor 1248	ND	3700	ug/kg
Aroclor 1254	ND	3700	ug/kg
Aroclor 1260	ND	3700	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	123 DIL	(10 - 172)
Decachlorobiphenyl	1210 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 027F2301.D
Report Date: 15-Mar-2005 14:12

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\027F2301.D
Lab Smp Id: G5C851AA Client Smp ID: S-030105-JH-022
Inj Date : 14-MAR-2005 20:53
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C851AA,100
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 27
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	55696	2e-004	8.158		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	2390722	0.90005	29800	75.00- 125.00	100.00(M)
2.503	2.505	-0.002	4056839	1.11803	37020	101.31- 168.85	169.69
2.847	2.850	-0.003	7986774	1.23403	40860	185.46- 309.11	334.07
2.949	2.952	-0.003	3671922	1.06999	35430	95.29- 158.82	153.59
3.304	3.307	-0.003	3486042	1.26137	41770	76.10- 126.84	145.82
Average of Peak Concentrations =					36980		

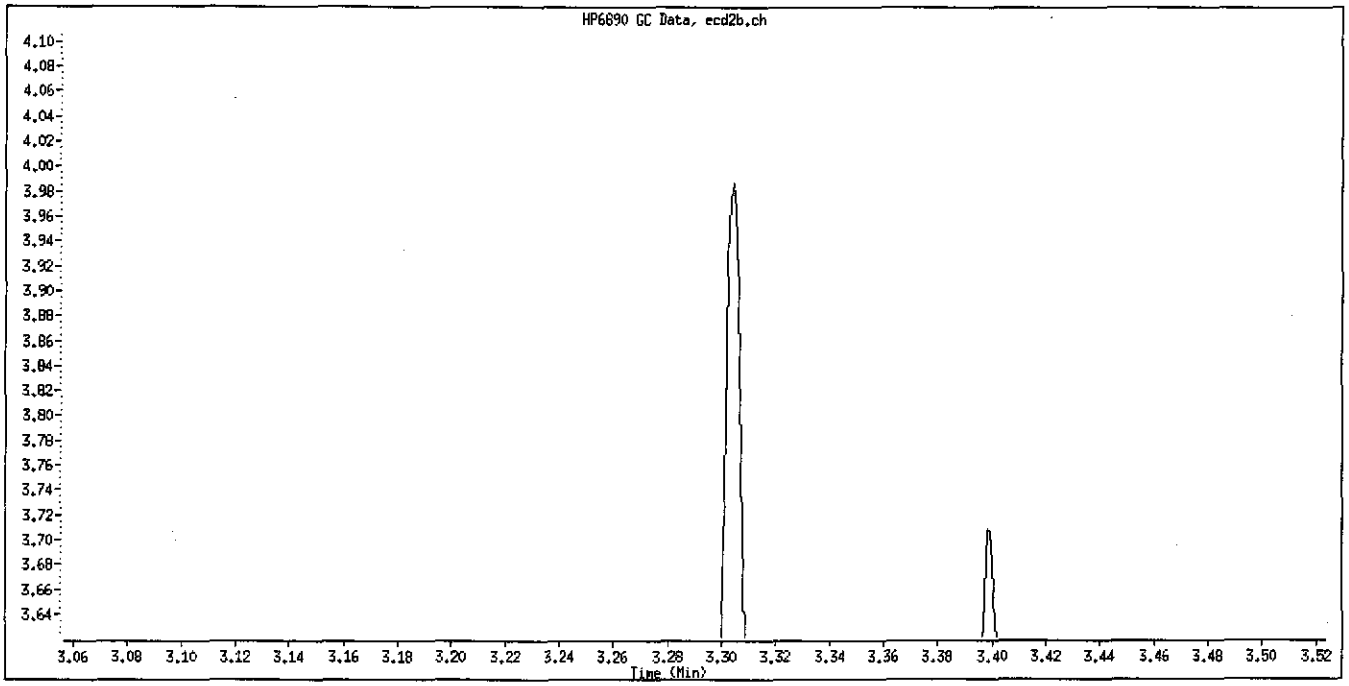
Data File: 027F2301.D
Report Date: 15-Mar-2005 14:12

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
7.149	7.135	0.014	228570	0.00242	80.08			(R)

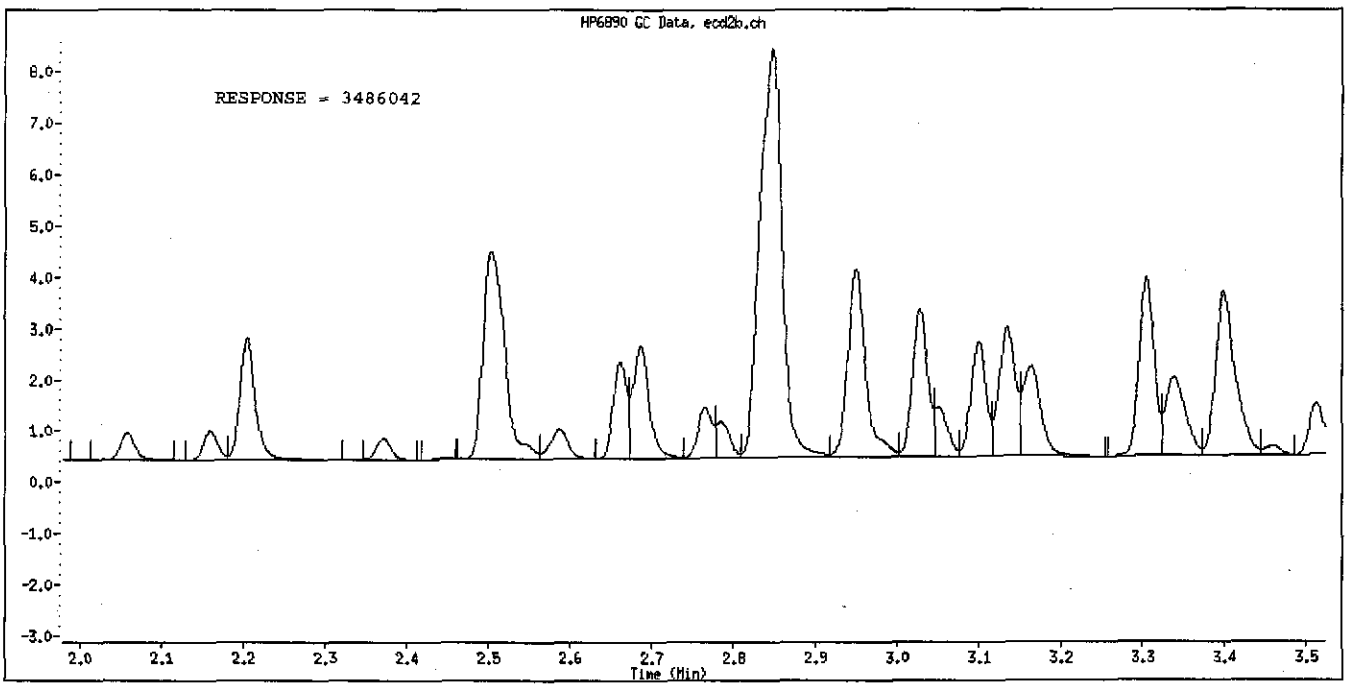
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 20:53
Instrument ID: a2hp5.i
Client ID: S-030105-JH-022
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration



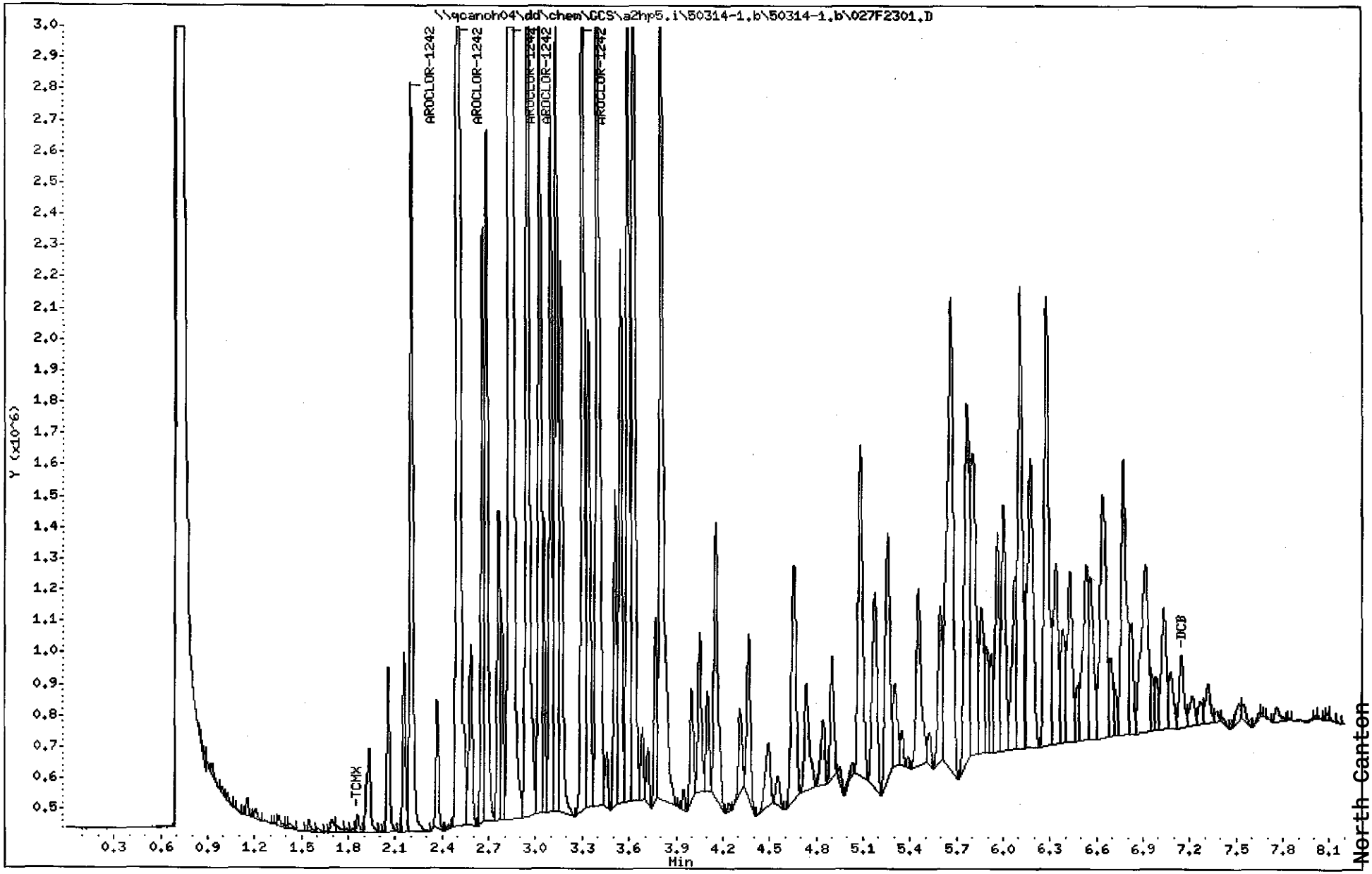
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\027F2301.D
Date : 14-MAR-2005 20:53
Client ID: S-030105-JH-022
Sample Info: G5C851AA,100
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-023

GC Semivolatiles

Lot-Sample #...:	A5C020144-023	**Work Order #...:**	G5C861AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:05	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	**62**	**38**	**ug/kg**
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	83	(10 - 172)
Decachlorobiphenyl	88	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 028F2401.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\028F2401.D
Lab Smp Id: G5C861AA Client Smp ID: S-030105-JH-023
Inj Date : 14-MAR-2005 21:06
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C861AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 28
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	3772896	0.01669	5.558		
2 AROCLOR-1221					CAS #: 11104-28-2		
Operator disabled compound identification.							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.217	2.206	0.011	574964	0.21646	72.08	75.00- 125.00	100.00(M)
2.506	2.505	0.001	560676	0.15452	51.45	101.31- 168.85	97.51
2.849	2.850	-0.001	1214370	0.18763	62.48	185.46- 309.11	211.21
2.956	2.952	0.004	293233	0.08545	28.45	95.29- 158.82	51.00
3.304	3.307	-0.003	472769	0.17106	56.96	76.10- 126.84	82.23
Average of Peak Concentrations =					54.29		

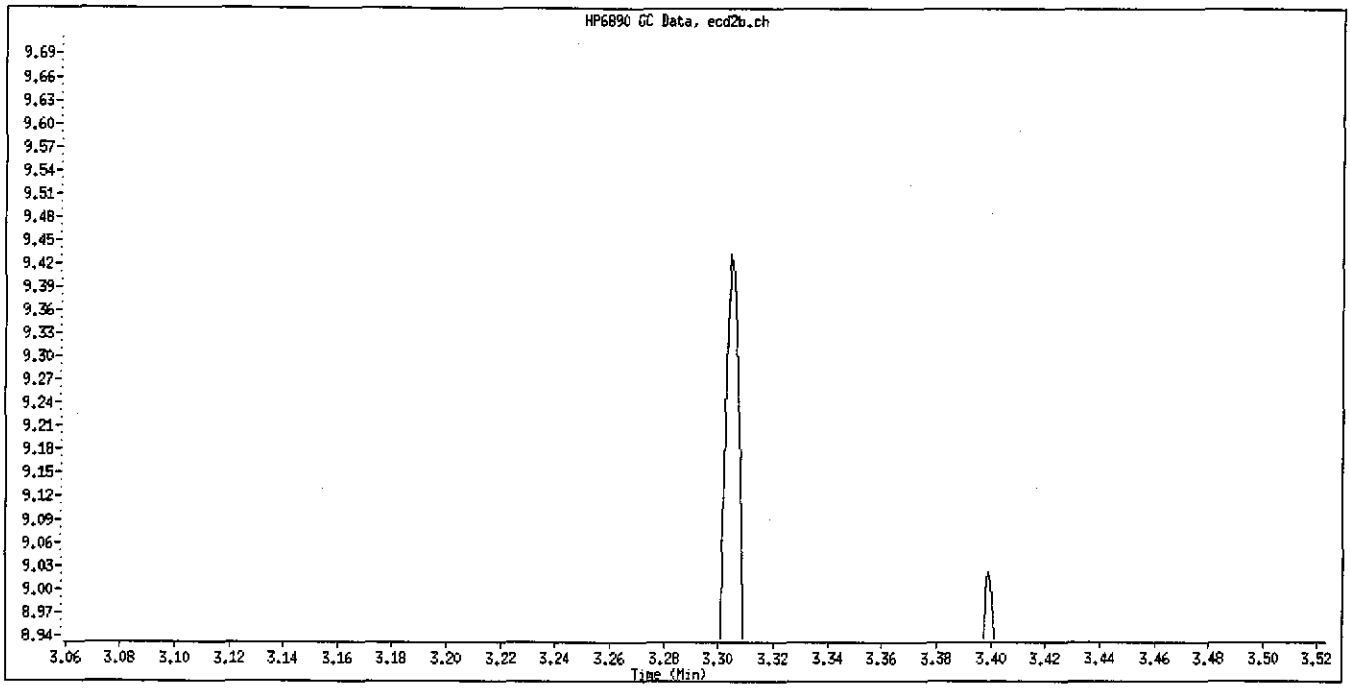
Data File: 028F2401.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1655515	0.01752	5.833		

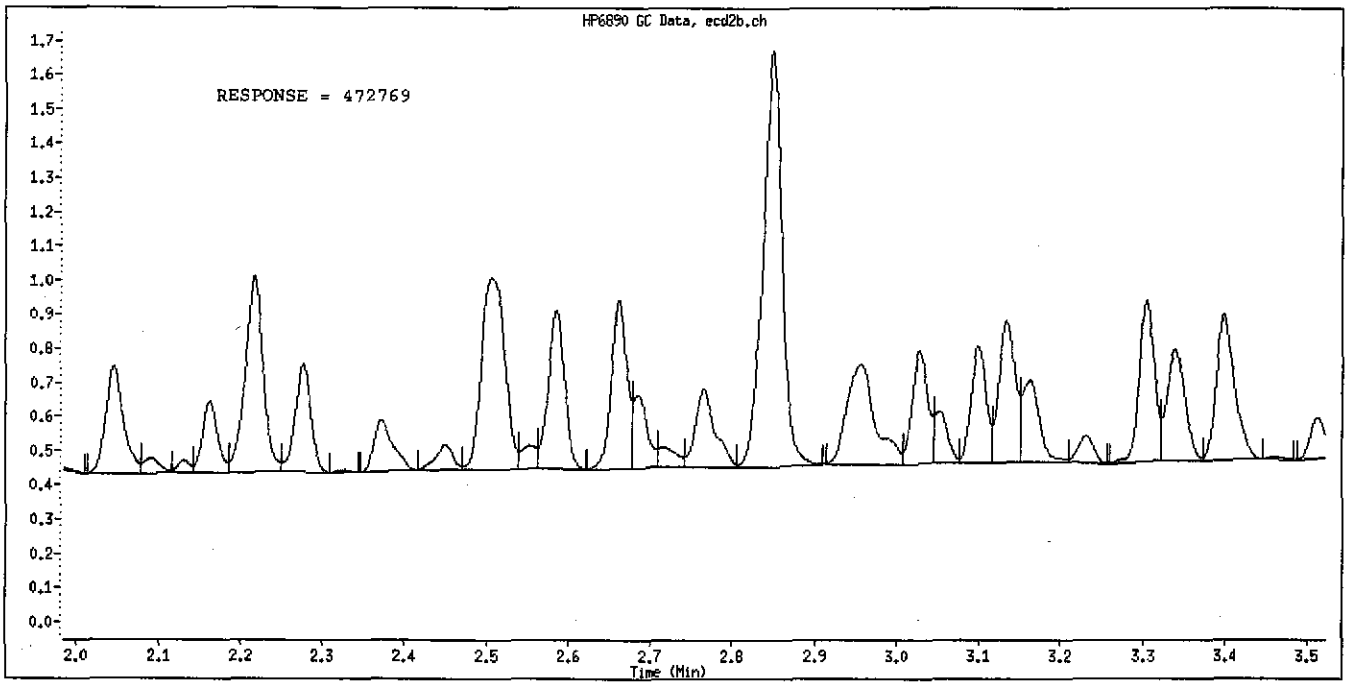
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 21:06
Instrument ID: a2hp5.i
Client ID: S-030105-JH-023
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration

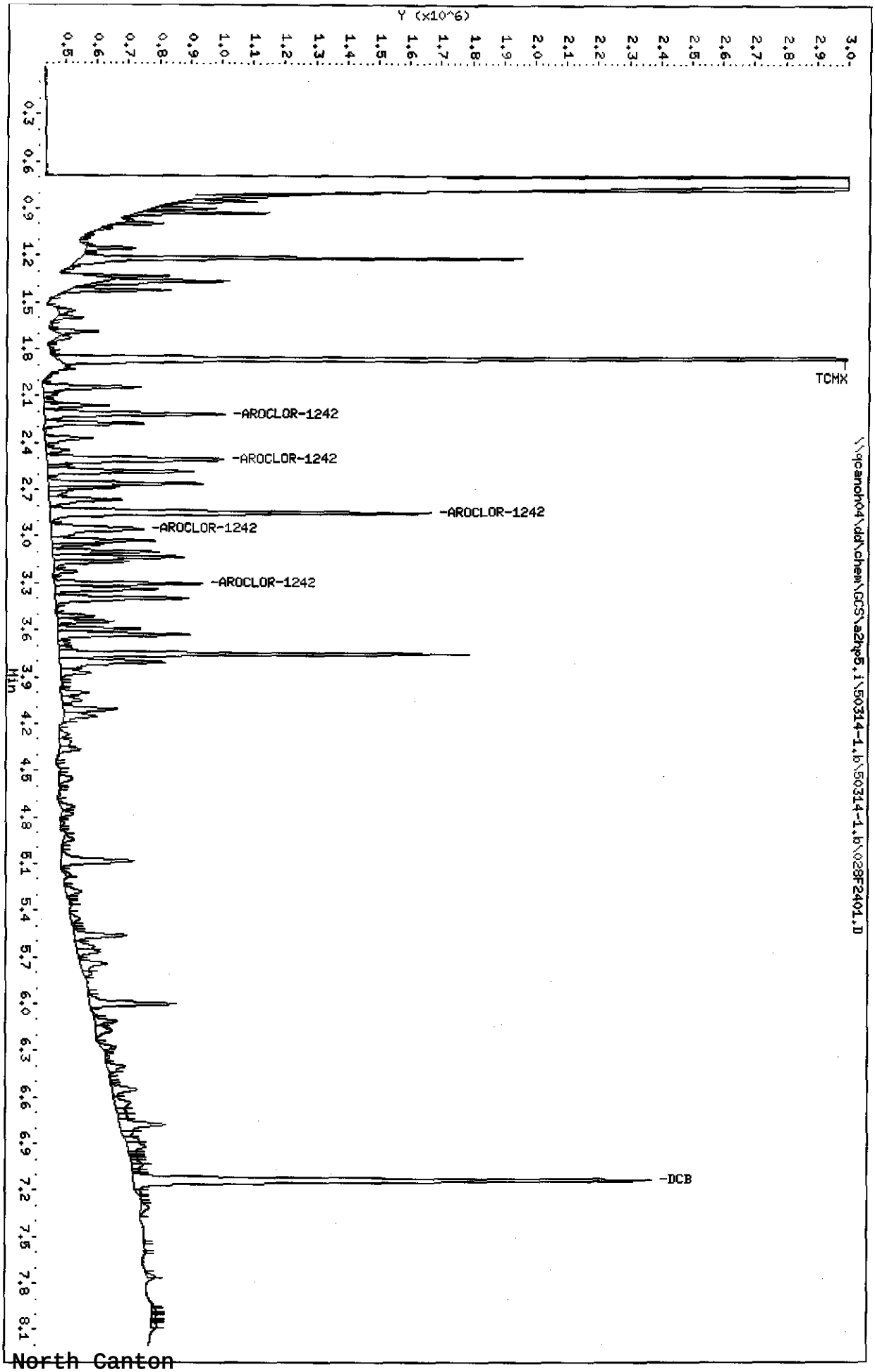


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\028F2401.D
Date : 14-MAR-2005 21:06
Client ID: S-030105-JH-023
Sample Info: G50861AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-024

GC Semivolatiles

Lot-Sample #...:	A5C020144-024	**Work Order #...:**	G5C871AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:10	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	500	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	19000	ug/kg
Aroclor 1221	ND	19000	ug/kg
Aroclor 1232	ND	19000	ug/kg
Aroclor 1242	ND	19000	ug/kg
Aroclor 1248	**85000**	**19000**	**ug/kg**
Aroclor 1254	ND	19000	ug/kg
Aroclor 1260	ND	19000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102 DIL	(10 - 172)
Decachlorobiphenyl	1030 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 029F2501.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\029F2501.D
Lab Smp Id: G5C871AA Client Smp ID: S-030105-JH-024
Inj Date : 14-MAR-2005 21:18
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C871AA,500
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 29
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.863	1.862	0.001	9234	4e-005	6.794		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

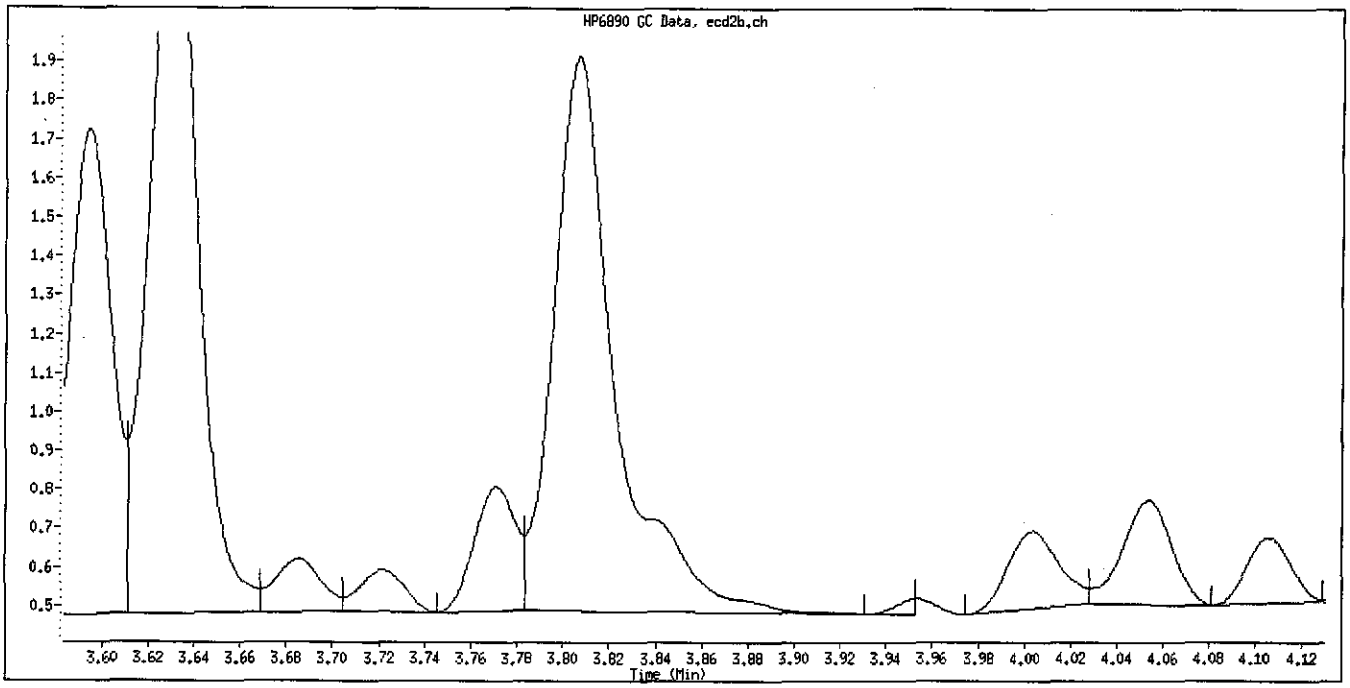
Data File: 029F2501.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Compound Not Detected								
6 AROCLOR-1248					CAS #: 12672-29-6			
2.506	2.503	0.003	815157	0.41689	69340	75.00- 125.00	100.00	(M)
2.849	2.846	0.003	3842310	0.95559	158900	157.16- 261.93	471.36	
3.304	3.306	-0.002	1620219	0.33385	55530	189.24- 315.41	198.76	
3.594	3.596	-0.002	1245448	0.24374	40540	193.23- 322.06	152.79	
3.806	3.808	-0.002	1425443	0.31163	51830	173.06- 288.43	174.87	
Average of Peak Concentrations =					75240			
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Compound Not Detected								
$ 9 DCB					CAS #: 2051-24-3			
7.150	7.135	0.015	38815	4e-004	68.31			(R)

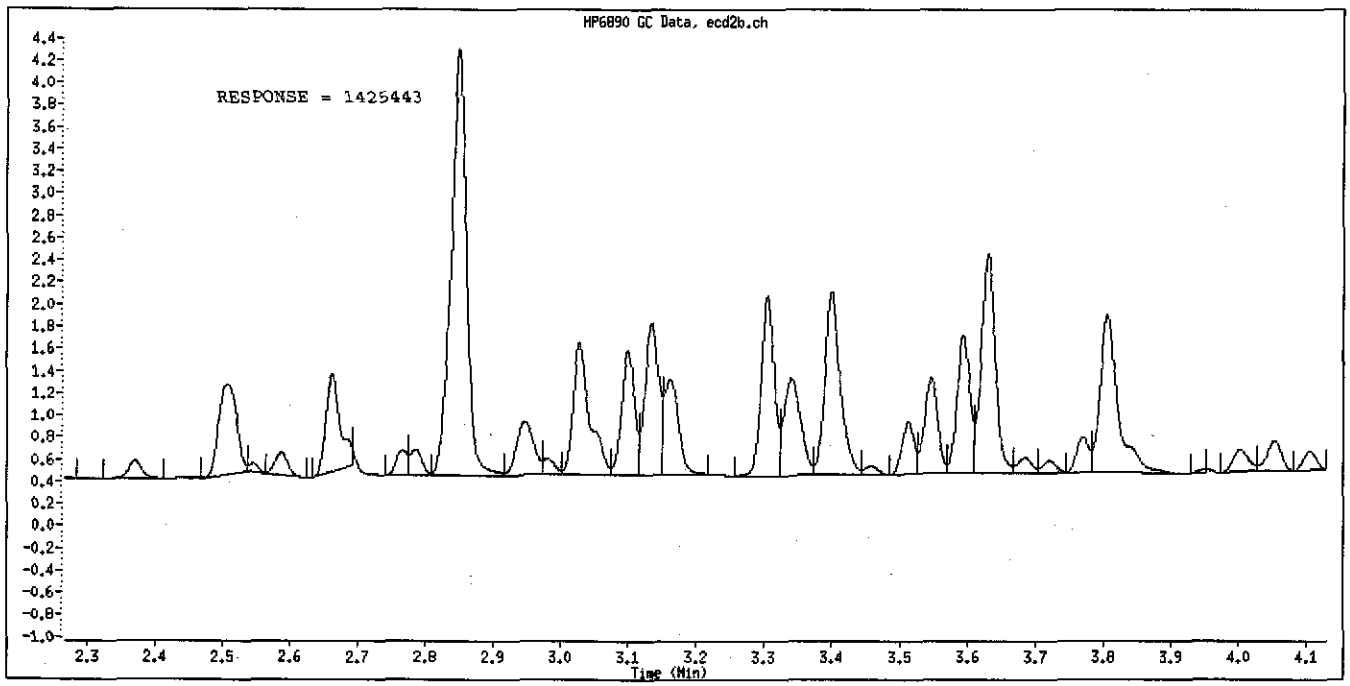
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 21:18
Instrument ID: a2hp5.i
Client ID: S-030105-JH-024
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



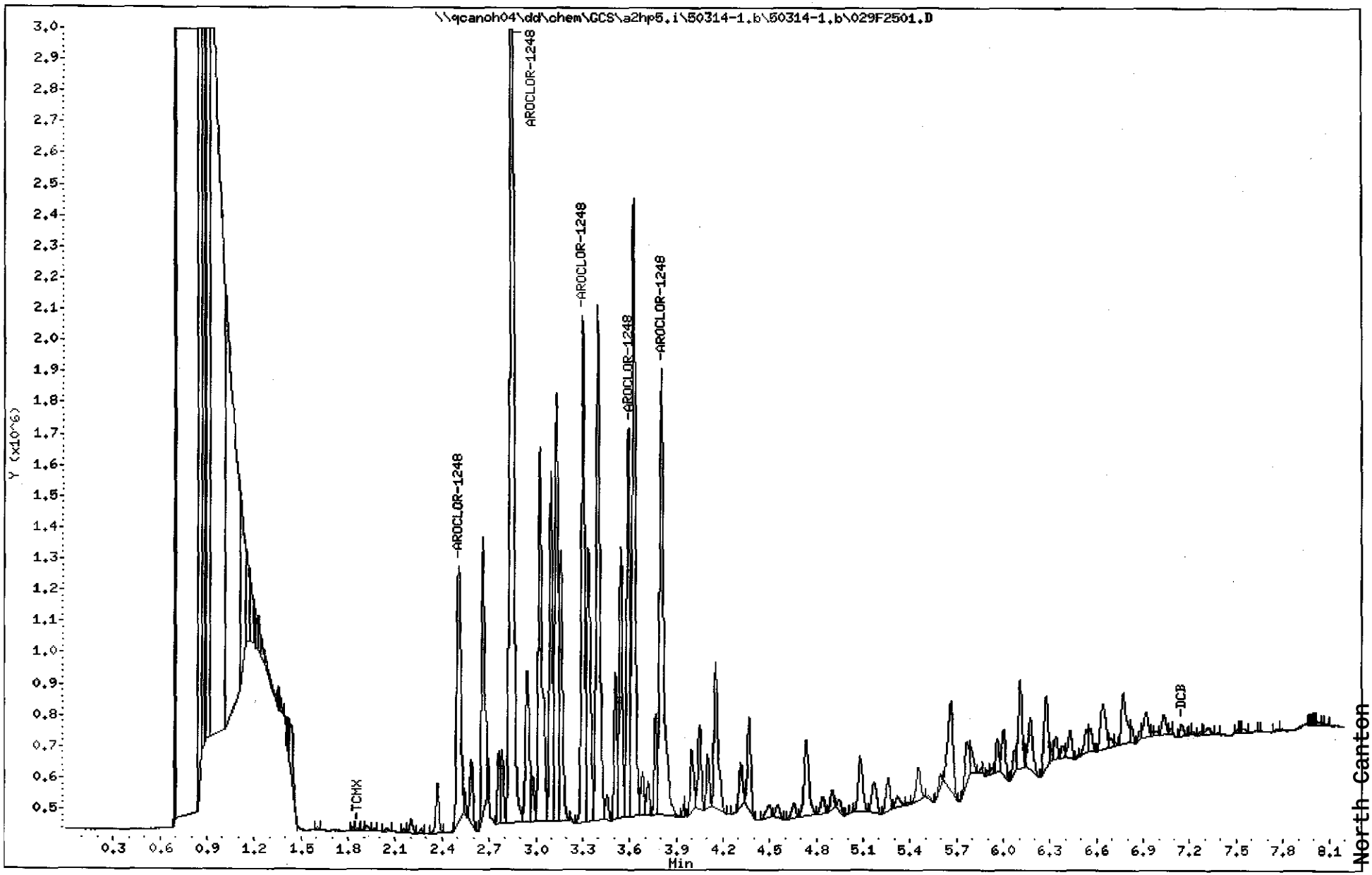
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\029F2501.D
Date : 14-MAR-2005 21:18
Client ID: S-030105-JH-024
Sample Info: G5C871AA,500
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-025

GC Semivolatiles

Lot-Sample #...: A5C020144-025 **Work Order #...:** G5C881AA **Matrix.....:** SO
Date Sampled...: 03/01/05 14:15 **Date Received..:** 03/02/05
Prep Date.....: 03/02/05 **Analysis Date..:** 03/14/05
Prep Batch #...: 5061335
Dilution Factor: 1 **Initial Wgt/Vol:** 30.01 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 30 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	47	ug/kg
Aroclor 1221	ND	47	ug/kg
Aroclor 1232	ND	47	ug/kg
Aroclor 1242	ND	47	ug/kg
Aroclor 1248	**75**	**47**	**ug/kg**
Aroclor 1254	ND	47	ug/kg
Aroclor 1260	ND	47	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	54	(10 - 172)
Decachlorobiphenyl	84	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 030F2601.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\030F2601.D
Lab Smp Id: G5C881AA Client Smp ID: S-030105-JH-025
Inj Date : 14-MAR-2005 21:30
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C881AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 30
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	2429909	0.01075	3.582		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

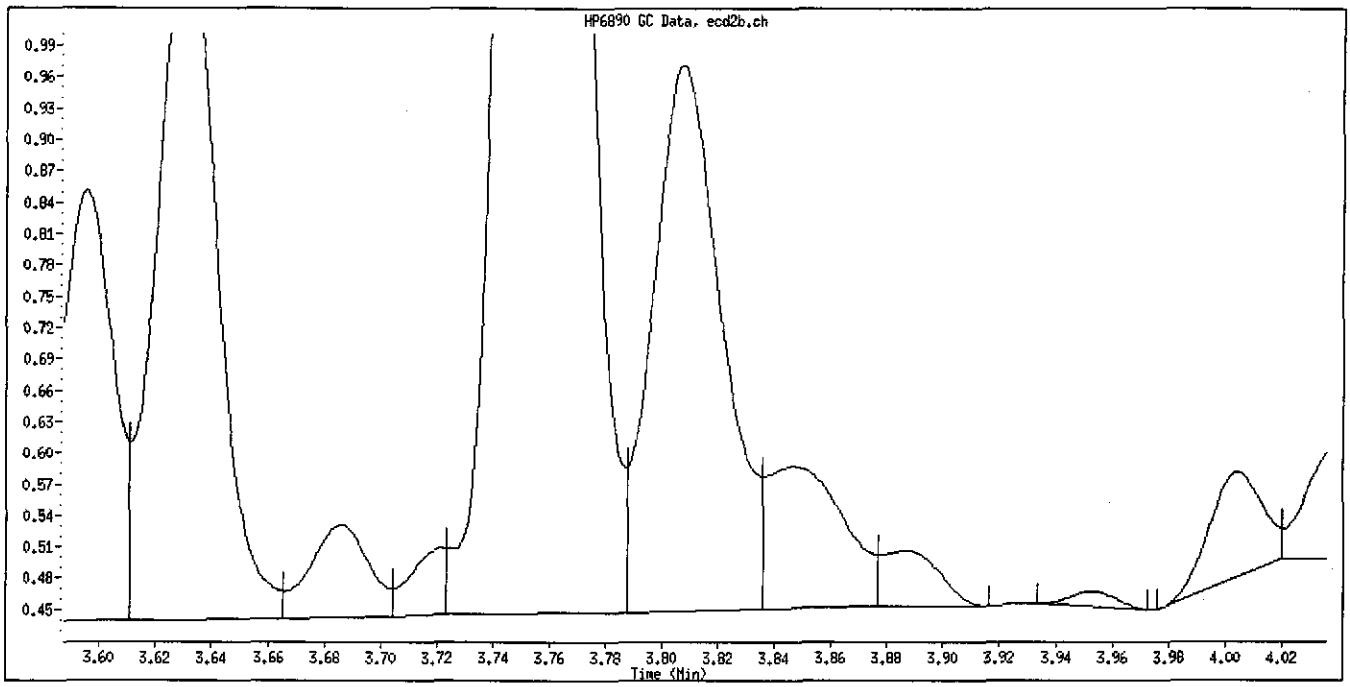
Data File: 030F2601.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	580995	0.29713	99.01	75.00- 125.00	100.00(M)
2.850	2.846	0.004	764680	0.19018	63.37	157.16- 261.93	131.62
3.305	3.306	-0.001	545924	0.11249	37.48	189.24- 315.41	93.96
3.595	3.596	-0.001	412574	0.08074	26.90	193.23- 322.06	71.01
3.806	3.808	-0.002	523178	0.11438	38.11	173.06- 288.43	90.05
Average of Peak Concentrations =					52.98		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1594140	0.01687	5.620		

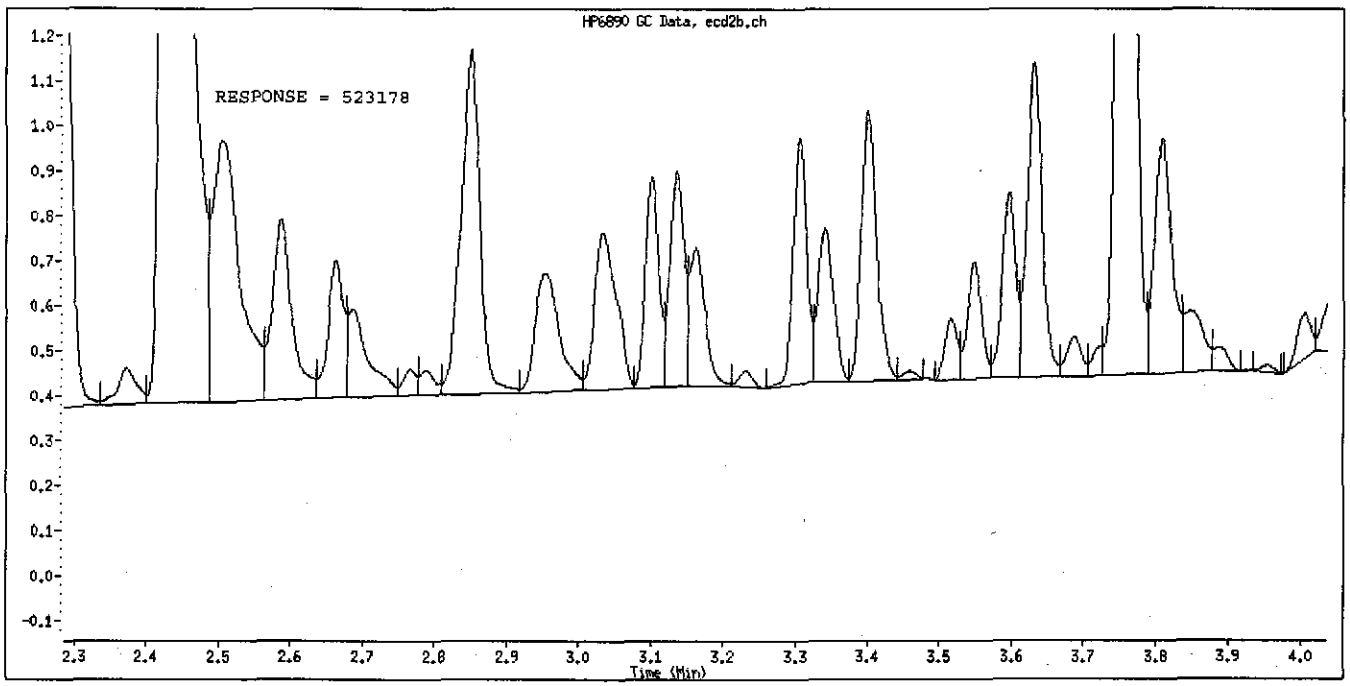
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 21:30
Instrument ID: a2hp5.i
Client ID: S-030105-JH-025
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



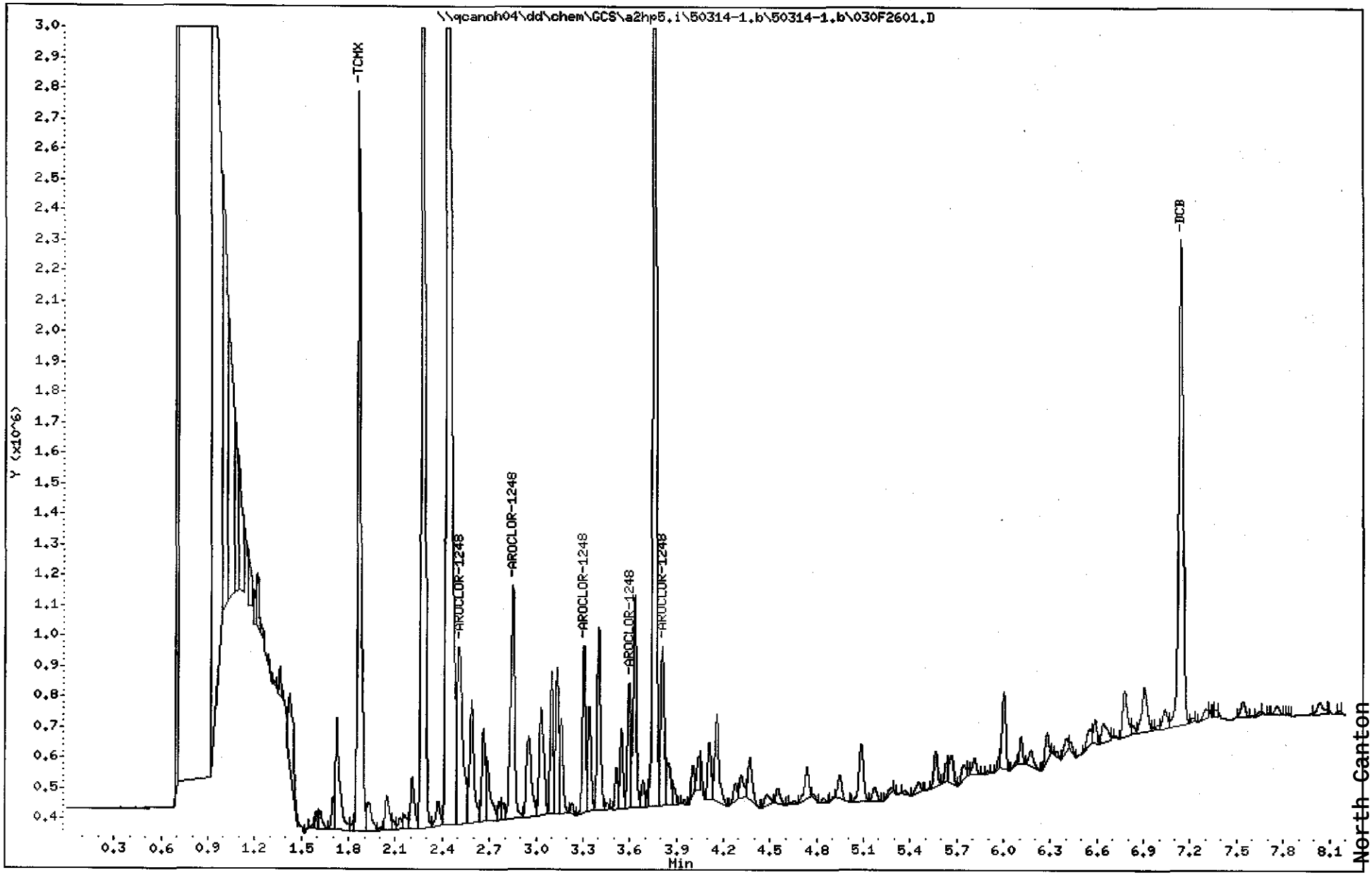
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\030F2601.D
Date : 14-MAR-2005 21:30
Client ID: S-030105-JH-025
Sample Info: G5C881AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



201

STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-026

GC Semivolatiles

Lot-Sample #...:	A5C020144-026	**Work Order #...:**	G5C891AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:20	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36	ug/kg
Aroclor 1221	ND	36	ug/kg
Aroclor 1232	ND	36	ug/kg
Aroclor 1242	ND	36	ug/kg
Aroclor 1248	ND	36	ug/kg
Aroclor 1254	ND	36	ug/kg
Aroclor 1260	ND	36	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	73	(10 - 172)
Decachlorobiphenyl	78	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 031F2701.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\031F2701.D
Lab Smp Id: G5C891AA Client Smp ID: S-030105-JH-026
Inj Date : 14-MAR-2005 21:42
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C891AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 31
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	3285958	0.01454	4.837		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.216	2.206	0.010	82067	0.03090	10.28	75.00- 125.00	100.00(M)
2.506	2.505	0.001	127781	0.03522	11.72	101.31- 168.85	155.70
2.848	2.850	-0.002	246082	0.03802	12.65	185.46- 309.11	299.85
2.950	2.952	-0.002	105489	0.03074	10.23	95.29- 158.82	128.54
3.303	3.307	-0.004	60306	0.02182	7.261	76.10- 126.84	73.48
Average of Peak Concentrations =					10.43		

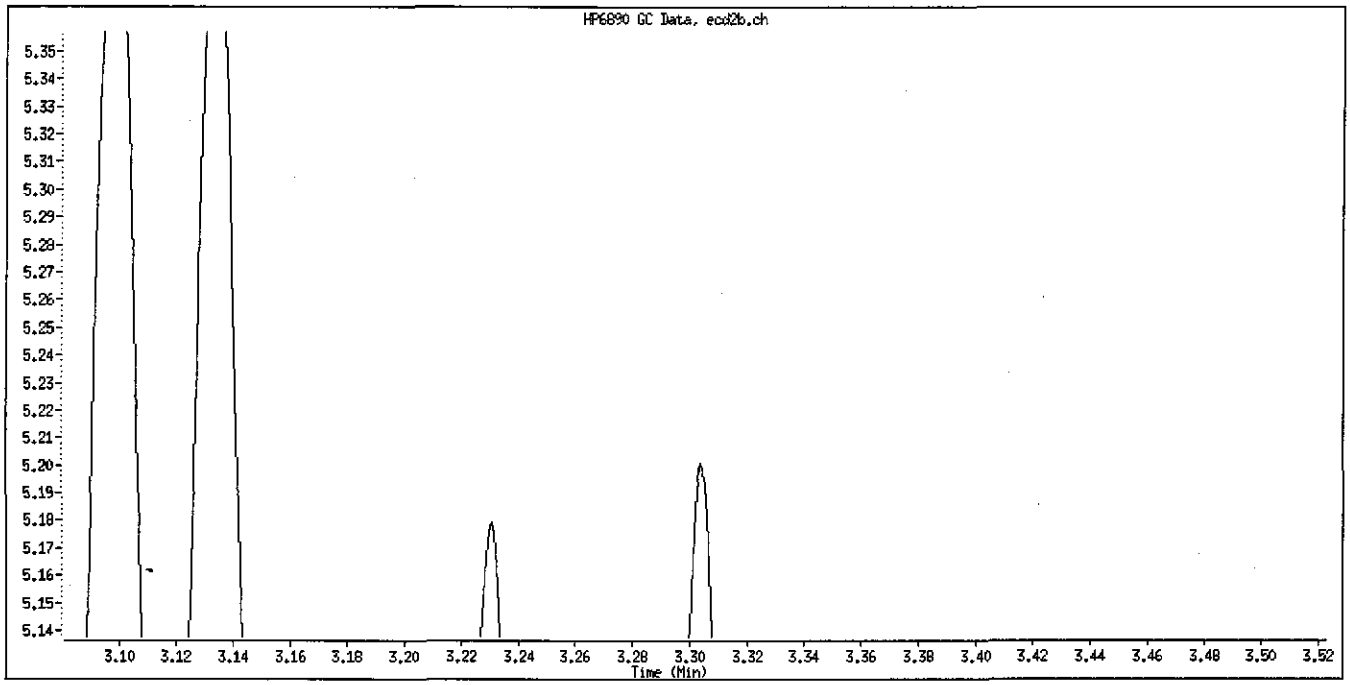
Data File: 031F2701.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	1482051	0.01568	5.218		

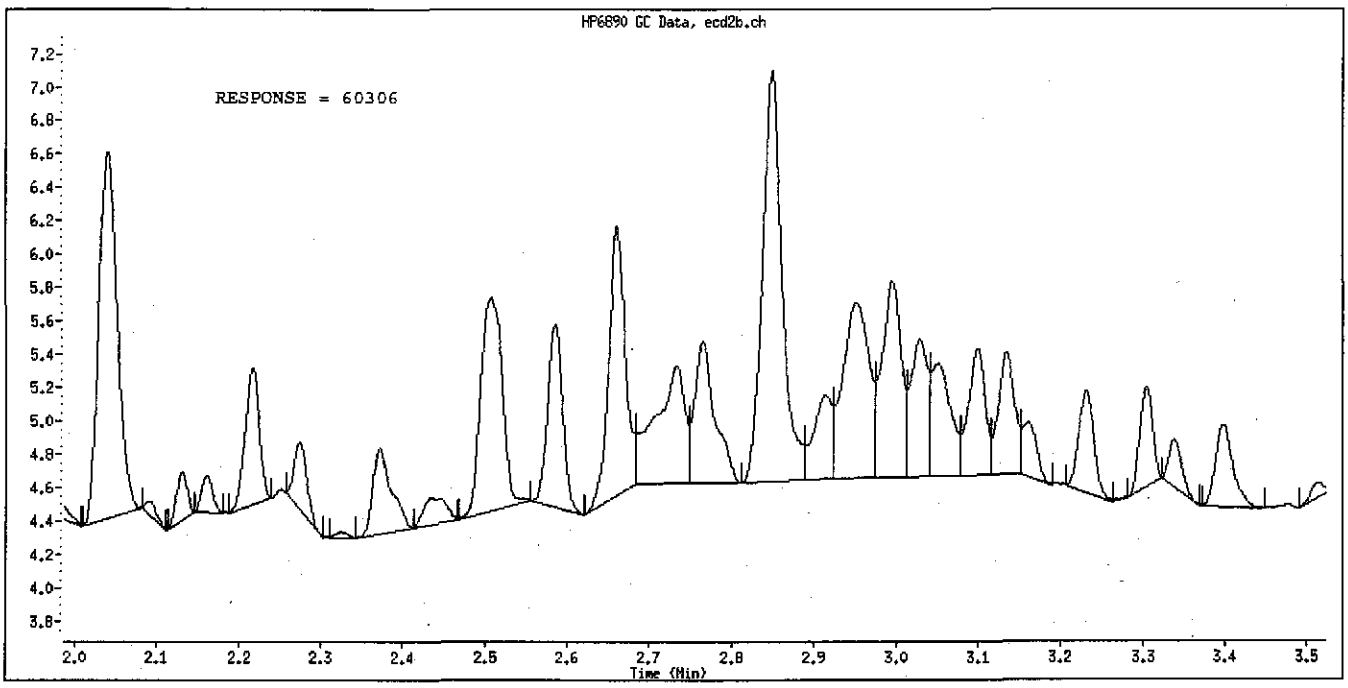
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 21:42
Instrument ID: a2hp5.i
Client ID: S-030105-JH-026
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration

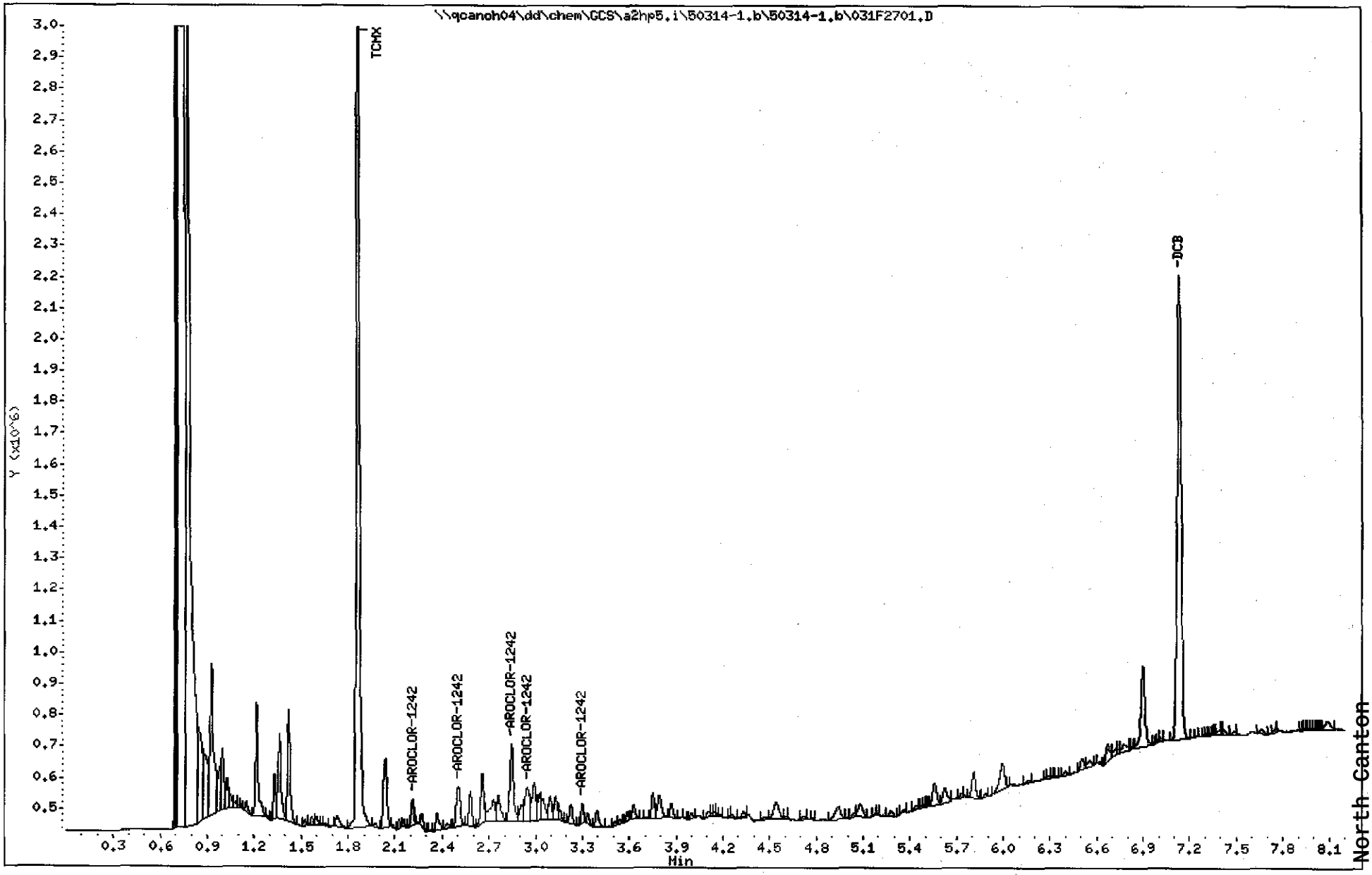


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\031F2701.D
Date : 14-MAR-2005 21:42
Client ID: S-030106-JH-026
Sample Info: G5C891AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-027

GC Semivolatiles

Lot-Sample #...:	A5C020144-027	**Work Order #...:**	G5C9A1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:25	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	750	ug/kg
Aroclor 1221	ND	750	ug/kg
Aroclor 1232	ND	750	ug/kg
Aroclor 1242	ND	750	ug/kg
Aroclor 1248	**3300**	**750**	**ug/kg**
Aroclor 1254	ND	750	ug/kg
Aroclor 1260	ND	750	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	5.5 DIL,*	(10 - 172)
Decachlorobiphenyl	116 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 032F2801.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\032F2801.D
Lab Smp Id: G5C9A1AA Client Smp ID: S-030105-JH-027
Inj Date : 14-MAR-2005 21:54
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9A1AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 32
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	12429	5e-005	0.3658		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

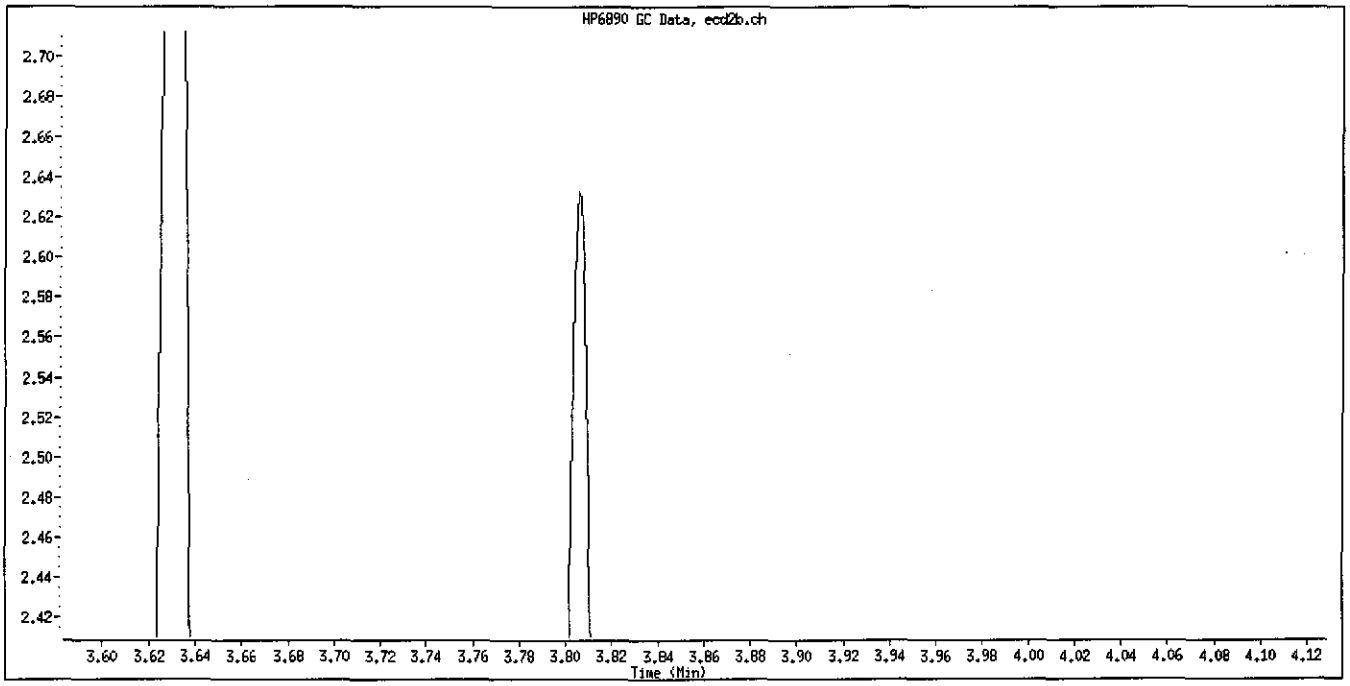
Data File: 032F2801.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.506	2.503	0.003	438248	0.22413	1491	75.00- 125.00	100.00(M)
2.849	2.846	0.003	3111601	0.77386	5149	157.16- 261.93	710.01
3.304	3.306	-0.002	1790754	0.36899	2455	189.24- 315.41	408.62
3.594	3.596	-0.002	1756978	0.34385	2288	193.23- 322.06	400.91
3.805	3.808	-0.003	2124244	0.46440	3090	173.06- 288.43	484.71
Average of Peak Concentrations =					2894		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
7.140	7.135	0.005	109268	0.00116	7.692		

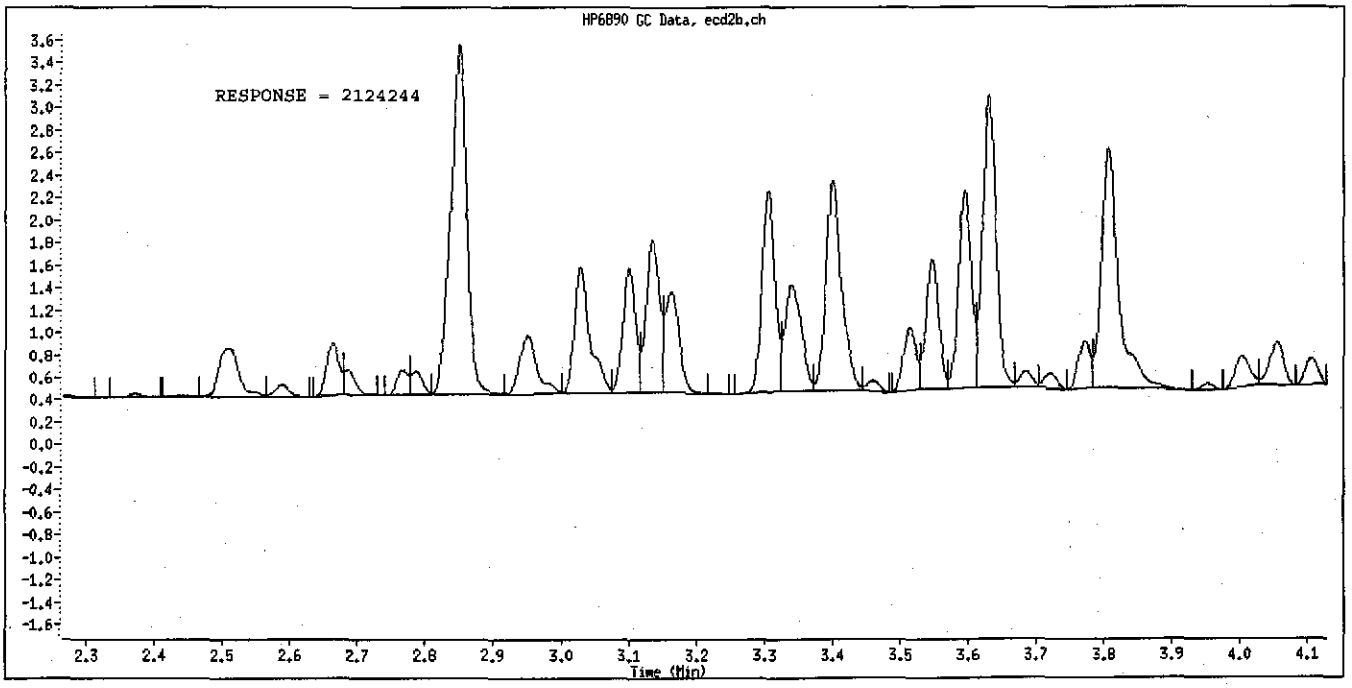
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 21:54
Instrument ID: a2hp5.i
Client ID: S-030105-JH-027
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration

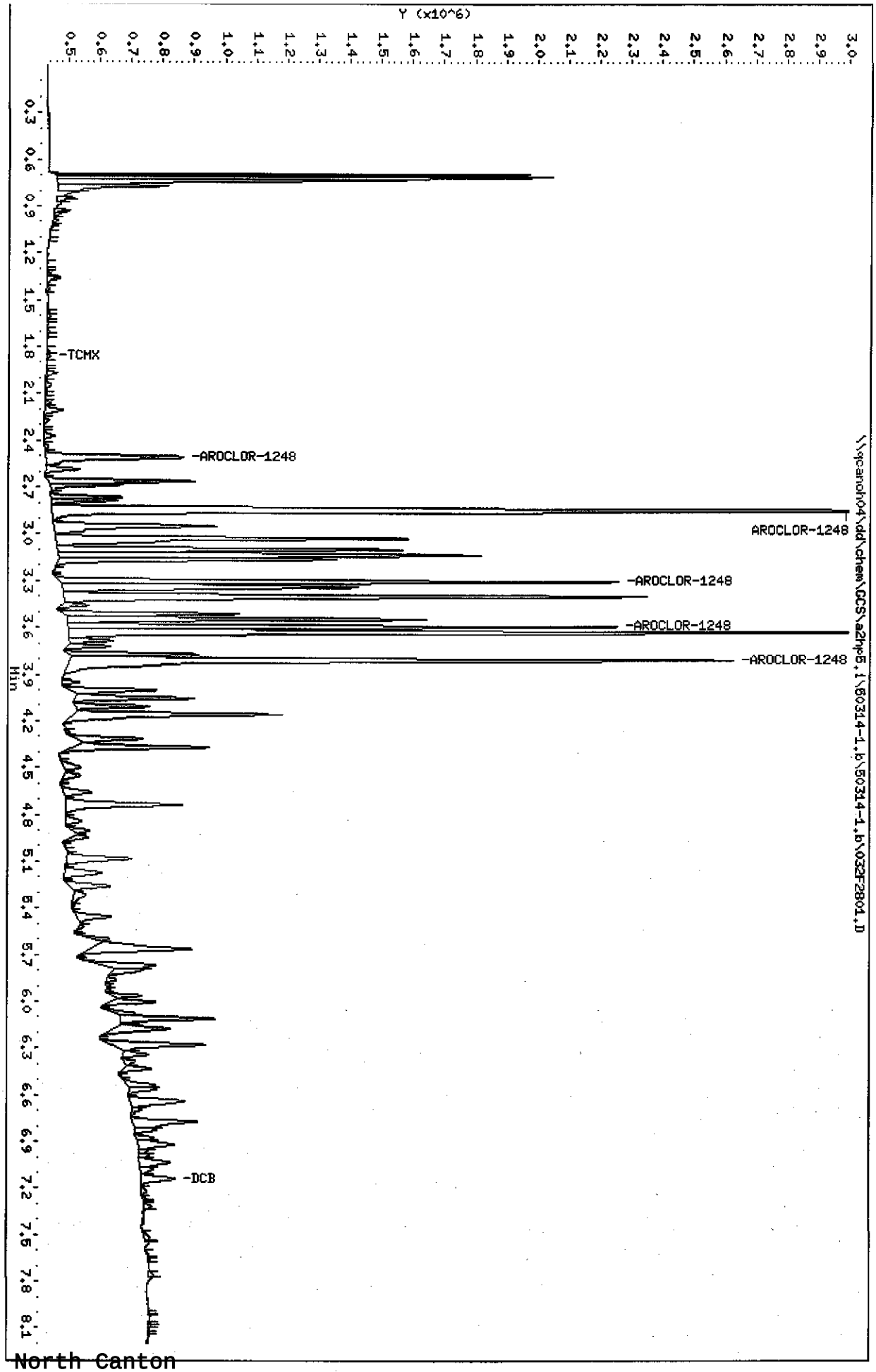


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\032F2801.D
Date : 14-MAR-2005 21:54
Client ID: S-030105-JH-027
Sample Info: G5C9A1AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-028

GC Semivolatiles

Lot-Sample #...:	A5C020144-028	**Work Order #...:**	G5C9C1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:30	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	5	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	190	ug/kg
Aroclor 1221	ND	190	ug/kg
Aroclor 1232	ND	190	ug/kg
Aroclor 1242	ND	190	ug/kg
Aroclor 1248	**600**	**190**	**ug/kg**
Aroclor 1254	ND	190	ug/kg
Aroclor 1260	ND	190	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88 DIL	(10 - 172)
Decachlorobiphenyl	103 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 033F2901.D
Report Date: 15-Mar-2005 14:13

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\033F2901.D
Lab Smp Id: G5C9C1AA Client Smp ID: S-030105-JH-028
Inj Date : 14-MAR-2005 22:07
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9C1AA,5
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 33
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.070	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	791154	0.00350	5.820		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

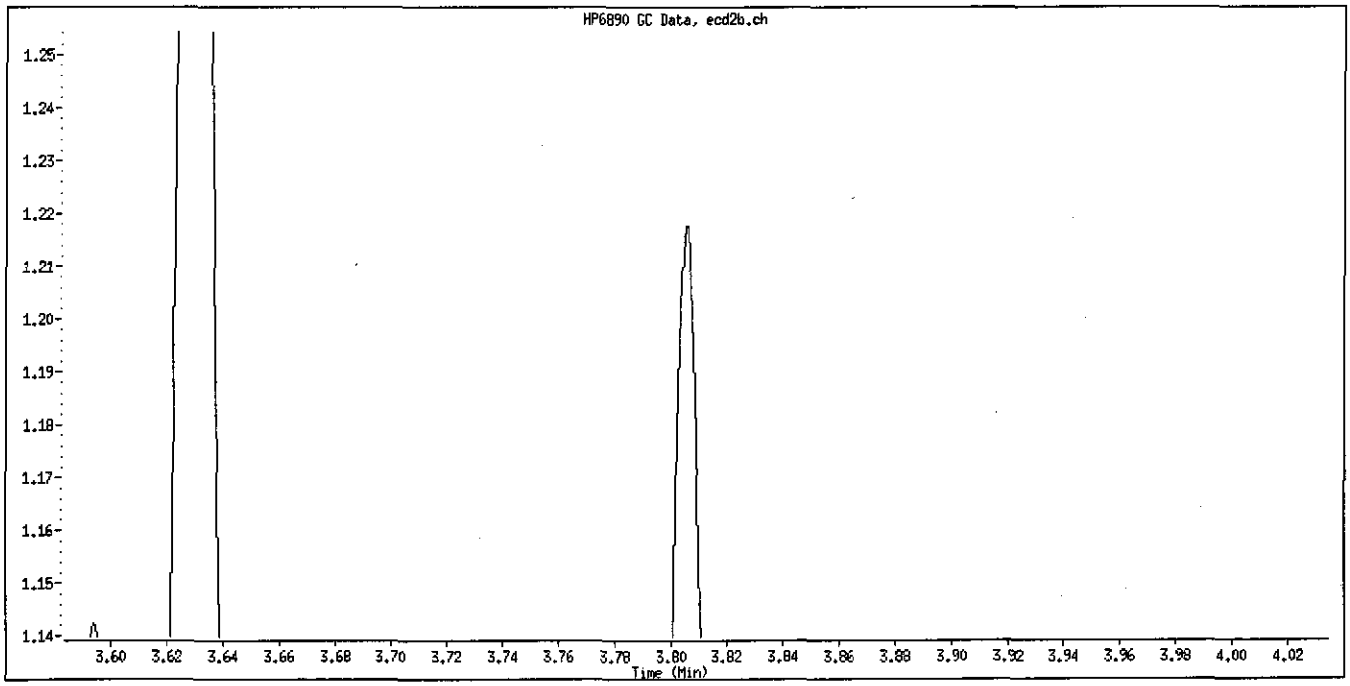
Data File: 033F2901.D
Report Date: 15-Mar-2005 14:13

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	1119235	0.57240	951.8	75.00- 125.00	100.00(M)
2.848	2.846	0.002	2062256	0.51289	852.8	157.16- 261.93	184.26
3.304	3.306	-0.002	1086550	0.22389	372.3	189.24- 315.41	97.08
3.593	3.596	-0.003	670188	0.13116	218.1	193.23- 322.06	59.88
3.805	3.808	-0.003	740280	0.16184	269.1	173.06- 288.43	66.14
Average of Peak Concentrations =					532.8		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	390158	0.00413	6.864		

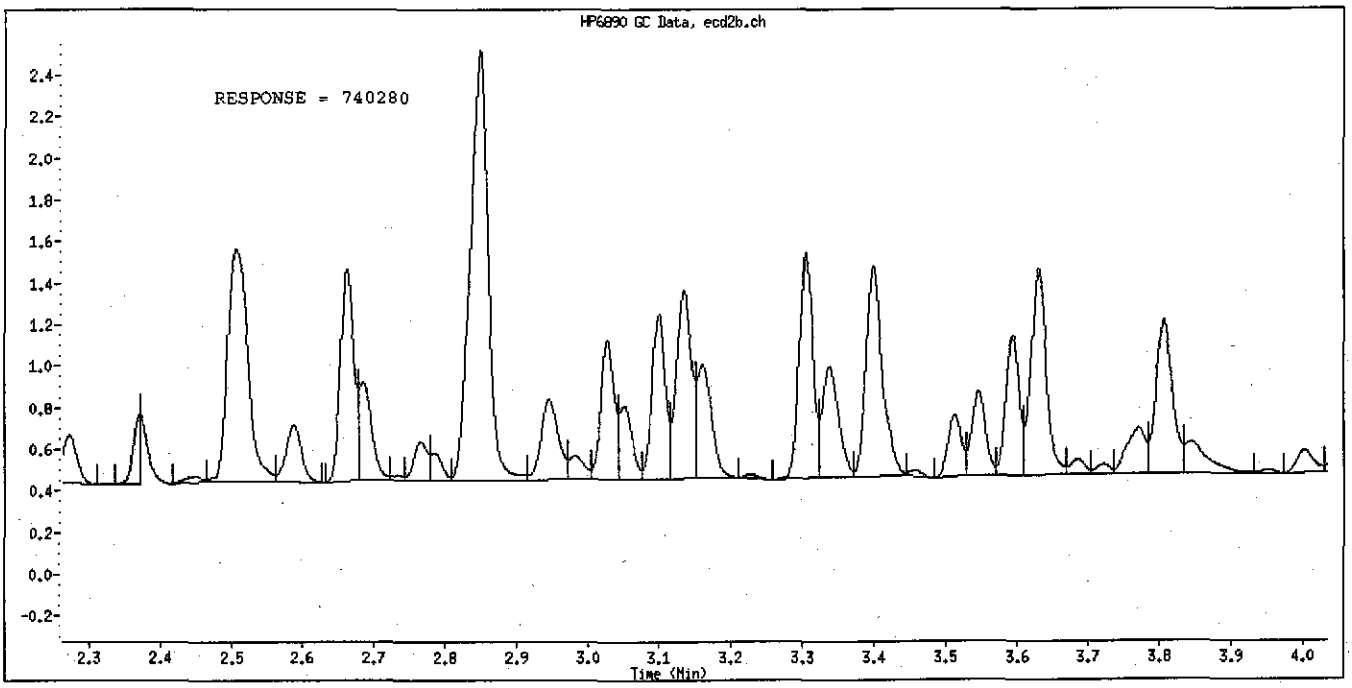
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 22:07
Instrument ID: a2hp5.i
Client ID: S-030105-JH-028
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



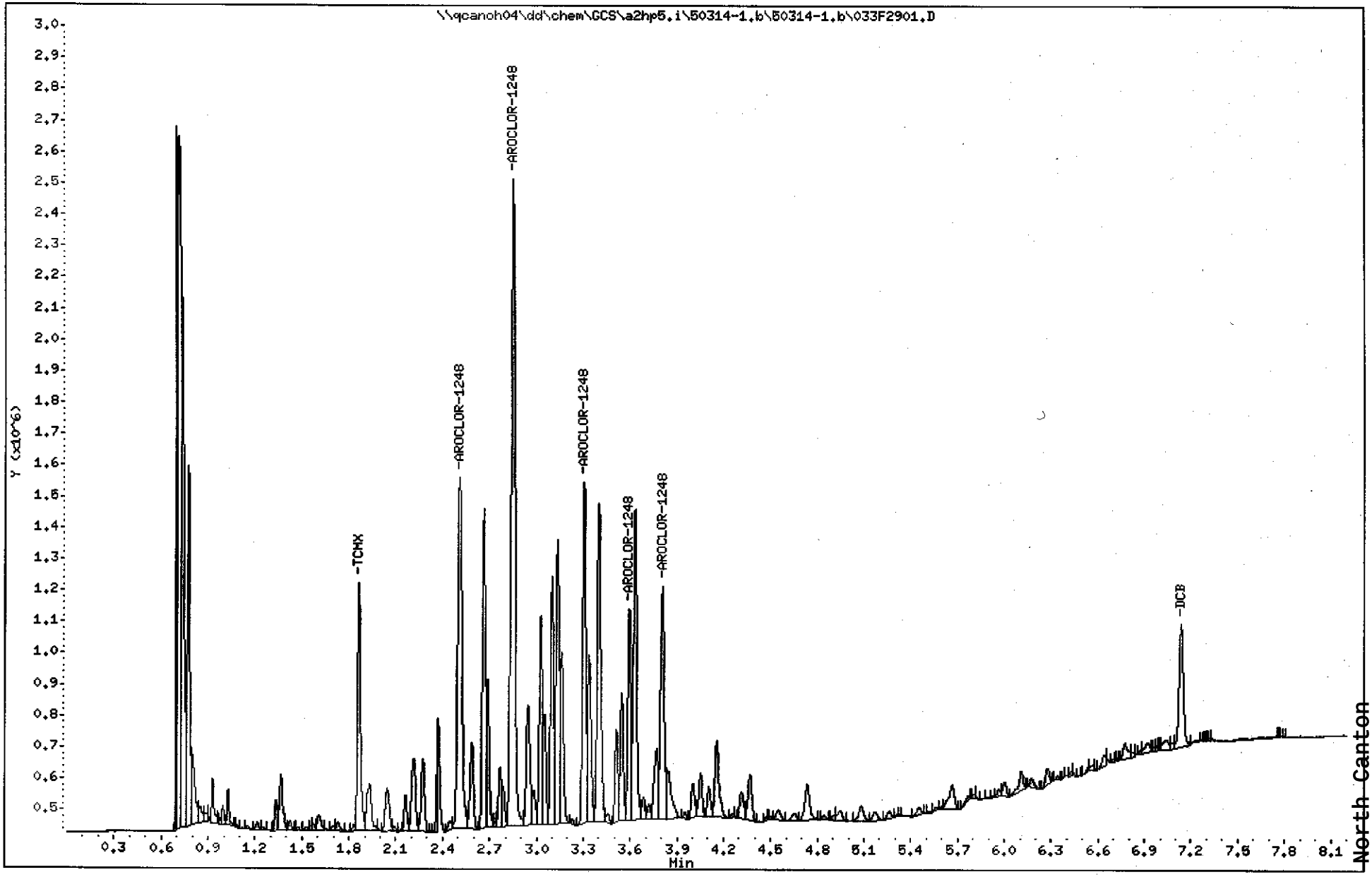
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\033F2901.D
Date : 14-MAR-2005 22:07
Client ID: S-030105-JH-028
Sample Info: G5C9C1AA,5
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-029

GC Semivolatiles

Lot-Sample #...:	A5C020144-029	**Work Order #...:**	G5C9D1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:35	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	5.3	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	**120**	**35**	**ug/kg**
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	ND	35	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 172)
Decachlorobiphenyl	91	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 034F3001.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\034F3001.D
Lab Smp Id: G5C9D1AA Client Smp ID: S-030105-JH-029
Inj Date : 14-MAR-2005 22:19
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9D1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 34
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	4218993	0.01866	6.198		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

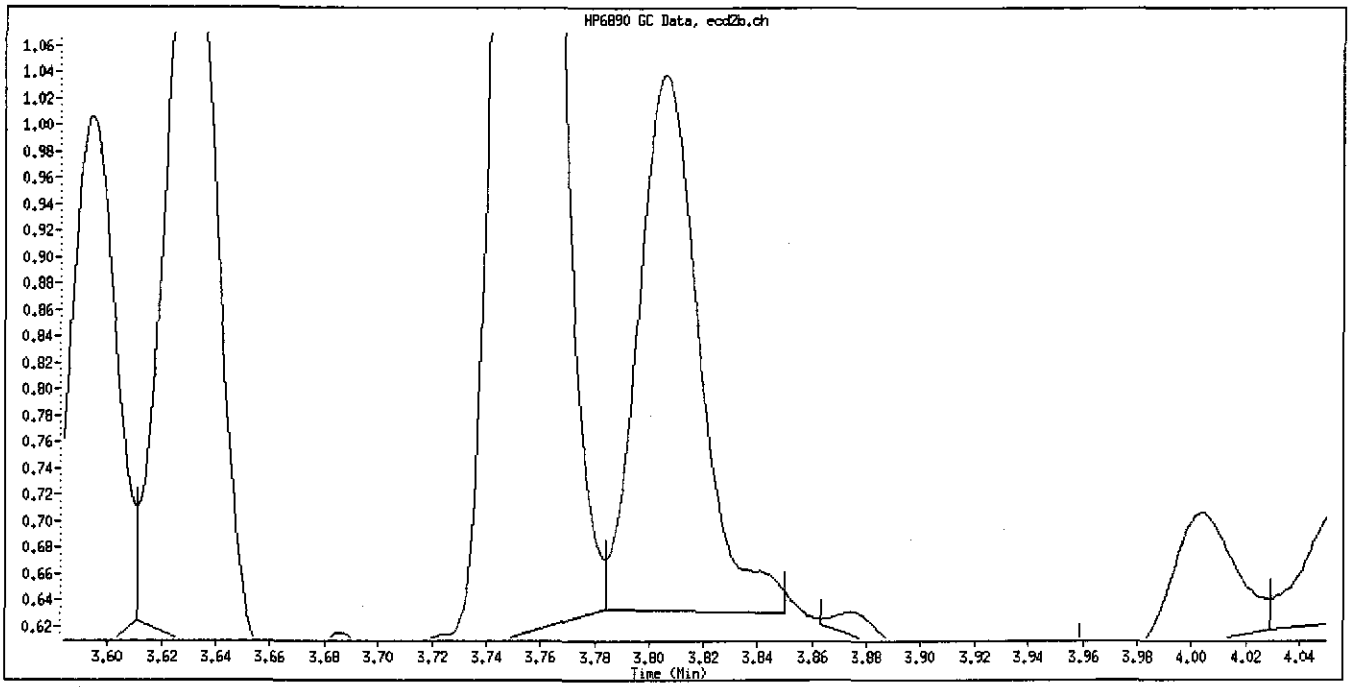
Data File: 034F3001.D
Report Date: 15-Mar-2005 14:14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	1575502	0.80574	267.6	75.00- 125.00	100.00(M)
2.848	2.846	0.002	2241682	0.55751	185.2	157.16- 261.93	142.28
3.304	3.306	-0.002	817972	0.16854	55.98	189.24- 315.41	51.92
3.593	3.596	-0.003	411912	0.08061	26.77	193.23- 322.06	26.14
3.805	3.808	-0.003	406176	0.08880	29.49	173.06- 288.43	25.78
Average of Peak Concentrations =					113.0		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.134	7.135	-0.001	1713144	0.01813	6.020		

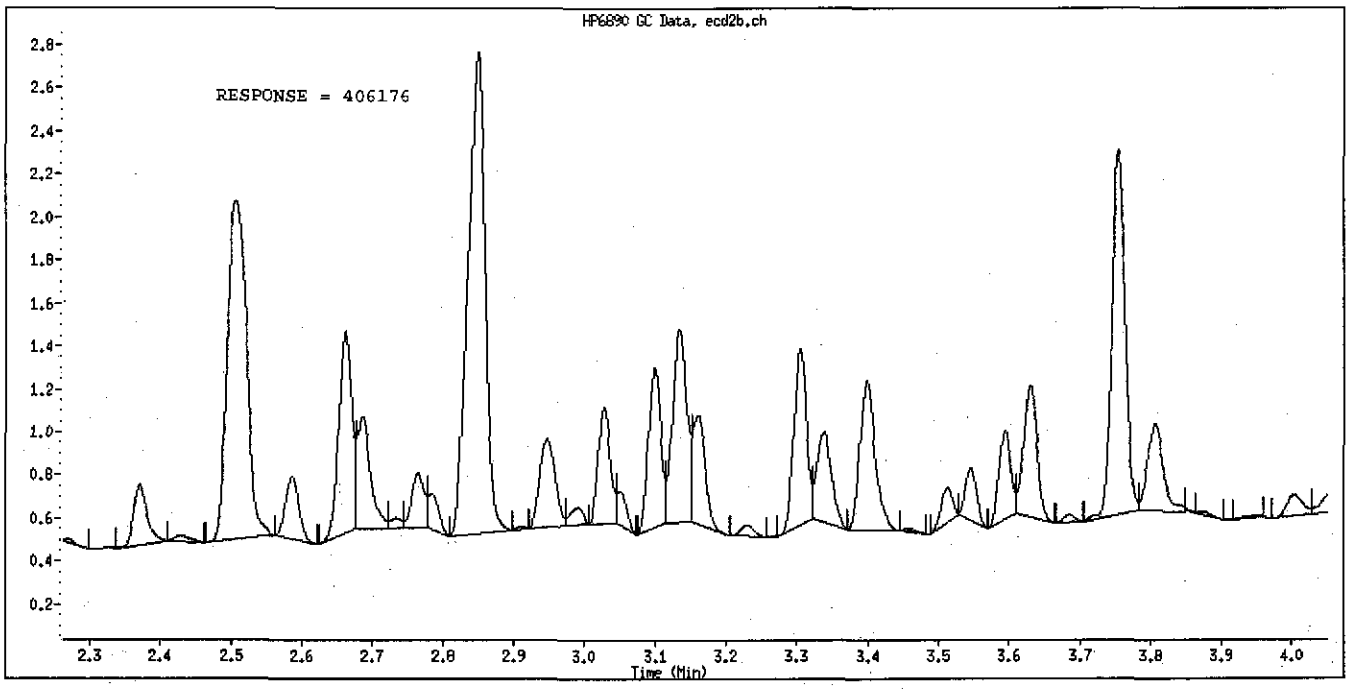
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 22:19
Instrument ID: a2hp5.i
Client ID: S-030105-JH-029
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



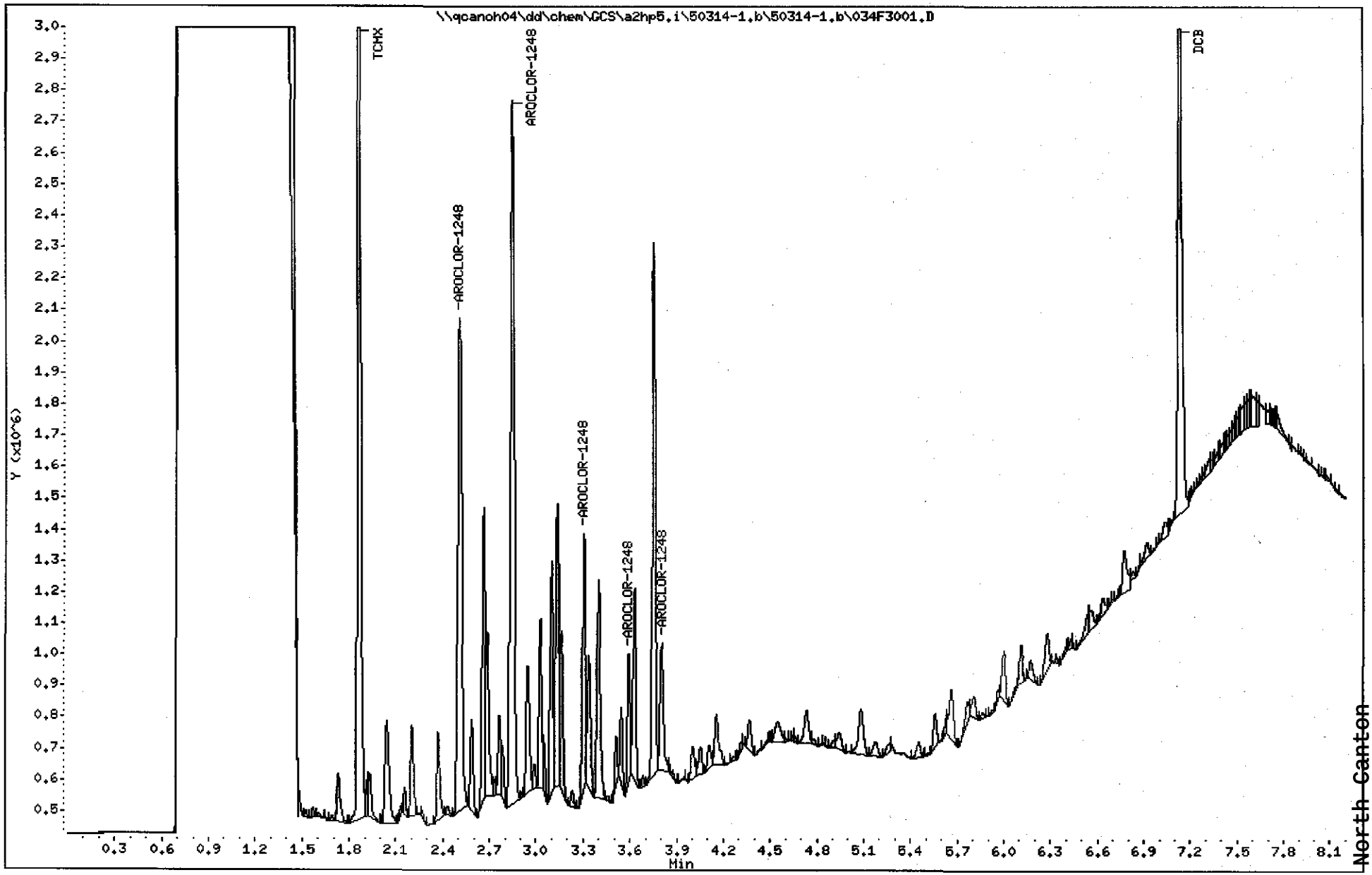
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\034F3001.D
Date : 14-MAR-2005 22:19
Client ID: S-030105-JH-029
Sample Info: G5C9D1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-030

GC Semivolatiles

Lot-Sample #...:	A5C020144-030	**Work Order #...:**	G5C9E1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 14:45	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	2	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	4.6	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	69	ug/kg
Aroclor 1221	ND	69	ug/kg
Aroclor 1232	ND	69	ug/kg
Aroclor 1242	ND	69	ug/kg
Aroclor 1248	**280**	**69**	**ug/kg**
Aroclor 1254	ND	69	ug/kg
Aroclor 1260	ND	69	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(10 - 172)
Decachlorobiphenyl	85	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 035F3101.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\035F3101.D
Lab Smp Id: G5C9E1AA Client Smp ID: S-030105-JH-030
Inj Date : 14-MAR-2005 22:31
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9E1AA,2
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 35
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	2045852	0.00905	6.000		
2 AROCLOR-1221					CAS #: 11104-28-2		
Operator disabled compound identification.							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

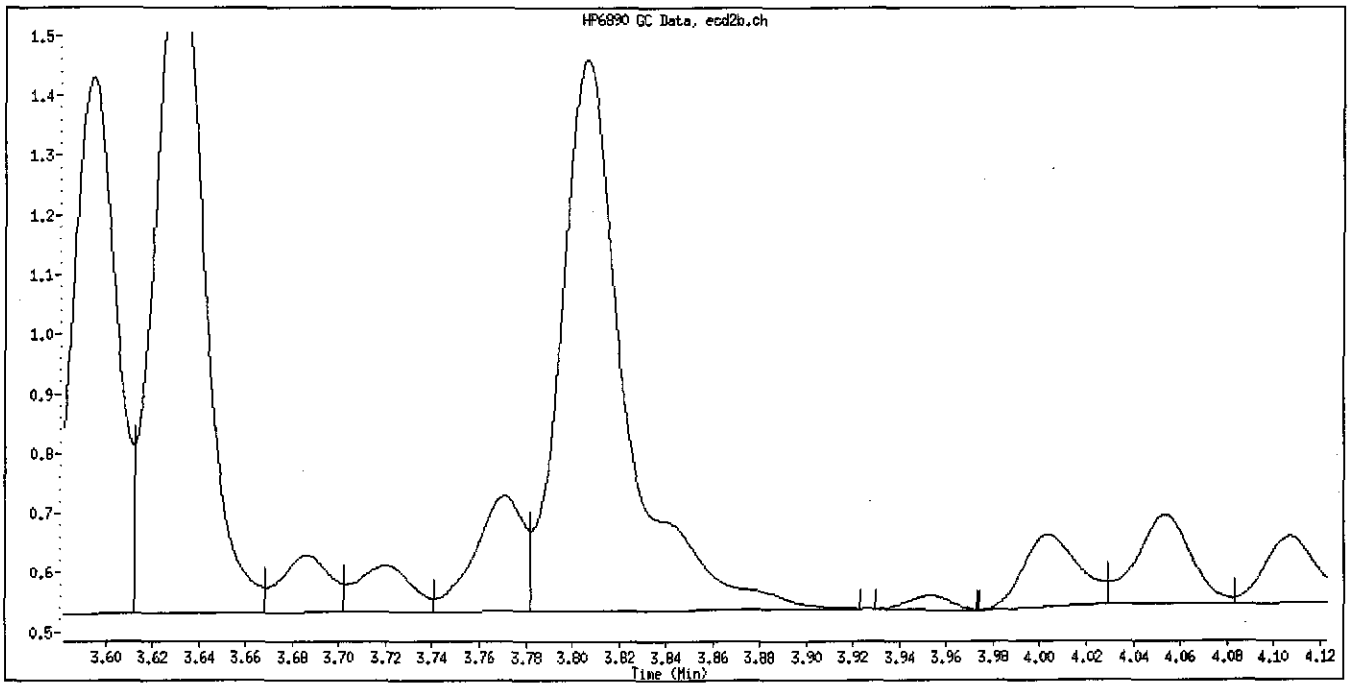
Data File: 035F3101.D
Report Date: 15-Mar-2005 14:14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	1292595	0.66106	438.2	75.00- 125.00	100.00(M)
2.849	2.846	0.003	2889239	0.71856	476.3	157.16- 261.93	223.52
3.304	3.306	-0.002	1150065	0.23697	157.1	189.24- 315.41	88.97
3.594	3.596	-0.002	901509	0.17643	117.0	193.23- 322.06	69.74
3.806	3.808	-0.002	923946	0.20199	133.9	173.06- 288.43	71.48
Average of Peak Concentrations =					264.5		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	805024	0.00852	5.646		

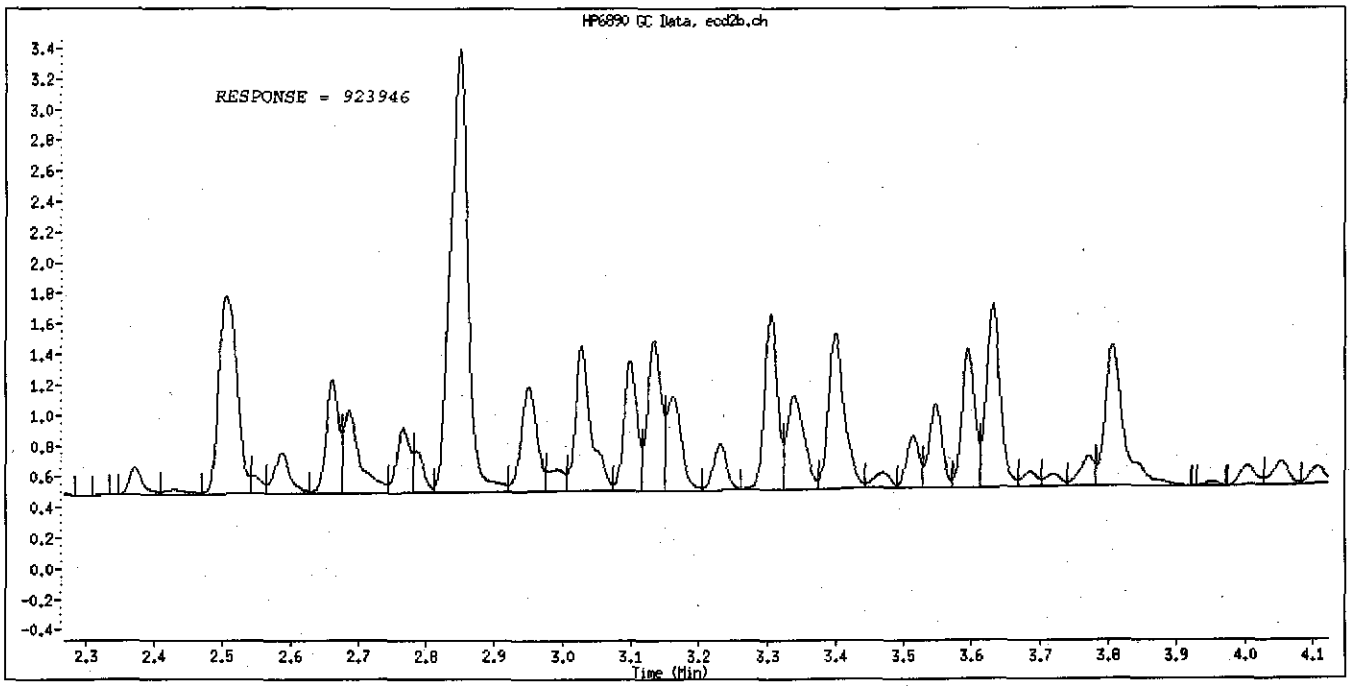
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 22:31
Instrument ID: a2hp5.i
Client ID: S-030105-JH-030
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



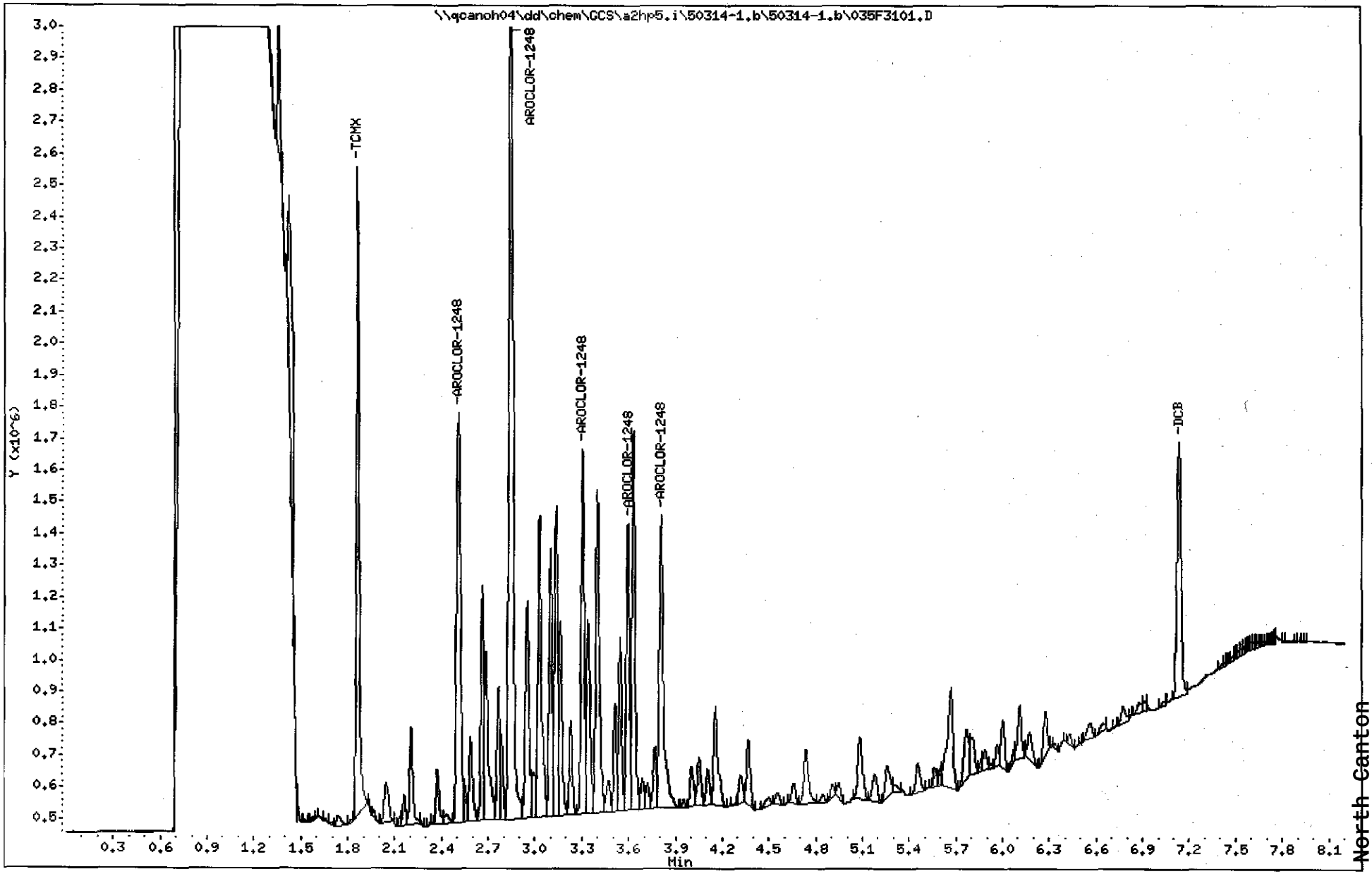
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\035F3101.D
Date : 14-MAR-2005 22:31
Client ID: S-030105-JH-030
Sample Info: G5C9E1AA,2
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-031

GC Semivolatiles

Lot-Sample #...:	A5C020144-031	**Work Order #...:**	G5C9F1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 15:00	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	500	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	19000	ug/kg
Aroclor 1221	ND	19000	ug/kg
Aroclor 1232	ND	19000	ug/kg
Aroclor 1242	ND	19000	ug/kg
Aroclor 1248	**77000**	**19000**	**ug/kg**
Aroclor 1254	ND	19000	ug/kg
Aroclor 1260	ND	19000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102 DIL	(10 - 172)
Decachlorobiphenyl	407 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 036F3201.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\036F3201.D
Lab Smp Id: G5C9F1AA Client Smp ID: S-030105-JH-031
Inj Date : 14-MAR-2005 22:43
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9F1AA,500
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 36
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.859	1.862	-0.003	9188	4e-005	6.729		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

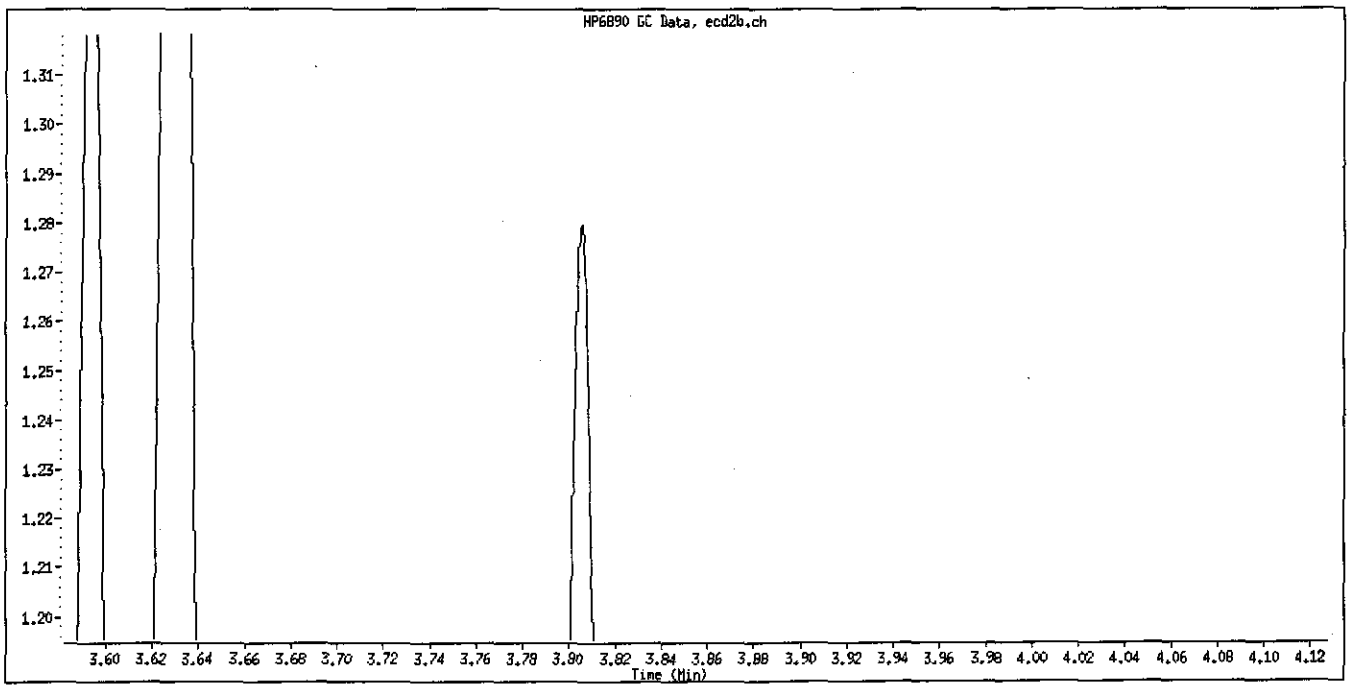
Data File: 036F3201.D
Report Date: 15-Mar-2005 14:14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Compound Not Detected								
6 AROCLOR-1248					CAS #: 12672-29-6			
2.504	2.503	0.001	1290957	0.66022	109300	75.00- 125.00	100.00	(M)
2.849	2.846	0.003	3229269	0.80313	133000	157.16- 261.93	250.15	
3.304	3.306	-0.002	1107734	0.22825	37790	189.24- 315.41	85.81	
3.593	3.596	-0.003	884443	0.17309	28660	193.23- 322.06	68.51	
3.805	3.808	-0.003	803117	0.17558	29070	173.06- 288.43	62.21	
Average of Peak Concentrations =					67560			
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Compound Not Detected								
$ 9 DCB					CAS #: 2051-24-3			
7.149	7.135	0.014	15395	2e-004	26.97			(R)

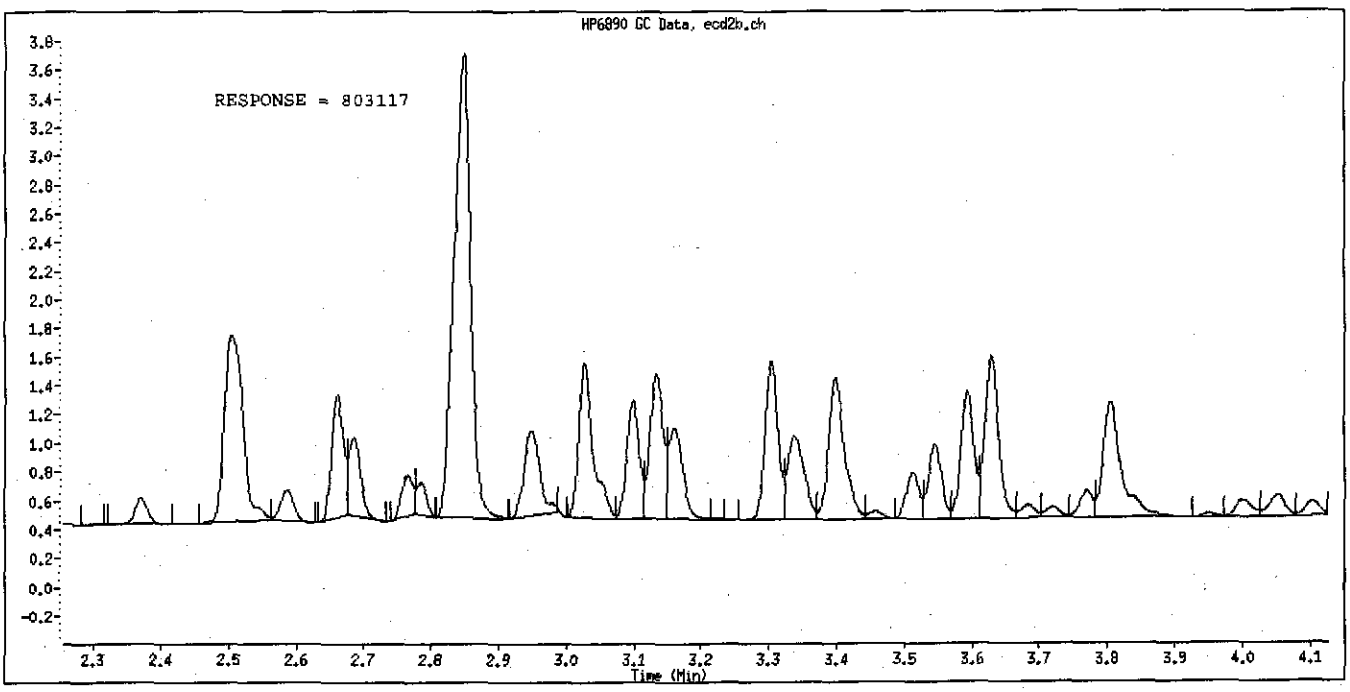
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 22:43
Instrument ID: a2hp5.i
Client ID: S-030105-JH-031
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



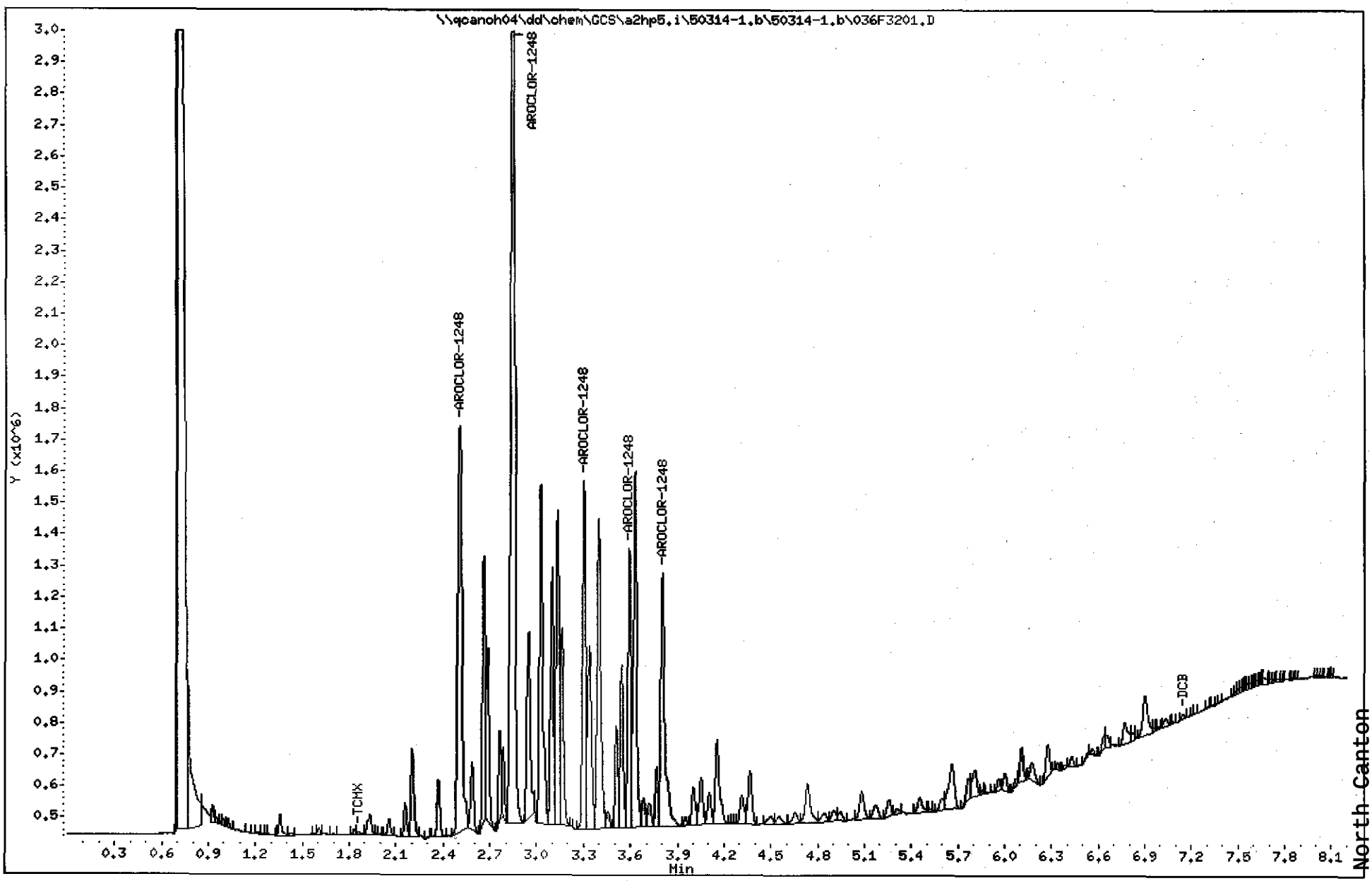
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\036F3201.D
Date : 14-MAR-2005 22:43
Client ID: S-030105-JH-031
Sample Info: G5C9F1AA,500
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-032

GC Semivolatiles

Lot-Sample #...:	A5C020144-032	**Work Order #...:**	G5C9G1AA	**Matrix.....:**	SO
Date Sampled...:	03/01/05 15:05	**Date Received..:**	03/02/05		
Prep Date.....:	03/02/05	**Analysis Date..:**	03/14/05		
Prep Batch #...:	5061335				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7600	ug/kg
Aroclor 1221	ND	7600	ug/kg
Aroclor 1232	ND	7600	ug/kg
Aroclor 1242	ND	7600	ug/kg
Aroclor 1248	**46000**	**7600**	**ug/kg**
Aroclor 1254	ND	7600	ug/kg
Aroclor 1260	ND	7600	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	131 DIL	(10 - 172)
Decachlorobiphenyl	590 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 037F3301.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\037F3301.D
Lab Smp Id: G5C9G1AA Client Smp ID: S-030105-JH-032
Inj Date : 14-MAR-2005 22:56
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C9G1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 37
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	29530	1e-004	8.697		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

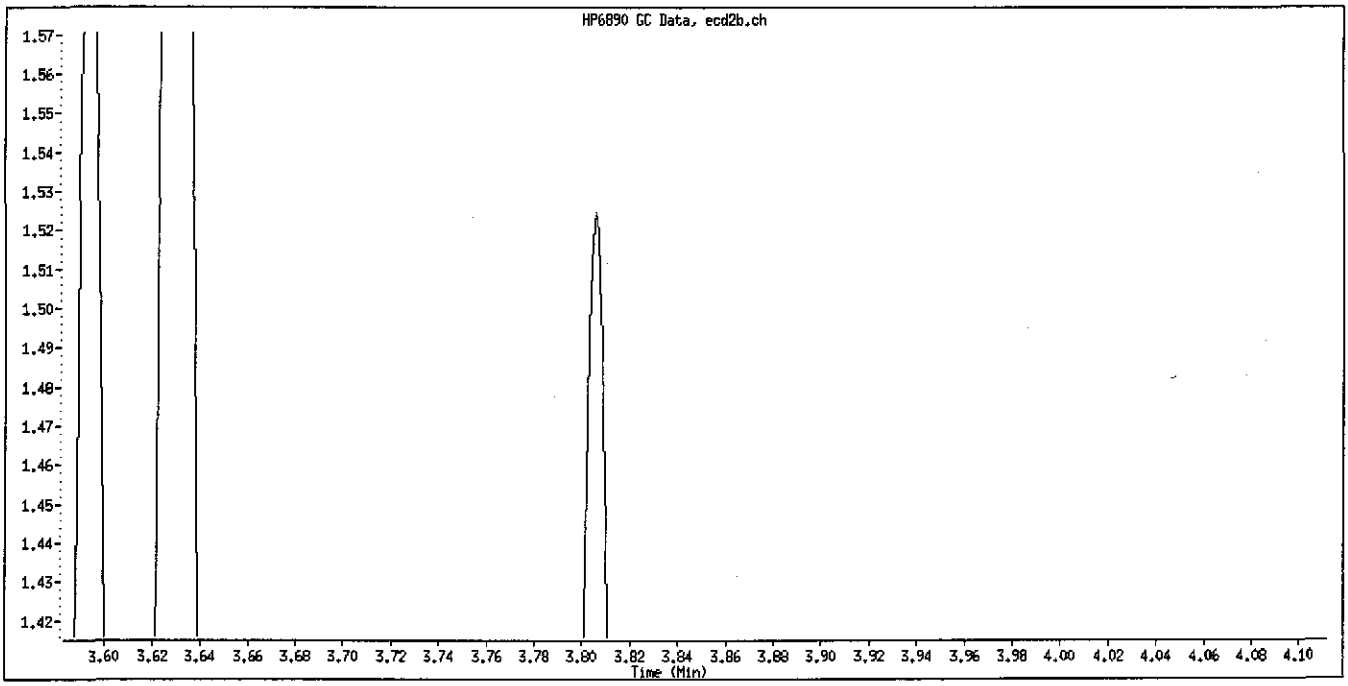
Data File: 037F3301.D
Report Date: 15-Mar-2005 14:14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	2128250	1.08843	72460	75.00- 125.00	100.00(M)
2.848	2.846	0.002	4501466	1.11953	74540	157.16- 261.93	211.51
3.304	3.306	-0.002	1532982	0.31587	21030	189.24- 315.41	72.03
3.594	3.596	-0.002	1155000	0.22604	15050	193.23- 322.06	54.27
3.805	3.808	-0.003	1037209	0.22675	15100	173.06- 288.43	48.74
Average of Peak Concentrations =					39640		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.148	7.135	0.013	55787	0.00059	39.30		(R)

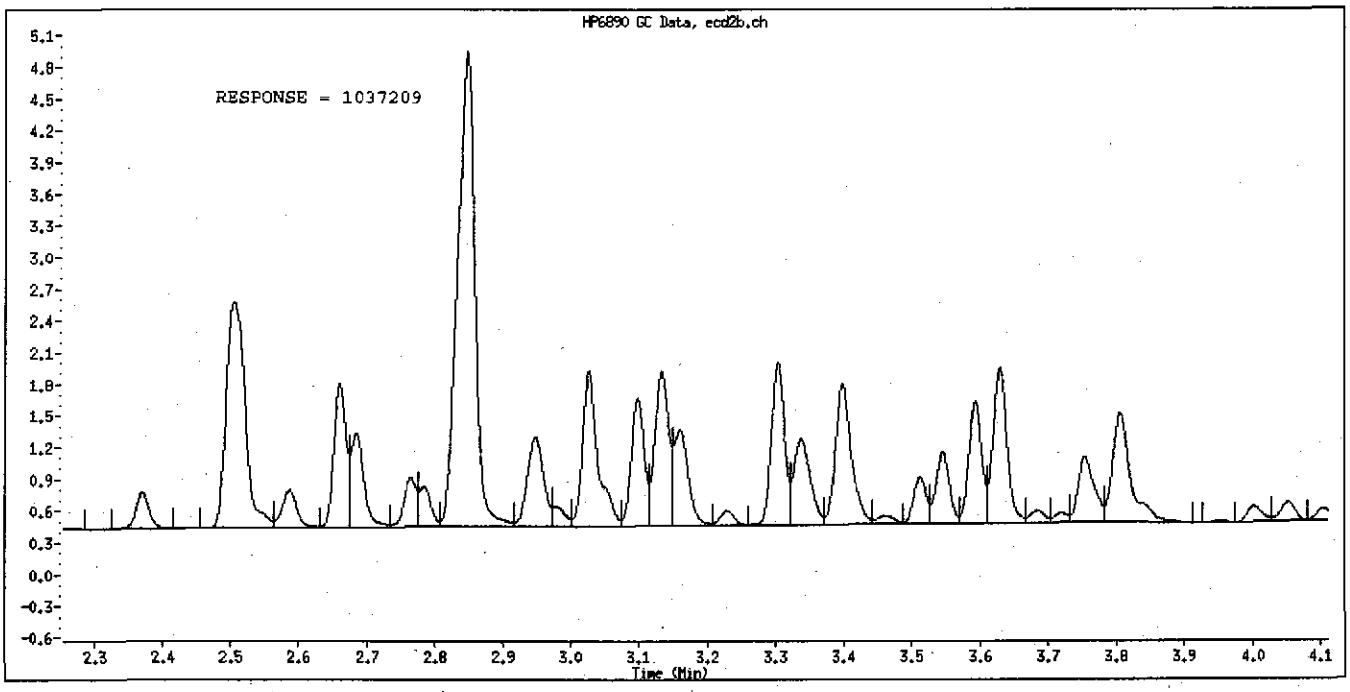
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 22:56
Instrument ID: a2hp5.i
Client ID: S-030105-JH-032
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



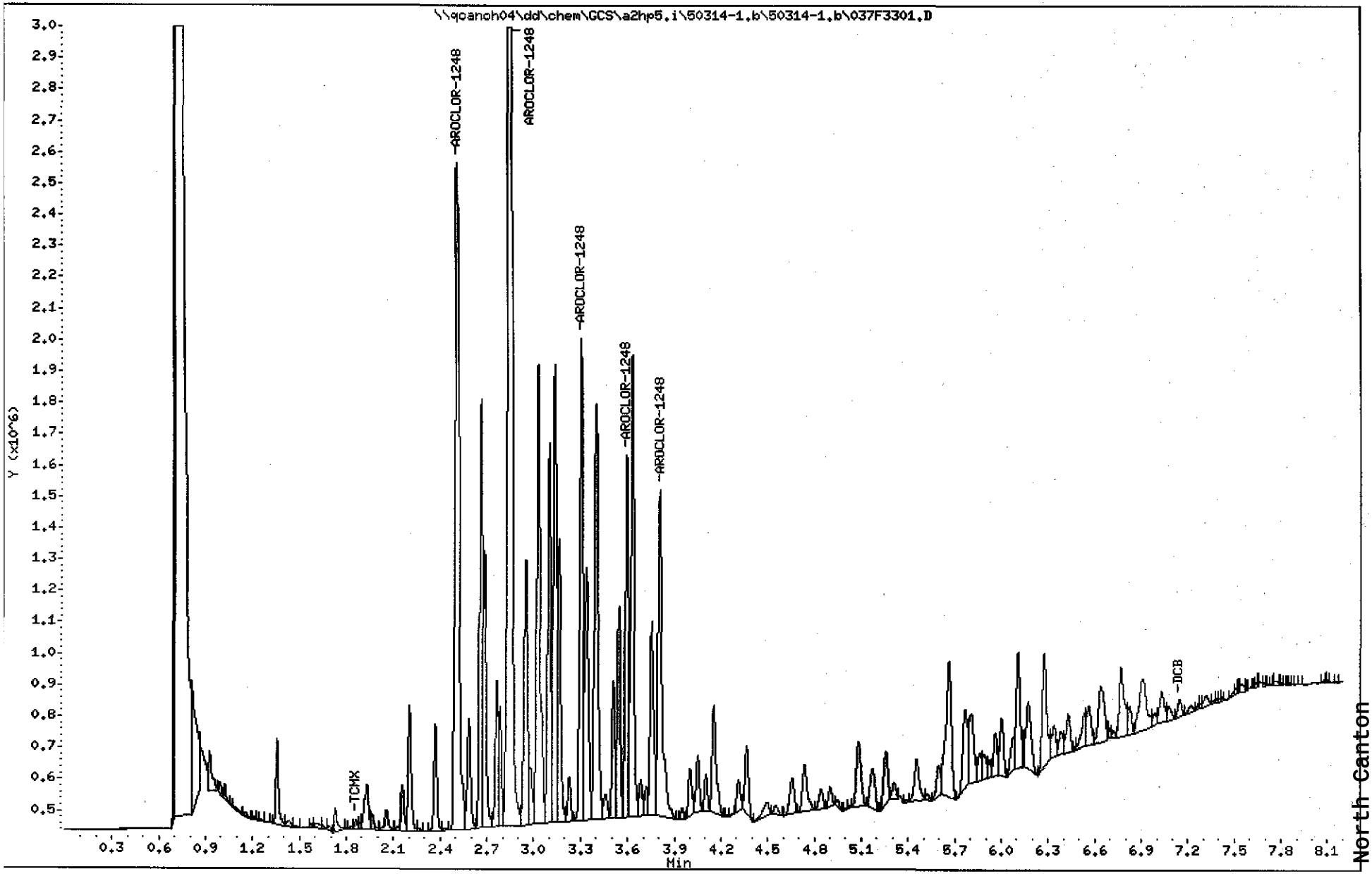
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\037F3301.D
Date : 14-MAR-2005 22:56
Client ID: S-030105-JH-032
Sample Info: G5C9G1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-033

GC Semivolatiles

Lot-Sample #...:	A5C030182-001	**Work Order #...:**	G5F751AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:05	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7500	ug/kg
Aroclor 1221	ND	7500	ug/kg
Aroclor 1232	ND	7500	ug/kg
Aroclor 1242	ND	7500	ug/kg
Aroclor 1248	**46000**	**7500**	**ug/kg**
Aroclor 1254	ND	7500	ug/kg
Aroclor 1260	ND	7500	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	124 DIL	(10 - 172)
Decachlorobiphenyl	572 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 050F5001.D
Report Date: 14-Mar-2005 16:49

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\050F5001.D
Lab Smp Id: G5F751AA Client Smp ID: S-030205-JH-033
Inj Date : 12-MAR-2005 02:43
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F751AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 50
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	28098	1e-004	8.259		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

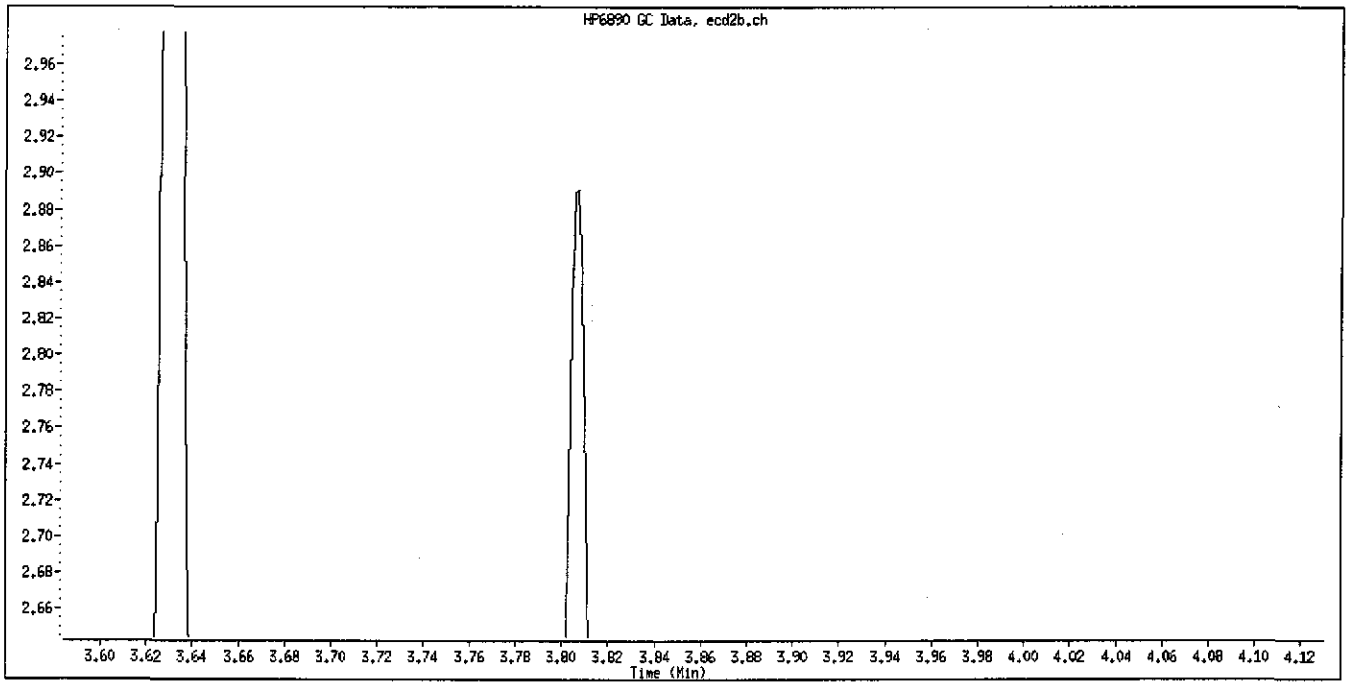
Data File: 050F5001.D
Report Date: 14-Mar-2005 16:49

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.502	2.503	-0.001	1012305	0.51771	34400	75.00- 125.00	100.00(M)
2.849	2.846	0.003	4473874	1.11267	73930	157.16- 261.93	441.95
3.305	3.306	-0.001	2477419	0.51048	33920	189.24- 315.41	244.73
3.594	3.596	-0.002	1918662	0.37550	24950	193.23- 322.06	189.53
3.806	3.808	-0.002	2346878	0.51307	34090	173.06- 288.43	231.84
Average of Peak Concentrations =					40260		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.316	4.335	-0.019	258244	0.05256	3492	80.00- 120.00	100.00(M)
4.551	4.545	0.006	65475	0.01155	767.2	87.22- 145.36	25.35
4.950	4.942	0.008	64497	0.01179	783.2	86.81- 144.68	24.98
5.326	5.364	-0.038	49138	0.01310	870.5	57.97- 96.61	19.03
6.004	5.997	0.007	173268	0.03193	2121	85.17- 141.95	67.09
Average of Peak Concentrations =					1607		
$ 9 DCB					CAS #: 2051-24-3		
7.151	7.135	0.016	54073	6e-004	38.02		(R)

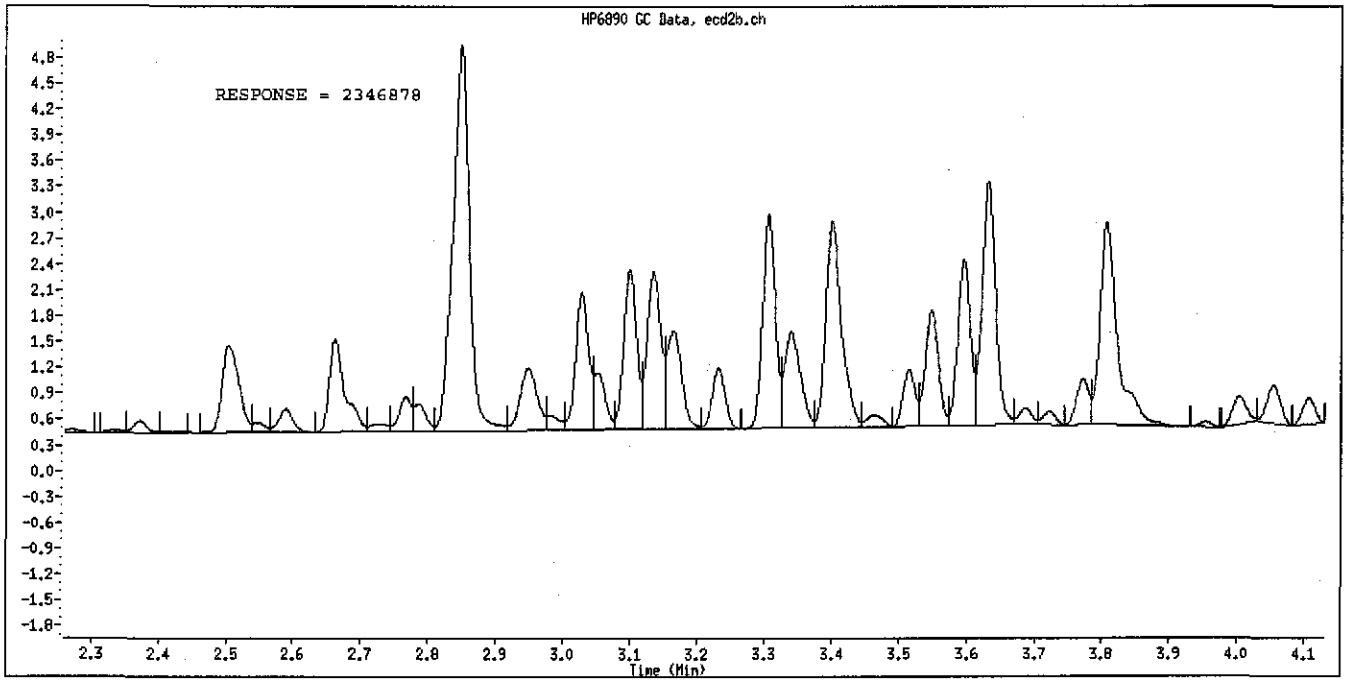
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 02:43
Instrument ID: a2hp5.i
Client ID: S-030205-JH-033
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



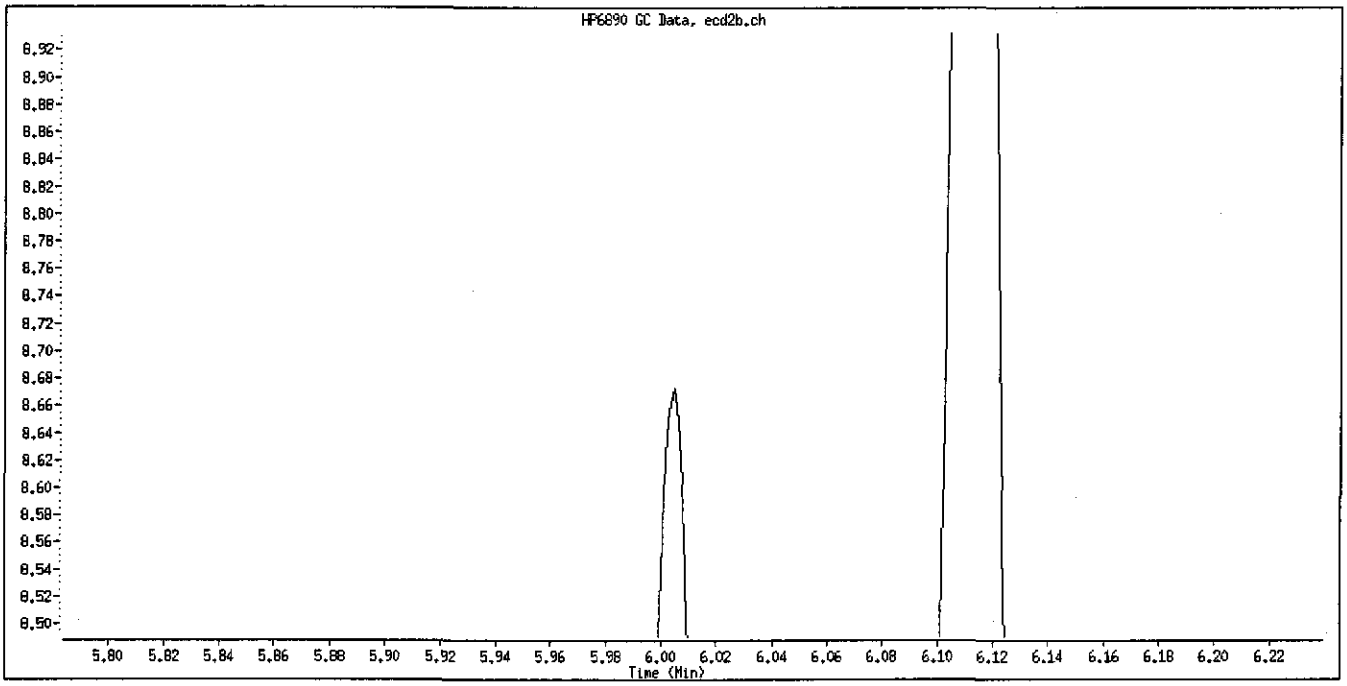
Original Integration



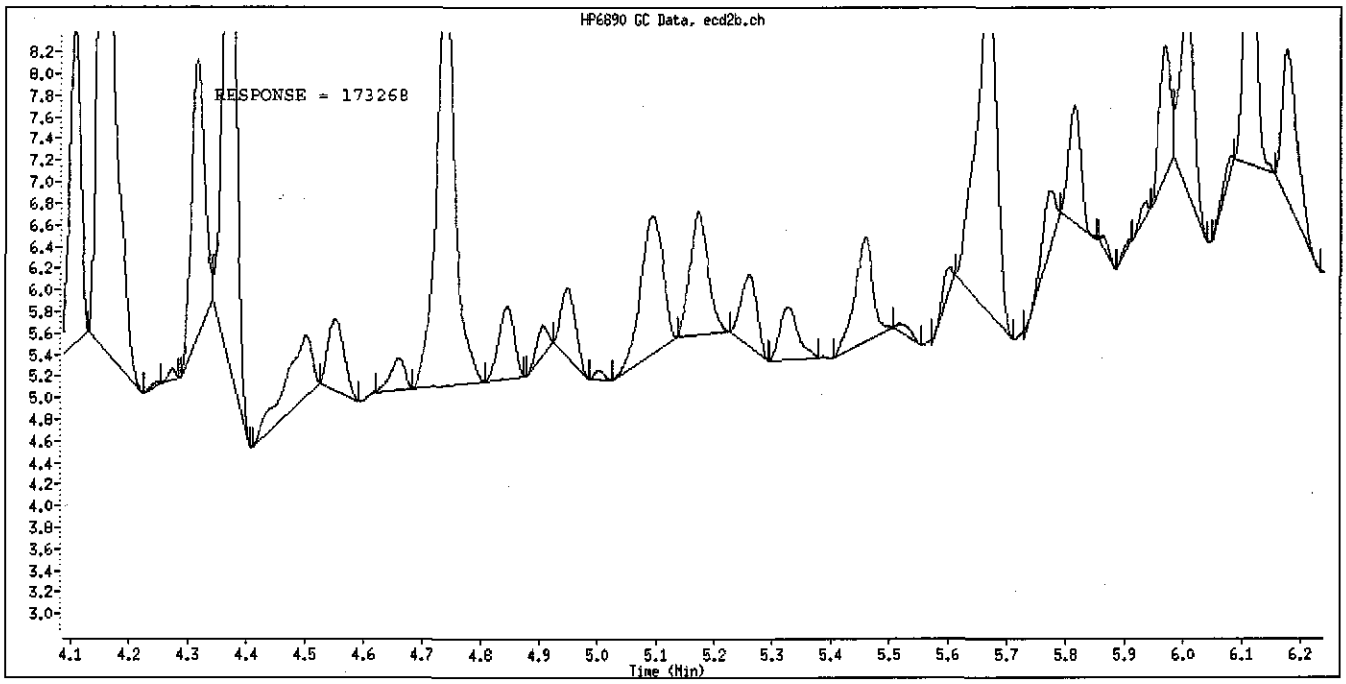
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 02:43
Instrument ID: a2hp5.i
Client ID: S-030205-JH-033
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



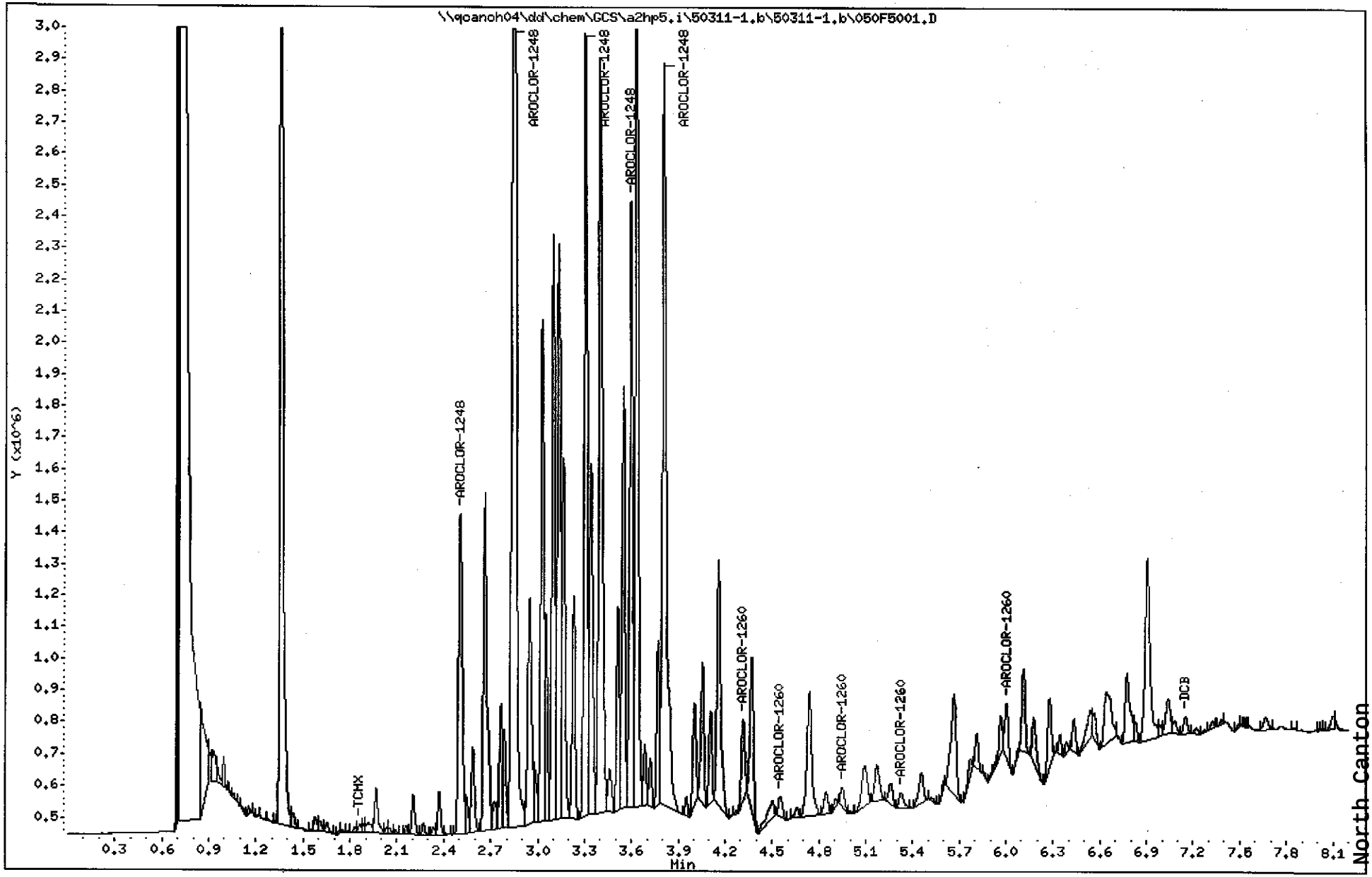
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qoanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\050F5001.D
Date : 12-MAR-2005 02:43
Client ID: S-030205-JH-033
Sample Info: G5F751AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-034

GC Semivolatiles

Lot-Sample #...:	A5C030182-002	**Work Order #...:**	G5F781AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:10	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.9	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	**11000**	**1800**	**ug/kg**
Aroclor 1248	ND	1800	ug/kg
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	116 DIL	(10 - 172)
Decachlorobiphenyl	221 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 051F5101.D
Report Date: 14-Mar-2005 16:50

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\051F5101.D
Lab Smp Id: G5F781AA Client Smp ID: S-030205-JH-034
Inj Date : 12-MAR-2005 02:56
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F781AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 51
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	105040	5e-004	7.708		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Operator disabled compound identification.							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.204	2.206	-0.002	1386019	0.52180	8656	75.00- 125.00	100.00(M)
2.505	2.505	0.000	2276142	0.62728	10410	101.31- 168.85	164.22
2.847	2.850	-0.003	3863670	0.59697	9903	185.46- 309.11	278.76
2.950	2.952	-0.002	1968956	0.57375	9518	95.29- 158.82	142.06
3.305	3.307	-0.002	1810098	0.65495	10860	76.10- 126.84	130.60
Average of Peak Concentrations =					9870		

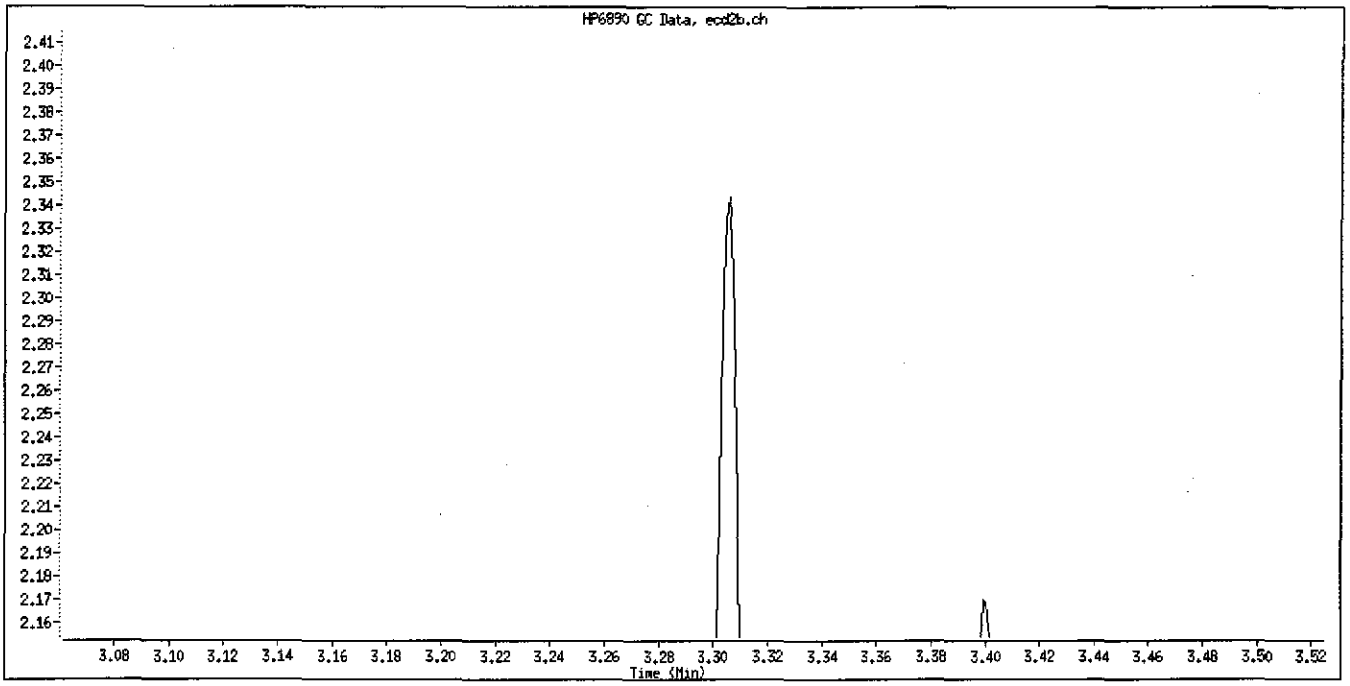
Data File: 051F5101.D
Report Date: 14-Mar-2005 16:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
7.149	7.135	0.014	83481	9e-004	14.65			(R)

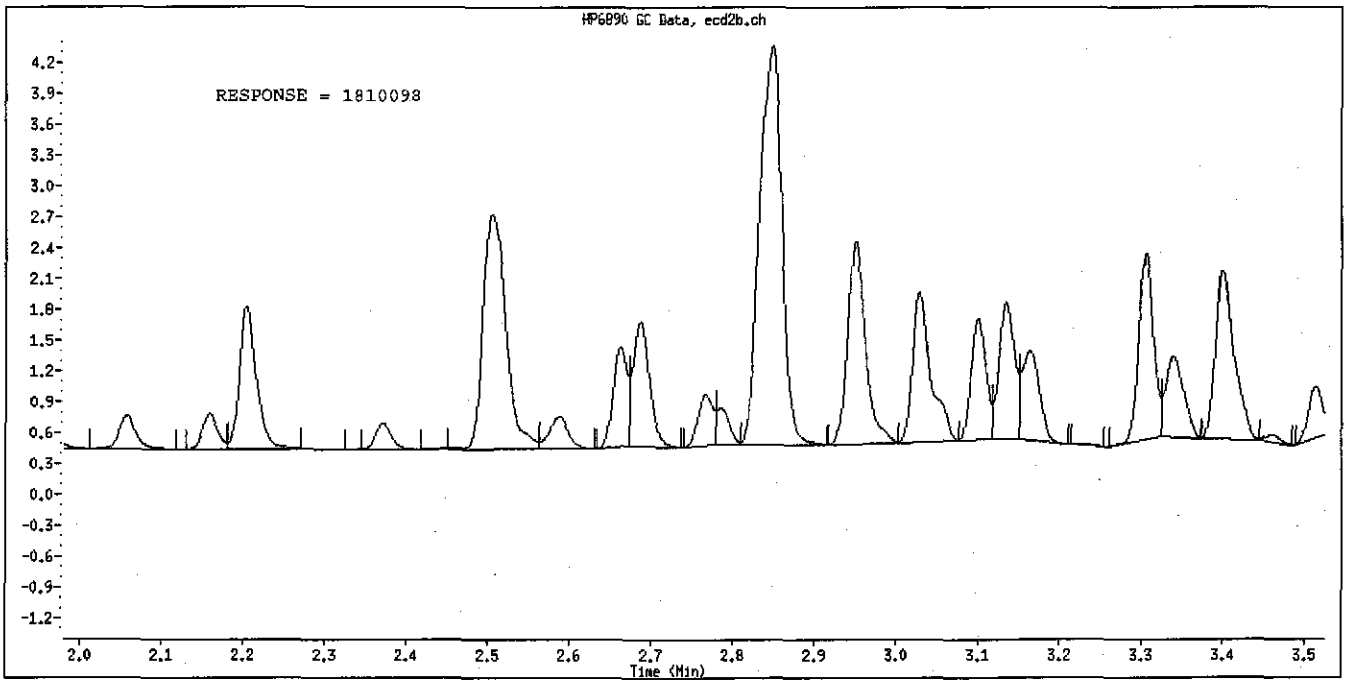
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File Name: [illegible]
Inj. Date and Time: 12-MAR-2005 02:56
Instrument ID: a2hp5.i
Client ID: S-030205-JH-034
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



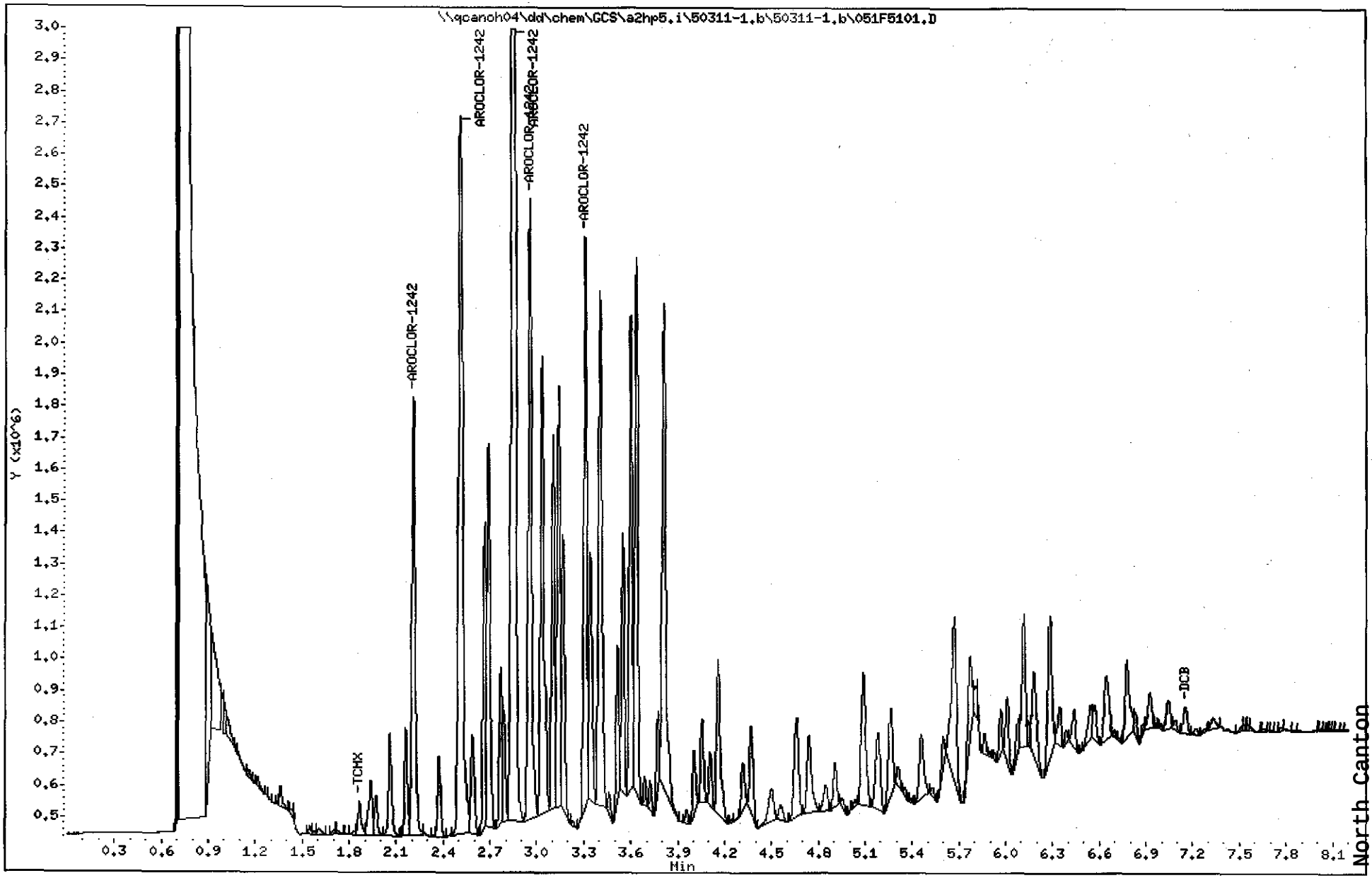
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\051F5101.D
Date : 12-MAR-2005 02:56
Client ID: S-030205-JH-034
Sample Info: G5F781AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-035

GC Semivolatiles

Lot-Sample #...:	A5C030182-003	**Work Order #...:**	G5F791AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:15	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	100	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	3800	ug/kg
Aroclor 1221	ND	3800	ug/kg
Aroclor 1232	ND	3800	ug/kg
Aroclor 1242	**21000**	**3800**	**ug/kg**
Aroclor 1248	ND	3800	ug/kg
Aroclor 1254	ND	3800	ug/kg
Aroclor 1260	ND	3800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	127 DIL	(10 - 172)
Decachlorobiphenyl	1130 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 052F5201.D
Report Date: 14-Mar-2005 16:50

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\052F5201.D
Lab Smp Id: G5F791AA Client Smp ID: S-030205-JH-035
Inj Date : 12-MAR-2005 03:08
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F791AA,100
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 52
Dil Factor: 100.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	100.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	57379	3e-004	8.422		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Operator disabled compound identification.							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.204	2.206	-0.002	1376380	0.51817	17190	75.00- 125.00	100.00(M)
2.504	2.505	-0.001	1997356	0.55045	18260	101.31- 168.85	145.12
2.847	2.850	-0.003	3627672	0.56051	18600	185.46- 309.11	263.57
2.950	2.952	-0.002	1875344	0.54647	18130	95.29- 158.82	136.25
3.305	3.307	-0.002	1700622	0.61534	20420	76.10- 126.84	123.56
		Average of Peak Concentrations =			18520		

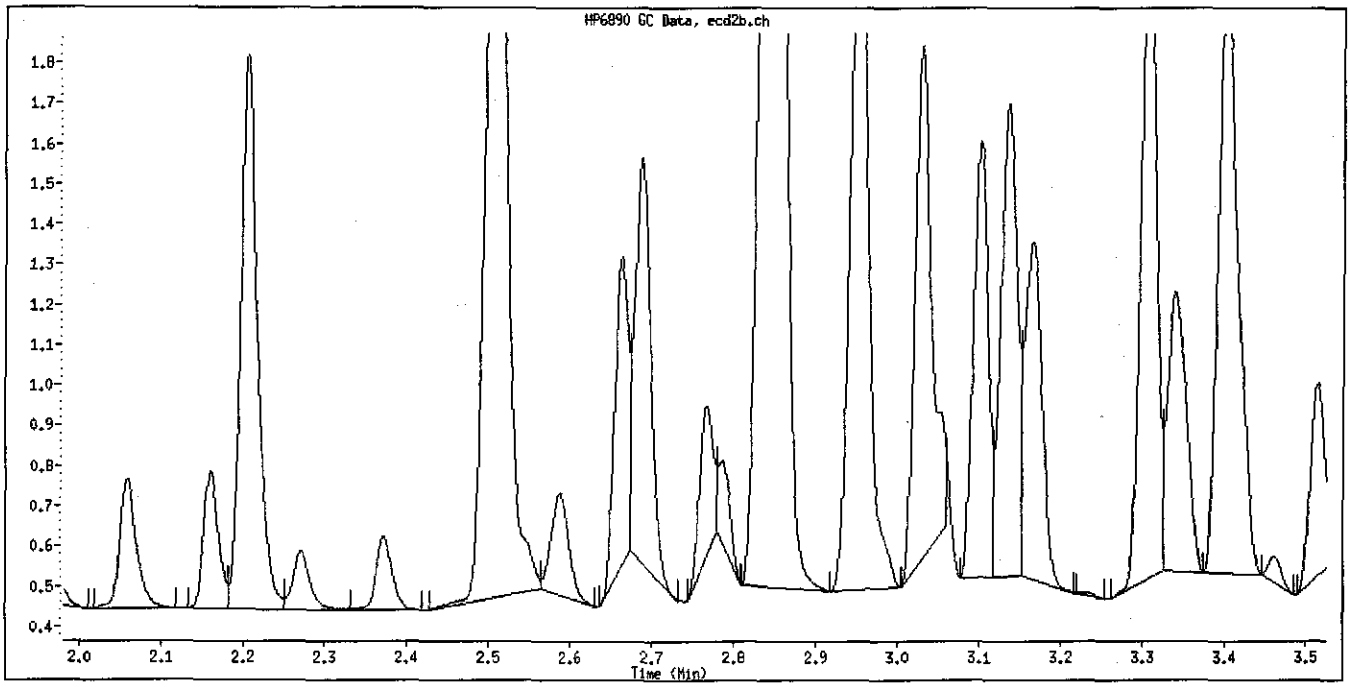
Data File: 052F5201.D
Report Date: 14-Mar-2005 16:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
4.315	4.335	-0.020	128614	0.02618	868.4	80.00- 120.00	100.00	(M)
4.557	4.545	0.012	76435	0.01348	447.2	87.22- 145.36	59.43	
4.956	4.942	0.014	38777	0.00709	235.1	86.81- 144.68	30.15	
5.351	5.364	-0.013	118716	0.03165	1050	57.97- 96.61	92.30	
6.007	5.997	0.010	713294	0.13144	4361	85.17- 141.95	554.60	
		Average of Peak Concentrations =			1392			
$ 9 DCB					CAS #: 2051-24-3			
7.152	7.135	0.017	212680	0.00225	74.66			(R)

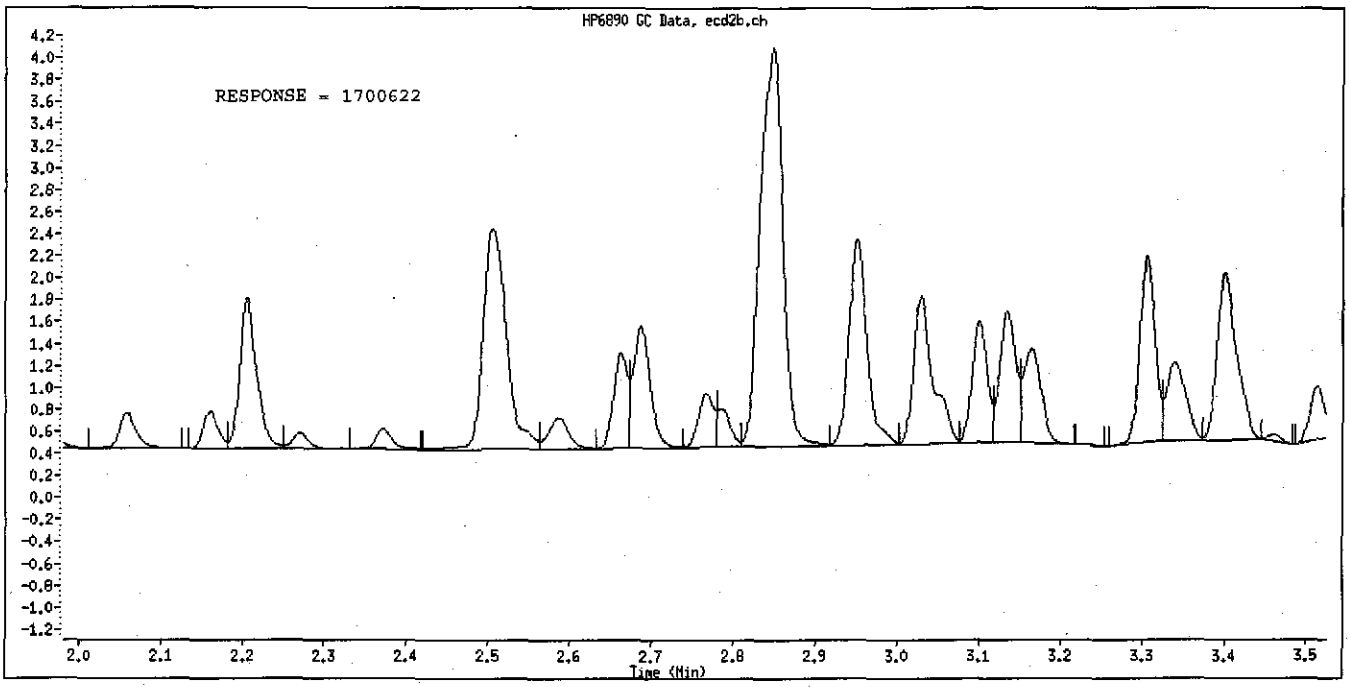
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 03:08
Instrument ID: a2hp5.i
Client ID: S-030205-JH-035
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



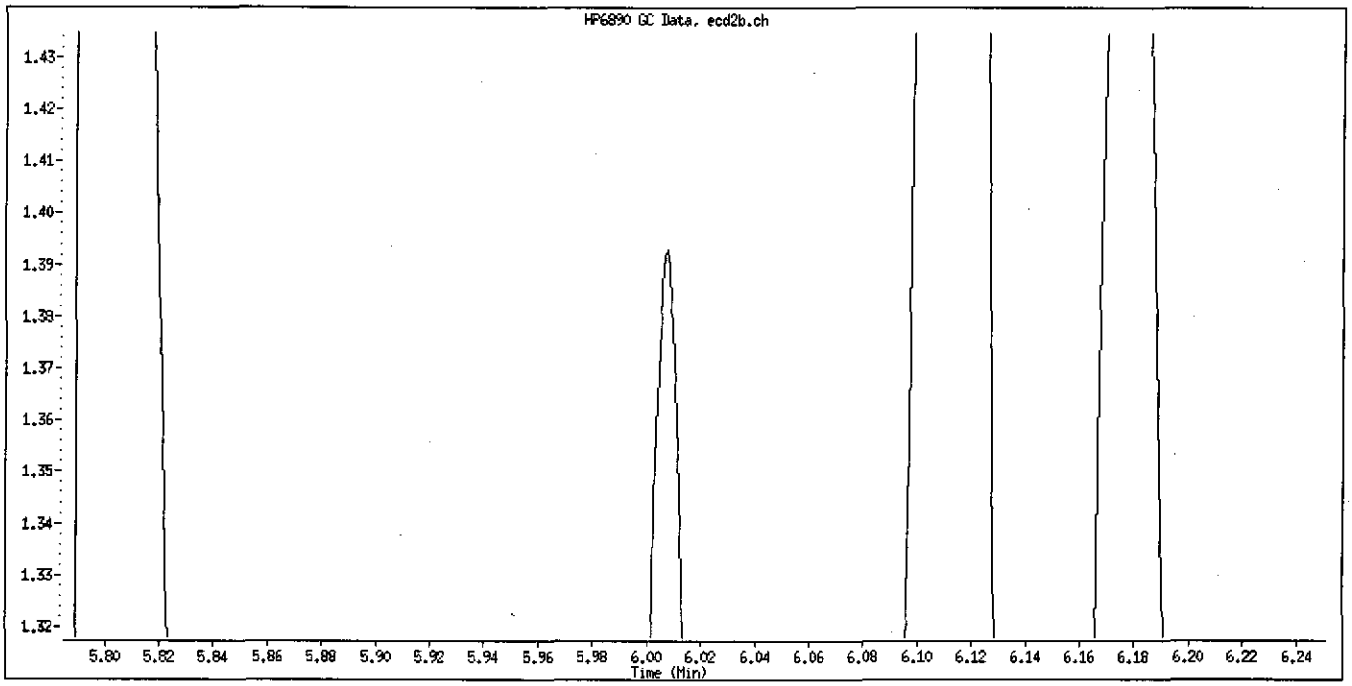
Original Integration



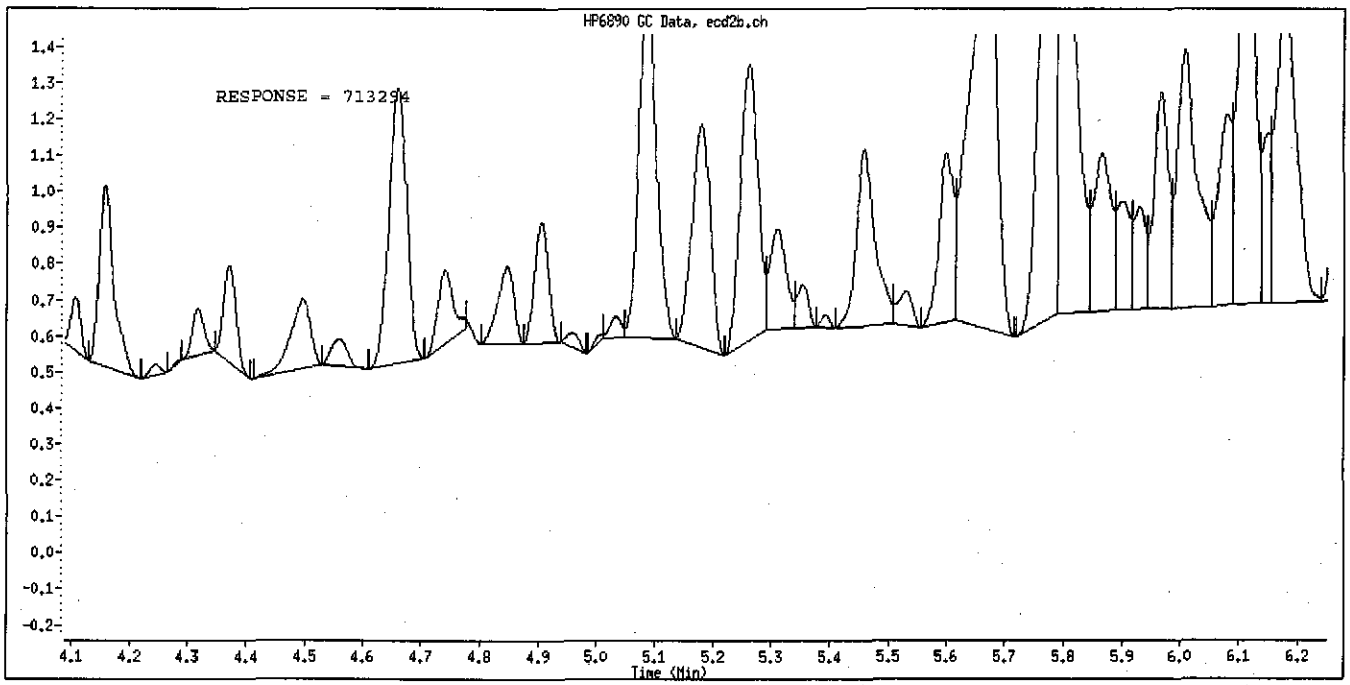
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 03:08
Instrument ID: a2hp5.i
Client ID: S-030205-JH-035
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



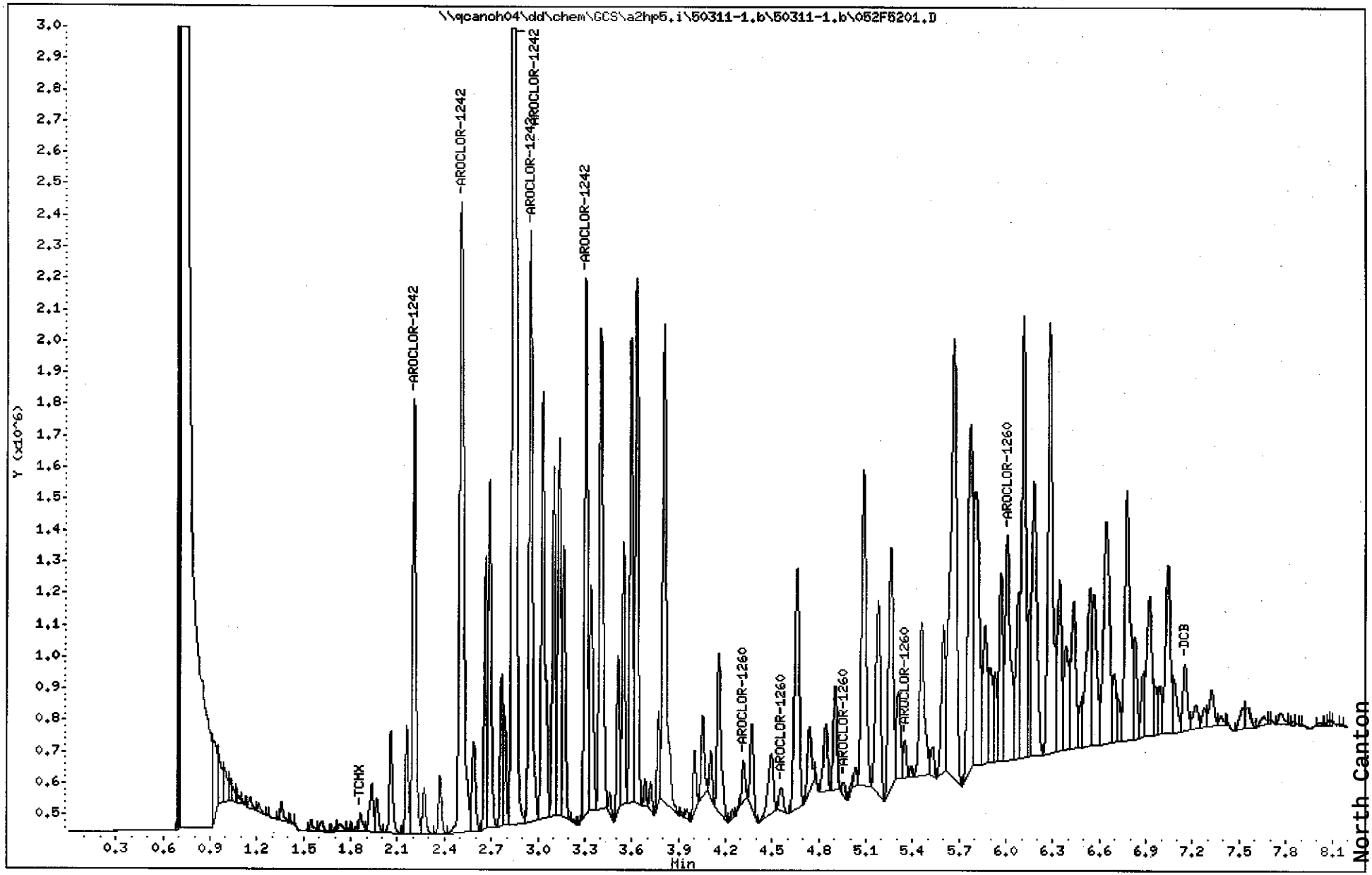
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\052F5201.D
Date : 12-MAR-2005 03:08
Client ID: S-030205-JH-035
Sample Info: G5F791AA,100
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-036

GC Semivolatiles

Lot-Sample #...:	A5C030182-004	**Work Order #...:**	G5F8C1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:20	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	**18000**	**1900**	**ug/kg**
Aroclor 1248	ND	1900	ug/kg
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	132 DIL	(10 - 172)
Decachlorobiphenyl	4060 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 053F5301.D
Report Date: 14-Mar-2005 17:05

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\053F5301.D
Lab Smp Id: G5F8C1AA Client Smp ID: S-030205-JH-036
Inj Date : 12-MAR-2005 03:20
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8C1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 53
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	119466	5e-004	8.790		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Operator disabled compound identification.							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	2604852	0.98066	16310	75.00- 125.00	100.00(M)
2.503	2.505	-0.002	3323373	0.91589	15230	101.31- 168.85	127.58
2.847	2.850	-0.003	6144999	0.94946	15790	185.46- 309.11	235.91
2.949	2.952	-0.003	3281764	0.95630	15910	95.29- 158.82	125.99
3.304	3.307	-0.003	2776220	1.00453	16710	76.10- 126.84	106.58
Average of Peak Concentrations =					15990		

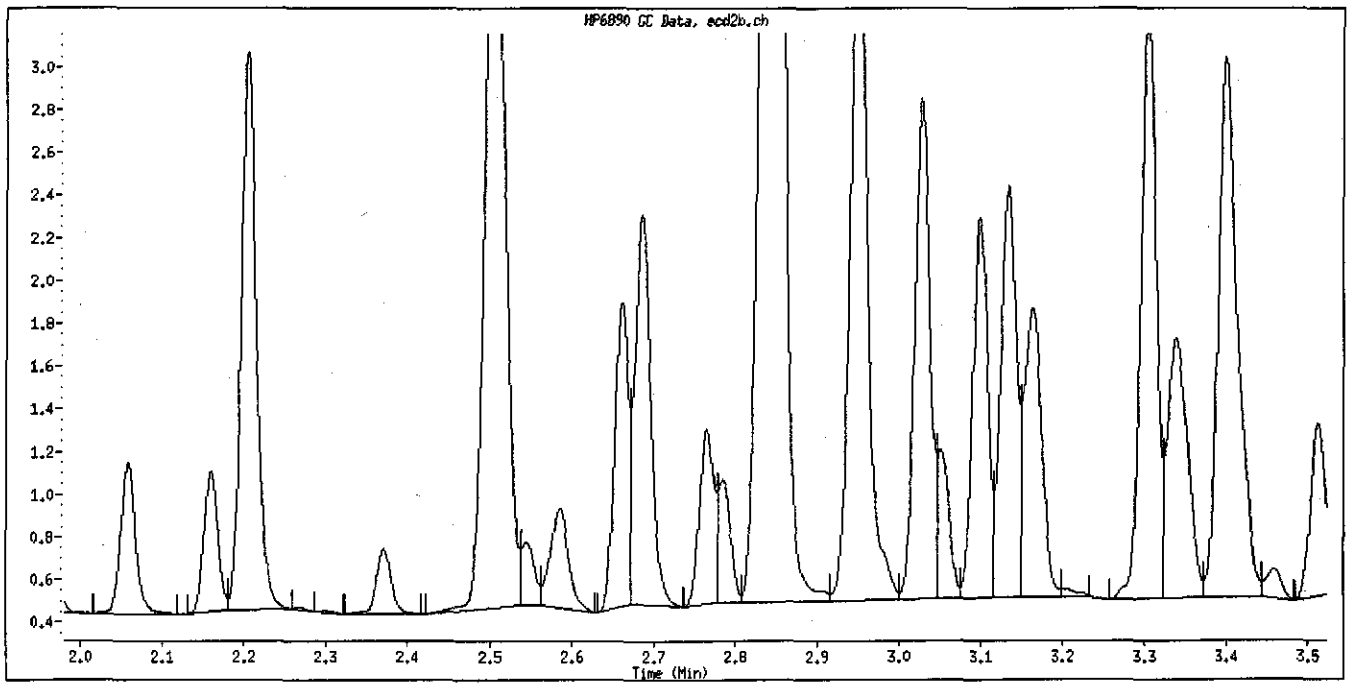
Data File: 053F5301.D
Report Date: 14-Mar-2005 17:05

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.152	7.135	0.017	1534603	0.01624	270.1		(R)

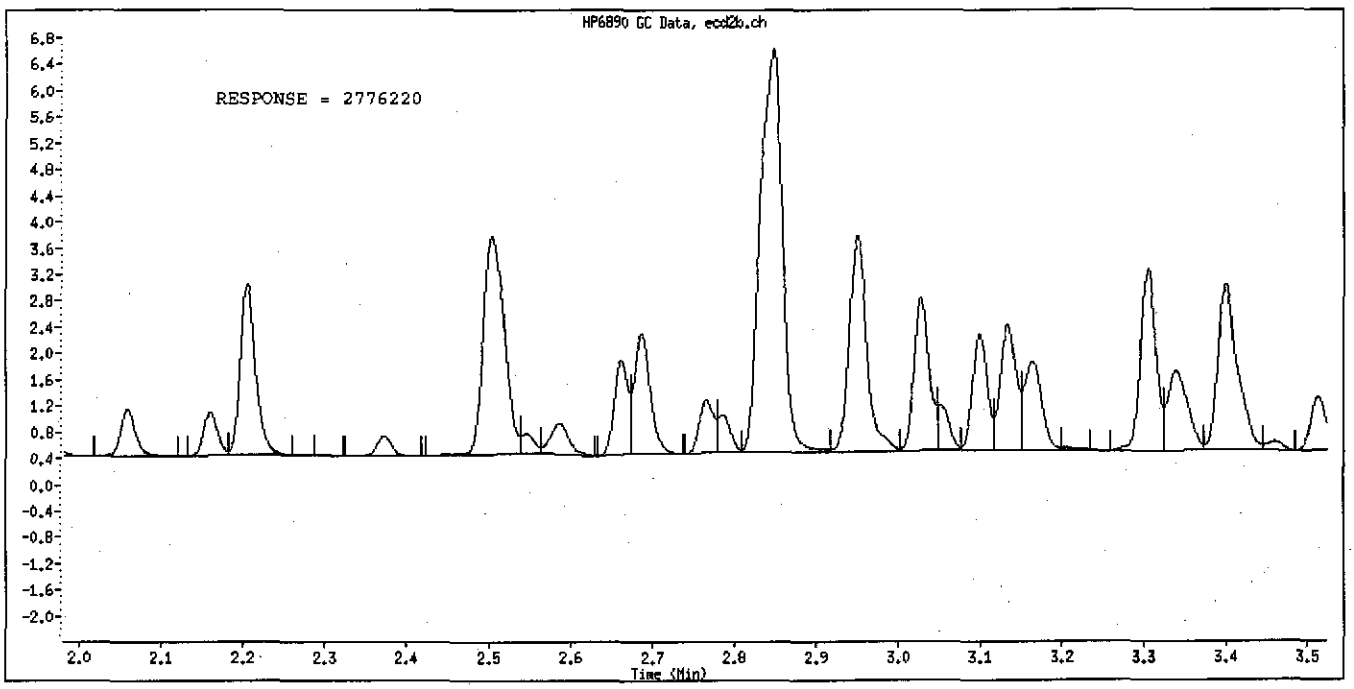
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 03:20
Instrument ID: a2hp5.i
Client ID: S-030205-JH-036
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



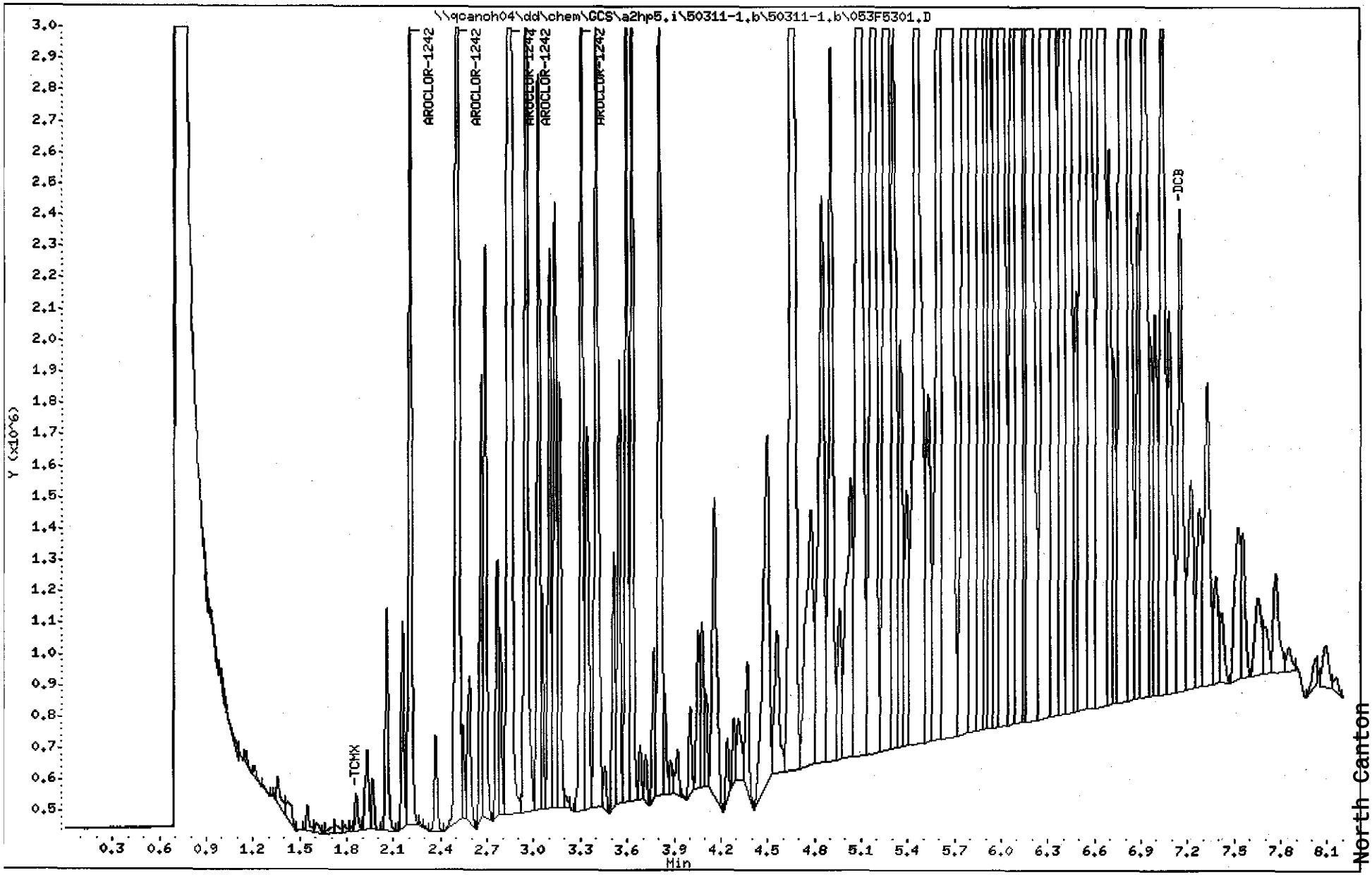
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\053F5301.D
Date : 12-MAR-2005 03:20
Client ID: S-030205-JH-036
Sample Info: G5F8C1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-037

GC Semivolatiles

Lot-Sample #...:	A5C030182-005	**Work Order #...:**	G5F8D1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:25	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	710	ug/kg
Aroclor 1221	ND	710	ug/kg
Aroclor 1232	ND	710	ug/kg
Aroclor 1242	ND	710	ug/kg
Aroclor 1248	**3700**	**710**	**ug/kg**
Aroclor 1254	ND	710	ug/kg
Aroclor 1260	ND	710	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	109 DIL	(10 - 172)
Decachlorobiphenyl	223 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 060F6001.D
Report Date: 14-Mar-2005 16:51

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\060F6001.D
Lab Smp Id: G5F8D1AA Client Smp ID: S-030205-JH-037
Inj Date : 12-MAR-2005 04:45
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8D1AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 60
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	247505	0.00109	7.290		

2 AROCLOR-1221 CAS #: 11104-28-2

Compound Not Detected

3 AROCLOR-1016 CAS #: 12674-11-2

Compound Not Detected

4 AROCLOR-1232 CAS #: 11141-16-5

Compound Not Detected

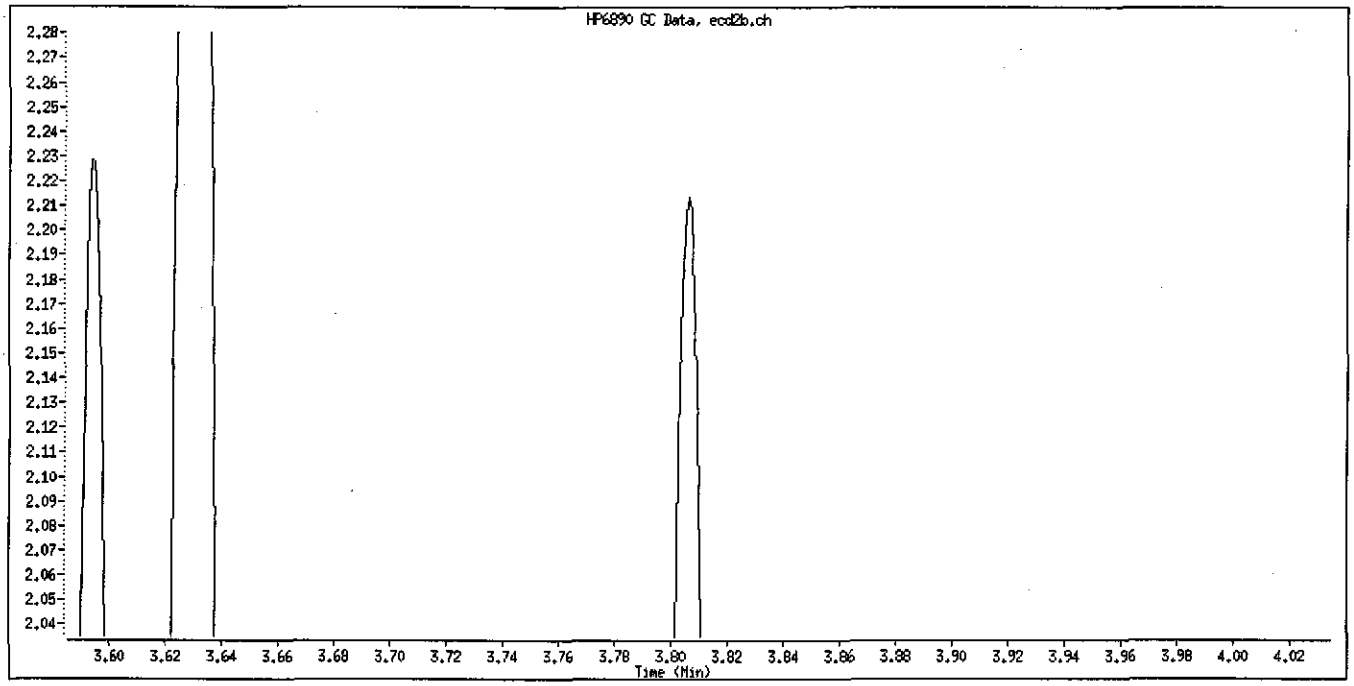
Data File: 060F6001.D
Report Date: 14-Mar-2005 16:51

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Compound Not Detected								
6 AROCLOR-1248					CAS #: 12672-29-6			
2.503	2.503	0.000	1355046	0.69300	4614	75.00- 125.00	100.00	(M)
2.847	2.846	0.001	3186278	0.79244	5276	157.16- 261.93	235.14	
3.305	3.306	-0.001	1867569	0.38482	2562	189.24- 315.41	137.82	
3.593	3.596	-0.003	1727203	0.33803	2250	193.23- 322.06	127.46	
3.806	3.808	-0.002	1702966	0.37230	2479	173.06- 288.43	125.68	
Average of Peak Concentrations =					3436			
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
7.147	7.135	0.012	210564	0.00223	14.83			(R)

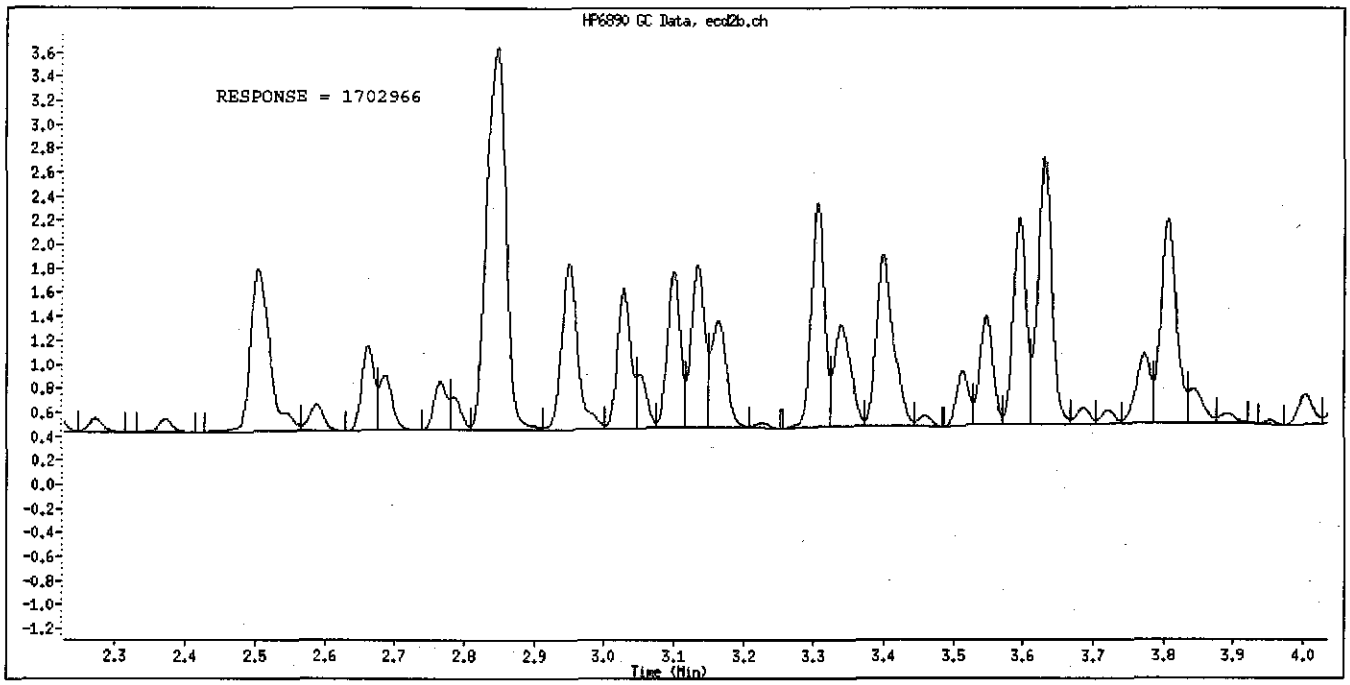
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 04:45
Instrument ID: a2hp5.i
Client ID: S-030205-JH-037
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



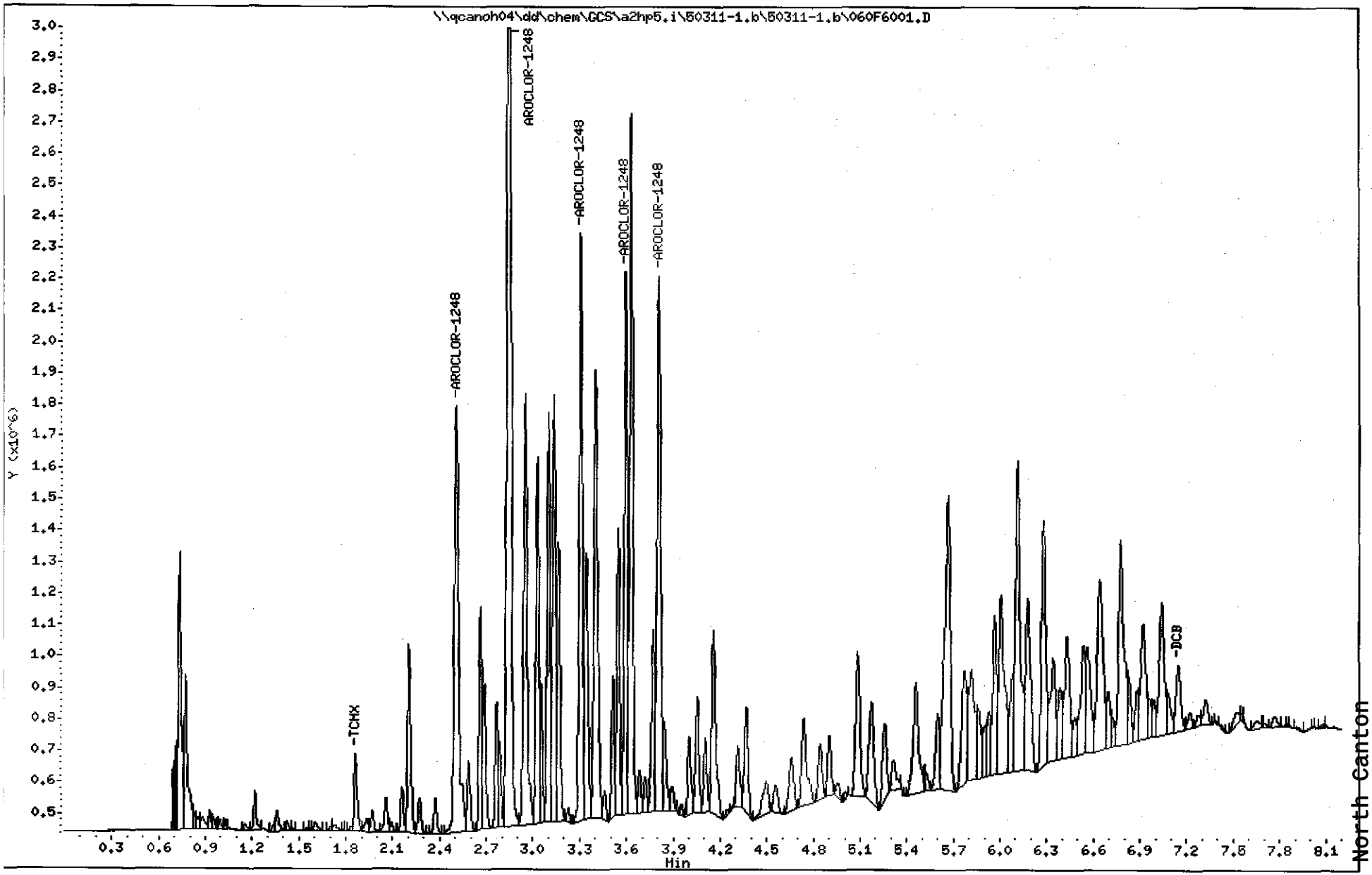
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\060F6001.D
Date : 12-MAR-2005 04:45
Client ID: S-030205-JH-037
Sample Info: G5F8D1AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-038

GC Semivolatiles

Lot-Sample #...:	A5C030182-006	**Work Order #...:**	G5F8E1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:30	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	500	**Initial Wgt/Vol:**	30.12 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	19000	ug/kg
Aroclor 1221	ND	19000	ug/kg
Aroclor 1232	ND	19000	ug/kg
Aroclor 1242	**51000**	**19000**	**ug/kg**
Aroclor 1248	ND	19000	ug/kg
Aroclor 1254	ND	19000	ug/kg
Aroclor 1260	ND	19000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	67 DIL	(10 - 172)
Decachlorobiphenyl	1340 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 061F6101.D
Report Date: 14-Mar-2005 16:51

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\061F6101.D
Lab Smp Id: G5F8E1AA Client Smp ID: S-030205-JH-038
Inj Date : 12-MAR-2005 04:58
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8E1AA,500
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 61
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.120	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.858	1.860	-0.002	6043	3e-005	4.438		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	1018292	0.38336	63640	75.00- 125.00	100.00(M)
2.505	2.505	0.000	1453054	0.40045	66480	101.31- 168.85	142.70
2.837	2.850	-0.013	1878512	0.29025	48180	185.46- 309.11	184.48
2.948	2.952	-0.004	426459	0.12427	20630	95.29- 158.82	41.88
3.304	3.307	-0.003	452870	0.16386	27200	76.10- 126.84	44.47
Average of Peak Concentrations =					45220		

Data File: 061F6101.D
Report Date: 14-Mar-2005 16:51

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		

Compound Not Detected

---

7 AROCLOR-1254					CAS #: 11097-69-1		

Compound Not Detected

---

8 AROCLOR-1260					CAS #: 11096-82-5		

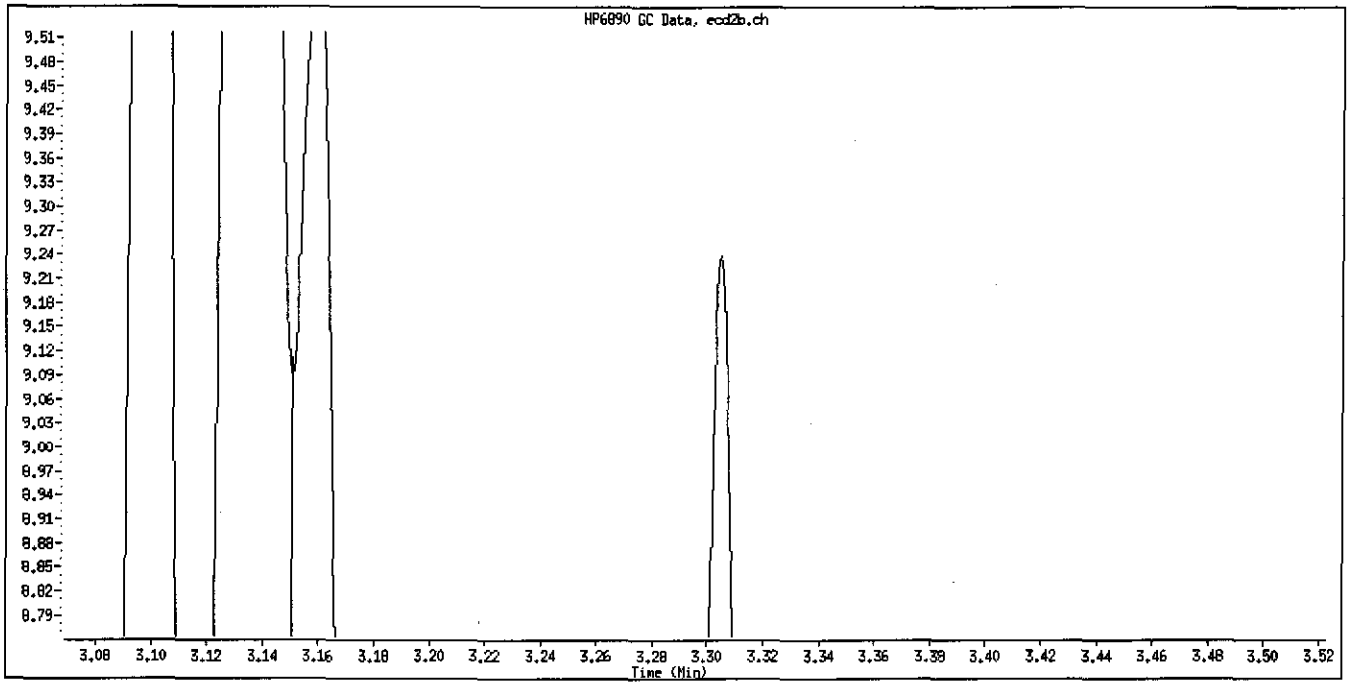
Operator disabled compound identification.

$ 9 DCB					CAS #: 2051-24-3		
7.151	7.135	0.016	50841	5e-004	89.30		(R)

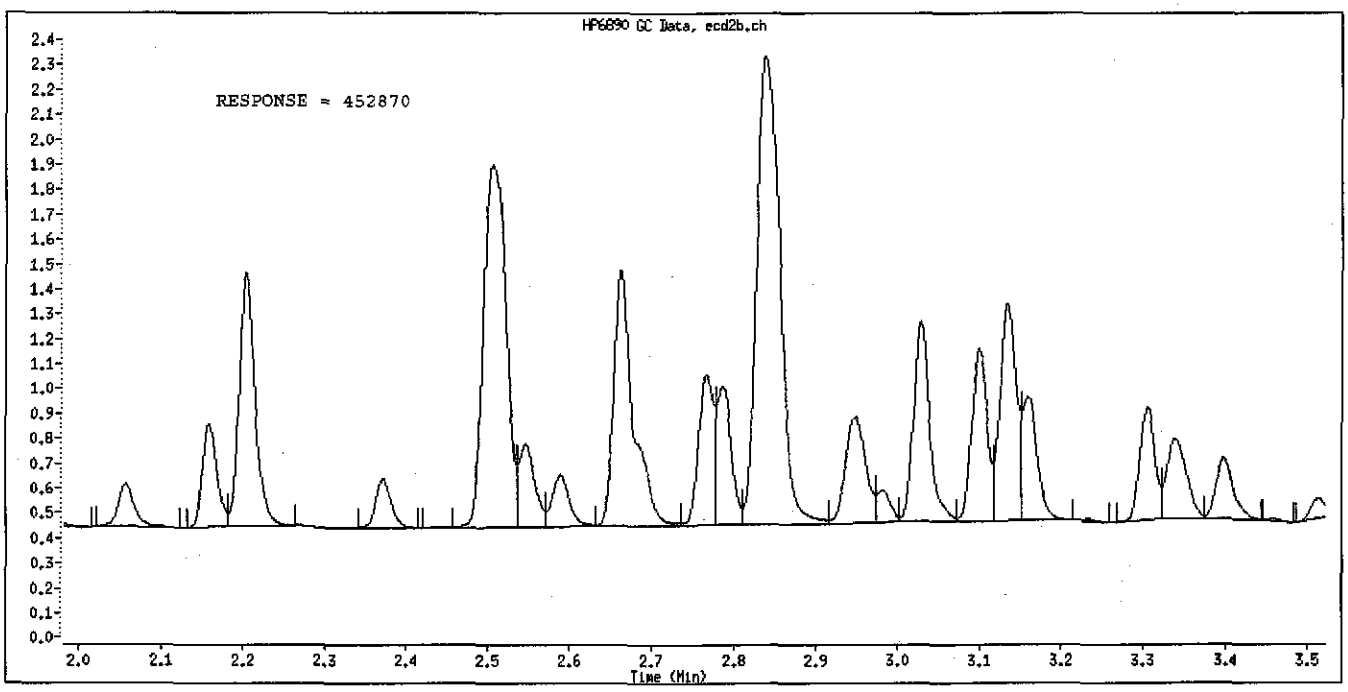
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 04:58
Instrument ID: a2hp5.i
Client ID: S-030205-JH-038
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



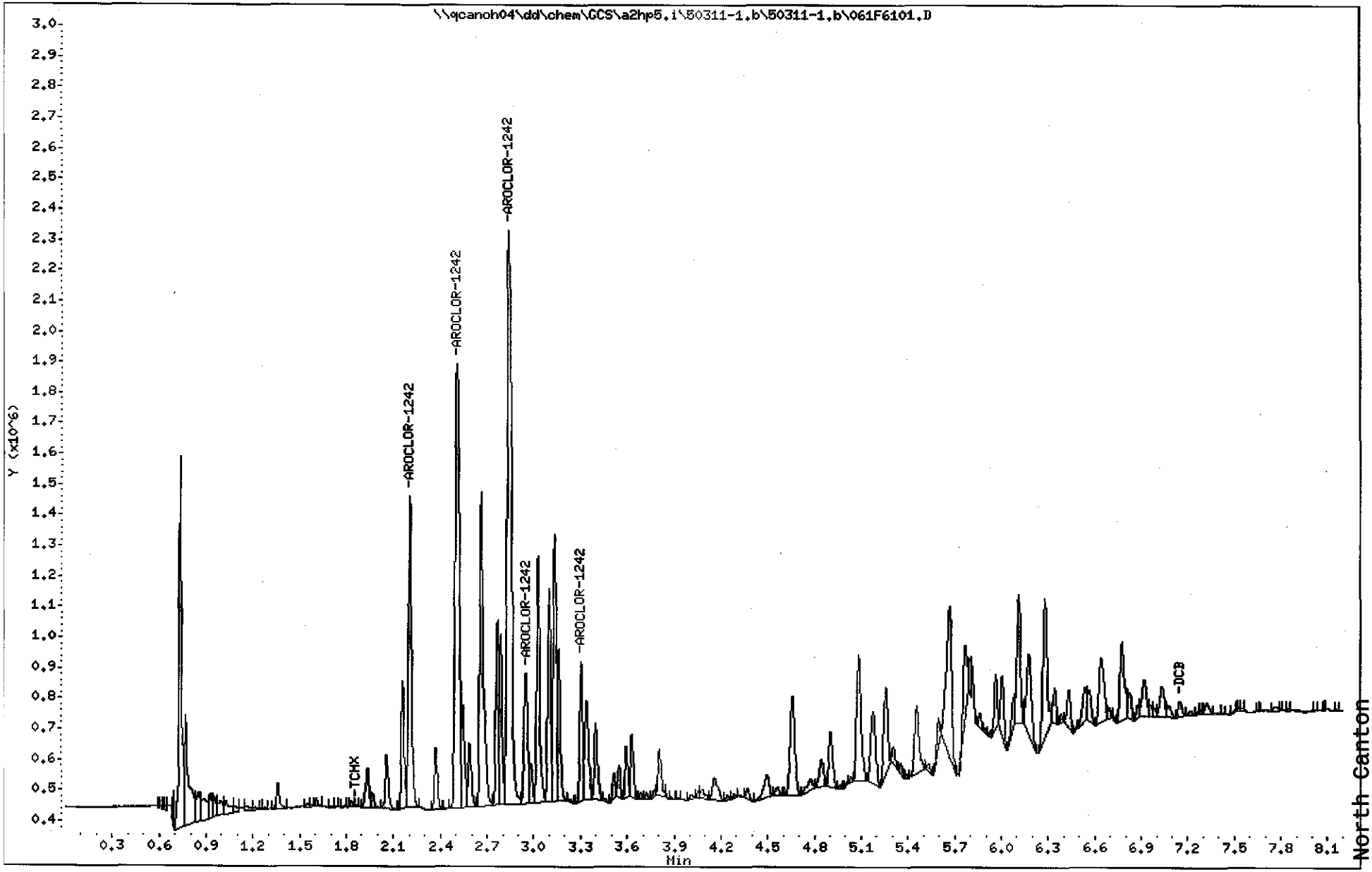
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\061F6101.D
Date : 12-MAR-2005 04:58
Client ID: S-030205-JH-038
Sample Info: G5F8E1AA,500
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-039

GC Semivolatiles

Lot-Sample #...:	A5C030182-007	**Work Order #...:**	G5F8F1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:35	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1000	**Initial Wgt/Vol:**	30.2 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	8.9	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	36000	ug/kg
Aroclor 1221	ND	36000	ug/kg
Aroclor 1232	ND	36000	ug/kg
Aroclor 1242	**260000**	**36000**	**ug/kg**
Aroclor 1248	ND	36000	ug/kg
Aroclor 1254	ND	36000	ug/kg
Aroclor 1260	ND	36000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	198 DIL,*	(10 - 172)
Decachlorobiphenyl	2540 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 062F6201.D
Report Date: 14-Mar-2005 16:52

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\062F6201.D
Lab Smp Id: G5F8F1AA Client Smp ID: S-030205-JH-039
Inj Date : 12-MAR-2005 05:10
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8F1AA,1000
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 62
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.200	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.880	1.860	0.020	8956	4.e-005	13.12			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.203	2.206	-0.003	3021044	1.13735	376600	75.00- 125.00	100.00	(M)
2.512	2.505	0.007	3313251	0.91310	302400	101.31- 168.85	109.67	
2.846	2.850	-0.004	4564275	0.70522	233500	185.46- 309.11	151.08	
2.946	2.952	-0.006	1260107	0.36719	121600	95.29- 158.82	41.71	
3.303	3.307	-0.004	1253122	0.45342	150100	76.10- 126.84	41.48	
Average of Peak Concentrations =					236800			

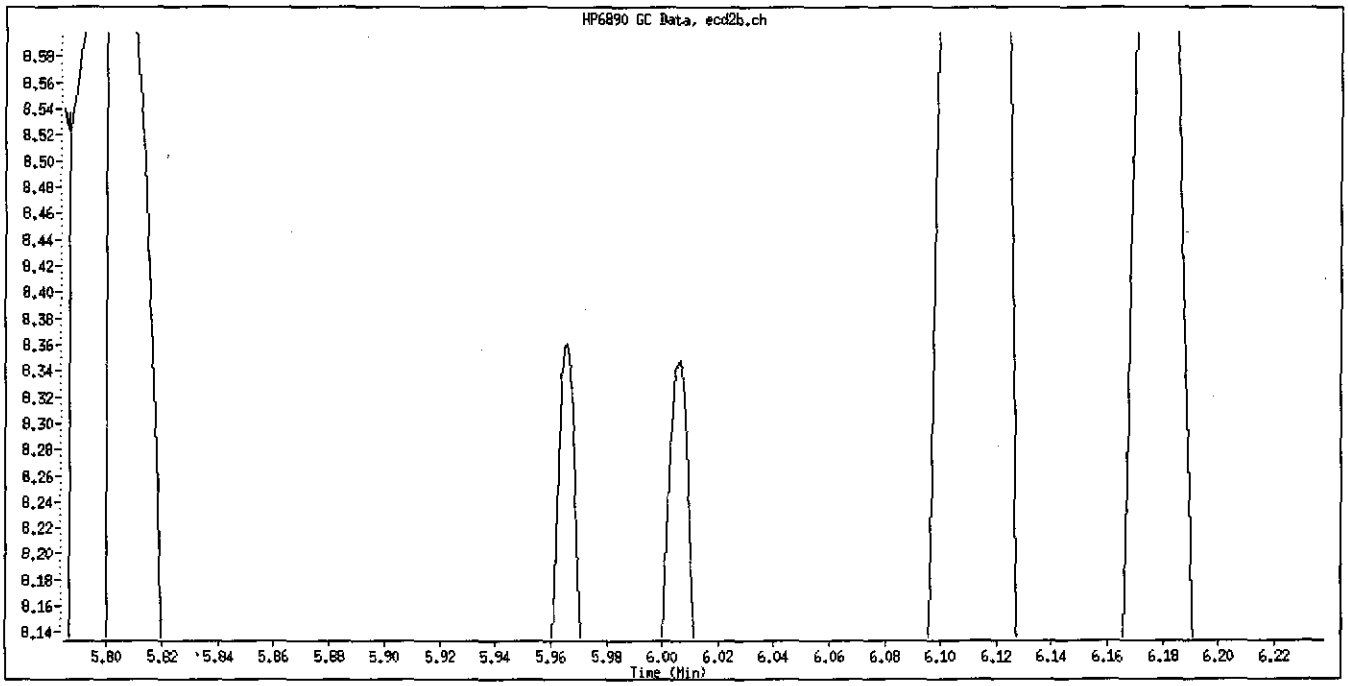
Data File: 062F6201.D
Report Date: 14-Mar-2005 16:52

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
4.314	4.335	-0.021	111445	0.02268	7510	80.00- 120.00	100.00	(M)
4.555	4.545	0.010	38163	0.00673	2228	87.22- 145.36	34.24	
4.950	4.942	0.008	19067	0.00348	1154	86.81- 144.68	17.11	
5.350	5.364	-0.014	25332	0.00675	2236	57.97- 96.61	22.73	
6.006	5.997	0.009	201169	0.03707	12270	85.17- 141.95	180.51	
Average of Peak Concentrations =					5081			
$ 9 DCB					CAS #: 2051-24-3			
7.152	7.135	0.017	48038	5e-004	168.3			(R)

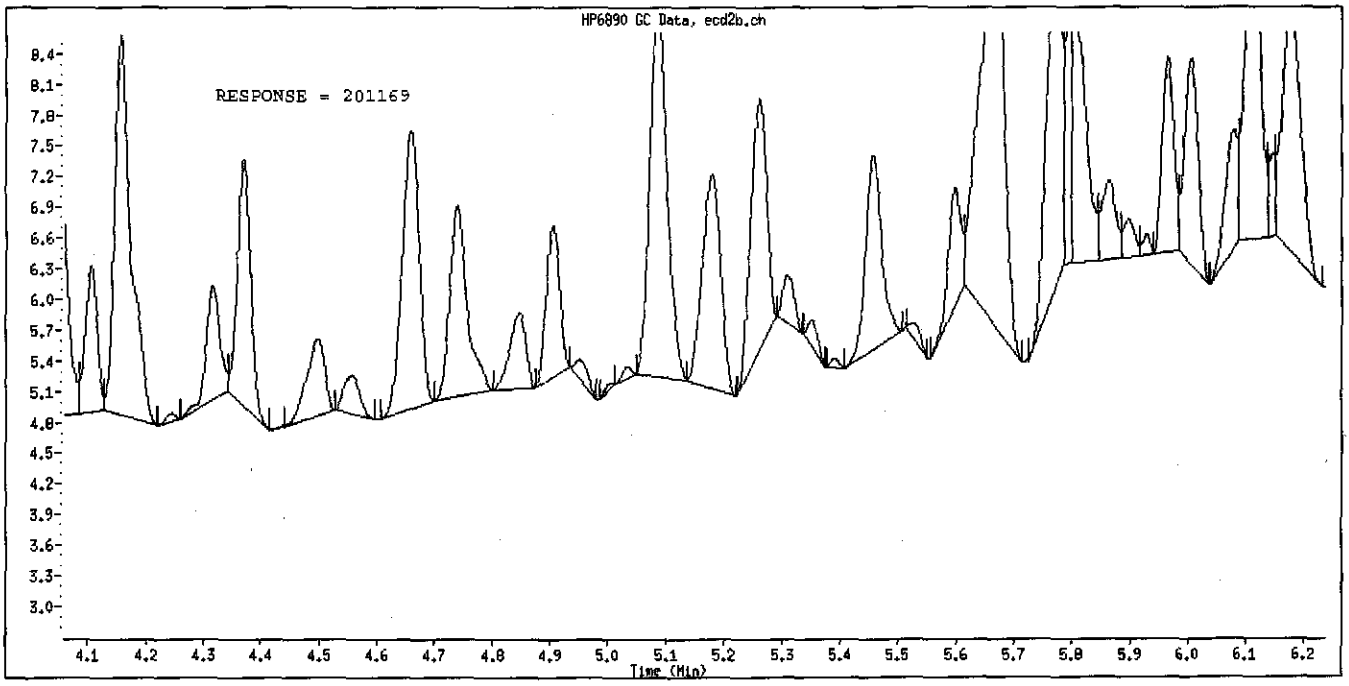
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 05:10
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



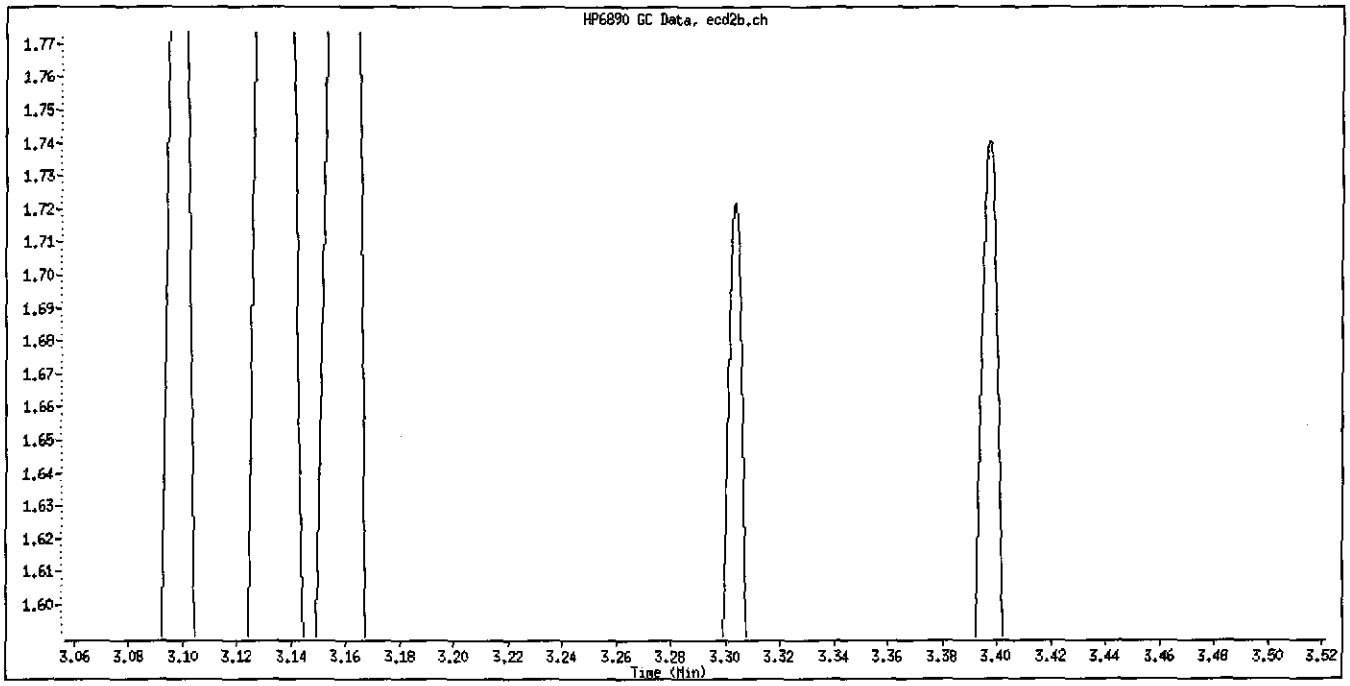
Original Integration



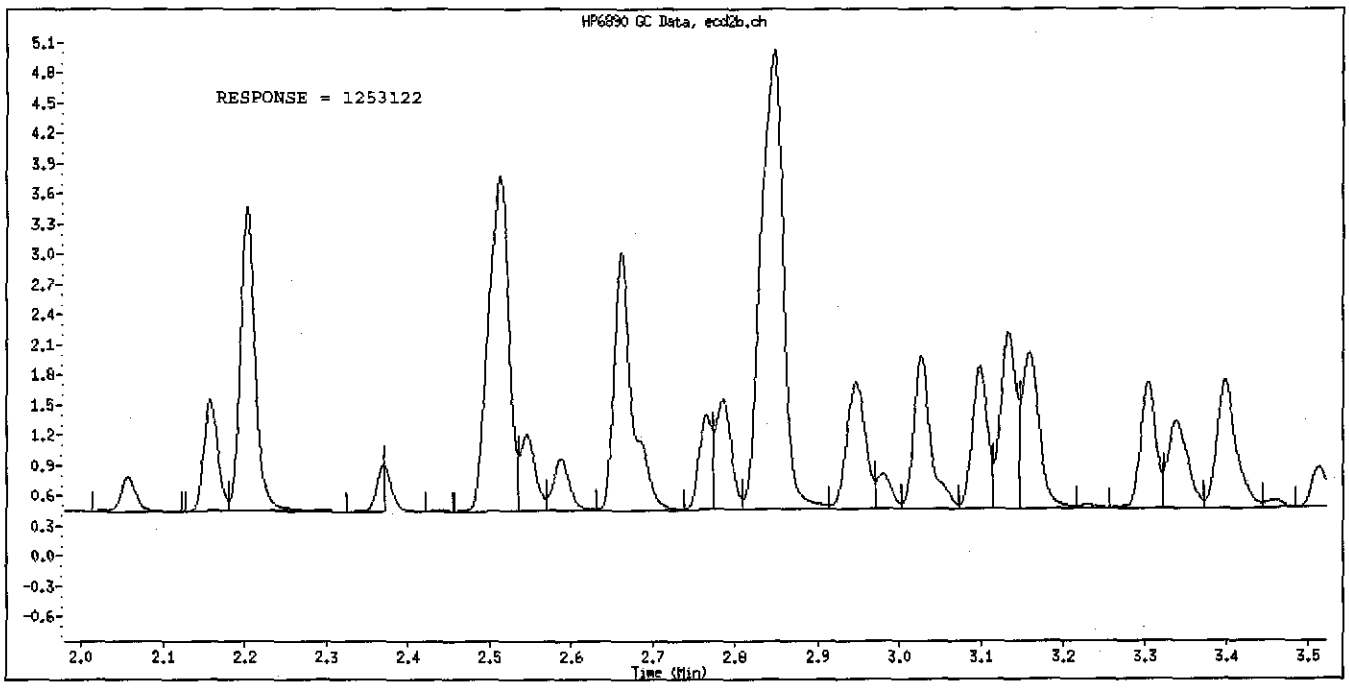
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 05:10
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



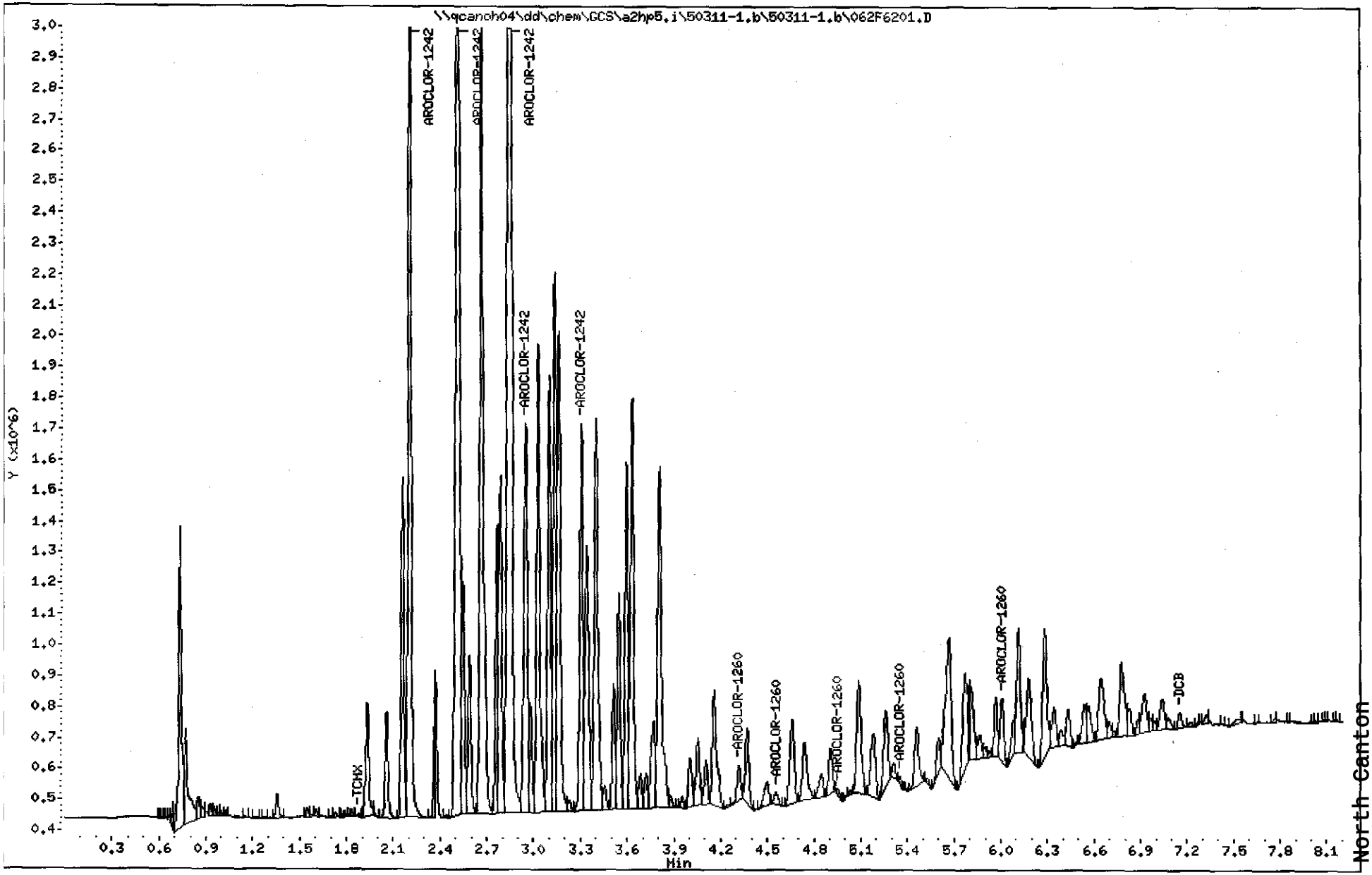
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\062F6201.D
Date : 12-MAR-2005 05:10
Client ID: S-030205-JH-039
Sample Info: G5F8F1AA,1000
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-040

GC Semivolatiles

Lot-Sample #...:	A5C030182-008	**Work Order #...:**	G5F8G1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:40	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/15/05		
Prep Batch #...:	5062354				
Dilution Factor:	2000	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	74000	ug/kg
Aroclor 1221	ND	74000	ug/kg
Aroclor 1232	ND	74000	ug/kg
Aroclor 1242	**1200000**	**74000**	**ug/kg**
Aroclor 1248	ND	74000	ug/kg
Aroclor 1254	ND	74000	ug/kg
Aroclor 1260	ND	74000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	1020 DIL,*	(10 - 172)
Decachlorobiphenyl	38100 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 006F0601.D
Report Date: 15-Mar-2005 10:32

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\006F0601.D
Lab Smp Id: G5F8G1AA Client Smp ID: S-030205-JH-040
Inj Date : 15-MAR-2005 09:39
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8G1AA,2000
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 10:00 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 6
Dil Factor: 2000.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.861	1.860	0.001	23126	1.e-004	68.11			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.203	2.206	-0.003	10012317	3.76940	2510000	75.00- 125.00	100.00	(M)
2.513	2.505	0.008	8812293	2.42858	1617000	101.31- 168.85	88.01	
2.844	2.850	-0.006	3656833	0.56501	376200	185.46- 309.11	36.52	
2.945	2.952	-0.007	2189771	0.63810	424800	95.29- 158.82	21.87	
3.303	3.307	-0.004	931853	0.33718	224500	76.10- 126.84	9.31	

Average of Peak Concentrations = 1030000

Data File: 006F0601.D
Report Date: 15-Mar-2005 10:32

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

---

7 AROCLOR-1254 CAS #: 11097-69-1

Compound Not Detected

---

8 AROCLOR-1260 CAS #: 11096-82-5

Operator disabled compound identification.

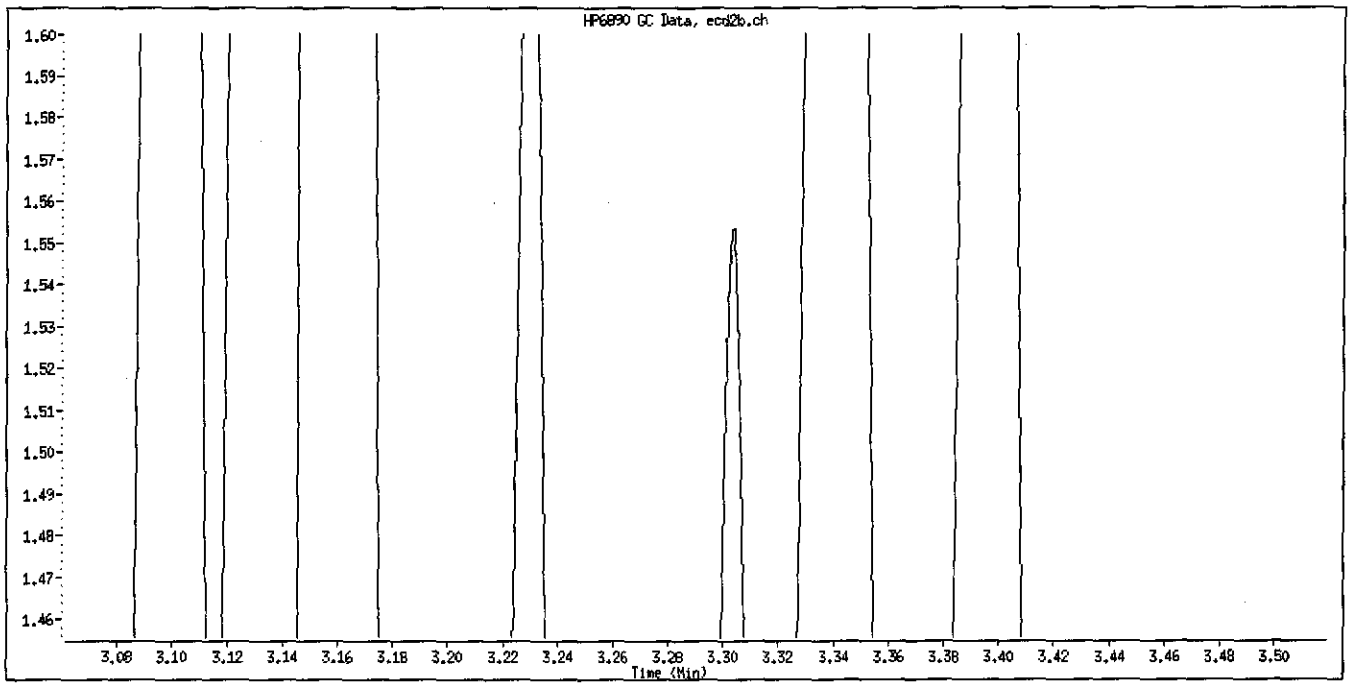
$ 9 DCB CAS #: 2051-24-3

7.147	7.132	0.015	359740	0.00381	2534		(R)

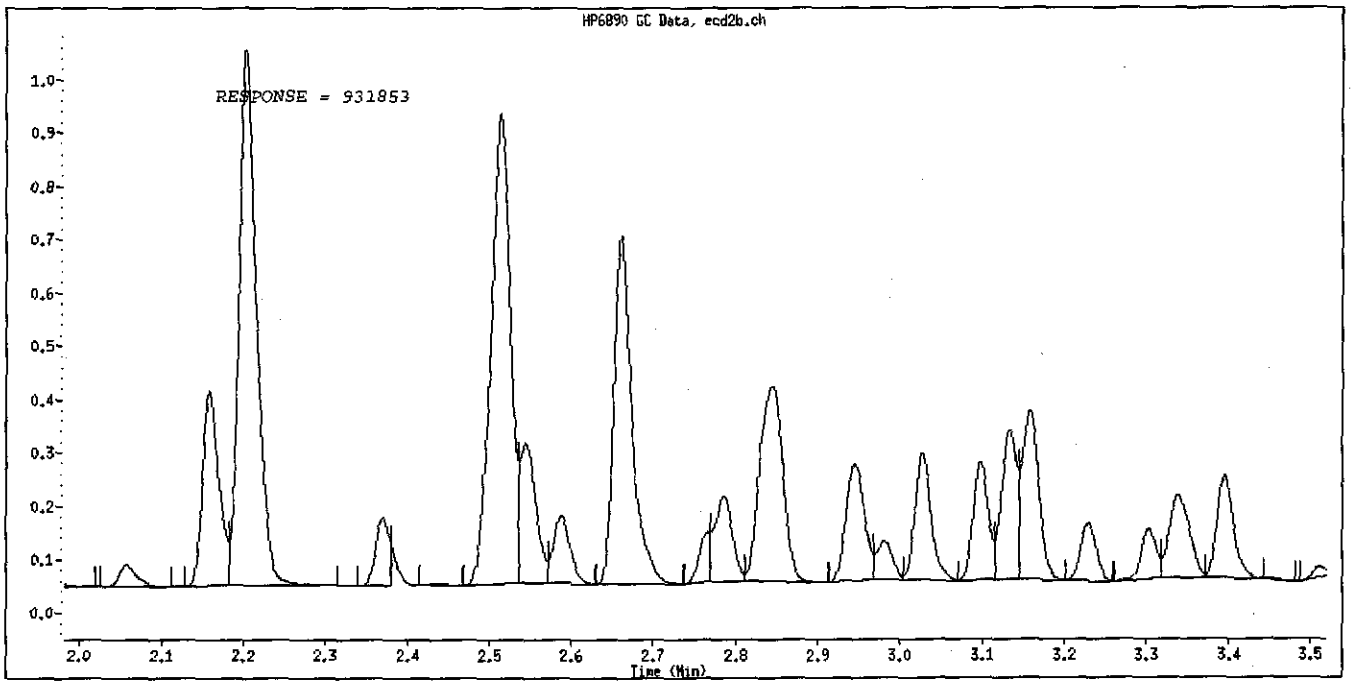
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File Name: 060F0001.D
Inj. Date and Time: 15-MAR-2005 09:39
Instrument ID: a2hp5.i
Client ID: S-030205-JH-040
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration



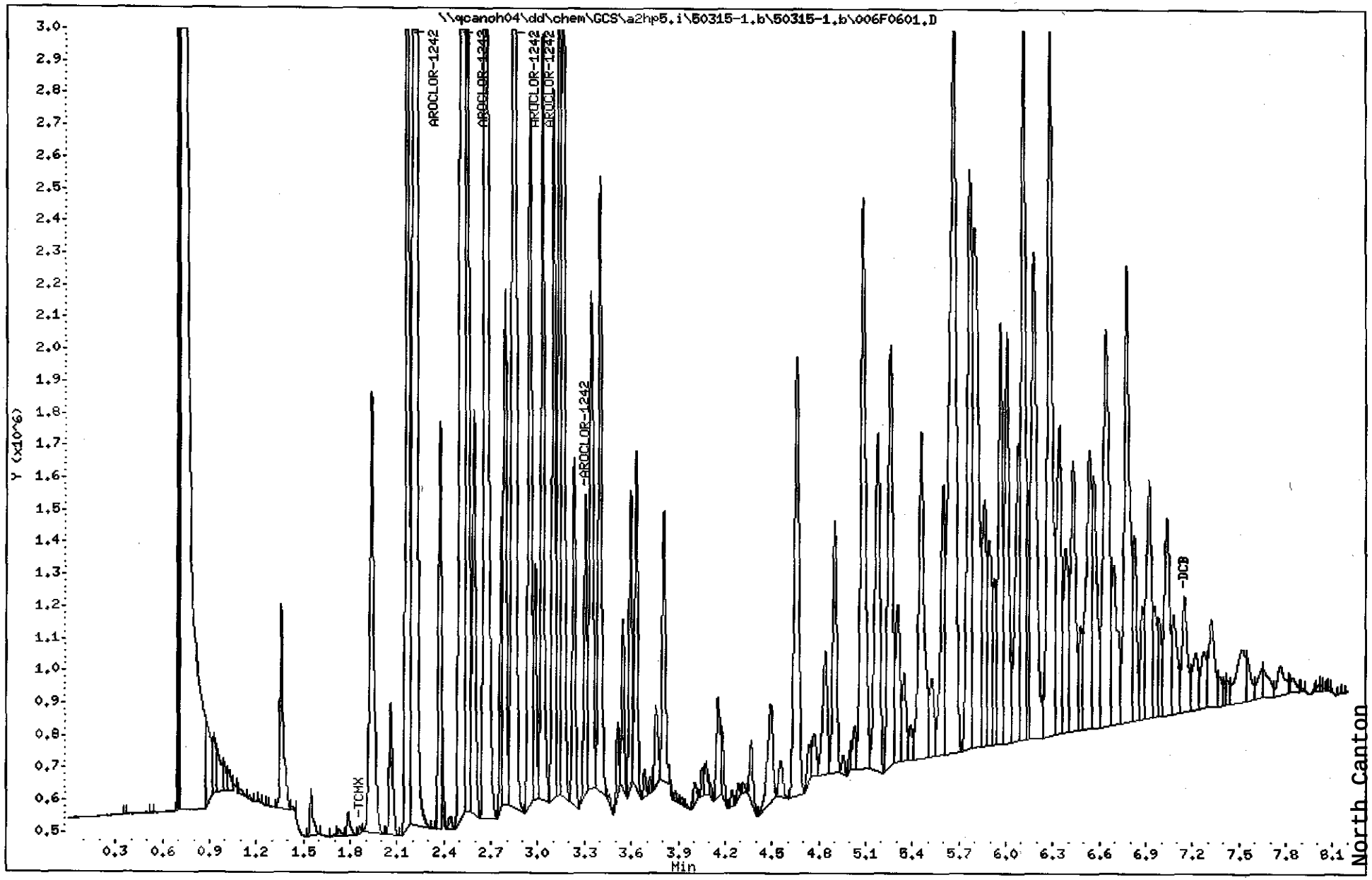
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\006F0601.D
Date : 15-MAR-2005 09:39
Client ID: S-030205-JH-040
Sample Info: G5F8G1AA,2000
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-041

GC Semivolatiles

Lot-Sample #...:	A5C030182-009	**Work Order #...:**	G5F8H1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:45	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	ND	1800	ug/kg
Aroclor 1248	**4900**	**1800**	**ug/kg**
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	62 DIL	(10 - 172)
Decachlorobiphenyl	255 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 067F6701.D
Report Date: 14-Mar-2005 16:52

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\067F6701.D
Lab Smp Id: G5F8H1AA Client Smp ID: S-030205-JH-041
Inj Date : 12-MAR-2005 06:11
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8H1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 67
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	56296	2e-004	4.140		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

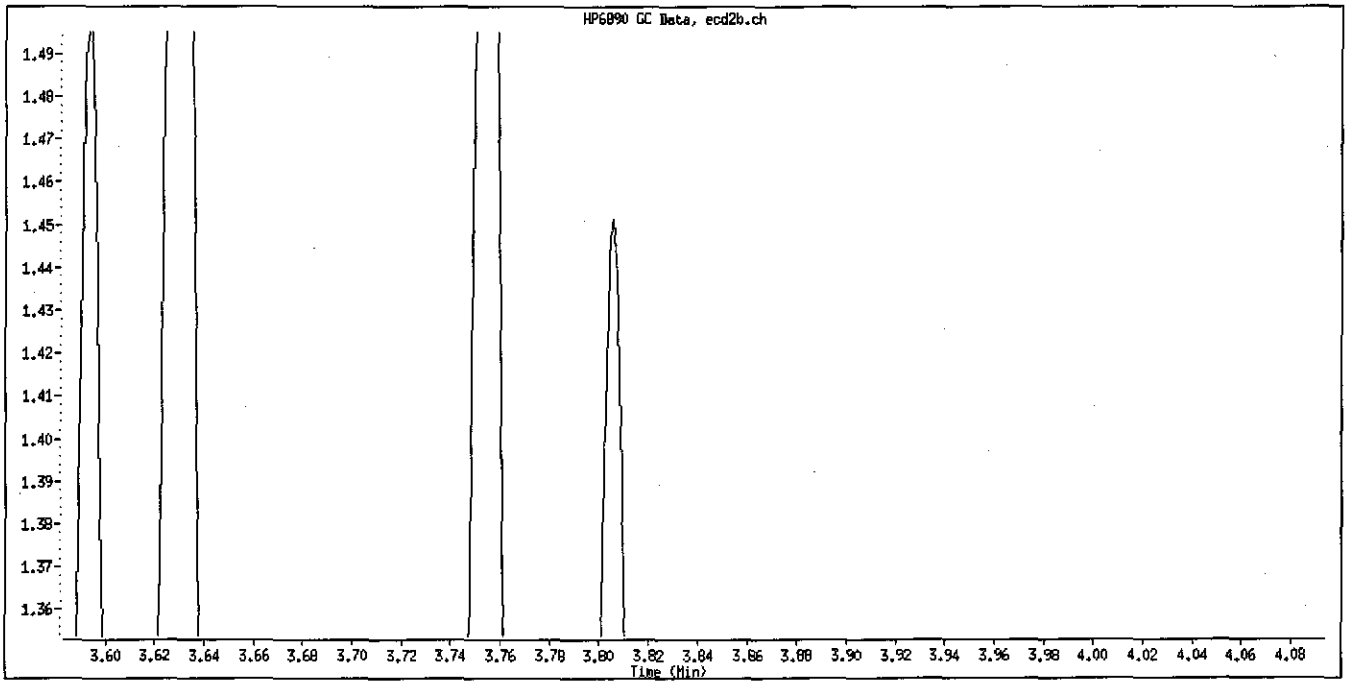
Data File: 067F6701.D
Report Date: 14-Mar-2005 16:52

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Operator disabled compound identification.							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	546018	0.27925	4642	75.00- 125.00	100.00(M)
2.847	2.846	0.001	1778248	0.44226	7351	157.16- 261.93	325.68
3.303	3.306	-0.003	1014287	0.20900	3474	189.24- 315.41	185.76
3.593	3.596	-0.003	985544	0.19288	3206	193.23- 322.06	180.50
3.805	3.808	-0.003	930248	0.20337	3380	173.06- 288.43	170.37
Average of Peak Concentrations =					4411		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.314	4.335	-0.021	95573	0.01945	323.3	80.00- 120.00	100.00(M)
4.553	4.545	0.008	46074	0.00812	135.0	87.22- 145.36	48.21
4.955	4.942	0.013	44812	0.00819	136.1	86.81- 144.68	46.89
5.318	5.364	-0.046	70971	0.01892	314.5	57.97- 96.61	74.26
6.005	5.997	0.008	253592	0.04673	776.7	85.17- 141.95	265.34
Average of Peak Concentrations =					337.2		
$ 9 DCB					CAS #: 2051-24-3		
7.150	7.135	0.015	96577	0.00102	16.98		(R)

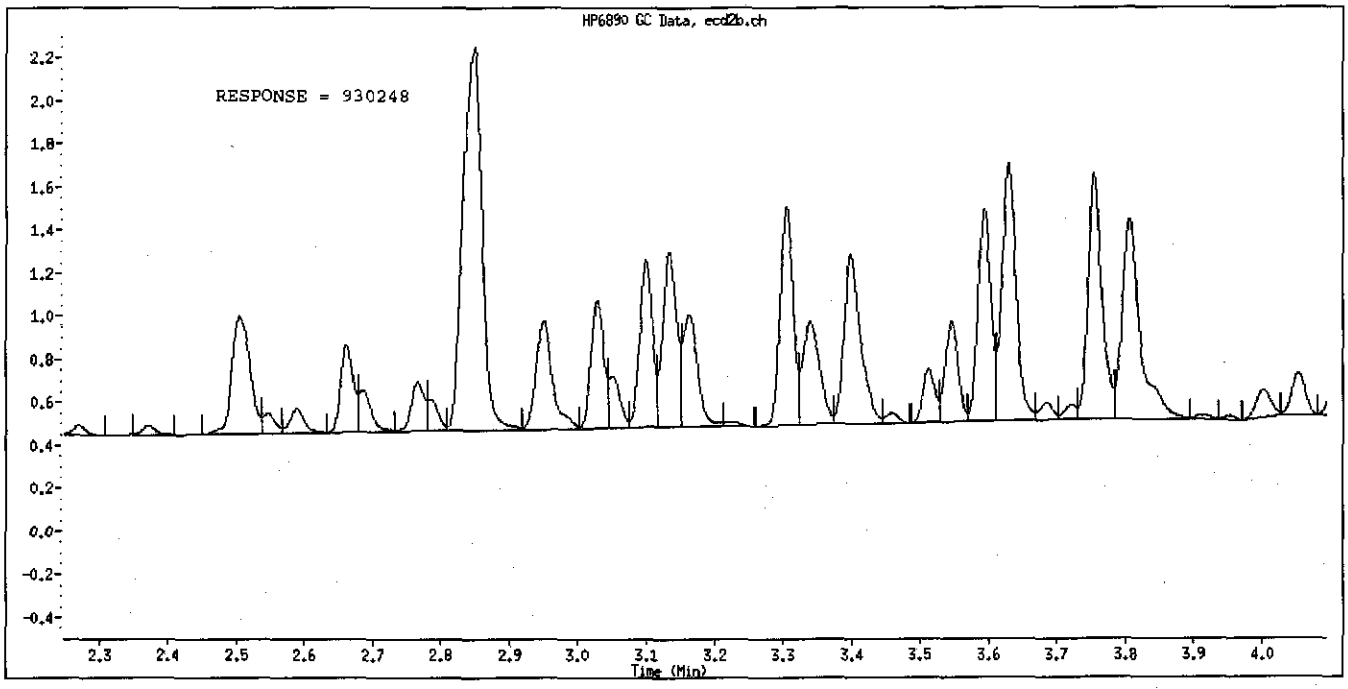
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 06:11
Instrument ID: a2hp5.i
Client ID: S-030205-JH-041
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



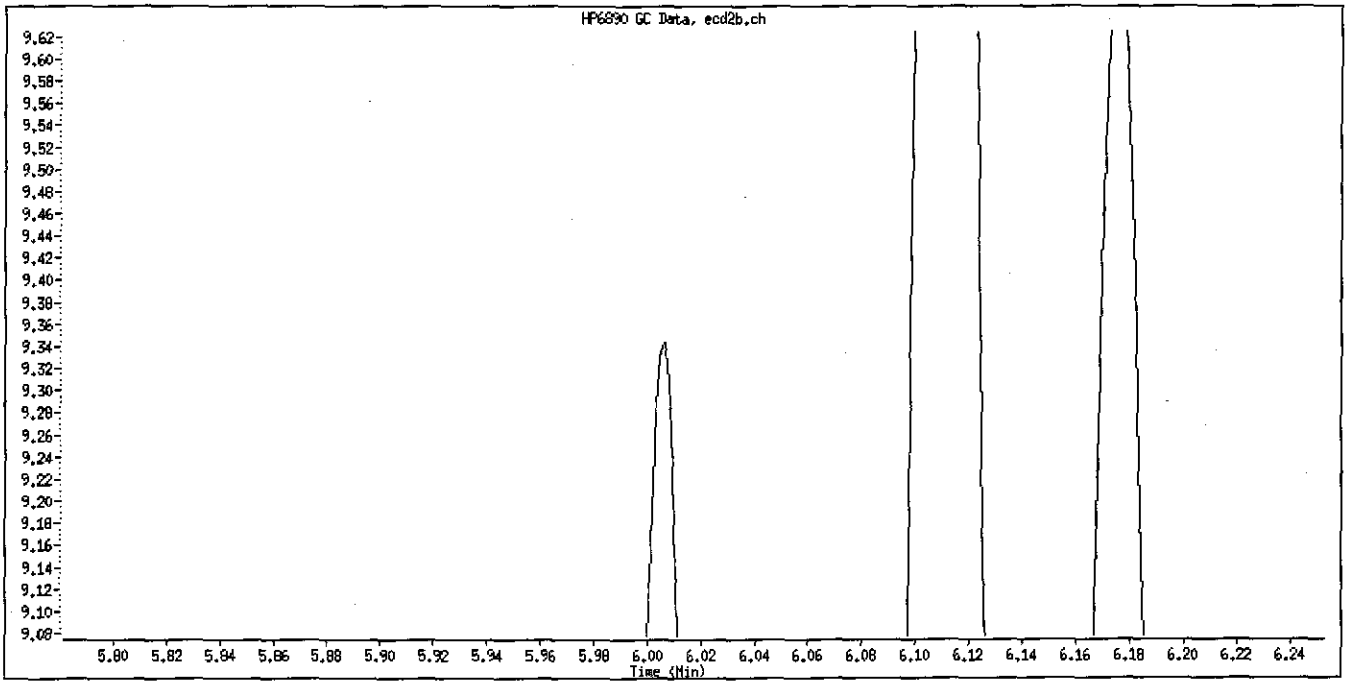
Original Integration



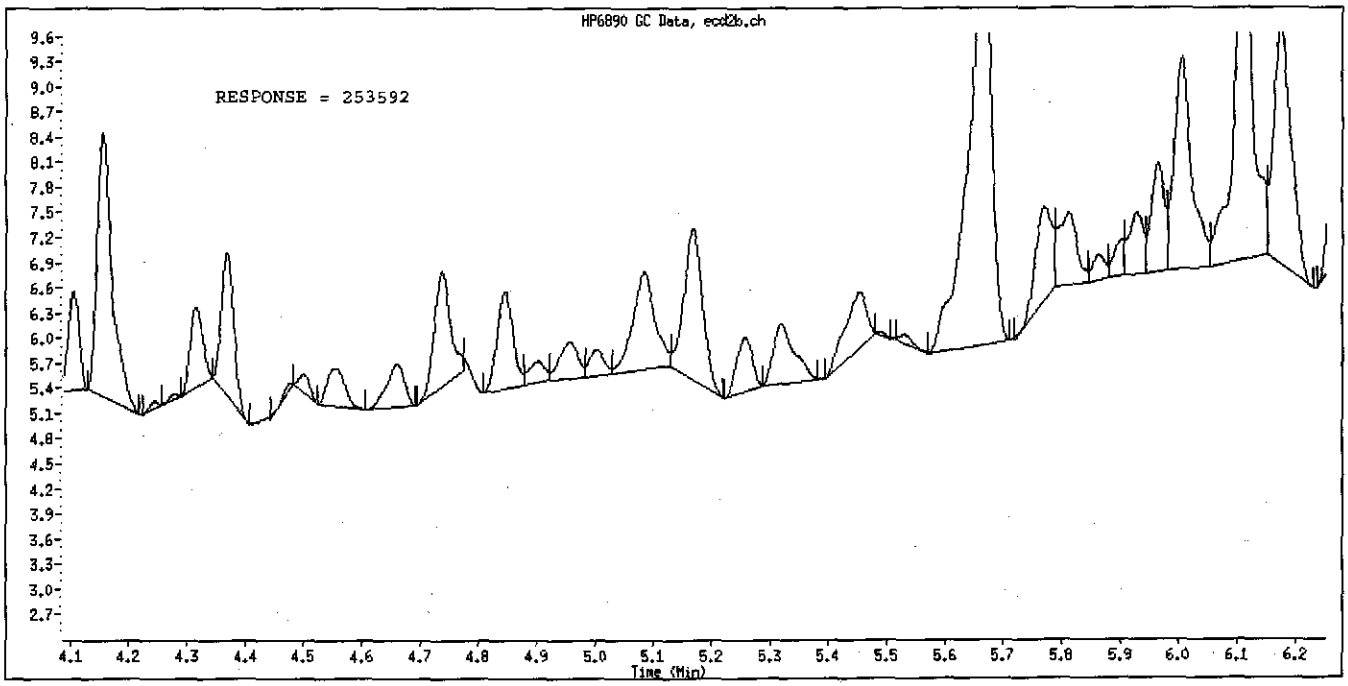
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 06:11
Instrument ID: a2hp5.i
Client ID: S-030205-JH-041
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

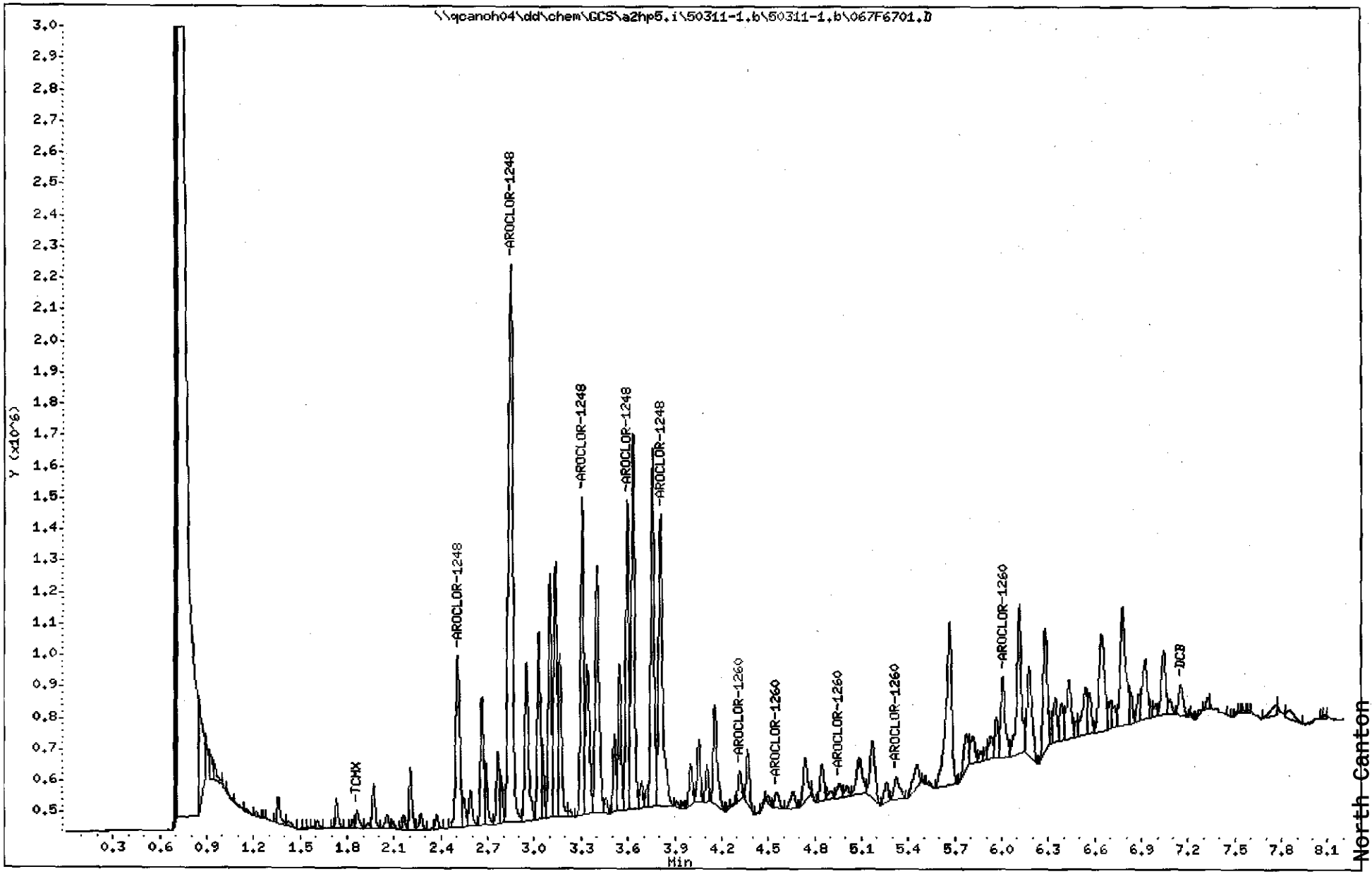


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\067F6701.D
Date : 12-MAR-2005 06:11
Client ID: S-030205-JH-041
Sample Info: G5F8H1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-042

GC Semivolatiles

Lot-Sample #...:	A5C030182-010	**Work Order #...:**	G5F8J1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:50	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.07 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7400	ug/kg
Aroclor 1221	ND	7400	ug/kg
Aroclor 1232	ND	7400	ug/kg
Aroclor 1242	**50000**	**7400**	**ug/kg**
Aroclor 1248	ND	7400	ug/kg
Aroclor 1254	ND	7400	ug/kg
Aroclor 1260	ND	7400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	133 DIL	(10 - 172)
Decachlorobiphenyl	2840 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 068F6801.D
Report Date: 14-Mar-2005 16:52

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\068F6801.D
Lab Smp Id: G5F8J1AA Client Smp ID: S-030205-JH-042
Inj Date : 12-MAR-2005 06:23
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8J1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 68
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.070	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	30016	1e-004	8.832		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.202	2.206	-0.004	1935155	0.72854	48460	75.00- 125.00	100.00(M)
2.504	2.505	-0.001	3200793	0.88211	58670	101.31- 168.85	165.40
2.847	2.850	-0.003	6907906	1.06733	70990	185.46- 309.11	356.97
2.947	2.952	-0.005	1142479	0.33292	22140	95.29- 158.82	59.04
3.303	3.307	-0.004	935208	0.33839	22510	76.10- 126.84	48.33
Average of Peak Concentrations =					44550		

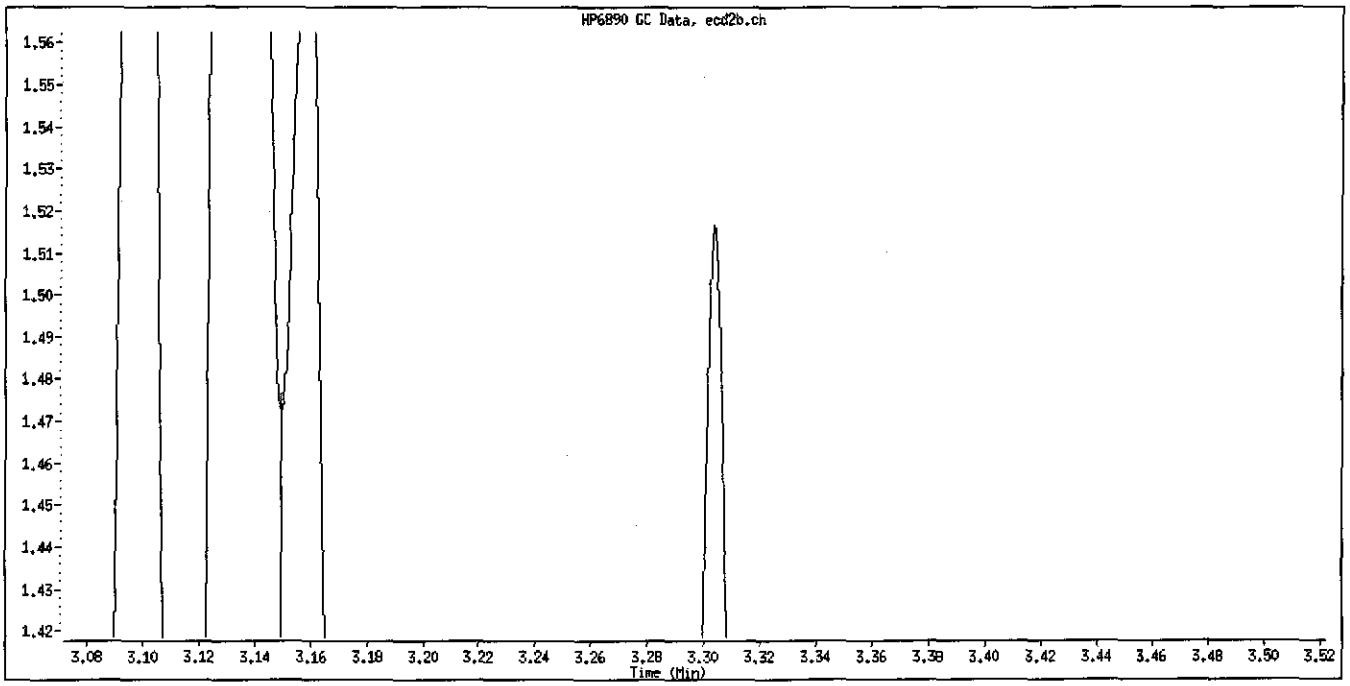
Data File: 068F6801.D
Report Date: 14-Mar-2005 16:52

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Compound Not Detected								
$ 9 DCB					CAS #: 2051-24-3			
7.150	7.135	0.015	268397	0.00284	188.9			(R)

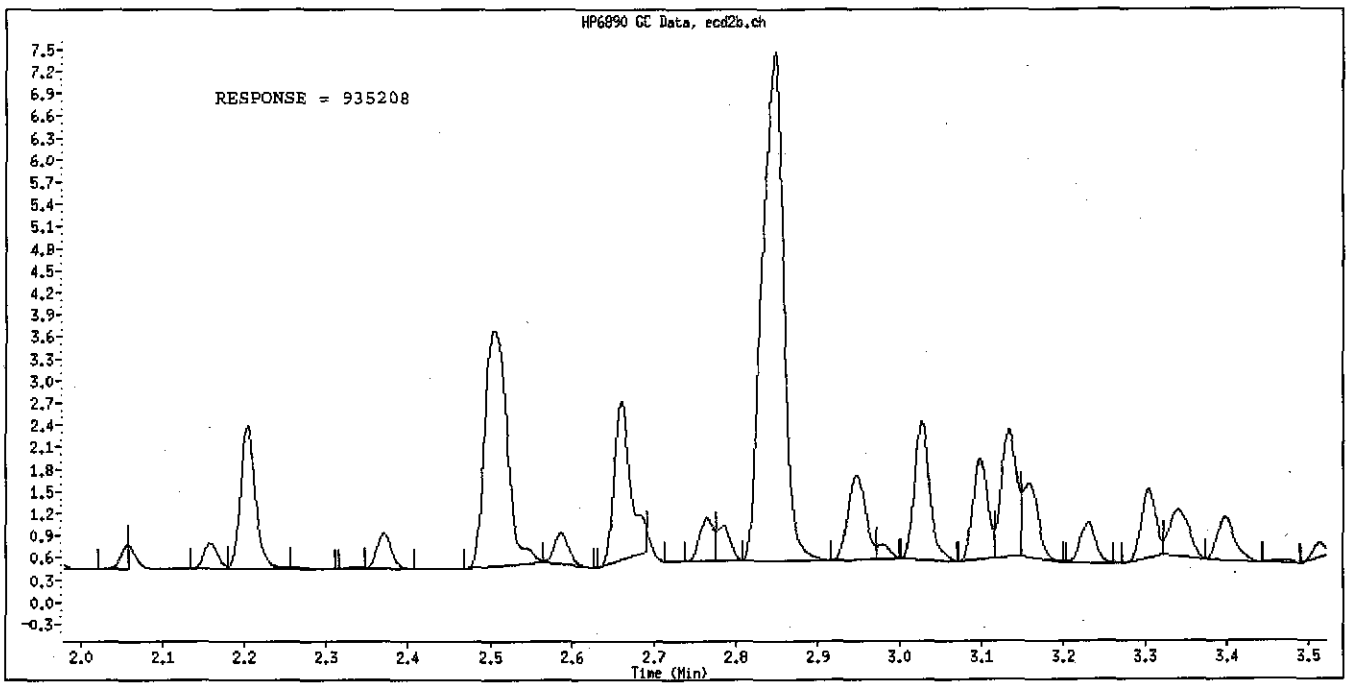
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 06:23
Instrument ID: a2hp5.i
Client ID: S-030205-JH-042
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration

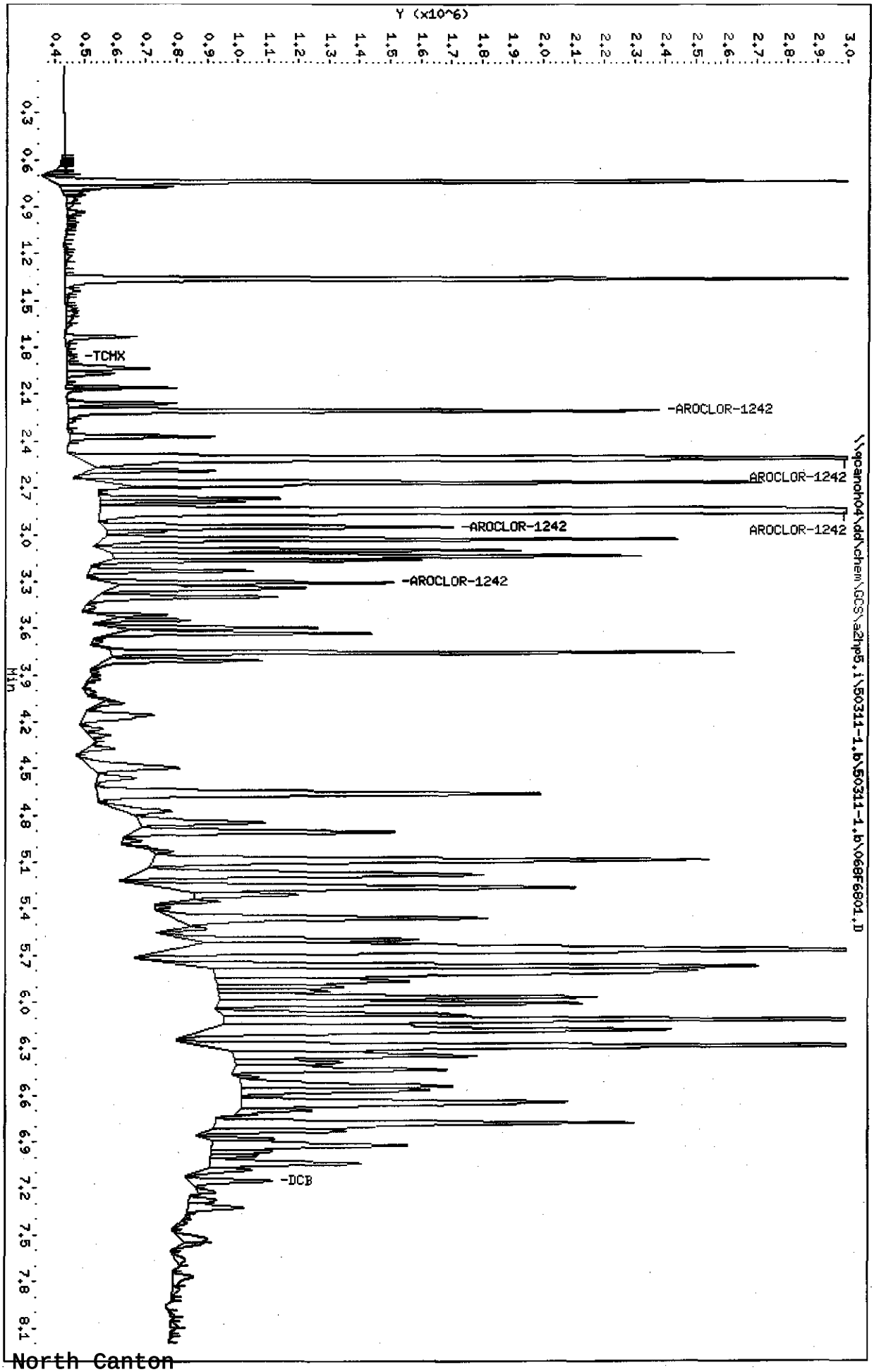


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanon04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\068F6801.D
Date : 12-MAR-2005 06:23
Client ID: S-030205-JH-042
Sample Info: C8F8J1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-043

GC Semivolatiles

Lot-Sample #...:	A5C030182-011	**Work Order #...:**	G5F8K1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 08:55	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	500	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.3	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	18000	ug/kg
Aroclor 1221	ND	18000	ug/kg
Aroclor 1232	ND	18000	ug/kg
Aroclor 1242	**56000**	**18000**	**ug/kg**
Aroclor 1248	ND	18000	ug/kg
Aroclor 1254	ND	18000	ug/kg
Aroclor 1260	ND	18000	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	163 DIL	(10 - 172)
Decachlorobiphenyl	381 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 069F6901.D
Report Date: 14-Mar-2005 16:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\069F6901.D
Lab Smp Id: G5F8K1AA Client Smp ID: S-030205-JH-043
Inj Date : 12-MAR-2005 06:36
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8K1AA,500
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 69
Dil Factor: 500.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	500.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.862	1.860	0.002	14721	7e-005	10.82			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.204	2.206	-0.002	1936582	0.72908	121200	75.00- 125.00	100.00	(M)
2.514	2.505	0.009	1886487	0.51990	86420	101.31- 168.85	97.41	
2.844	2.850	-0.006	766929	0.11850	19700	185.46- 309.11	39.60	
2.945	2.952	-0.007	376250	0.10964	18220	95.29- 158.82	19.43	
3.304	3.307	-0.003	251704	0.09107	15140	76.10- 126.84	13.00	
Average of Peak Concentrations =					52130			

Data File: 069F6901.D
Report Date: 14-Mar-2005 16:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

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7 AROCLOR-1254 CAS #: 11097-69-1

Compound Not Detected

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8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

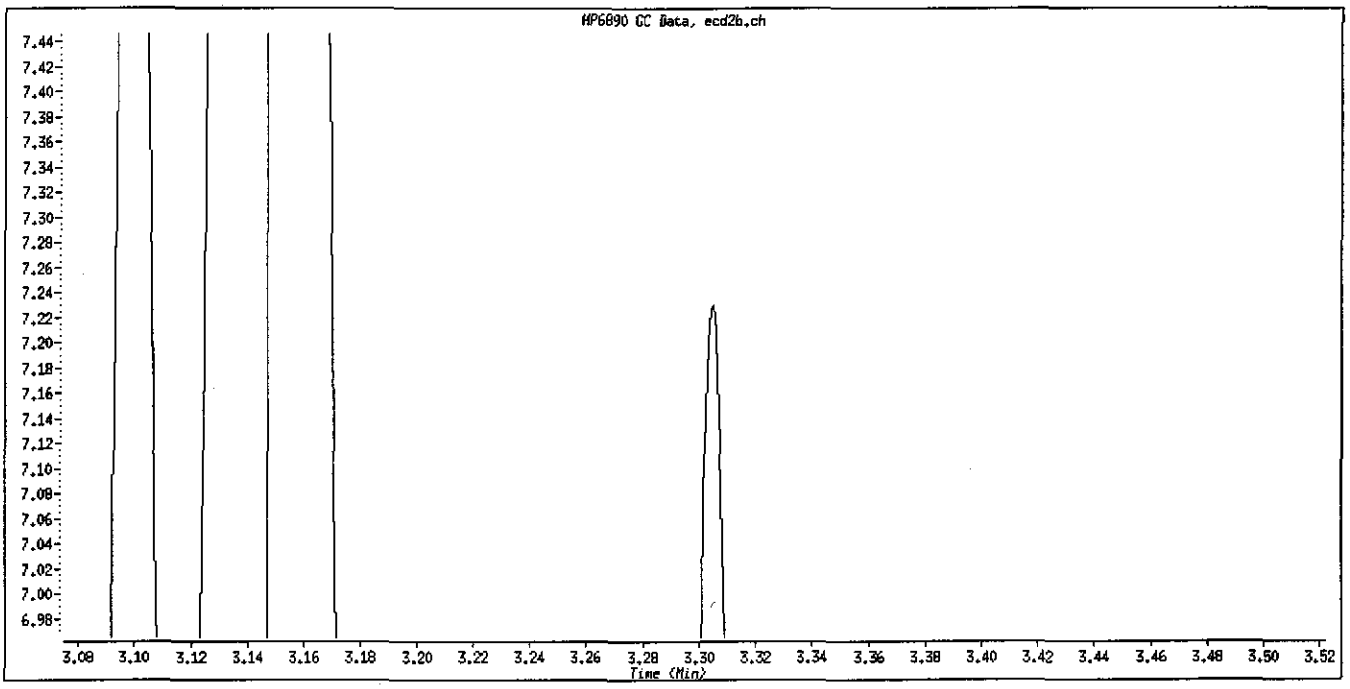
$ 9 DCB CAS #: 2051-24-3

7.148	7.135	0.013	14410	2e-004	25.34	(R)

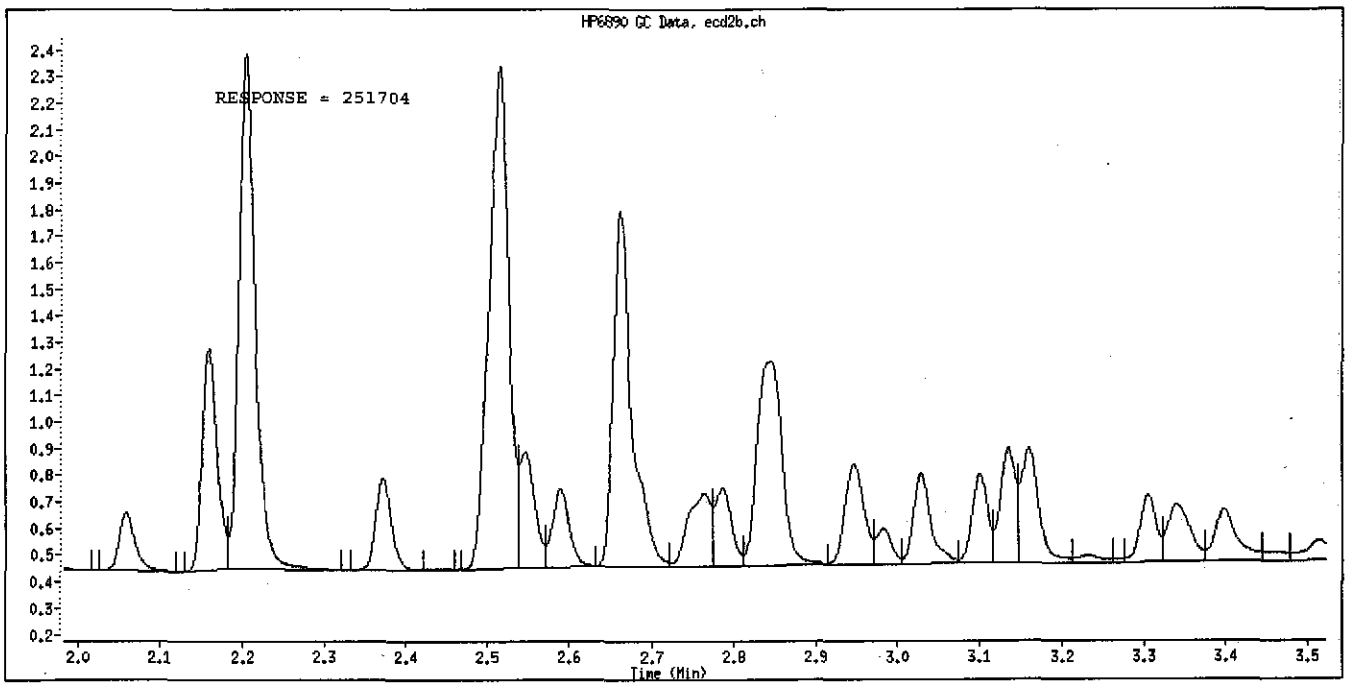
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 06:36
Instrument ID: a2hp5.i
Client ID: S-030205-JH-043
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



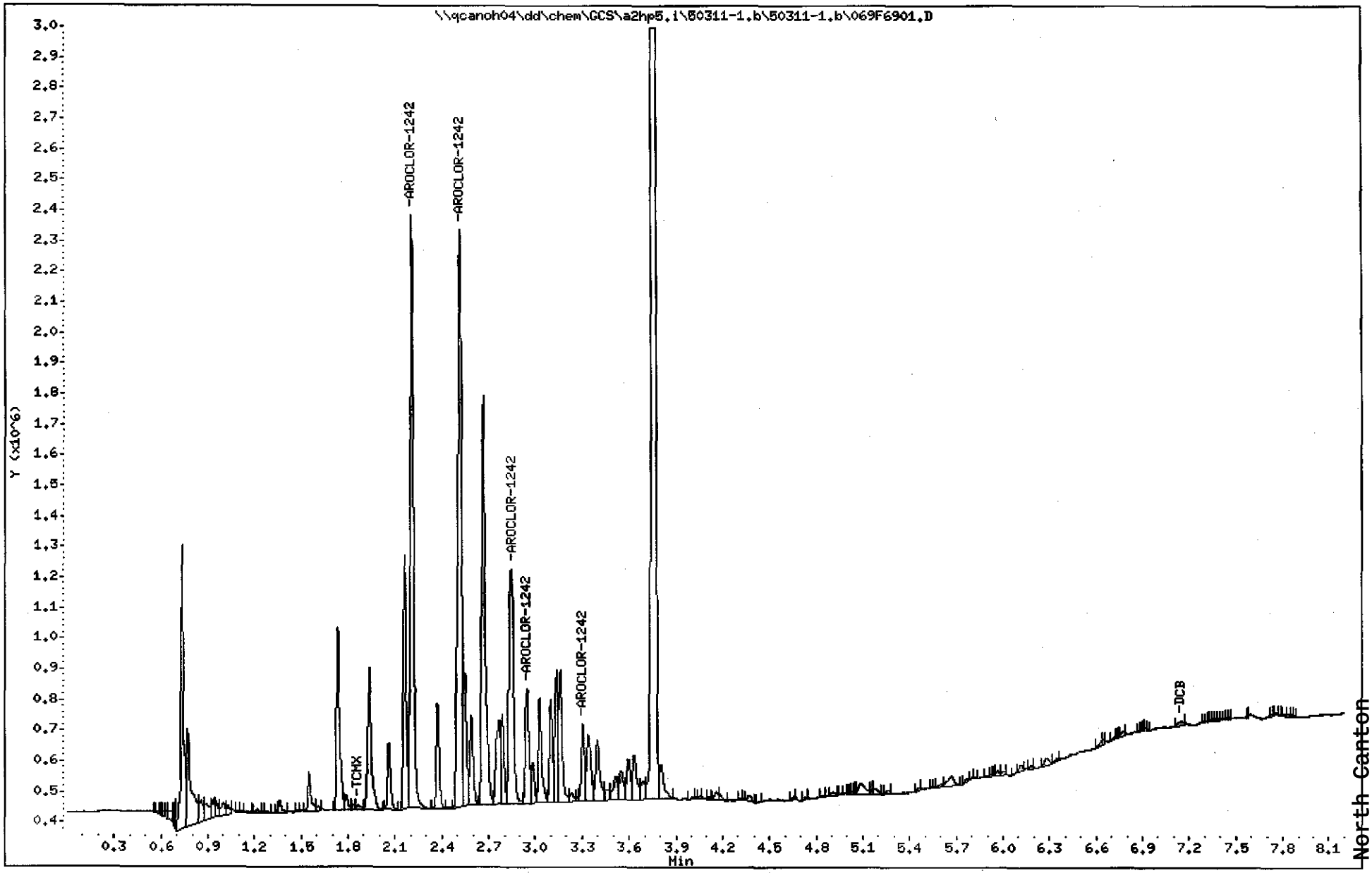
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\069F6901.D
Date : 12-MAR-2005 06:36
Client ID: S-030205-JH-043
Sample Info: G5F8K1AA,500
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-044

GC Semivolatiles

Lot-Sample #...:	A5C030182-012	**Work Order #...:**	G5F8L1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:00	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7300	ug/kg
Aroclor 1221	ND	7300	ug/kg
Aroclor 1232	ND	7300	ug/kg
Aroclor 1242	**77000**	**7300**	**ug/kg**
Aroclor 1248	ND	7300	ug/kg
Aroclor 1254	ND	7300	ug/kg
Aroclor 1260	ND	7300	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	146 DIL	(10 - 172)
Decachlorobiphenyl	193 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 070F7001.D
Report Date: 14-Mar-2005 16:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\070F7001.D
Lab Smp Id: G5F8L1AA Client Smp ID: S-030205-JH-044
Inj Date : 12-MAR-2005 06:48
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8L1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 70
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	32998	1e-004	9.699		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	3816624	1.43687	95470	75.00- 125.00	100.00(M)
2.512	2.505	0.007	3845726	1.05985	70420	101.31- 168.85	100.76
2.848	2.850	-0.002	7901623	1.22087	81120	185.46- 309.11	207.03
2.949	2.952	-0.003	2543407	0.74114	49240	95.29- 158.82	66.64
3.304	3.307	-0.003	2036533	0.73689	48960	76.10- 126.84	53.36
Average of Peak Concentrations =					69040		

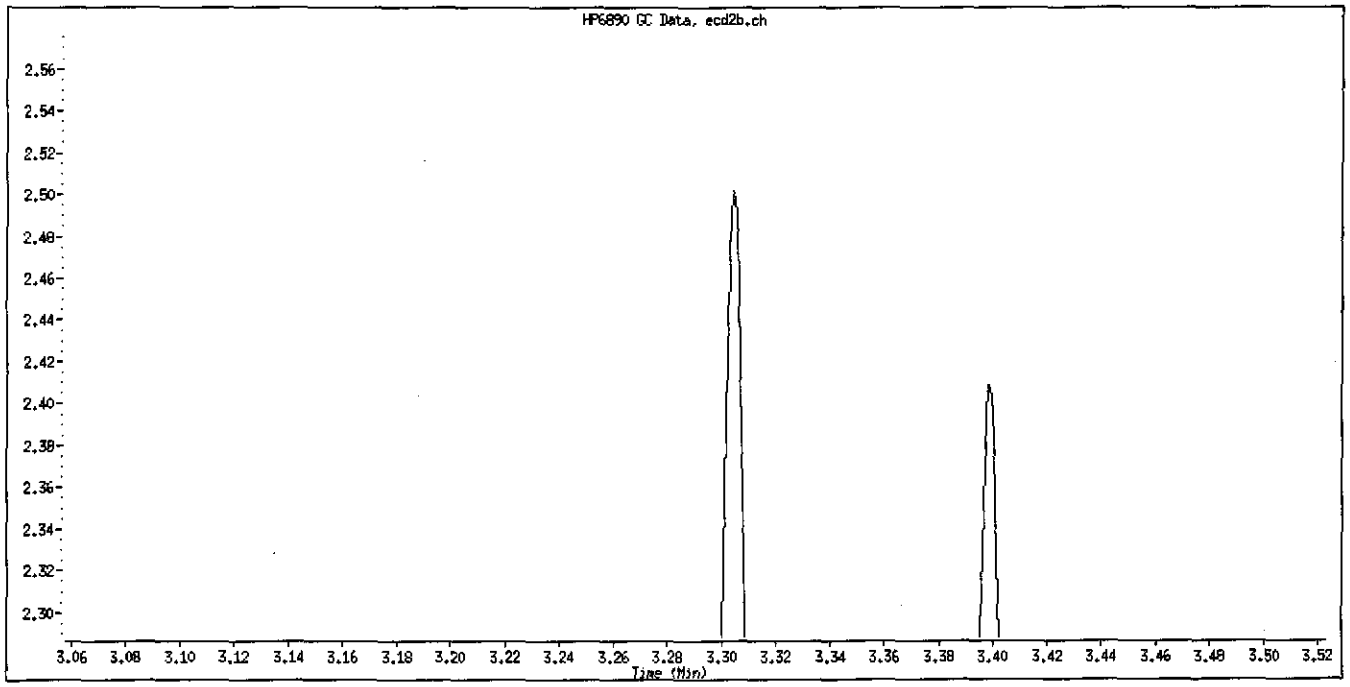
Data File: 070F7001.D
Report Date: 14-Mar-2005 16:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Peaks not detected for Quant. or Qual. signal(s).							
$ 9 DCB					CAS #: 2051-24-3		
7.144	7.135	0.009	18216	2e-004	12.81		(R)

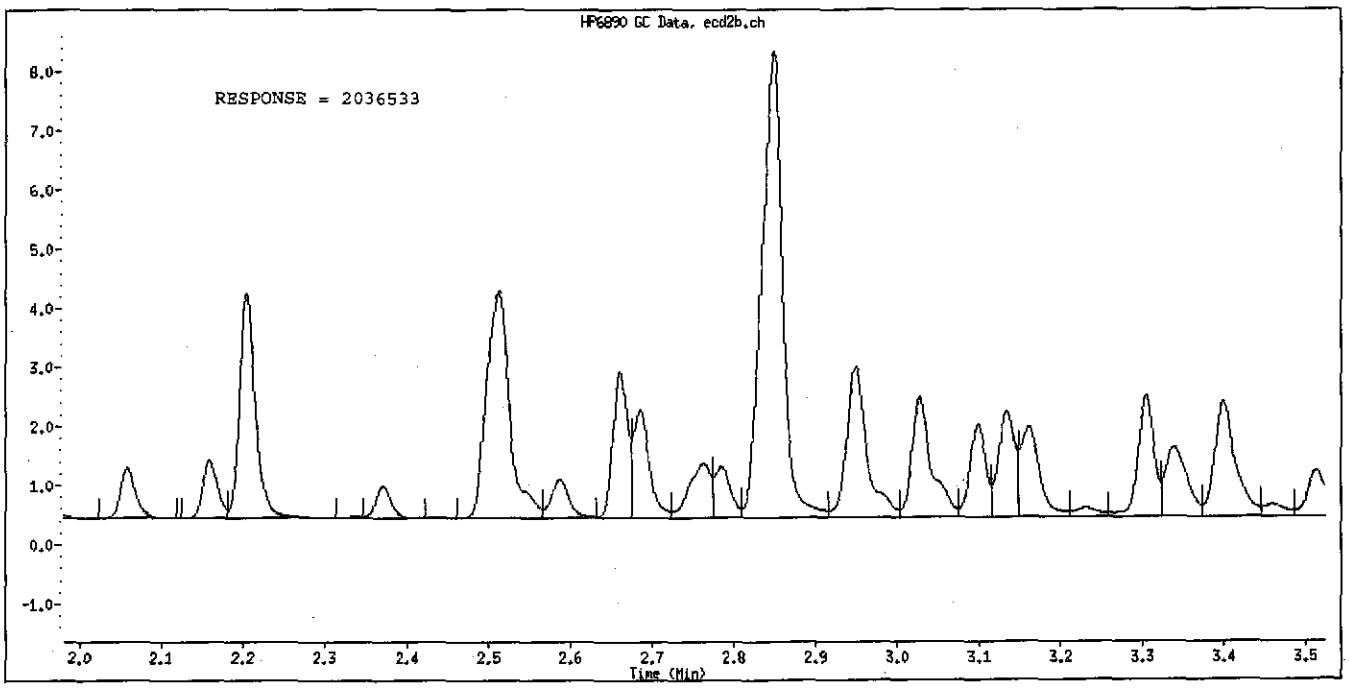
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 06:48
Instrument ID: a2hp5.i
Client ID: S-030205-JH-044
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration

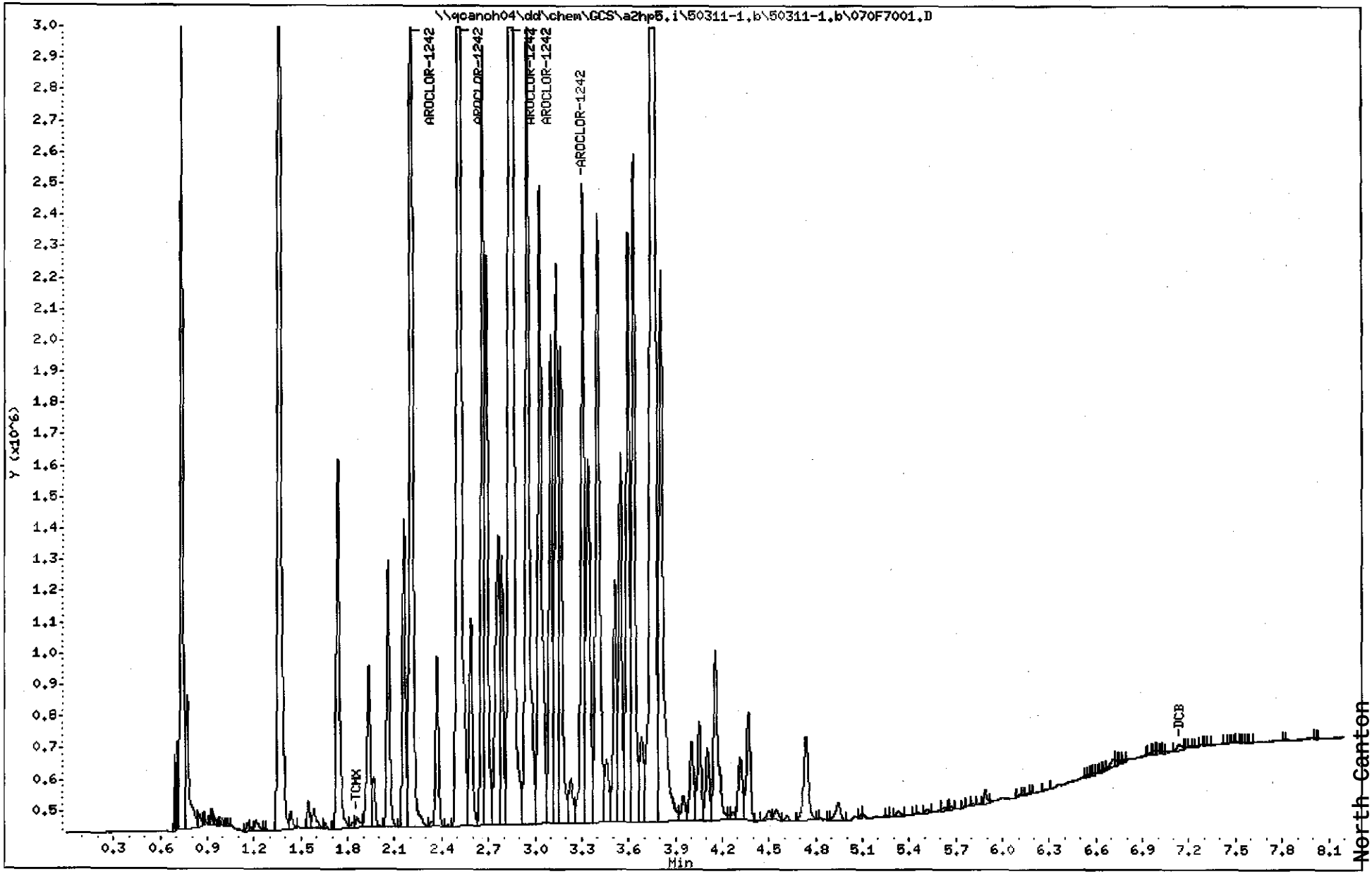


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qoanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\070F7001.D
Date : 12-MAR-2005 06:48
Client ID: S-030205-JH-044
Sample Info: G5F8L1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

300

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-045

GC Semivolatiles

Lot-Sample #...:	A5C030182-013	**Work Order #...:**	G5F8M1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:05	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.1 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	**70**	**40**	**ug/kg**
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101	(10 - 172)
Decachlorobiphenyl	90	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 071F7101.D
Report Date: 14-Mar-2005 16:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\071F7101.D
Lab Smp Id: G5F8M1AA Client Smp ID: S-030205-JH-045
Inj Date : 12-MAR-2005 07:00
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8M1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 71
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.100	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4577710	0.02025	6.728		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	568116	0.21388	71.06	75.00- 125.00	100.00(M)
2.504	2.505	-0.001	446968	0.12318	40.92	101.31- 168.85	78.68
2.847	2.850	-0.003	1441208	0.22268	73.98	185.46- 309.11	253.68
2.948	2.952	-0.004	428791	0.12495	41.51	95.29- 158.82	75.48
3.304	3.307	-0.003	544815	0.19713	65.49	76.10- 126.84	95.90
Average of Peak Concentrations =					58.59		

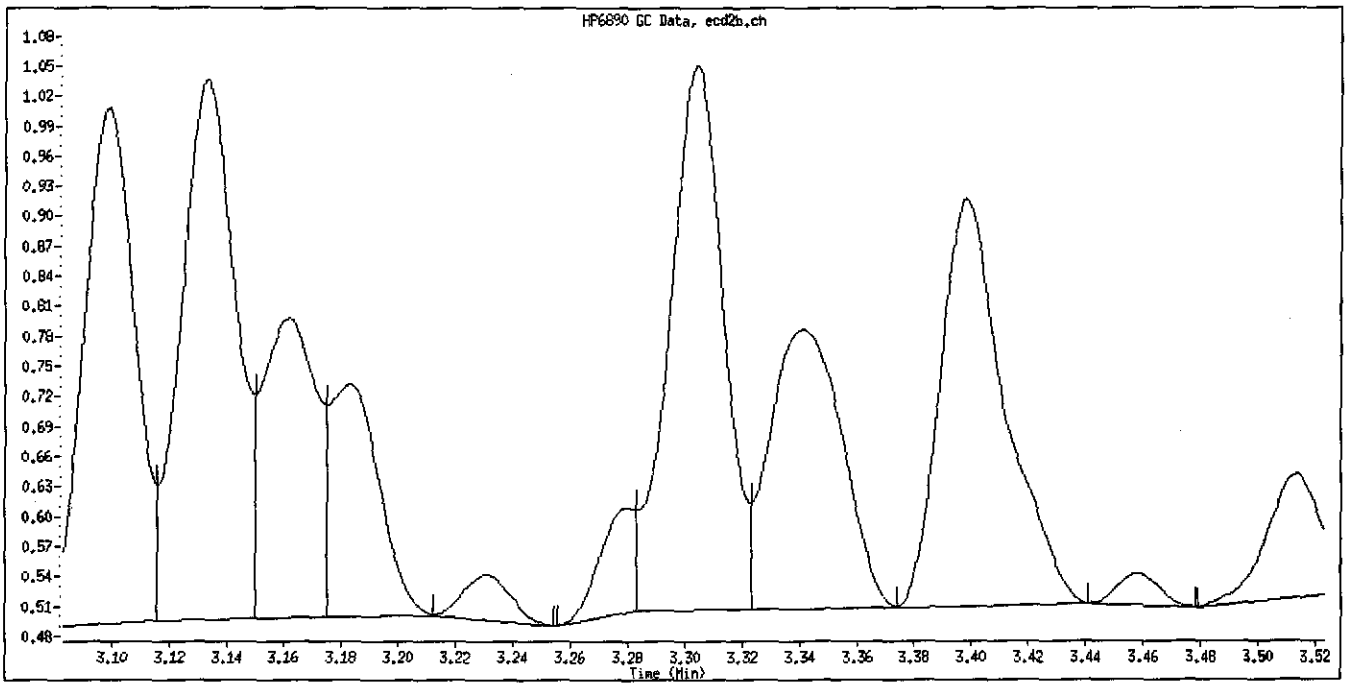
Data File: 071F7101.D
Report Date: 14-Mar-2005 16:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Operator disabled compound identification.							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.314	4.335	-0.021	141360	0.02877	9.558	80.00- 120.00	100.00(M)
4.558	4.545	0.013	348917	0.06153	20.44	87.22- 145.36	246.83
4.944	4.942	0.002	179071	0.03272	10.87	86.81- 144.68	126.68
5.375	5.364	0.011	7505	0.00200	0.6648	57.97- 96.61	5.31
6.002	5.997	0.005	120900	0.02228	7.401	85.17- 141.95	85.53
Average of Peak Concentrations =					9.787		
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1707843	0.01807	6.003		

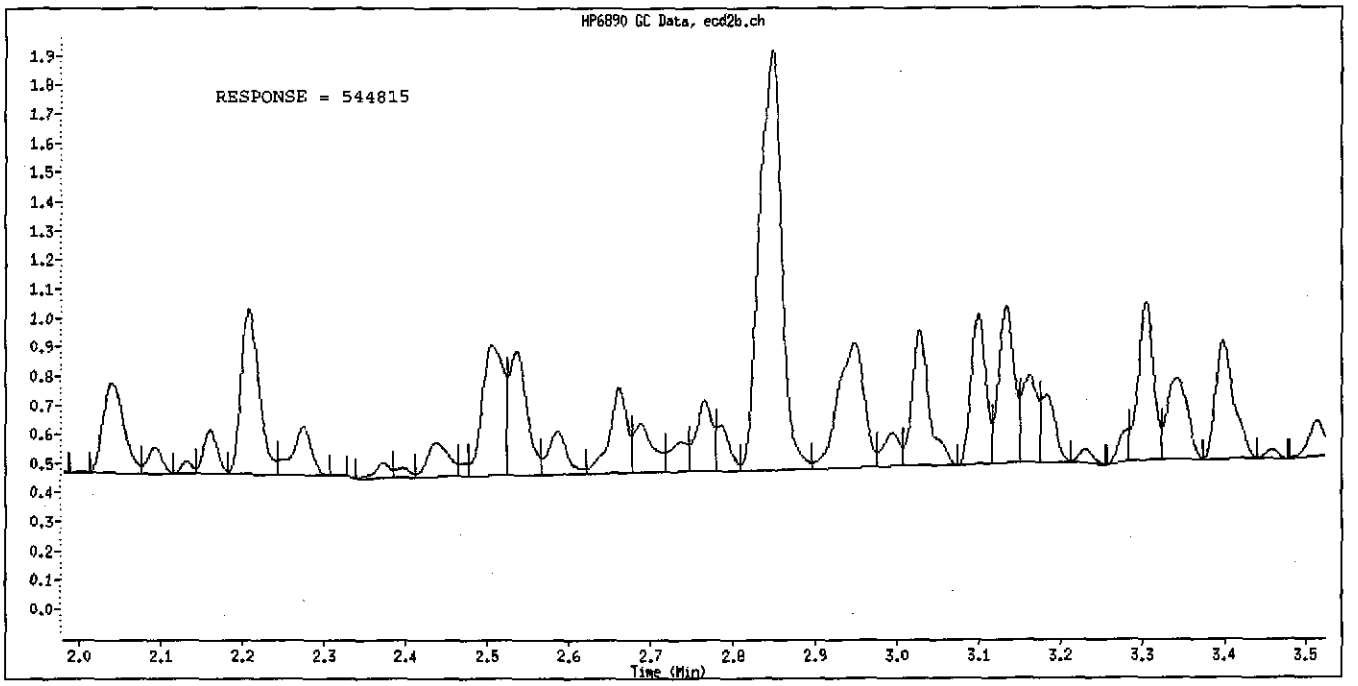
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 07:00
Instrument ID: a2hp5.i
Client ID: S-030205-JH-045
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



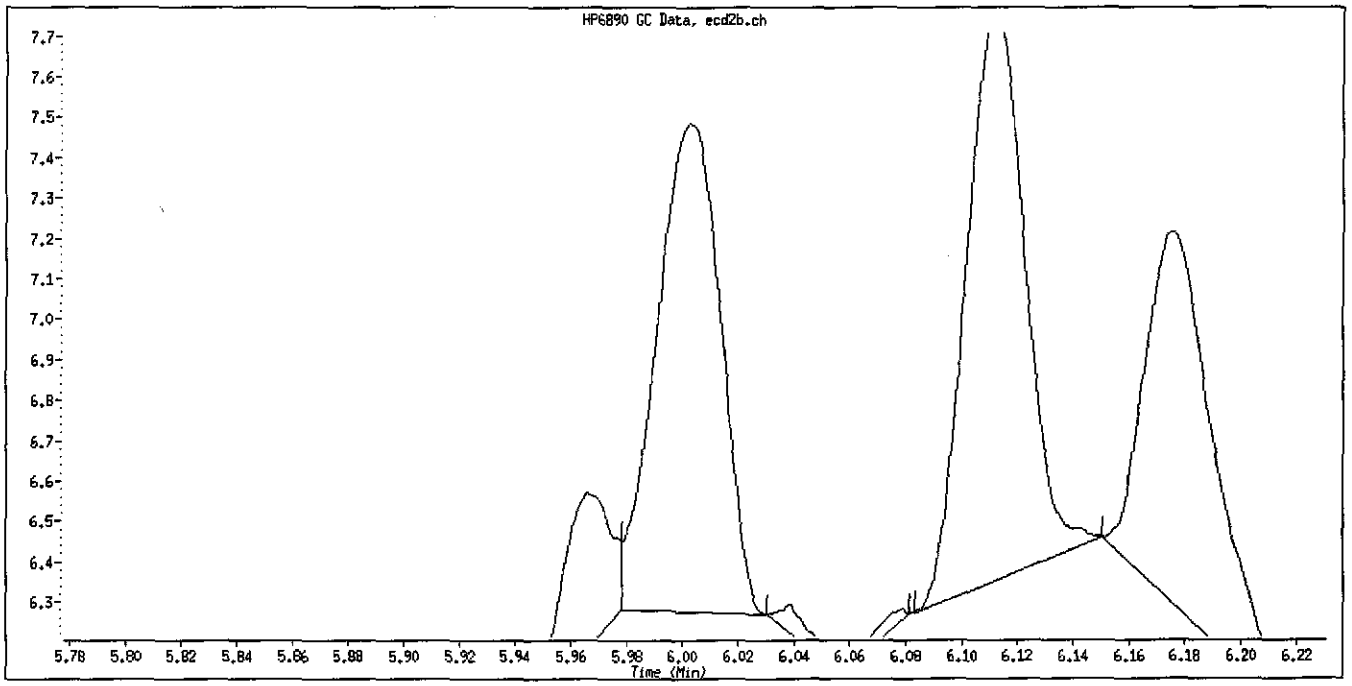
Original Integration



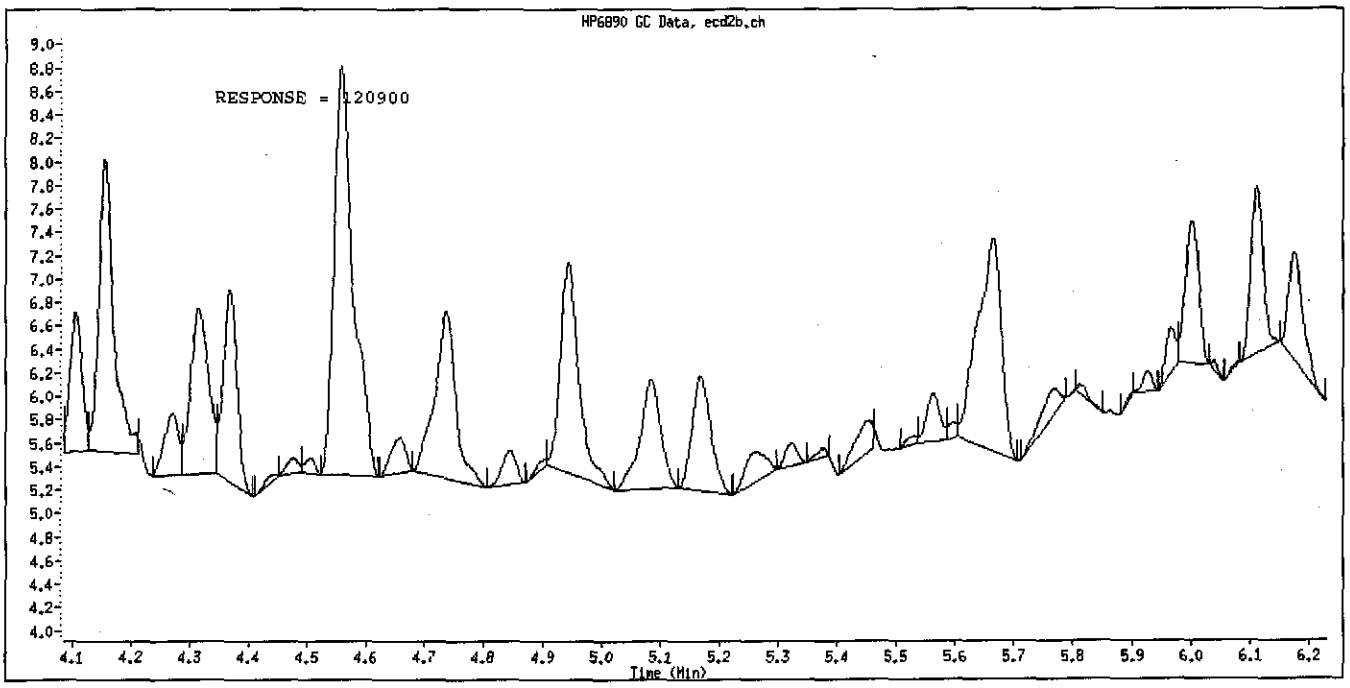
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 07:00
Instrument ID: a2hp5.i
Client ID: S-030205-JH-045
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

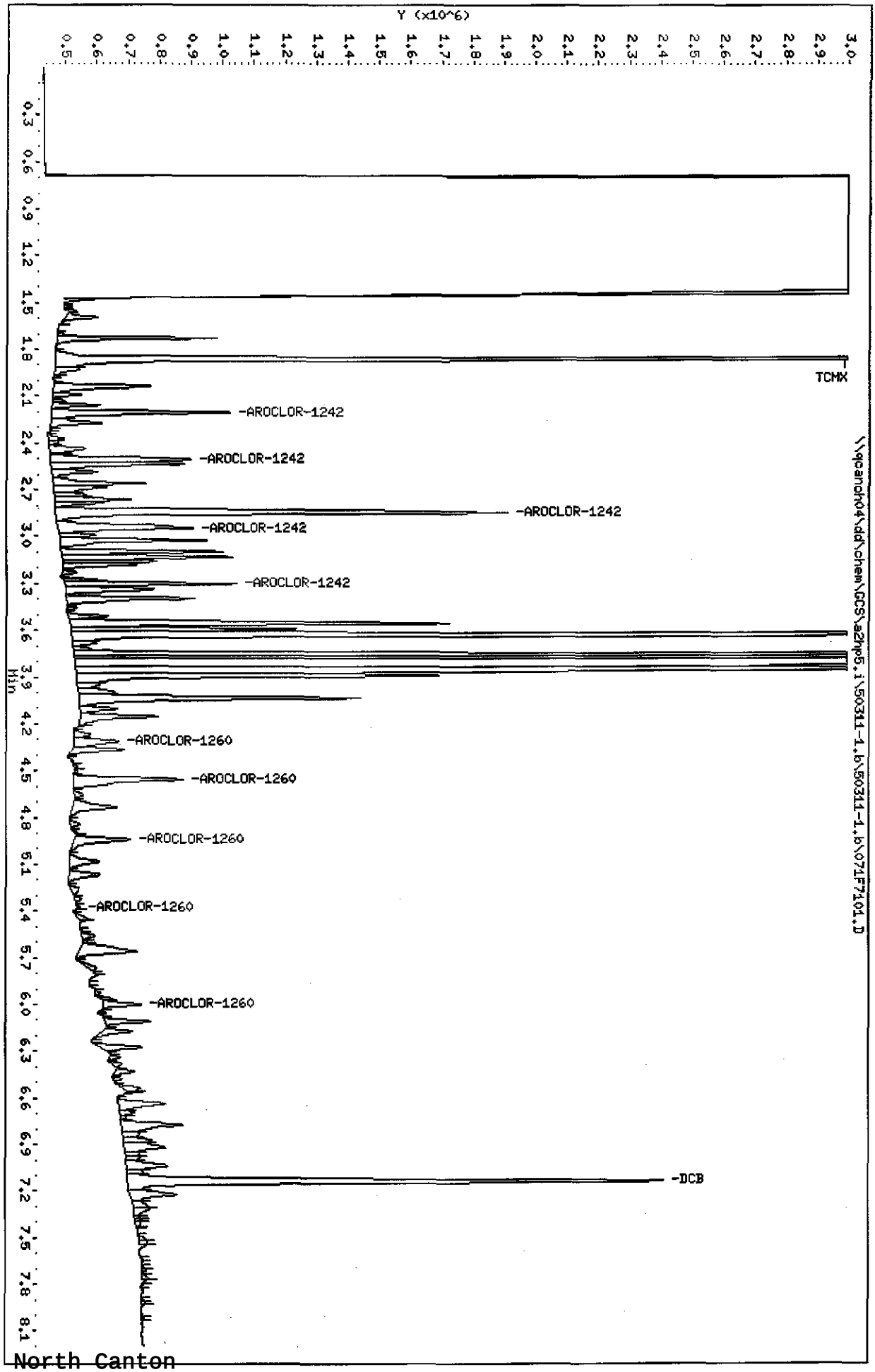


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\071F7101.D
Date : 12-MAR-2005 07:00
Client ID: S-030205-JH-045
Sample Info: G5F8H16A
Volume Injected (uL): 1.0
Column phase: restek pest clpl

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-046

GC Semivolatiles

Lot-Sample #...:	A5C030182-014	**Work Order #...:**	G5F8N1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:10	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	**29000**	**1800**	**ug/kg**
Aroclor 1248	ND	1800	ug/kg
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	274 DIL,*	(10 - 172)
Decachlorobiphenyl	1950 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 072F7201.D
Report Date: 14-Mar-2005 16:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\072F7201.D
Lab Smp Id: G5F8N1AA Client Smp ID: S-030205-JH-046
Inj Date : 12-MAR-2005 07:13
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8N1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 72
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.861	1.860	0.001	248030	0.00110	18.26			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.203	2.206	-0.003	2918637	1.09880	18290	75.00- 125.00	100.00	(M)
2.504	2.505	-0.001	6320420	1.74185	28990	101.31- 168.85	216.55	
2.847	2.850	-0.003	13744141	2.12360	35350	185.46- 309.11	470.91	
2.949	2.952	-0.003	3818669	1.11275	18520	95.29- 158.82	130.84	
3.303	3.307	-0.004	4884230	1.76728	29420	76.10- 126.84	167.35	
Average of Peak Concentrations =					26110			

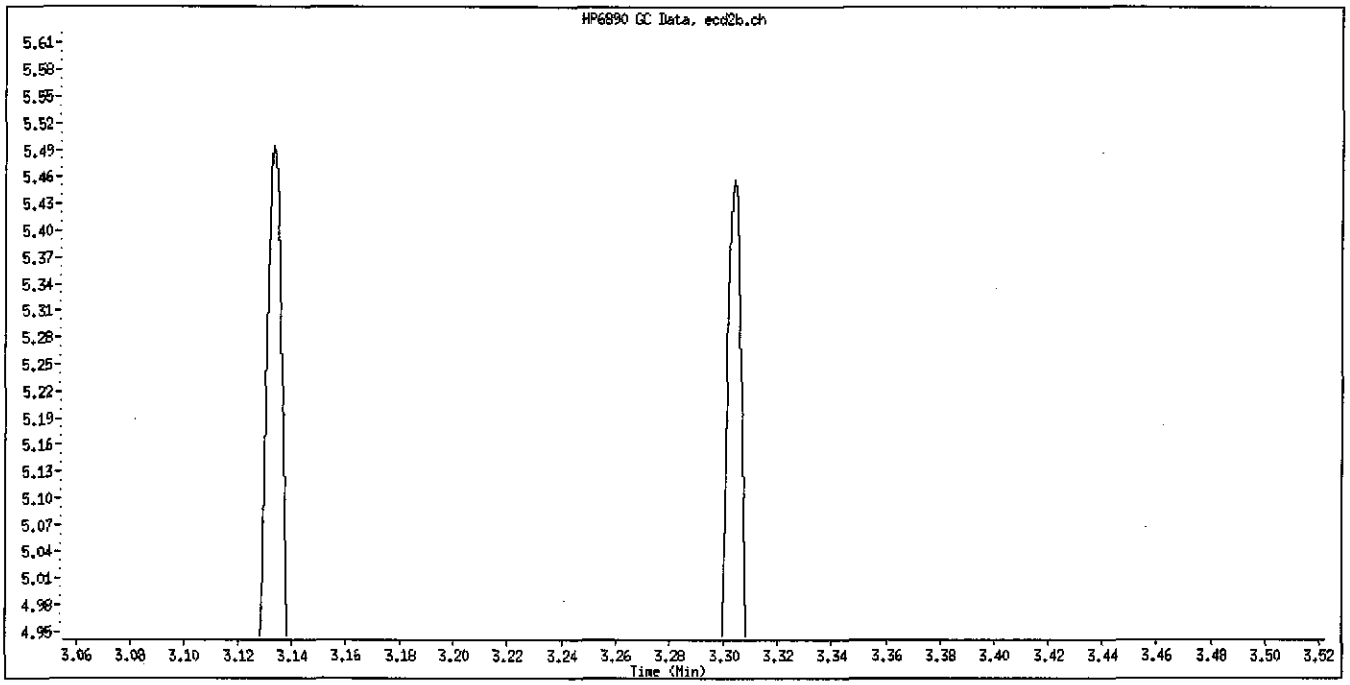
Data File: 072F7201.D
Report Date: 14-Mar-2005 16:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
7.149	7.135	0.014	738867	0.00782	130.1			(R)

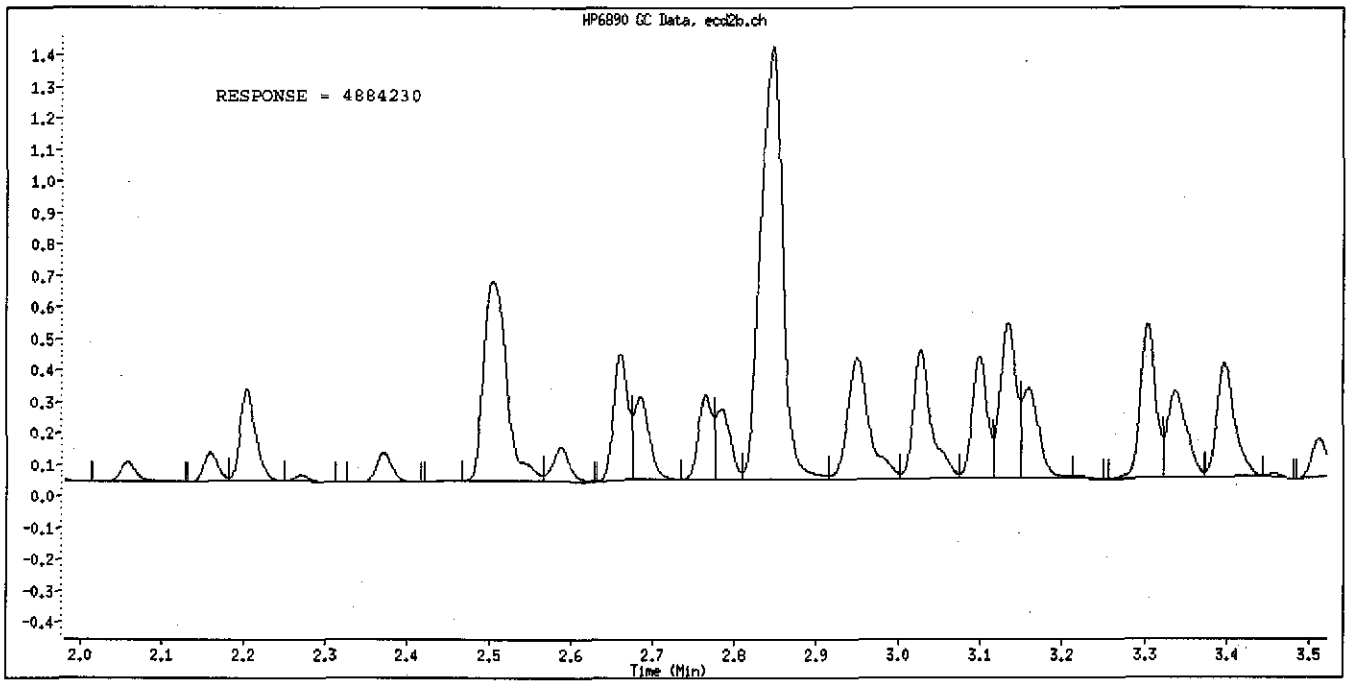
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 07:13
Instrument ID: a2hp5.i
Client ID: S-030205-JH-046
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



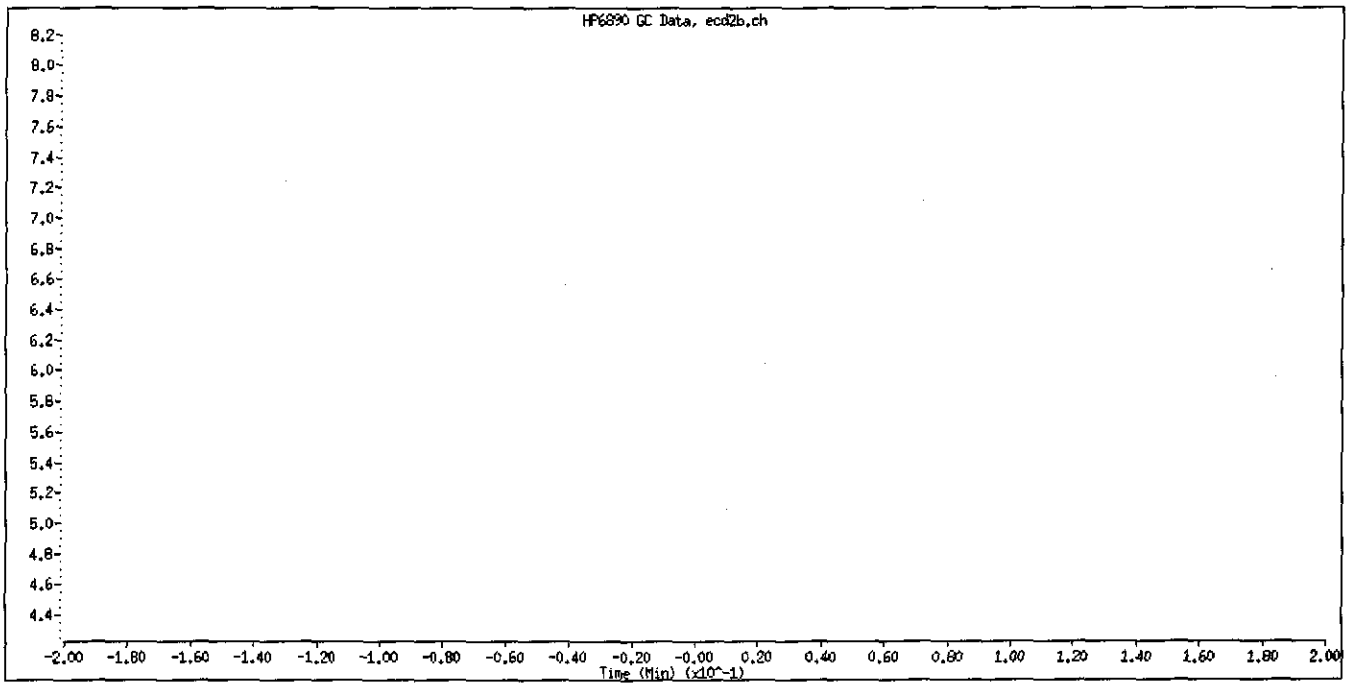
Original Integration



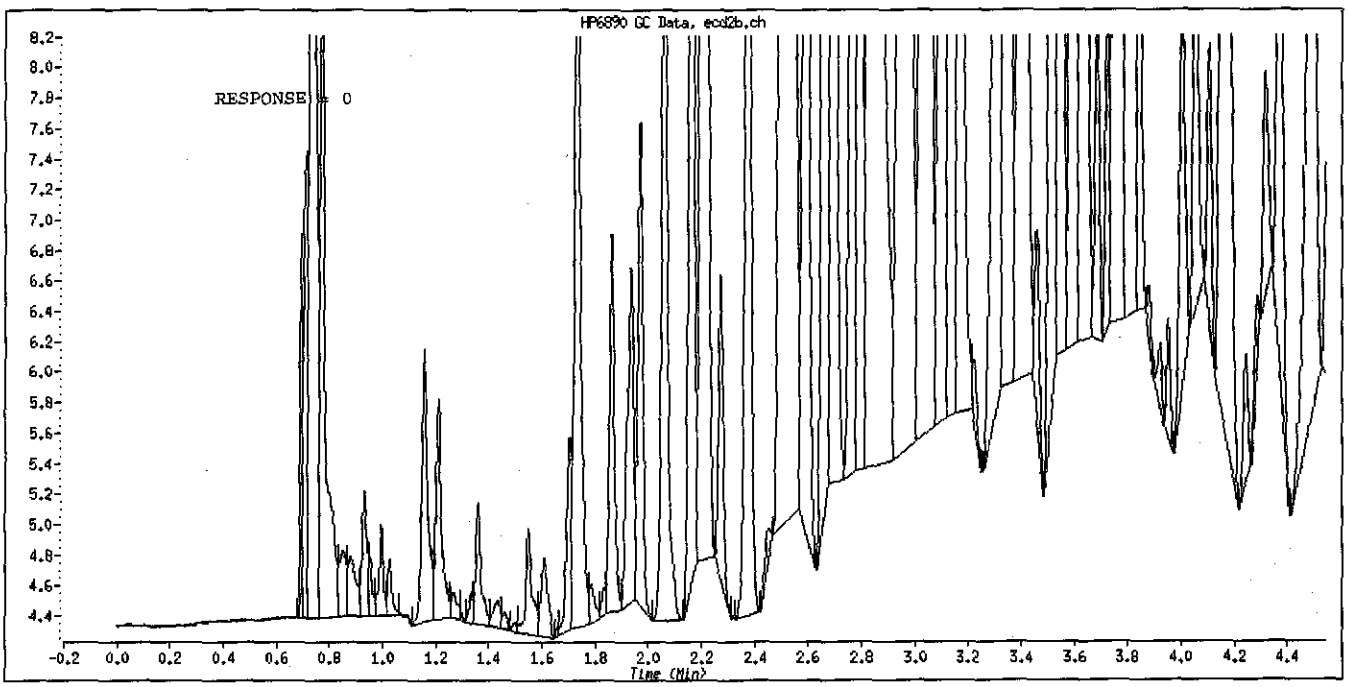
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 07:13
Instrument ID: a2hp5.i
Client ID: S-030205-JH-046
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



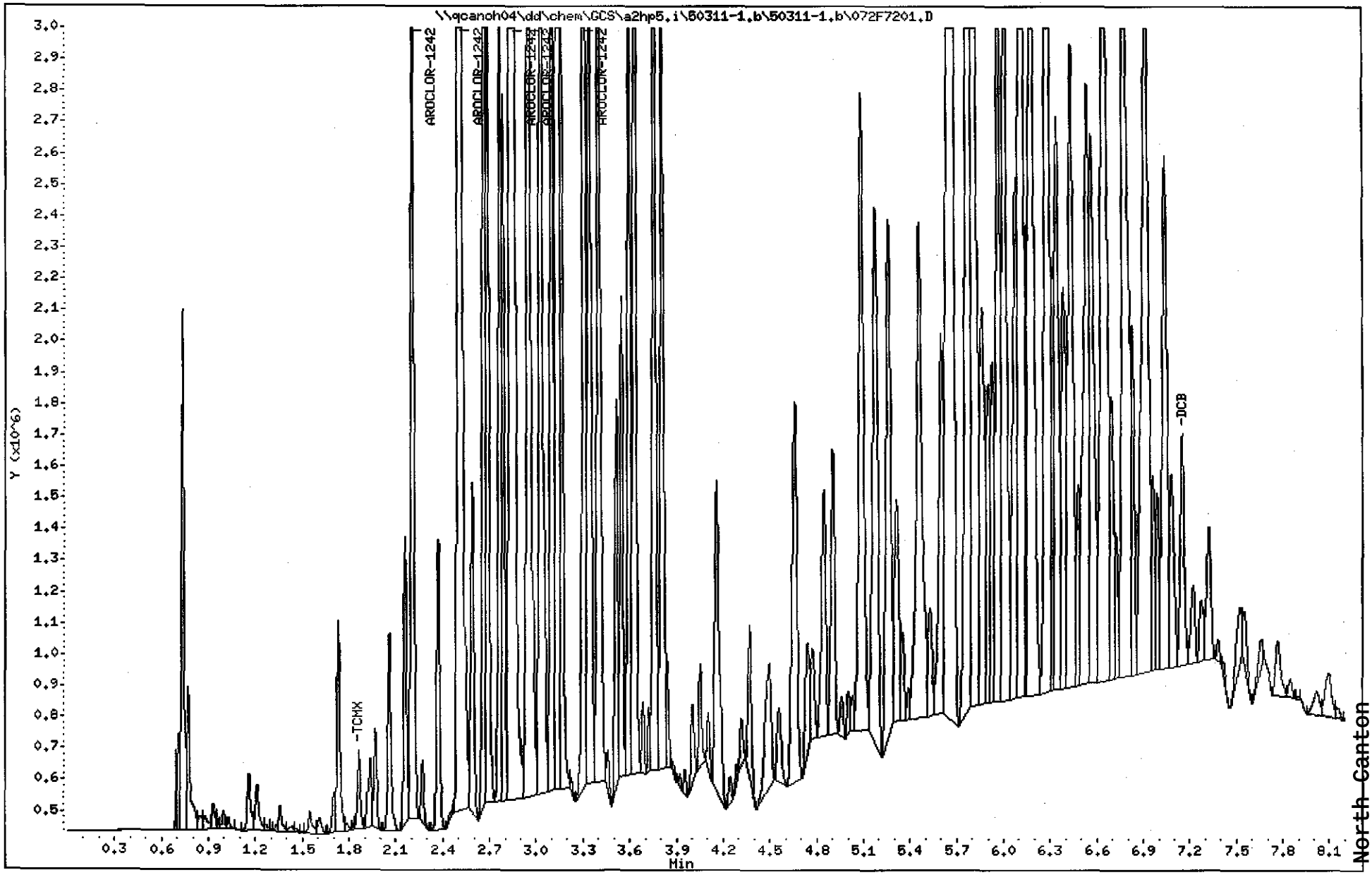
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\072F7201.D
Date : 12-MAR-2005 07:13
Client ID: S-030205-JH-046
Sample Info: G5F8N1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-047

GC Semivolatiles

Lot-Sample #...:	A5C030182-015	**Work Order #...:**	G5F8P1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:15	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.8	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1800	ug/kg
Aroclor 1221	ND	1800	ug/kg
Aroclor 1232	ND	1800	ug/kg
Aroclor 1242	**18000**	**1800**	**ug/kg**
Aroclor 1248	ND	1800	ug/kg
Aroclor 1254	ND	1800	ug/kg
Aroclor 1260	ND	1800	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	253 DIL,*	(10 - 172)
Decachlorobiphenyl	667 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 073F7301.D
Report Date: 14-Mar-2005 16:53

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\073F7301.D
Lab Smp Id: G5F8P1AA Client Smp ID: S-030205-JH-047
Inj Date : 12-MAR-2005 07:25
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8P1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 73
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.860	1.860	0.000	228961	0.00101	16.86			(R)
2 AROCLOR-1221					CAS #: 11104-28-2			
Compound Not Detected								
3 AROCLOR-1016					CAS #: 12674-11-2			
Compound Not Detected								
4 AROCLOR-1232					CAS #: 11141-16-5			
Compound Not Detected								
5 AROCLOR-1242					CAS #: 53469-21-9			
2.203	2.206	-0.003	2155720	0.81158	13510	75.00- 125.00	100.00	(M)
2.503	2.505	-0.002	3401378	0.93739	15610	101.31- 168.85	157.78	
2.847	2.850	-0.003	7930454	1.22533	20400	185.46- 309.11	367.88	
2.948	2.952	-0.004	2354242	0.68602	11420	95.29- 158.82	109.21	
3.303	3.307	-0.004	3109089	1.12497	18730	76.10- 126.84	144.23	
Average of Peak Concentrations =					15940			

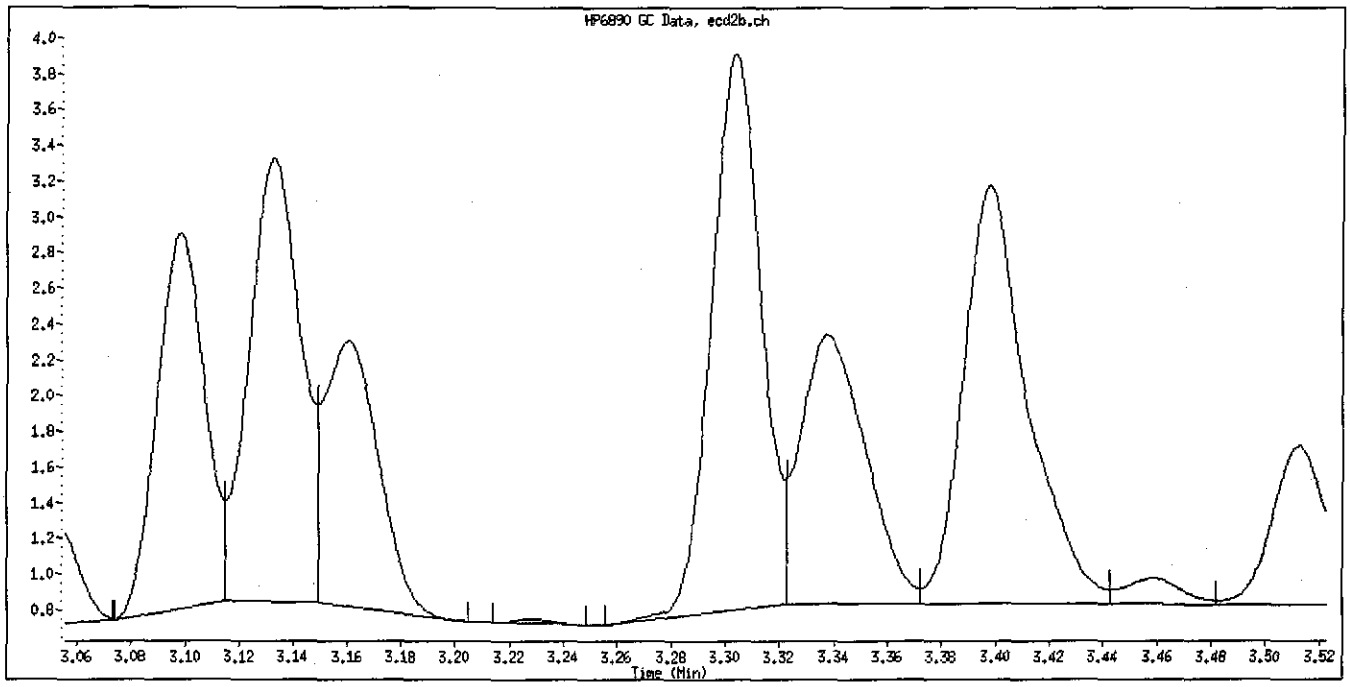
Data File: 073F7301.D
Report Date: 14-Mar-2005 16:53

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.314	4.335	-0.021	222243	0.04523	753.1	80.00- 120.00	100.00(M)
4.554	4.545	0.009	112698	0.01987	330.9	87.22- 145.36	50.71
4.954	4.942	0.012	68252	0.01247	207.7	86.81- 144.68	30.71
5.364	5.364	0.000	0	0.0000	0.0000	57.97- 96.61	0.00
6.004	5.997	0.007	598592	0.11030	1836	85.17- 141.95	269.34
Average of Peak Concentrations =					782.0		
$ 9 DCB					CAS #: 2051-24-3		
7.146	7.135	0.011	251957	0.00267	44.39		(R)

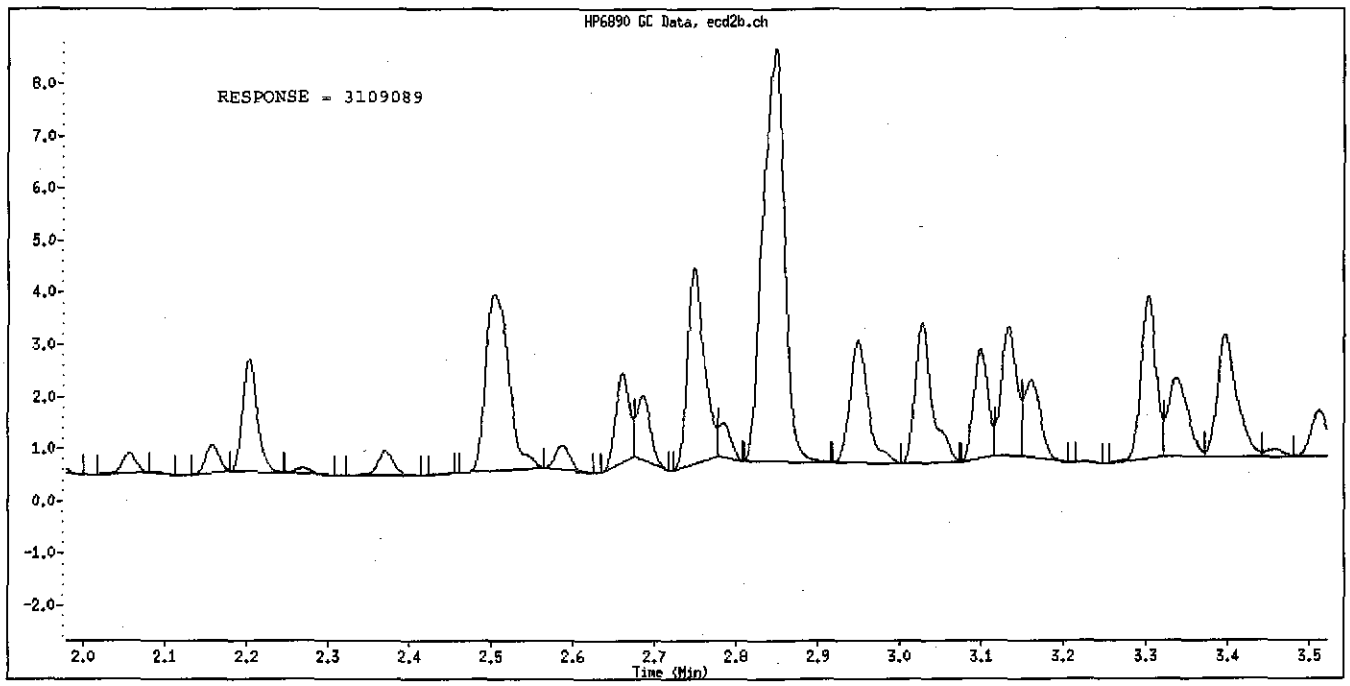
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 07:25
Instrument ID: a2hp5.i
Client ID: S-030205-JH-047
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



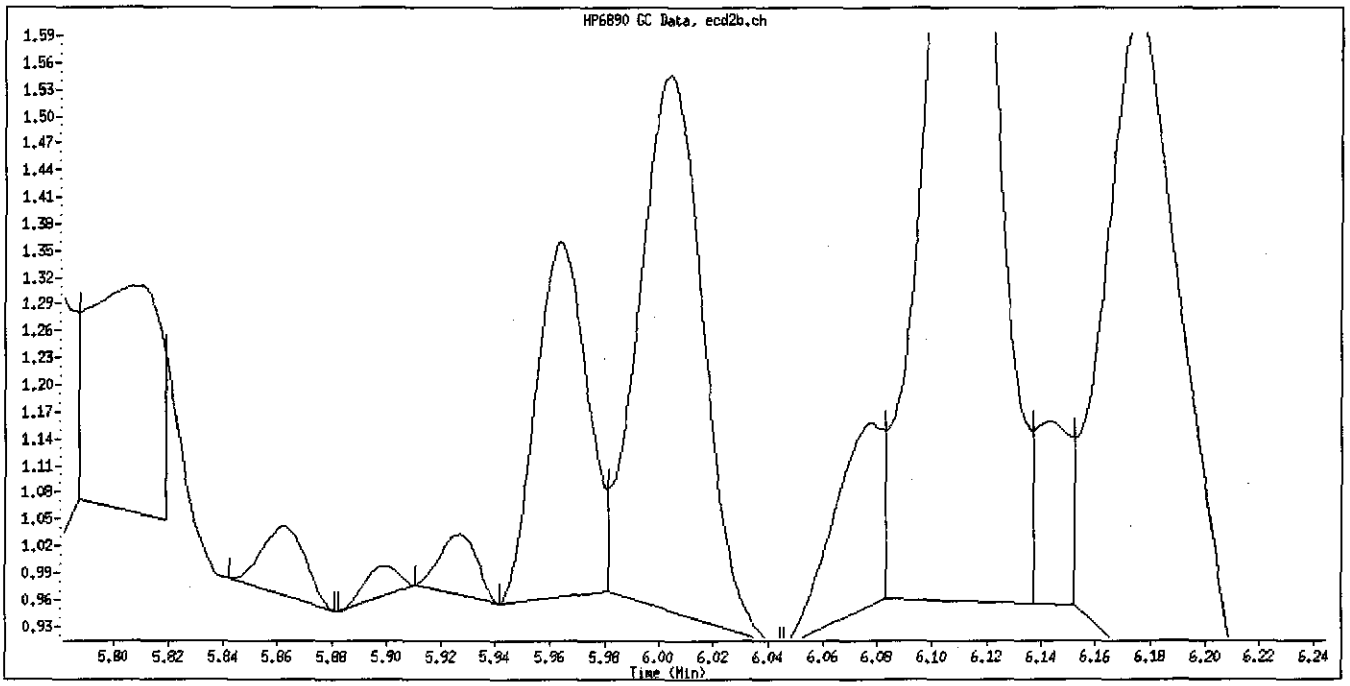
Original Integration



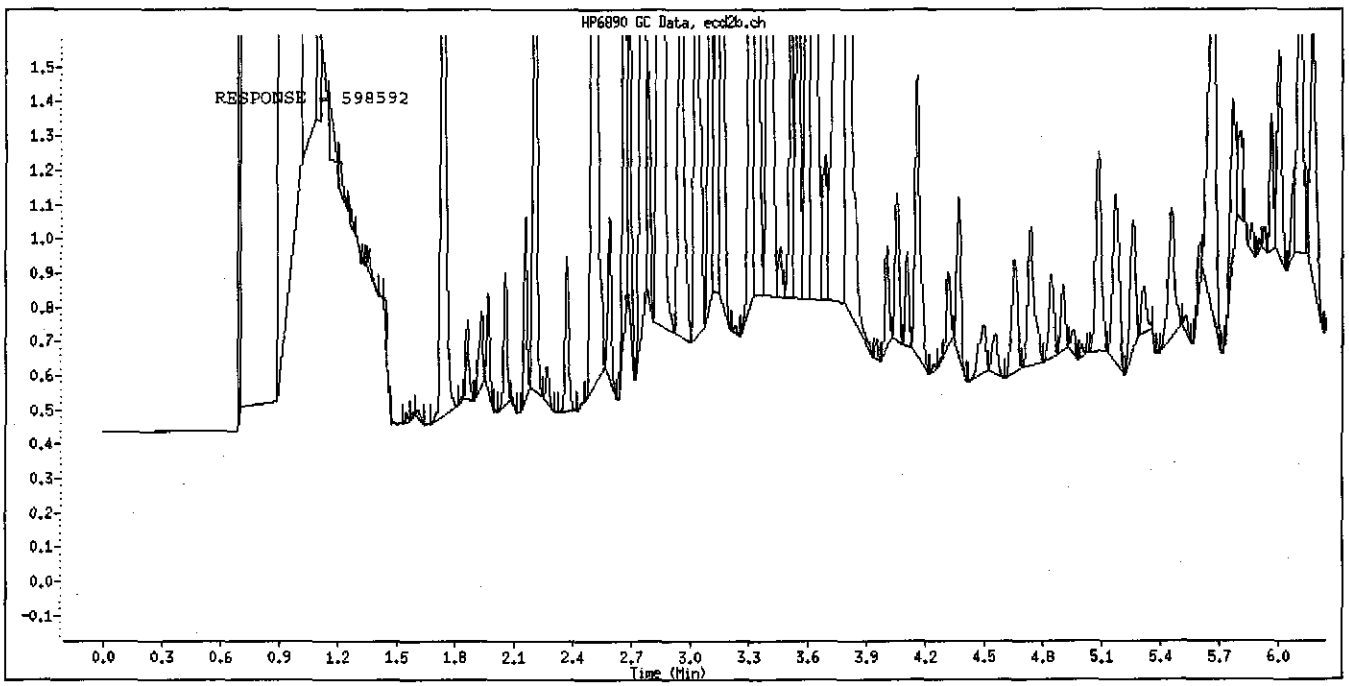
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 07:25
Instrument ID: a2hp5.i
Client ID: S-030205-JH-047
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



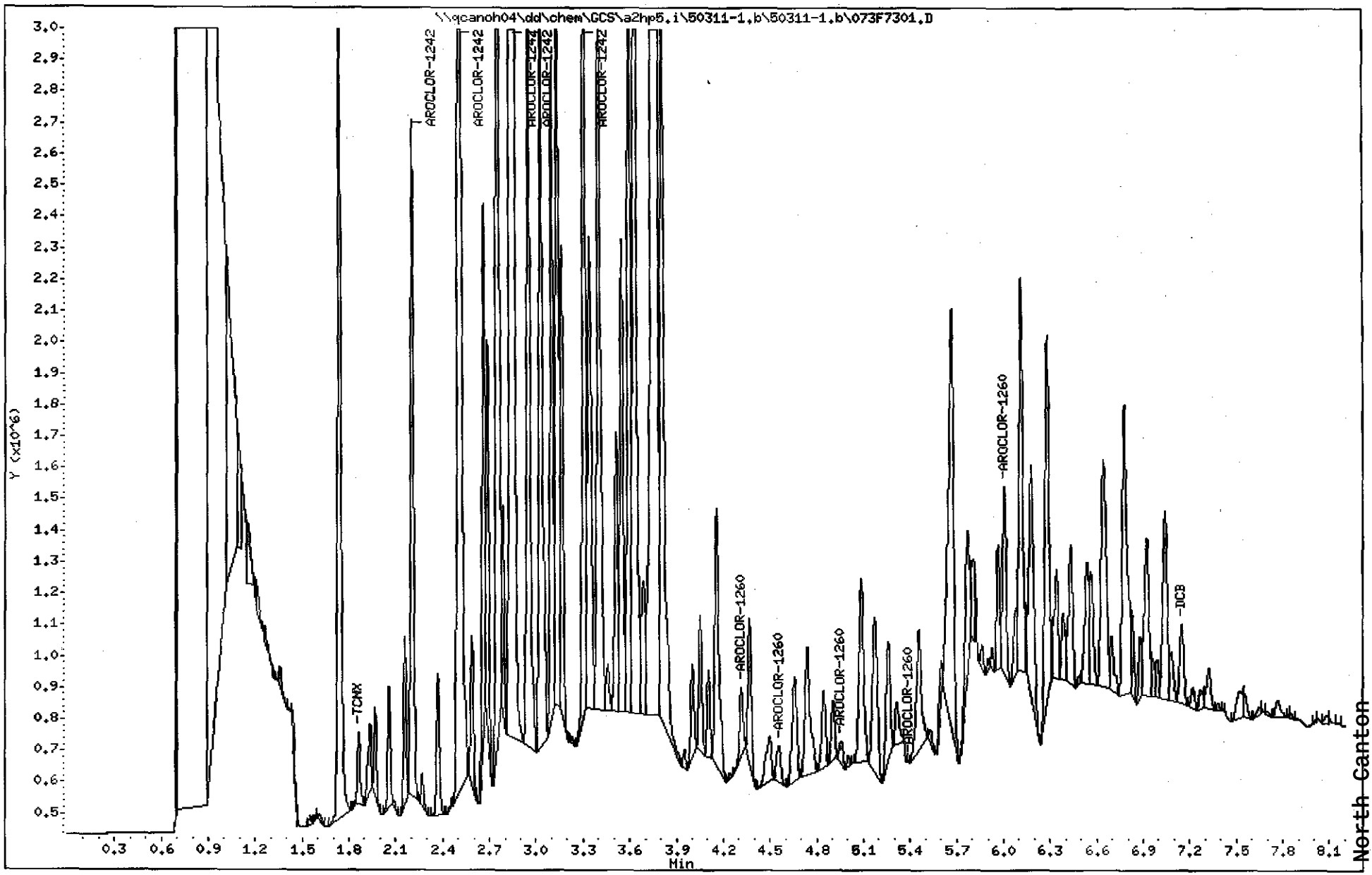
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\073F7301.D
Date : 12-MAR-2005 07:25
Client ID: S-030205-JH-047
Sample Info: G5F8P1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-048

GC Semivolatiles

Lot-Sample #...:	A5C030182-016	**Work Order #...:**	G5F8Q1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:20	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	200	**Initial Wgt/Vol:**	30.01 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	7400	ug/kg
Aroclor 1221	ND	7400	ug/kg
Aroclor 1232	ND	7400	ug/kg
Aroclor 1242	ND	7400	ug/kg
Aroclor 1248	**43000**	**7400**	**ug/kg**
Aroclor 1254	ND	7400	ug/kg
Aroclor 1260	ND	7400	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	148 DIL	(10 - 172)
Decachlorobiphenyl	328 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 074F7401.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\074F7401.D
Lab Smp Id: G5F8Q1AA Client Smp ID: S-030205-JH-048
Inj Date : 12-MAR-2005 07:37
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8Q1AA,200
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 74
Dil Factor: 200.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	200.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	33363	1e-004	9.836		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

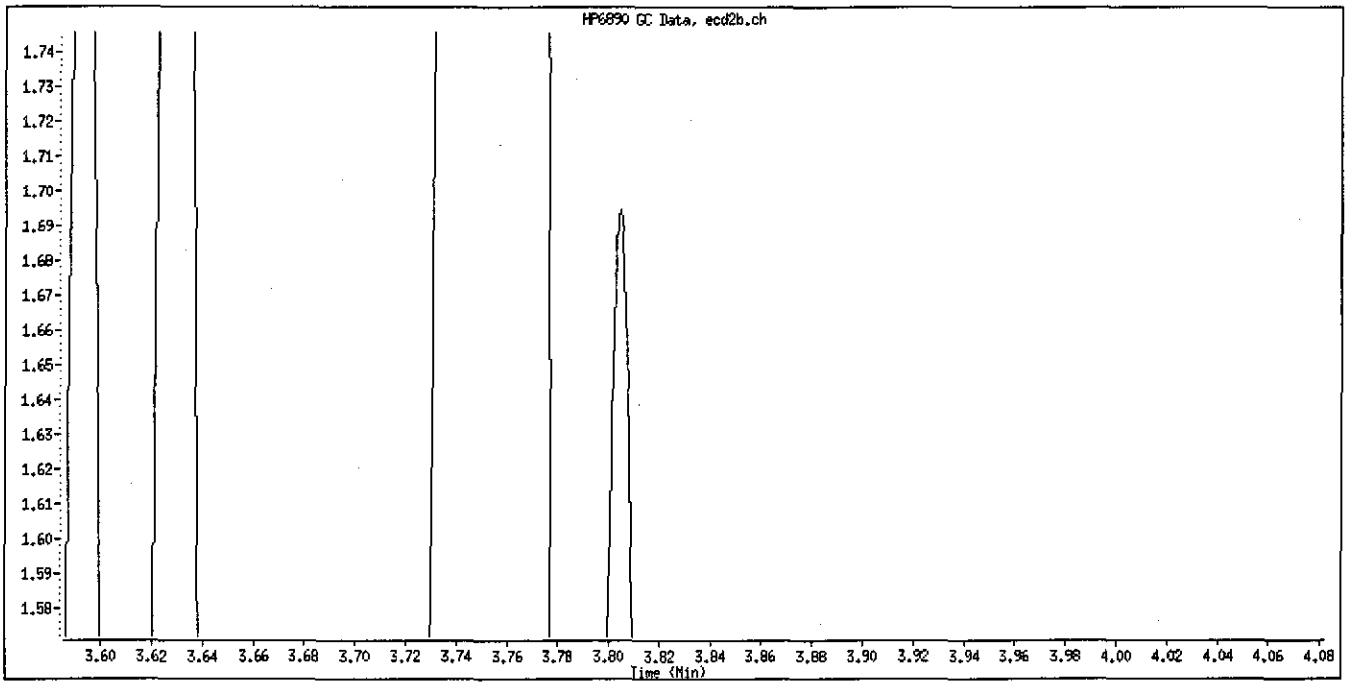
Data File: 074F7401.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.508	2.503	0.005	1608430	0.82258	54820	75.00- 125.00	100.00(M)
2.846	2.846	0.000	5016129	1.24753	83140	157.16- 261.93	311.86
3.302	3.306	-0.004	1559757	0.32139	21420	189.24- 315.41	96.97
3.592	3.596	-0.004	1368929	0.26791	17850	193.23- 322.06	85.11
3.804	3.808	-0.004	1171775	0.25617	17070	173.06- 288.43	72.85
Average of Peak Concentrations =					38860		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.146	7.135	0.011	30984	3e-004	21.85		(R)

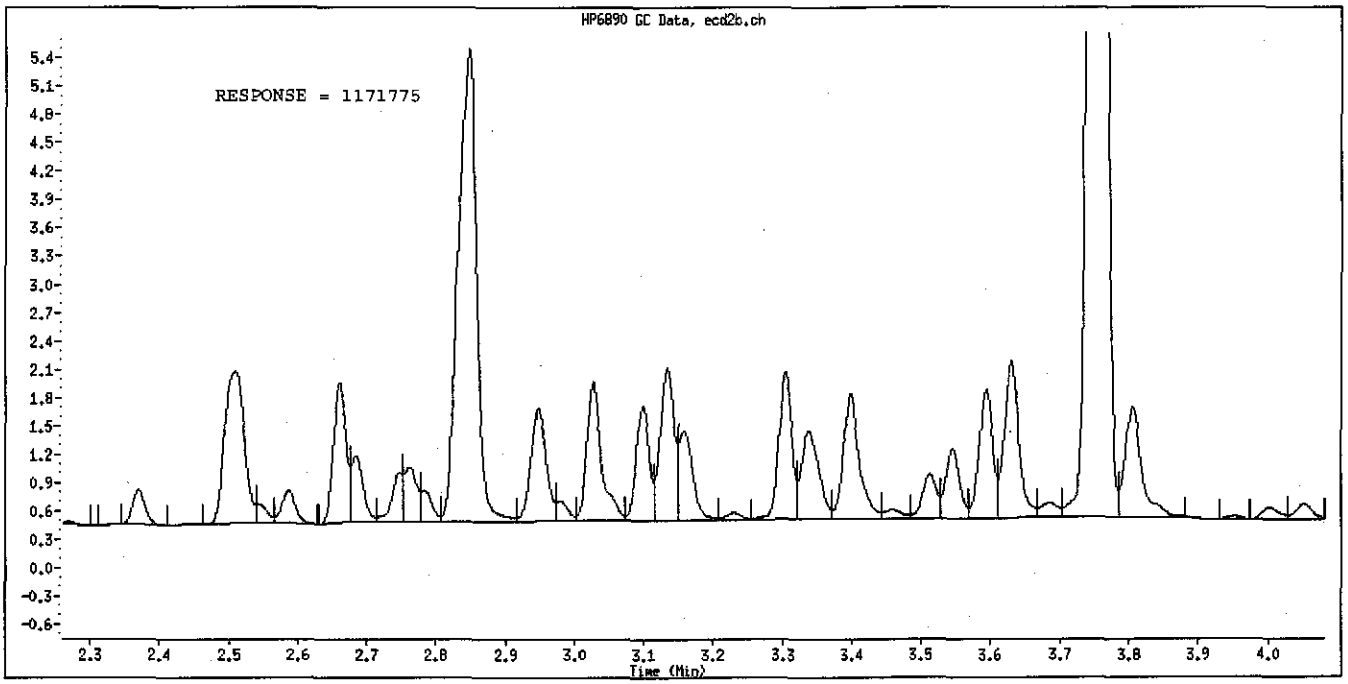
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 07:37
Instrument ID: a2hp5.i
Client ID: S-030205-JH-048
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



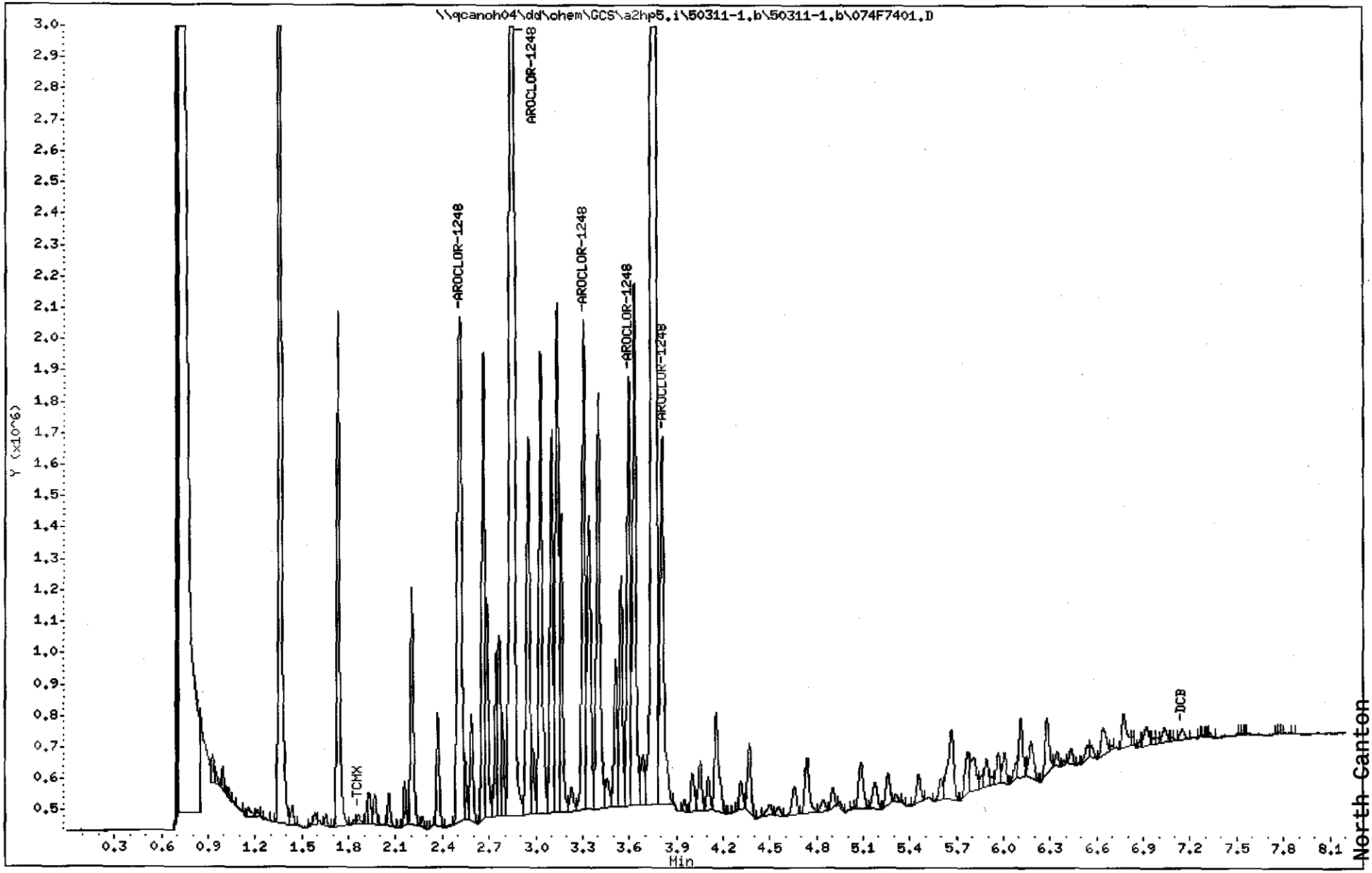
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\074F7401.D
Date : 12-MAR-2005 07:37
Client ID: S-030205-JH-048
Sample Info: G5F8Q1AA,200
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-049

GC Semivolatiles

Lot-Sample #...:	A5C030182-017	**Work Order #...:**	G5F8R1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:25	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.15 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	17	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	**46**	**40**	**ug/kg**
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(10 - 172)
Decachlorobiphenyl	93	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 075F7501.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\075F7501.D
Lab Smp Id: G5F8R1AA Client Smp ID: S-030205-JH-049
Inj Date : 12-MAR-2005 07:49
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8R1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 75
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.150	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4282668	0.01895	6.284		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

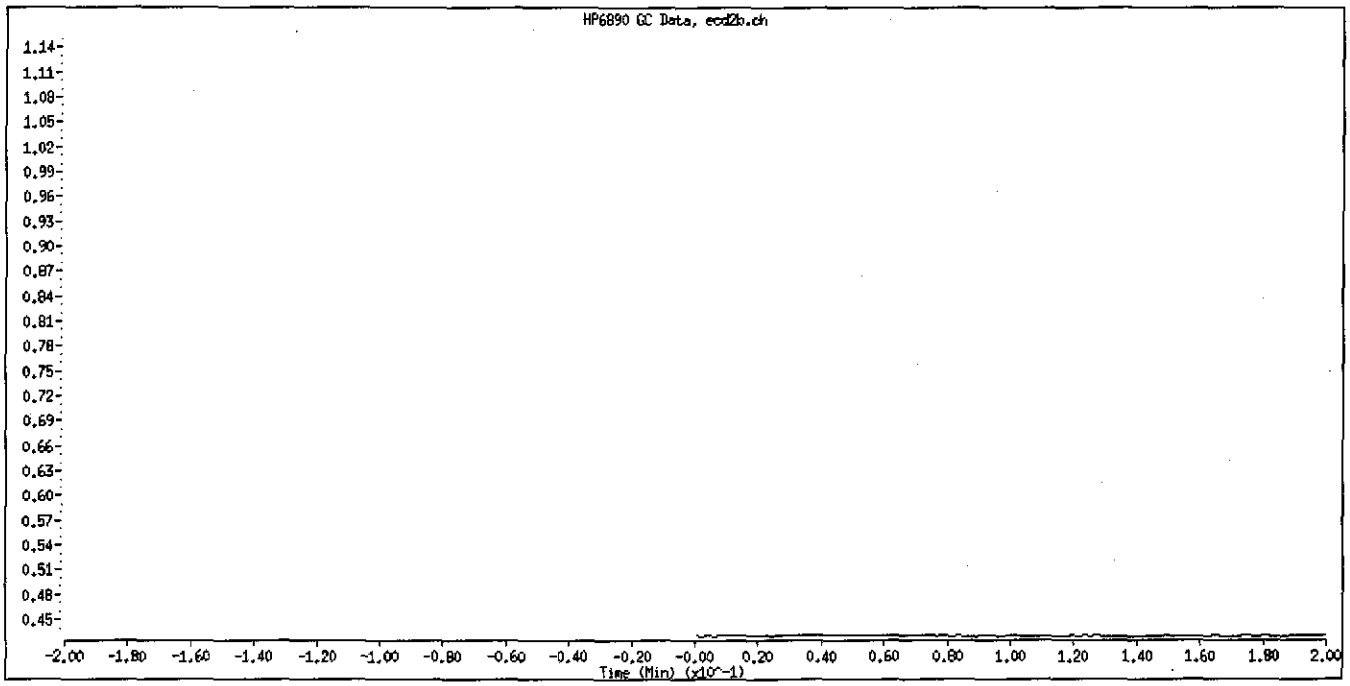
Data File: 075F7501.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.517	2.503	0.014	338428	0.17308	57.41	75.00- 125.00	100.00(M)
2.847	2.846	0.001	454350	0.11300	37.48	157.16- 261.93	134.25
3.278	3.306	-0.028	665307	0.13709	45.47	189.24- 315.41	196.59
3.593	3.596	-0.003	197711	0.03869	12.83	193.23- 322.06	58.42
3.808	3.808	0.000	0	0.0000	0.0000	173.06- 288.43	0.00
Average of Peak Concentrations =					38.30		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1755721	0.01858	6.161		

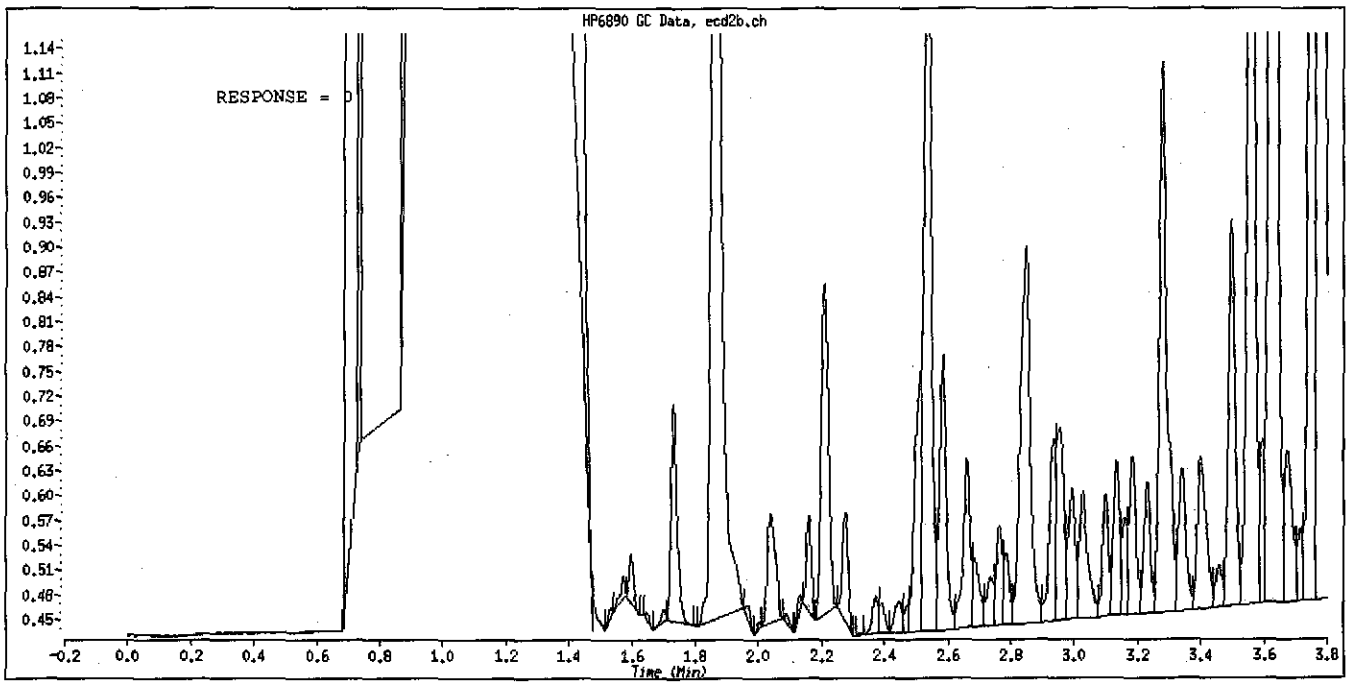
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 07:49
Instrument ID: a2hp5.i
Client ID: S-030205-JH-049
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration

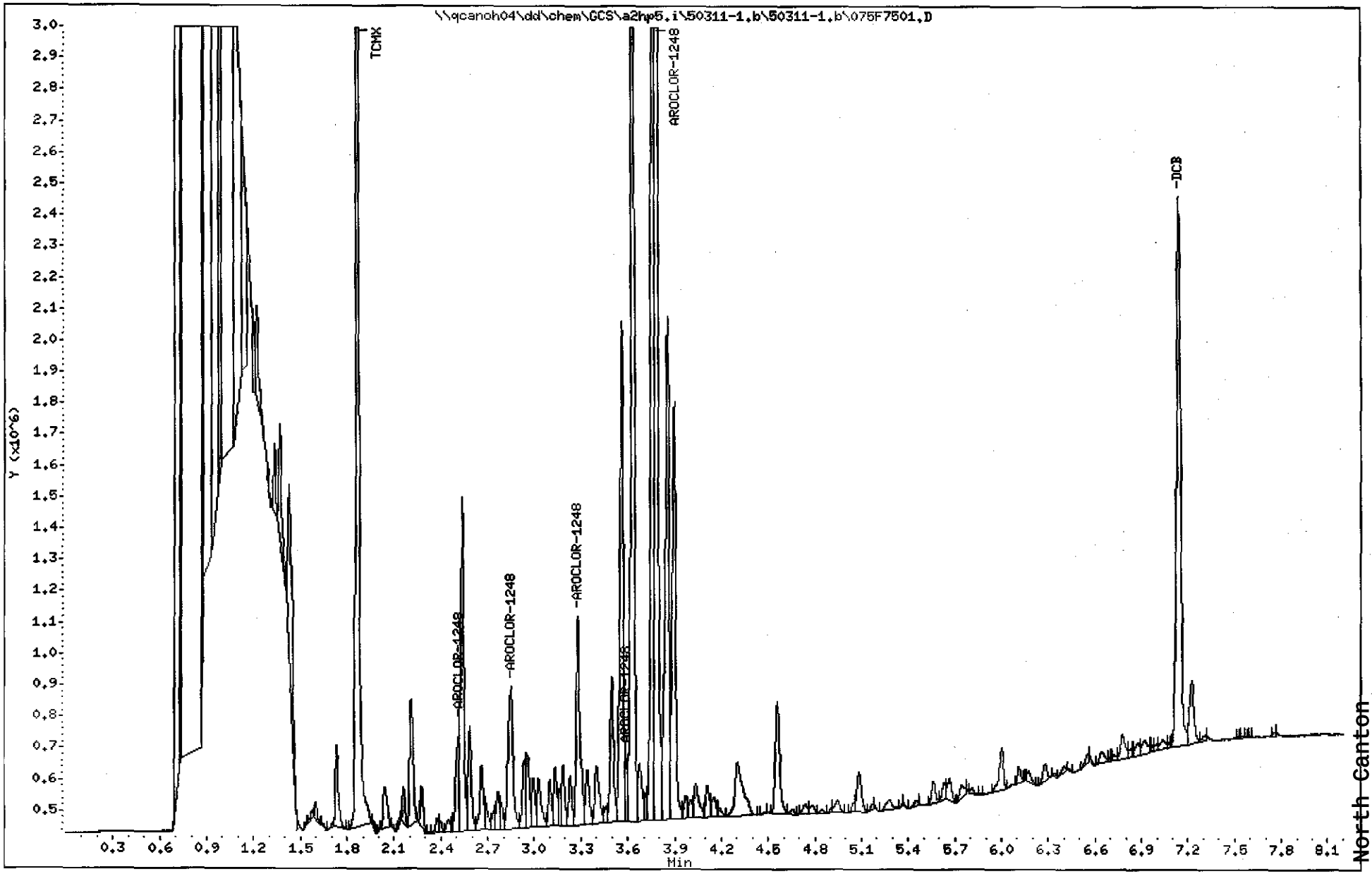


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\075F7501.D
Date : 12-MAR-2005 07:49
Client ID: S-030205-JH-049
Sample Info: G5F8R1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-050

GC Semivolatiles

Lot-Sample #...:	A5C030182-018	**Work Order #...:**	G5F8T1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:30	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	2	**Initial Wgt/Vol:**	29.95 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	3.2	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	68	ug/kg
Aroclor 1221	ND	68	ug/kg
Aroclor 1232	ND	68	ug/kg
Aroclor 1242	ND	68	ug/kg
Aroclor 1248	**170**	**68**	**ug/kg**
Aroclor 1254	ND	68	ug/kg
Aroclor 1260	ND	68	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 172)
Decachlorobiphenyl	110	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 076F7601.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\076F7601.D
Lab Smp Id: G5F8T1AA Client Smp ID: S-030205-JH-050
Inj Date : 12-MAR-2005 08:01
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8T1AA,2
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 76
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2.000	Dilution Factor
Vt	10000.000	final volume
Vo	29.950	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	2226930	0.00985	6.578		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

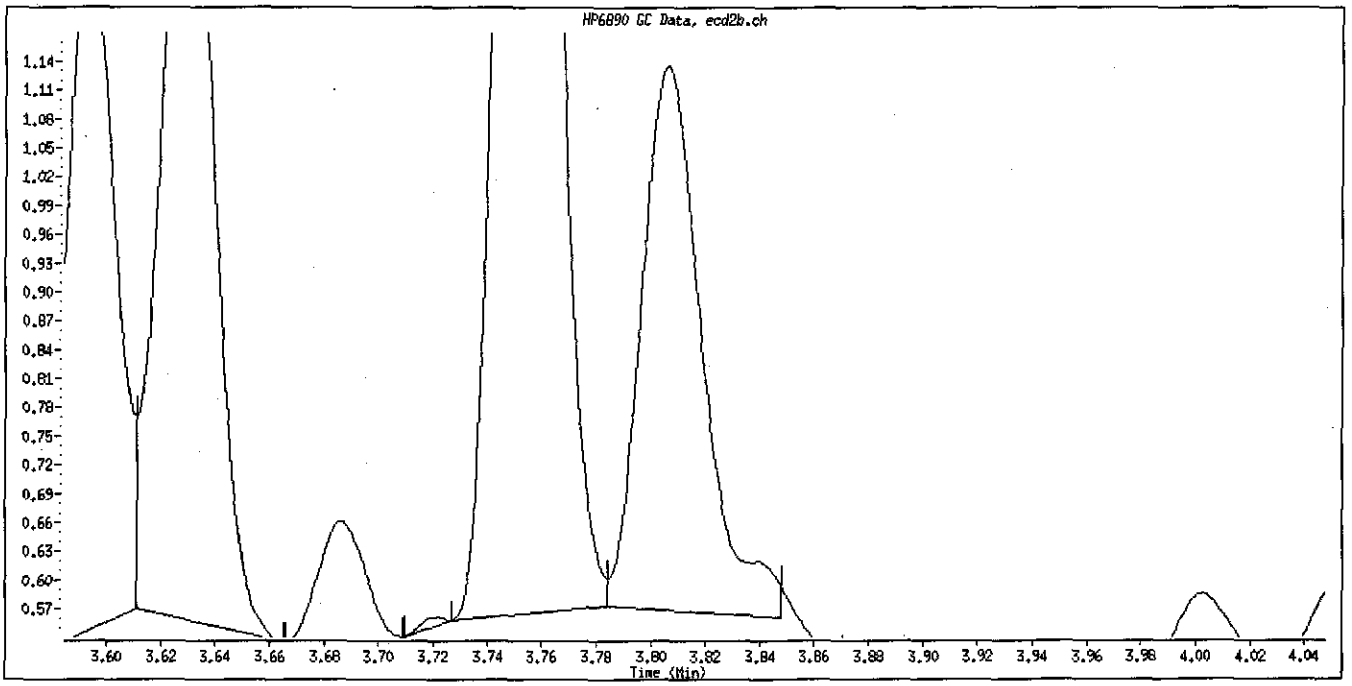
Data File: 076F7601.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.508	2.503	0.005	790502	0.40428	270.0	75.00- 125.00	100.00(M)
2.847	2.846	0.001	1387438	0.34506	230.4	157.16- 261.93	175.51
3.303	3.306	-0.003	967446	0.19934	133.1	189.24- 315.41	122.38
3.593	3.596	-0.003	729944	0.14286	95.40	193.23- 322.06	92.34
3.806	3.808	-0.002	566428	0.12383	82.69	173.06- 288.43	71.65
Average of Peak Concentrations =					162.3		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.321	4.335	-0.014	60865	0.01239	8.272	80.00- 120.00	100.00(M)
4.556	4.545	0.011	82455	0.01454	9.710	87.22- 145.36	135.47
4.959	4.942	0.017	39965	0.00730	4.877	86.81- 144.68	65.66
5.390	5.364	0.026	17113	0.00456	3.047	57.97- 96.61	28.12
6.004	5.997	0.007	686914	0.12658	84.52	85.17- 141.95	1128.59
Average of Peak Concentrations =					22.08		
$ 9 DCB					CAS #: 2051-24-3		
7.137	7.135	0.002	1040584	0.01101	7.352		

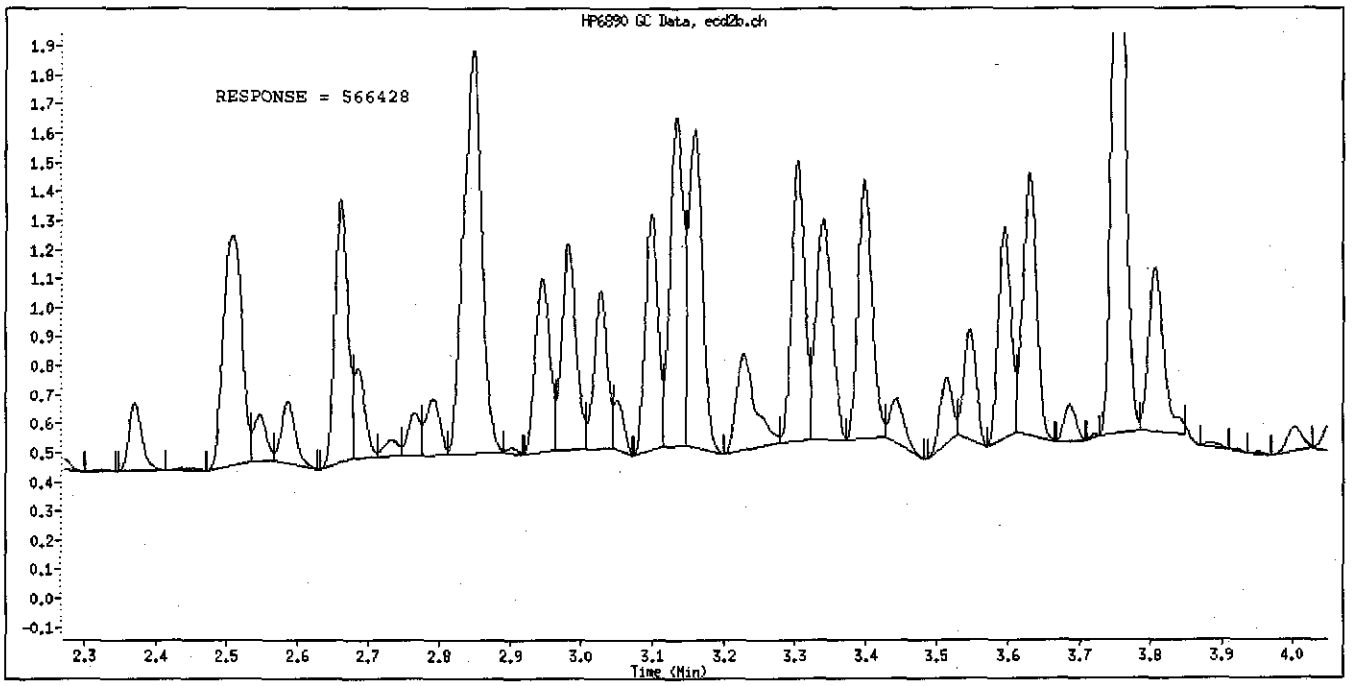
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 08:01
Instrument ID: a2hp5.i
Client ID: S-030205-JH-050
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



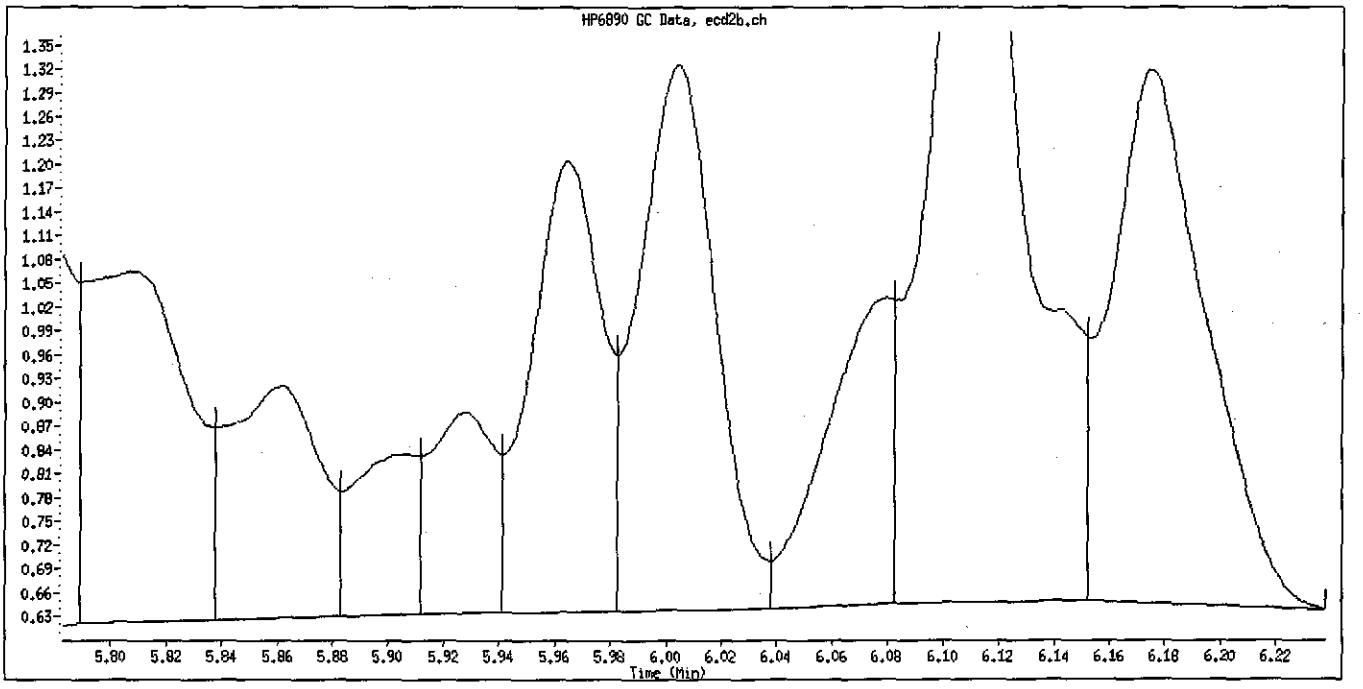
Original Integration



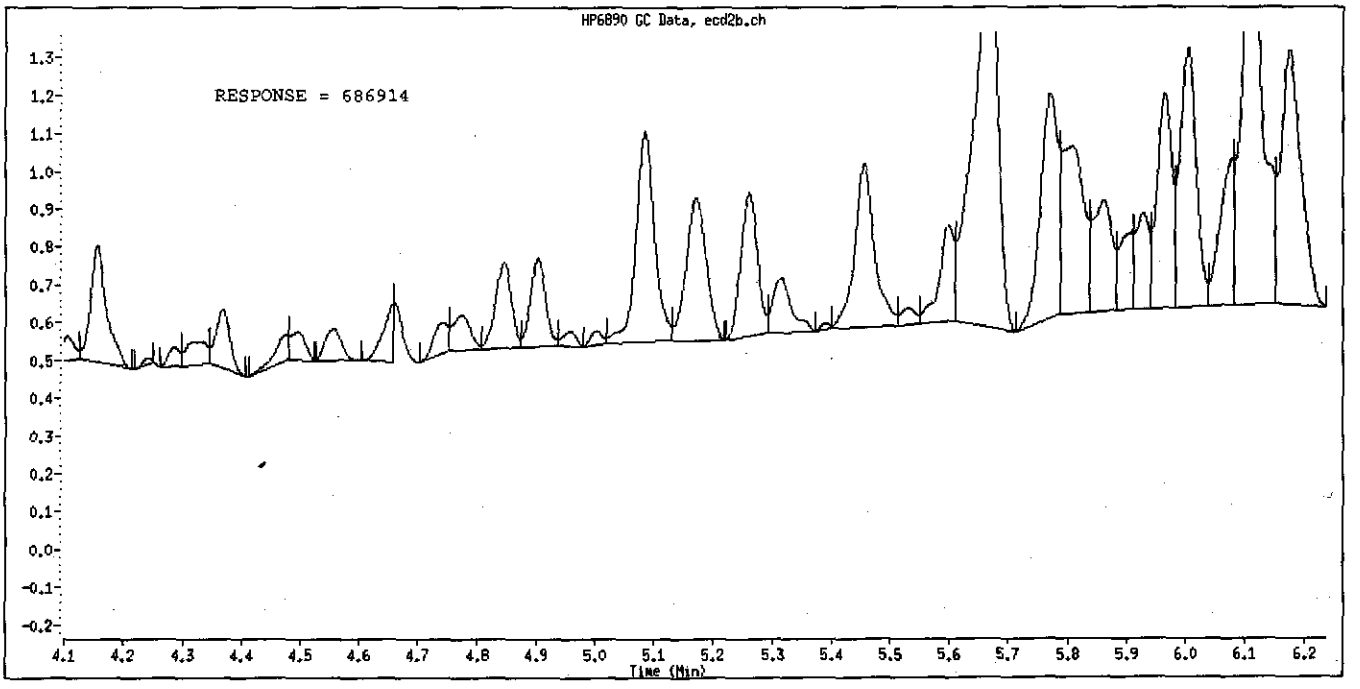
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 08:01
Instrument ID: a2hp5.i
Client ID: S-030205-JH-050
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



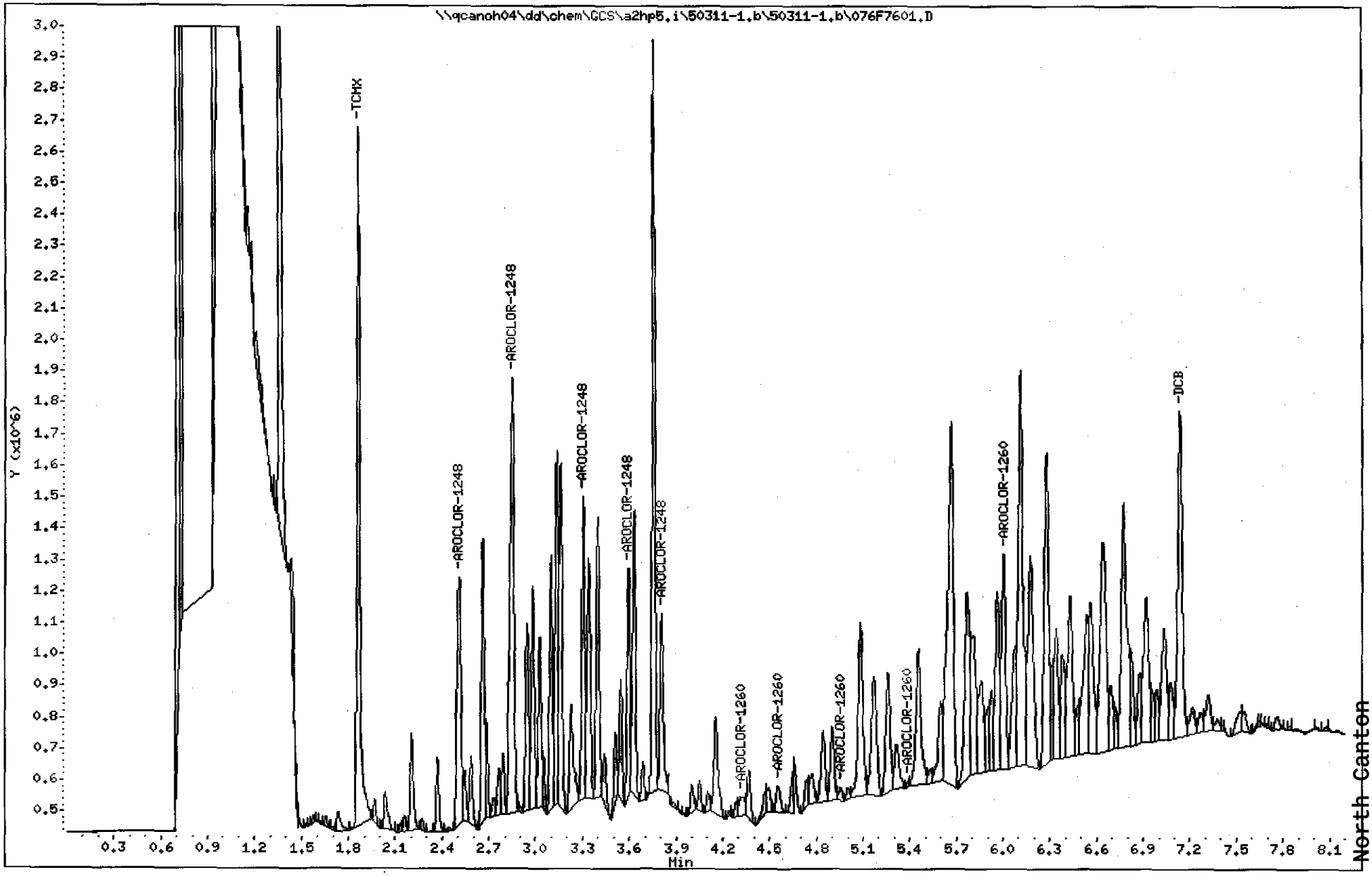
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\076F7601.D
Date : 12-MAR-2005 08:01
Client ID: S-030205-JH-050
Sample Info: G5F8T1AA,2
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-051

GC Semivolatiles

Lot-Sample #...:	A5C030182-019	**Work Order #...:**	G5F8V1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:35	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	5.9	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	35	ug/kg
Aroclor 1221	ND	35	ug/kg
Aroclor 1232	ND	35	ug/kg
Aroclor 1242	ND	35	ug/kg
Aroclor 1248	**280**	**35**	**ug/kg**
Aroclor 1254	ND	35	ug/kg
Aroclor 1260	**56**	**35**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	107	(10 - 172)
Decachlorobiphenyl	132	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 077F7701.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\077F7701.D
Lab Smp Id: G5F8V1AA Client Smp ID: S-030205-JH-051
Inj Date : 12-MAR-2005 08:14
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8V1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 77
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4834205	0.02139	7.114		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

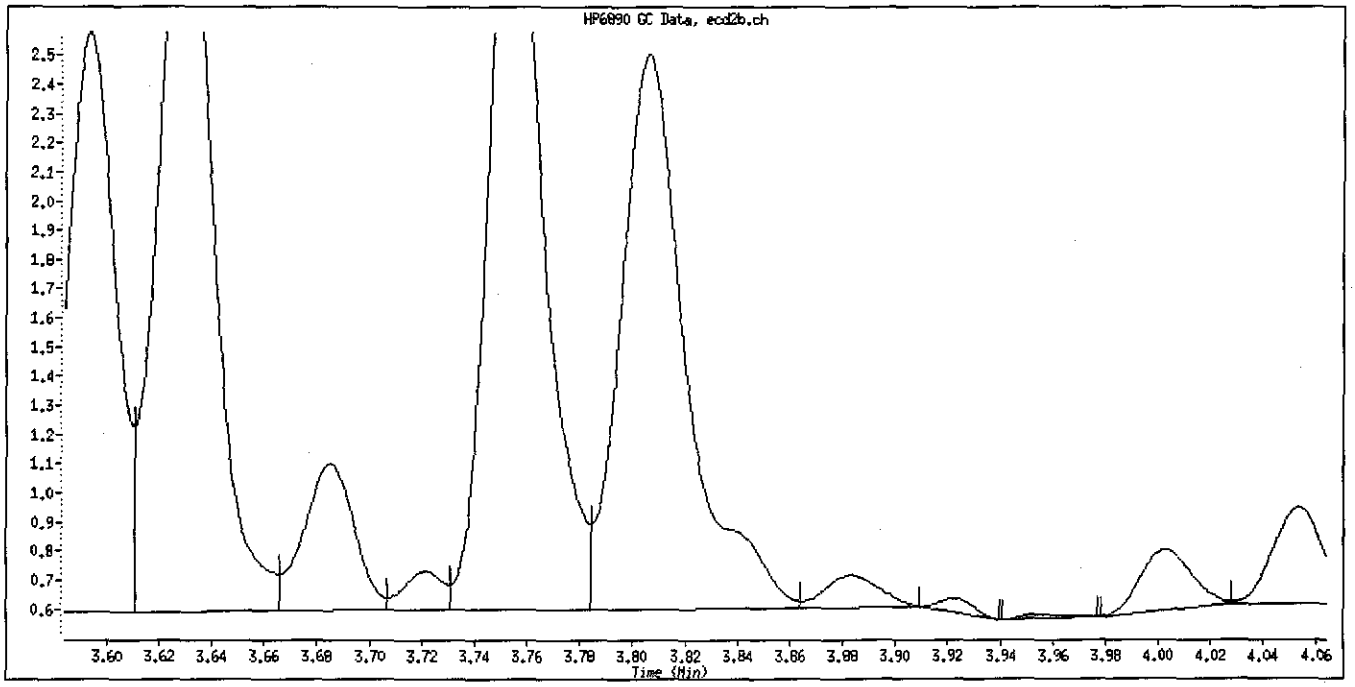
Data File: 077F7701.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.509	2.503	0.006	2516595	1.28704	428.2	75.00- 125.00	100.00(M)
2.848	2.846	0.002	5227772	1.30016	432.5	157.16- 261.93	207.73
3.304	3.306	-0.002	3080223	0.63468	211.1	189.24- 315.41	122.40
3.594	3.596	-0.002	1986369	0.38875	129.3	193.23- 322.06	78.93
3.805	3.808	-0.003	1900662	0.41552	138.2	173.06- 288.43	75.53
Average of Peak Concentrations =					267.9		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.335	4.335	0.000	176295	0.03588	11.94	80.00- 120.00	100.00(M)
4.556	4.545	0.011	331003	0.05837	19.42	87.22- 145.36	187.76
4.960	4.942	0.018	258940	0.04732	15.74	86.81- 144.68	146.88
5.353	5.364	-0.011	386470	0.10304	34.28	57.97- 96.61	219.22
6.003	5.997	0.006	2936428	0.54109	180.0	85.17- 141.95	1665.63
Average of Peak Concentrations =					52.28		
$ 9 DCB					CAS #: 2051-24-3		
7.139	7.135	0.004	2486909	0.02631	8.754		

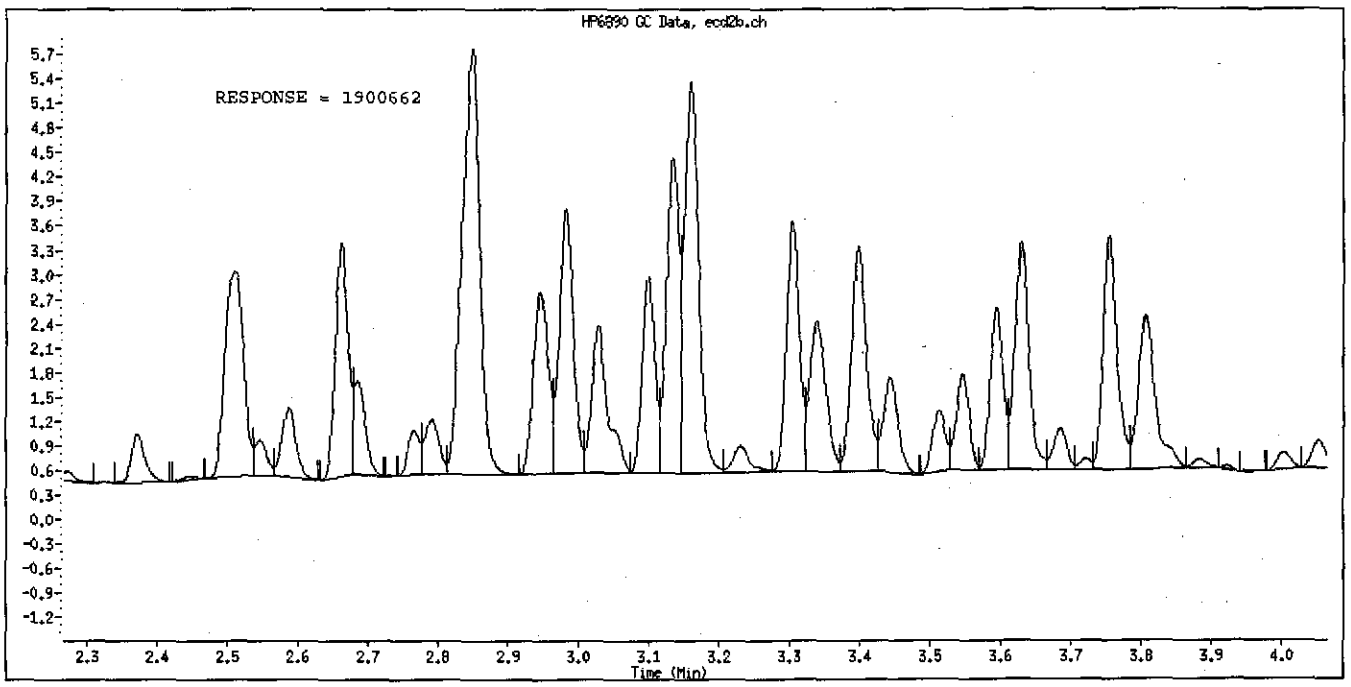
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 08:14
Instrument ID: a2hp5.i
Client ID: S-030205-JH-051
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



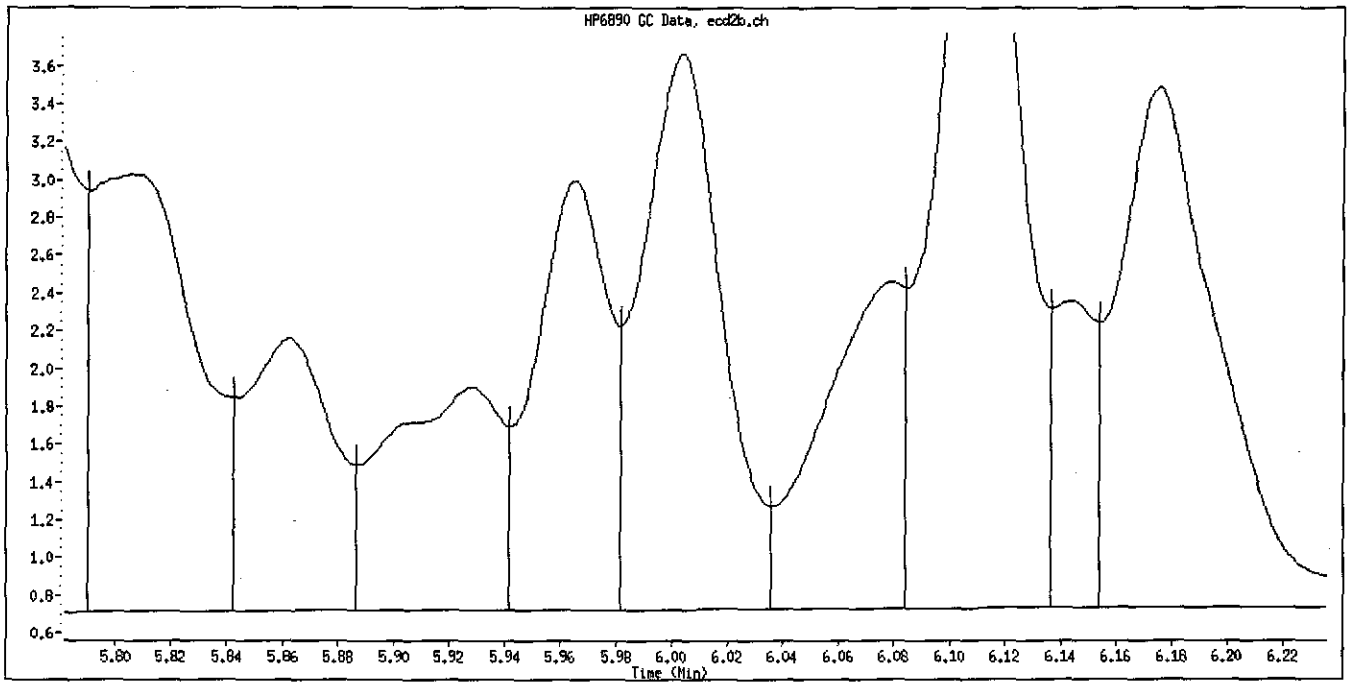
Original Integration



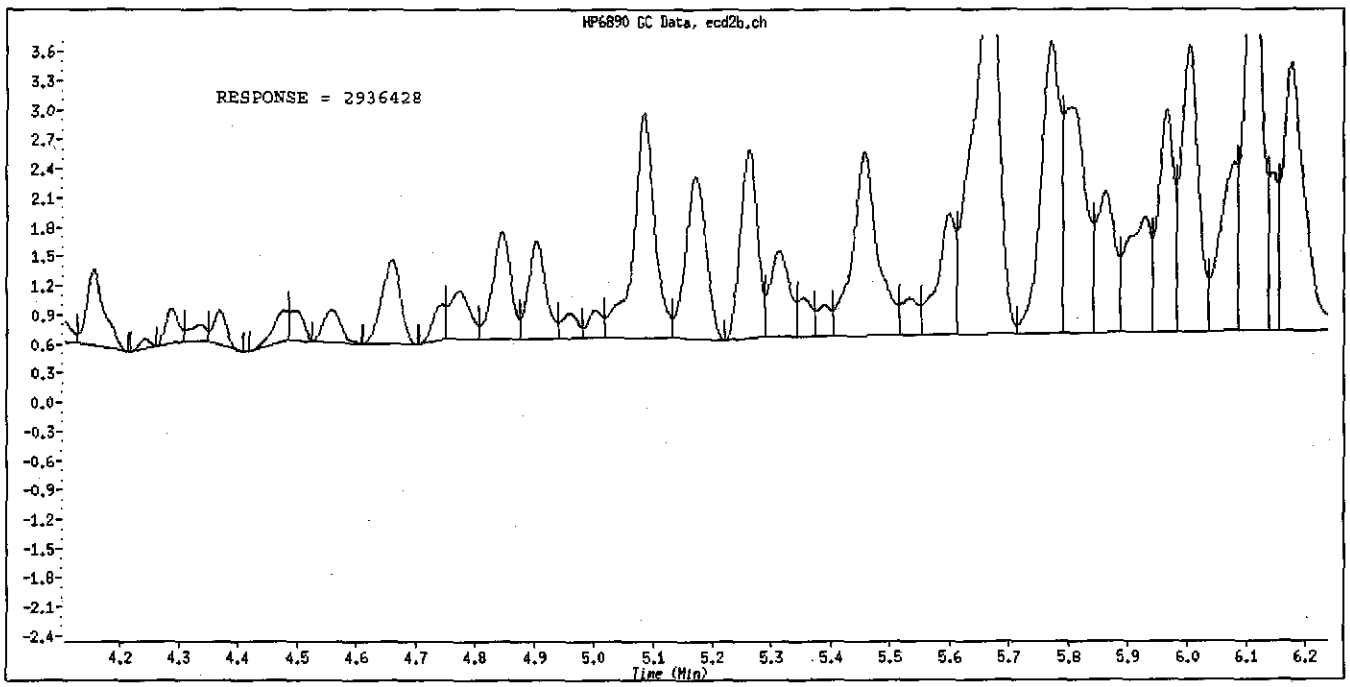
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 08:14
Instrument ID: a2hp5.i
Client ID: S-030205-JH-051
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



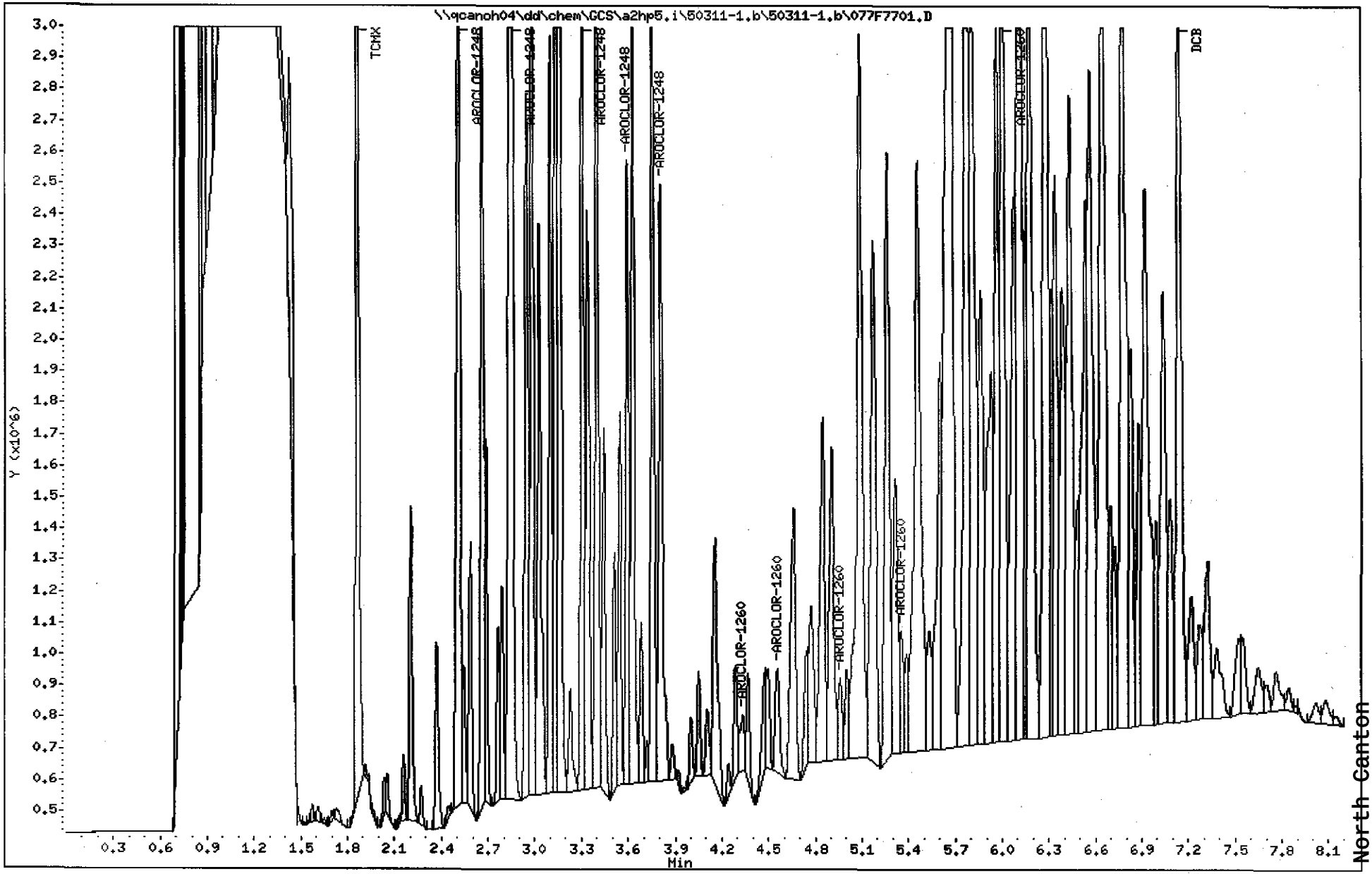
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\077F7701.D
Date : 12-MAR-2005 08:14
Client ID: S-030205-JH-051
Sample Info: G5F8V1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-052

GC Semivolatiles

Lot-Sample #...:	A5C030182-020	**Work Order #...:**	G5F8W1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:40	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.14 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	77	(10 - 172)
Decachlorobiphenyl	73	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 078F7801.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\078F7801.D
Lab Smp Id: G5F8W1AA Client Smp ID: S-030205-JH-052
Inj Date : 12-MAR-2005 08:26
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8W1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 78
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.140	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	3488013	0.01543	5.119		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.215	2.206	0.009	189481	0.07134	23.67	75.00- 125.00	100.00(M)
2.522	2.505	0.017	454790	0.12534	41.58	101.31- 168.85	240.02
2.847	2.850	-0.003	410287	0.06339	21.03	185.46- 309.11	216.53
2.955	2.952	0.003	159912	0.04660	15.46	95.29- 158.82	84.39
3.303	3.307	-0.004	189035	0.06840	22.69	76.10- 126.84	99.76
Average of Peak Concentrations =					24.89		

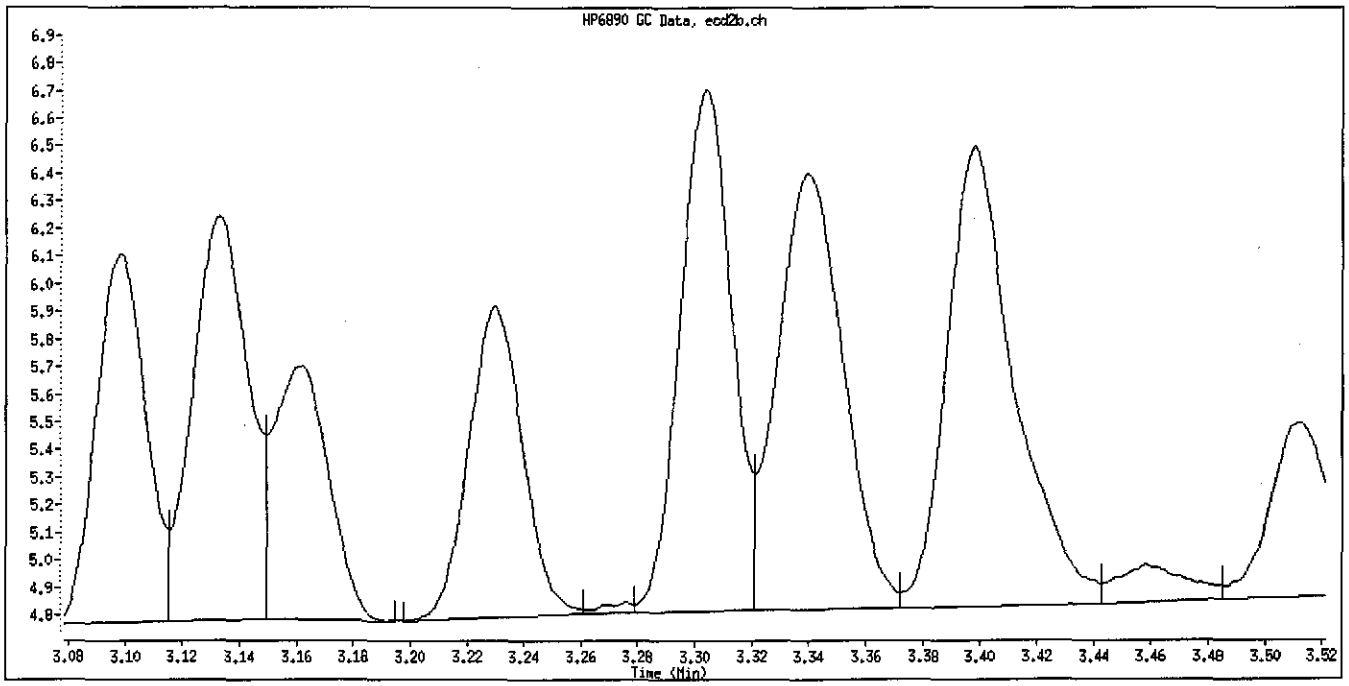
Data File: 078F7801.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248						CAS #: 12672-29-6		
Compound Not Detected								
7 AROCLOR-1254						CAS #: 11097-69-1		
Compound Not Detected								
8 AROCLOR-1260						CAS #: 11096-82-5		
Operator disabled compound identification.								
$ 9 DCB						CAS #: 2051-24-3		
7.136	7.135	0.001	1374827	0.01455	4.826			(R)

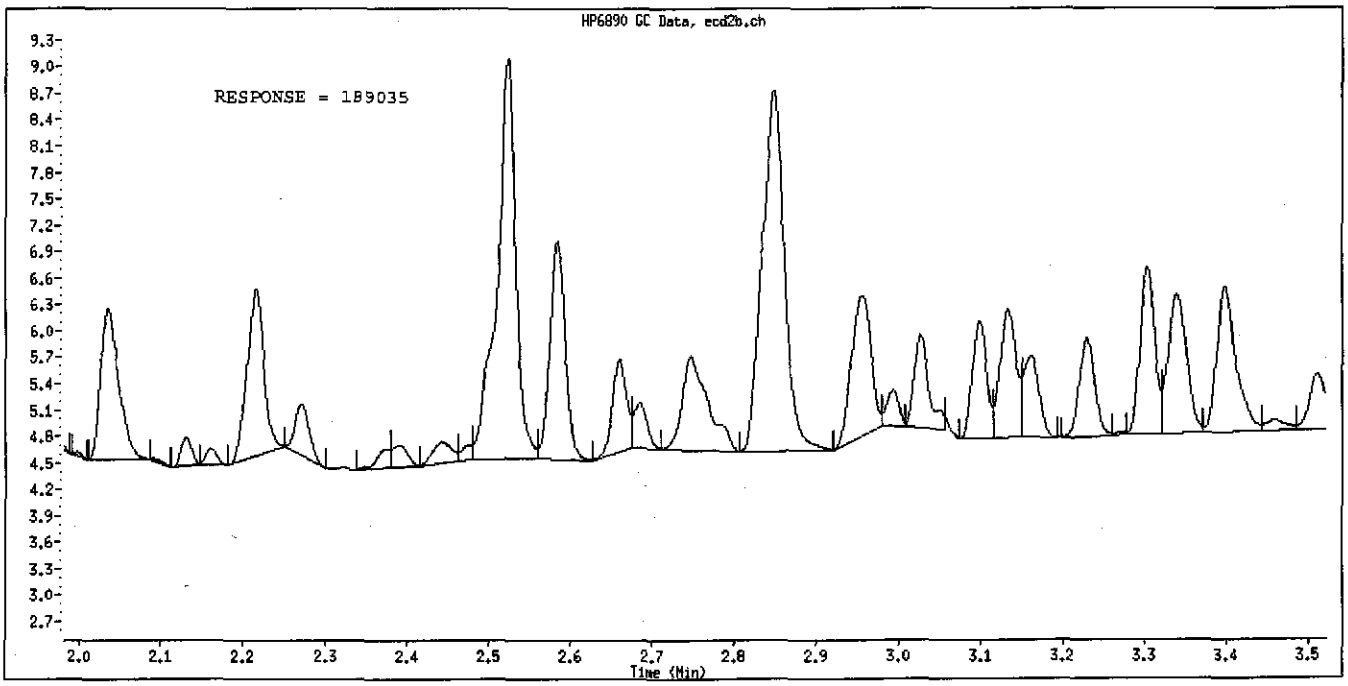
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 08:26
Instrument ID: a2hp5.i
Client ID: S-030205-JH-052
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



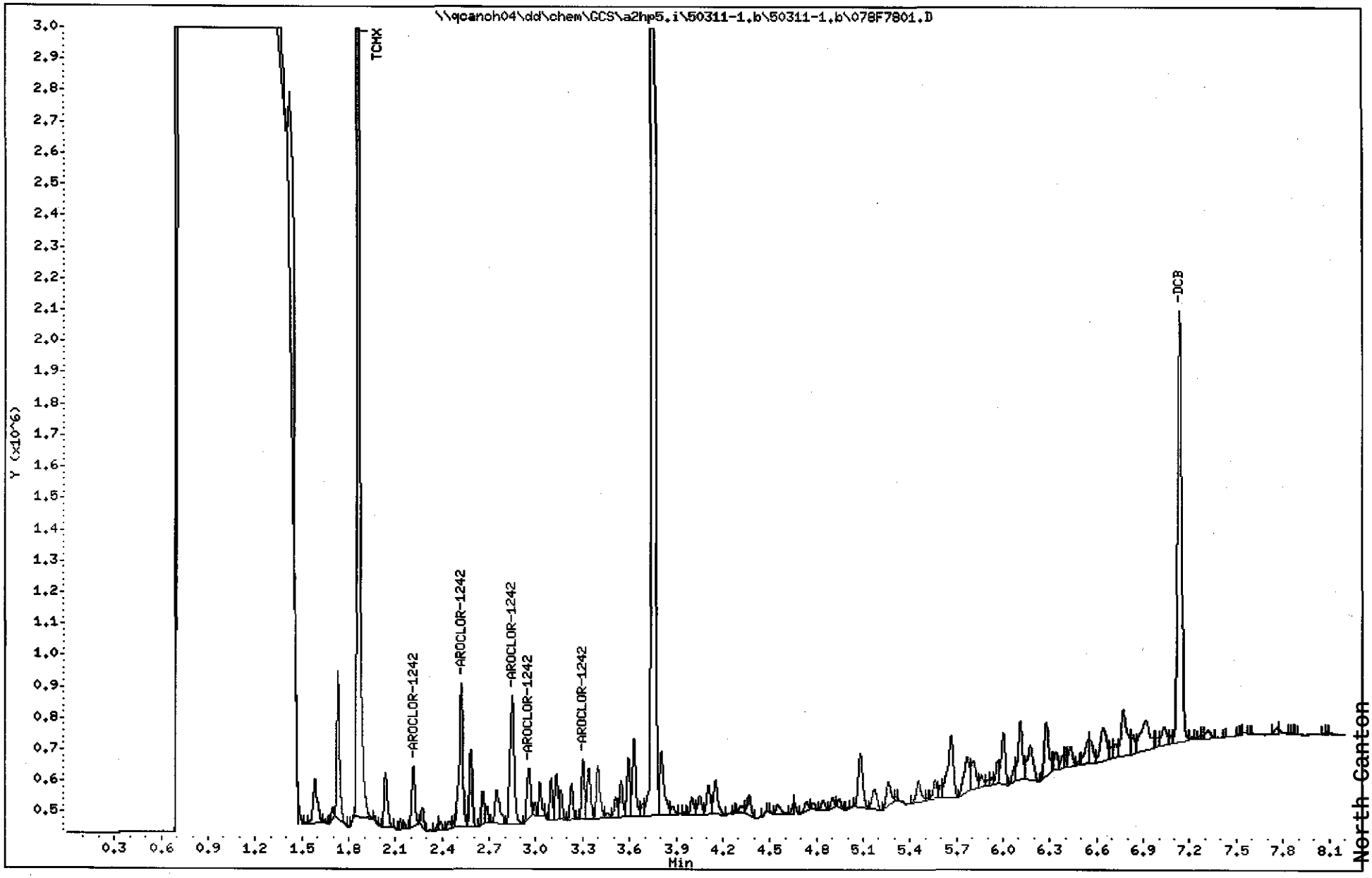
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\078F7801.D
Date : 12-MAR-2008 08:26
Client ID: S-030205-JH-052
Sample Info: C5F8W1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-053

GC Semivolatiles

Lot-Sample #...:	A5C030182-021	**Work Order #...:**	G5F8X1AA	**Matrix.....:**	*SO*
Date Sampled...:	03/02/05 09:45	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	**55**	**37**	**ug/kg**
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(10 - 172)
Decachlorobiphenyl	93	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 079F7901.D
Report Date: 14-Mar-2005 16:54

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\079F7901.D
Lab Smp Id: G5F8X1AA Client Smp ID: S-030205-JH-053
Inj Date : 12-MAR-2005 08:38
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8X1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 79
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	4526548	0.02002	6.664		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

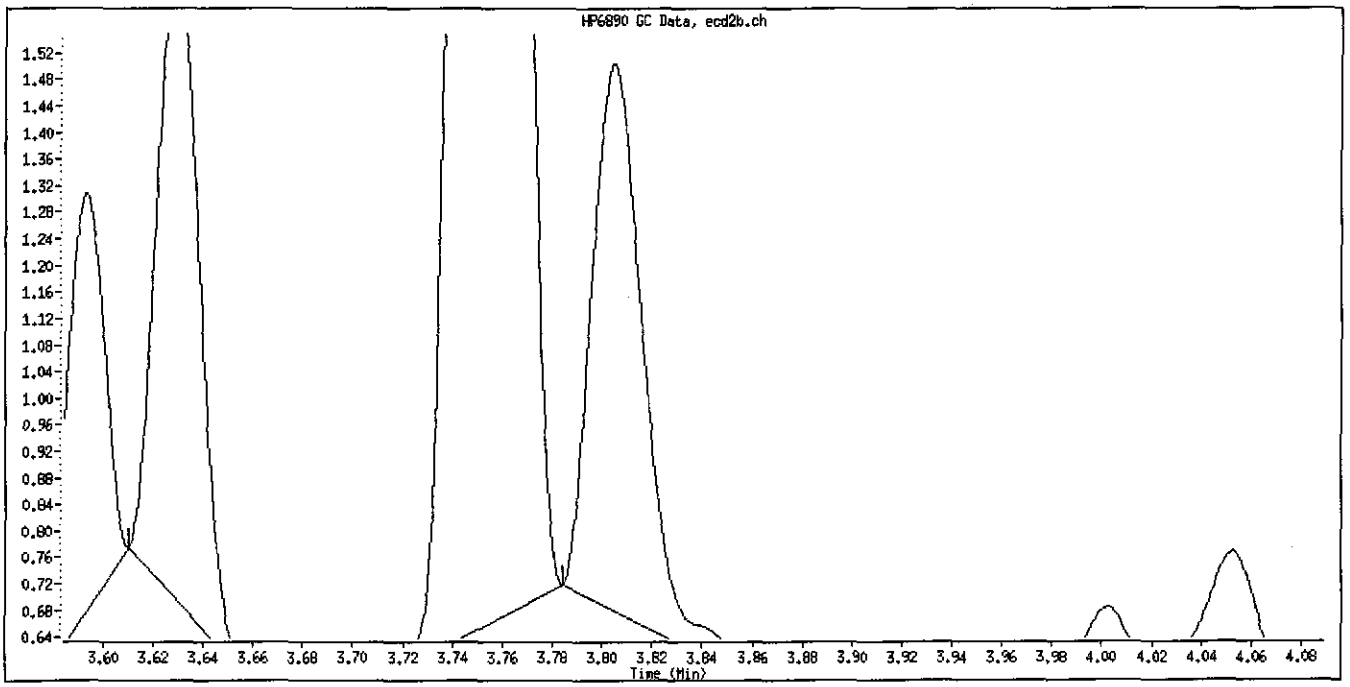
Data File: 079F7901.D
Report Date: 14-Mar-2005 16:54

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.519	2.503	0.016	142601	0.07293	24.27	75.00- 125.00	100.00(M)
2.847	2.846	0.001	721086	0.17934	59.68	157.16- 261.93	505.67
3.303	3.306	-0.003	535323	0.11030	36.71	189.24- 315.41	375.40
3.629	3.596	0.033	974728	0.19076	63.48	193.23- 322.06	683.54
3.804	3.808	-0.004	823543	0.18004	59.91	173.06- 288.43	577.52
Average of Peak Concentrations =					48.81		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	1759333	0.01862	6.195		

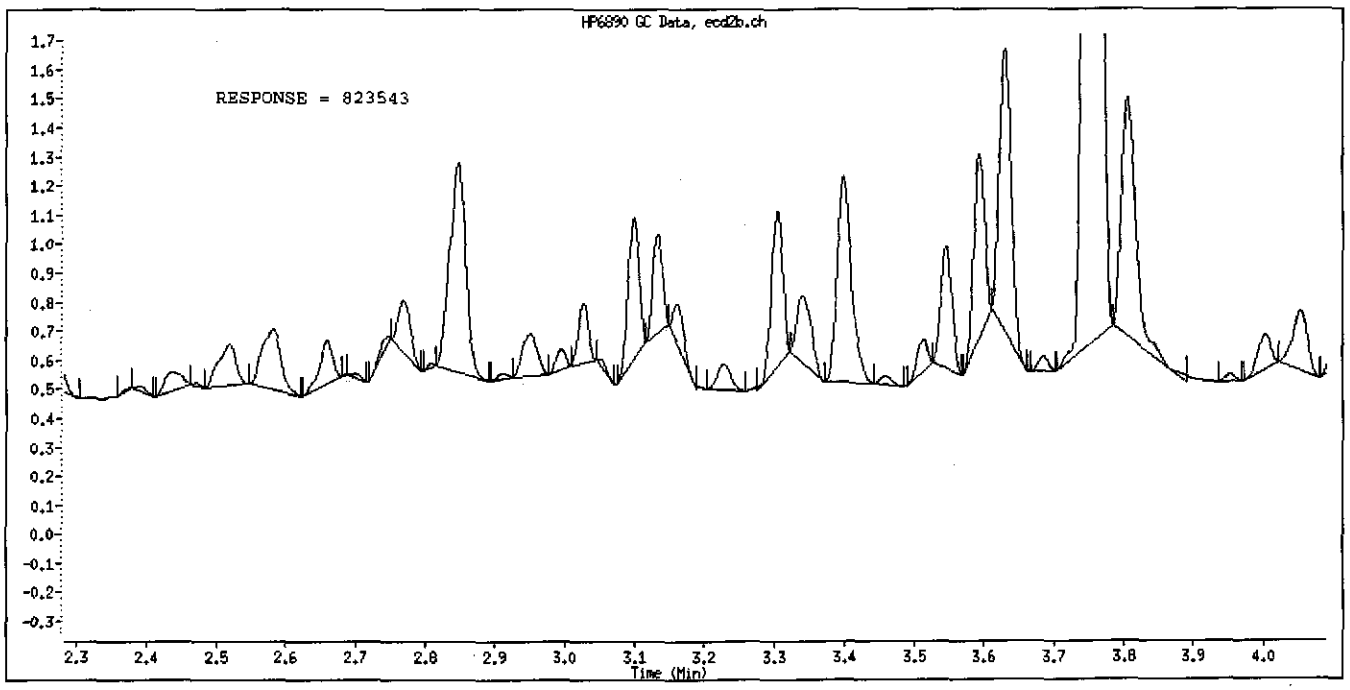
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 08:38
Instrument ID: a2hp5.i
Client ID: S-030205-JH-053
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



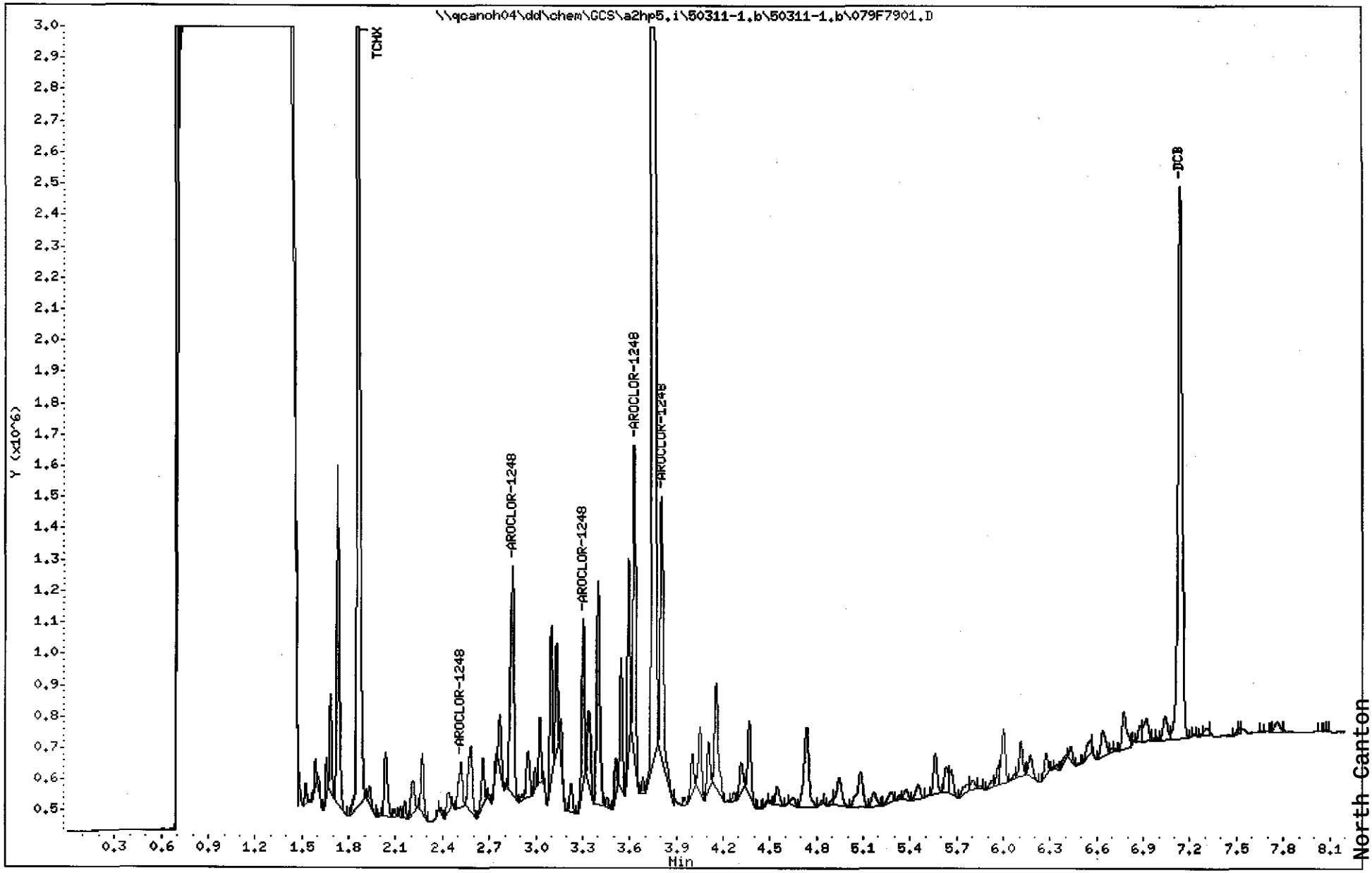
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\079F7901.D
Date : 12-MAR-2005 08:38
Client ID: S-030205-JH-053
Sample Info: G5F8X1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-054

GC Semivolatiles

Lot-Sample #...:	A5C030182-022	**Work Order #...:**	G5F801AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 09:50	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.19 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	37	ug/kg
Aroclor 1221	ND	37	ug/kg
Aroclor 1232	ND	37	ug/kg
Aroclor 1242	ND	37	ug/kg
Aroclor 1248	ND	37	ug/kg
Aroclor 1254	ND	37	ug/kg
Aroclor 1260	ND	37	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 172)
Decachlorobiphenyl	94	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 054F5401.D
Report Date: 14-Mar-2005 16:50

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\054F5401.D
Lab Smp Id: G5F801AA Client Smp ID: S-030205-JH-054
Inj Date : 12-MAR-2005 03:32
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F801AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 54
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.190	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	4138842	0.01831	6.065		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

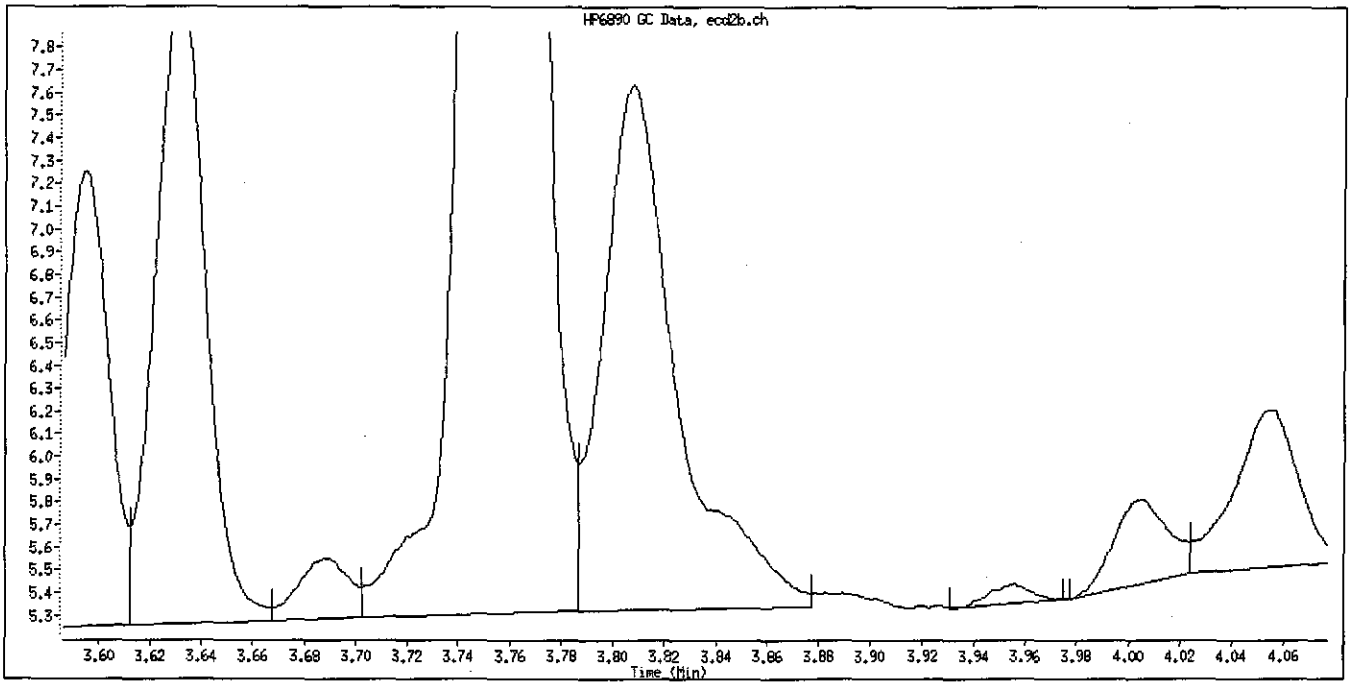
Data File: 054F5401.D
Report Date: 14-Mar-2005 16:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	49013	0.02507	8.303	75.00- 125.00	100.00(M)
2.848	2.846	0.002	204290	0.05081	16.83	157.16- 261.93	416.81
3.304	3.306	-0.002	165312	0.03406	11.28	189.24- 315.41	337.28
3.594	3.596	-0.002	199935	0.03913	12.96	193.23- 322.06	407.92
3.807	3.808	-0.001	231260	0.05056	16.75	173.06- 288.43	471.83
Average of Peak Concentrations =					13.22		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	1777527	0.01881	6.230		

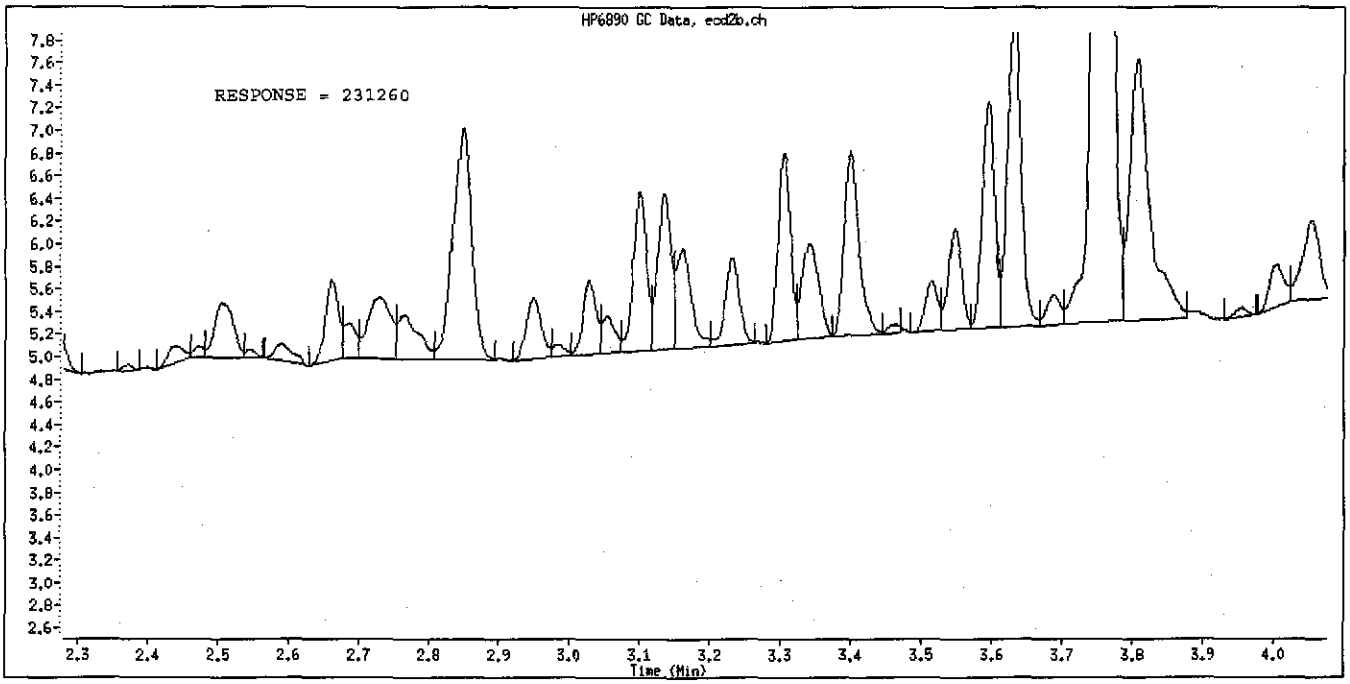
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 03:32
Instrument ID: a2hp5.i
Client ID: S-030205-JH-054
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



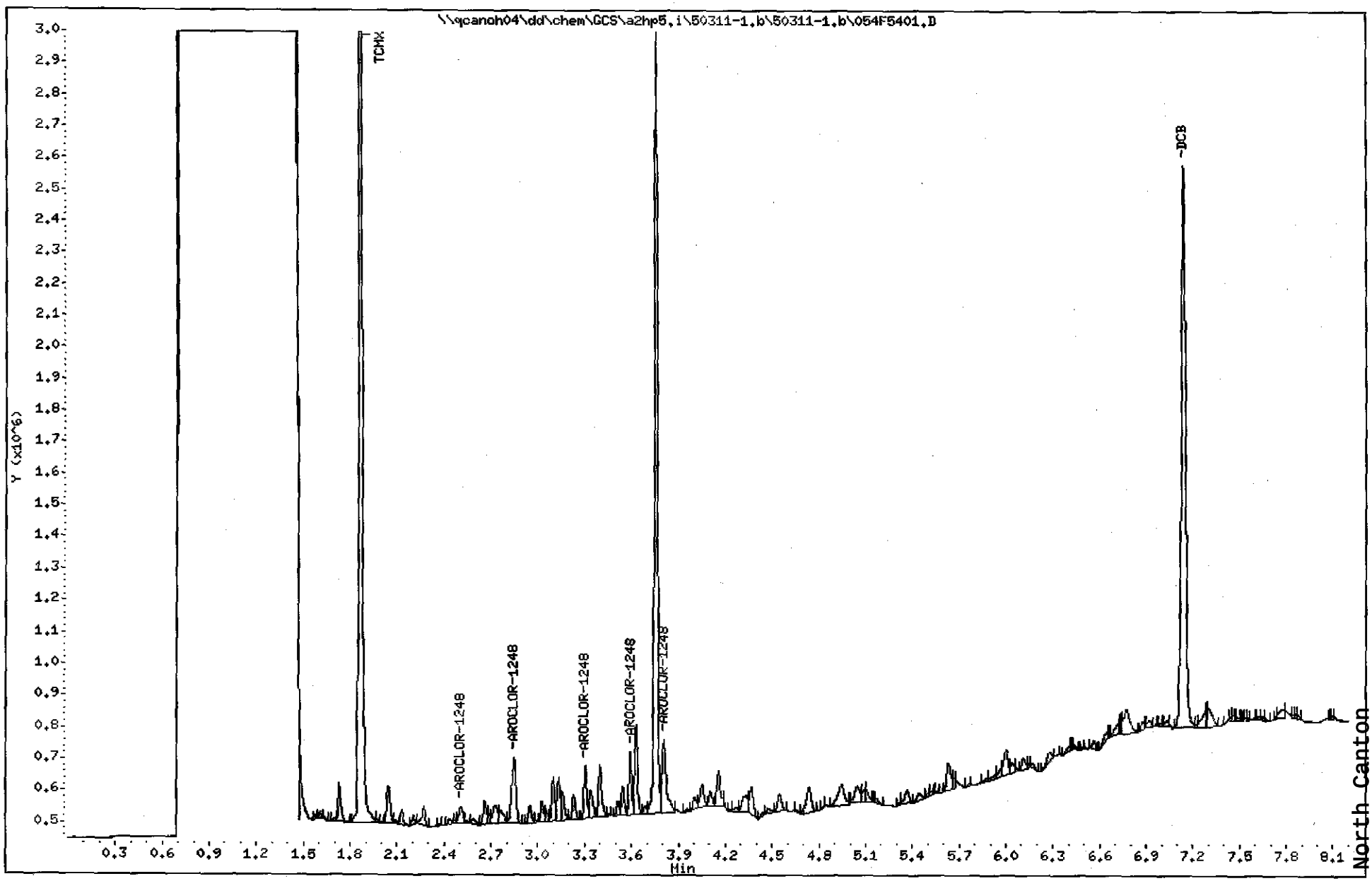
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\054F5401.D
Date : 12-MAR-2005 03:32
Client ID: S-030205-JH-054
Sample Info: G5F801AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-055

GC Semivolatiles

Lot-Sample #...:	A5C030182-023	**Work Order #...:**	G5F811AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:20	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	1	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	38	ug/kg
Aroclor 1221	ND	38	ug/kg
Aroclor 1232	ND	38	ug/kg
Aroclor 1242	ND	38	ug/kg
Aroclor 1248	ND	38	ug/kg
Aroclor 1254	ND	38	ug/kg
Aroclor 1260	ND	38	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(10 - 172)
Decachlorobiphenyl	71	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 016F1601.D
Report Date: 18-Mar-2005 14:18

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\016F1601.D
Lab Smp Id: G5F811AA Client Smp ID: S-030205-JH-055
Inj Date : 18-MAR-2005 01:29
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F811AA
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.489	0.003	2837996	0.01761	5.869		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Peaks not detected for Quant. or Qual. signal(s).							
4 AROCLOR-1232					CAS #: 11141-16-5		
Peaks not detected for Quant. or Qual. signal(s).							

Data File: 016F1601.D
Report Date: 18-Mar-2005 14:18

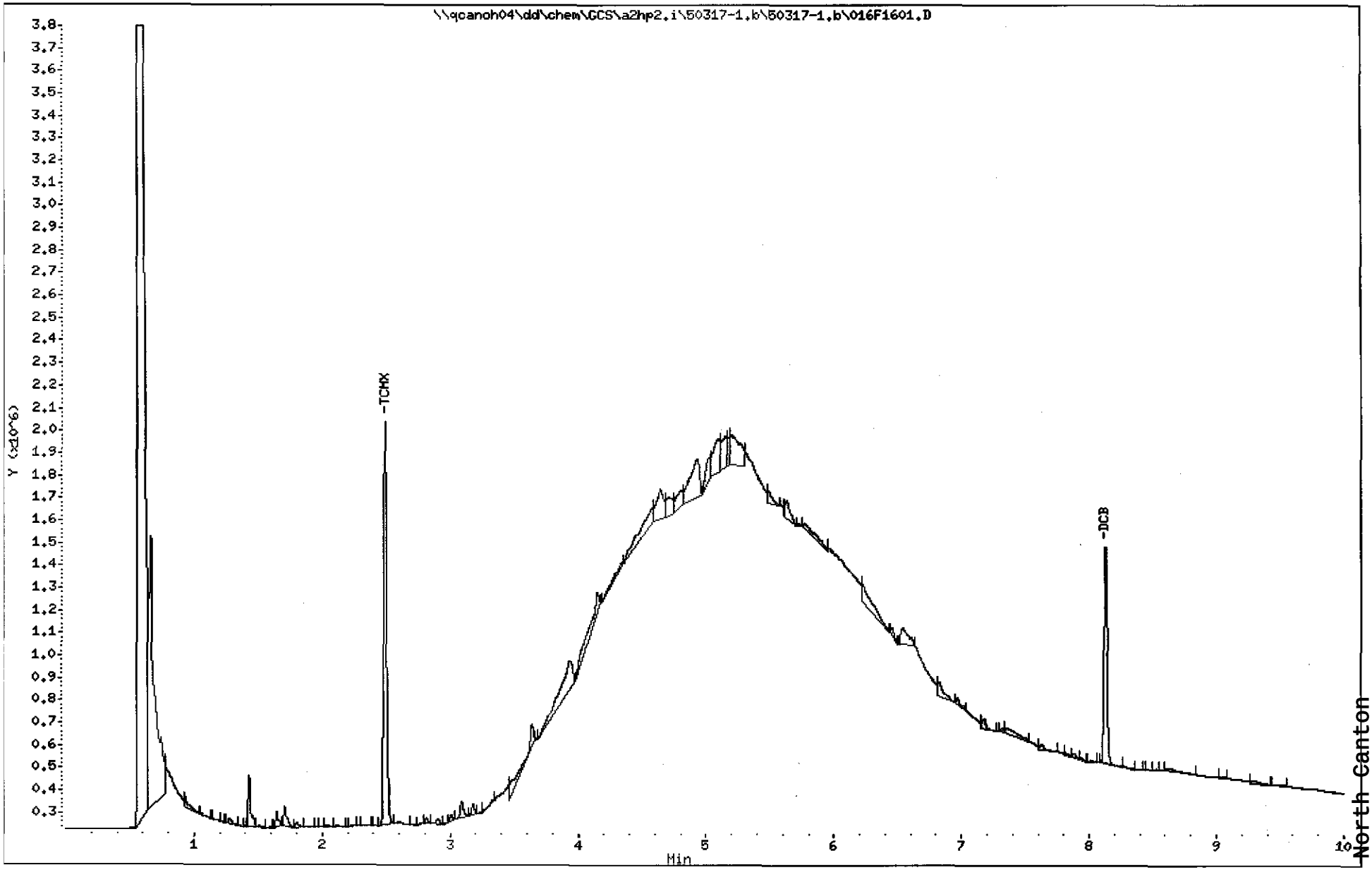
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Peaks not detected for Quant. or Qual. signal(s).								
6 AROCLOR-1248					CAS #: 12672-29-6			
Peaks not detected for Quant. or Qual. signal(s).								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Peaks not detected for Quant. or Qual. signal(s).								
$ 9 DCB					CAS #: 2051-24-3			
8.131	8.129	0.002	963985	0.01430	4.765			(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\016F1601.D
Date : 18-MAR-2005 01:29
Client ID: S-030205-JH-055
Sample Info: G5F811AA
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-056

GC Semivolatiles

Lot-Sample #...:	A5C030182-024	**Work Order #...:**	G5F831AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:25	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	1	**Initial Wgt/Vol:**	30.06 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	18	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	40	ug/kg
Aroclor 1221	ND	40	ug/kg
Aroclor 1232	ND	40	ug/kg
Aroclor 1242	ND	40	ug/kg
Aroclor 1248	ND	40	ug/kg
Aroclor 1254	ND	40	ug/kg
Aroclor 1260	ND	40	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(10 - 172)
Decachlorobipheny1	88	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 080F8001.D
Report Date: 14-Mar-2005 16:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\080F8001.D
Lab Smp Id: G5F831AA Client Smp ID: S-030205-JH-056
Inj Date : 12-MAR-2005 08:50
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F831AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 80
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.060	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	4274504	0.01891	6.290		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

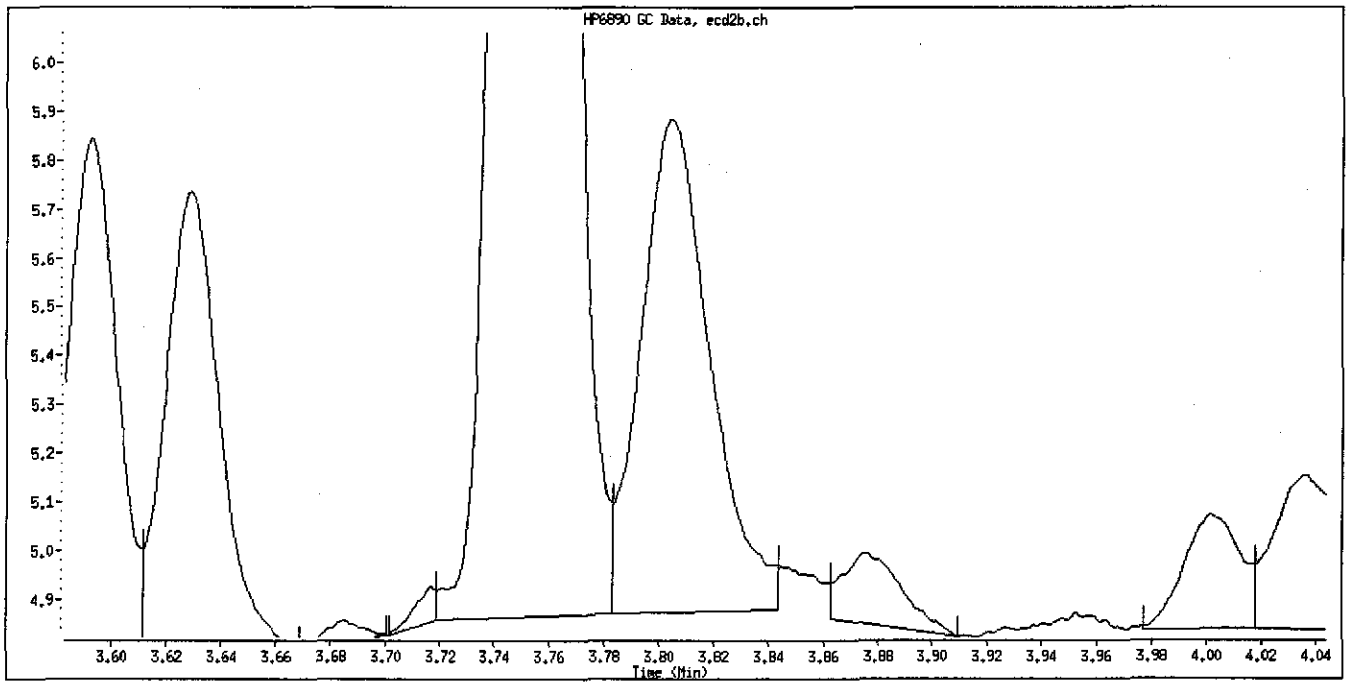
Data File: 080F8001.D
Report Date: 14-Mar-2005 16:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Operator disabled compound identification.							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.517	2.503	0.014	93551	0.04784	15.92	75.00- 125.00	100.00(M)
2.847	2.846	0.001	243938	0.06067	20.18	157.16- 261.93	260.75
3.302	3.306	-0.004	57365	0.01182	3.932	189.24- 315.41	61.32
3.592	3.596	-0.004	107306	0.02100	6.986	193.23- 322.06	114.70
3.803	3.808	-0.005	101199	0.02212	7.360	173.06- 288.43	108.18
Average of Peak Concentrations =					10.88		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1666944	0.01764	5.867		

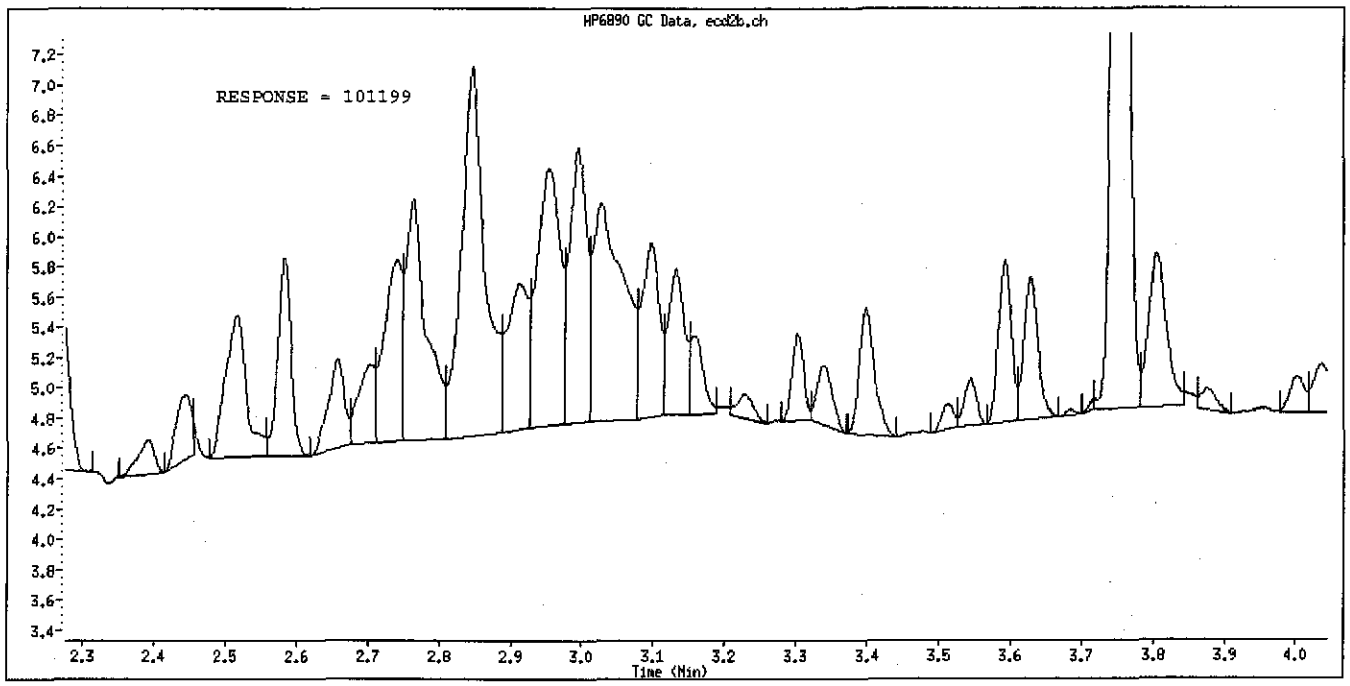
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 08:50
Instrument ID: a2hp5.i
Client ID: S-030205-JH-056
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration

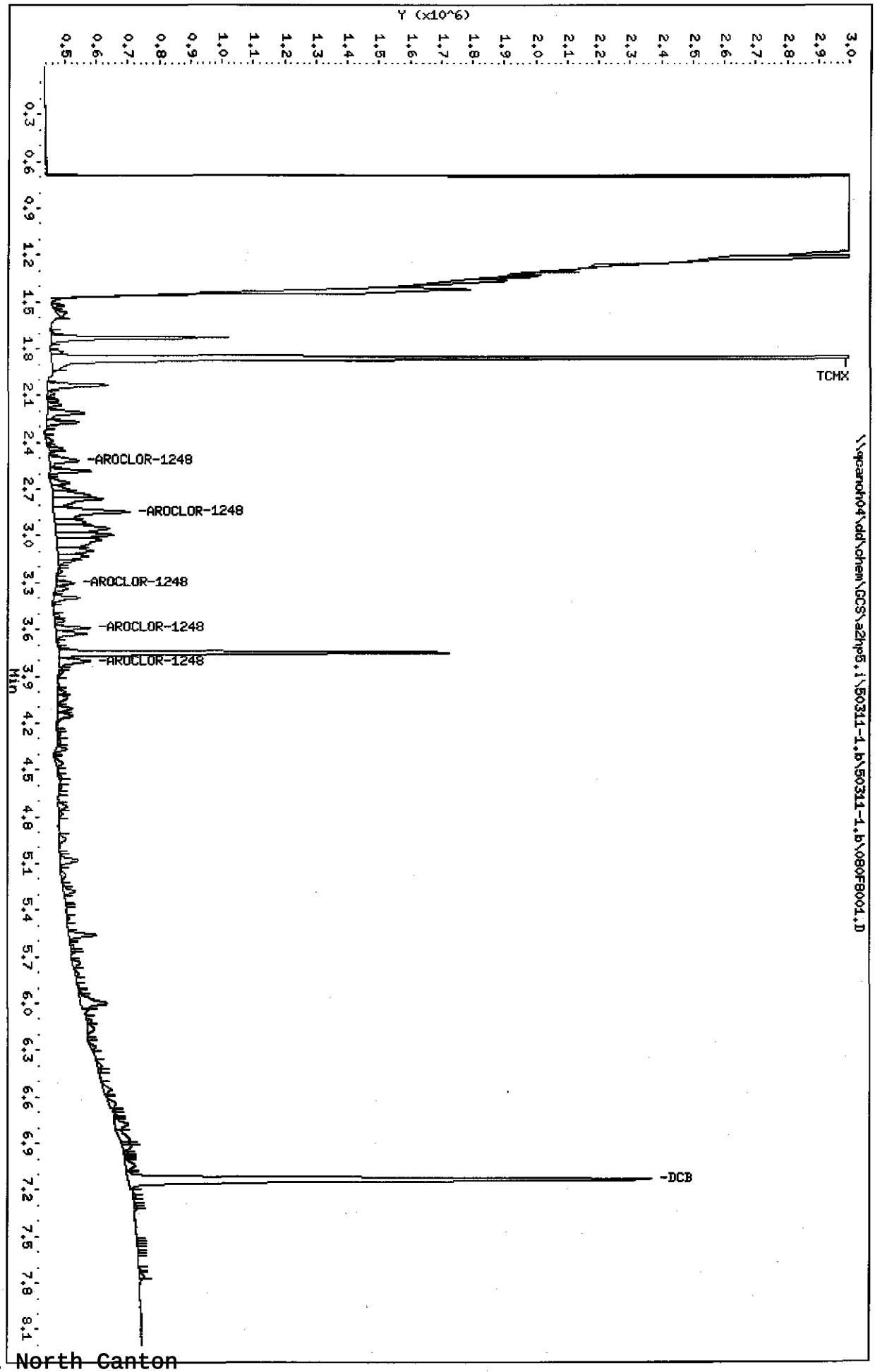


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\080F8001.D
Date : 12-MAR-2005 08:50
Client ID: S-030205-JH-056
Sample Info: G5F831AA
Volume Injected (ul): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-057

GC Semivolatiles

Lot-Sample #...: A5C030182-025 **Work Order #...:** G5F841AA **Matrix.....:** SO
Date Sampled...: 03/02/05 10:30 **Date Received..:** 03/03/05
Prep Date.....: 03/03/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5062344
Dilution Factor: 10 **Initial Wgt/Vol:** 30.16 g **Final Wgt/Vol..:** 10 mL
% Moisture.....: 12 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	370	ug/kg
Aroclor 1221	ND	370	ug/kg
Aroclor 1232	ND	370	ug/kg
Aroclor 1242	ND	370	ug/kg
Aroclor 1248	**3100**	**370**	**ug/kg**
Aroclor 1254	ND	370	ug/kg
Aroclor 1260	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	106 DIL	(10 - 172)
Decachlorobiphenyl	119 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 055F5501.D
Report Date: 14-Mar-2005 16:50

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\055F5501.D
Lab Smp Id: G5F841AA Client Smp ID: S-030205-JH-057
Inj Date : 12-MAR-2005 03:44
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F841AA,10
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 55
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.160	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	480239	0.00212	7.044		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

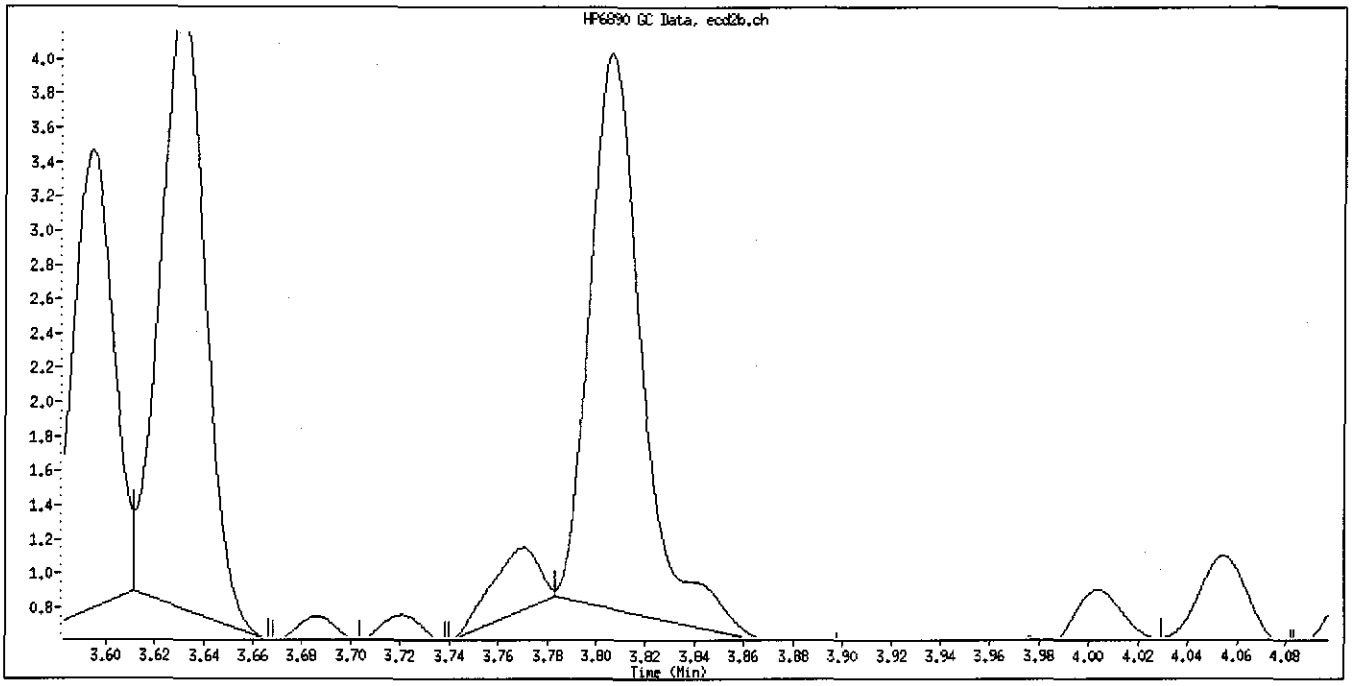
Data File: 055F5501.D
Report Date: 14-Mar-2005 16:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	1479614	0.75671	2509	75.00- 125.00	100.00(M)
2.848	2.846	0.002	6034558	1.50081	4976	157.16- 261.93	407.85
3.304	3.306	-0.002	3159539	0.65103	2158	189.24- 315.41	213.54
3.594	3.596	-0.002	2673476	0.52322	1735	193.23- 322.06	180.69
3.805	3.808	-0.003	3238656	0.70803	2348	173.06- 288.43	218.89
Average of Peak Concentrations =					2745		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.315	4.335	-0.020	276540	0.05628	186.6	80.00- 120.00	100.00(M)
4.550	4.545	0.005	81346	0.01434	47.56	87.22- 145.36	29.42
4.947	4.942	0.005	78355	0.01432	47.48	86.81- 144.68	28.33
5.317	5.364	-0.047	43018	0.01147	38.03	57.97- 96.61	15.56
6.003	5.997	0.006	181994	0.03354	111.2	85.17- 141.95	65.81
Average of Peak Concentrations =					86.17		
$ 9 DCB					CAS #: 2051-24-3		
7.140	7.135	0.005	225370	0.00238	7.906		

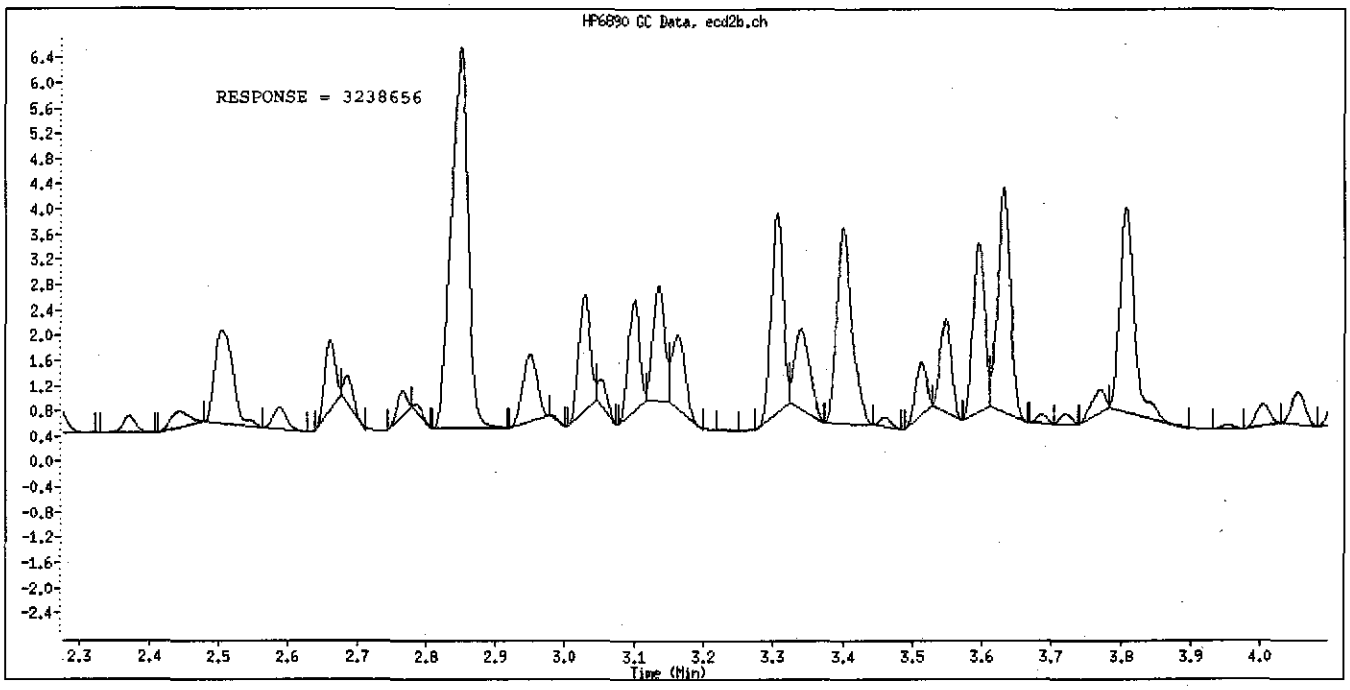
QC Flag Legend

M - Compound response manually integrated.

Data File Name: [illegible]
Inj. Date and Time: 12-MAR-2005 03:44
Instrument ID: a2hp5.i
Client ID: S-030205-JH-057
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File Name: [illegible]

Inj. Date and Time: 12-MAR-2005 03:44

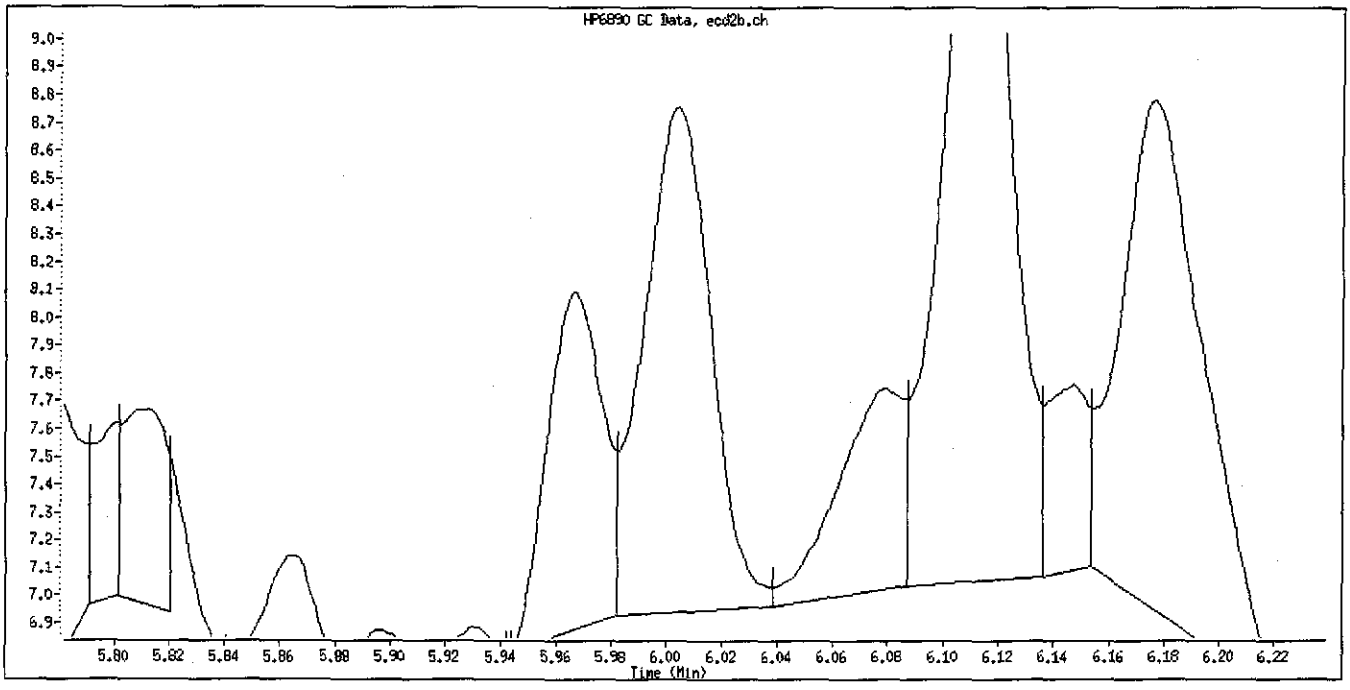
Instrument ID: a2hp5.i

Client ID: S-030205-JH-057

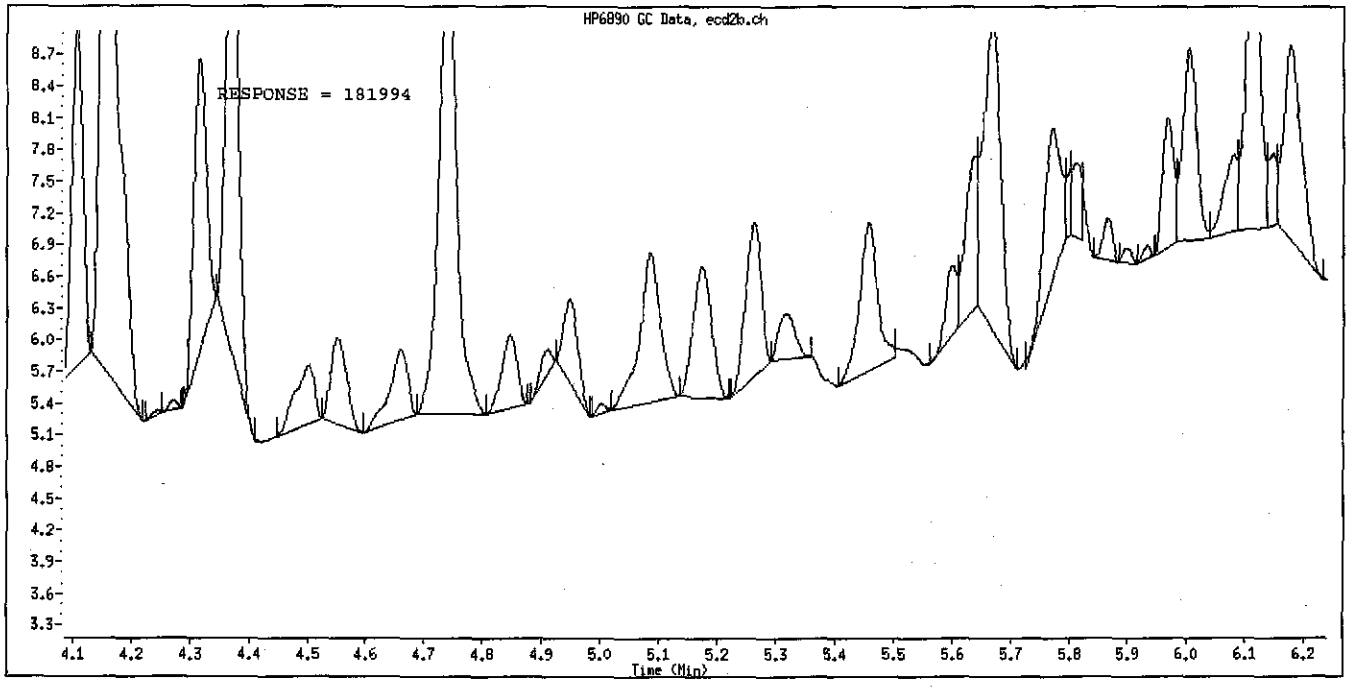
Compound Name: AROCLOR-1260

CAS #: 11096-82-5

Report Date: 03/14/2005



Original Integration



Manual Integration

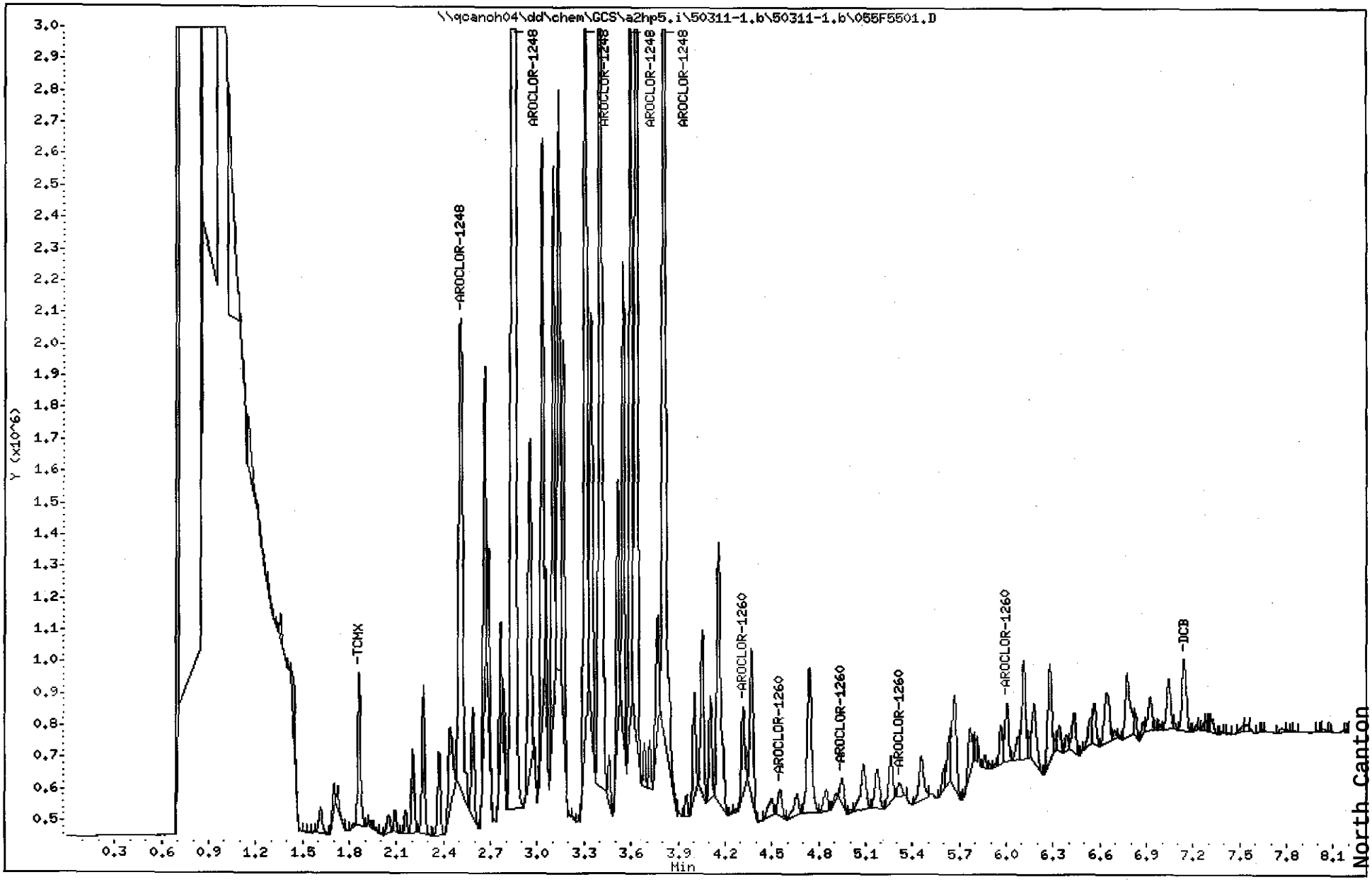
Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File: \\qoanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\055F5501.D
Date : 12-MAR-2005 03:44
Client ID: S-030205-JH-057
Sample Info: G5F841AA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-058

GC Semivolatiles

Lot-Sample #...:	A5C030182-026	**Work Order #...:**	G5F851AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:35	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	740	ug/kg
Aroclor 1221	ND	740	ug/kg
Aroclor 1232	ND	740	ug/kg
Aroclor 1242	ND	740	ug/kg
Aroclor 1248	**3300**	**740**	**ug/kg**
Aroclor 1254	ND	740	ug/kg
Aroclor 1260	ND	740	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	113 DIL	(10 - 172)
Decachlorobiphenyl	263 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 056F5601.D
Report Date: 14-Mar-2005 16:50

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\056F5601.D
Lab Smp Id: G5F851AA Client Smp ID: S-030205-JH-058
Inj Date : 12-MAR-2005 03:57
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F851AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 56
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	255208	0.00113	7.516		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

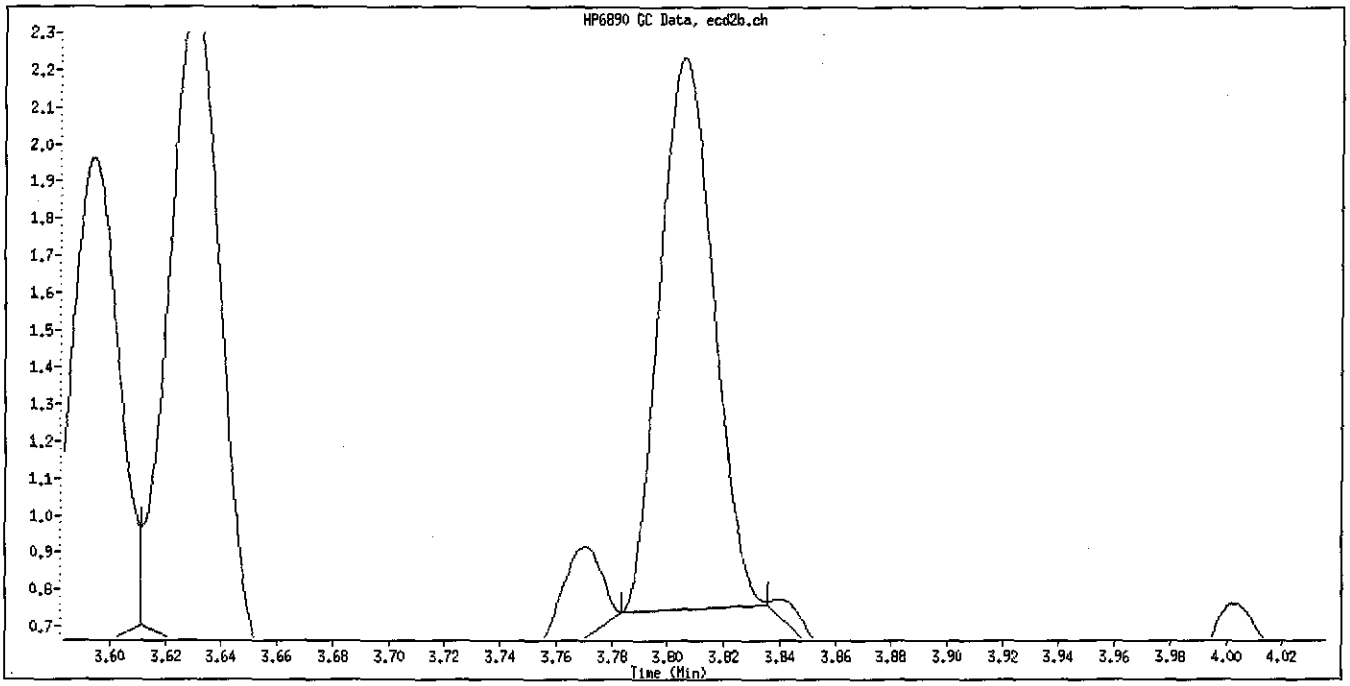
Data File: 056F5601.D
Report Date: 14-Mar-2005 16:50

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	1131893	0.57887	3854	75.00- 125.00	100.00(M)
2.848	2.846	0.002	2768370	0.68850	4584	157.16- 261.93	244.58
3.304	3.306	-0.002	1741316	0.35880	2389	189.24- 315.41	153.84
3.594	3.596	-0.002	1324837	0.25928	1726	193.23- 322.06	117.05
3.805	3.808	-0.003	1487182	0.32512	2165	173.06- 288.43	131.39
Average of Peak Concentrations =					2944		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.314	4.335	-0.021	175061	0.03563	237.2	80.00- 120.00	100.00(M)
4.555	4.545	0.010	86422	0.01524	101.5	87.22- 145.36	49.37
4.950	4.942	0.008	52698	0.00963	64.12	86.81- 144.68	30.10
5.348	5.364	-0.016	17700	0.00472	31.42	57.97- 96.61	10.11
6.004	5.997	0.007	465447	0.08577	571.0	85.17- 141.95	265.88
Average of Peak Concentrations =					201.0		
$ 9 DCB					CAS #: 2051-24-3		
7.148	7.135	0.013	248148	0.00263	17.48		(R)

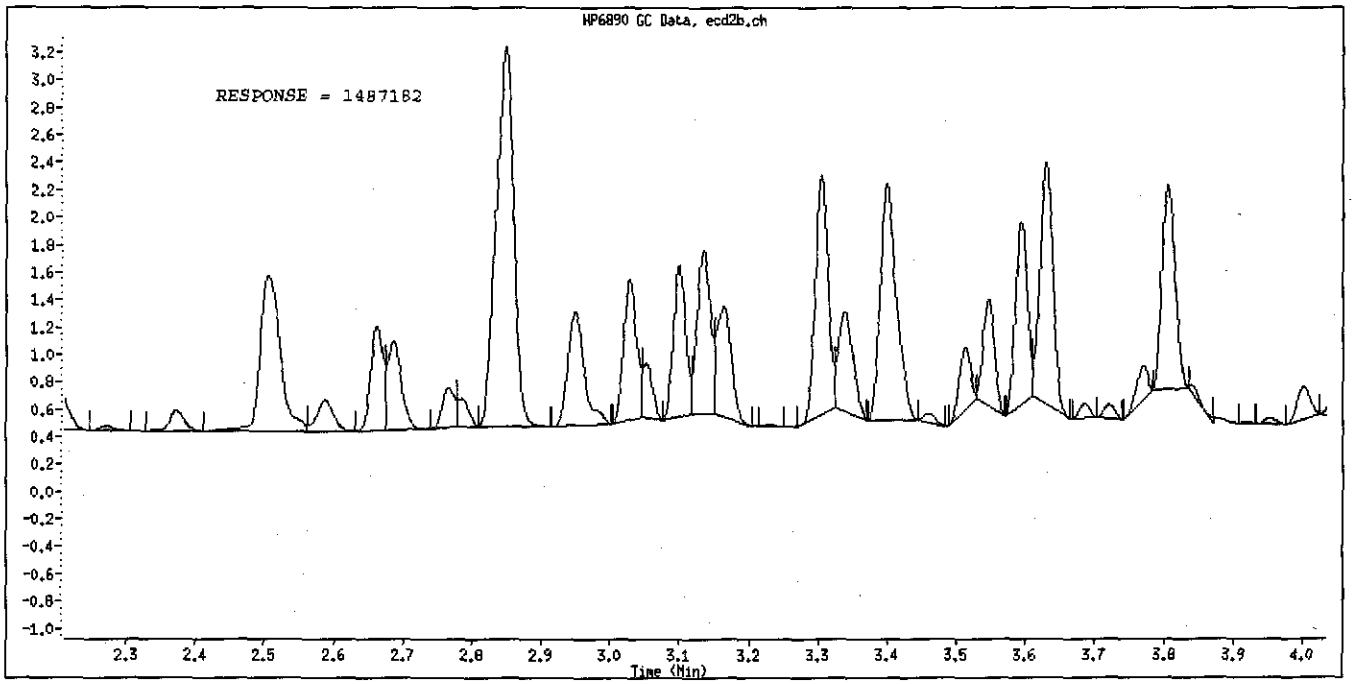
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 03:57
Instrument ID: a2hp5.i
Client ID: S-030205-JH-058
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File Name: [illegible]

Inj. Date and Time: 12-MAR-2005 03:57

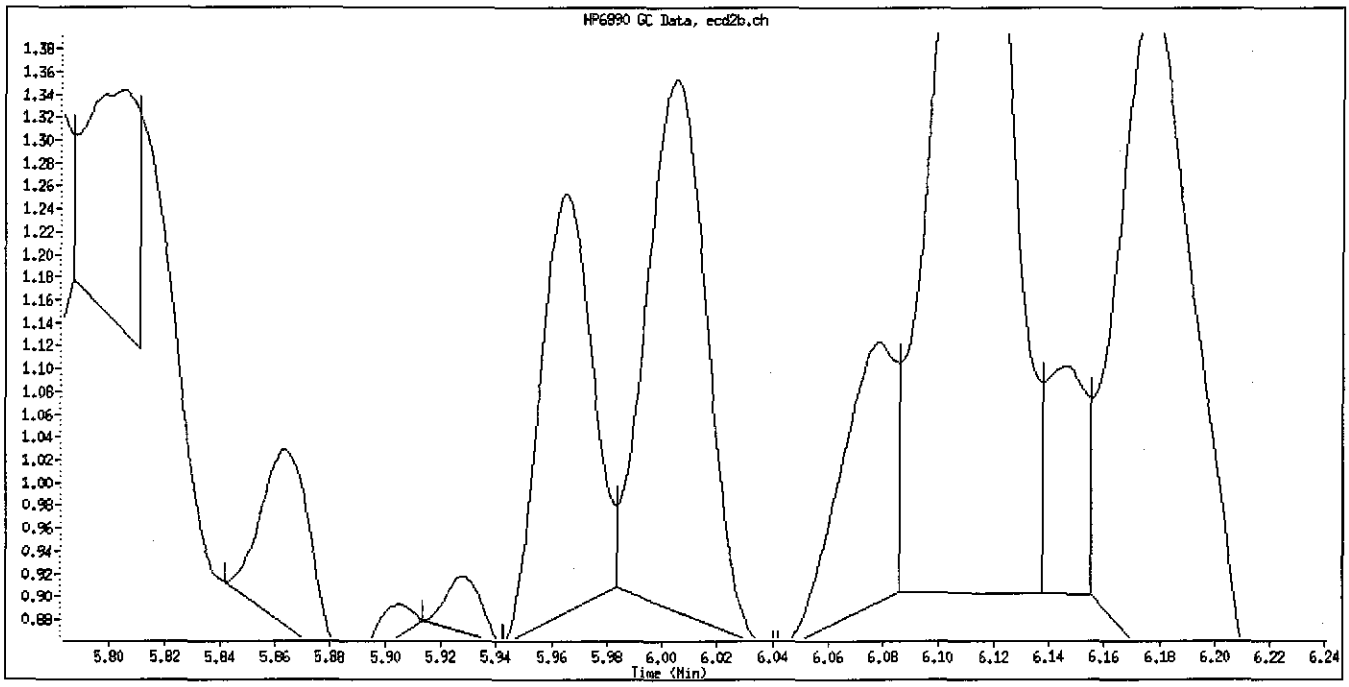
Instrument ID: a2hp5.i

Client ID: S-030205-JH-058

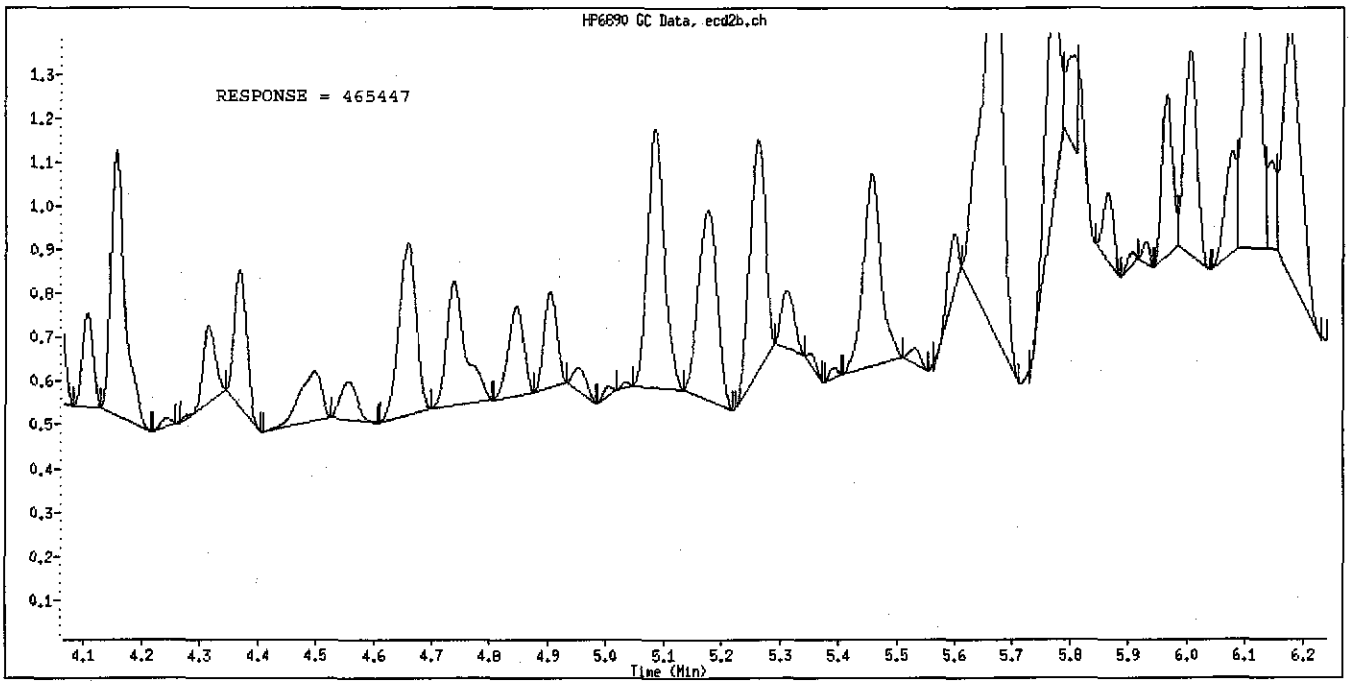
Compound Name: AROCLOR-1260

CAS #: 11096-82-5

Report Date: 03/14/2005



Original Integration



Manual Integration

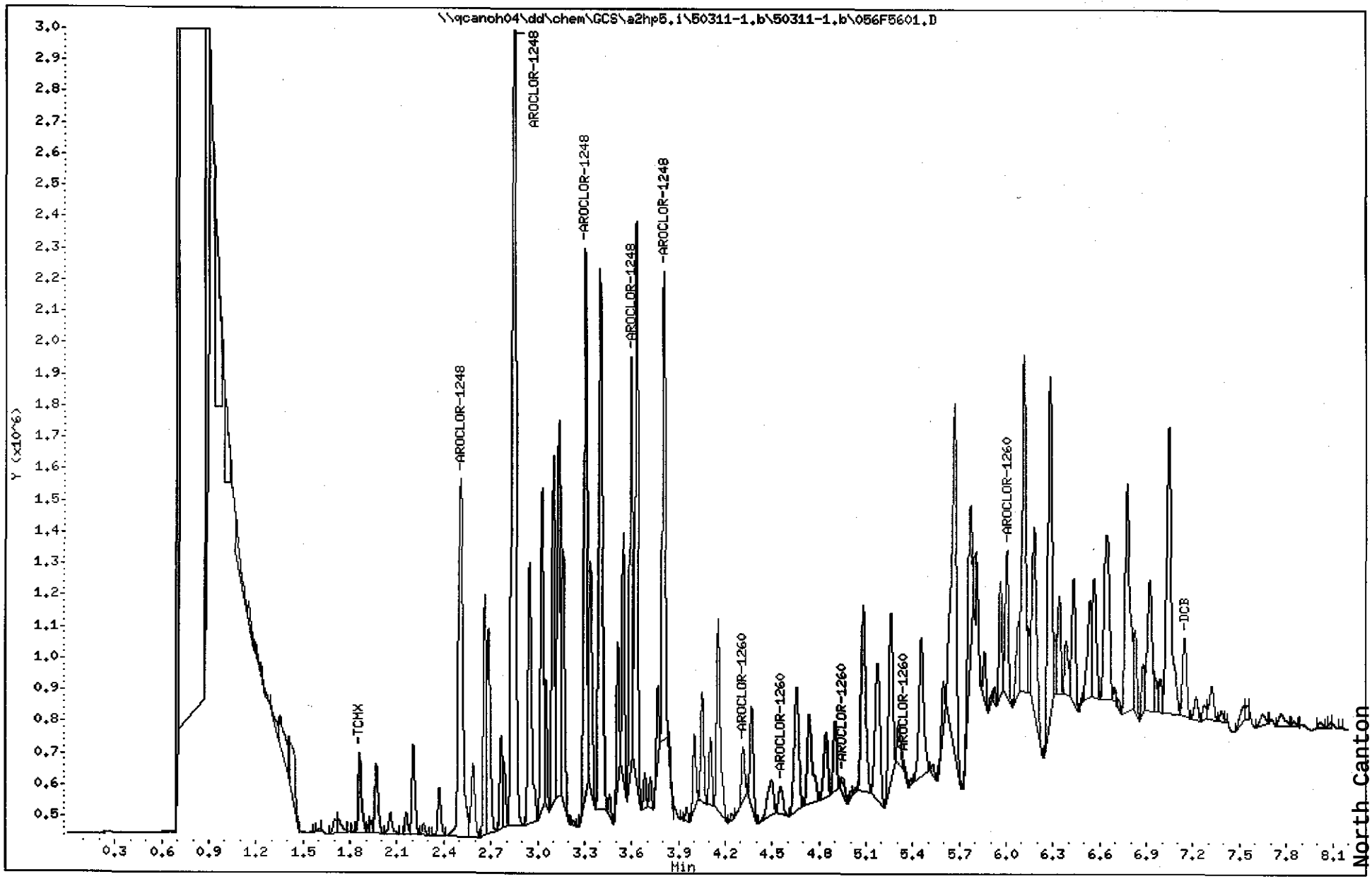
Manually Integrated By: LiC

Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\056F5601.D
Date : 12-MAR-2005 03:57
Client ID: S-030205-JH-058
Sample Info: G6F851AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-059

GC Semivolatiles

Lot-Sample #...:	A5C030182-027	**Work Order #...:**	G5F861AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:40	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.05 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	10	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	740	ug/kg
Aroclor 1221	ND	740	ug/kg
Aroclor 1232	ND	740	ug/kg
Aroclor 1242	ND	740	ug/kg
Aroclor 1248	**5000**	**740**	**ug/kg**
Aroclor 1254	ND	740	ug/kg
Aroclor 1260	ND	740	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	106 DIL	(10 - 172)
Decachlorobiphenyl	141 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 057F5701.D
Report Date: 14-Mar-2005 16:51

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\057F5701.D
Lab Smp Id: G5F861AA Client Smp ID: S-030205-JH-059
Inj Date : 12-MAR-2005 04:09
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F861AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 57
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.050	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	238689	0.00106	7.028		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

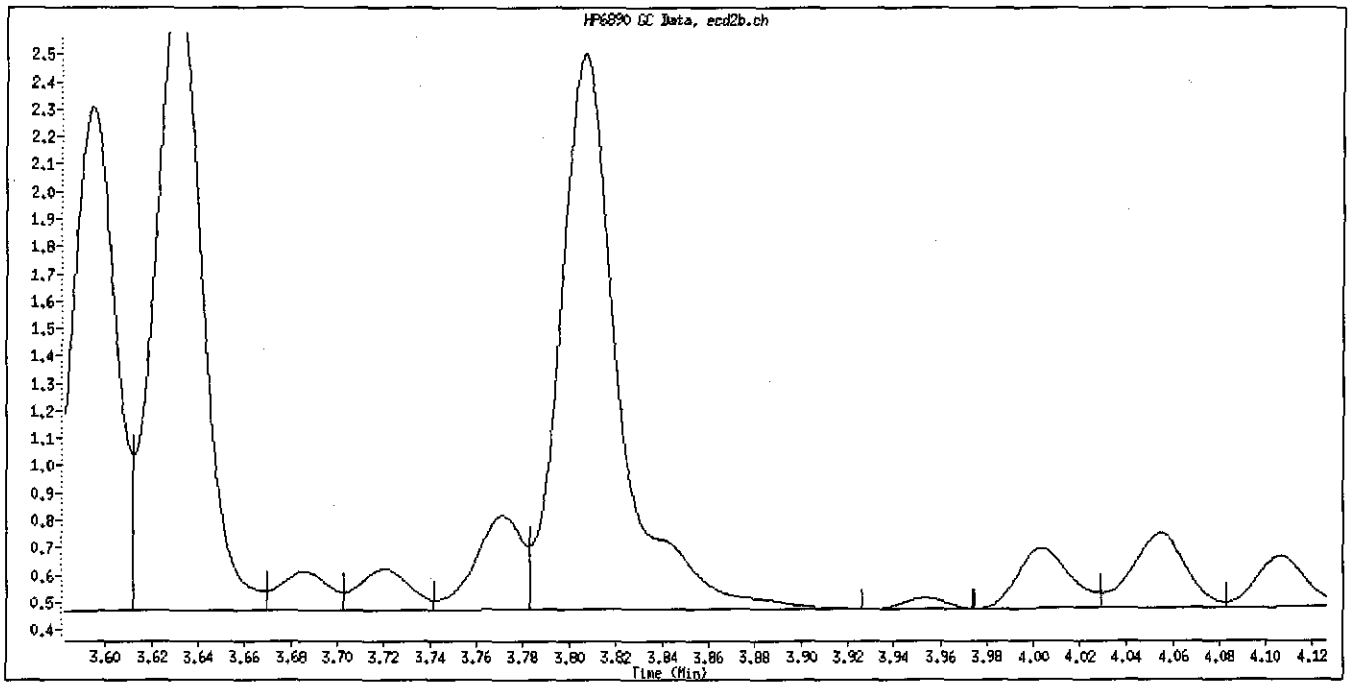
Data File: 057F5701.D
Report Date: 14-Mar-2005 16:51

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.507	2.503	0.004	1842899	0.94250	6273	75.00- 125.00	100.00(M)
2.849	2.846	0.003	4614364	1.14761	7638	157.16- 261.93	250.39
3.305	3.306	-0.001	2136876	0.44031	2930	189.24- 315.41	115.95
3.594	3.596	-0.002	1838560	0.35982	2395	193.23- 322.06	99.76
3.806	3.808	-0.002	2027530	0.44325	2950	173.06- 288.43	110.02
Average of Peak Concentrations =					4437		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
7.139	7.135	0.004	133336	0.00141	9.390		

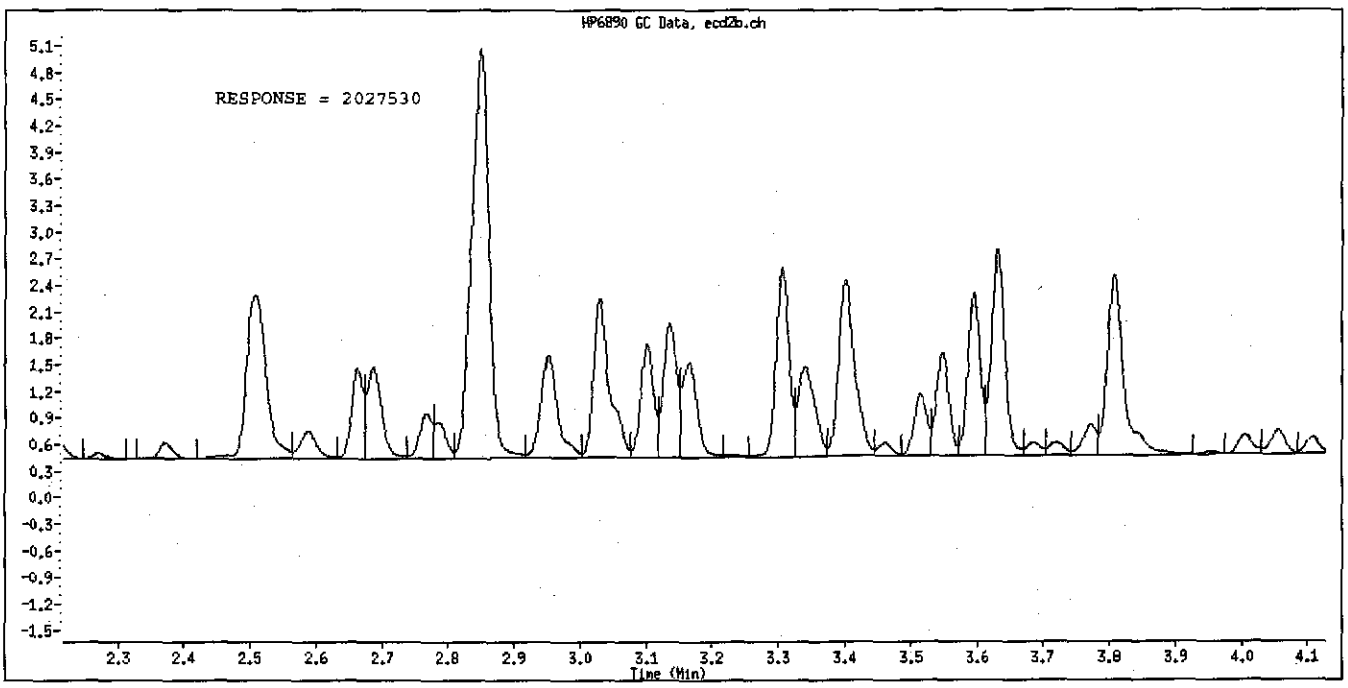
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 04:09
Instrument ID: a2hp5.i
Client ID: S-030205-JH-059
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration

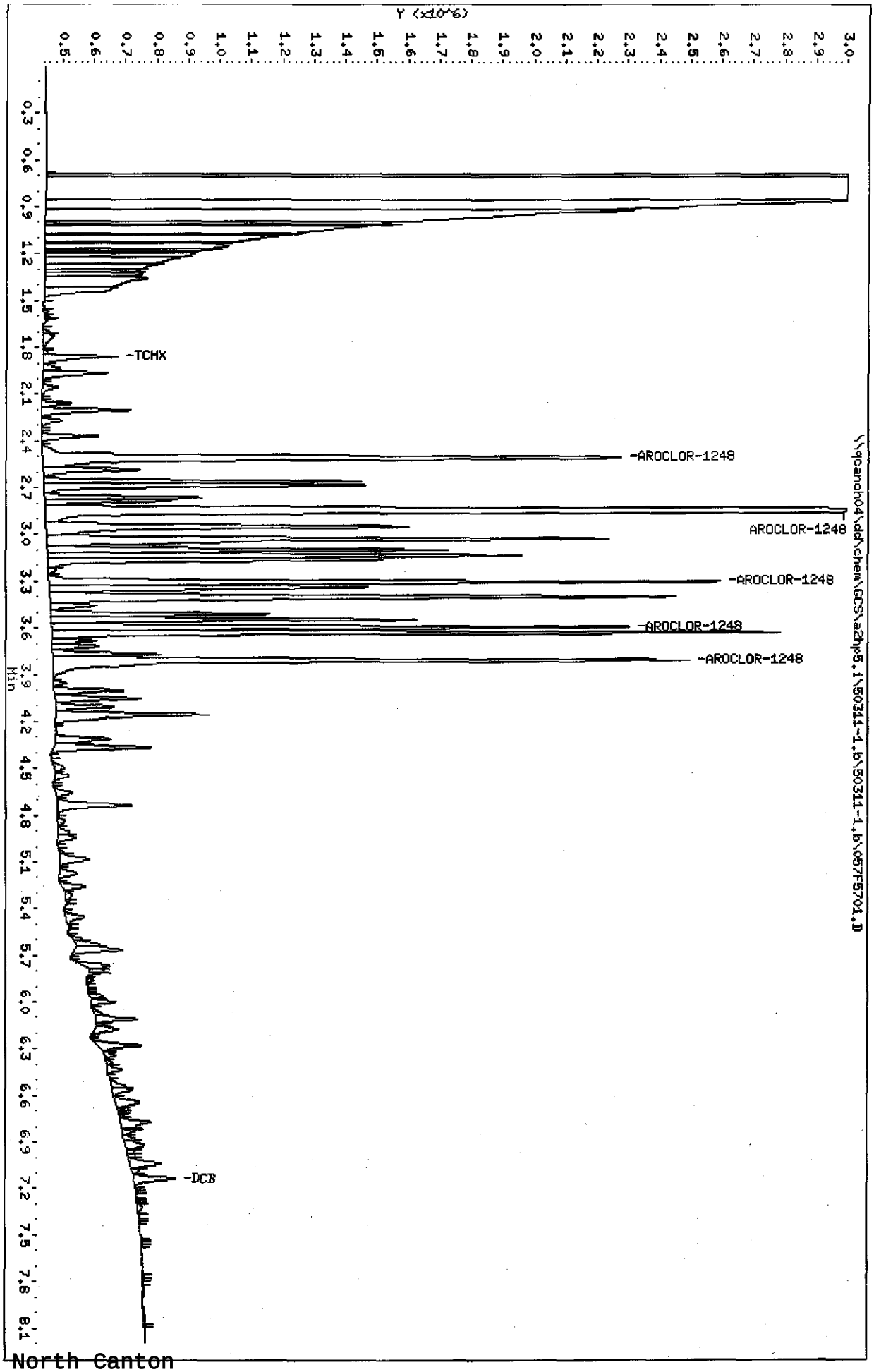


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\057F5701.D
Date : 12-MAR-2005 04:09
Client ID: S-030205-JH-059
Sample Info: C5F861AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-060

GC Semivolatiles

Lot-Sample #...:	A5C030182-028	**Work Order #...:**	G5F881AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:45	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	5	**Initial Wgt/Vol:**	30.11 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	15	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	200	ug/kg
Aroclor 1221	ND	200	ug/kg
Aroclor 1232	ND	200	ug/kg
Aroclor 1242	ND	200	ug/kg
Aroclor 1248	**320**	**200**	**ug/kg**
Aroclor 1254	ND	200	ug/kg
Aroclor 1260	ND	200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95 DIL	(10 - 172)
Decachlorobiphenyl	107 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 058F5801.D
Report Date: 14-Mar-2005 16:51

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\058F5801.D
Lab Smp Id: G5F881AA Client Smp ID: S-030205-JH-060
Inj Date : 12-MAR-2005 04:21
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F881AA,5
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 58
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	855134	0.00378	6.282		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

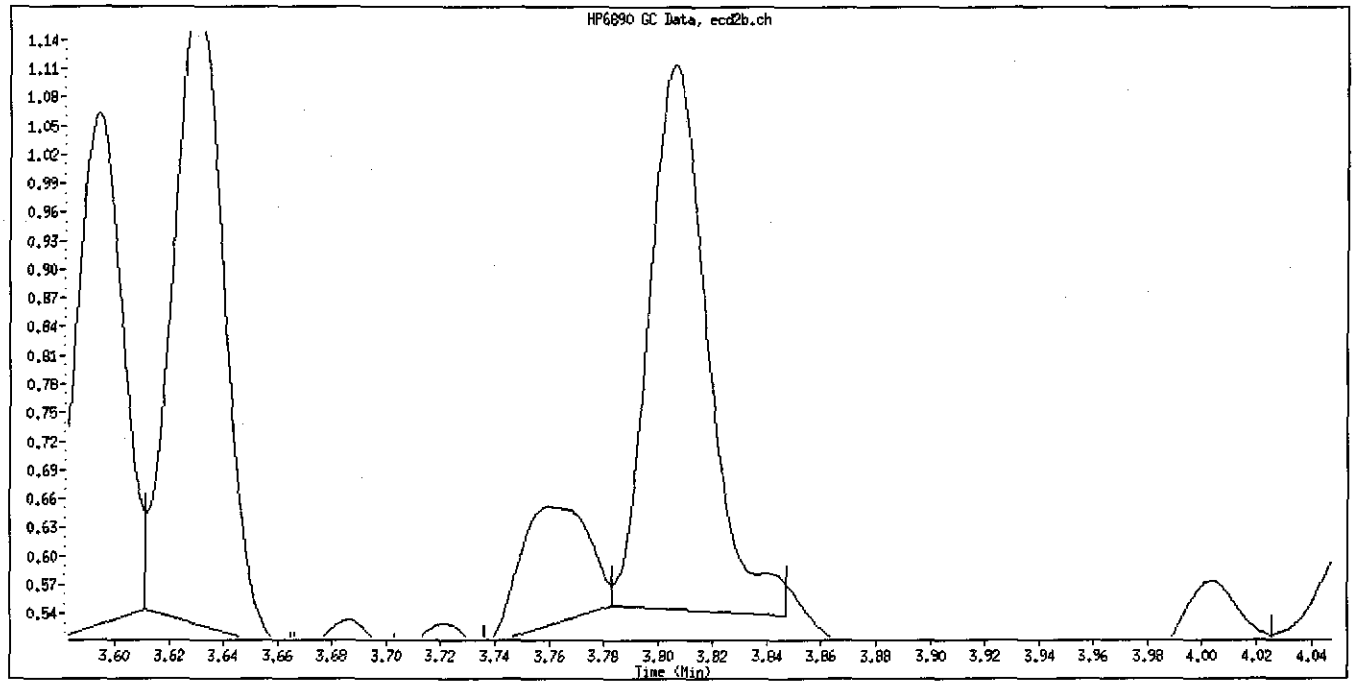
Data File: 058F5801.D
Report Date: 14-Mar-2005 16:51

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	420486	0.21505	357.1	75.00- 125.00	100.00(M)
2.848	2.846	0.002	883151	0.21964	364.7	157.16- 261.93	210.03
3.304	3.306	-0.002	680603	0.14024	232.9	189.24- 315.41	161.86
3.593	3.596	-0.003	535252	0.10475	174.0	193.23- 322.06	127.29
3.806	3.808	-0.002	569903	0.12459	206.9	173.06- 288.43	135.53
Average of Peak Concentrations =					267.1		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	404919	0.00428	7.114		

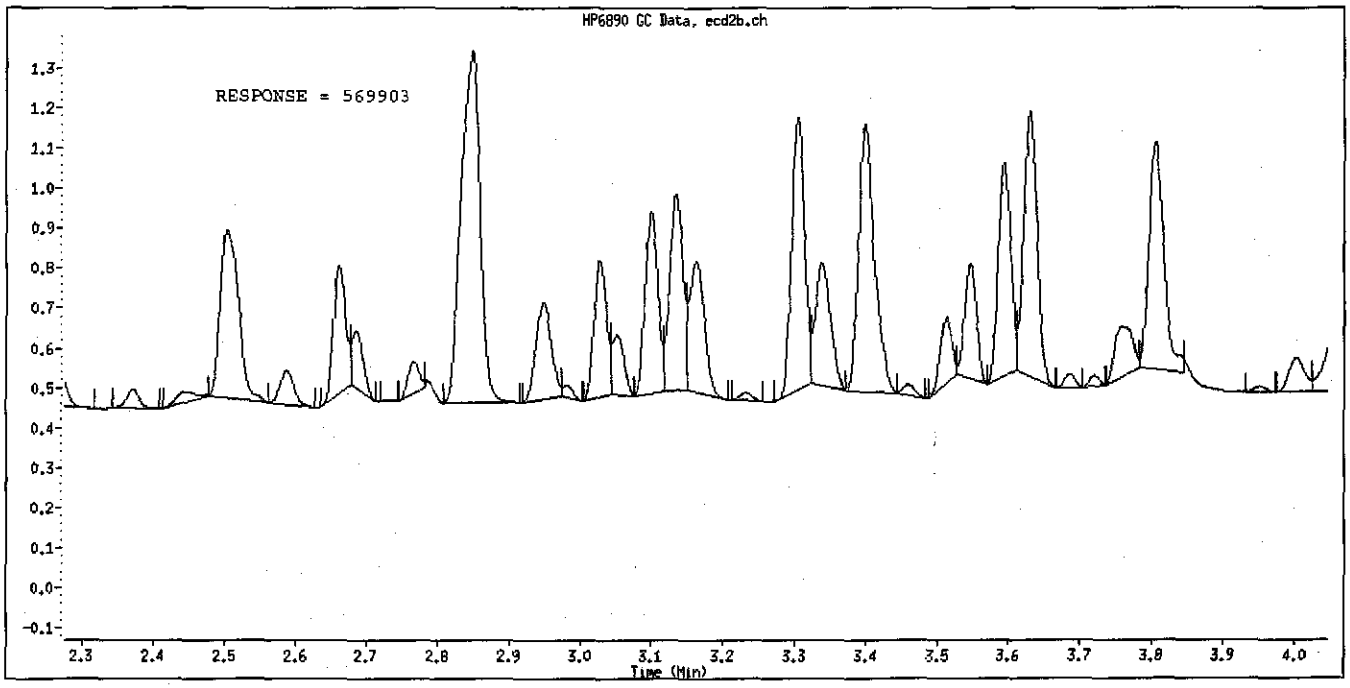
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 04:21
Instrument ID: a2hp5.i
Client ID: S-030205-JH-060
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



Original Integration

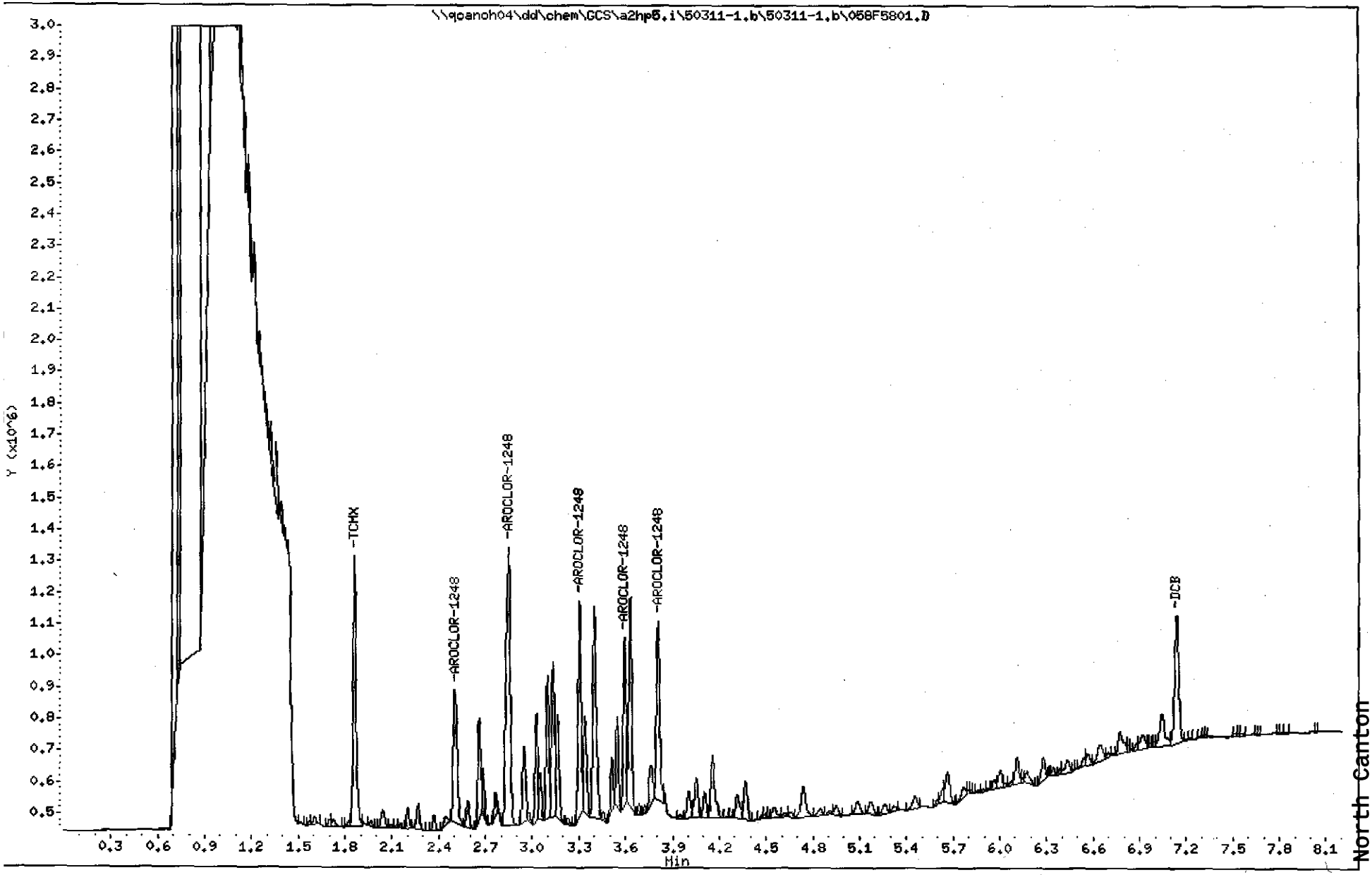


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\058F5801.D
Date : 12-MAR-2005 04:21
Client ID: S-030205-JH-060
Sample Info: G5F881AA,5
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-061

GC Semivolatiles

Lot-Sample #...:	A5C030182-029	**Work Order #...:**	G5F891AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 10:50	**Date Received..:**	03/03/05		
Prep Date.....:	03/03/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062344				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	740	ug/kg
Aroclor 1221	ND	740	ug/kg
Aroclor 1232	ND	740	ug/kg
Aroclor 1242	ND	740	ug/kg
Aroclor 1248	**5300**	**740**	**ug/kg**
Aroclor 1254	ND	740	ug/kg
Aroclor 1260	ND	740	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	127 DIL	(10 - 172)
Decachlorobiphenyl	292 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 059F5901.D
Report Date: 14-Mar-2005 16:51

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\059F5901.D
Lab Smp Id: G5F891AA Client Smp ID: S-030205-JH-061
Inj Date : 12-MAR-2005 04:33
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F891AA,20
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 59
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	287429	0.00127	8.454		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

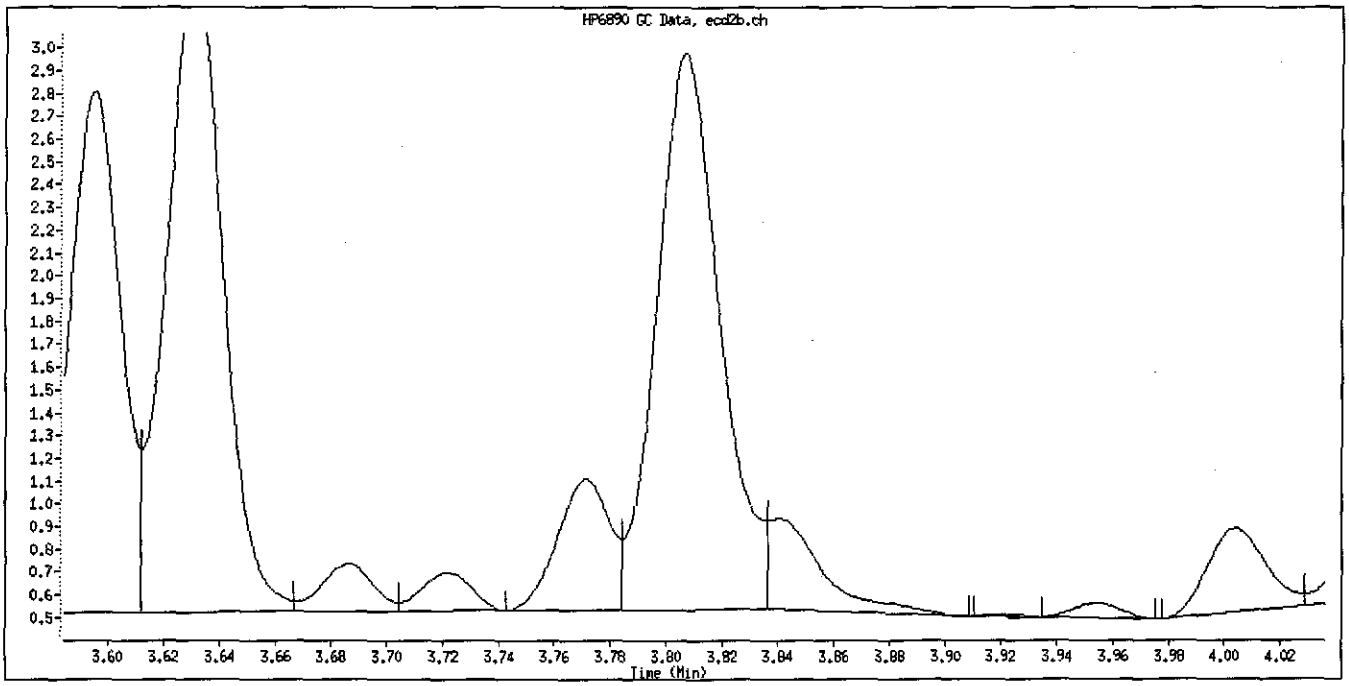
Data File: 059F5901.D
Report Date: 14-Mar-2005 16:51

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.503	0.001	1764116	0.90221	5999	75.00- 125.00	100.00(M)
2.848	2.846	0.002	4295786	1.06838	7104	157.16- 261.93	243.51
3.305	3.306	-0.001	2900896	0.59773	3974	189.24- 315.41	164.44
3.595	3.596	-0.001	2286855	0.44755	2976	193.23- 322.06	129.63
3.806	3.808	-0.002	2438342	0.53306	3544	173.06- 288.43	138.22
Average of Peak Concentrations =					4719		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.315	4.335	-0.020	270764	0.05511	366.4	80.00- 120.00	100.00(M)
4.557	4.545	0.012	101297	0.01786	118.8	87.22- 145.36	37.41
4.951	4.942	0.009	56896	0.01040	69.13	86.81- 144.68	21.01
5.349	5.364	-0.015	49130	0.01310	87.10	57.97- 96.61	18.14
6.006	5.997	0.009	721899	0.13302	884.4	85.17- 141.95	266.62
Average of Peak Concentrations =					305.2		
$ 9 DCB					CAS #: 2051-24-3		
7.149	7.135	0.014	275941	0.00292	19.41		(R)

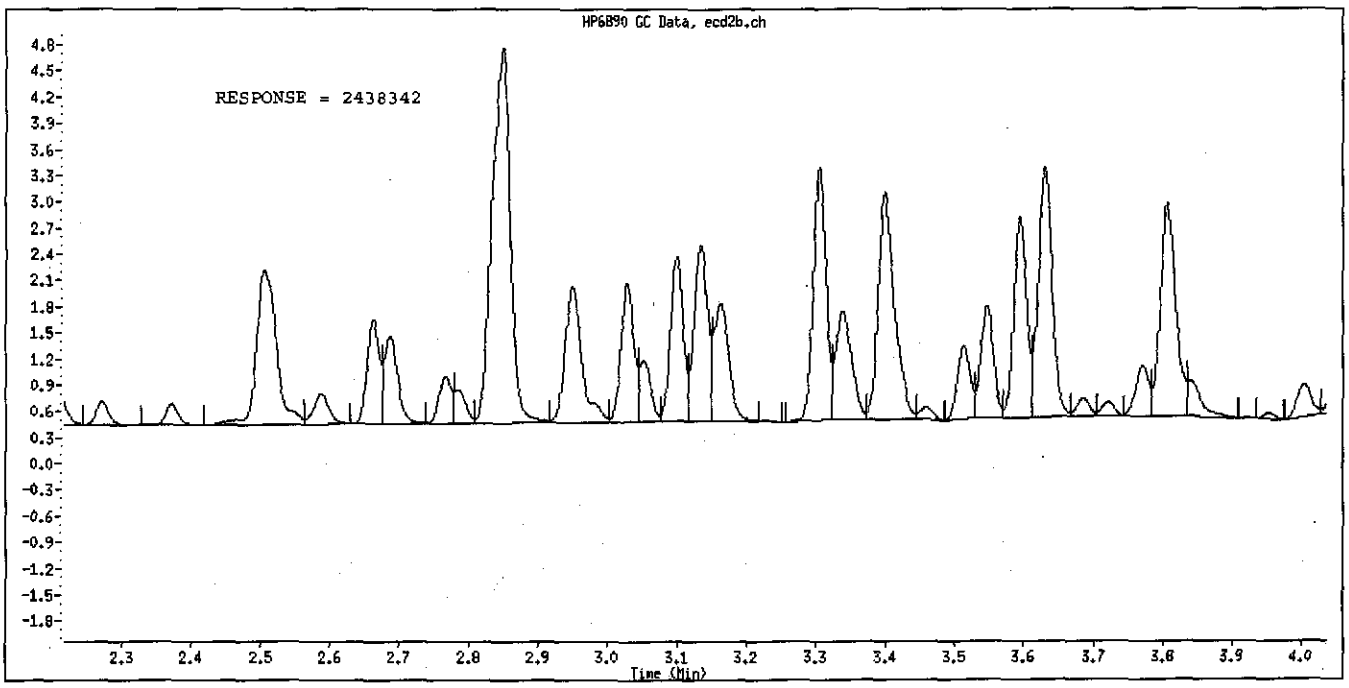
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 04:33
Instrument ID: a2hp5.i
Client ID: S-030205-JH-061
Compound Name: AROCLOR-1249
CAS #: 12672-29-6
Report Date: 03/14/2005



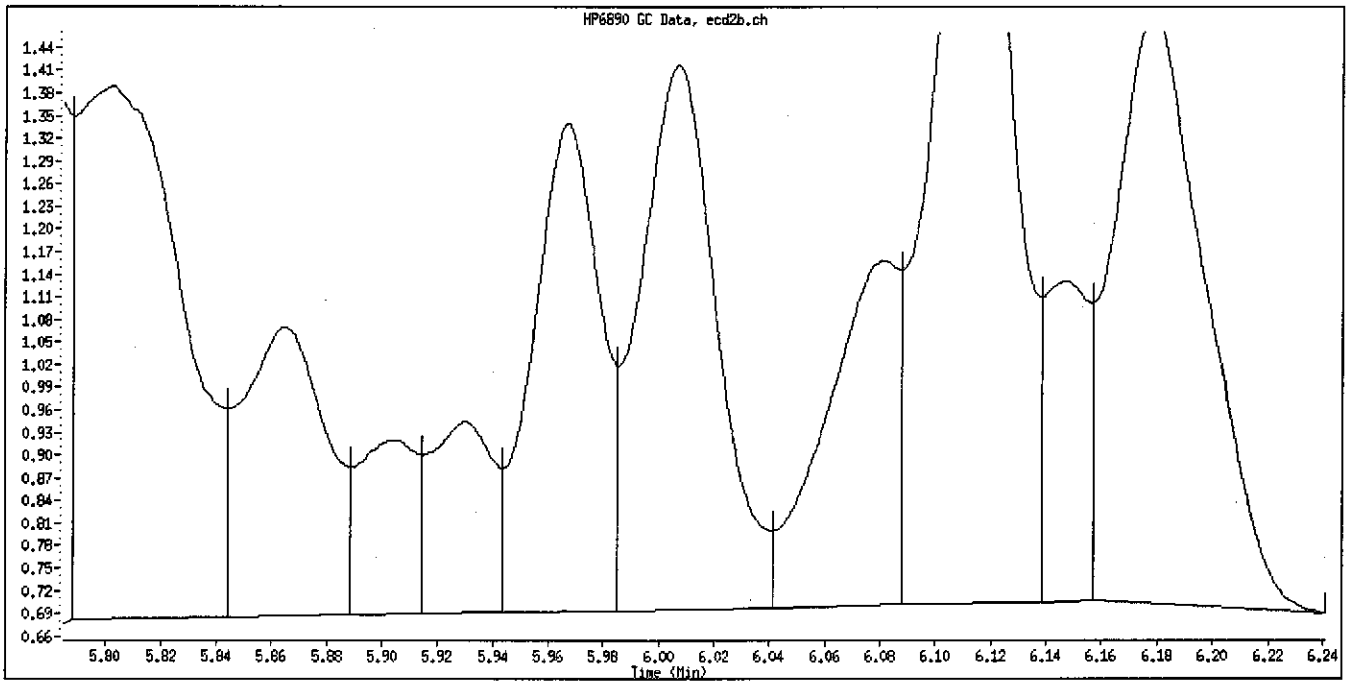
Original Integration



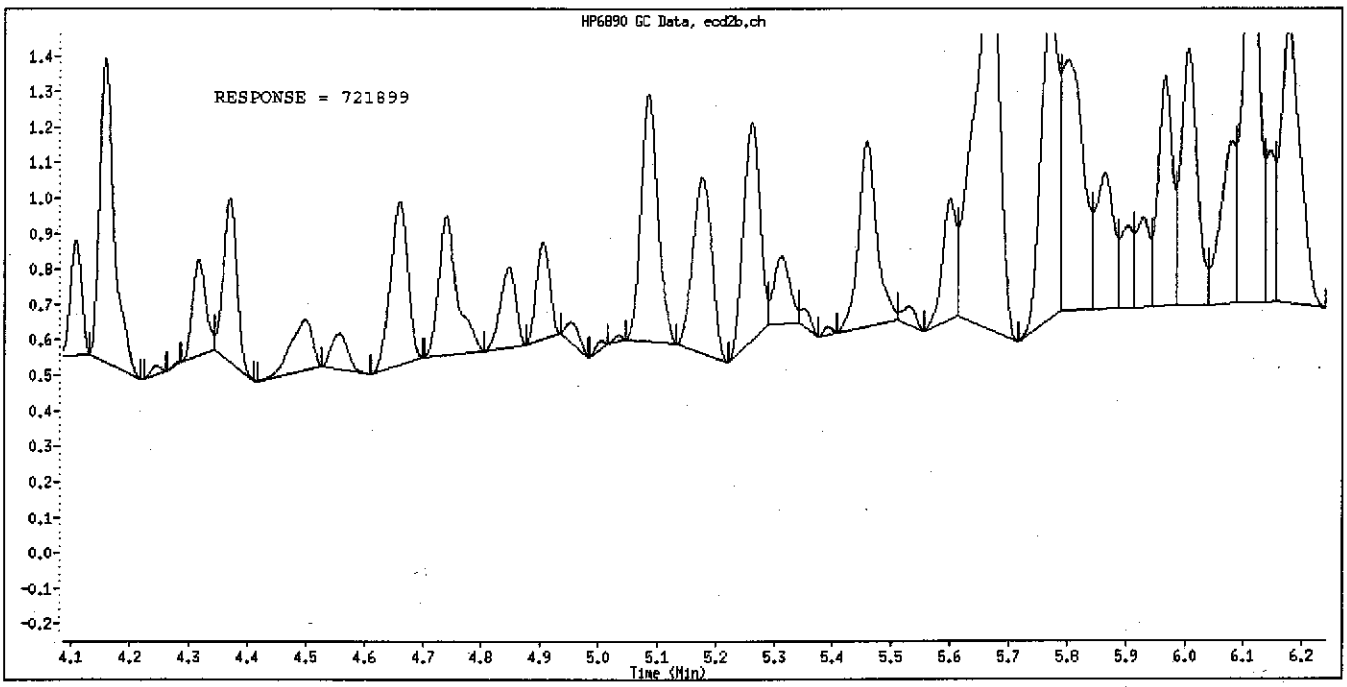
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 04:33
Instrument ID: a2hp5.i
Client ID: S-030205-JH-061
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



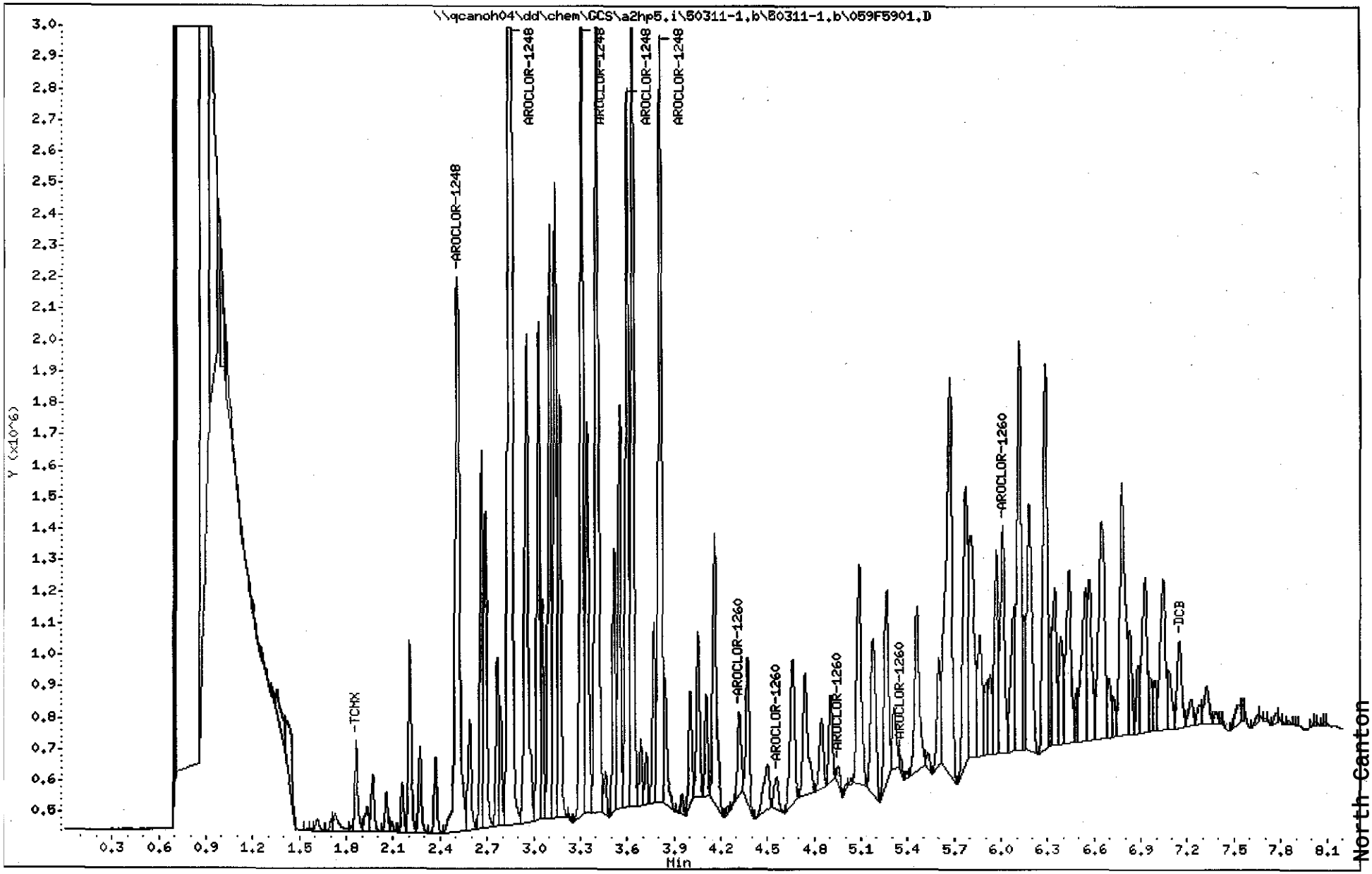
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\059F5901.D
Date : 12-MAR-2005 04:33
Client ID: S-030205-JH-061
Sample Info: G5F891AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-062

GC Semivolatiles

Lot-Sample #...:	A5C030182-030	**Work Order #...:**	G5F9C1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 11:00	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/12/05		
Prep Batch #...:	5062354				
Dilution Factor:	50	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	ND	1900	ug/kg
Aroclor 1248	**23000**	**1900**	**ug/kg**
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	300 DIL,*	(10 - 172)
Decachlorobiphenyl	358 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 081F8101.D
Report Date: 14-Mar-2005 16:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\081F8101.D
Lab Smp Id: G5F9C1AA Client Smp ID: S-030205-JH-062
Inj Date : 12-MAR-2005 09:03
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F9C1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 81
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	271439	0.00120	20.01		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

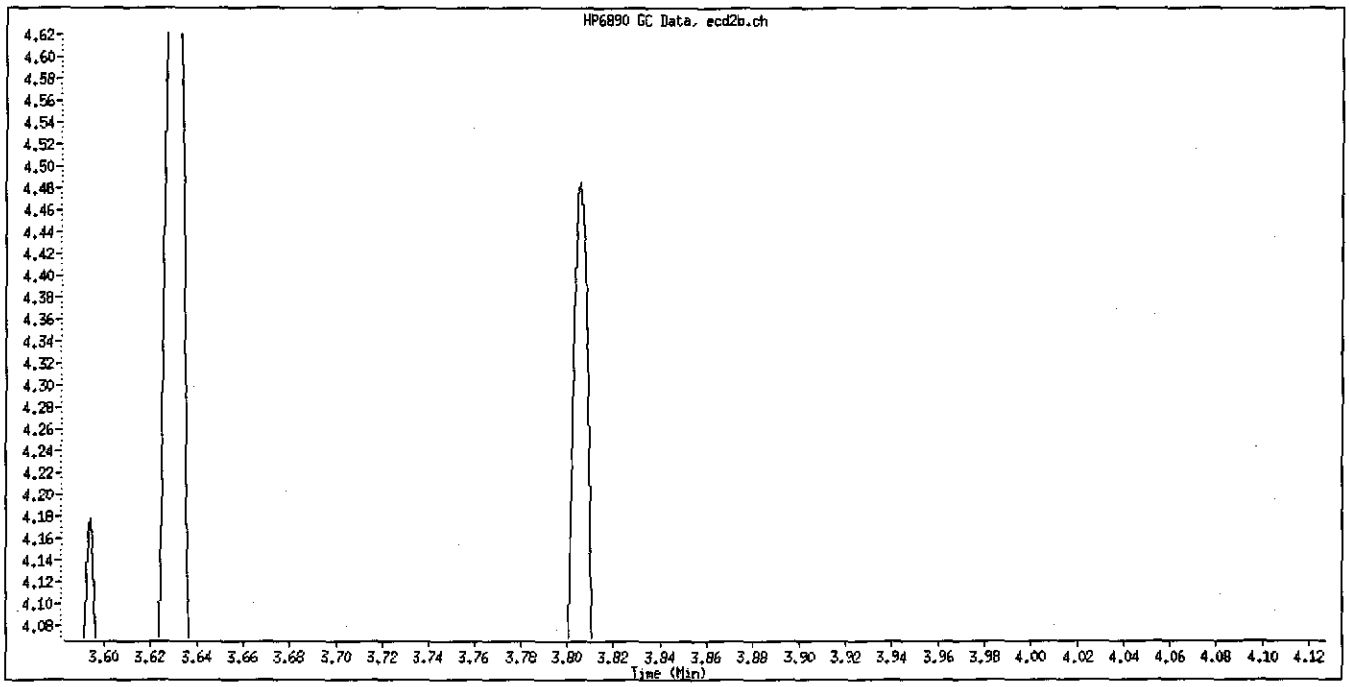
Data File: 081F8101.D
Report Date: 14-Mar-2005 16:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
5 AROCLOR-1242					CAS #: 53469-21-9			
Compound Not Detected								
6 AROCLOR-1248					CAS #: 12672-29-6			
2.504	2.503	0.001	2988638	1.52845	25470	75.00- 125.00	100.00	(M)
2.848	2.846	0.002	8850103	2.20105	36680	157.16- 261.93	296.12	
3.303	3.306	-0.003	3999725	0.82415	13740	189.24- 315.41	133.83	
3.593	3.596	-0.003	3654104	0.71514	11920	193.23- 322.06	122.27	
3.805	3.808	-0.003	3963264	0.86644	14440	173.06- 288.43	132.61	
Average of Peak Concentrations =					20450			
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
4.314	4.335	-0.021	392961	0.07997	1333	80.00- 120.00	100.00	(M)
4.551	4.545	0.006	78427	0.01383	230.5	87.22- 145.36	19.96	
4.945	4.942	0.003	95333	0.01742	290.4	86.81- 144.68	24.26	
5.388	5.364	0.024	4945	0.00132	21.97	57.97- 96.61	1.26	
6.005	5.997	0.008	107220	0.01976	329.3	85.17- 141.95	27.29	
Average of Peak Concentrations =					441.0			
$ 9 DCB					CAS #: 2051-24-3			
7.140	7.135	0.005	135226	0.00143	23.85			(R)

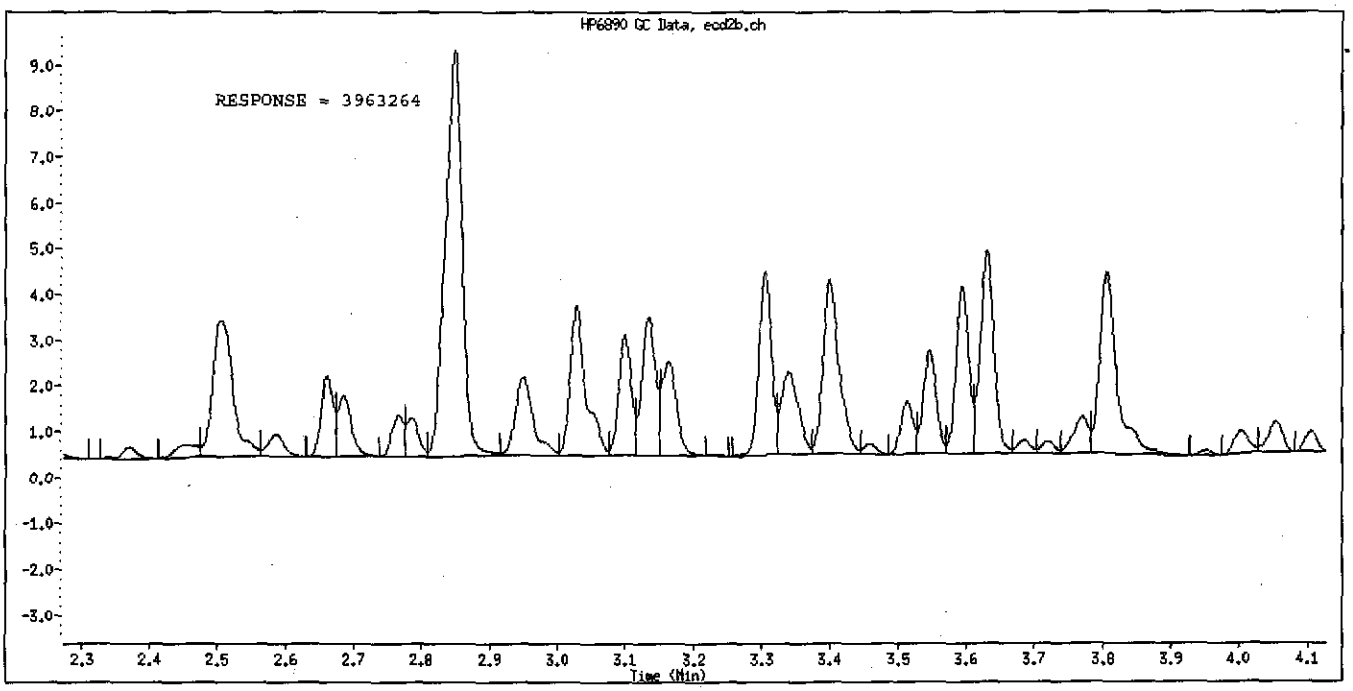
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 09:03
Instrument ID: a2hp5.i
Client ID: S-030205-JH-062
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/14/2005



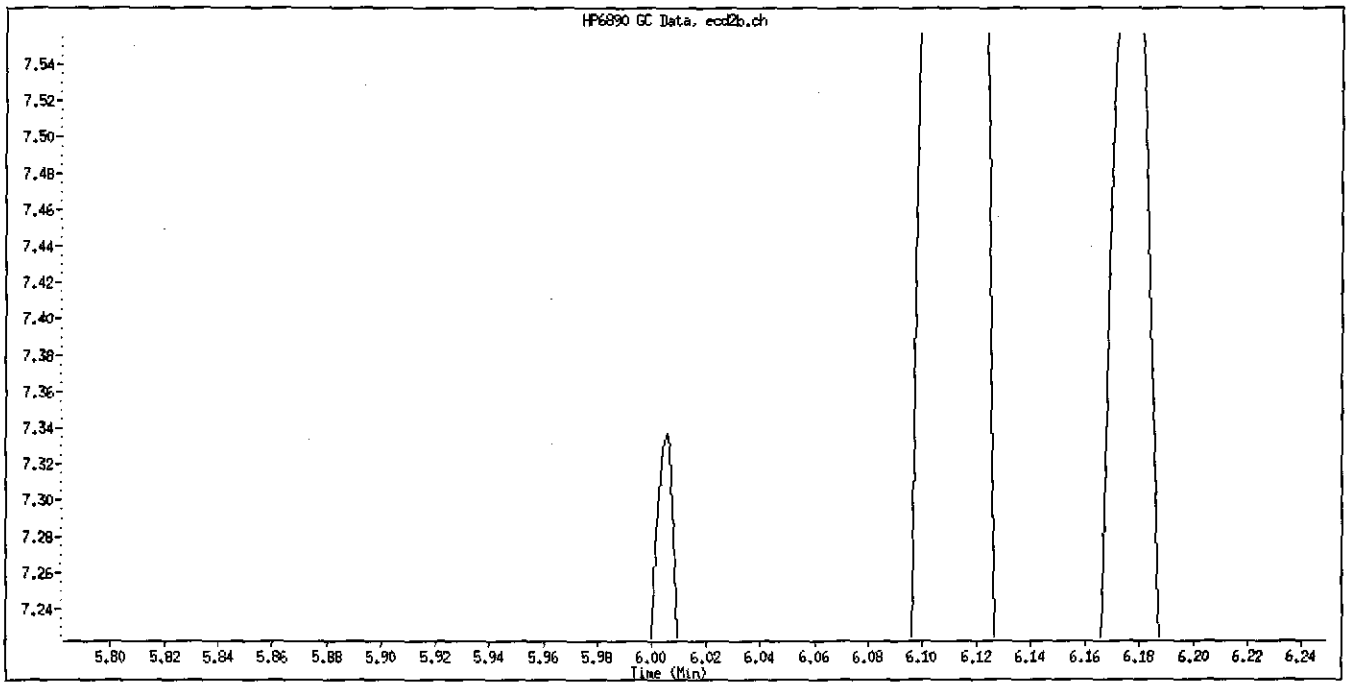
Original Integration



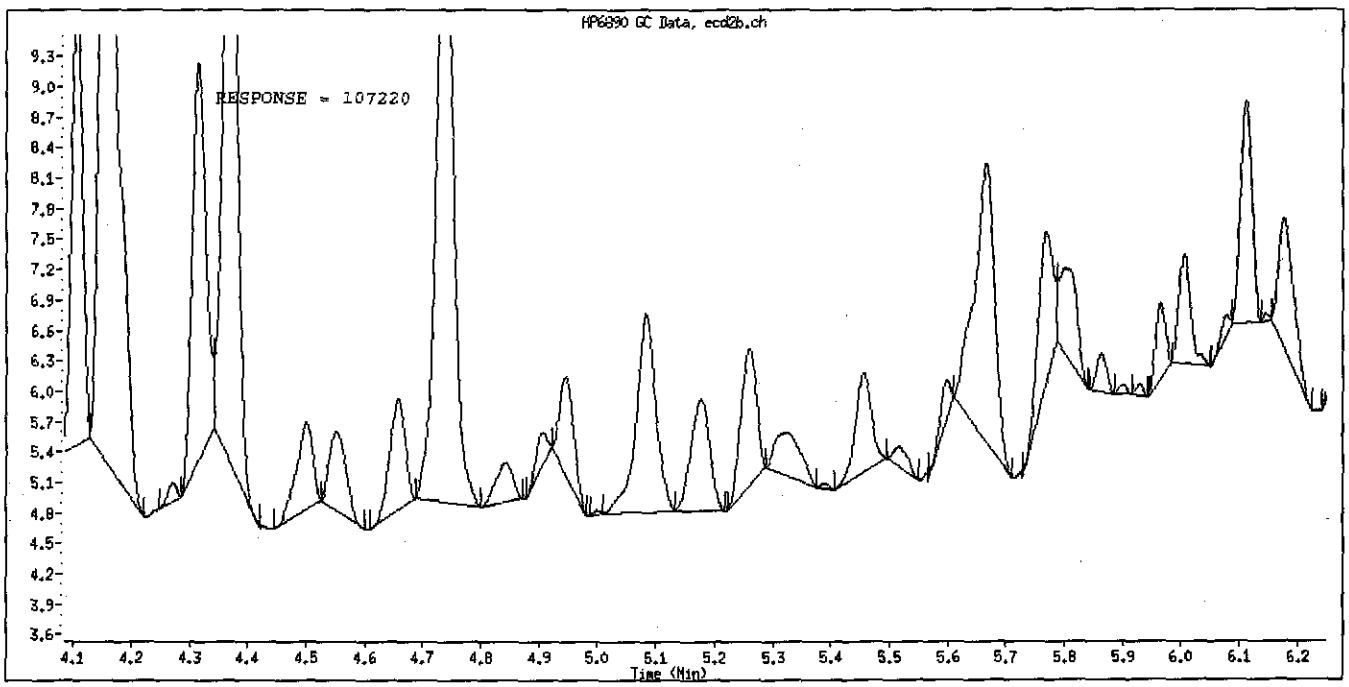
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 09:03
Instrument ID: a2hp5.i
Client ID: S-030205-JH-062
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration



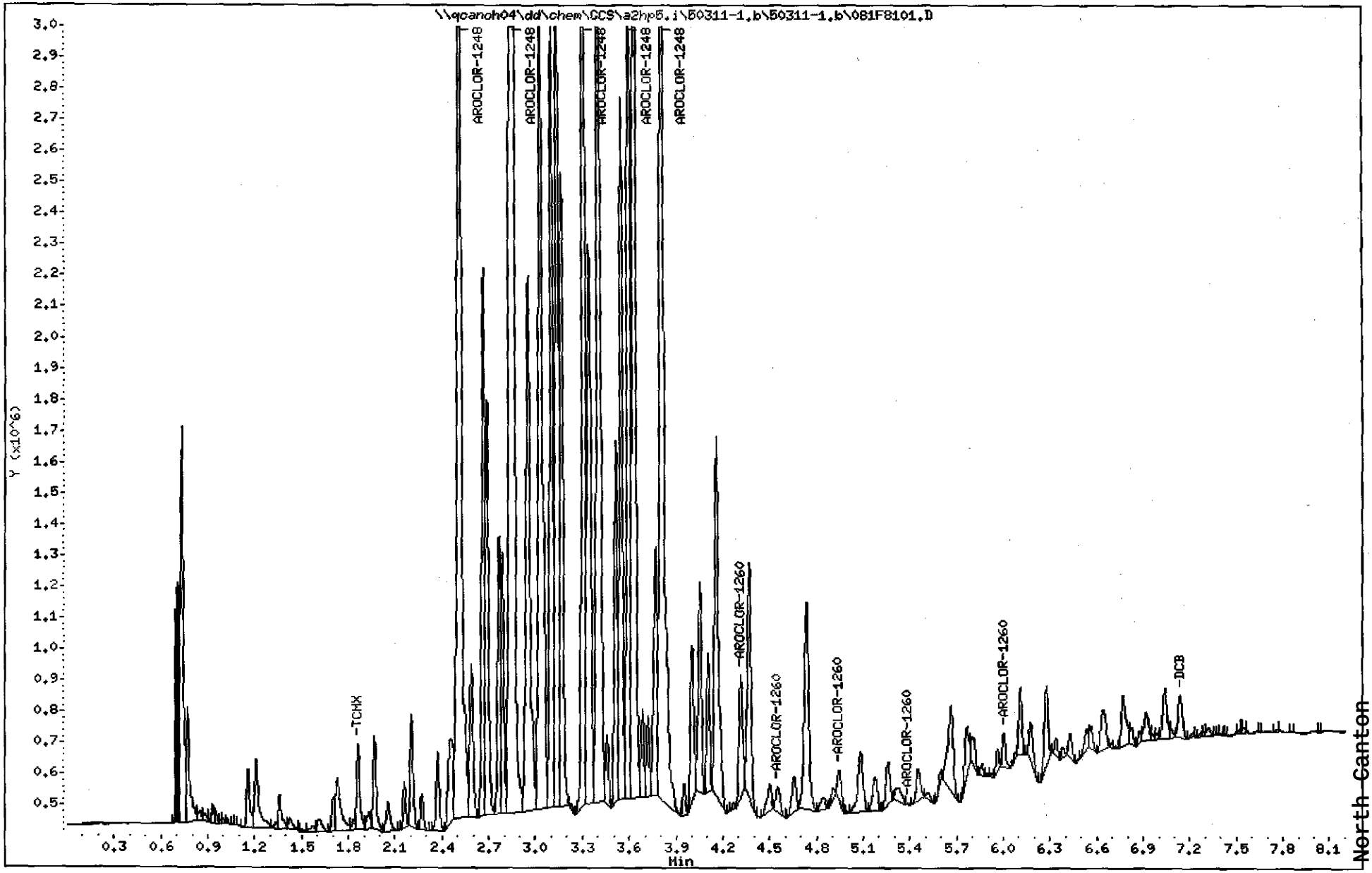
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\081F8101.D
Date : 12-MAR-2005 09:03
Client ID: S-030205-JH-062
Sample Info: G5F9C1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-063

GC Semivolatiles

Lot-Sample #...:	A5C030182-031	**Work Order #...:**	G5F9D1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 11:10	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	20	**Initial Wgt/Vol:**	30.17 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	750	ug/kg
Aroclor 1221	ND	750	ug/kg
Aroclor 1232	ND	750	ug/kg
Aroclor 1242	**3000**	**750**	**ug/kg**
Aroclor 1248	ND	750	ug/kg
Aroclor 1254	ND	750	ug/kg
Aroclor 1260	ND	750	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	134 DIL	(10 - 172)
Decachlorobiphenyl	162 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 019F1901.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\019F1901.D
Lab Smp Id: G5F9D1AA Client Smp ID: S-030205-JH-063
Inj Date : 18-MAR-2005 02:16
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9D1AA,20
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 19
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	20.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.170	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.495	2.489	0.006	215490	0.00134	8.862		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
3.036	3.032	0.004	223911	0.17189	1140	75.00- 125.00	100.00(M)
3.468	3.464	0.004	896414	0.44843	2973	119.51- 199.18	400.34
3.938	3.934	0.004	2171702	0.53783	3565	244.78- 407.97	969.90
4.073	4.070	0.003	606183	0.30202	2002	118.93- 198.22	270.72
4.543	4.540	0.003	941070	0.52739	3496	106.16- 176.93	420.29
Average of Peak Concentrations =					2635		

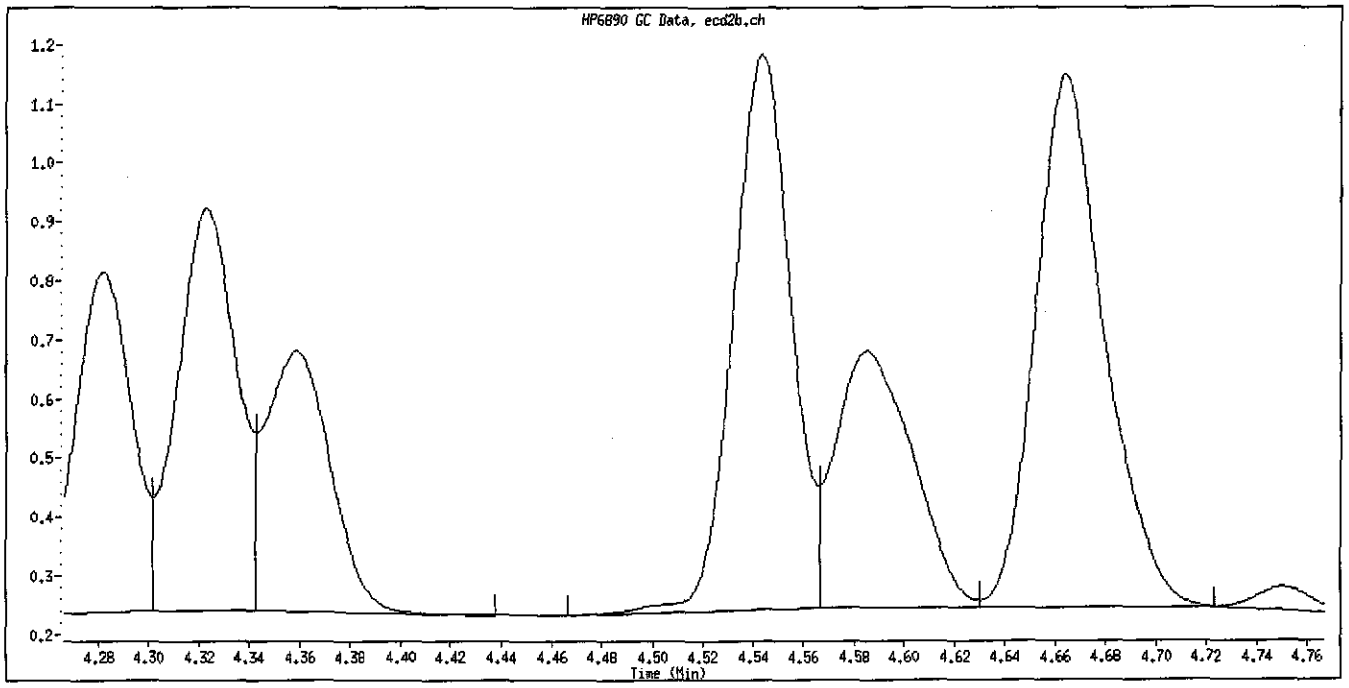
Data File: 019F1901.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.777	5.804	-0.027	80522	0.02004	132.9	80.00- 120.00	100.00(M)
6.007	6.001	0.006	34302	0.00724	48.02	87.87- 146.45	42.60
6.294	6.317	-0.023	88187	0.01708	113.2	96.24- 160.39	109.52
6.849	6.869	-0.020	87803	0.01203	79.77	135.40- 225.67	109.04
7.183	7.173	0.010	195055	0.04412	292.5	76.53- 127.54	242.24
Average of Peak Concentrations =					133.3		
$ 9 DCB					CAS #: 2051-24-3		
8.137	8.129	0.008	109202	0.00162	10.74		

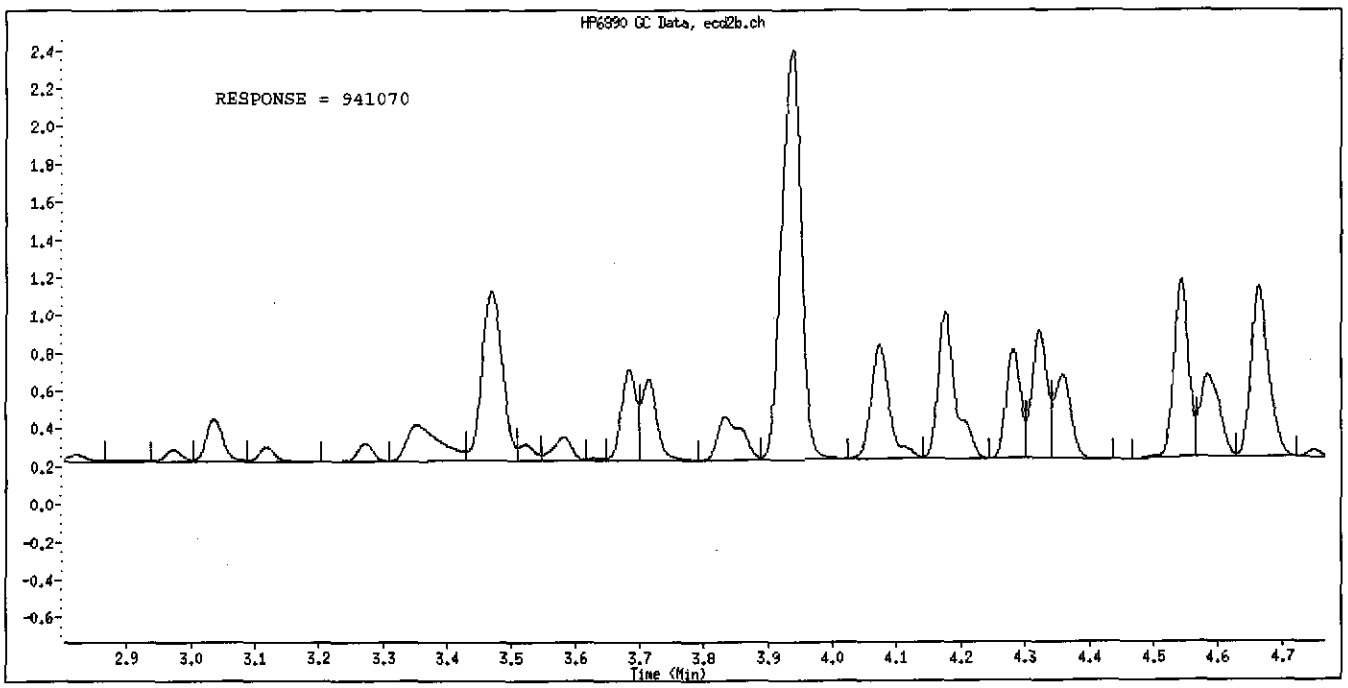
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 02:16
Instrument ID: a2hp2.i
Client ID: S-030205-JH-063
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/18/2005



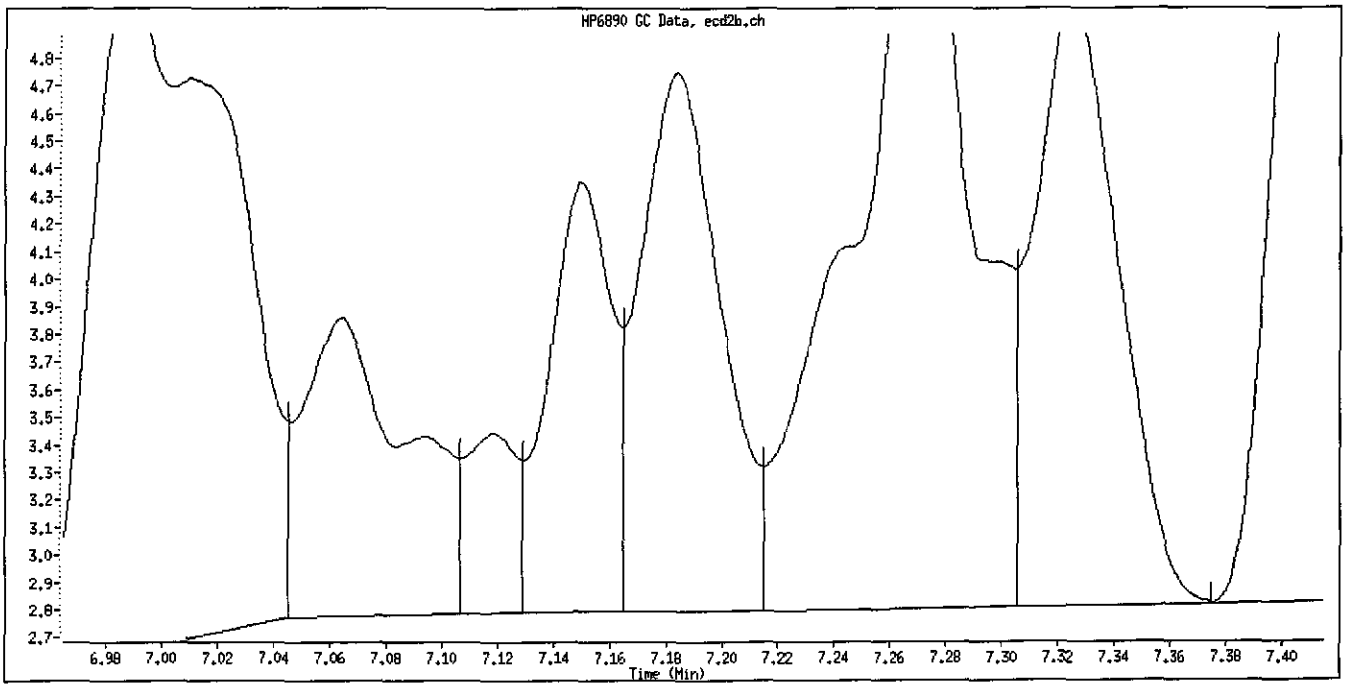
Original Integration



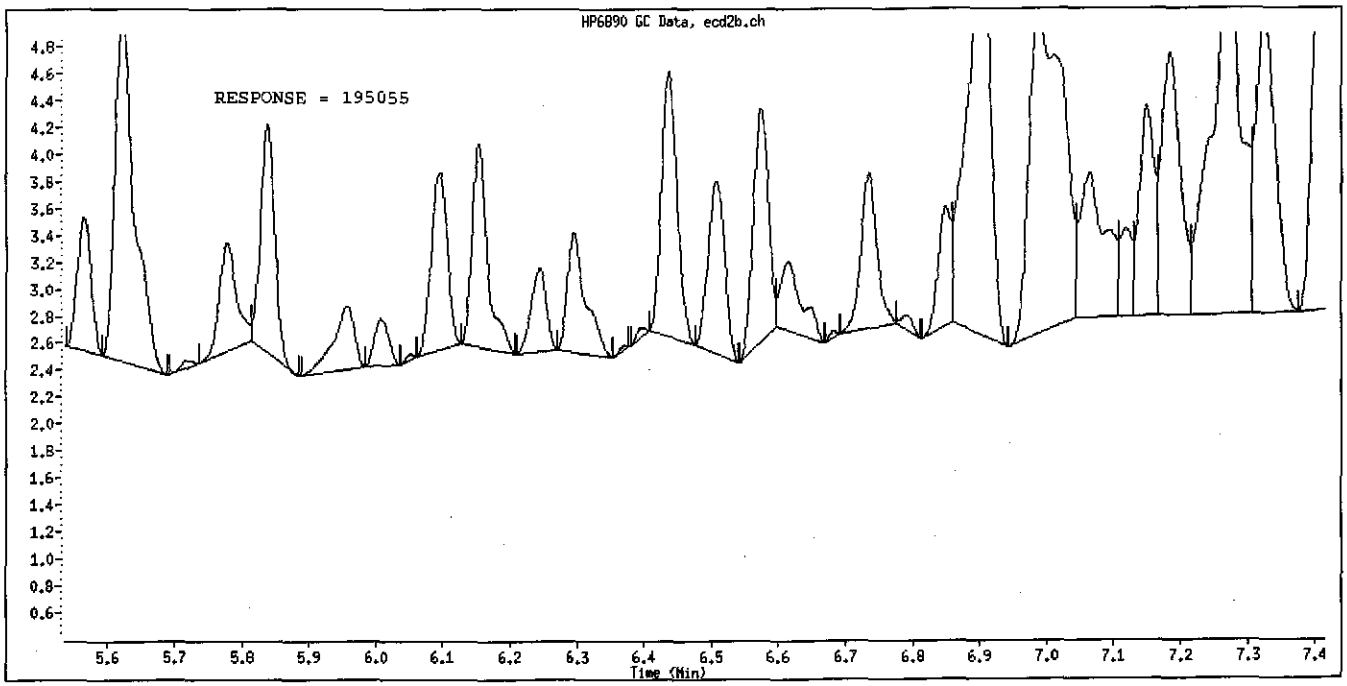
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 18-MAR-2005 02:16
Instrument ID: a2hp2.i
Client ID: S-030205-JH-063
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/18/2005



Original Integration



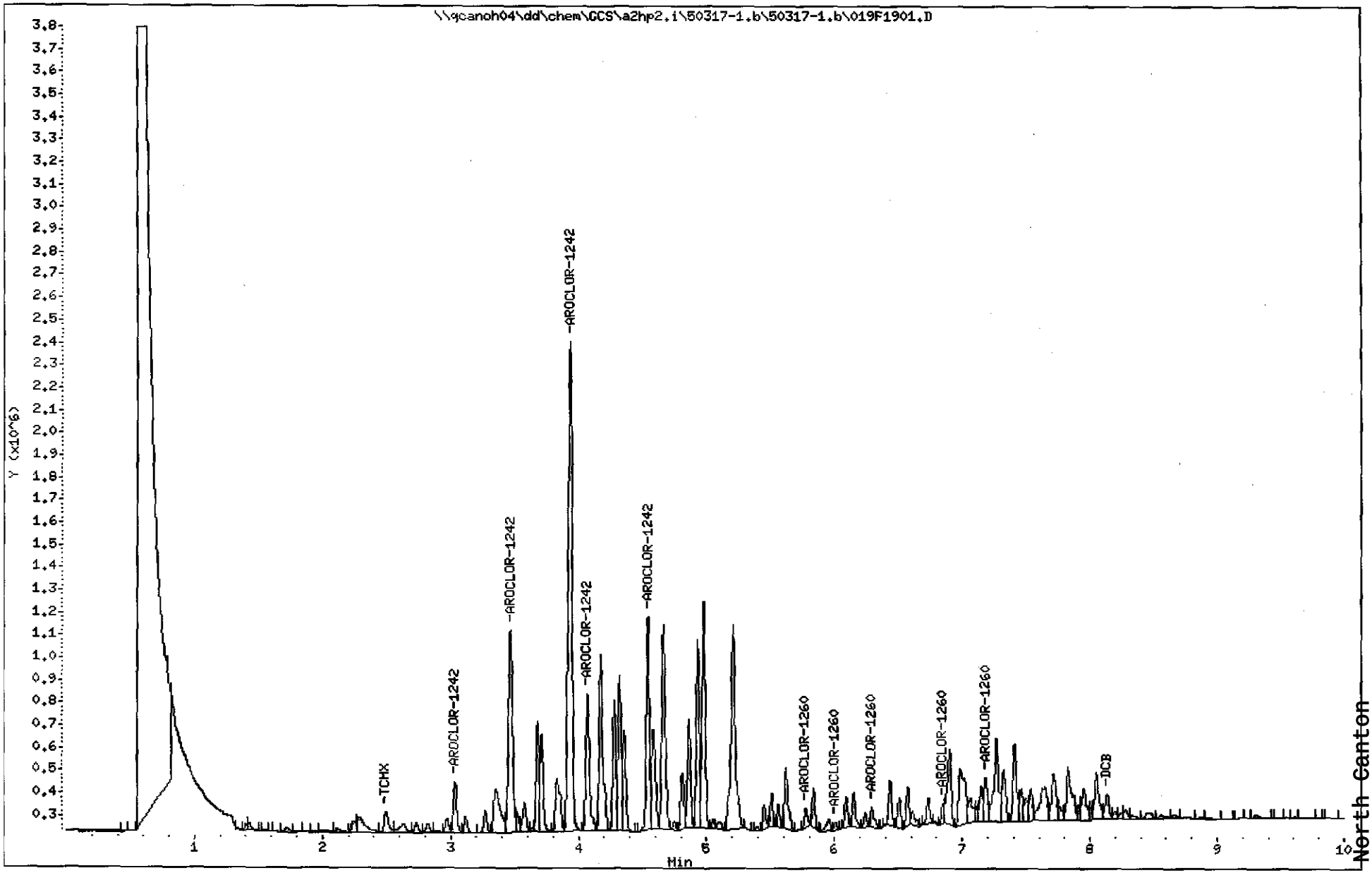
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\019F1901.D
Date : 18-MAR-2005 02:16
Client ID: S-030205-JH-063
Sample Info: G8F9D1AA,20
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i

Operator: 9237
Column diameter: 0.53



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-064

GC Semivolatiles

Lot-Sample #...:	A5C030182-032	**Work Order #...:**	G5F9E1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:00	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	5	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	16	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	200	ug/kg
Aroclor 1221	ND	200	ug/kg
Aroclor 1232	ND	200	ug/kg
Aroclor 1242	ND	200	ug/kg
Aroclor 1248	**480**	**200**	**ug/kg**
Aroclor 1254	ND	200	ug/kg
Aroclor 1260	ND	200	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	101 DIL	(10 - 172)
Decachlorobiphenyl	102 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 023F2301.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\023F2301.D
Lab Smp Id: G5F9E1AA Client Smp ID: S-030205-JH-064
Inj Date : 18-MAR-2005 03:22
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9E1AA,5
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 23
Dil Factor: 5.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	5.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.489	0.002	648792	0.00403	6.688		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

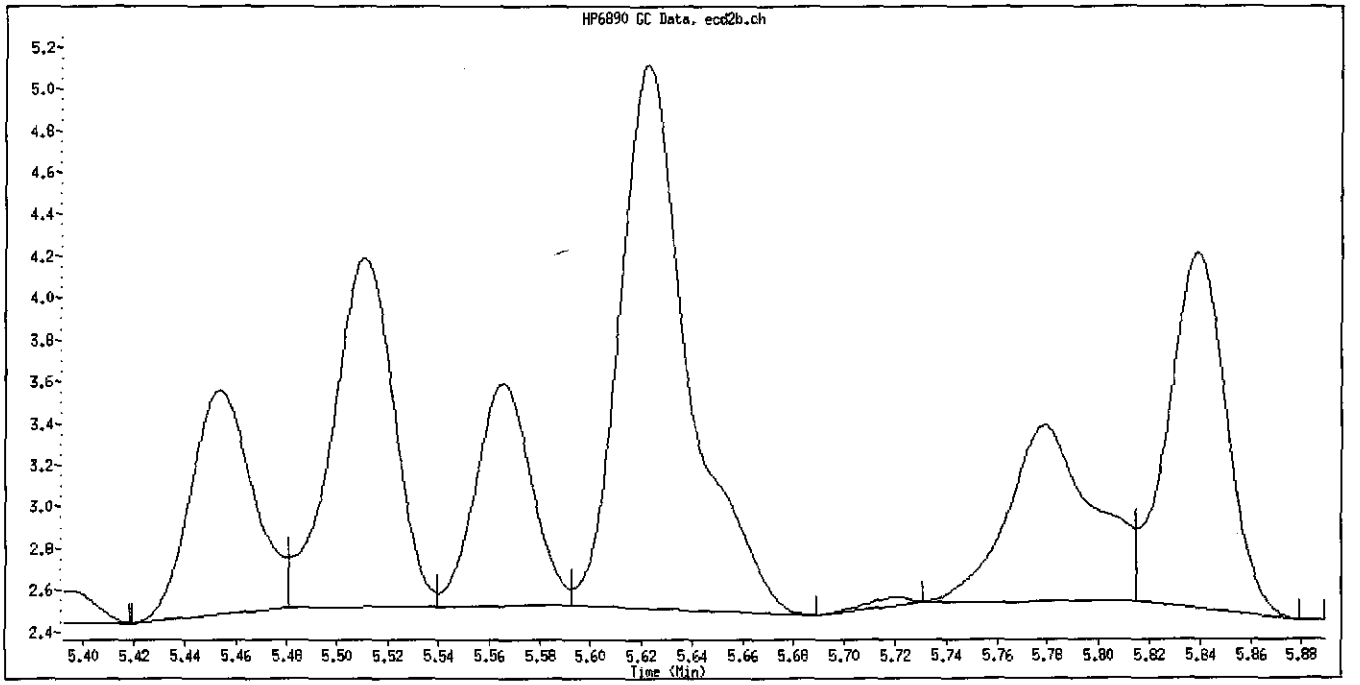
Data File: 023F2301.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.466	3.465	0.001	303078	0.29996	498.4	75.00- 125.00	100.00(M)
3.936	3.932	0.004	773057	0.31712	526.9	183.64- 306.07	255.07
4.543	4.543	0.000	591569	0.20552	341.5	216.84- 361.40	195.19
4.979	4.978	0.001	729717	0.22154	368.1	251.26- 418.77	240.77
5.622	5.621	0.001	260830	0.15259	253.5	129.44- 215.73	86.06
Average of Peak Concentrations =					397.7		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Operator disabled compound identification.							
$ 9 DCB					CAS #: 2051-24-3		
8.132	8.129	0.003	274239	0.00407	6.758		

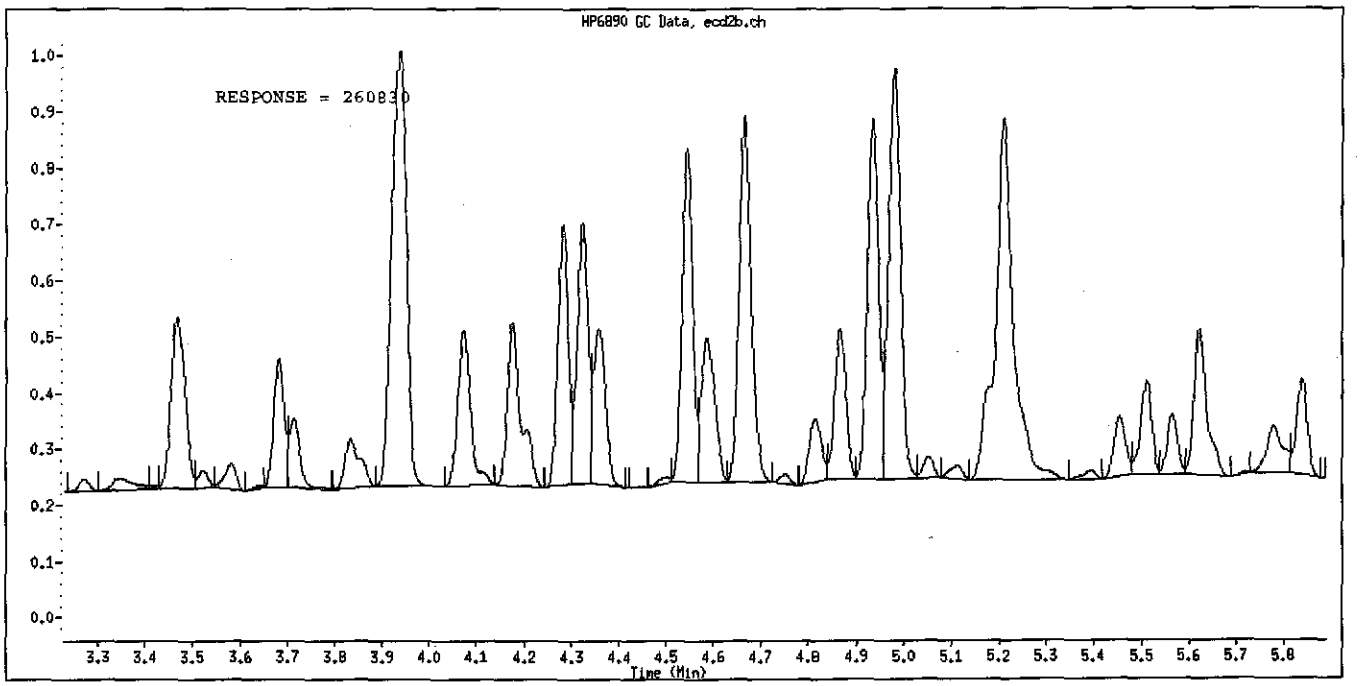
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 03:22
Instrument ID: a2hp2.i
Client ID: S-030205-JH-064
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

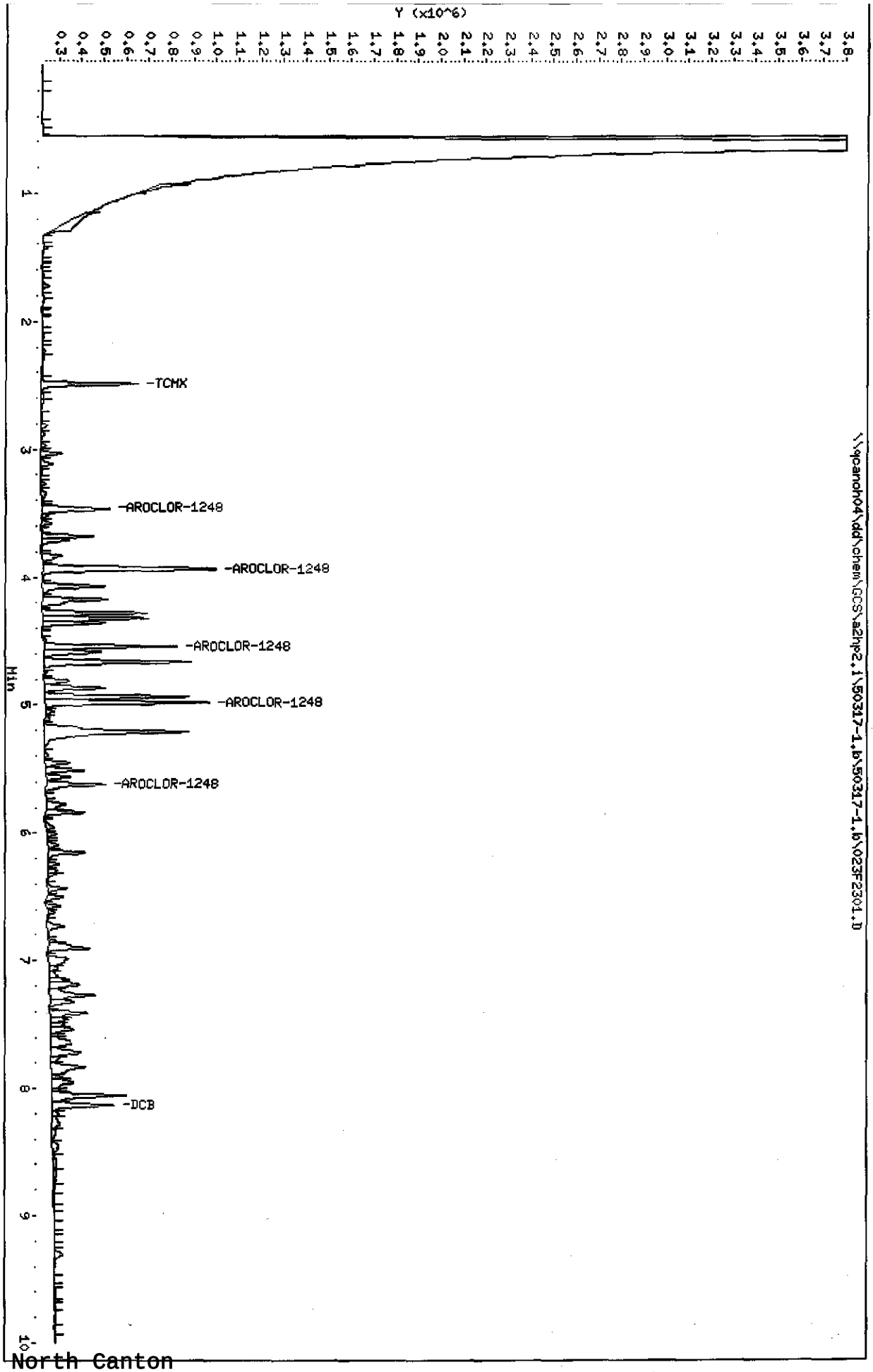


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\023F2301.D
Date : 18-MAR-2005 03:22
Client ID: S-030205-JH-064
Sample Info: C5F9E1AA,5
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-065

GC Semivolatiles

Lot-Sample #...:	A5C030182-033	**Work Order #...:**	G5F9F1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:05	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	380	ug/kg
Aroclor 1221	ND	380	ug/kg
Aroclor 1232	ND	380	ug/kg
Aroclor 1242	ND	380	ug/kg
Aroclor 1248	**2000**	**380**	**ug/kg**
Aroclor 1254	ND	380	ug/kg
Aroclor 1260	ND	380	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	108 DIL	(10 - 172)
Decachlorobiphenyl	122 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 024F2401.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\024F2401.D
Lab Smp Id: G5F9F1AA Client Smp ID: S-030205-JH-065
Inj Date : 18-MAR-2005 03:38
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9F1AA,10
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 24
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.490	2.489	0.001	347758	0.00216	7.184		

2 AROCLOR-1221 CAS #: 11104-28-2

Compound Not Detected

3 AROCLOR-1016 CAS #: 12674-11-2

Compound Not Detected

4 AROCLOR-1232 CAS #: 11141-16-5

Compound Not Detected

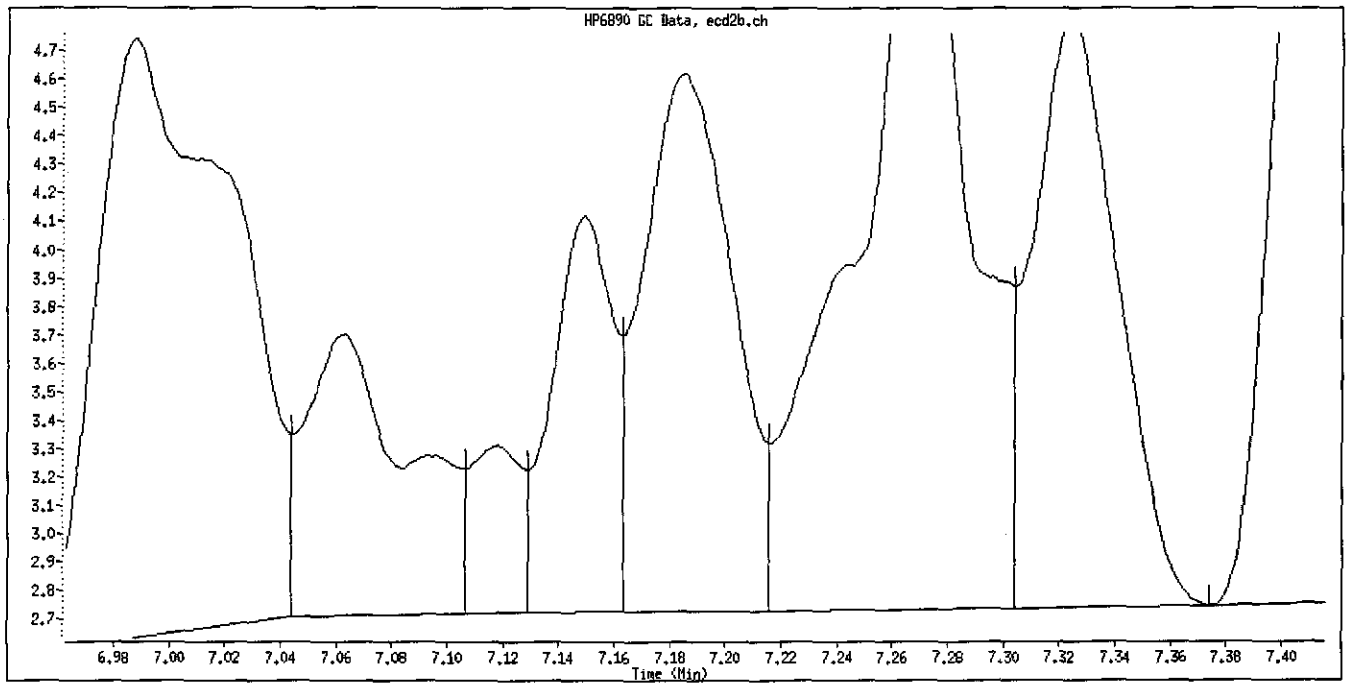
Data File: 024F2401.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.466	3.465	0.001	681235	0.67422	2245	75.00- 125.00	100.00(M)
3.936	3.932	0.004	2343685	0.96140	3201	183.64- 306.07	344.03
4.541	4.543	-0.002	1123554	0.39035	1300	216.84- 361.40	164.93
4.978	4.978	0.000	1318692	0.40034	1333	251.26- 418.77	193.87
5.620	5.621	-0.001	350170	0.20485	682.1	129.44- 215.73	51.40
Average of Peak Concentrations =					1752		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.777	5.804	-0.027	114906	0.02860	95.24	80.00- 120.00	100.00(M)
6.006	6.001	0.005	45818	0.00968	32.22	87.87- 146.45	39.87
6.295	6.317	-0.022	63111	0.01222	40.70	96.24- 160.39	54.92
6.848	6.869	-0.021	83415	0.01143	38.07	135.40- 225.67	72.59
7.184	7.173	0.011	189691	0.04291	142.9	76.53- 127.54	165.08
Average of Peak Concentrations =					69.82		
$ 9 DCB					CAS #: 2051-24-3		
8.133	8.129	0.004	164292	0.00244	8.113		

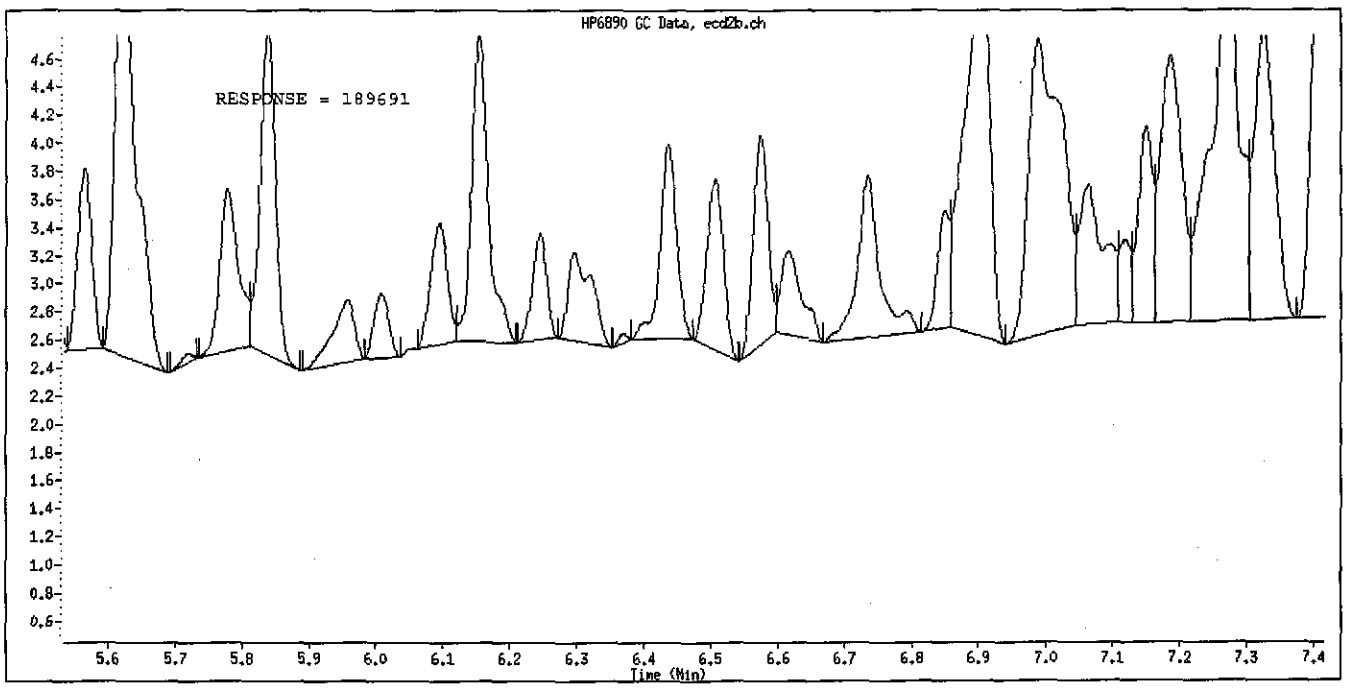
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 03:38
Instrument ID: a2hp2.i
Client ID: S-030205-JH-065
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/18/2005



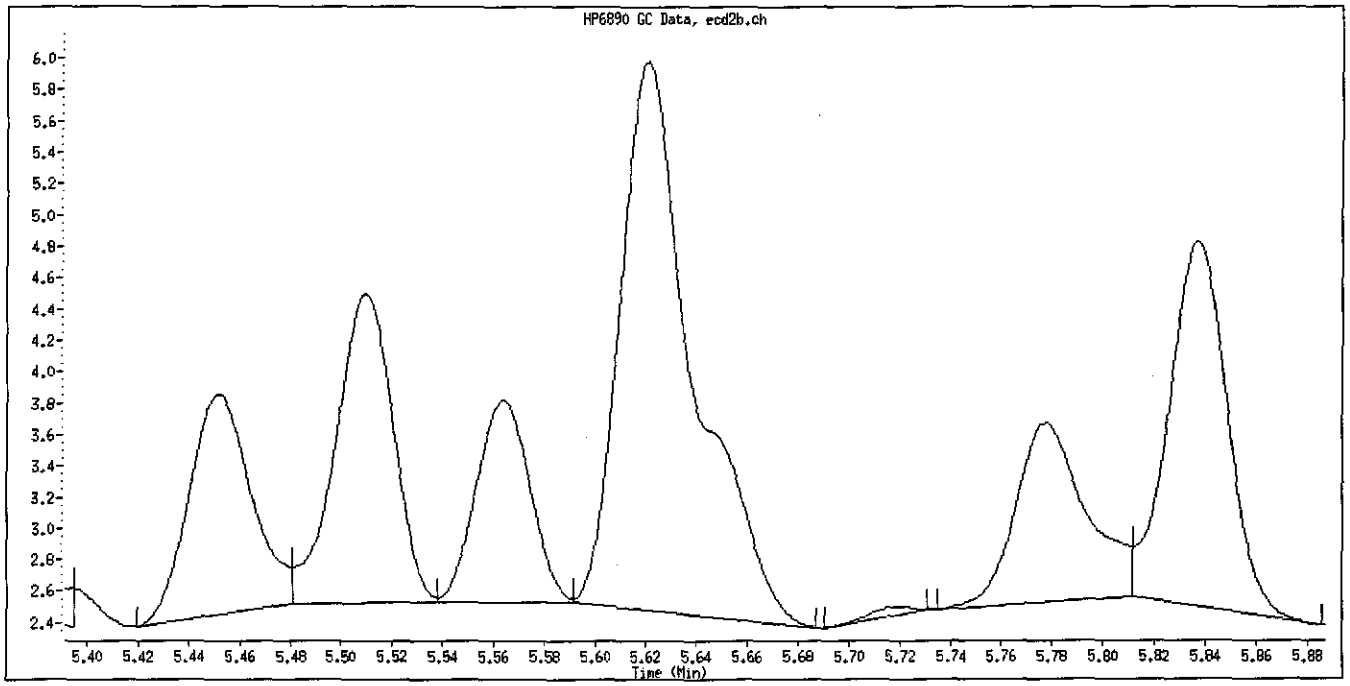
Original Integration



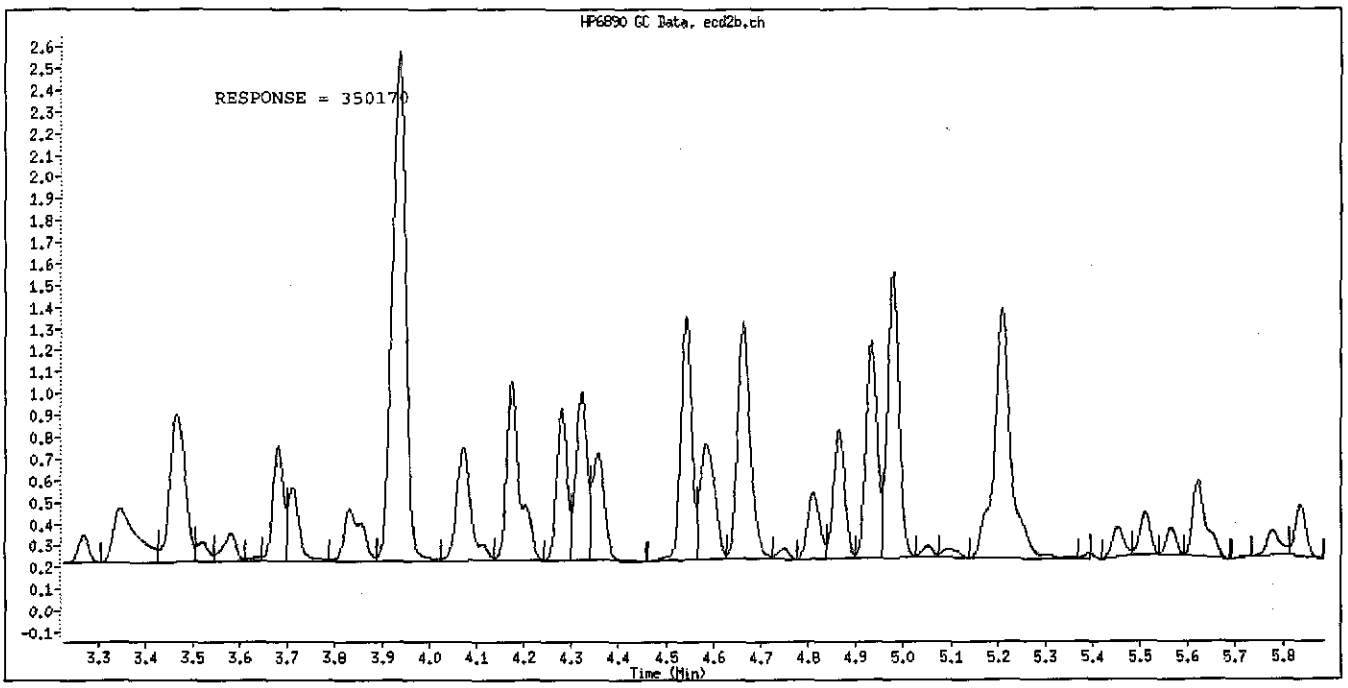
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: *Manually Assigned*

Inj. Date and Time: 18-MAR-2005 03:38
Instrument ID: a2hp2.i
Client ID: S-030205-JH-065
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

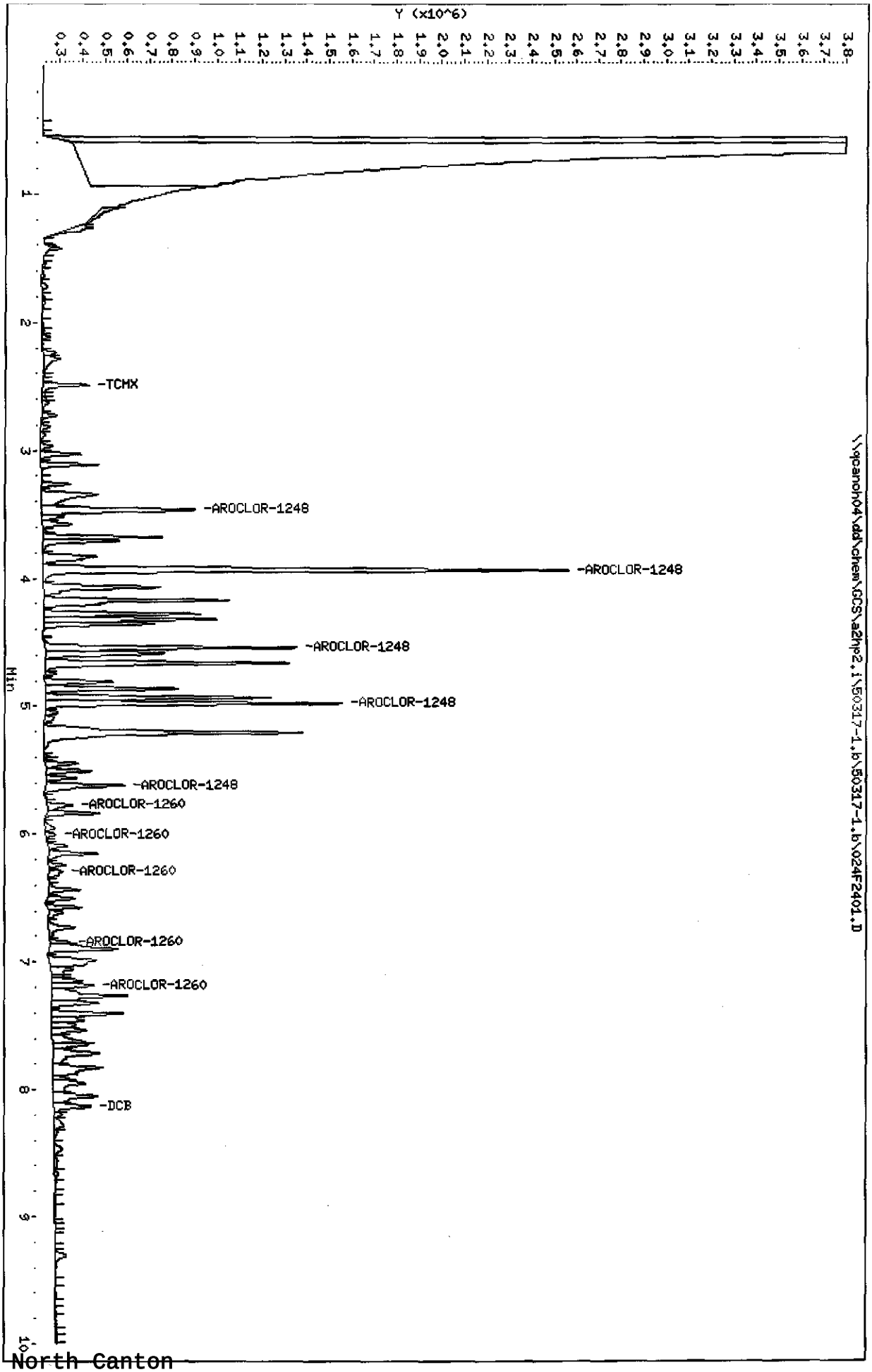


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\024F2401.D
Date : 18-MAR-2005 03:38
Client ID: S-030205-JH-065
Sample Info: G5F9F1AA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-066

GC Semivolatiles

Lot-Sample #...:	A5C030182-034	**Work Order #...:**	G5F9G1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:10	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.08 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	12	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	**4500**	**1900**	**ug/kg**
Aroclor 1248	ND	1900	ug/kg
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	175 *	(10 - 172)
Decachlorobiphenyl	221 *	(40 - 138)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 025F2501.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\025F2501.D
Lab Smp Id: G5F9G1AA Client Smp ID: S-030205-JH-066
Inj Date : 18-MAR-2005 03:53
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9G1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 25
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.080	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.489	2.489	0.000	112886	0.00070	11.64		(R)
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
3.031	3.032	-0.001	238430	0.18304	3042	75.00- 125.00	100.00(M)
3.464	3.464	0.000	491768	0.24601	4089	119.51- 199.18	206.25
3.935	3.934	0.001	1067810	0.26445	4396	244.78- 407.97	447.85
4.071	4.070	0.001	474154	0.23624	3927	118.93- 198.22	198.87
4.541	4.540	0.001	458846	0.25715	4274	106.16- 176.93	192.44
Average of Peak Concentrations =					3946		

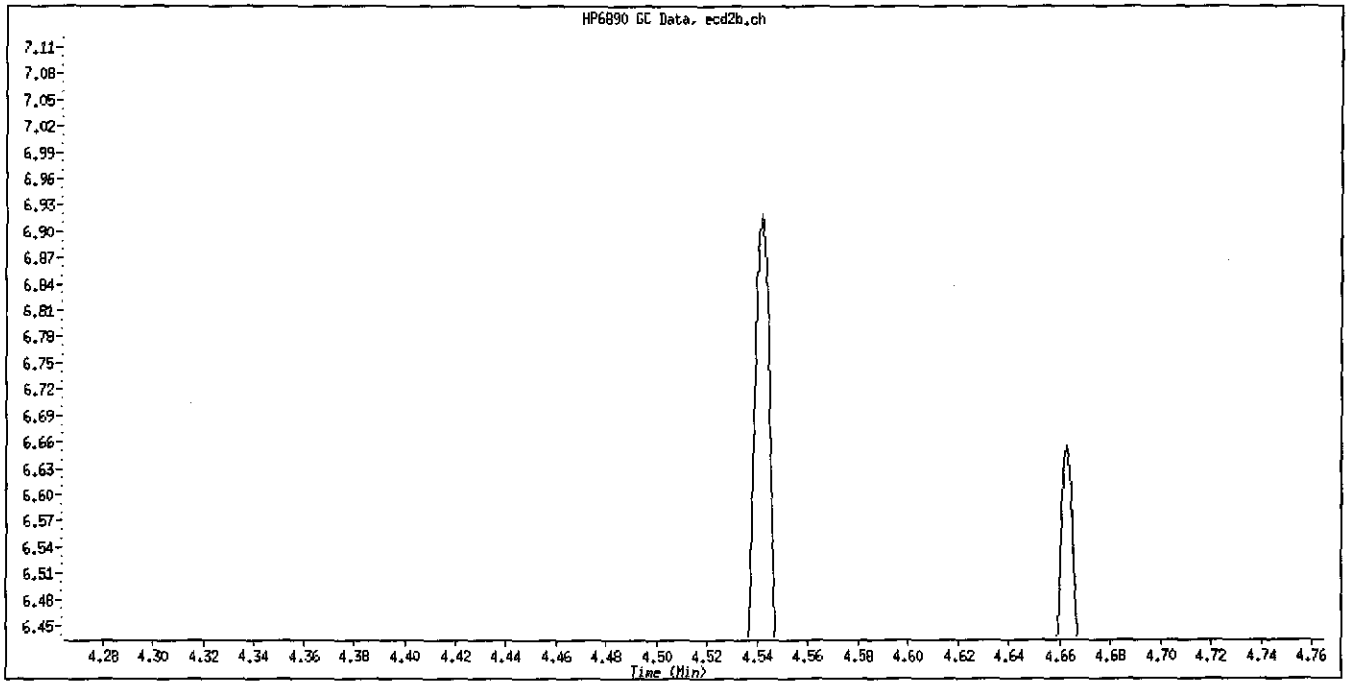
Data File: 025F2501.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.838	5.804	0.034	83343	0.02074	344.8	80.00- 120.00	100.00(M)
6.009	6.001	0.008	20989	0.00443	73.68	87.87- 146.45	25.18
6.294	6.317	-0.023	64642	0.01252	208.1	96.24- 160.39	77.56
6.849	6.869	-0.020	70779	0.00970	161.2	135.40- 225.67	84.92
7.195	7.173	0.022	187728	0.04247	705.9	76.53- 127.54	225.25
Average of Peak Concentrations =					298.7		
$ 9 DCB					CAS #: 2051-24-3		
8.140	8.129	0.011	59638	9e-004	14.70		(R)

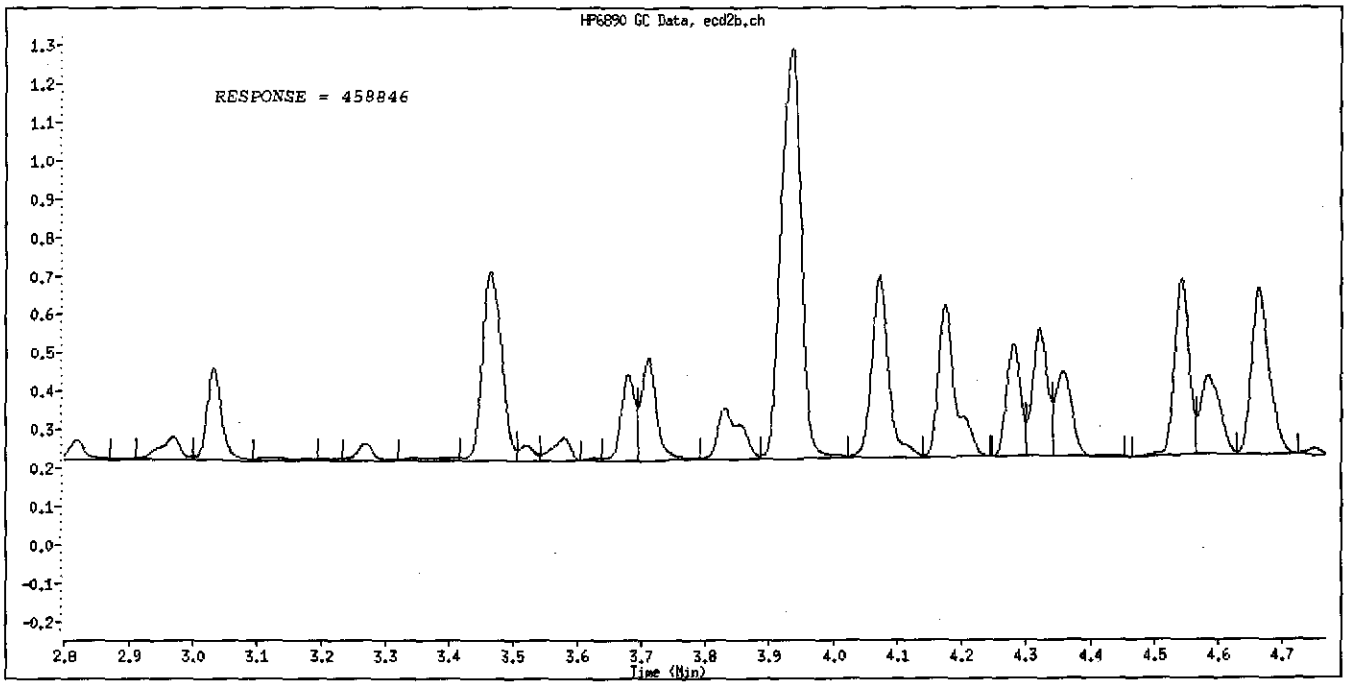
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 03:53
Instrument ID: a2hp2.i
Client ID: S-030205-JH-066
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/18/2005



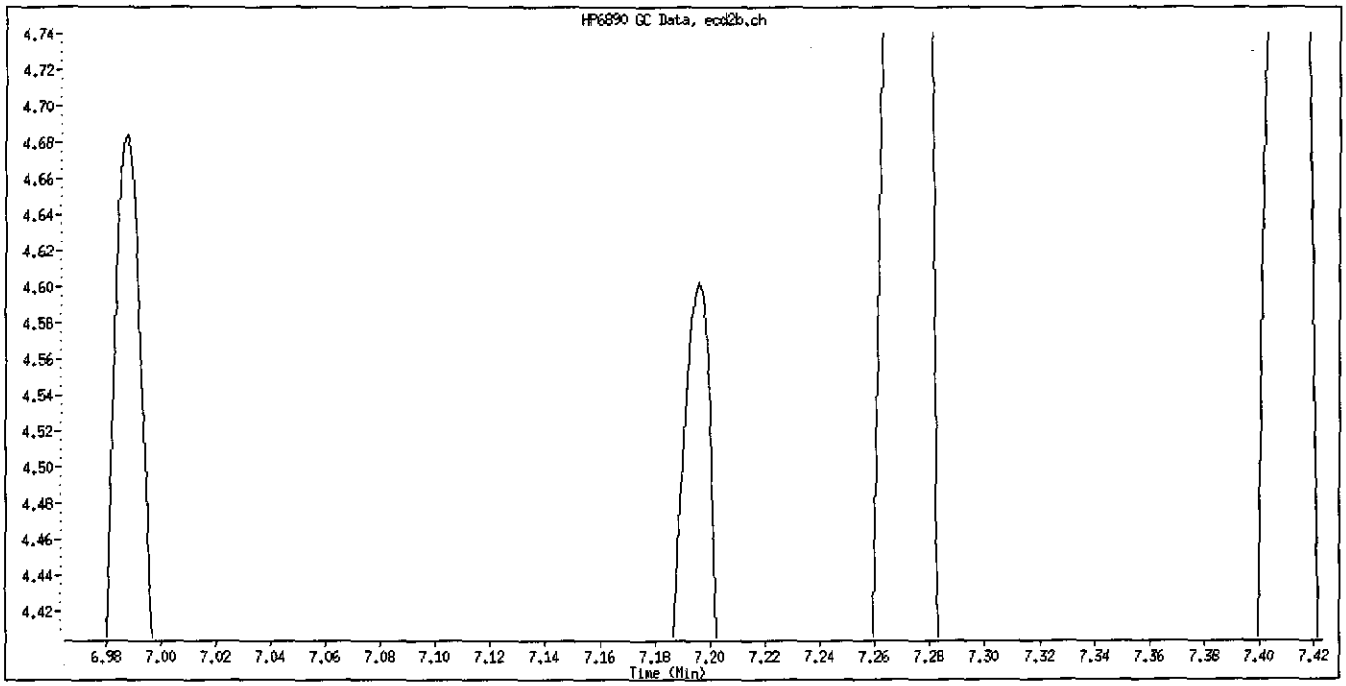
Original Integration



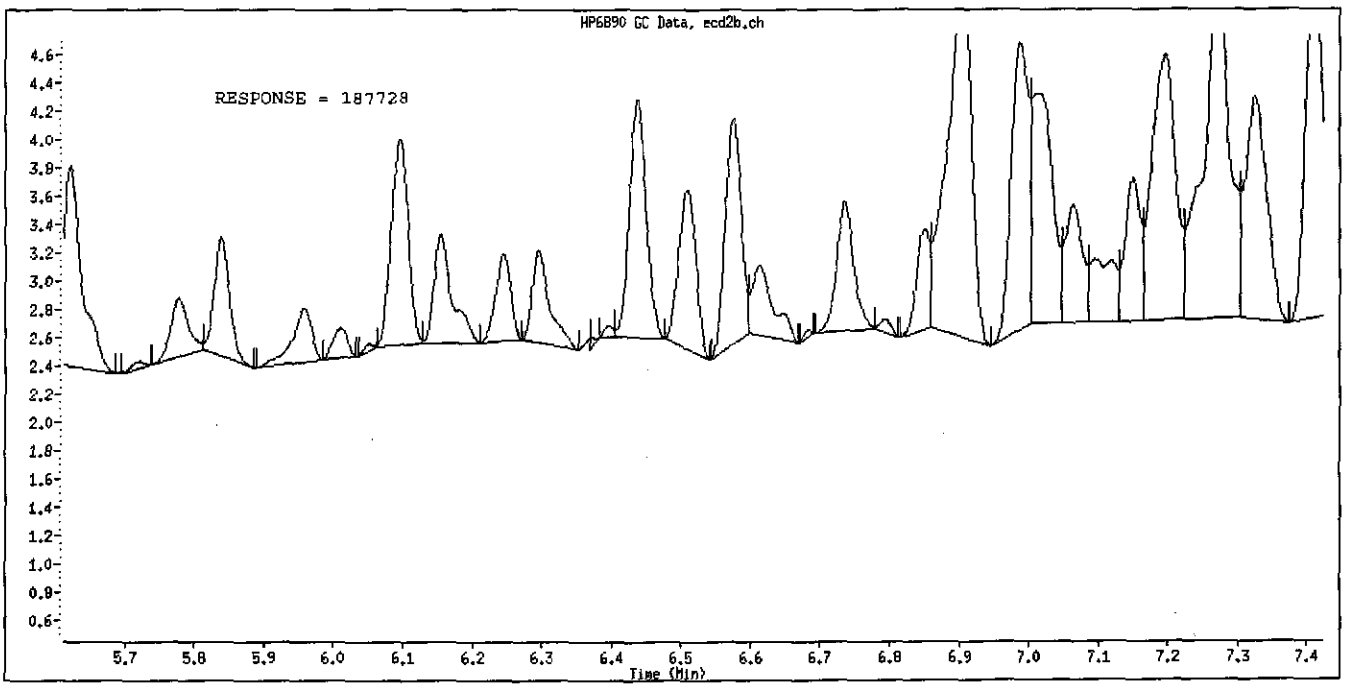
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Inj. Date and Time: 18-MAR-2005 03:53
Instrument ID: a2hp2.i
Client ID: S-030205-JH-066
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/18/2005



Original Integration

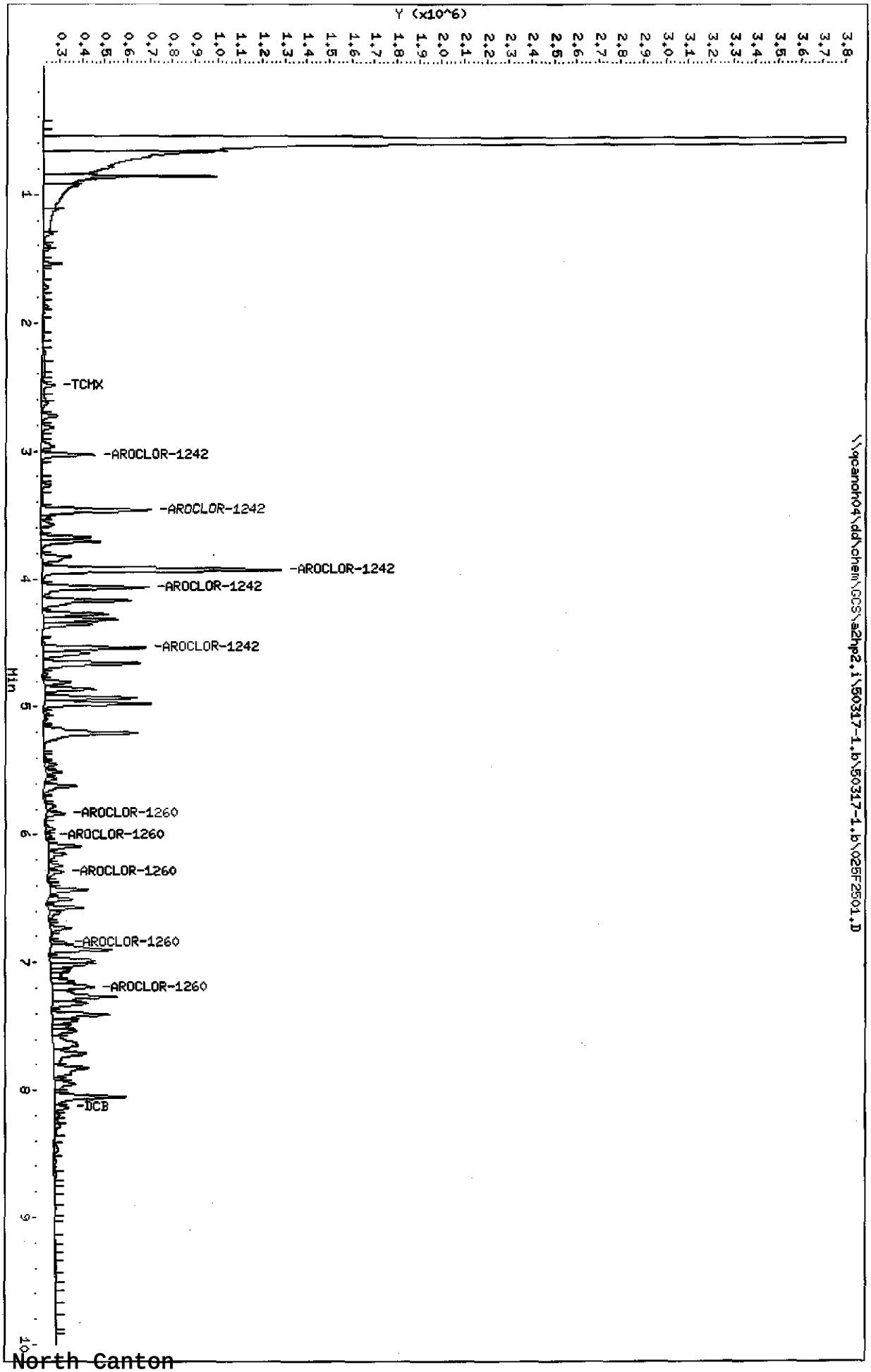


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\025F2501.D
Date : 18-MAR-2005 03:53
Client ID: S-030205-JH-066
Sample Info: C5F9G1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-067

GC Semivolatiles

Lot-Sample #...:	A5C030182-035	**Work Order #...:**	G5F9H1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:15	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	**4400**	**1900**	**ug/kg**
Aroclor 1248	ND	1900	ug/kg
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	144 DIL	(10 - 172)
Decachlorobiphenyl	618 DIL,*	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

* Surrogate recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 026F2601.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\026F2601.D
Lab Smp Id: G5F9H1AA Client Smp ID: S-030205-JH-067
Inj Date : 18-MAR-2005 04:09
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9H1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 26
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.489	0.003	92734	6e-004	9.579		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
3.033	3.032	0.001	301276	0.23129	3851	75.00- 125.00	100.00(M)
3.464	3.464	0.000	0	0.0000	0.0000	119.51- 199.18	0.00
3.934	3.934	0.000	0	0.0000	0.0000	244.78- 407.97	0.00
4.070	4.070	0.000	0	0.0000	0.0000	118.93- 198.22	0.00
4.540	4.540	0.000	0	0.0000	0.0000	106.16- 176.93	0.00

Average of Peak Concentrations = 3851

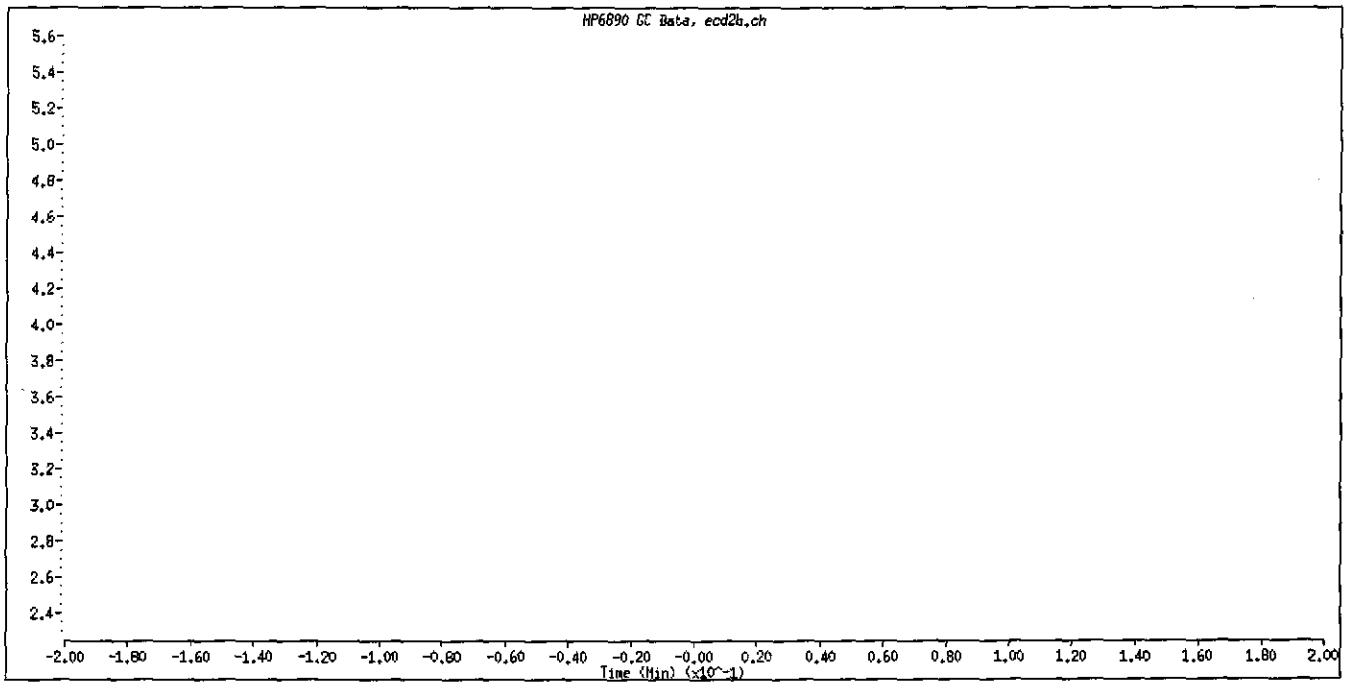
Data File: 026F2601.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
6 AROCLOR-1248					CAS #: 12672-29-6			
Compound Not Detected								
7 AROCLOR-1254					CAS #: 11097-69-1			
Compound Not Detected								
8 AROCLOR-1260					CAS #: 11096-82-5			
Operator disabled compound identification.								
$ 9 DCB					CAS #: 2051-24-3			
8.143	8.129	0.014	166688	0.00247	41.16			(R)

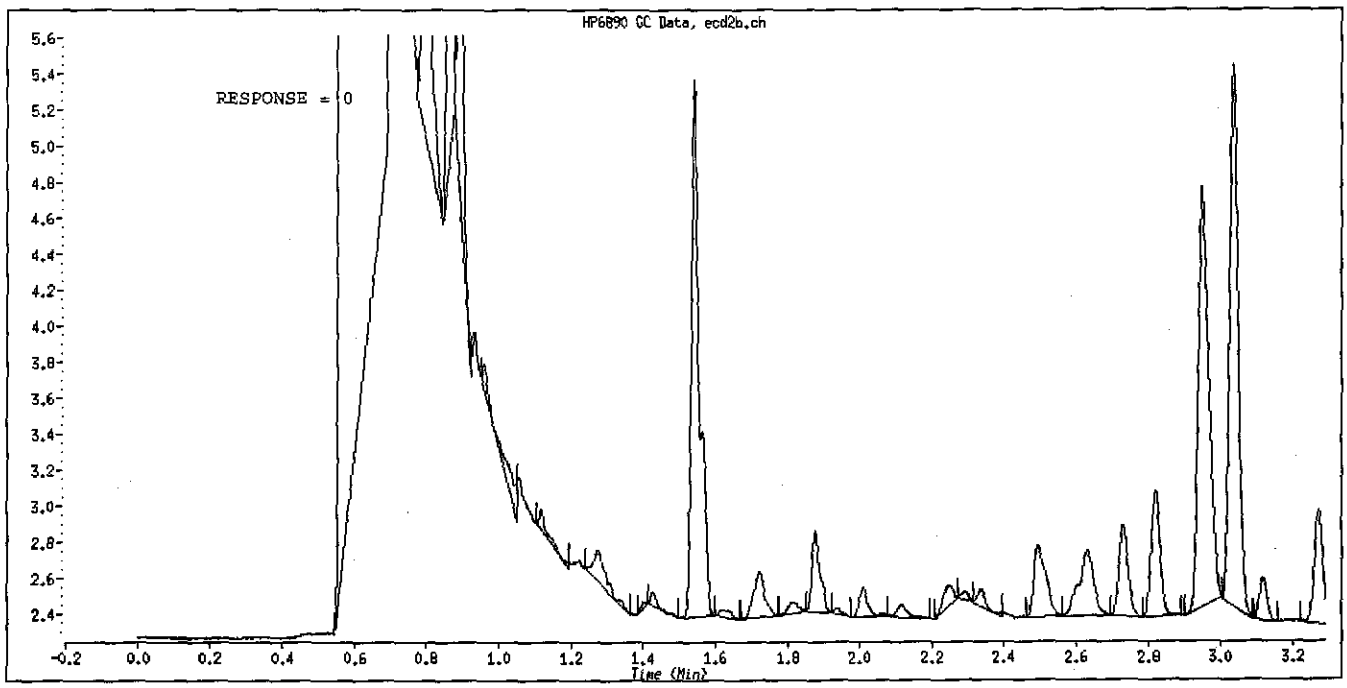
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 04:09
Instrument ID: a2hp2.i
Client ID: S-030205-JH-067
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/18/2005



Original Integration

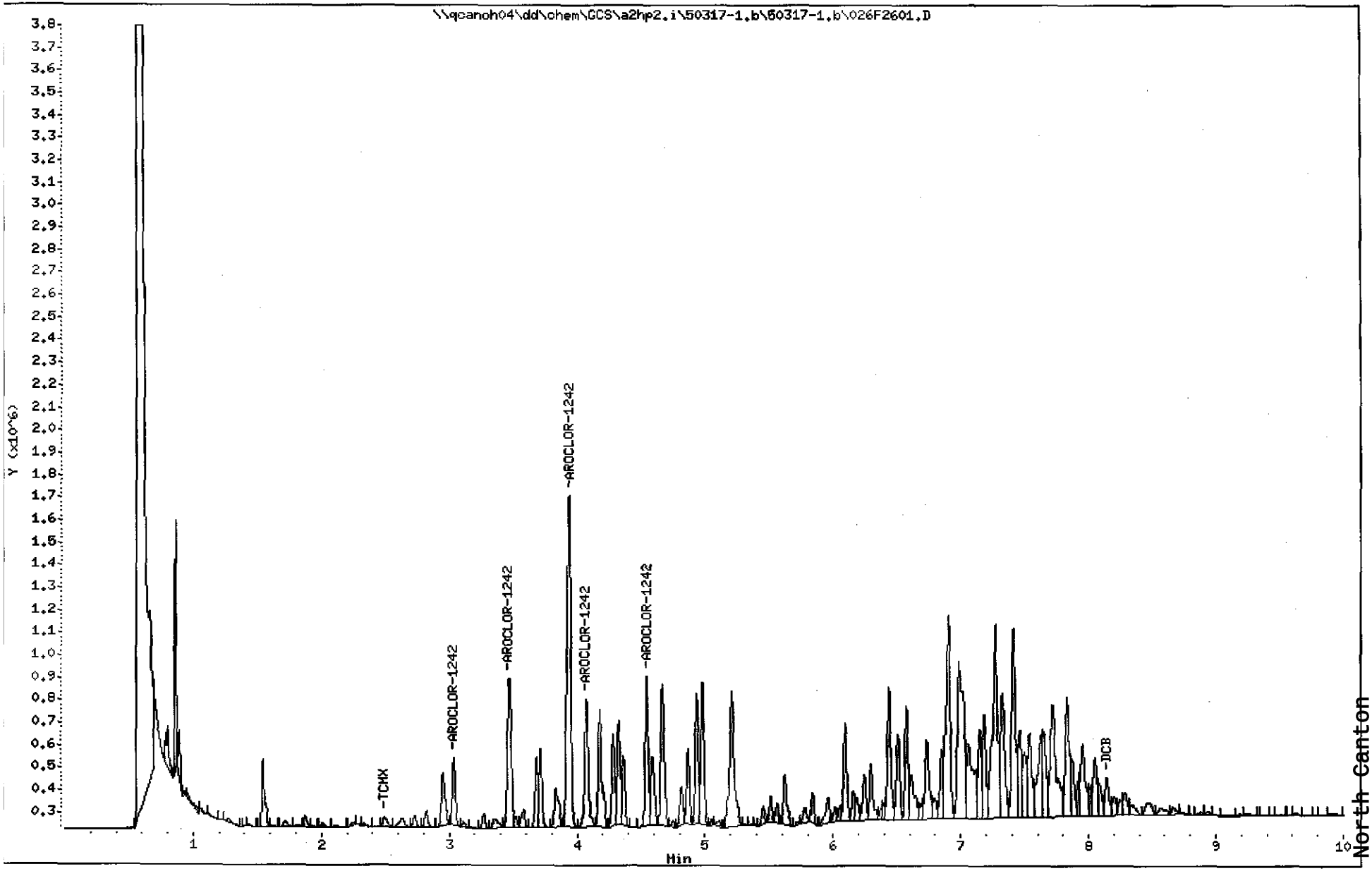


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\026F2601.D
Date : 18-MAR-2005 04:09
Client ID: S-030205-JH-067
Sample Info: G5F9H1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-068

GC Semivolatiles

Lot-Sample #...:	A5C030182-036	**Work Order #...:**	G5F9J1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:20	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30.04 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	11	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	370	ug/kg
Aroclor 1221	ND	370	ug/kg
Aroclor 1232	ND	370	ug/kg
Aroclor 1242	ND	370	ug/kg
Aroclor 1248	**1600**	**370**	**ug/kg**
Aroclor 1254	ND	370	ug/kg
Aroclor 1260	ND	370	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	106 DIL	(10 - 172)
Decachlorobiphenyl	104 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 027F2701.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\027F2701.D
Lab Smp Id: G5F9J1AA Client Smp ID: S-030205-JH-068
Inj Date : 18-MAR-2005 04:25
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9J1AA,10
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 27
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.040	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.489	0.002	343095	0.00213	7.086		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

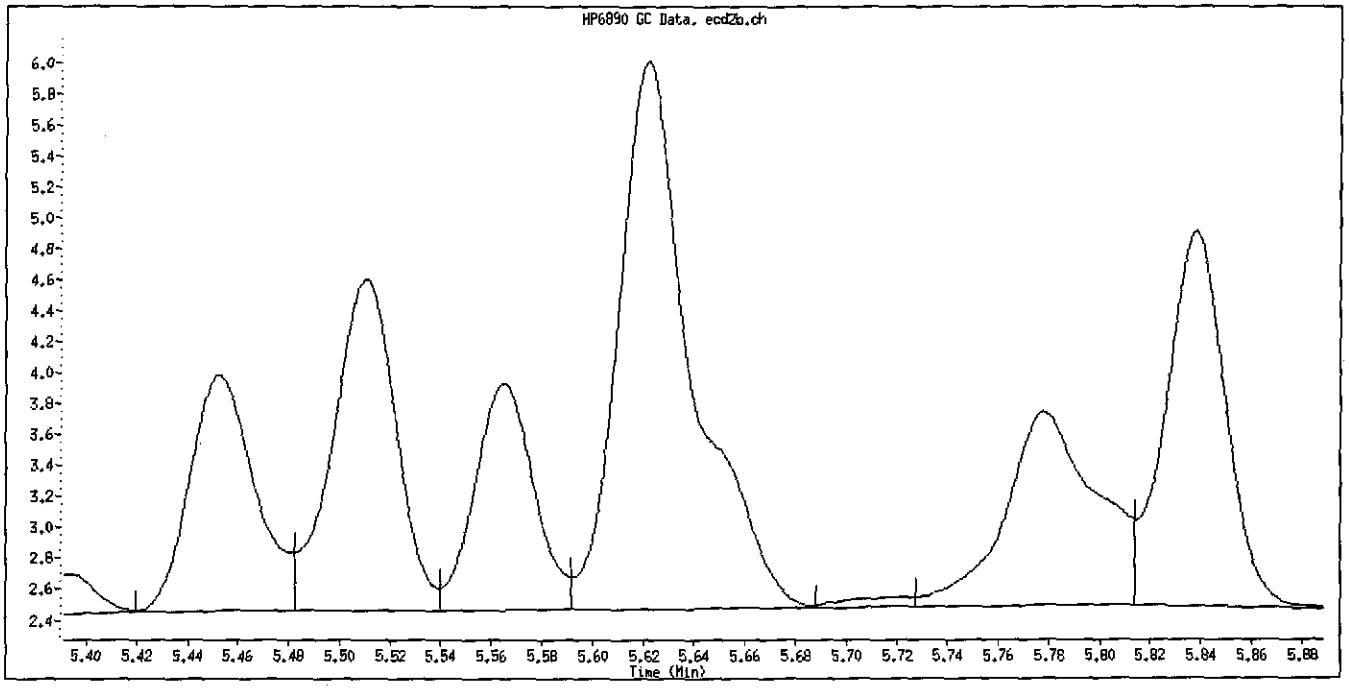
Data File: 027F2701.D
Report Date: 18-Mar-2005 14:20

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.465	3.465	0.000	492490	0.48742	1622	75.00- 125.00	100.00(M)
3.934	3.932	0.002	1765403	0.72419	2411	183.64- 306.07	358.46
4.542	4.543	-0.001	1059386	0.36805	1225	216.84- 361.40	215.11
4.978	4.978	0.000	1343870	0.40799	1358	251.26- 418.77	272.87
5.621	5.621	0.000	354158	0.20718	689.7	129.44- 215.73	71.91
Average of Peak Concentrations =					1461		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
8.131	8.129	0.002	140463	0.00208	6.934		

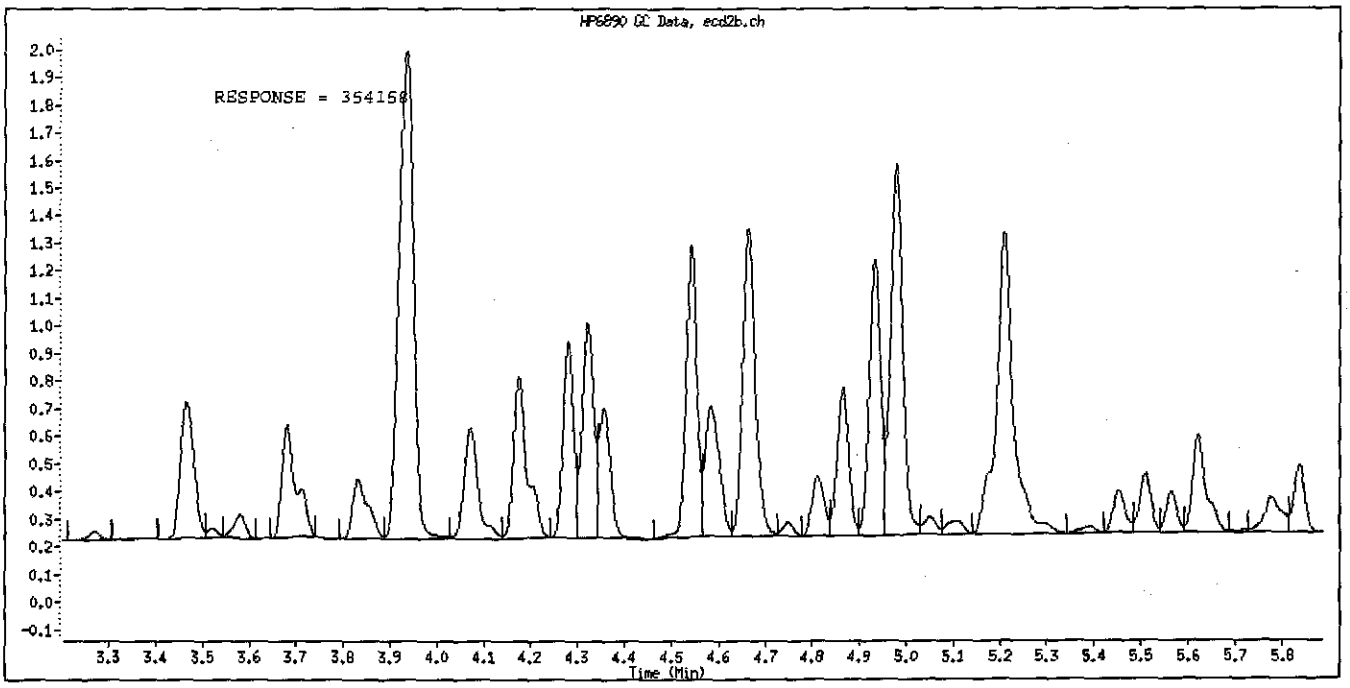
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 04:25
Instrument ID: a2hp2.i
Client ID: S-030205-JH-068
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

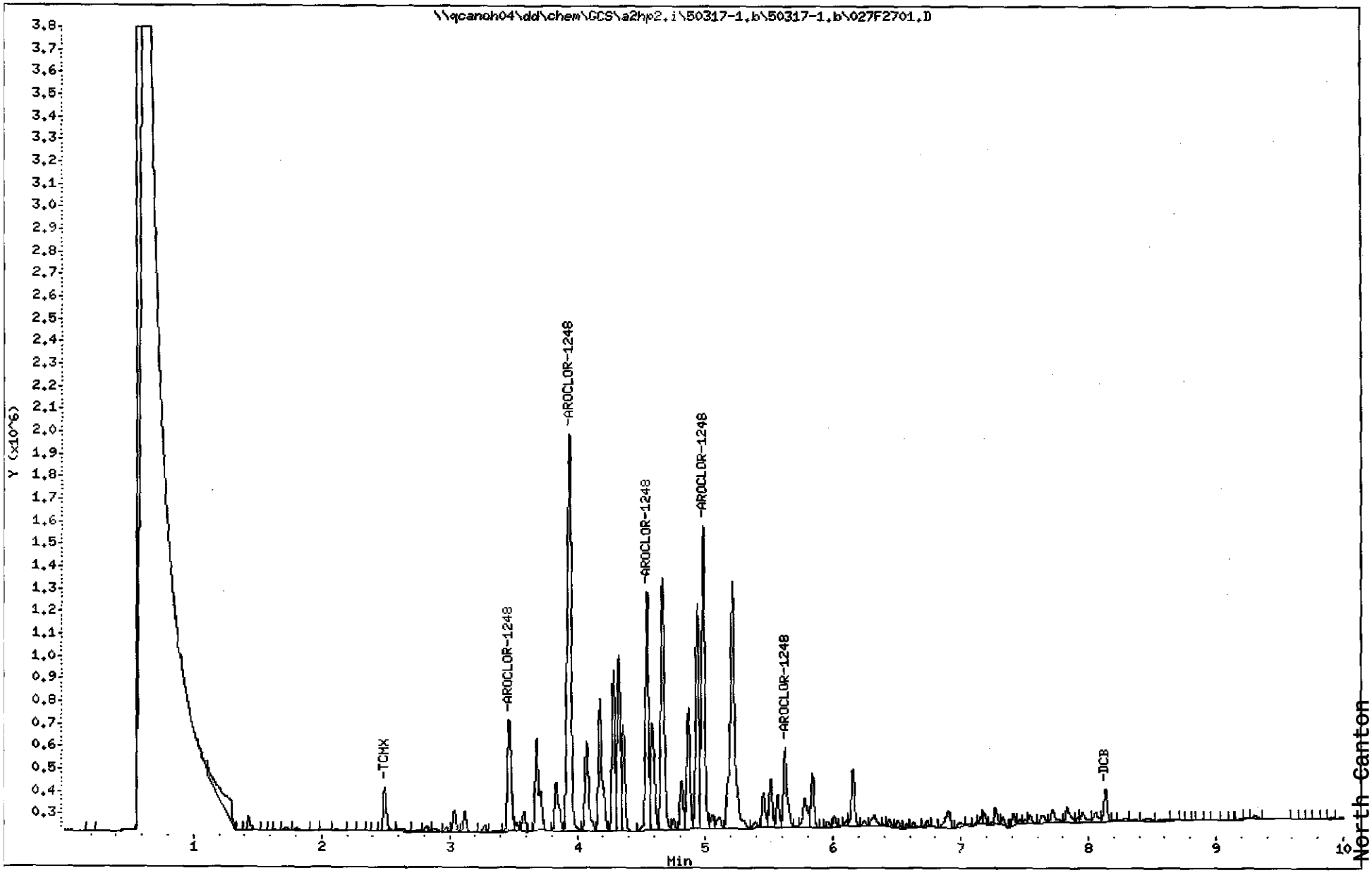


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\027F2701.D
Date : 18-MAR-2005 04:25
Client ID: S-030205-JH-068
Sample Info: G5F9J1AA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-069

GC Semivolatiles

Lot-Sample #...:	A5C030182-037	**Work Order #...:**	G5F9K1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:25	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30.15 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	9.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	360	ug/kg
Aroclor 1221	ND	360	ug/kg
Aroclor 1232	ND	360	ug/kg
Aroclor 1242	ND	360	ug/kg
Aroclor 1248	**1100**	**360**	**ug/kg**
Aroclor 1254	ND	360	ug/kg
Aroclor 1260	ND	360	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91 DIL	(10 - 172)
Decachlorobiphenyl	109 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 044F0101.D
Report Date: 18-Mar-2005 15:02

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\044F0101.D
Lab Smp Id: G5F9K1AA Client Smp ID: S-030205-JH-069
Inj Date : 18-MAR-2005 14:39
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9K1AA,10
Misc Info :
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 44
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: CANPGCV04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.150	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.487	2.489	-0.002	293188	0.00182	6.033		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

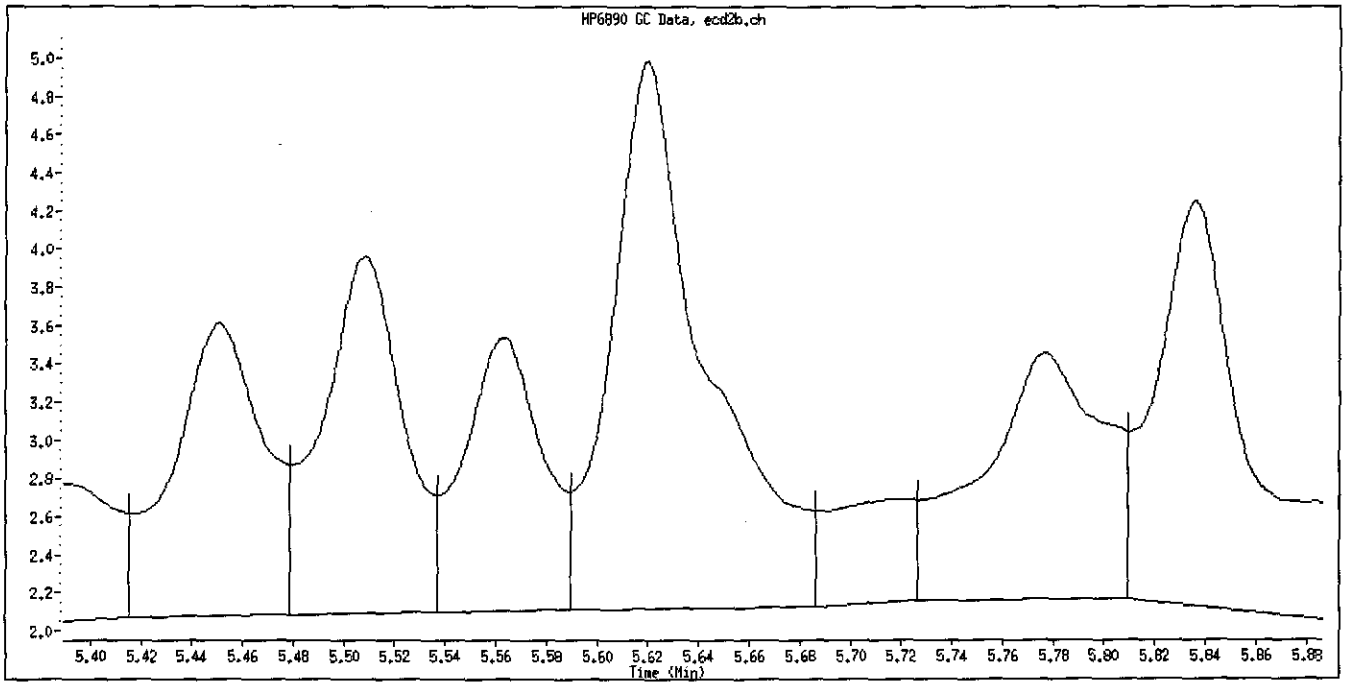
Data File: 044F0101.D
Report Date: 18-Mar-2005 15:02

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.463	3.465	-0.002	288565	0.28559	947.2	75.00- 125.00	100.00(M)
3.936	3.932	0.004	1397635	0.57332	1902	183.64- 306.07	484.34
4.540	4.543	-0.003	688476	0.23919	793.3	216.84- 361.40	238.59
4.976	4.978	-0.002	844491	0.25638	850.3	251.26- 418.77	292.65
5.619	5.621	-0.002	287089	0.16795	557.0	129.44- 215.73	99.49
Average of Peak Concentrations =					1010		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	146444	0.00217	7.203		

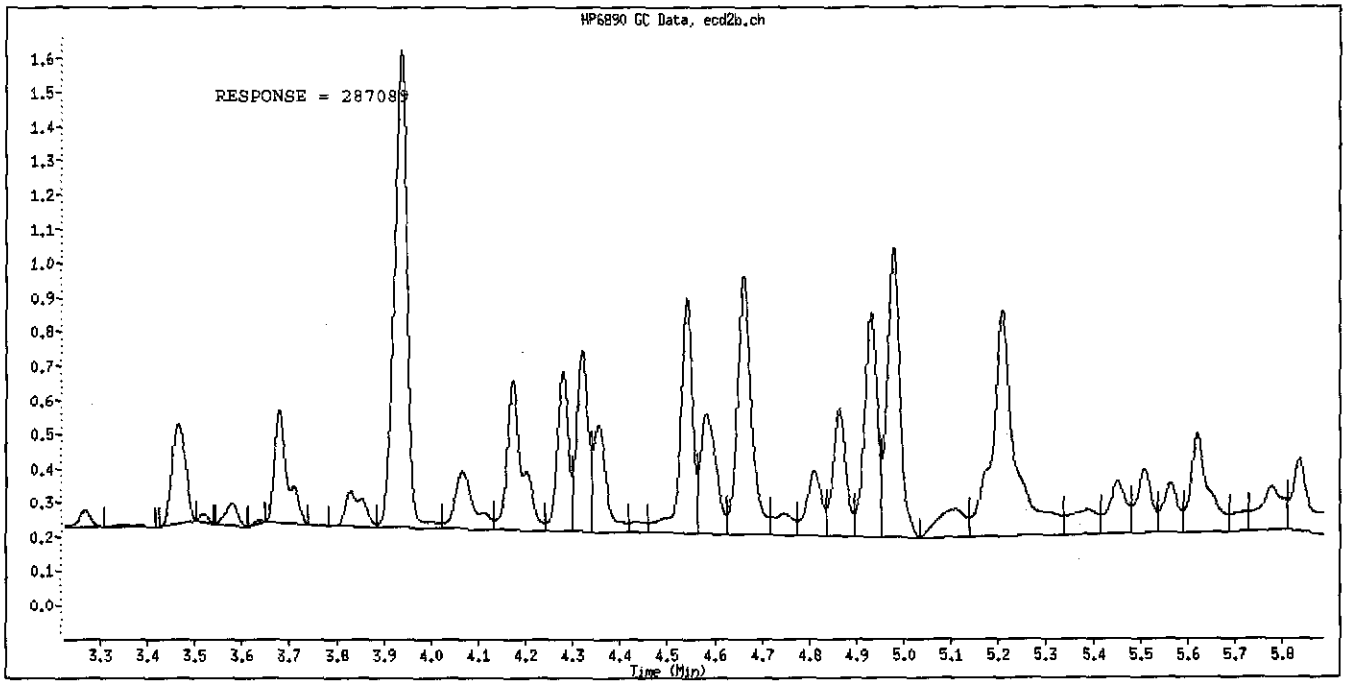
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 14:39
Instrument ID: a2hp2.i
Client ID: S-030205-JH-069
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

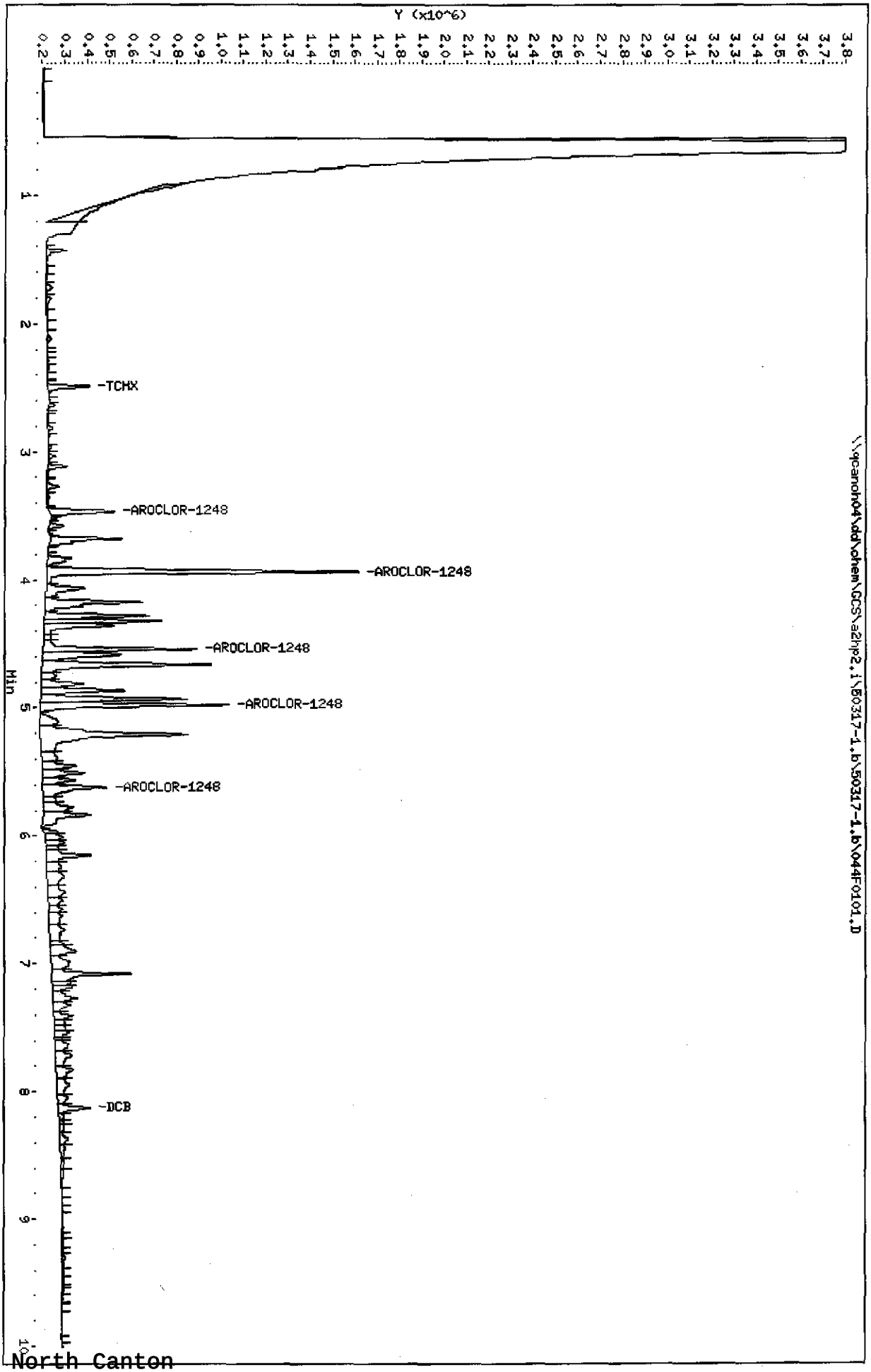


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\044F0101.D
Date : 18-MAR-2005 14:39
Client ID: S-030205-JH-069
Sample Info: G5F9K1AA,10
Volume Injected (ul): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-070

GC Semivolatiles

Lot-Sample #...:	A5C030182-038	**Work Order #...:**	G5F9L1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:30	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.4	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	350	ug/kg
Aroclor 1221	ND	350	ug/kg
Aroclor 1232	ND	350	ug/kg
Aroclor 1242	ND	350	ug/kg
Aroclor 1248	**1900**	**350**	**ug/kg**
Aroclor 1254	ND	350	ug/kg
Aroclor 1260	ND	350	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99 DIL	(10 - 172)
Decachlorobiphenyl	111 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 031F3101.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\031F3101.D
Lab Smp Id: G5F9L1AA Client Smp ID: S-030205-JH-070
Inj Date : 18-MAR-2005 05:27
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9L1AA,10
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 31
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.489	0.002	318197	0.00197	6.580		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

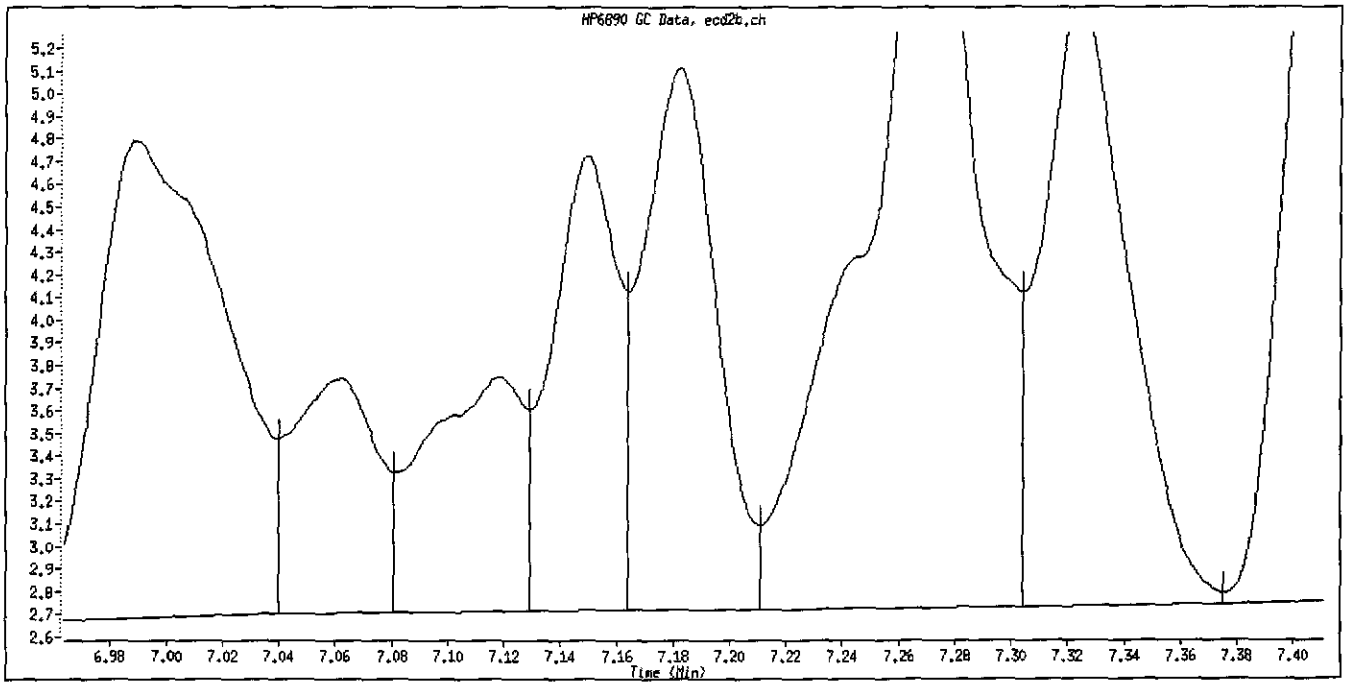
Data File: 031F3101.D
Report Date: 18-Mar-2005 14:20

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.467	3.465	0.002	220887	0.21861	728.7	75.00- 125.00	100.00(M)
3.939	3.932	0.007	2481909	1.01811	3394	183.64- 306.07	1123.61
4.542	4.543	-0.001	1246365	0.43302	1443	216.84- 361.40	564.25
4.979	4.978	0.001	2068833	0.62808	2094	251.26- 418.77	936.60
5.621	5.621	0.000	675973	0.39544	1318	129.44- 215.73	306.03
Average of Peak Concentrations =					1796		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.778	5.804	-0.026	237766	0.05918	197.3	80.00- 120.00	100.00(M)
6.008	6.001	0.007	92721	0.01958	65.27	87.87- 146.45	39.00
6.320	6.317	0.003	108835	0.02108	70.26	96.24- 160.39	45.77
6.902	6.869	0.033	391691	0.05368	178.9	135.40- 225.67	164.74
7.182	7.173	0.009	239613	0.05420	180.7	76.53- 127.54	100.78
Average of Peak Concentrations =					138.5		
$ 9 DCB					CAS #: 2051-24-3		
8.134	8.129	0.005	150356	0.00223	7.432		

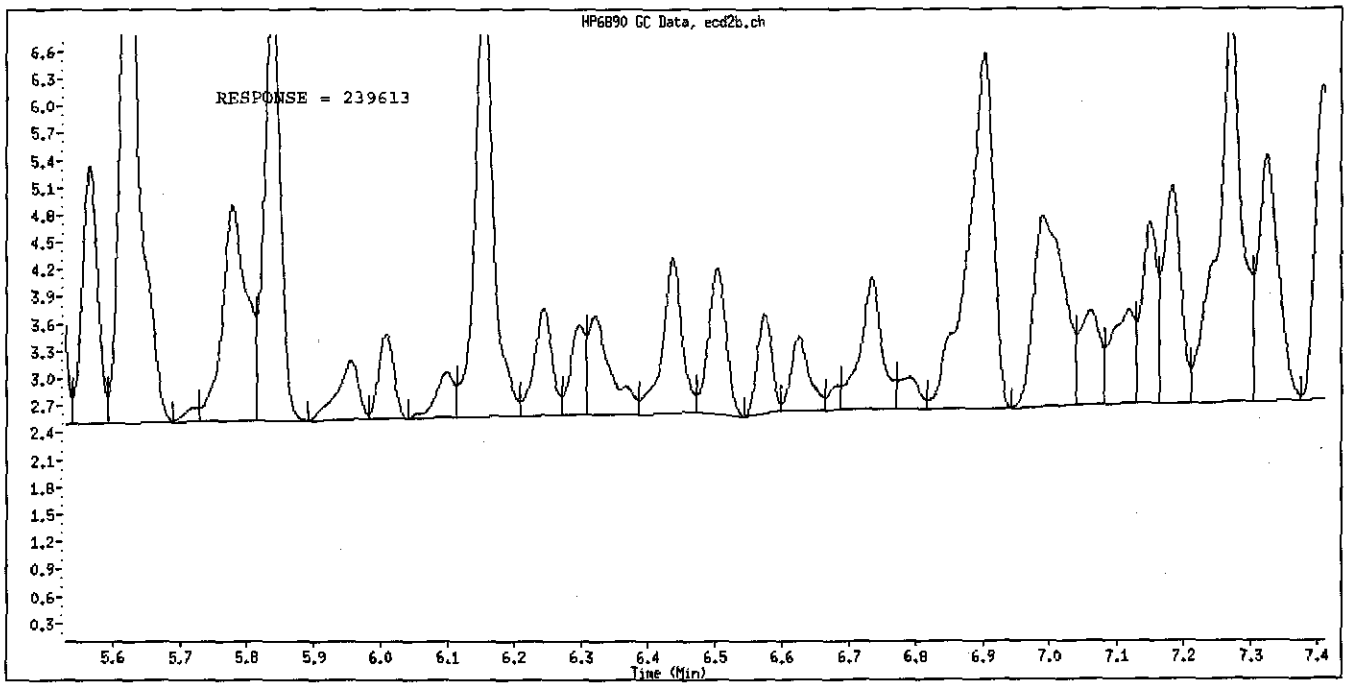
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 05:27
Instrument ID: a2hp2.i
Client ID: S-030205-JH-070
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/18/2005



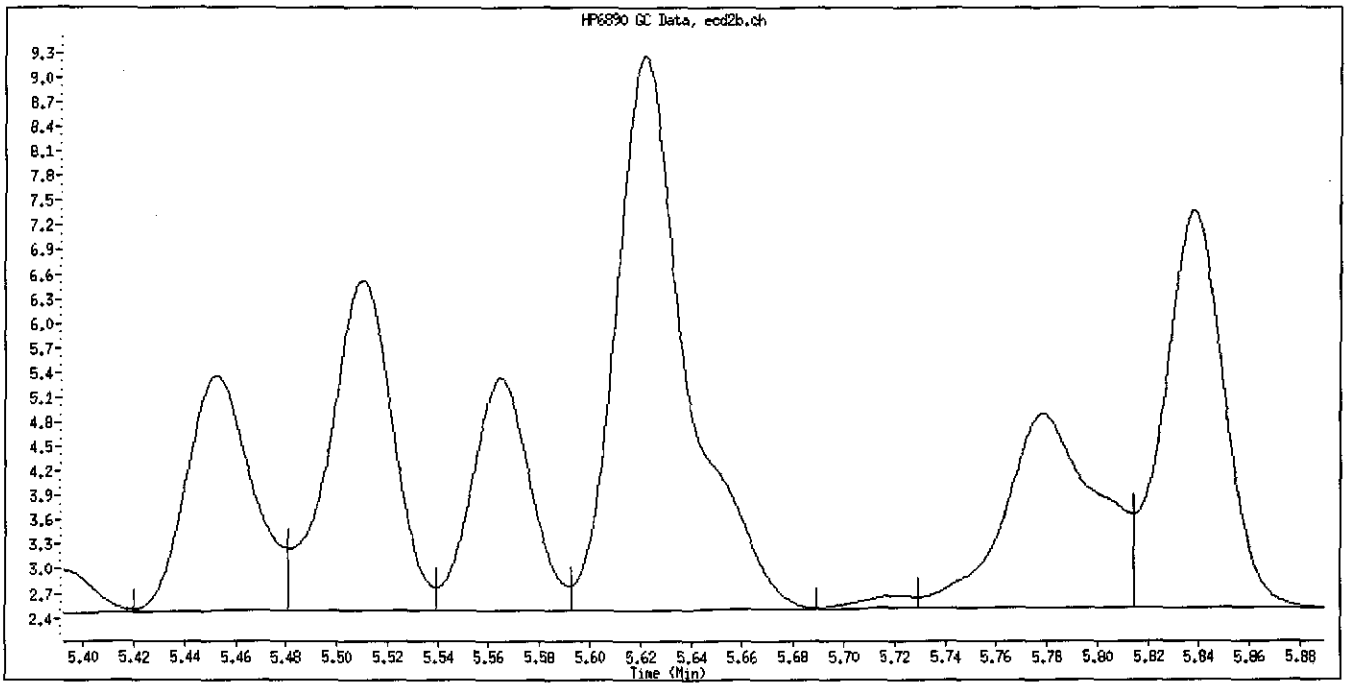
Original Integration



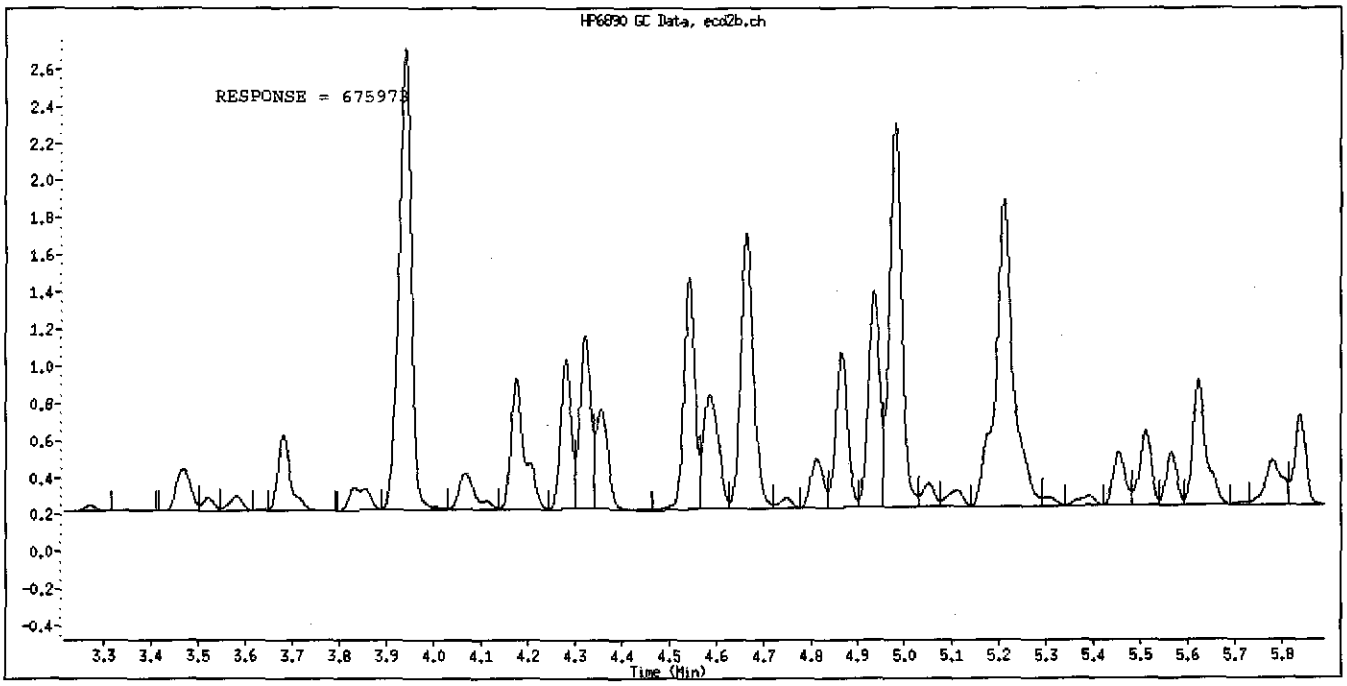
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 18-MAR-2005 05:27
Instrument ID: a2hp2.i
Client ID: S-030205-JH-070
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

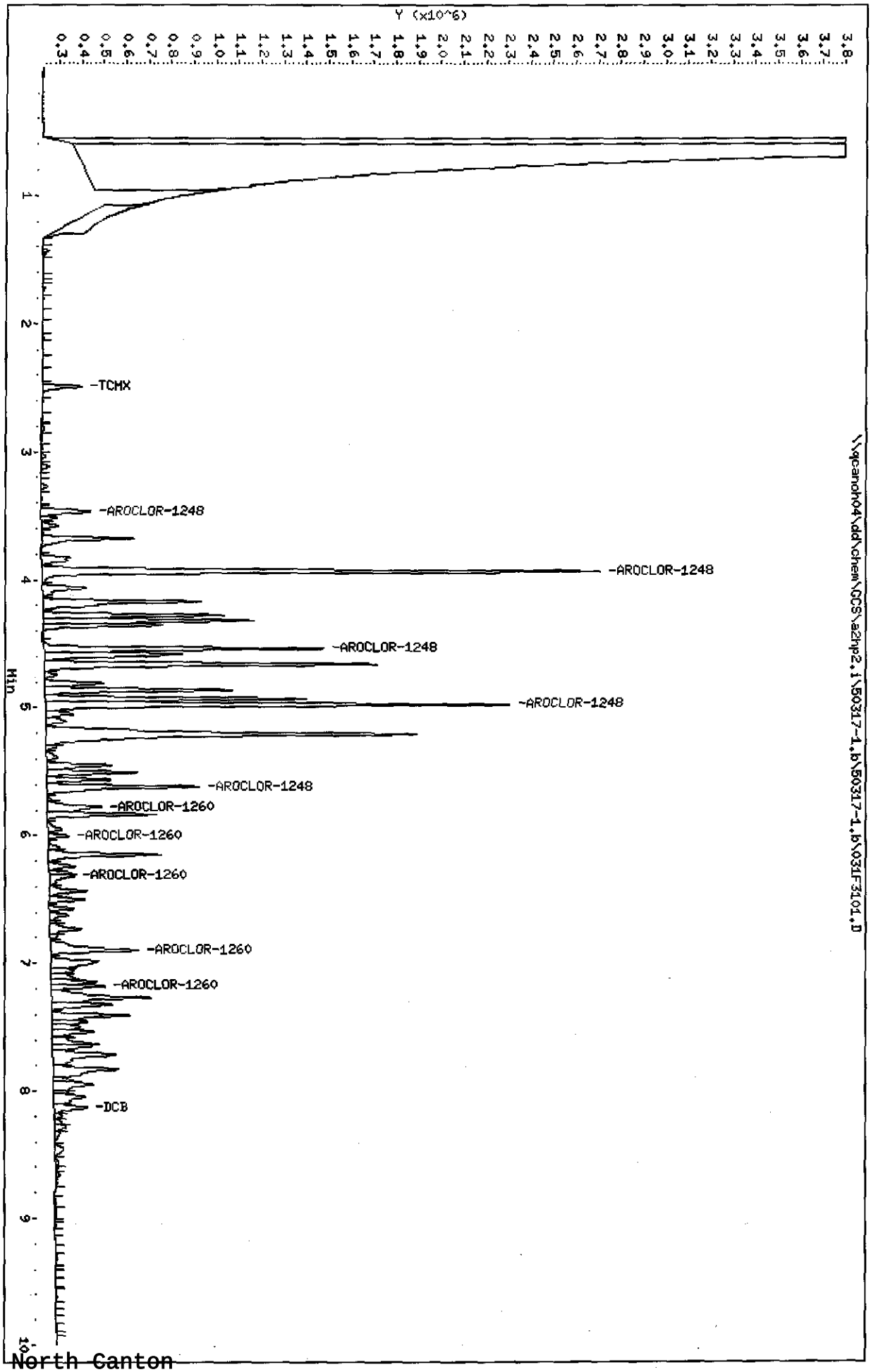


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\031F3101.D
Date : 18-MAR-2005 05:27
Client ID: S-030205-JH-070
Sample Info: G5F9L1AA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-071

GC Semivolatiles

Lot-Sample #...:	A5C030182-039	**Work Order #...:**	G5F9M1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:35	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	2	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	6.7	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	71	ug/kg
Aroclor 1221	ND	71	ug/kg
Aroclor 1232	ND	71	ug/kg
Aroclor 1242	ND	71	ug/kg
Aroclor 1248	**380**	**71**	***ug/kg***
Aroclor 1254	ND	71	ug/kg
Aroclor 1260	ND	71	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(10 - 172)
Decachlorobiphenyl	91	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: 032F3201.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\032F3201.D
Lab Smp Id: G5F9M1AA Client Smp ID: S-030205-JH-071
Inj Date : 18-MAR-2005 05:43
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9M1AA,2
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 32
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.489	2.489	0.000	1594711	0.00989	6.589		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

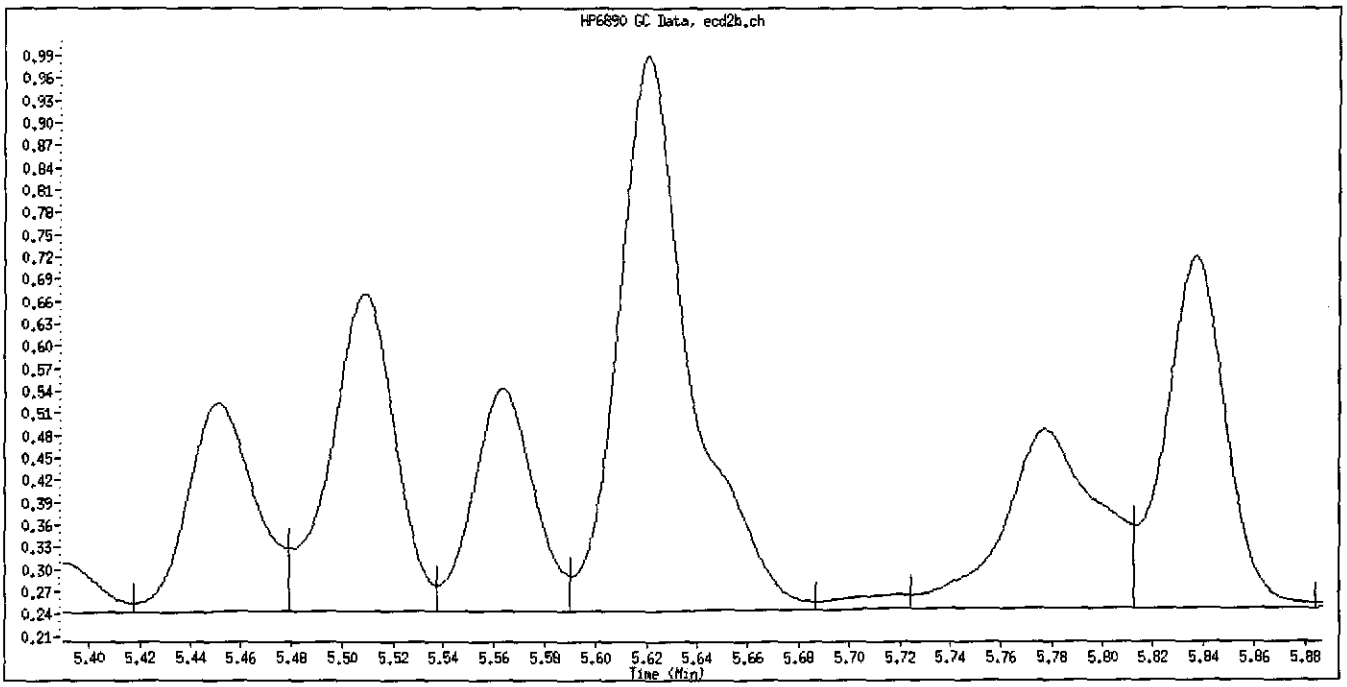
Data File: 032F3201.D
Report Date: 18-Mar-2005 14:20

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.463	3.465	-0.002	176347	0.17453	116.2	75.00- 125.00	100.00(M)
3.937	3.932	0.005	2240330	0.91901	612.0	183.64- 306.07	1270.41
4.540	4.543	-0.003	1337285	0.46460	309.4	216.84- 361.40	758.33
4.977	4.978	-0.001	2227784	0.67634	450.4	251.26- 418.77	1263.30
5.620	5.621	-0.001	744677	0.43564	290.1	129.44- 215.73	422.28
Average of Peak Concentrations =					355.6		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	613539	0.00910	6.060		

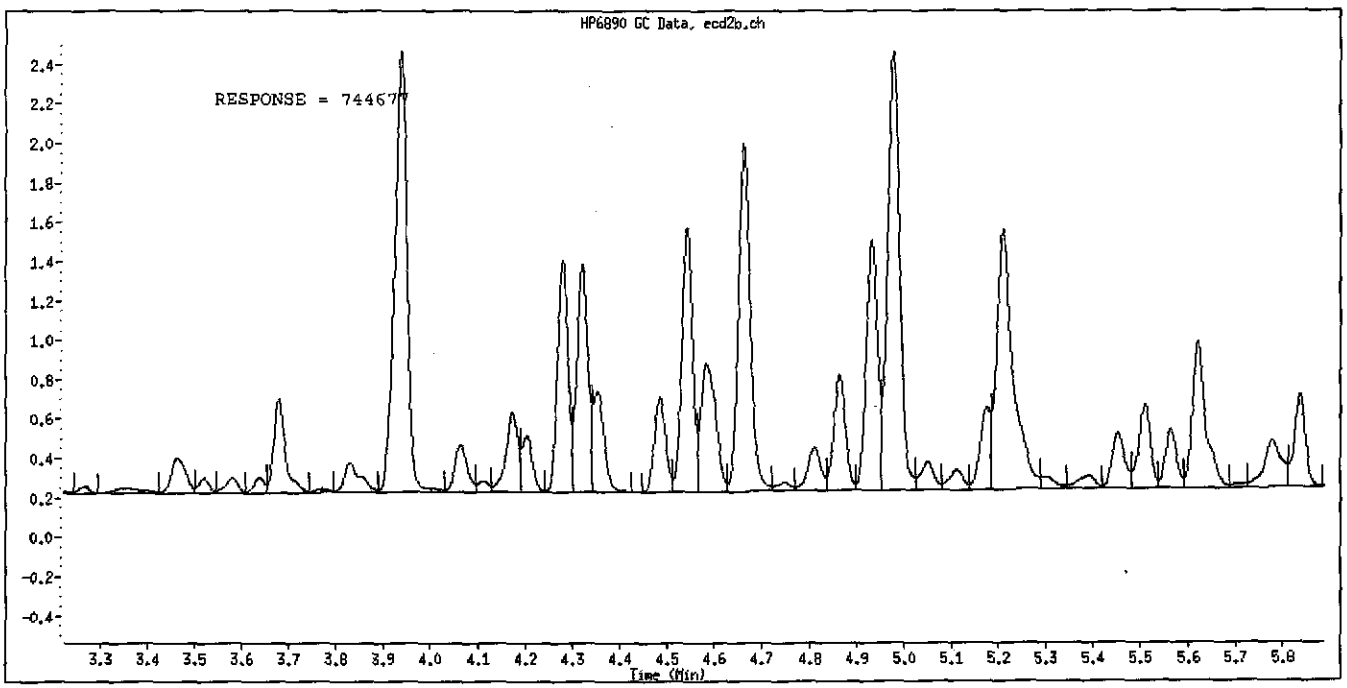
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 05:43
Instrument ID: a2hp2.i
Client ID: S-030205-JH-071
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

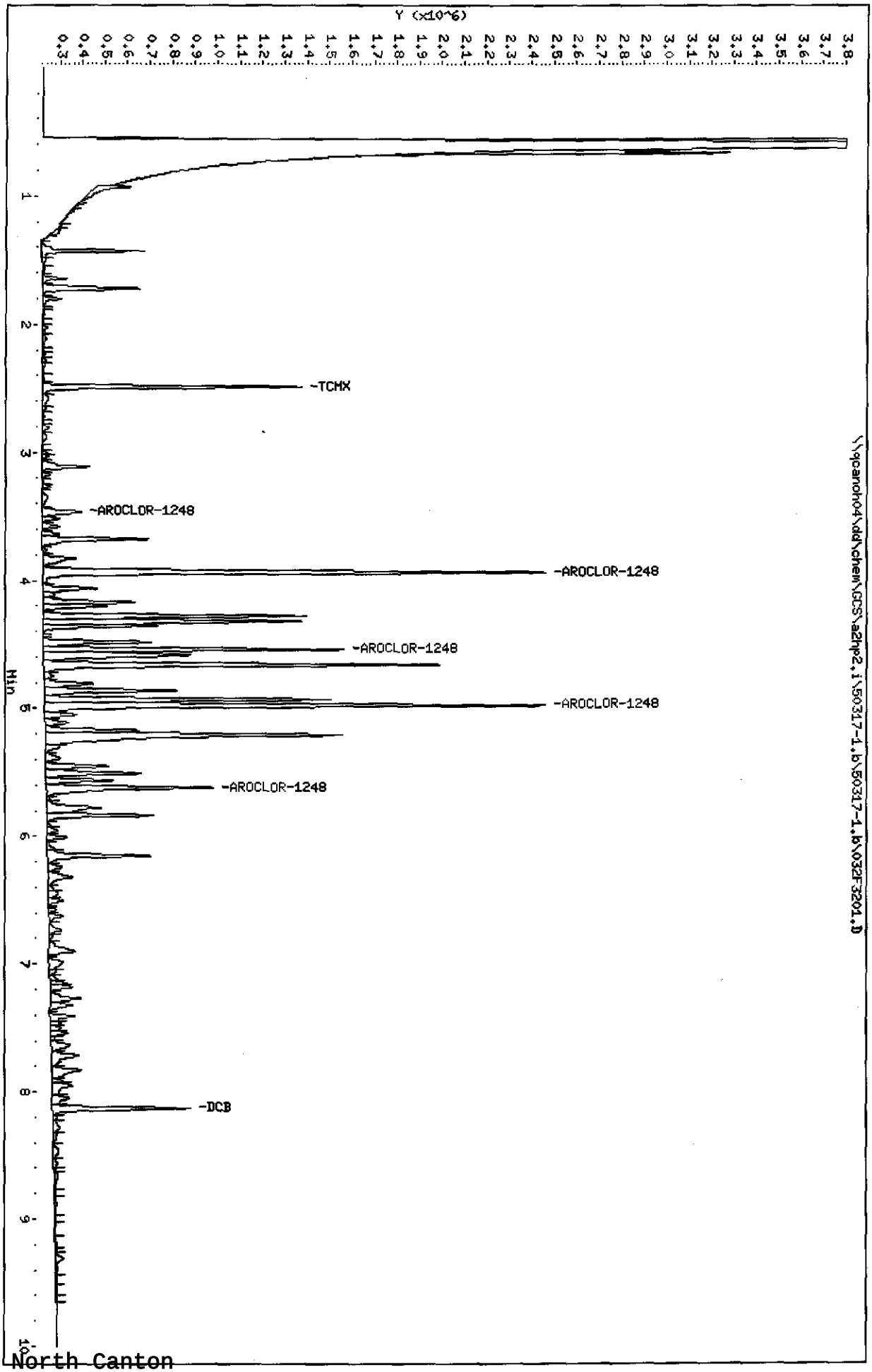


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\032F3201.D
Date : 18-MAR-2005 05:43
Client ID: S-030205-JH-071
Sample Info: C5F9H1AA,2
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-072

GC Semivolatiles

Lot-Sample #...:	A5C030182-040	**Work Order #...:**	G5F9N1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:40	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30.13 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	380	ug/kg
Aroclor 1221	ND	380	ug/kg
Aroclor 1232	ND	380	ug/kg
Aroclor 1242	ND	380	ug/kg
Aroclor 1248	**2100**	**380**	**ug/kg**
Aroclor 1254	ND	380	ug/kg
Aroclor 1260	ND	380	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	108 DIL	(10 - 172)
Decachlorobiphenyl	124 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 033F3301.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\033F3301.D
Lab Smp Id: G5F9N1AA Client Smp ID: S-030205-JH-072
Inj Date : 18-MAR-2005 05:59
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9N1AA,10
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 33
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.130	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.489	2.489	0.000	347348	0.00215	7.152		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

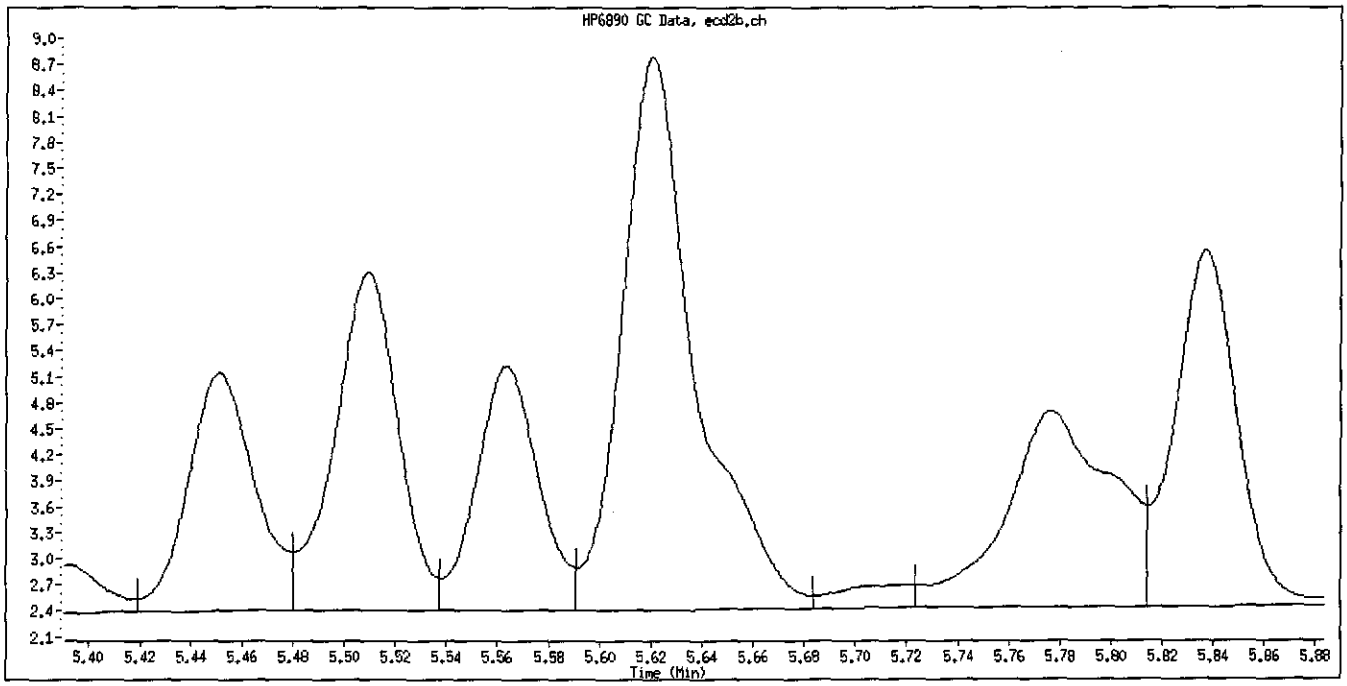
Data File: 033F3301.D
Report Date: 18-Mar-2005 14:20

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.463	3.465	-0.002	378001	0.37411	1242	75.00- 125.00	100.00(M)
3.935	3.932	0.003	2101006	0.86186	2860	183.64- 306.07	555.82
4.540	4.543	-0.003	1468558	0.51021	1693	216.84- 361.40	388.51
4.978	4.978	0.000	2127191	0.64580	2143	251.26- 418.77	562.75
5.620	5.621	-0.001	638123	0.37330	1239	129.44- 215.73	168.82
Average of Peak Concentrations =					1836		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
8.132	8.129	0.003	167635	0.00249	8.251		

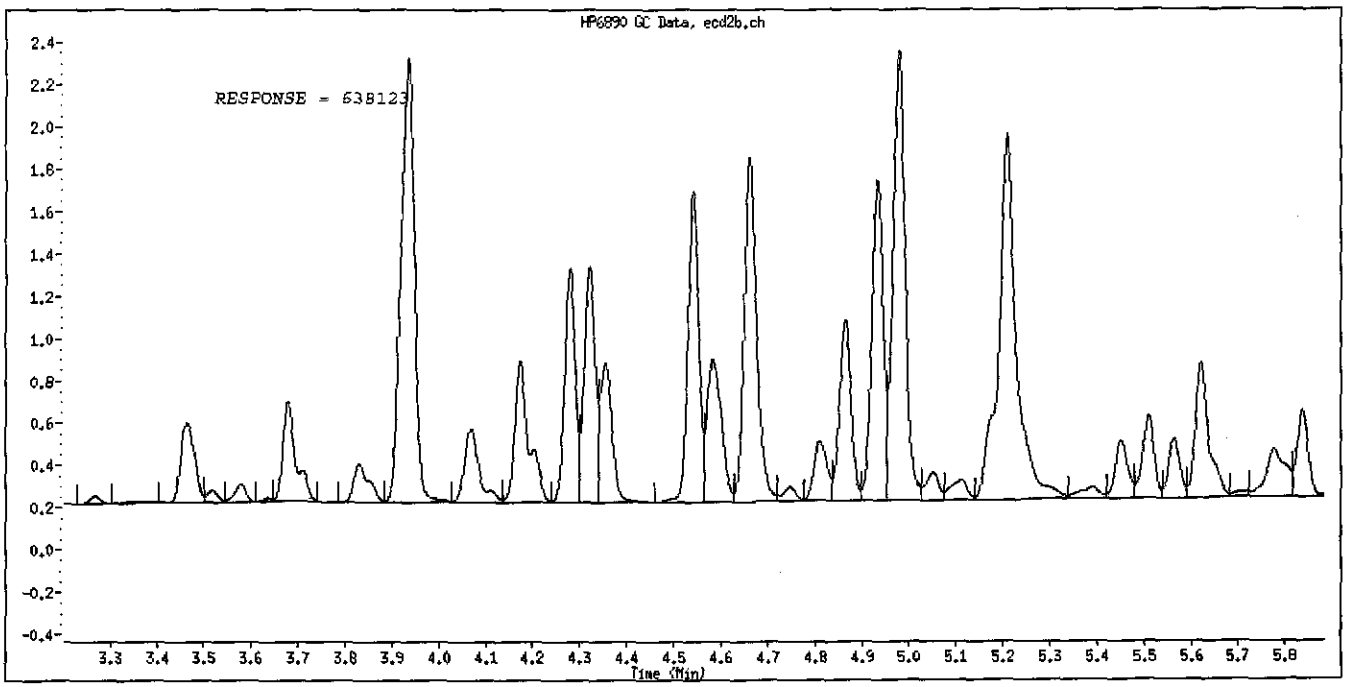
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 05:59
Instrument ID: a2hp2.i
Client ID: S-030205-JH-072
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



Original Integration

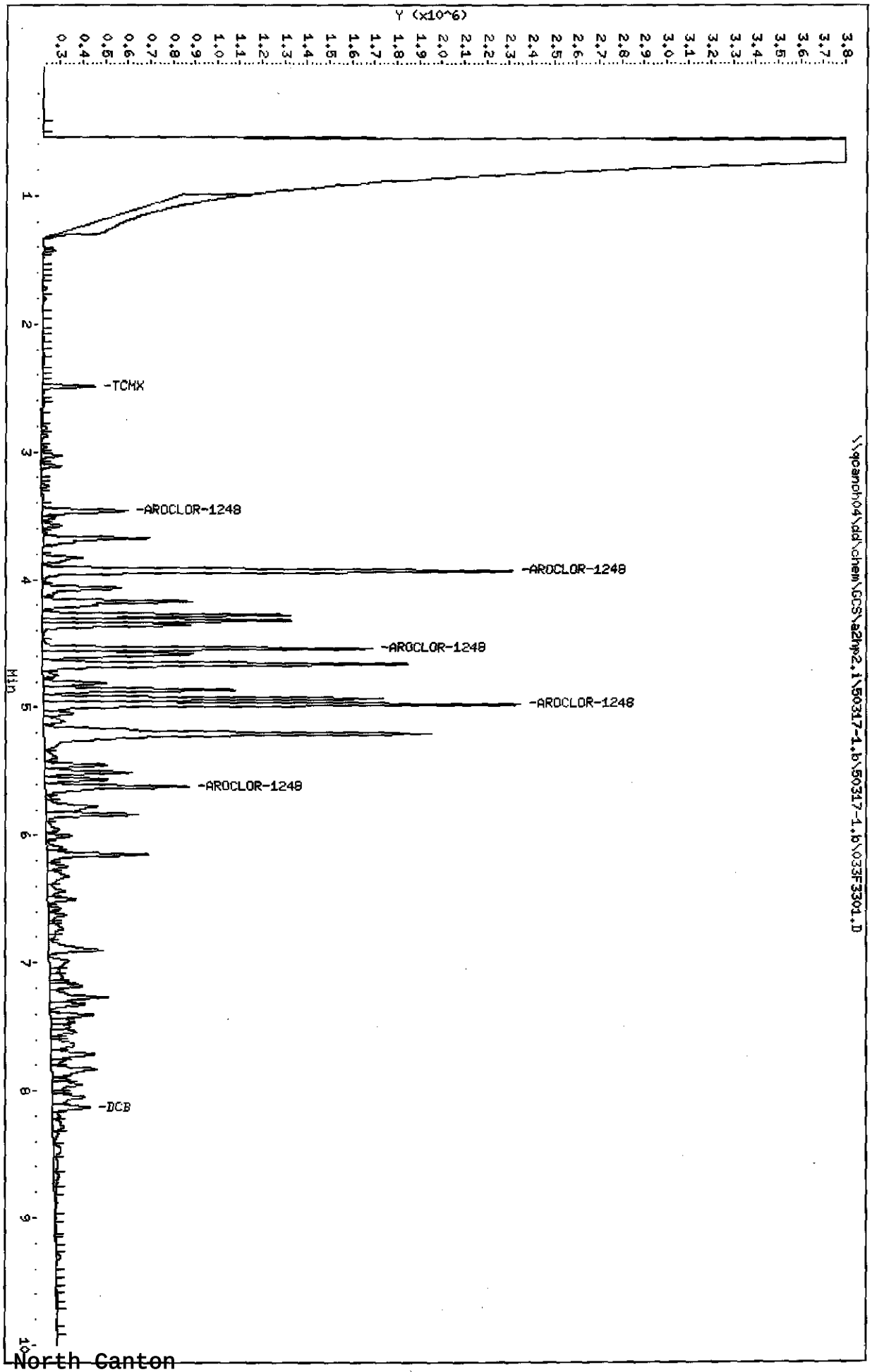


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\033F3301.D
Date : 18-MAR-2005 05:59
Client ID: S-030205-JH-072
Sample Info: G5F9XLAA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-073

GC Semivolatiles

Lot-Sample #...:	A5C030182-041	**Work Order #...:**	G5F9P1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:45	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/18/05		
Prep Batch #...:	5062356				
Dilution Factor:	10	**Initial Wgt/Vol:**	30.03 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	14	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	380	ug/kg
Aroclor 1221	ND	380	ug/kg
Aroclor 1232	ND	380	ug/kg
Aroclor 1242	ND	380	ug/kg
Aroclor 1248	**2100**	**380**	**ug/kg**
Aroclor 1254	ND	380	ug/kg
Aroclor 1260	ND	380	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89 DIL	(10 - 172)
Decachlorobiphenyl	103 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: 034F3401.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\034F3401.D
Lab Smp Id: G5F9P1AA Client Smp ID: S-030205-JH-073
Inj Date : 18-MAR-2005 06:14
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9P1AA,10
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 34
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.489	0.002	287268	0.00178	5.935		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

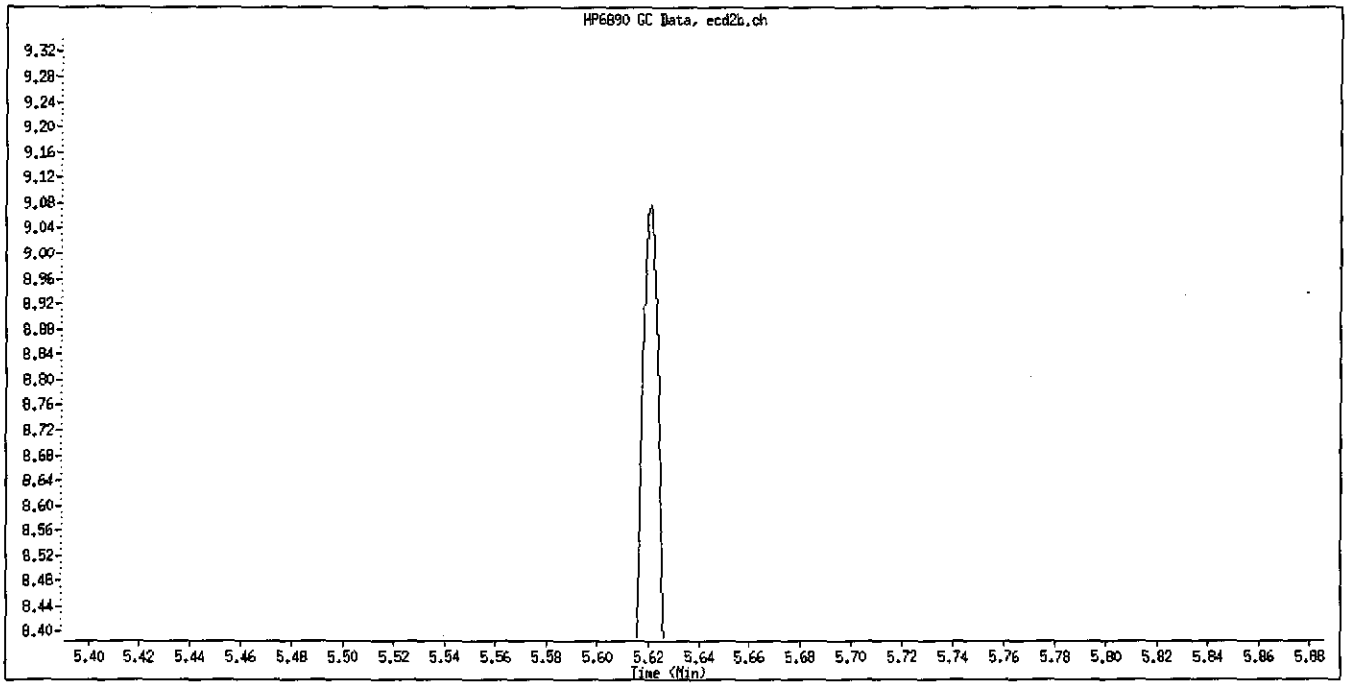
Data File: 034F3401.D
Report Date: 18-Mar-2005 14:20

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
3.466	3.465	0.001	336254	0.33279	1108	75.00- 125.00	100.00(M)
3.937	3.932	0.005	2103829	0.86301	2874	183.64- 306.07	625.67
4.542	4.543	-0.001	1402843	0.48738	1623	216.84- 361.40	417.20
4.979	4.978	0.001	2049184	0.62211	2072	251.26- 418.77	609.42
5.620	5.621	-0.001	653809	0.38248	1274	129.44- 215.73	194.44
Average of Peak Concentrations =					1790		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
5.776	5.804	-0.028	229156	0.05704	189.9	80.00- 120.00	100.00(M)
6.006	6.001	0.005	98187	0.02074	69.05	87.87- 146.45	42.85
6.319	6.317	0.002	101126	0.01958	65.22	96.24- 160.39	44.13
6.900	6.869	0.031	222693	0.03052	101.6	135.40- 225.67	97.18
7.181	7.173	0.008	141756	0.03207	106.8	76.53- 127.54	61.86
Average of Peak Concentrations =					106.5		
$ 9 DCB					CAS #: 2051-24-3		
8.132	8.129	0.003	138453	0.00205	6.837		

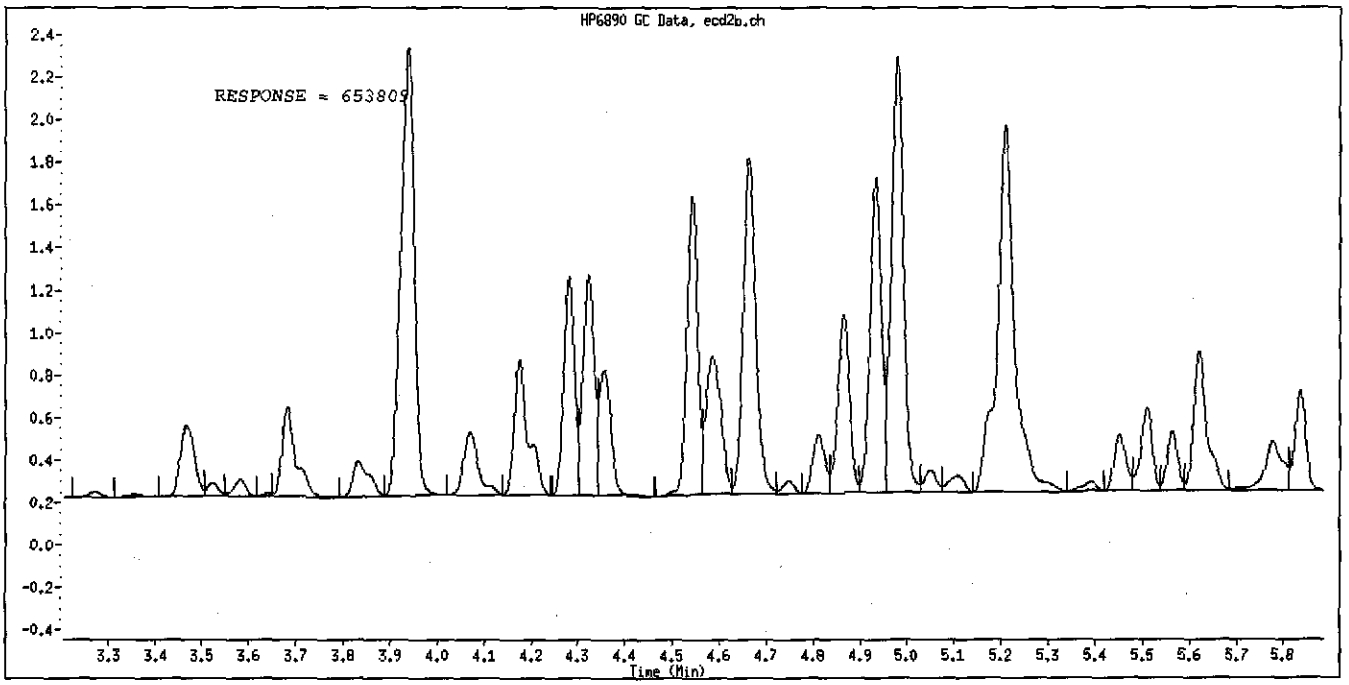
QC Flag Legend

M - Compound response manually integrated.

Data File Name: 0341540[illegible].D
Inj. Date and Time: 18-MAR-2005 06:14
Instrument ID: a2hp2.i
Client ID: S-030205-JH-073
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/18/2005



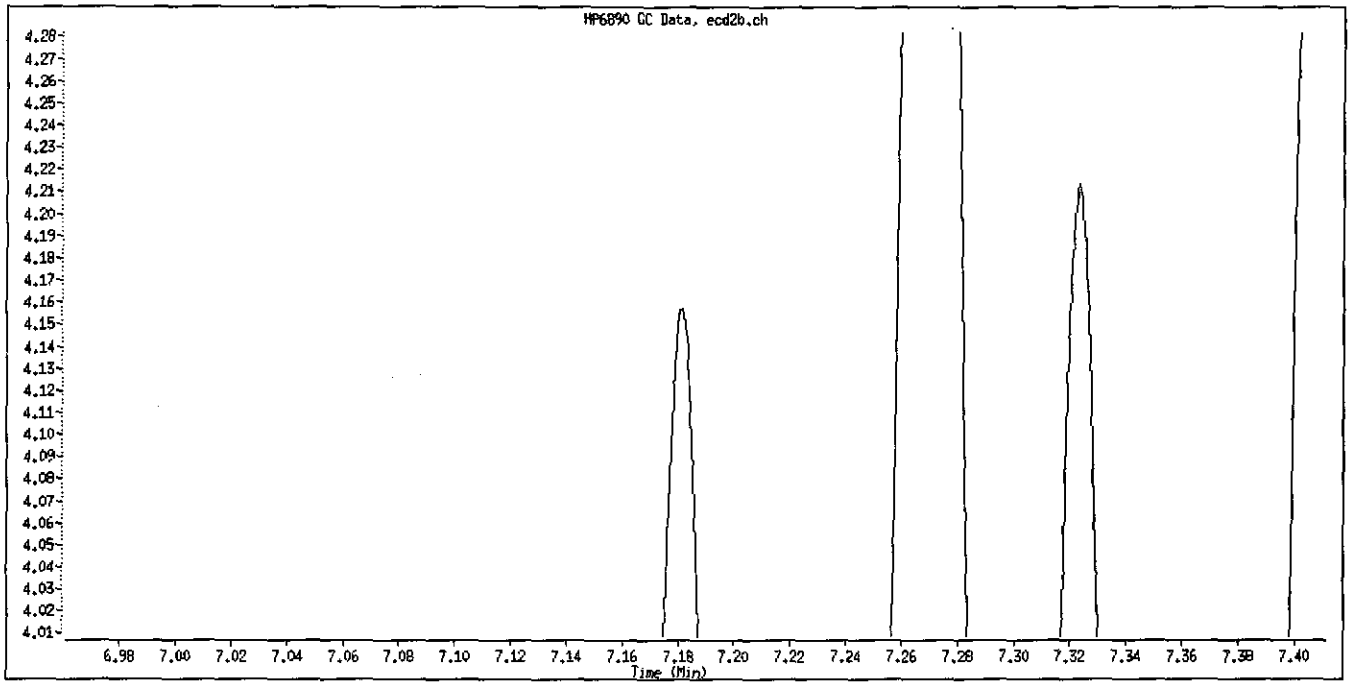
Original Integration



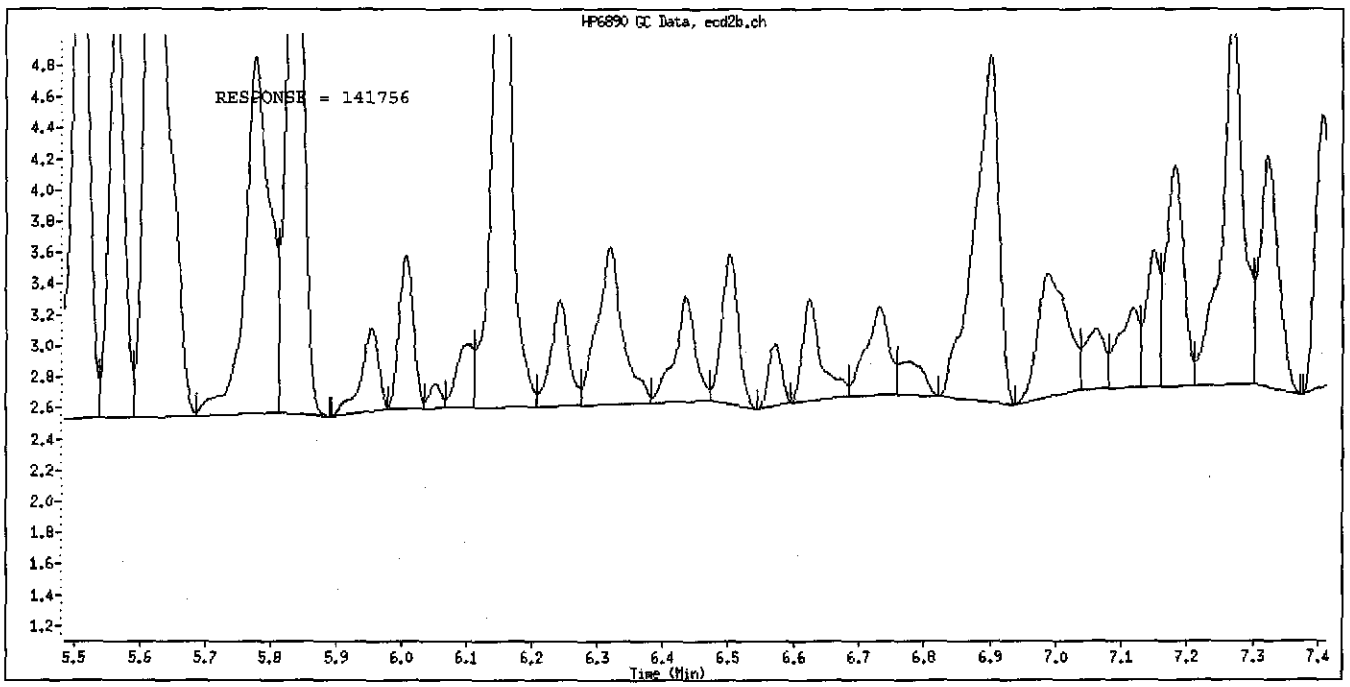
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File Name: 0318401.D
Inj. Date and Time: 18-MAR-2005 06:14
Instrument ID: a2hp2.i
Client ID: S-030205-JH-073
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/18/2005



Original Integration

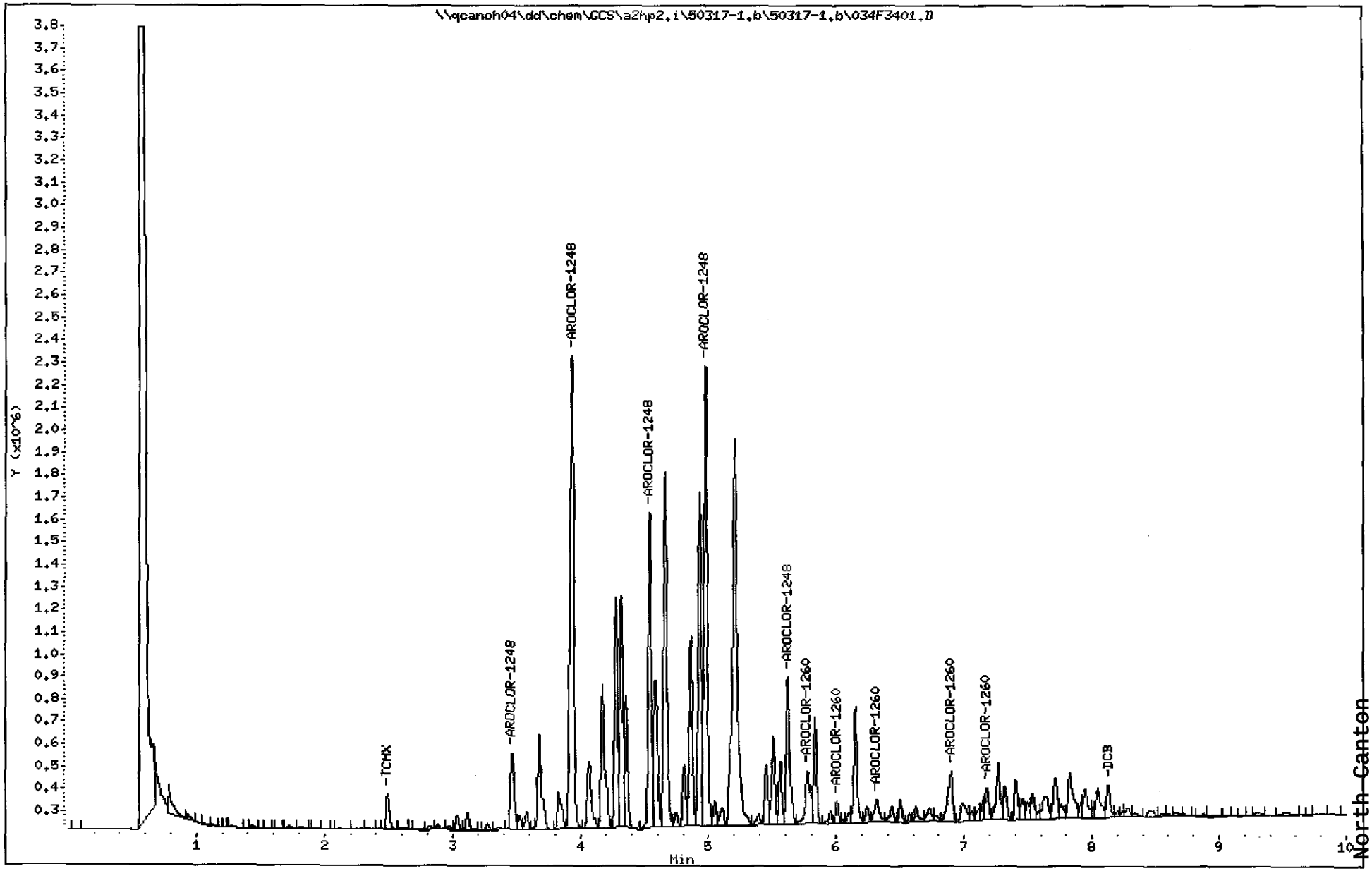


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\034F3401.D
Date : 18-MAR-2005 06:14
Client ID: S-030205-JH-073
Sample Info: G5F9P1AA,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



STL North Canton

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-074

GC Semivolatiles

Lot-Sample #...:	A5C030182-042	**Work Order #...:**	G5F9Q1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:50	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/21/05		
Prep Batch #...:	5062356				
Dilution Factor:	50	**Initial Wgt/Vol:**	30.09 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	1900	ug/kg
Aroclor 1221	ND	1900	ug/kg
Aroclor 1232	ND	1900	ug/kg
Aroclor 1242	ND	1900	ug/kg
Aroclor 1248	**7100**	**1900**	**ug/kg**
Aroclor 1254	ND	1900	ug/kg
Aroclor 1260	ND	1900	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	109 DIL	(10 - 172)
Decachlorobiphenyl	121 DIL	(40 - 138)

NOTE(S):

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

Results and reporting limits have been adjusted for dry weight.

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\003F0301.D
Report Date: 21-Mar-2005 11:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\003F0301.D
Lab Smp Id: G5F9Q1AA Client Smp ID: S-030205-JH-074
Inj Date : 21-MAR-2005 10:15
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F9Q1AA,50
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m
Meth Date : 21-Mar-2005 11:57 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 3
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	50.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.673	1.675	-0.002	62098	4e-004	7.271		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\003F0301.D
Report Date: 21-Mar-2005 11:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.128	2.131	-0.003	368518	0.28127	4674	75.00- 125.00	100.00(M)
2.452	2.453	-0.001	1899793	0.72004	11960	149.93- 249.88	515.52
2.838	2.841	-0.003	1043604	0.30250	5026	196.39- 327.32	283.19
3.084	3.088	-0.004	588669	0.29883	4966	112.42- 187.36	159.74
3.286	3.291	-0.005	628757	0.24541	4078	133.25- 222.08	170.62
Average of Peak Concentrations =					6142		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
6.288	6.291	-0.003	43966	5e-004	8.018		

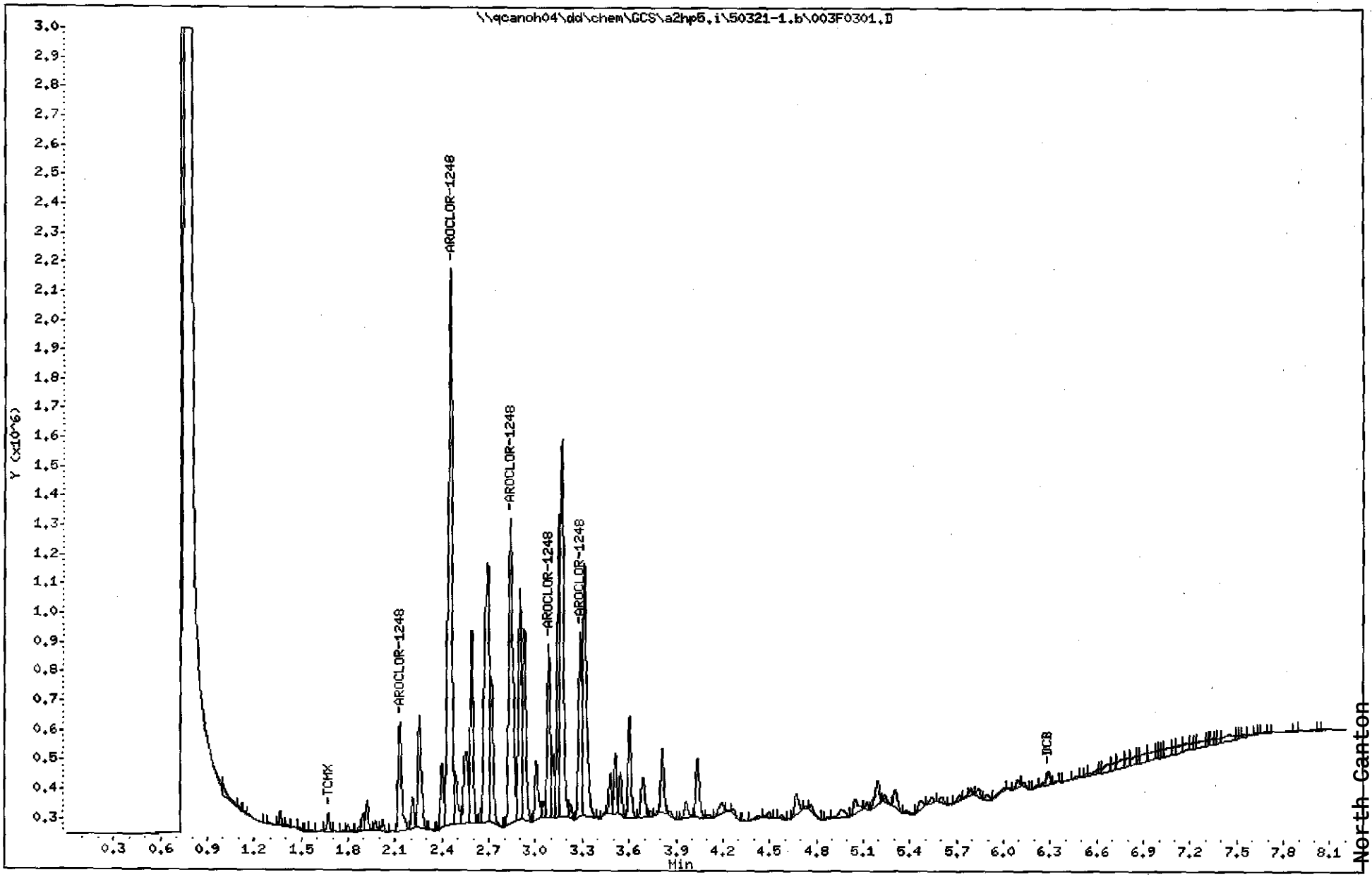
QC Flag Legend

M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\003F0301.D
Date : 21-MAR-2005 10:15
Client ID: S-030205-JH-074
Sample Info: G5F9Q1AA,50
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.53



Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-075

GC Semivolatiles

Lot-Sample #...:	A5C030182-043	**Work Order #...:**	G5F9R1AA	**Matrix.....:**	SO
Date Sampled...:	03/02/05 13:55	**Date Received..:**	03/03/05		
Prep Date.....:	03/04/05	**Analysis Date..:**	03/21/05		
Prep Batch #...:	5062356				
Dilution Factor:	2	**Initial Wgt/Vol:**	30 g	**Final Wgt/Vol..:**	10 mL
% Moisture.....:	13	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	76	ug/kg
Aroclor 1221	ND	76	ug/kg
Aroclor 1232	ND	76	ug/kg
Aroclor 1242	ND	76	ug/kg
Aroclor 1248	**250**	**76**	**ug/kg**
Aroclor 1254	ND	76	ug/kg
Aroclor 1260	ND	76	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(10 - 172)
Decachlorobiphenyl	99	(40 - 138)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\004F0401.D
Report Date: 21-Mar-2005 11:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\004F0401.D
Lab Smp Id: G5F9R1AA Client Smp ID: S-030205-JH-075
Inj Date : 21-MAR-2005 10:27
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F9R1AA,2
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m
Meth Date : 21-Mar-2005 11:57 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 4
Dil Factor: 2.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	2.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.674	1.675	-0.001	1318382	0.00929	6.193		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\004F0401.D
Report Date: 21-Mar-2005 11:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.131	2.131	0.000	349716	0.26692	177.9	75.00- 125.00	100.00(M)
2.452	2.453	-0.001	1556149	0.58980	393.2	149.93- 249.88	444.98
2.839	2.841	-0.002	805463	0.23347	155.6	196.39- 327.32	230.32
3.086	3.088	-0.002	531551	0.26983	179.9	112.42- 187.36	152.00
3.287	3.291	-0.004	615050	0.24006	160.0	133.25- 222.08	175.87
Average of Peak Concentrations =					213.3		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
6.289	6.291	-0.002	899525	0.00987	6.581		

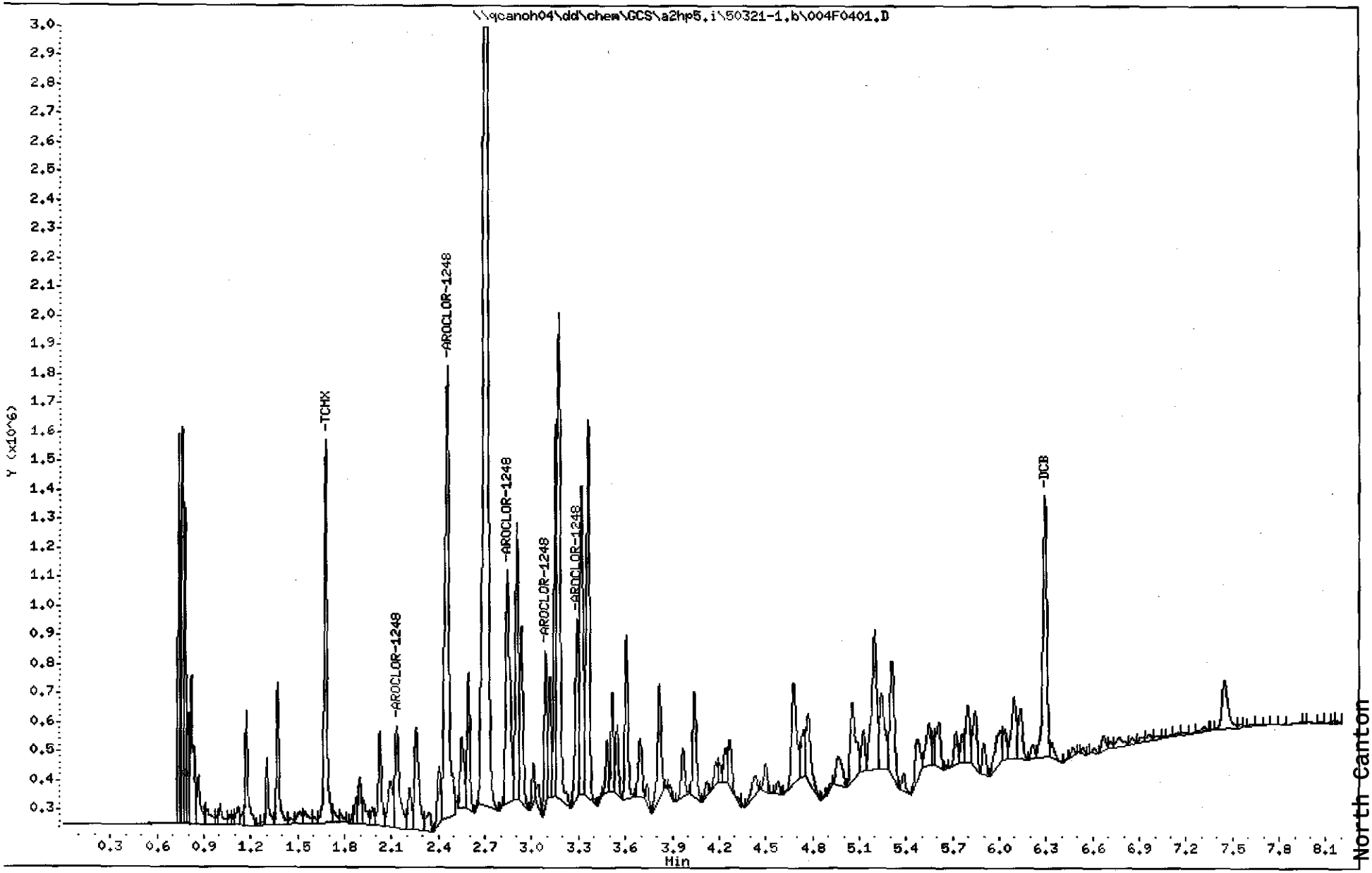
QC Flag Legend

M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\004F0401.D
Date : 21-MAR-2006 10:27
Client ID: S-030206-JH-075
Sample Info: G5F9R1AA,2
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.53



STANDARD DATA

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Start Cal Date: 03-MAR-2005 12:23
End Cal Date : 03-MAR-2005 19:28
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
03-MAR-2005 17:38	12-AR1660TD	022F2201.D
03-MAR-2005 16:19	9-AR2154	017F1701.D
03-MAR-2005 15:01	3-AR1248	012F1201.D
03-MAR-2005 13:42	2-AR1242	007F0701.D
03-MAR-2005 12:23	1-AR1232	002F0201.D
Cal Level: 2 , Cal Amount: 0.20000		
03-MAR-2005 17:54	12-AR1660TD	023F2301.D
03-MAR-2005 16:35	9-AR2154	018F1801.D
03-MAR-2005 15:16	3-AR1248	013F1301.D
03-MAR-2005 13:58	2-AR1242	008F0801.D
03-MAR-2005 12:39	1-AR1232	003F0301.D
Cal Level: 3 , Cal Amount: 0.50000		
03-MAR-2005 19:28	14-AR1268	029F2901.D
03-MAR-2005 19:12	13-AR1262	028F2801.D
03-MAR-2005 18:09	12-AR1660TD	024F2401.D
03-MAR-2005 16:51	9-AR2154	019F1901.D
03-MAR-2005 15:32	3-AR1248	014F1401.D
03-MAR-2005 14:14	2-AR1242	009F0901.D
03-MAR-2005 12:55	1-AR1232	004F0401.D
Cal Level: 4 , Cal Amount: 1.00000		
03-MAR-2005 18:25	12-AR1660TD	025F2501.D
03-MAR-2005 17:07	9-AR2154	020F2001.D
03-MAR-2005 15:48	3-AR1248	015F1501.D
03-MAR-2005 14:29	2-AR1242	010F1001.D
03-MAR-2005 13:11	1-AR1232	005F0501.D
Cal Level: 5 , Cal Amount: 2.00000		
03-MAR-2005 18:41	12-AR1660TD	026F2601.D
03-MAR-2005 17:22	9-AR2154	021F2101.D
03-MAR-2005 16:04	3-AR1248	016F1601.D
03-MAR-2005 14:45	2-AR1242	011F1101.D
03-MAR-2005 13:26	1-AR1232	006F0601.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

03-MAR-2005 23:08	12-AR1660TD	043F4301.D
03-MAR-2005 18:56	12-AR1660TD	027F2701.D
03-MAR-2005 18:25	12-AR1660TD	025F2501.D
03-MAR-2005 17:07	9-AR2154	020F2001.D
03-MAR-2005 15:48	3-AR1248	015F1501.D
03-MAR-2005 14:29	2-AR1242	010F1001.D
03-MAR-2005 13:11	1-AR1232	005F0501.D

Report Date : 04-Mar-2005 09:55

STL - North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 03-MAR-2005 12:23
End Cal Date : 03-MAR-2005 19:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Last Edit : 04-Mar-2005 04:50 a2hp2.i
Curve Type : Average

Calibration File Names:
Level 1: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\022F2201.D
Level 2: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\023F2301.D
Level 3: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\029F2901.D
Level 4: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\025F2501.D
Level 5: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\026F2601.D

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	___ RRF	% RSD	
2 AROCLOR-1221 (1)	1284400	1543150	1594332	859439	975097	1251284	26.318	<-
(2)	851200	1002380	1034450	554042	617530	811920	26.958	<-
(3)	3132670	3597540	3609176	2175188	2257080	2954331	23.740	<-
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.000	<-
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.000	<-
3 AROCLOR-1016 (1)	2489340	2409725	2618702	2082050	2204988	2360961	9.168	
(2)	8456030	7818270	7367708	6980845	6272698	7379110	11.207	
(3)	18559530	17329260	15969518	16478892	15271390	16721718	7.609	
(4)	7361510	6767635	6569912	6340454	5823410	6572584	8.592	
(5)	4784990	4518610	4407192	4299680	4045307	4411156	6.183	
4 AROCLOR-1232 (1)	3389000	3193550	3323860	2832324	3029700	3153687	7.171	
(2)	2099750	2286335	2250780	2118733	2061332	2163386	4.577	
(3)	7070470	6953725	6899304	6424147	6783043	6826138	3.624	
(4)	1917690	1952775	1873498	1790721	1825010	1871939	3.526	
(5)	3074550	3010085	2788944	2634600	2591025	2819841	7.702	
5 AROCLOR-1242 (1)	1865530	1325900	1765178	1856627	1310224	1624692	17.401	
(2)	2583720	1848885	2421340	2560305	1871972	2257244	16.286	
(3)	5061810	4167430	4876132	4723532	4042922	4574365	9.770	
(4)	2452670	1849600	2354150	2474345	1929422	2212037	13.527	
(5)	2246800	1759755	2084922	2113700	1762977	1993631	11.068	
6 AROCLOR-1248 (1)	2856710	2844545	2697778	2631561	2430167	2692152	6.504	
(2)	7966550	7737040	7605076	7611803	7433296	7670753	2.575	
(3)	9165250	8760895	8228098	8155192	7892993	8440486	6.082	
(4)	8074620	8352285	7109216	7008395	7494923	7607888	7.756	
(5)	6502290	6511965	6119092	6302337	6242326	6335602	2.683	
7 AROCLOR-1254 (1)	5958640	5569080	5241532	5005007	4622383	5279328	9.722	
(2)	7049960	6794145	6455992	6318422	5780111	6479726	7.482	
(3)	13048220	13193960	12679030	12399652	11420932	12548359	5.602	
(4)	8905020	9649885	9391534	9223888	8460407	9126147	5.040	

Report Date : 04-Mar-2005 09:55

STL - North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 03-MAR-2005 12:23
End Cal Date : 03-MAR-2005 19:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Last Edit : 04-Mar-2005 04:50 a2hp2.i
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD	
(5)	13462170	13078195	12626334	12342714	11449057	12591694	6.104	
8 AROCLOR-1260 (1)	10295280	9411645	9156236	8953236	8441162	9251512	7.390	
(2)	18513530	17092485	16766842	16362103	15443085	16835609	6.674	
(3)	17791170	16602065	16627836	16238099	15570391	16565912	4.871	
(4)	20583850	19113385	19233898	18578791	18136102	19129205	4.831	
(5)	10232470	9091070	9331848	8977242	8823101	9291146	6.006	
14 AROCLOR-1262 (1)	+++++	+++++	5218366	+++++	+++++	5218366	0.000	<-
(2)	+++++	+++++	6893598	+++++	+++++	6893598	0.000	<-
(3)	+++++	+++++	6552376	+++++	+++++	6552376	0.000	<-
(4)	+++++	+++++	13538172	+++++	+++++	13538172	0.000	<-
(5)	+++++	+++++	5763388	+++++	+++++	5763388	0.000	<-
15 AROCLOR-1268 (1)	+++++	+++++	4308350	+++++	+++++	4308350	0.000	<-
(2)	+++++	+++++	18057520	+++++	+++++	18057520	0.000	<-
(3)	+++++	+++++	13787090	+++++	+++++	13787090	0.000	<-
(4)	+++++	+++++	5226964	+++++	+++++	5226964	0.000	<-
(5)	+++++	+++++	36847392	+++++	+++++	36847392	0.000	<-
$ 1 TCMX	106418400	104526500	129277760	91501280	115389940	109422776	12.794	
$ 9 DCB	175071800	159325300	162397960	152826200	158696740	161663600	5.107	

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\002F0201.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 03-MAR-2005 12:23
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

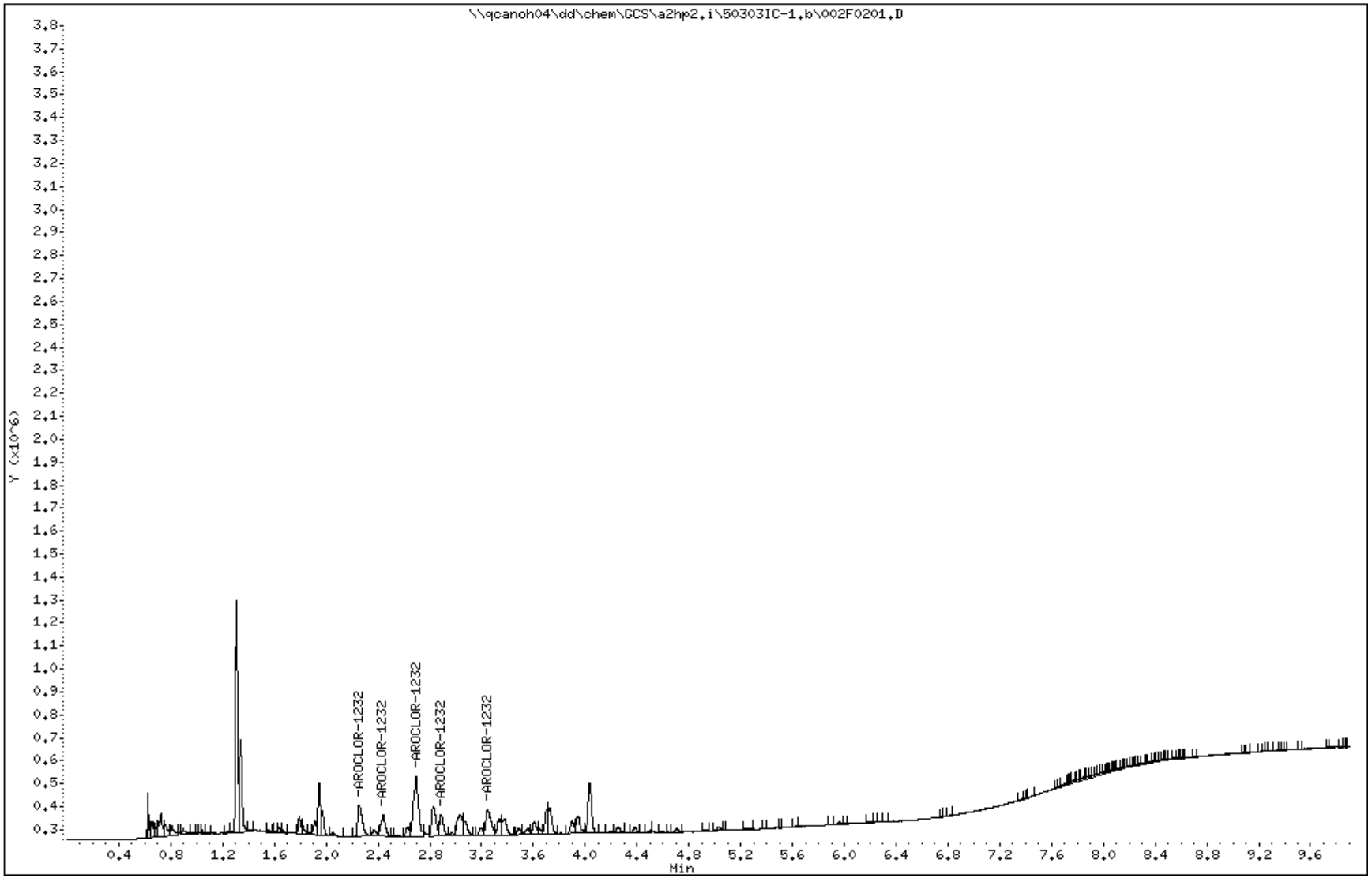
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.255	2.255	0.000	338900	0.10000		0.00- 0.00	100.00(M)
2.440	2.440	0.000	209975	0.10000		0.00- 0.00	61.96
2.694	2.694	0.000	707047	0.10000		0.00- 0.00	208.63
2.887	2.887	0.000	191769	0.10000		0.00- 0.00	56.59
3.246	3.246	0.000	307455	0.10000		0.00- 0.00	90.72

QC Flag Legend

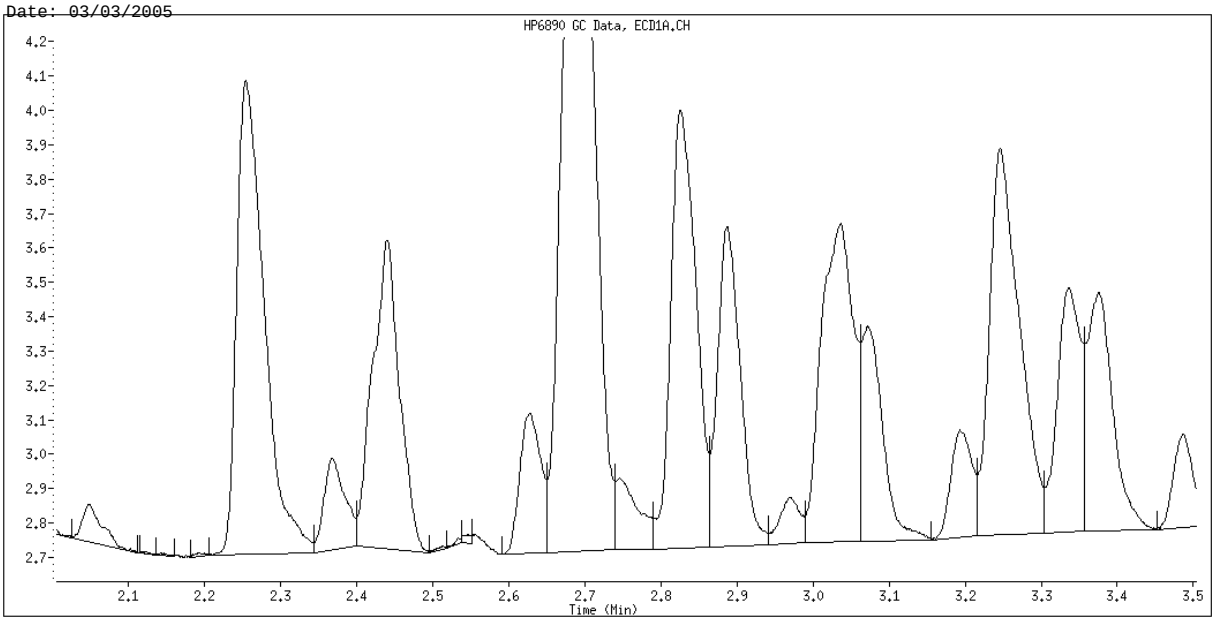
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\002F0201.D
Date : 03-MAR-2005 12:23
Client ID:
Sample Info: 1232,,1,1
Column phase: restek pest clpI

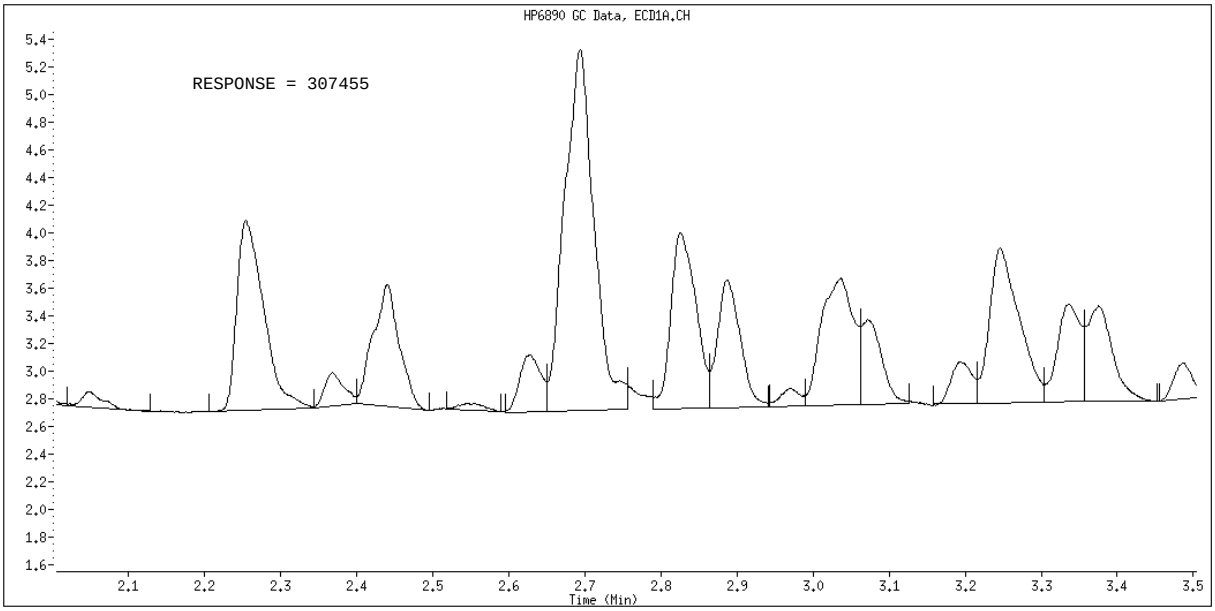
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 002F0201.D
Inj. Date and Time: 03-MAR-2005 12:23
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\003F0301.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 03-MAR-2005 12:39
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 12:23 Cal File: 002F0201.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

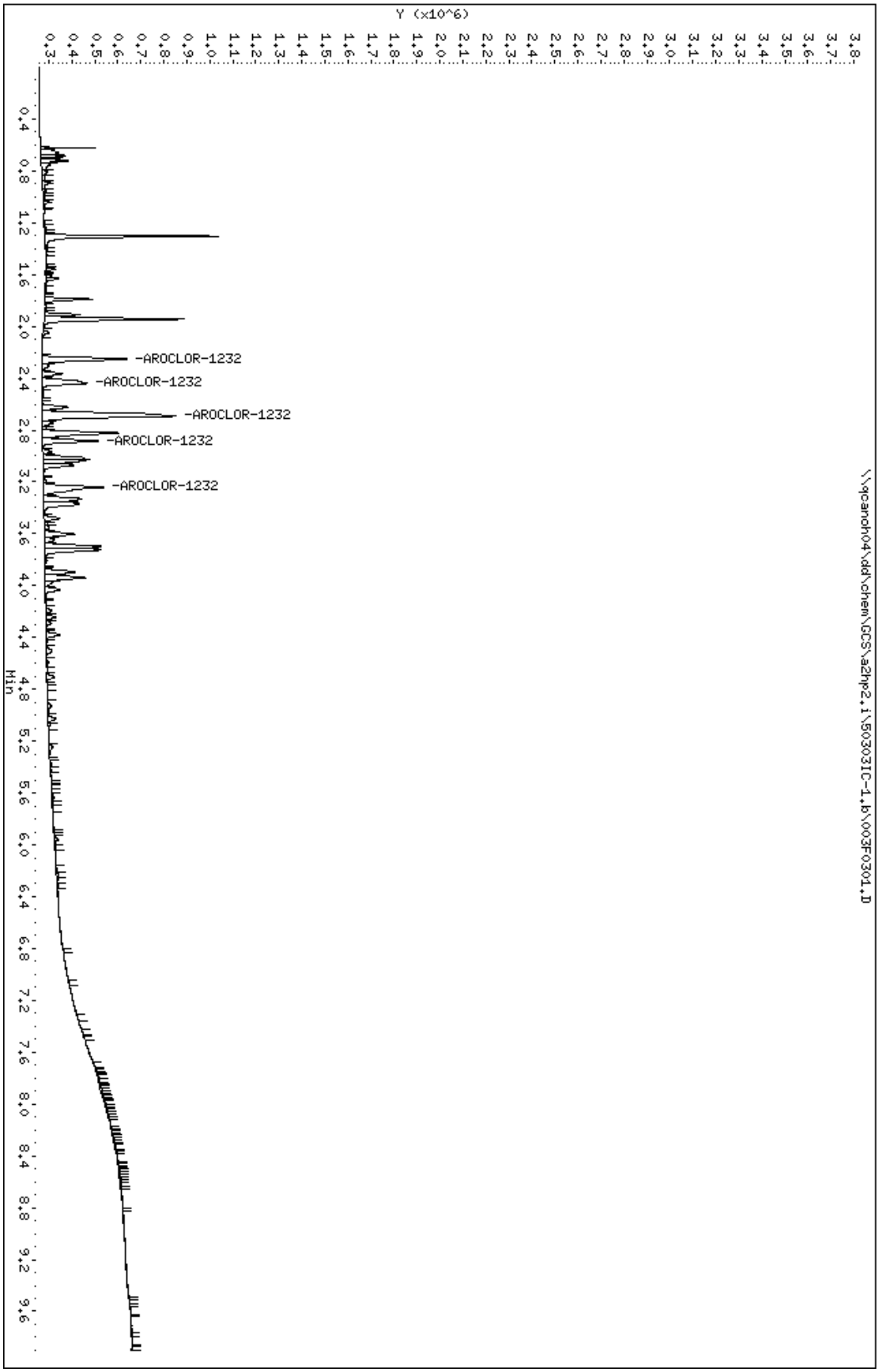
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.252	2.252	0.000	638710	0.20000	0.1885	0.00- 0.00	100.00(M)
2.438	2.438	0.000	457267	0.20000	0.2178	0.00- 0.00	71.59
2.691	2.691	0.000	1390745	0.20000	0.1967	0.00- 0.00	217.74
2.884	2.884	0.000	390555	0.20000	0.2036	0.00- 0.00	61.15
3.241	3.241	0.000	602017	0.20000	0.1958	0.00- 0.00	94.26
		Average of Peak Amounts =			0.20048		

QC Flag Legend

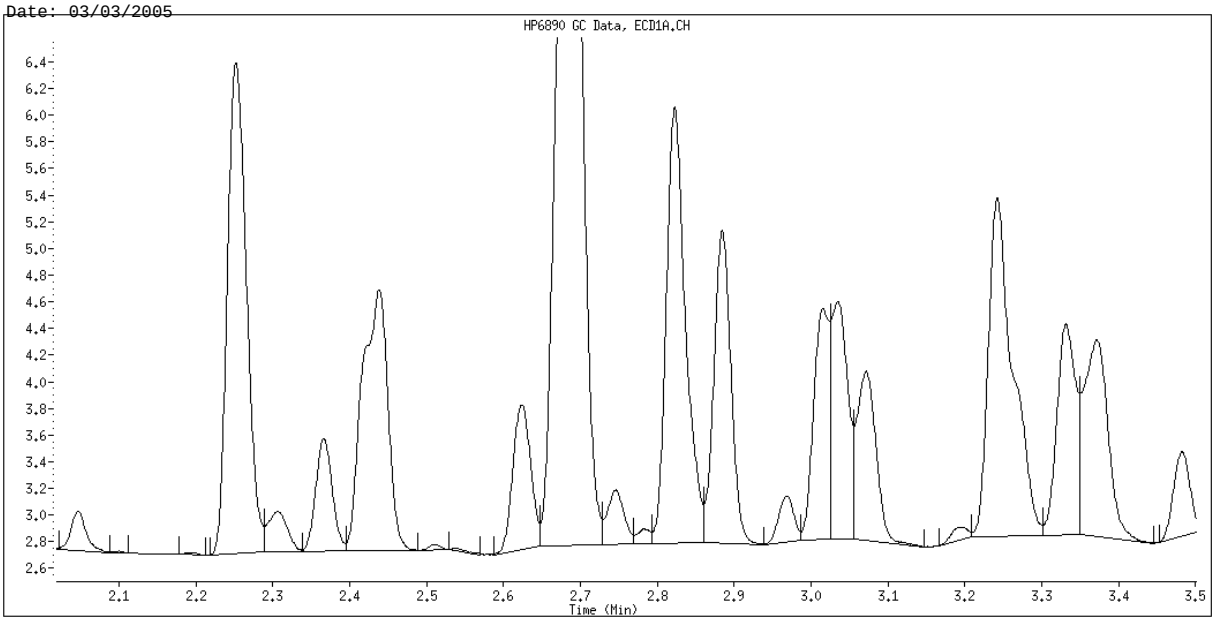
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\003F0301.D
Date : 03-MAR-2005 12:39
Client ID:
Sample Info: 1232,.1,2
Column phase: restek pest clpI

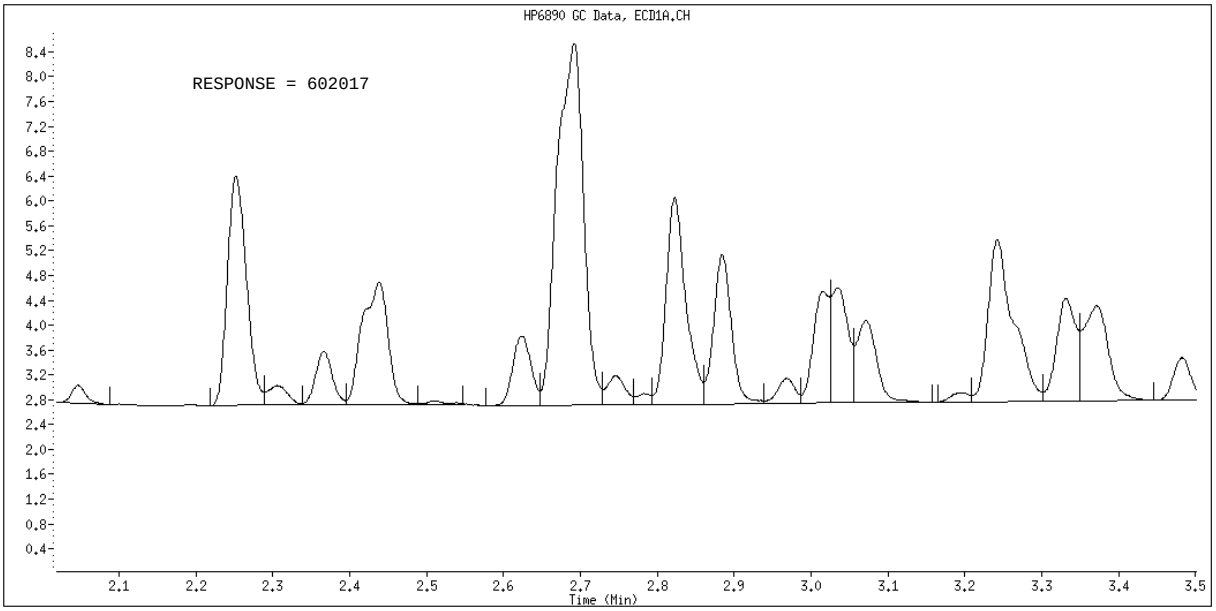
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 003F0301.D
Inj. Date and Time: 03-MAR-2005 12:39
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\004F0401.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 03-MAR-2005 12:55
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 12:39 Cal File: 003F0301.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.254	2.254	0.000	1661930	0.50000	0.5050	75.00- 125.00	100.00(M)
2.440	2.440	0.000	1125390	0.50000	0.5132	50.79- 84.64	67.72
2.694	2.694	0.000	3449652	0.50000	0.4920	155.68- 259.46	207.57
2.887	2.887	0.000	936749	0.50000	0.4840	42.27- 70.46	56.37
3.245	3.245	0.000	1394472	0.50000	0.4584	62.93- 104.88	83.91

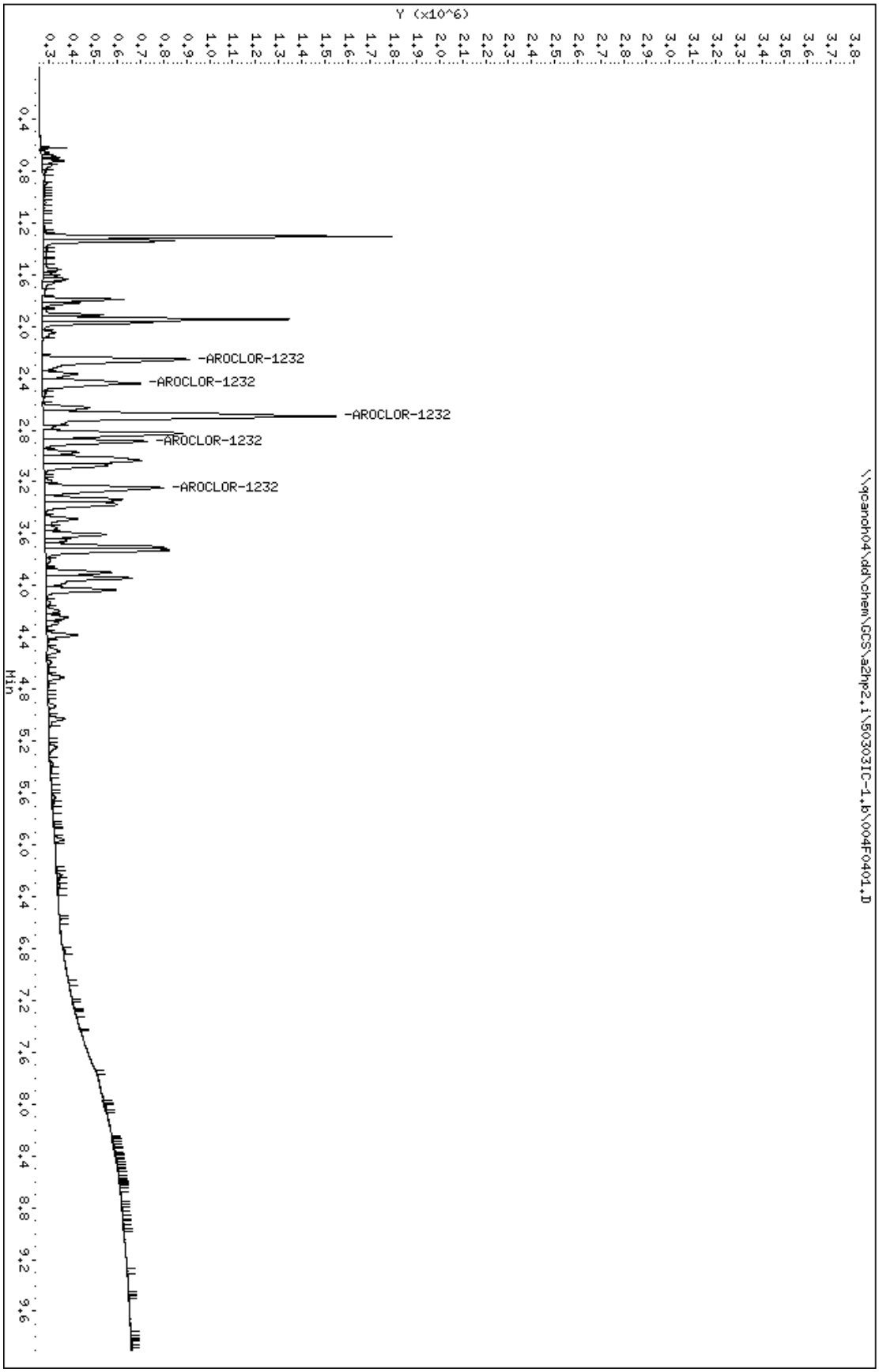
Average of Peak Amounts = 0.49052

QC Flag Legend

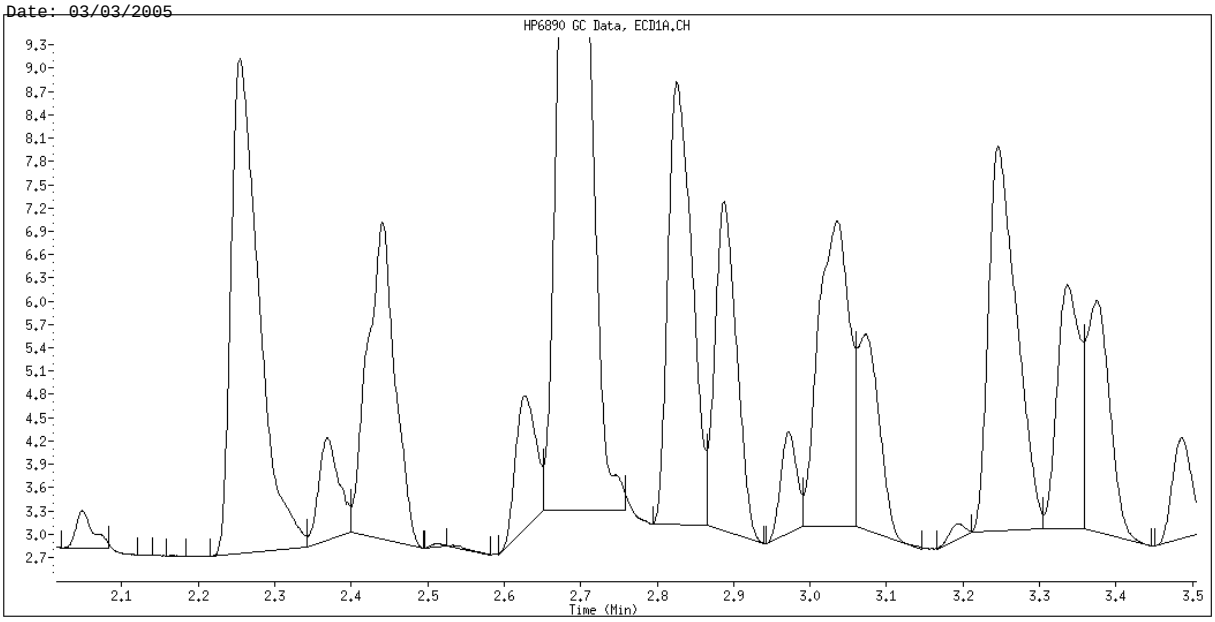
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\004F0401.D
Date : 03-MAR-2005 12:55
Client ID:
Sample Info: 1232,1,3
Column phase: restek pest clpI

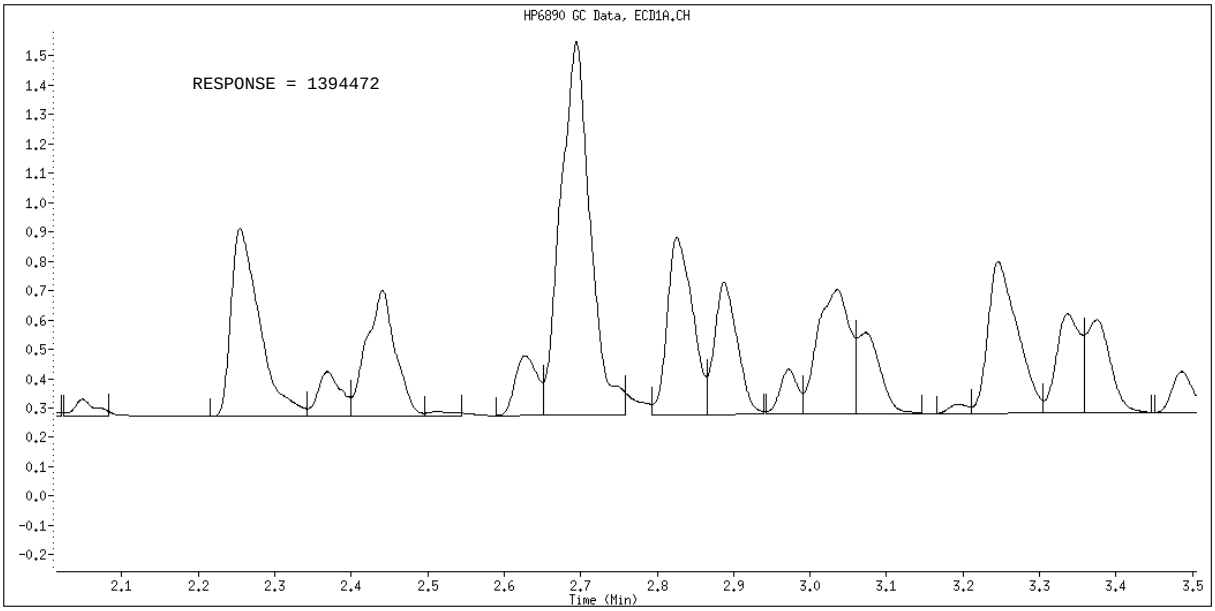
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 004F0401.D
Inj. Date and Time: 03-MAR-2005 12:55
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\005F0501.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 03-MAR-2005 13:11
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 12:55 Cal File: 004F0401.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

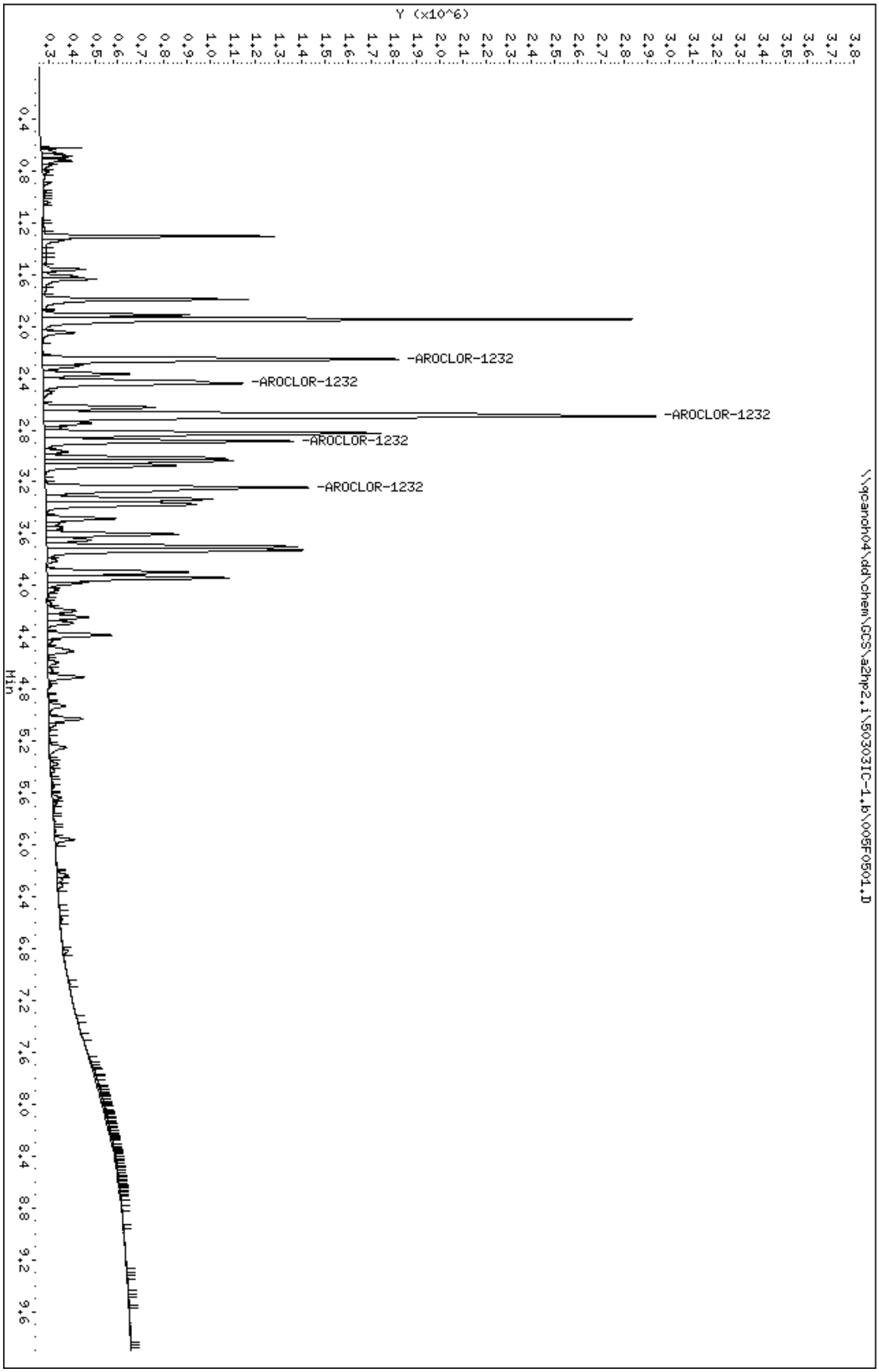
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.252	2.252	0.000	2832324	1.00000	0.8577	80.00- 120.00	100.00(M)
2.440	2.440	0.000	2118733	1.00000	0.9577	56.10- 93.51	74.81
2.693	2.693	0.000	6424147	1.00000	0.9211	170.11- 283.52	226.82
2.886	2.886	0.000	1790721	1.00000	0.9353	47.42- 79.03	63.22
3.243	3.243	0.000	2634600	1.00000	0.8907	69.76- 116.27	93.02
		Average of Peak Amounts =			0.91250		

QC Flag Legend

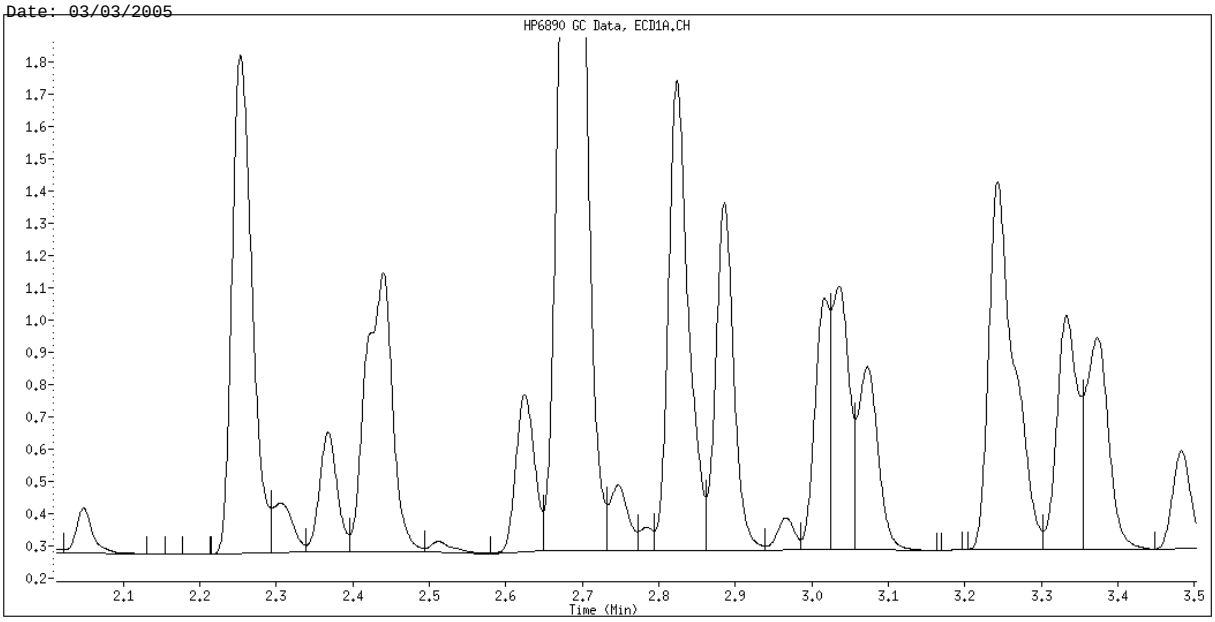
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\005F0501.D
Date : 03-MAR-2005 13:11
Client ID:
Sample Info: 1232,1.4
Column phase: restek pest clpI

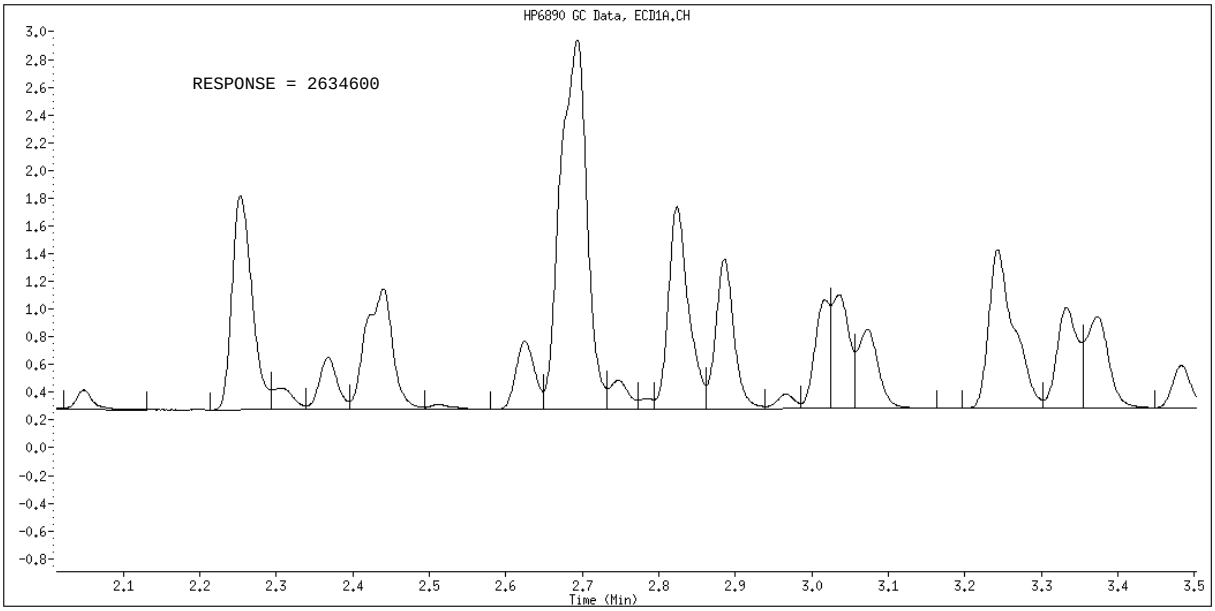
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 005F0501.D
Inj. Date and Time: 03-MAR-2005 13:11
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\006F0601.D
Report Date: 04-Mar-2005 04:39

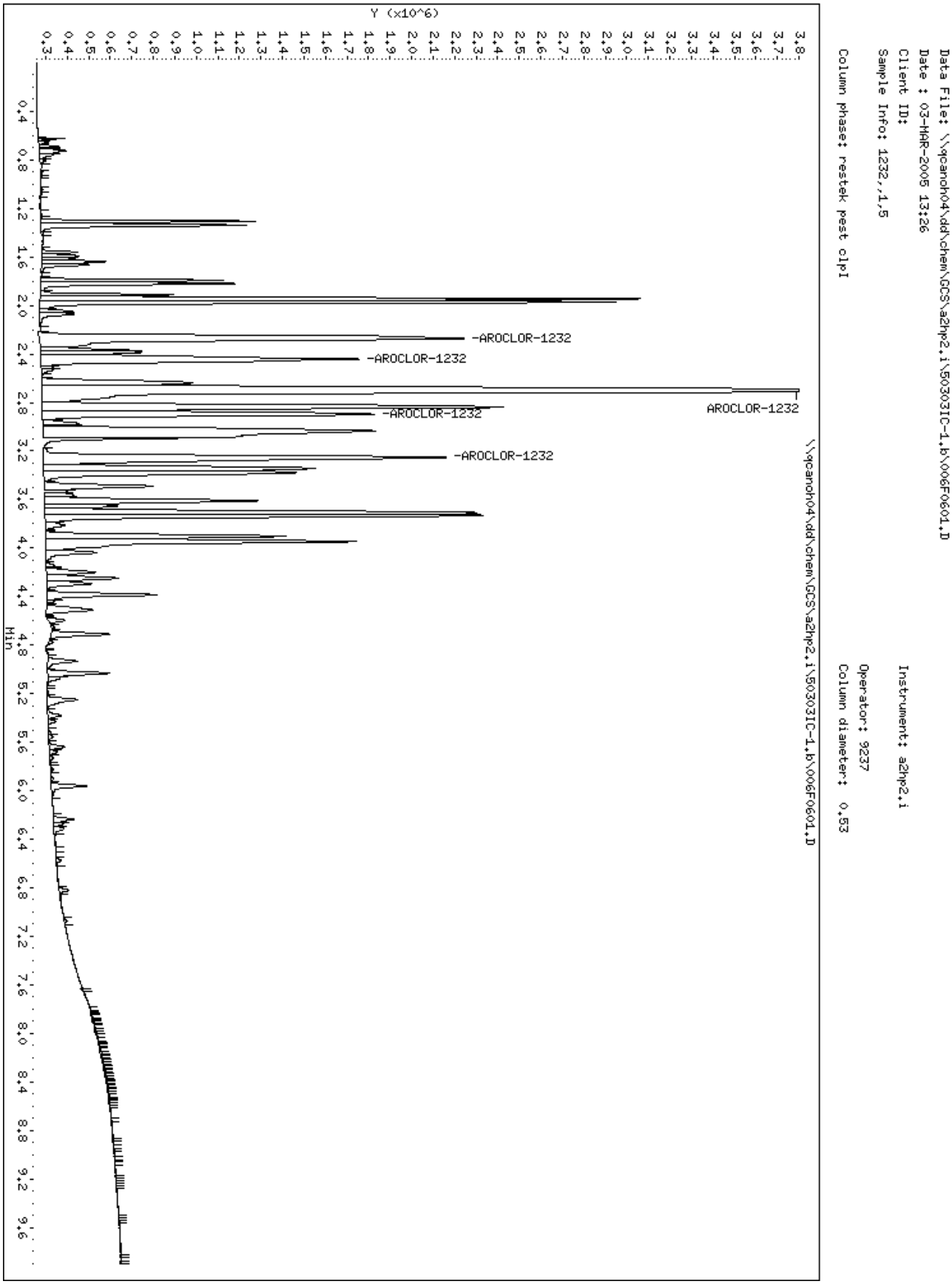
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 03-MAR-2005 13:26
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 13:11 Cal File: 005F0501.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

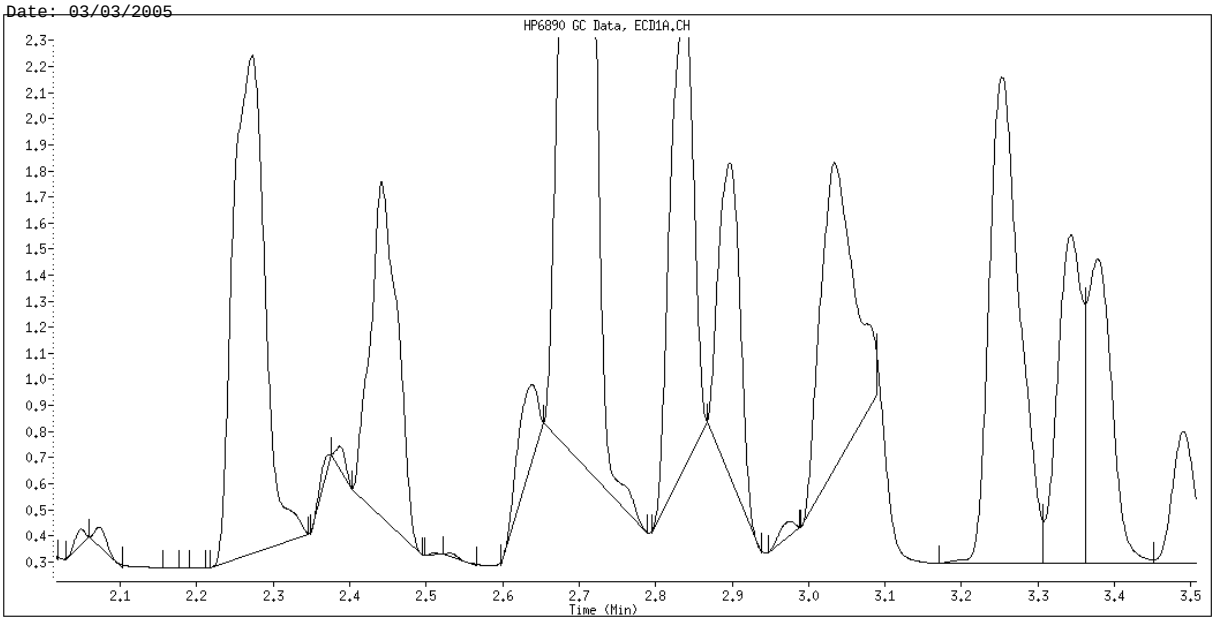
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.272	2.272	0.000	6059400	2.00000	1.903	75.00- 125.00	100.00(M)
2.441	2.441	0.000	4122663	2.00000	1.883	56.10- 93.51	68.04
2.695	2.695	0.000	13566085	2.00000	1.984	170.11- 283.52	223.88
2.896	2.896	0.000	3650019	2.00000	1.938	47.42- 79.03	60.24
3.252	3.252	0.000	5182050	2.00000	1.801	69.76- 116.27	85.52
		Average of Peak Amounts =			1.90180		

QC Flag Legend

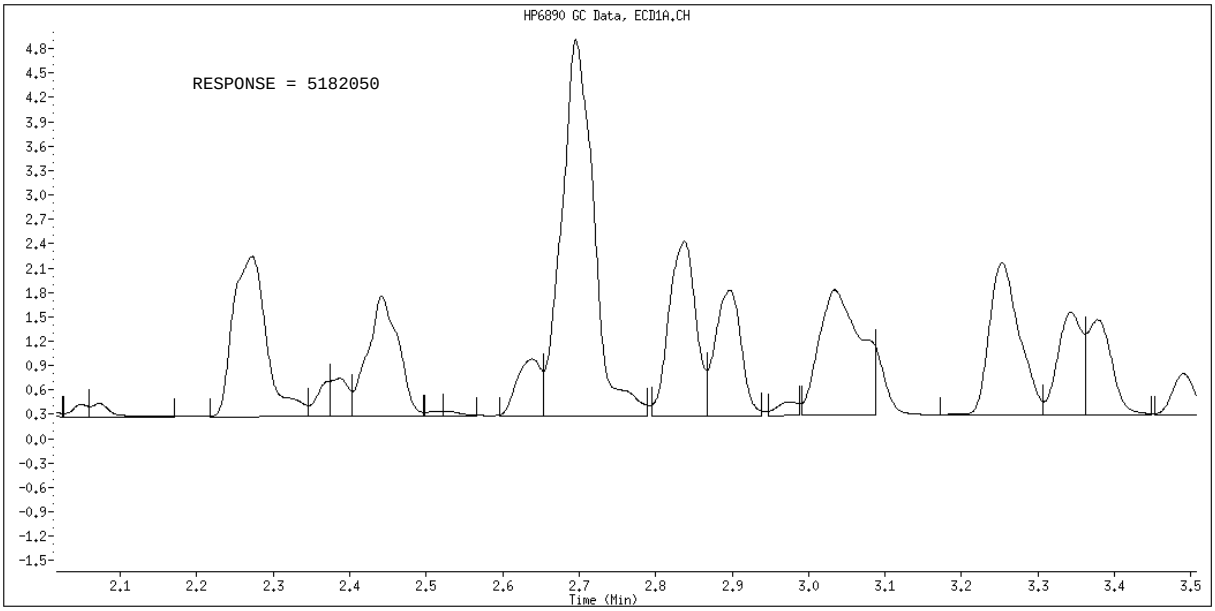
M - Compound response manually integrated.


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\006F0601.D
Date : 03-MAR-2005 13:26
Client ID:
Sample Info: 1232,1.5
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1232
-AROCLOR-1232
AROCLOR-1232
-AROCLOR-1232
-AROCLOR-1232
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\006F0601.D
Min

Data File Name: 006F0601.D
Inj. Date and Time: 03-MAR-2005 13:26
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\007F0701.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\007F0701.D
Lab Smp Id: 1242
Inj Date : 03-MAR-2005 13:42
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 13:26 Cal File: 006F0601.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

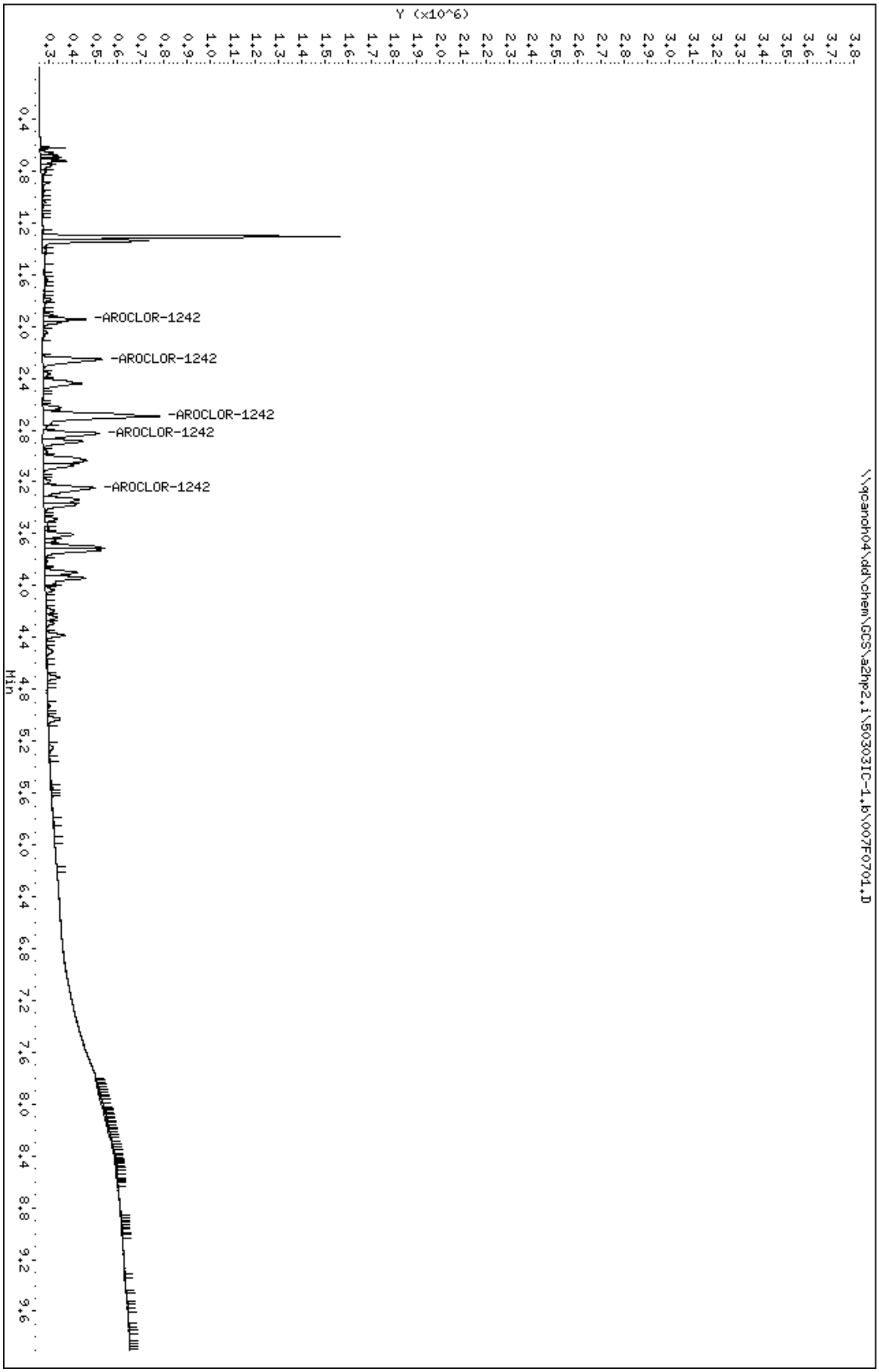
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.945	1.945	0.000	186553	0.10000		0.00- 0.00	100.00(M)
2.254	2.254	0.000	258372	0.10000		0.00- 0.00	138.50
2.693	2.693	0.000	506181	0.10000		0.00- 0.00	271.33
2.825	2.825	0.000	245267	0.10000		0.00- 0.00	131.47
3.246	3.246	0.000	224680	0.10000		0.00- 0.00	120.44

QC Flag Legend

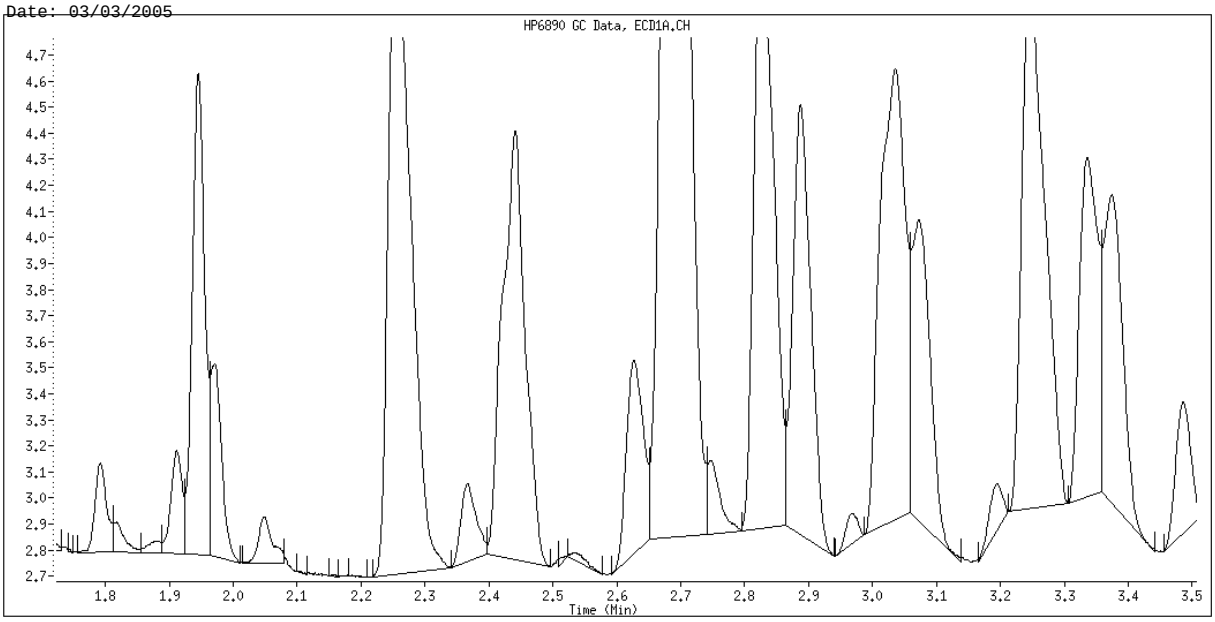
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\007F0701.D
Date : 03-MAR-2005 13:42
Client ID:
Sample Info: 1242,.1,1
Column phase: restek pest clpI

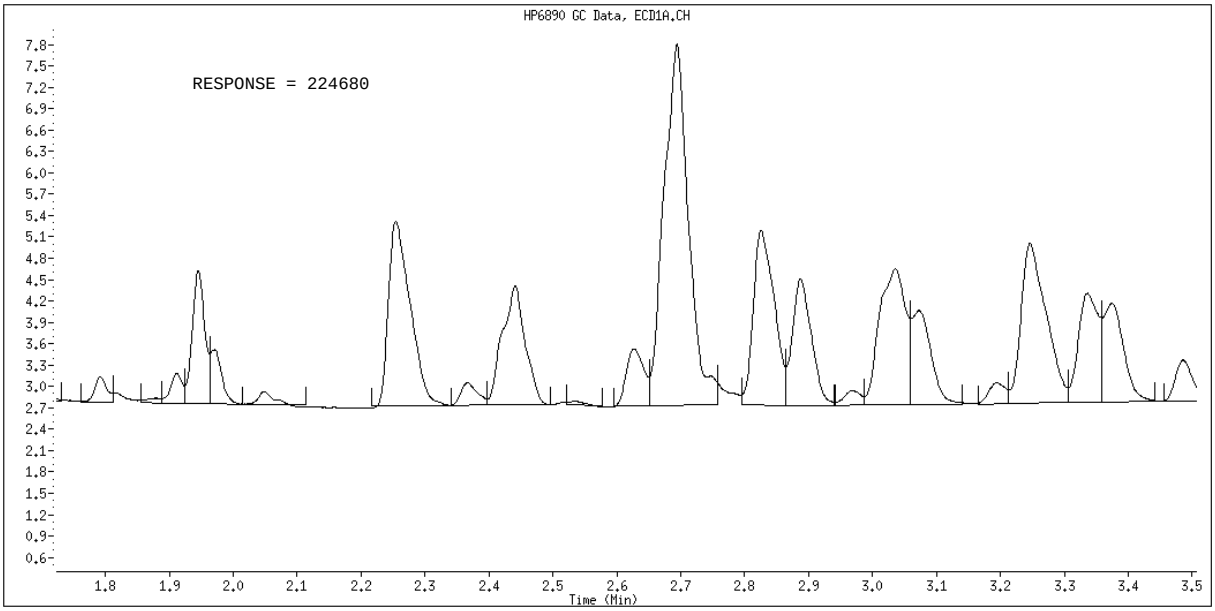
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 007F0701.D
Inj. Date and Time: 03-MAR-2005 13:42
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\008F0801.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 03-MAR-2005 13:58
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 13:42 Cal File: 007F0701.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

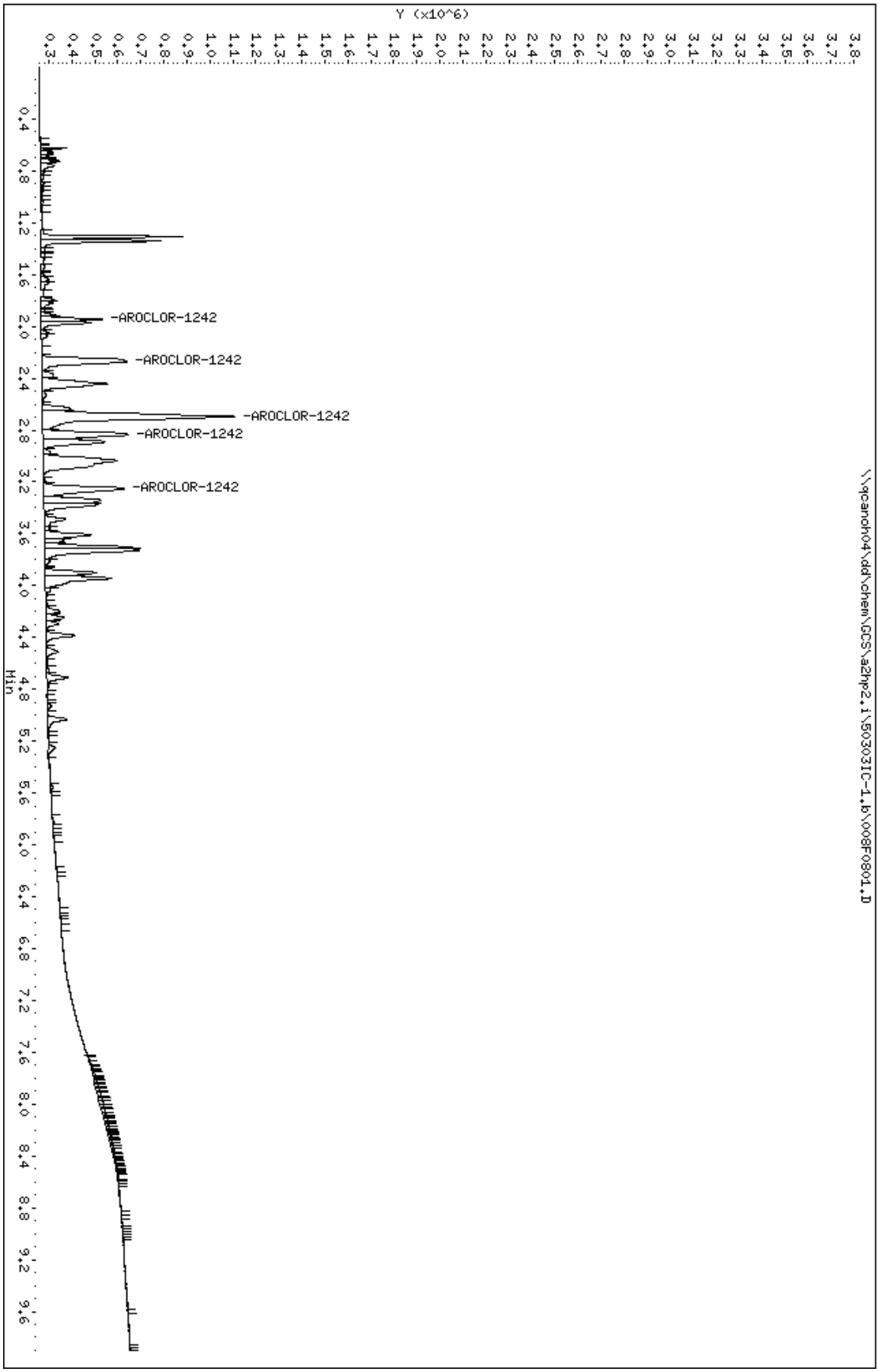
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.945	1.945	0.000	265180	0.20000	0.1421	0.00- 0.00	100.00(M)
2.271	2.271	0.000	369777	0.20000	0.1431	0.00- 0.00	139.44
2.695	2.695	0.000	833486	0.20000	0.1647	0.00- 0.00	314.31
2.835	2.835	0.000	369920	0.20000	0.1508	0.00- 0.00	139.50
3.250	3.250	0.000	351951	0.20000	0.1566	0.00- 0.00	132.72
		Average of Peak Amounts =			0.15146		

QC Flag Legend

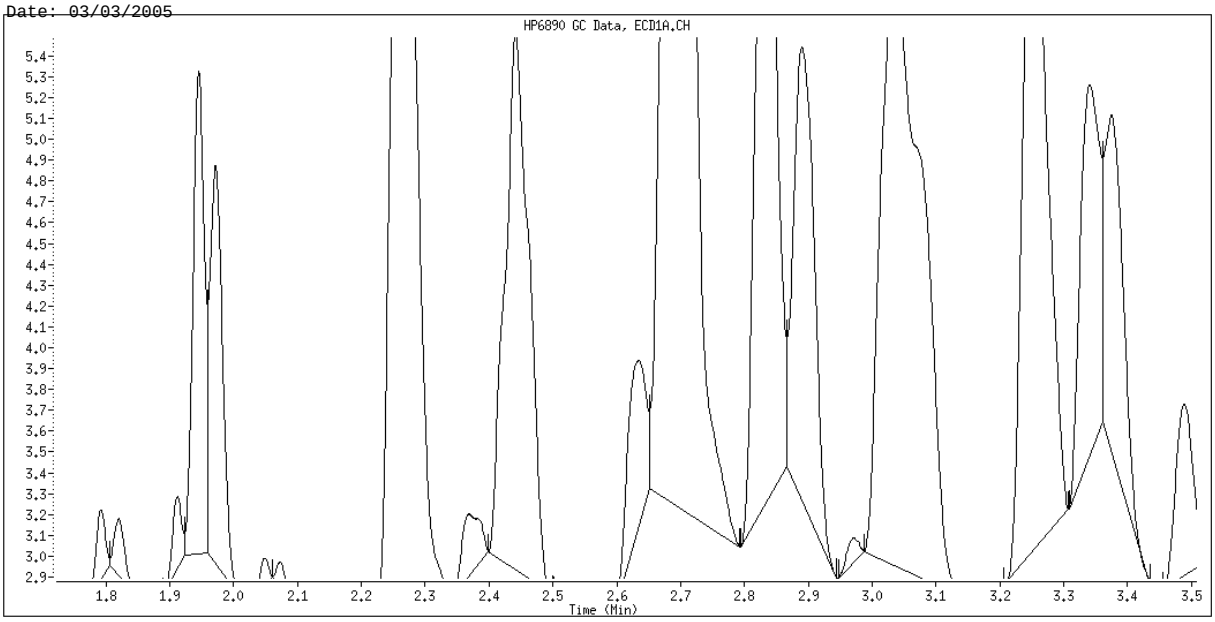
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\008F0801.D
Date : 03-MAR-2005 13:58
Client ID:
Sample Info: 1242,,1,2
Column phase: restek pest clpI

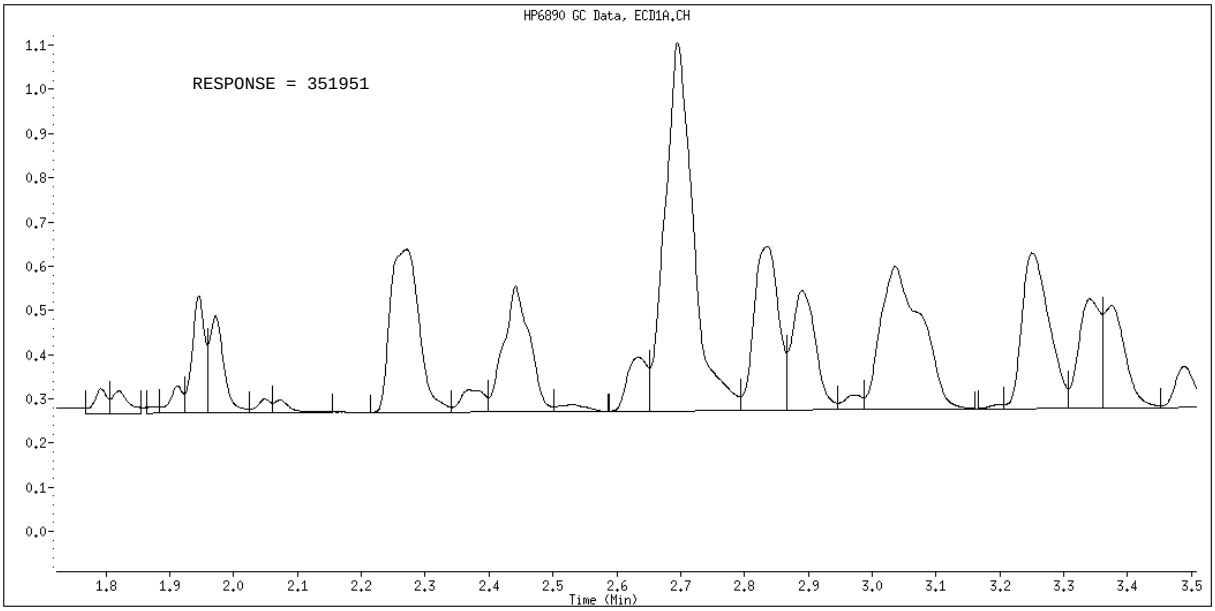
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 008F0801.D
Inj. Date and Time: 03-MAR-2005 13:58
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\009F0901.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\009F0901.D
Lab Smp Id: 1242
Inj Date : 03-MAR-2005 14:14
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 13:58 Cal File: 008F0801.D
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

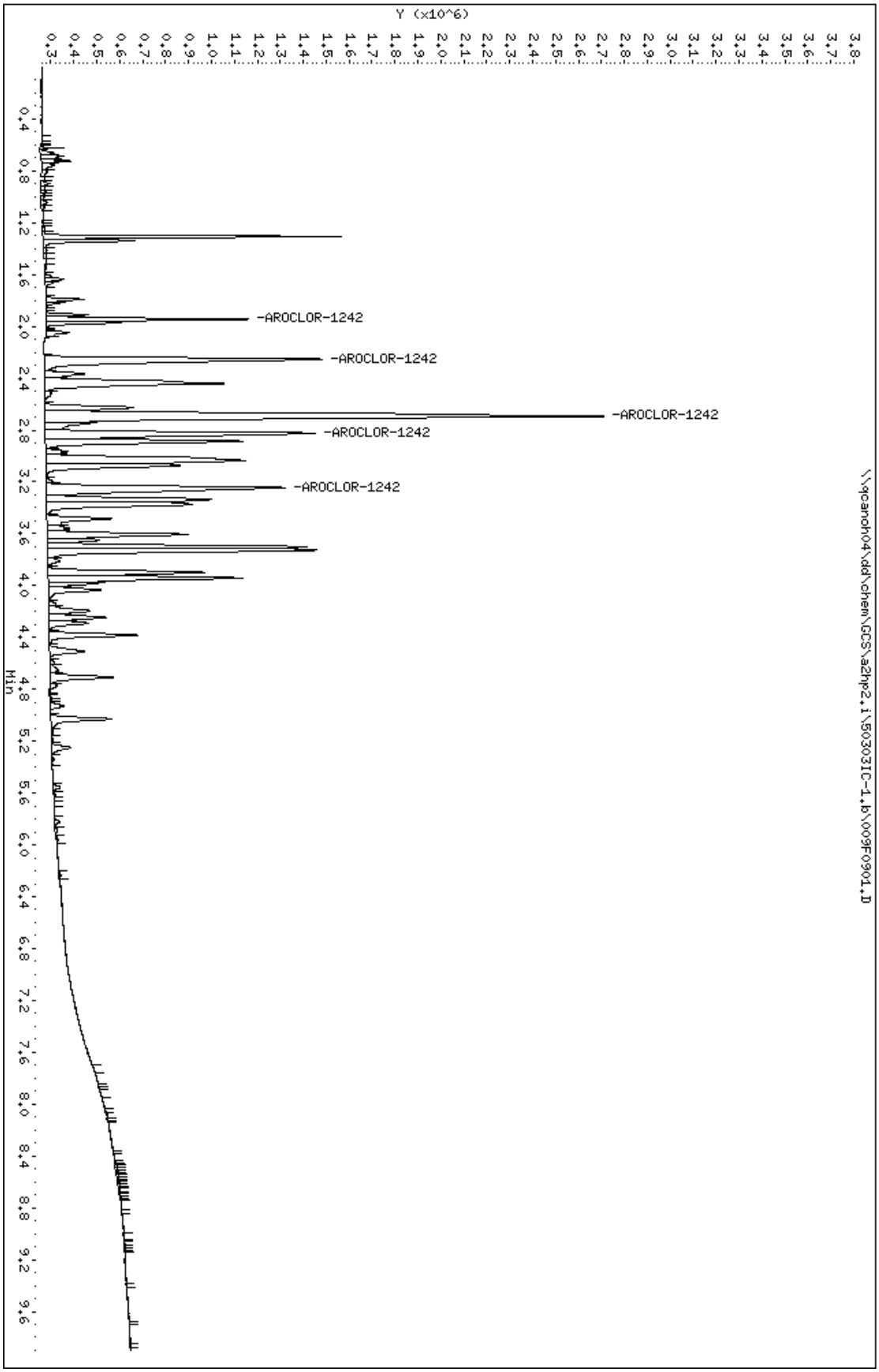
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.944	1.944	0.000	882589	0.50000	0.5531	75.00- 125.00	100.00(M)
2.253	2.253	0.000	1210670	0.50000	0.5462	102.88- 171.47	137.17
2.693	2.693	0.000	2438066	0.50000	0.5283	207.18- 345.30	276.24
2.824	2.824	0.000	1177075	0.50000	0.5472	100.02- 166.71	133.37
3.244	3.244	0.000	1042461	0.50000	0.5204	88.59- 147.64	118.11
		Average of Peak Amounts =			0.53904		

QC Flag Legend

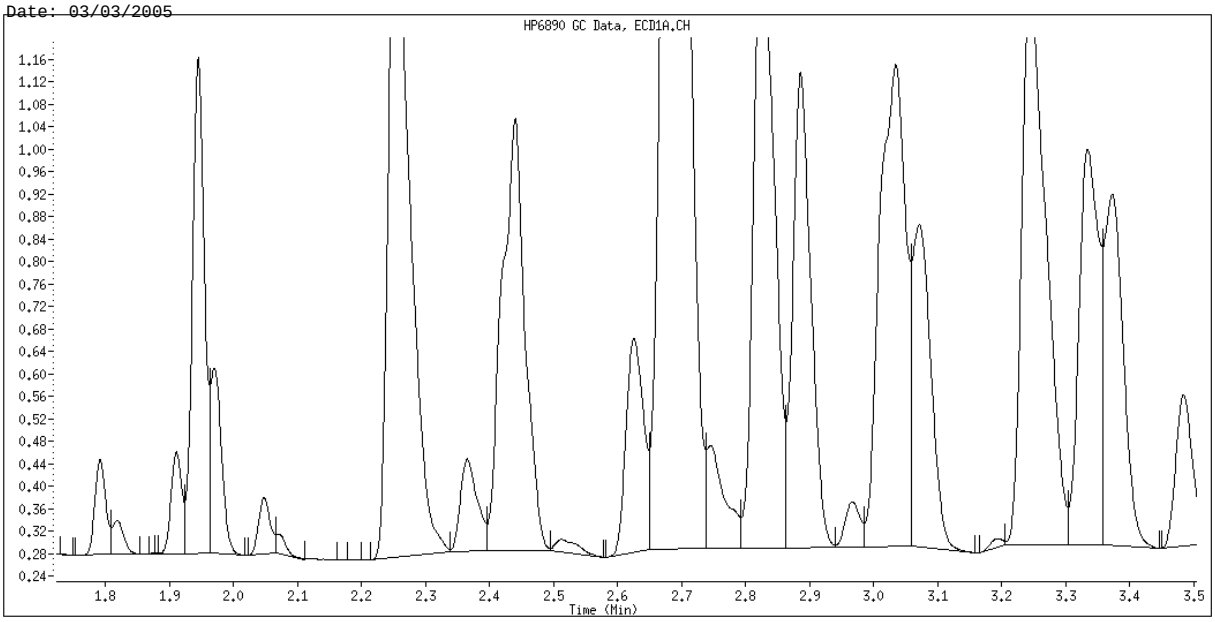
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\009F0901.D
Date : 03-MAR-2005 14:14
Client ID:
Sample Info: 1242,1,3
Column phase: restek pest clpI

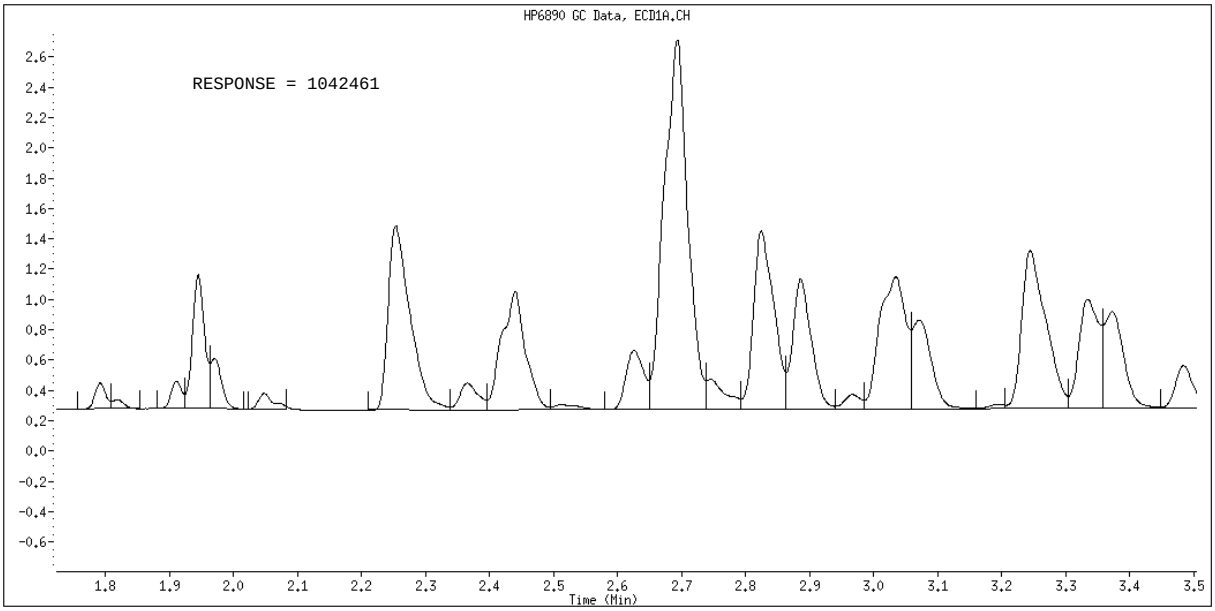
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 009F0901.D
Inj. Date and Time: 03-MAR-2005 14:14
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\010F1001.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\010F1001.D
Lab Smp Id: 1242
Inj Date : 03-MAR-2005 14:29
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 14:14 Cal File: 009F0901.D
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.944	1.944	0.000	1856627	1.00000	1.124	80.00- 120.00	100.00(M)
2.253	2.253	0.000	2560305	1.00000	1.121	103.43- 172.38	137.90
2.693	2.693	0.000	4723532	1.00000	1.005	190.81- 318.02	254.41
2.823	2.823	0.000	2474345	1.00000	1.115	99.95- 166.59	133.27
3.243	3.243	0.000	2113700	1.00000	1.041	85.38- 142.31	113.85

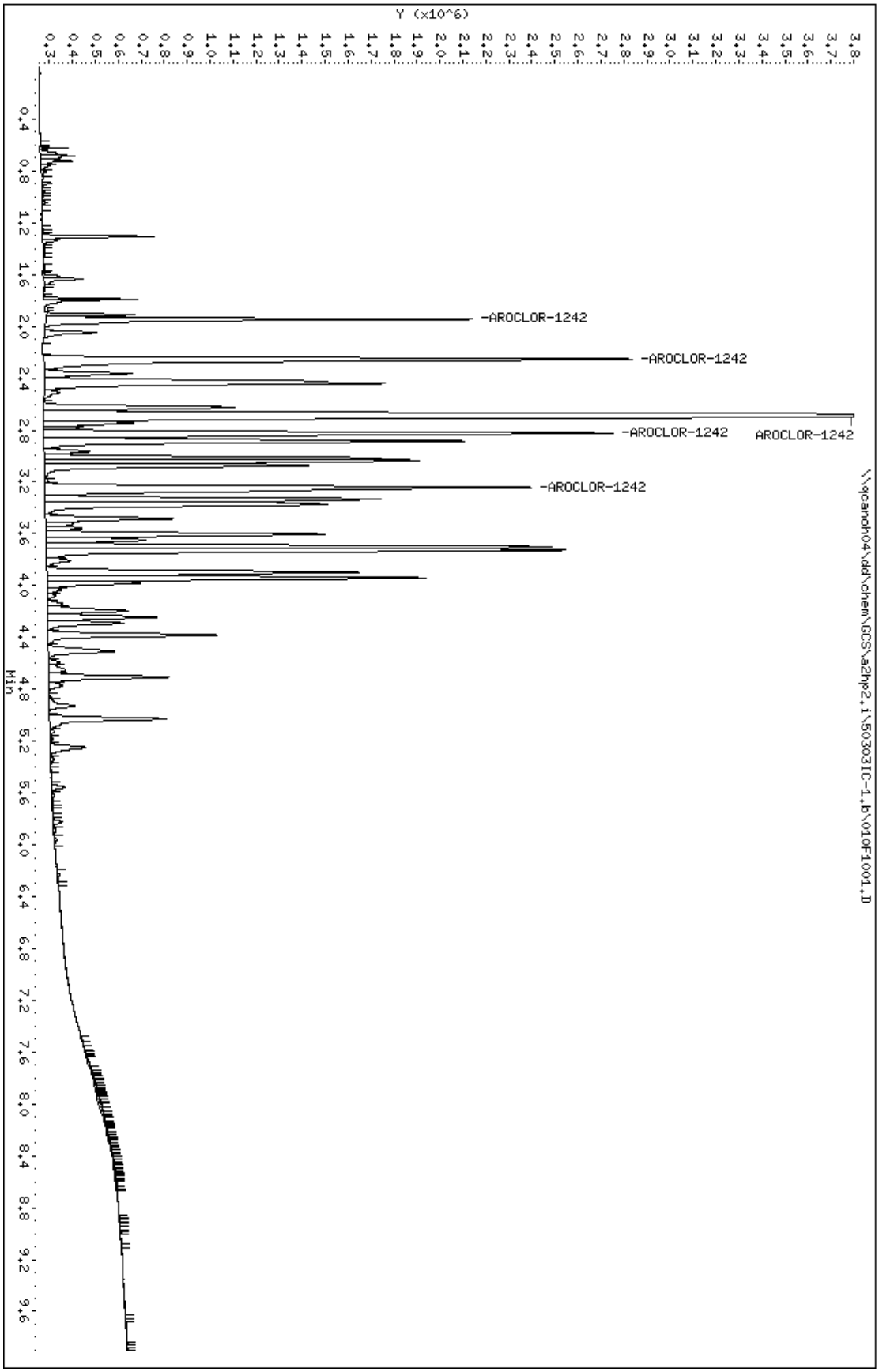
Average of Peak Amounts = 1.08120

QC Flag Legend

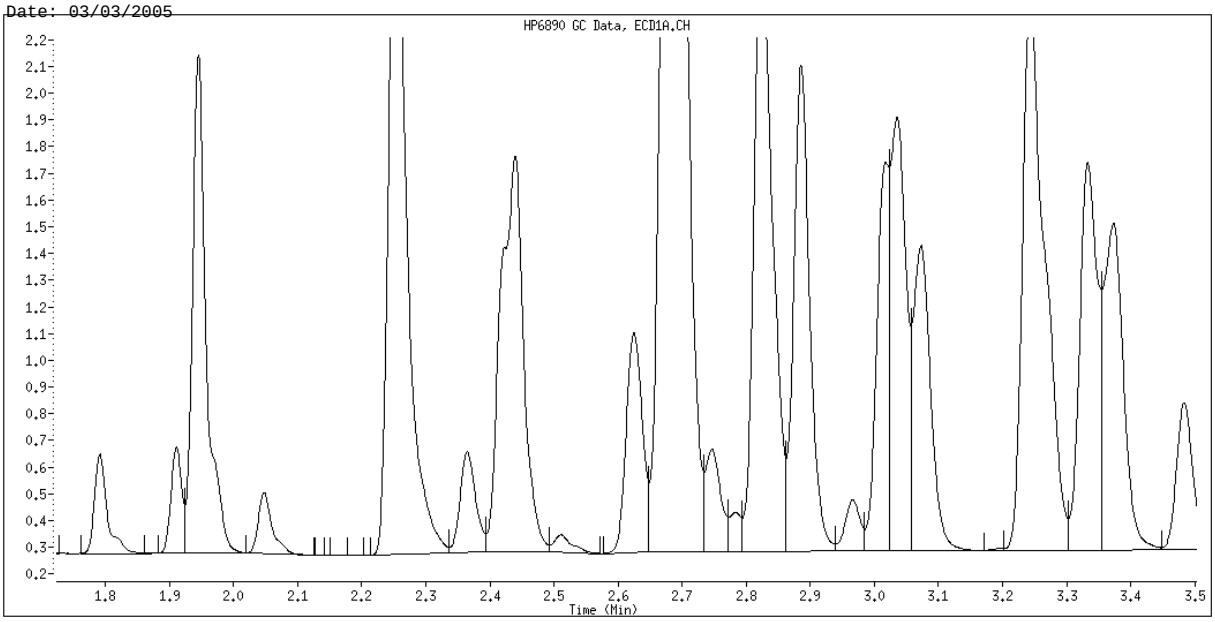
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\010F1001.D
Date : 03-MAR-2005 14:29
Client ID:
Sample Info: 1242,,1,4
Column phase: restek pest clpI

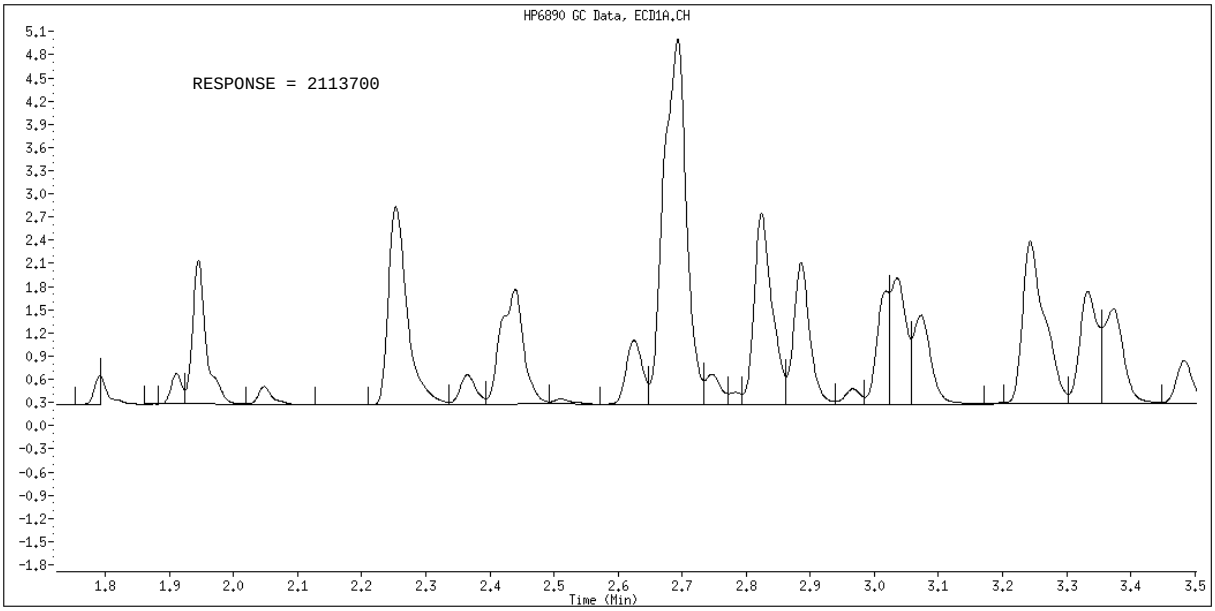
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 010F1001.D
Inj. Date and Time: 03-MAR-2005 14:29
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\011F1101.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\011F1101.D
Lab Smp Id: 1242
Inj Date : 03-MAR-2005 14:45
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 14:29 Cal File: 010F1001.D
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.945	1.945	0.000	2620447	2.00000	1.538	75.00- 125.00	100.00(M)
2.255	2.255	0.000	3743944	2.00000	1.591	103.43- 172.38	142.87
2.694	2.694	0.000	8085843	2.00000	1.718	190.81- 318.02	308.57
2.826	2.826	0.000	3858844	2.00000	1.690	99.95- 166.59	147.26
3.245	3.245	0.000	3525953	2.00000	1.719	85.38- 142.31	134.56

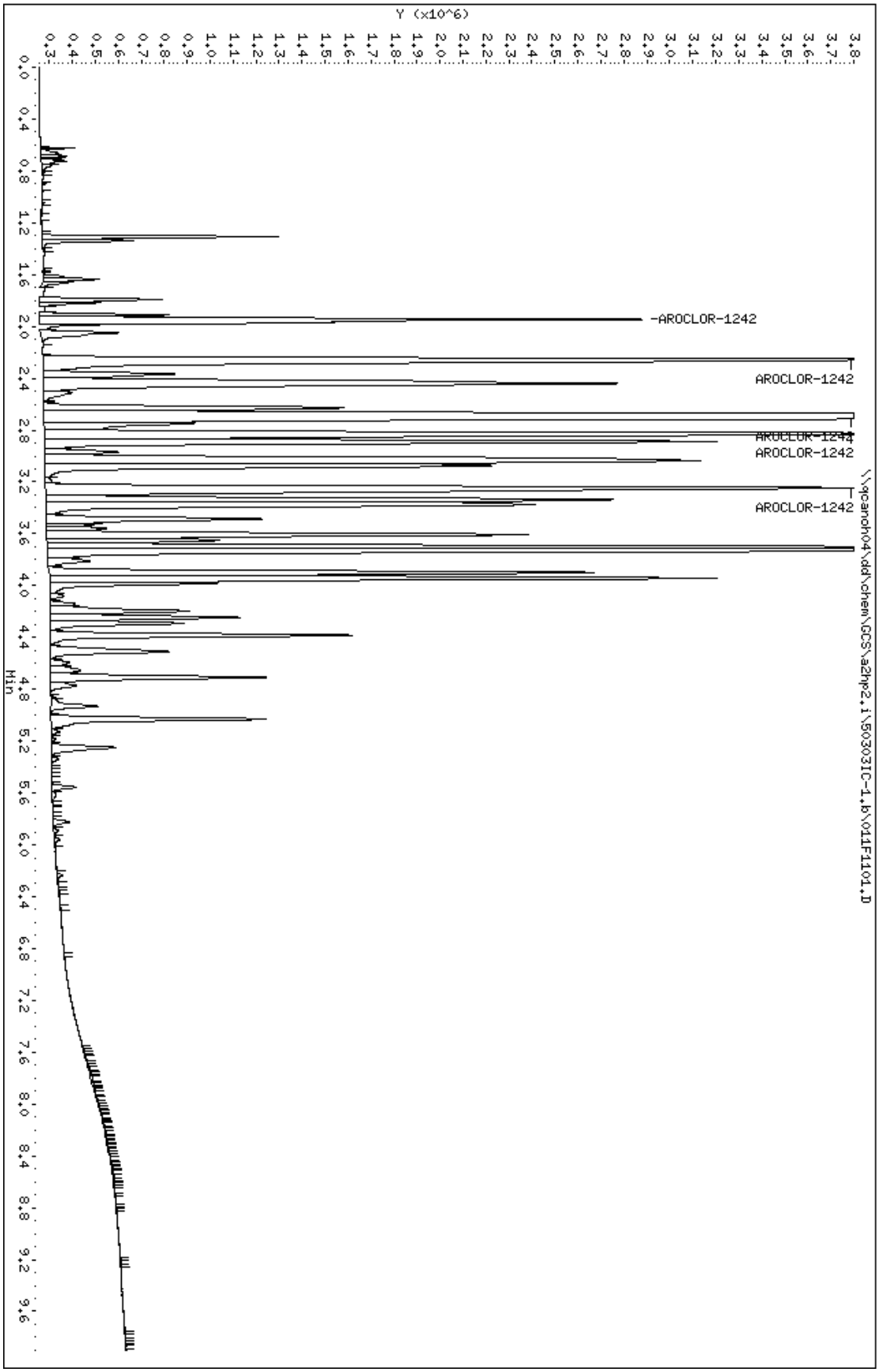
Average of Peak Amounts = 1.65120

QC Flag Legend

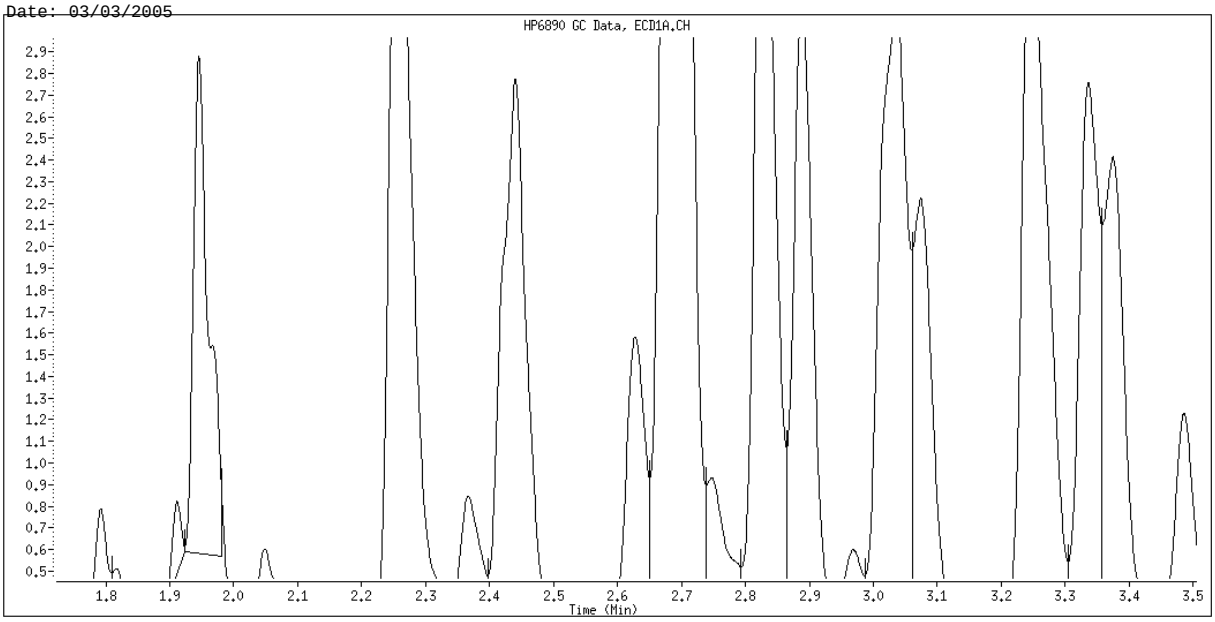
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\011F1101.D
Date : 03-MAR-2005 14:45
Client ID:
Sample Info: 1242,.1,5
Column phase: restek pest clpI

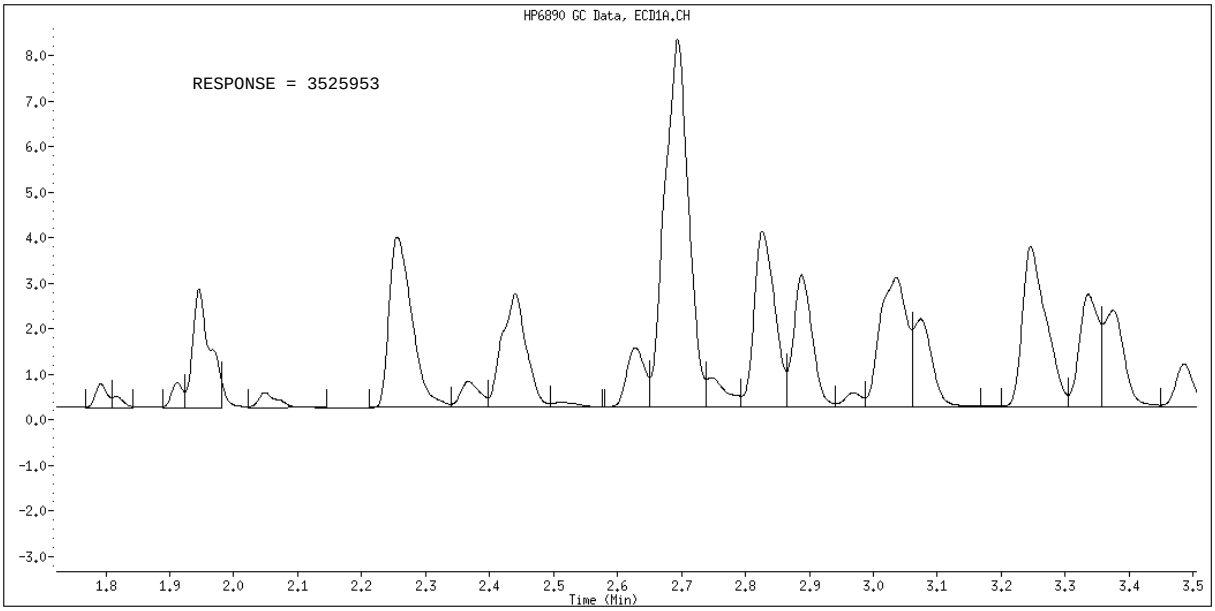
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 011F1101.D
Inj. Date and Time: 03-MAR-2005 14:45
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\012F1201.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\012F1201.D
Lab Smp Id: 1248
Inj Date : 03-MAR-2005 15:01
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 14:45 Cal File: 011F1101.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

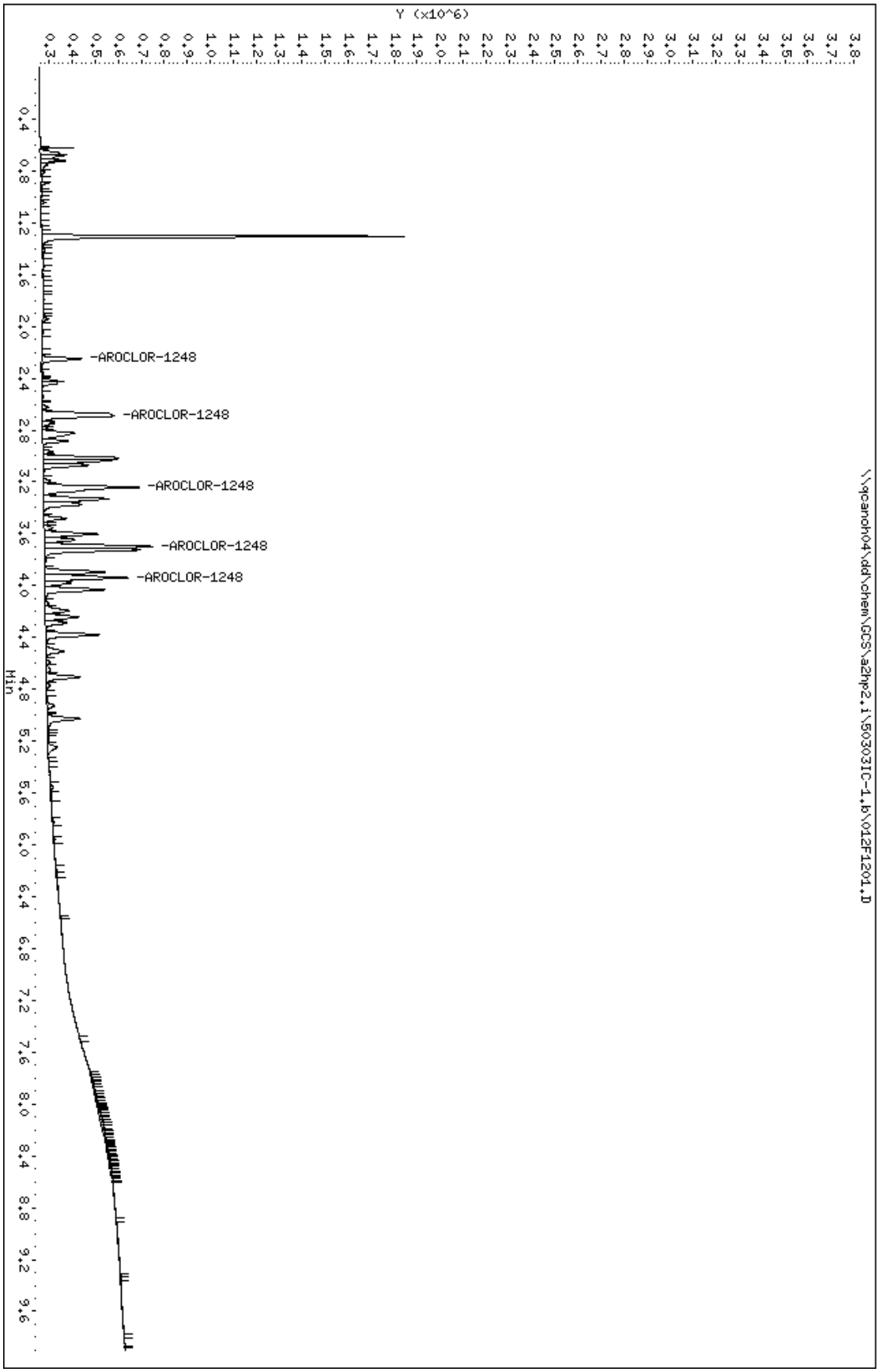
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.250	2.250	0.000	285671	0.10000		0.00- 0.00	100.00(M)
2.691	2.691	0.000	796655	0.10000		0.00- 0.00	278.87
3.242	3.242	0.000	916525	0.10000		0.00- 0.00	320.83
3.698	3.698	0.000	807462	0.10000		0.00- 0.00	282.65
3.938	3.938	0.000	650229	0.10000		0.00- 0.00	227.61

QC Flag Legend

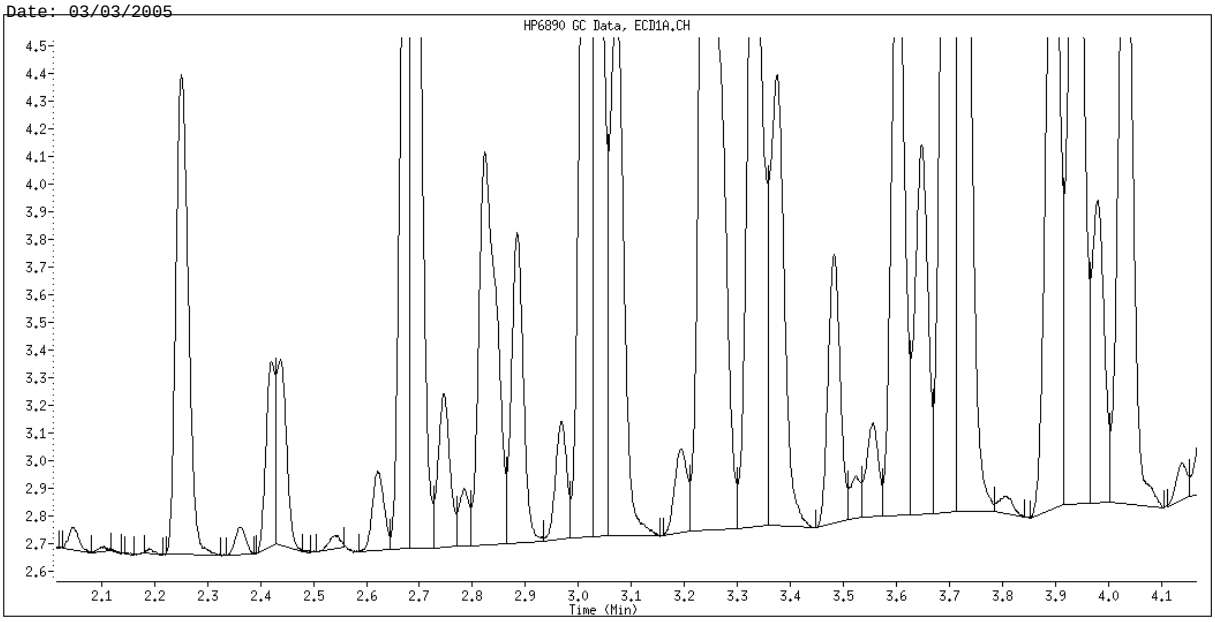
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\012F1201.D
Date : 03-MAR-2005 15:01
Client ID:
Sample Info: 1248,,1,1
Column phase: restek pest clpI

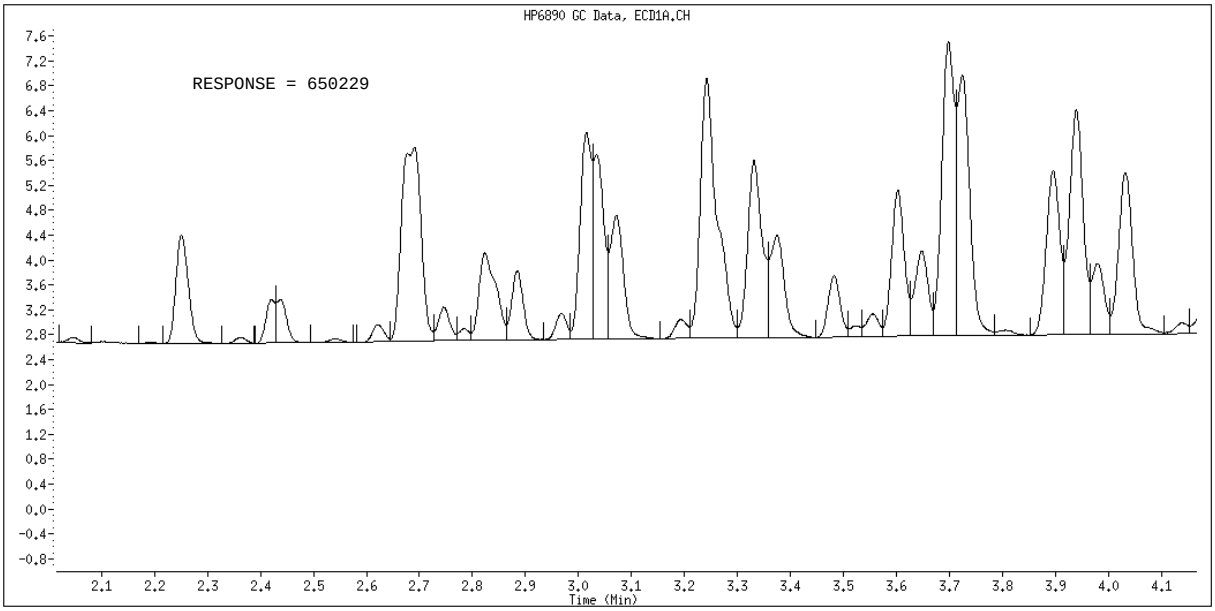
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 012F1201.D
Inj. Date and Time: 03-MAR-2005 15:01
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Poor Chromatography

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\013F1301.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\013F1301.D
Lab Smp Id: 1248
Inj Date : 03-MAR-2005 15:16
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 15:01 Cal File: 012F1201.D
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.271	2.271	0.000	568909	0.20000	0.1991	0.00- 0.00	100.00
2.694	2.694	0.000	1547408	0.20000	0.1942	0.00- 0.00	272.00
3.252	3.252	0.000	1752179	0.20000	0.1912	0.00- 0.00	307.99
3.708	3.708	0.000	1670457	0.20000	0.2069	0.00- 0.00	293.62
3.944	3.944	0.000	1302393	0.20000	0.2003	0.00- 0.00	228.93

Average of Peak Amounts = 0.19834

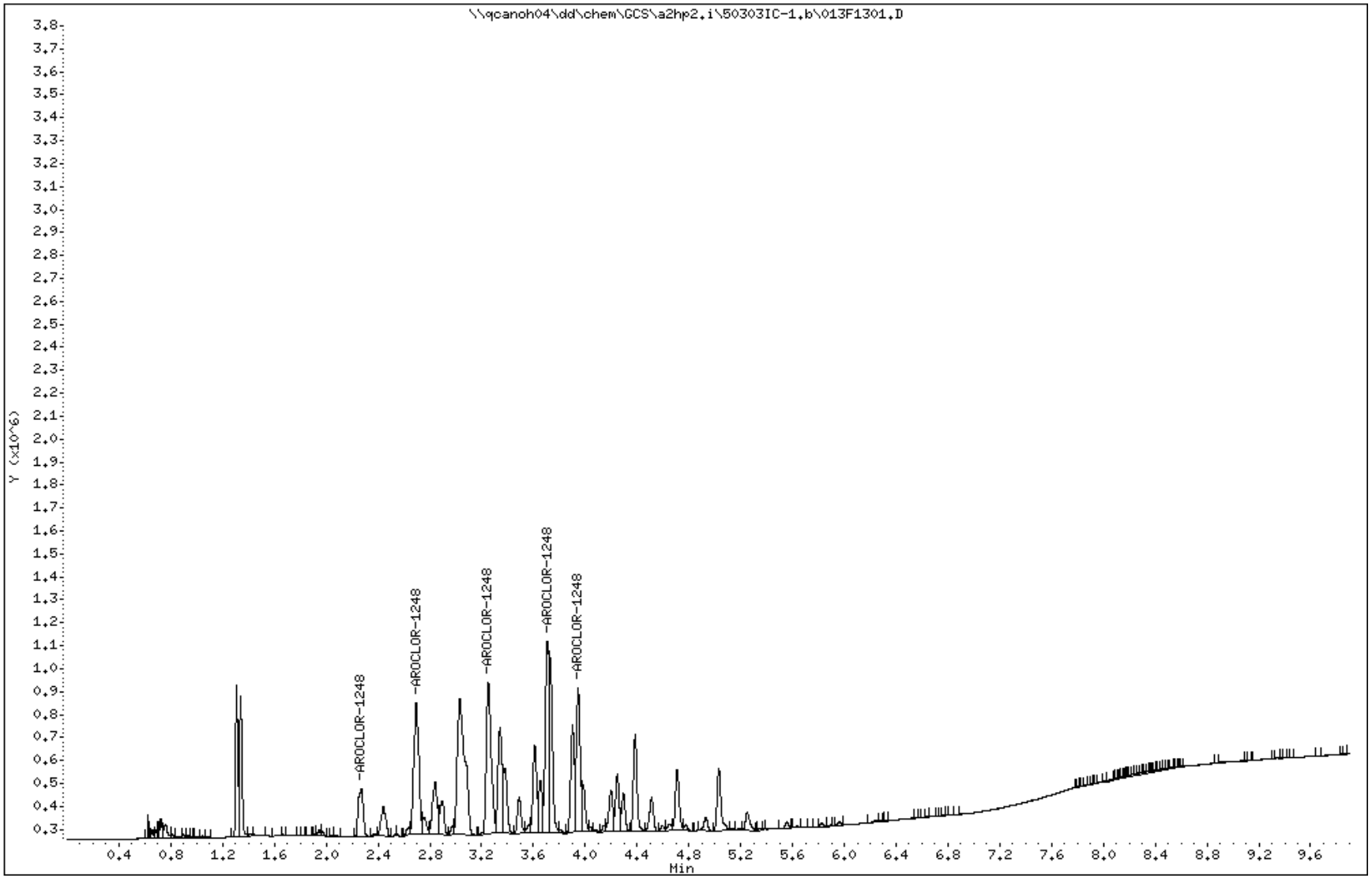
Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\013F1301.D
Date : 03-MAR-2005 15:16
Client ID:
Sample Info: 1248,,1,2

Instrument: a2hp2.i

Operator: 9237

Column phase: restek pest clpI

Column diameter: 0.53



Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\014F1401.D
Report Date: 04-Mar-2005 04:39

STL North Canton

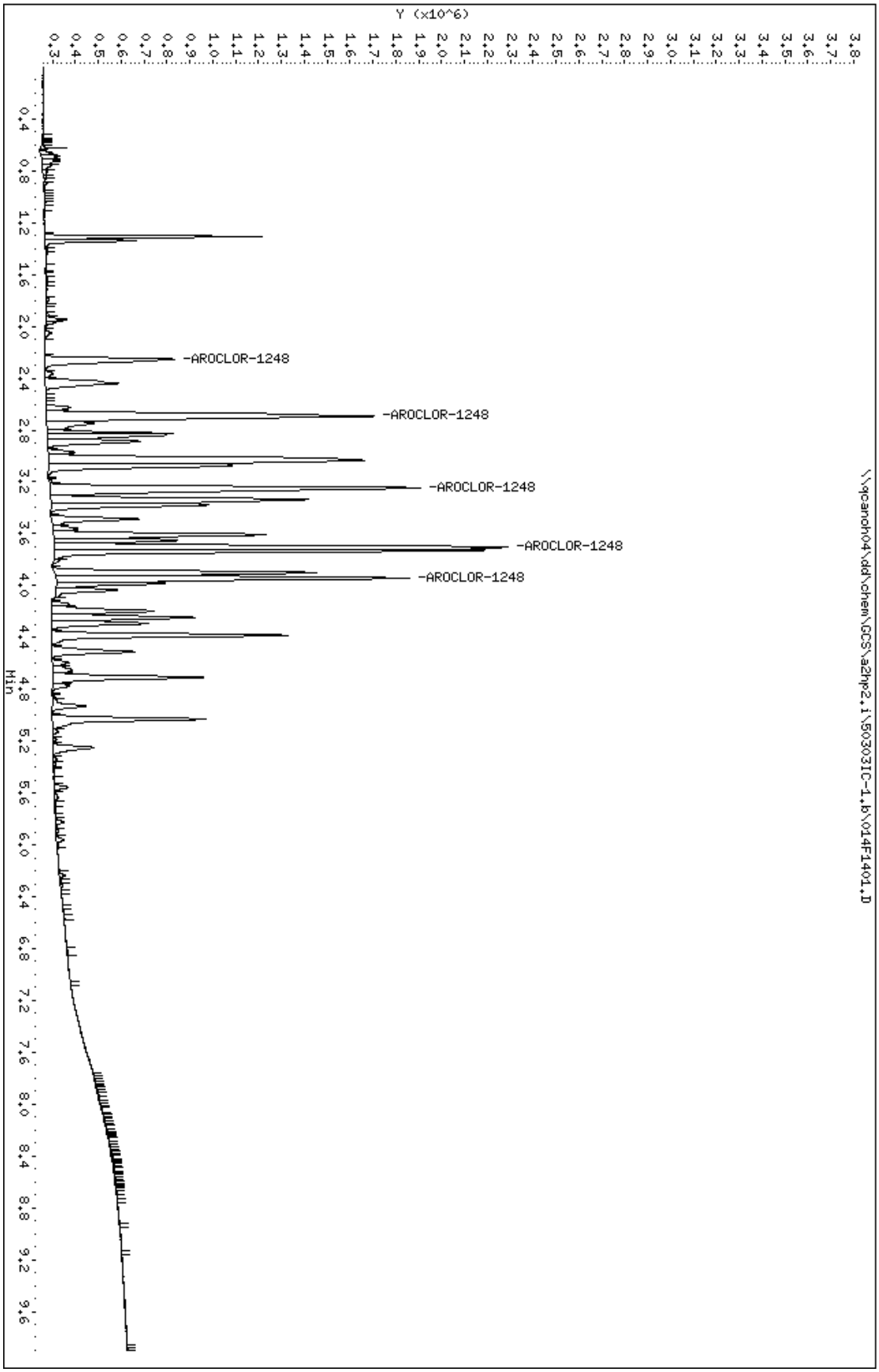
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\014F1401.D
Lab Smp Id: 1248
Inj Date : 03-MAR-2005 15:32
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 15:16 Cal File: 013F1301.D
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.253	2.253	0.000	1348889	0.50000	0.4732	75.00- 125.00	100.00
2.693	2.693	0.000	3802538	0.50000	0.4843	211.43- 352.38	281.90
3.246	3.246	0.000	4114049	0.50000	0.4590	228.75- 381.24	305.00
3.703	3.703	0.000	3554608	0.50000	0.4328	197.64- 329.40	263.52
3.942	3.942	0.000	3059546	0.50000	0.4702	170.11- 283.52	226.82

Average of Peak Amounts = 0.46390

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\014F1401.D
Date : 03-MAR-2005 15:32
Client ID:
Sample Info: 1248,,1,3
Column phase: restek pest clpI

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\015F1501.D
Report Date: 04-Mar-2005 04:39

STL North Canton

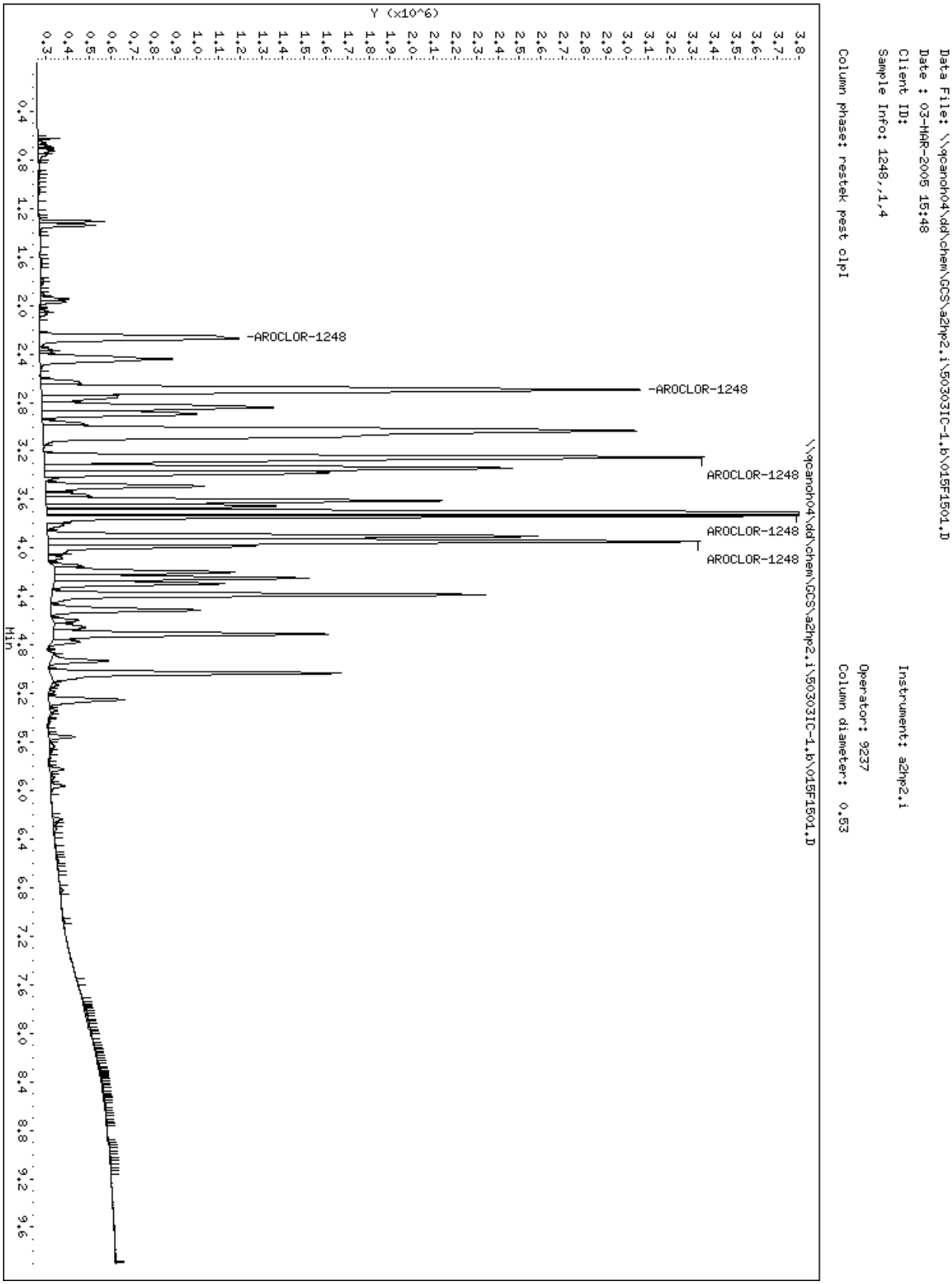
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\015F1501.D
Lab Smp Id: 1248
Inj Date : 03-MAR-2005 15:48
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 15:32 Cal File: 014F1401.D
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.271	2.271	0.000	2631561	1.00000	0.9400	80.00- 120.00	100.00(M)
2.695	2.695	0.000	7611803	1.00000	0.9797	216.94- 361.56	289.25
3.251	3.251	0.000	8155192	1.00000	0.9354	232.42- 387.37	309.90
3.706	3.706	0.000	7008395	1.00000	0.8933	199.74- 332.90	266.32
3.945	3.945	0.000	6302337	1.00000	0.9882	179.62- 299.36	239.49

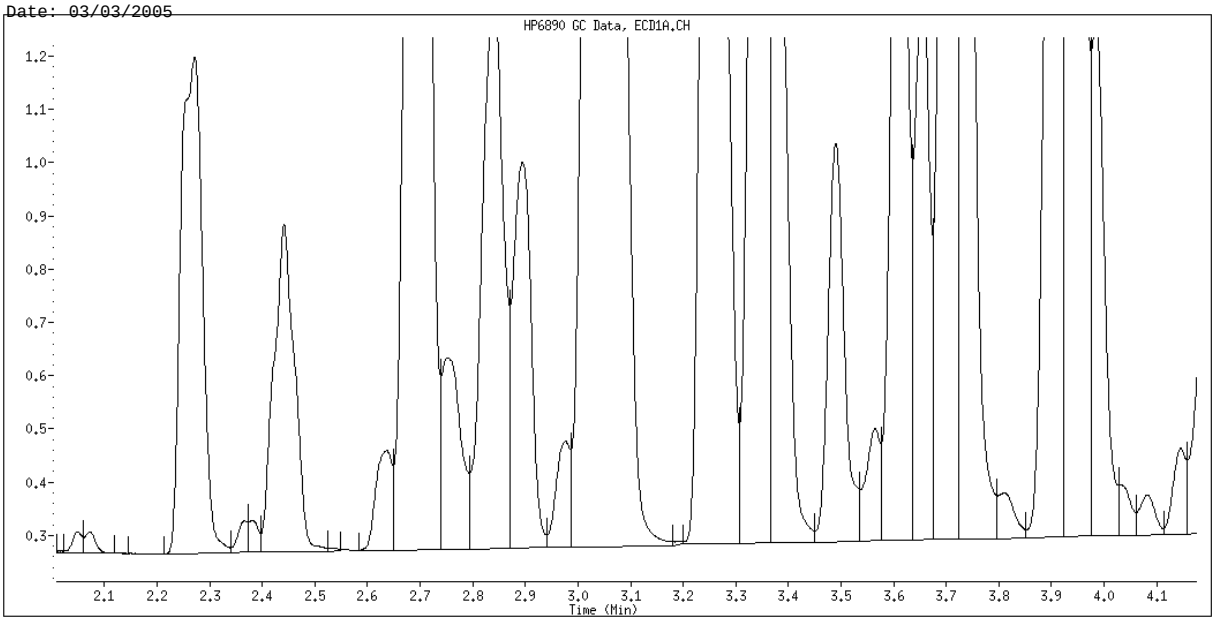
Average of Peak Amounts = 0.94732

QC Flag Legend

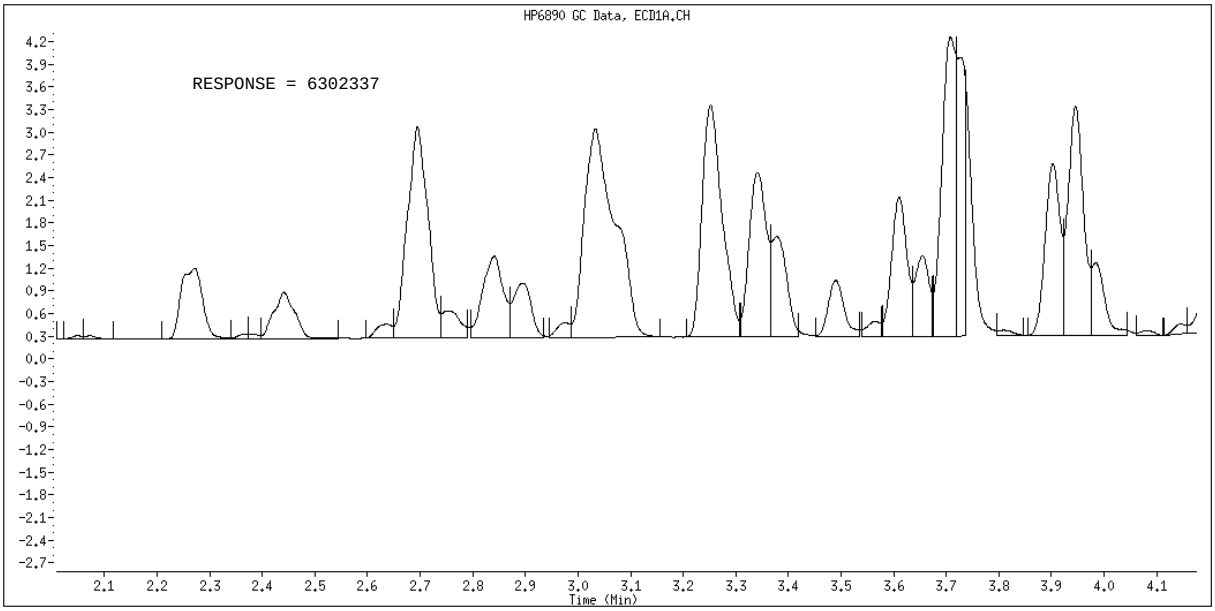
M - Compound response manually integrated.


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\015F1501.D
Date : 03-MAR-2005 15:48
Client ID:
Sample Info: 1248,,1,4
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1248
-AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\015F1501.D
Min

Data File Name: 015F1501.D
Inj. Date and Time: 03-MAR-2005 15:48
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Split Peak

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\016F1601.D
Report Date: 04-Mar-2005 04:39

STL North Canton

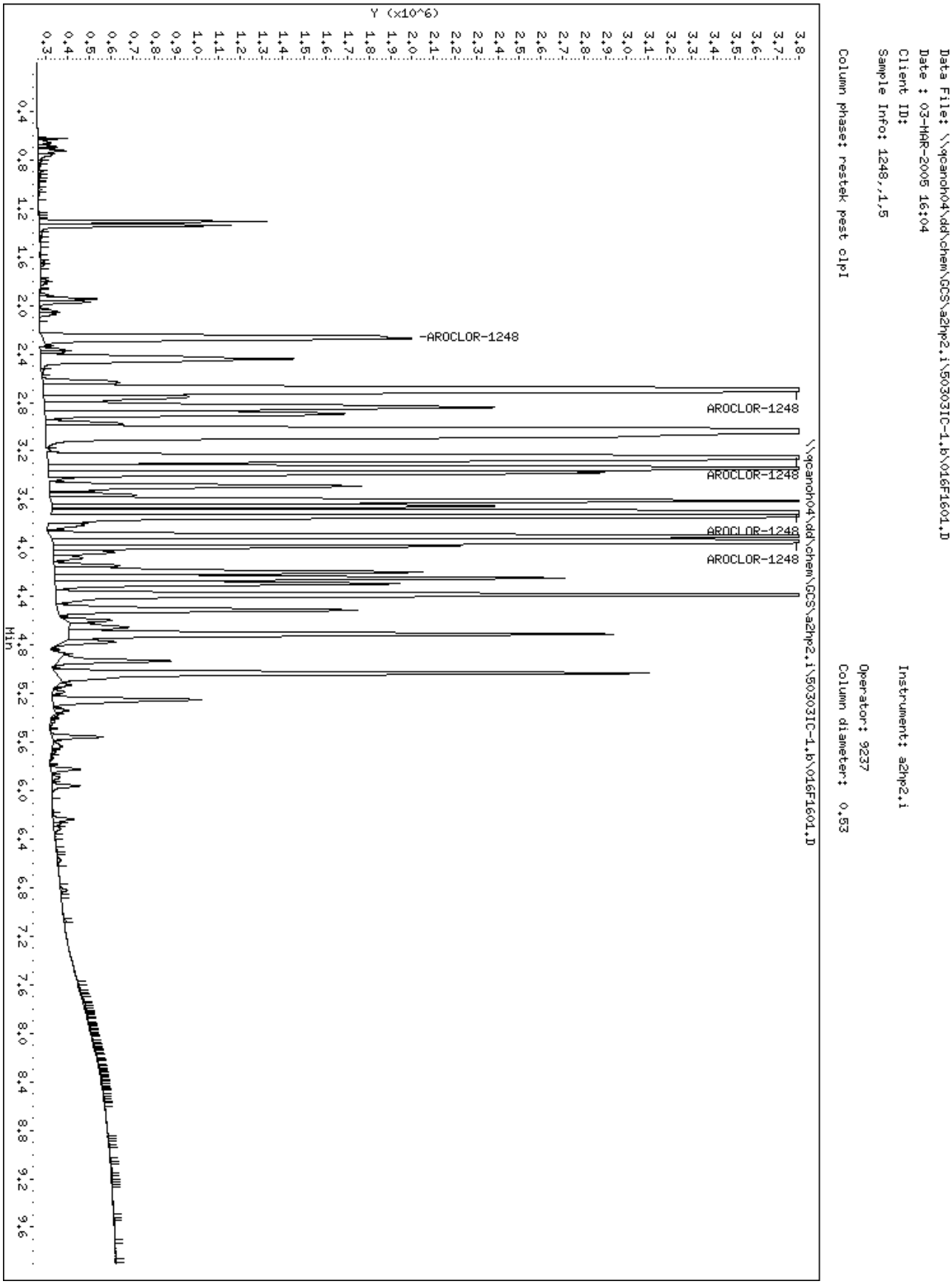
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\016F1601.D
Lab Smp Id: 1248
Inj Date : 03-MAR-2005 16:04
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 15:48 Cal File: 015F1501.D
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.271	2.271	0.000	4860333	2.00000	1.762	75.00- 125.00	100.00(M)
2.694	2.694	0.000	14866591	2.00000	1.923	216.94- 361.56	305.88
3.251	3.251	0.000	15785985	2.00000	1.840	232.42- 387.37	324.79
3.707	3.707	0.000	14989845	2.00000	1.963	199.74- 332.90	308.41
3.945	3.945	0.000	12484652	2.00000	1.963	179.62- 299.36	256.87

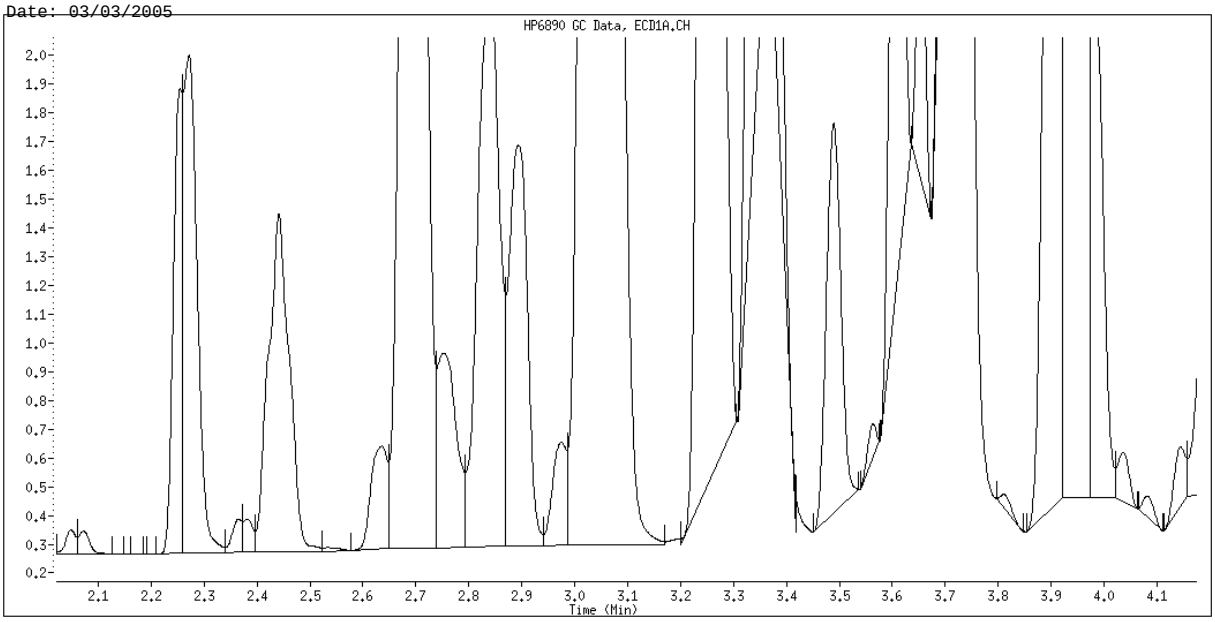
Average of Peak Amounts = 1.89020

QC Flag Legend

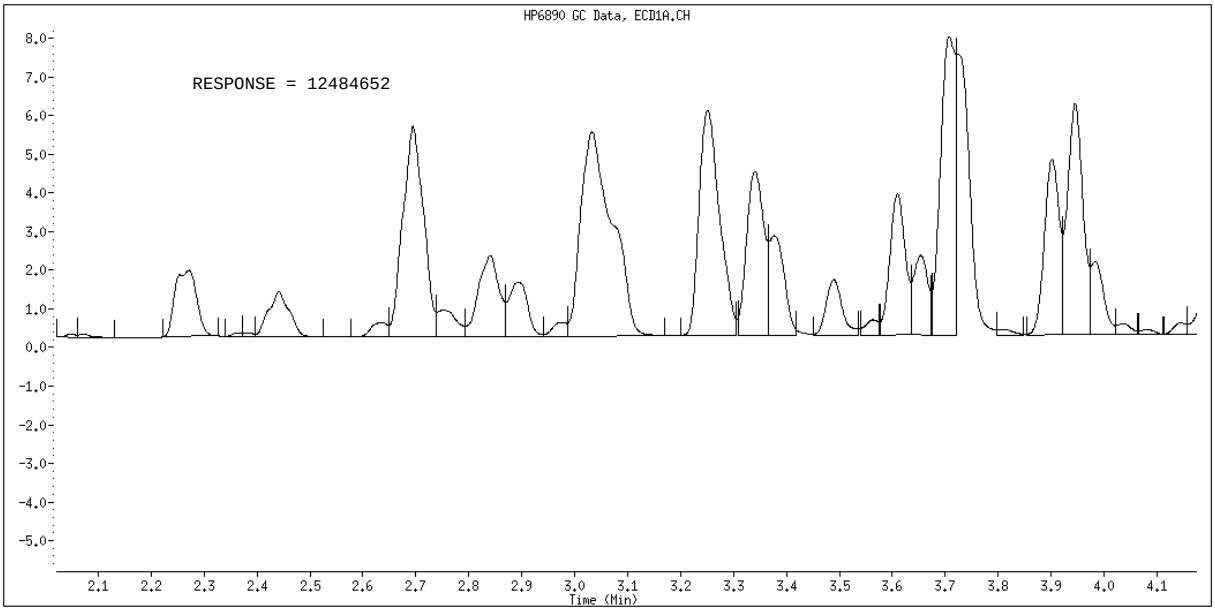
M - Compound response manually integrated.


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\016F1601.D
Date : 03-MAR-2005 16:04
Client ID:
Sample Info: 1248,.1,5
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\016F1601.D
Min

Data File Name: 016F1601.D
Inj. Date and Time: 03-MAR-2005 16:04
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/03/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\017F1701.D
Report Date: 04-Mar-2005 04:48

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\017F1701.D
Lab Smp Id: 2154
Inj Date : 03-MAR-2005 16:19
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:46 molm Quant Type: ESTD
Cal Date : 21-FEB-2005 19:02 Cal File: 022F2201.D
Als bottle: 17 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None

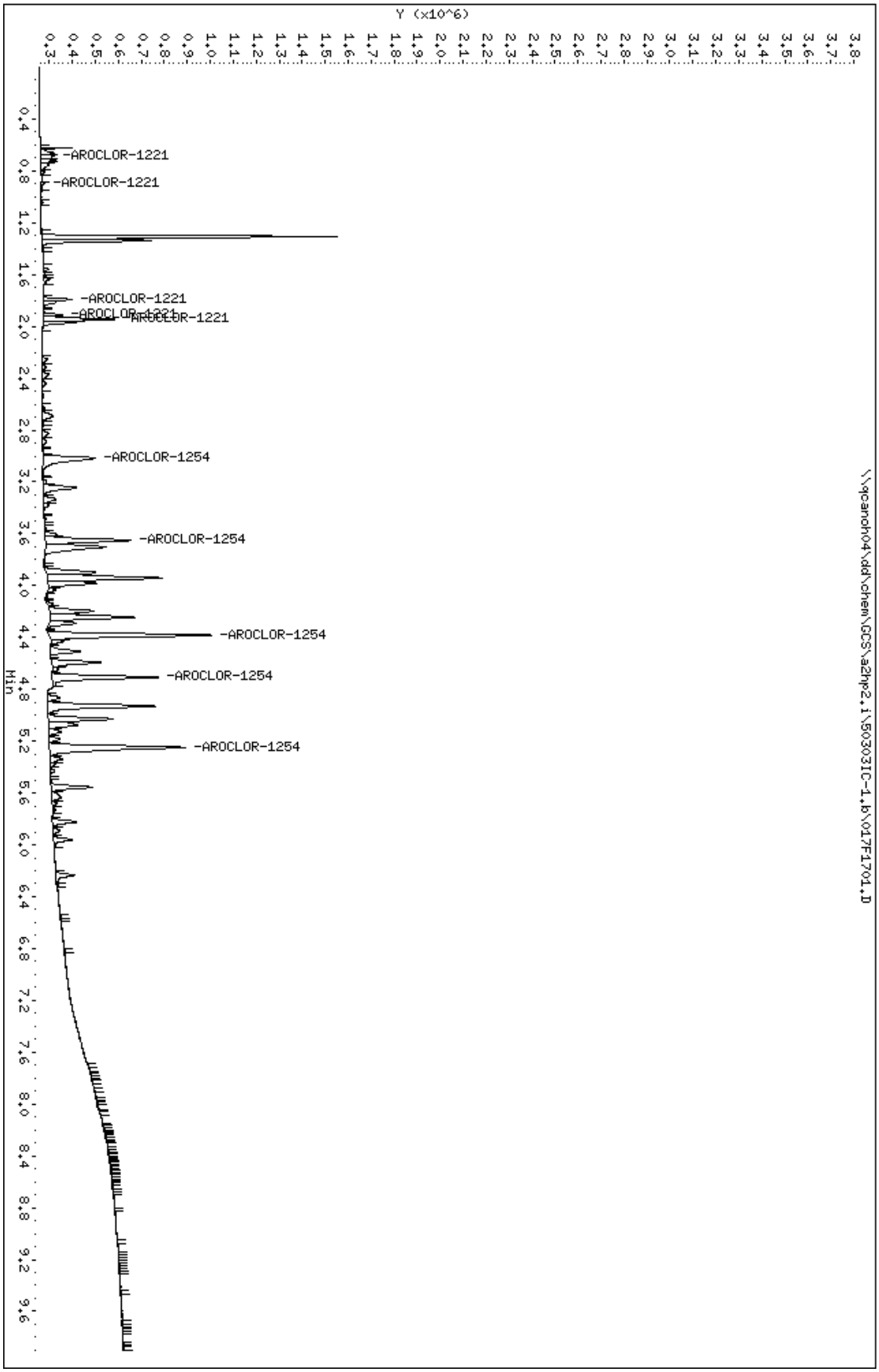
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.016	3.016	0.000	595864	0.10000	0.1129	75.00- 125.00	100.00
3.650	3.650	0.000	704996	0.10000	0.1088	92.38- 153.96	118.31
4.382	4.382	0.000	1304822	0.10000	0.1040	181.42- 302.37	218.98
4.707	4.707	0.000	890502	0.10000	0.09758	134.38- 223.97	149.45
5.248	5.248	0.000	1346217	0.10000	0.1069	180.67- 301.11	225.93
		Average of Peak Amounts =			0.10604		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.791	1.791	0.000	128440	0.10000	0.1026	75.00- 125.00	100.00(M)
1.911	1.911	0.000	85120	0.10000	0.1048	48.66- 81.10	68.33
1.945	1.945	0.000	313267	0.10000	0.1060	169.78- 282.97	251.50
0.685	0.685	0.000	59644	0.10000		12.95- 21.59	47.88
0.895	0.895	0.000	14393	0.10000		2.72- 4.53	11.55
		Average of Peak Amounts =			0.06268		

QC Flag Legend

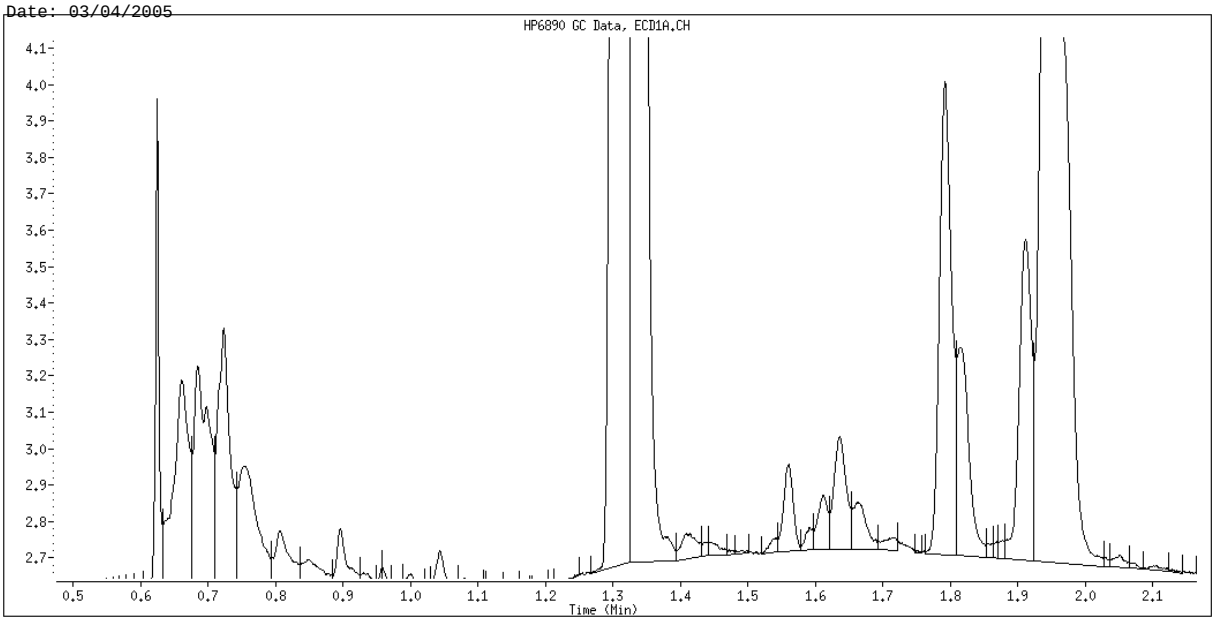
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\017F1701.D
Date : 03-MAR-2005 16:19
Client ID:
Sample Info: 2154,,1,1
Column phase: restek pest clpI

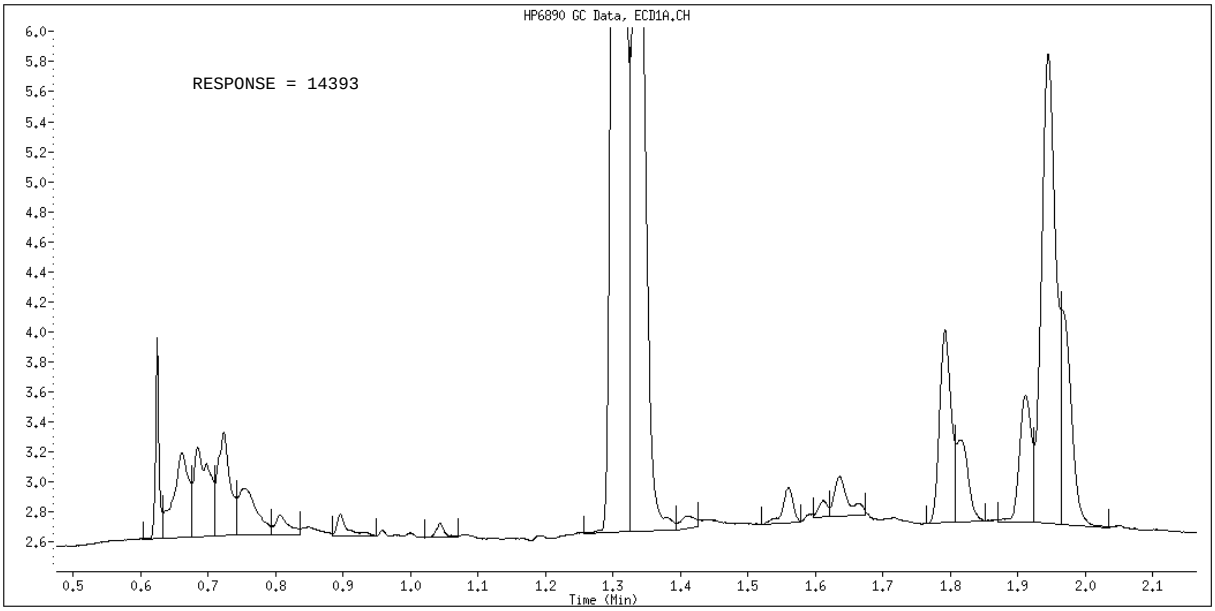
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 017F1701.D
Inj. Date and Time: 03-MAR-2005 16:19
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1221
CAS #: 11104-28-2
Report Date: 03/04/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Poor Chromatography

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\018F1801.D
Report Date: 04-Mar-2005 04:48

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\018F1801.D
Lab Smp Id: 2154
Inj Date : 03-MAR-2005 16:35
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:46 molm Quant Type: ESTD
Cal Date : 21-FEB-2005 19:18 Cal File: 023F2301.D
Als bottle: 18 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None

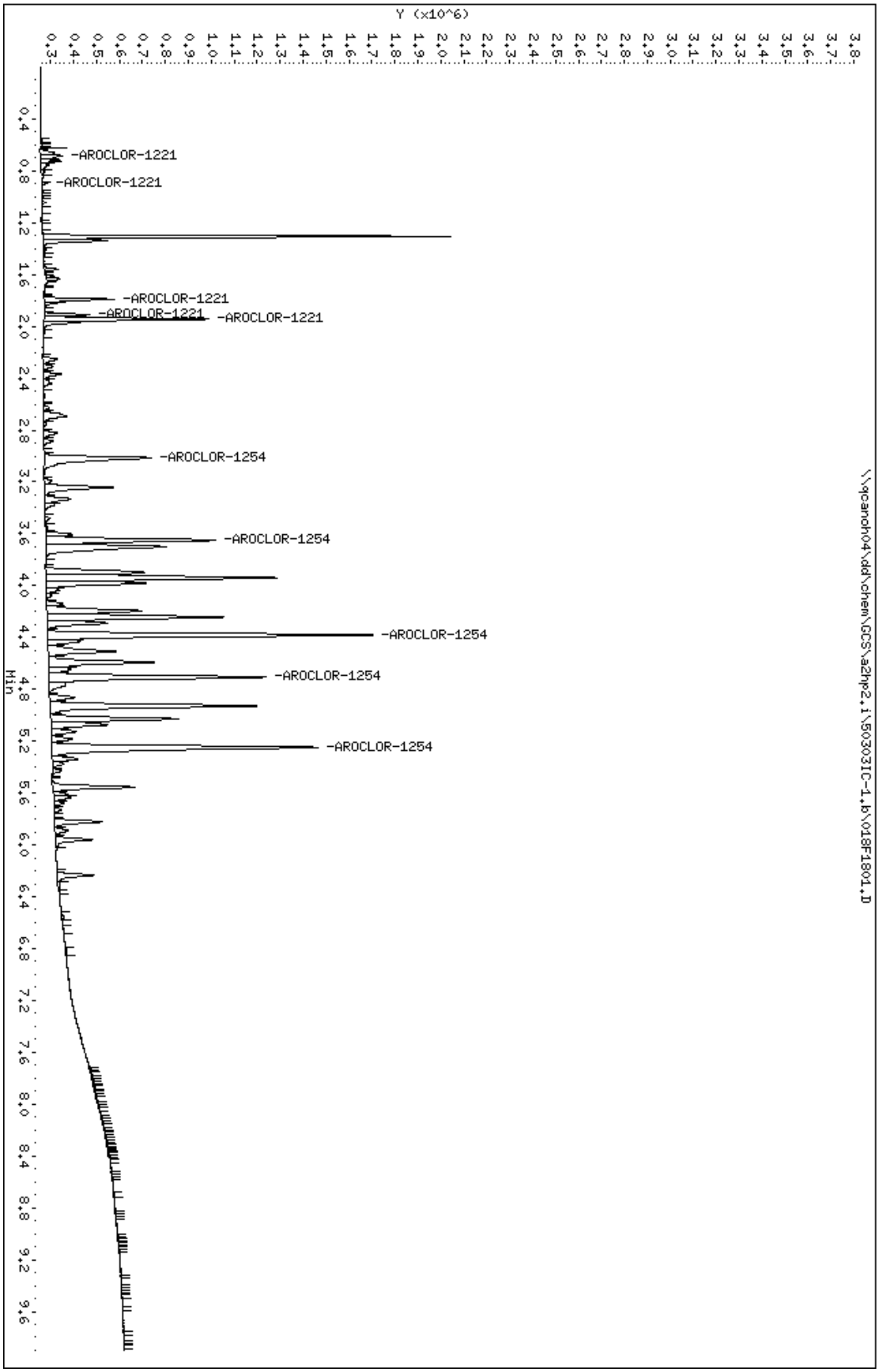
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.014	3.014	0.000	1113816	0.20000	0.2110	75.00- 125.00	100.00
3.649	3.649	0.000	1358829	0.20000	0.2097	92.38- 153.96	122.00
4.381	4.381	0.000	2638792	0.20000	0.2103	181.42- 302.37	236.91
4.706	4.706	0.000	1929977	0.20000	0.2115	134.38- 223.97	173.28
5.248	5.248	0.000	2615639	0.20000	0.2077	180.67- 301.11	234.84
		Average of Peak Amounts =			0.21004		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.791	1.791	0.000	308630	0.20000	0.2466	75.00- 125.00	100.00(M)
1.910	1.910	0.000	200476	0.20000	0.2469	48.66- 81.10	66.20
1.944	1.944	0.000	719508	0.20000	0.2435	169.78- 282.97	237.60
0.685	0.685	0.000	95076	0.20000		12.95- 21.59	31.40
0.896	0.896	0.000	24296	0.20000		2.72- 4.53	8.02
		Average of Peak Amounts =			0.14740		

QC Flag Legend

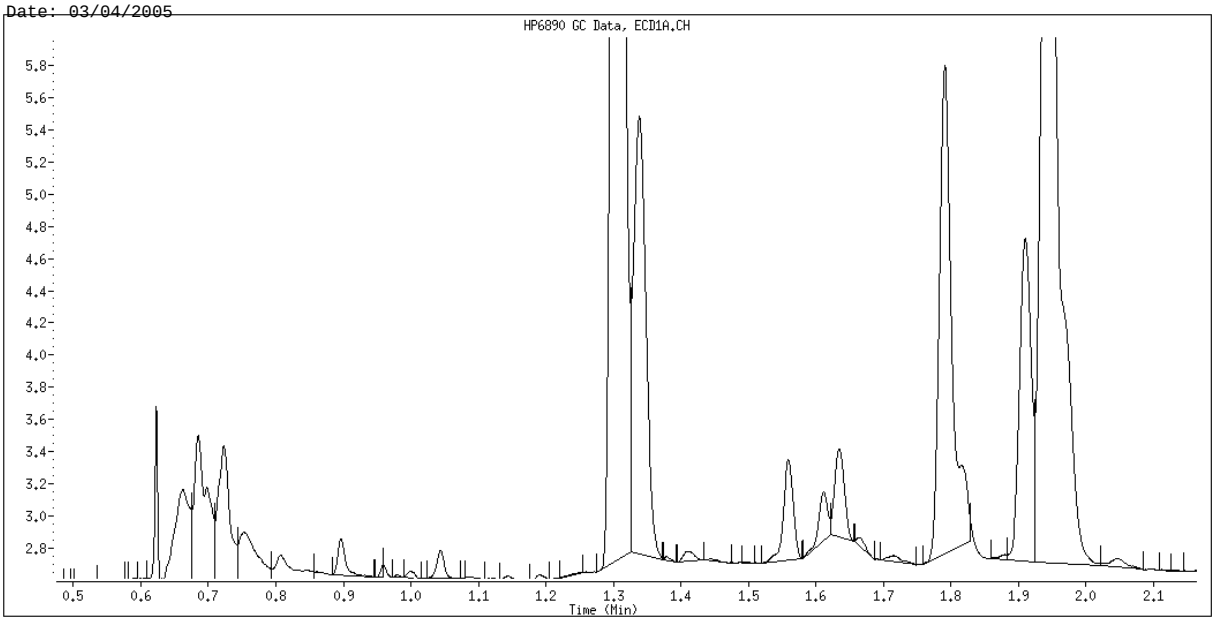
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\018F1801.D
Date : 03-MAR-2005 16:35
Client ID:
Sample Info: 2154,.1,2
Column phase: restek pest clpI

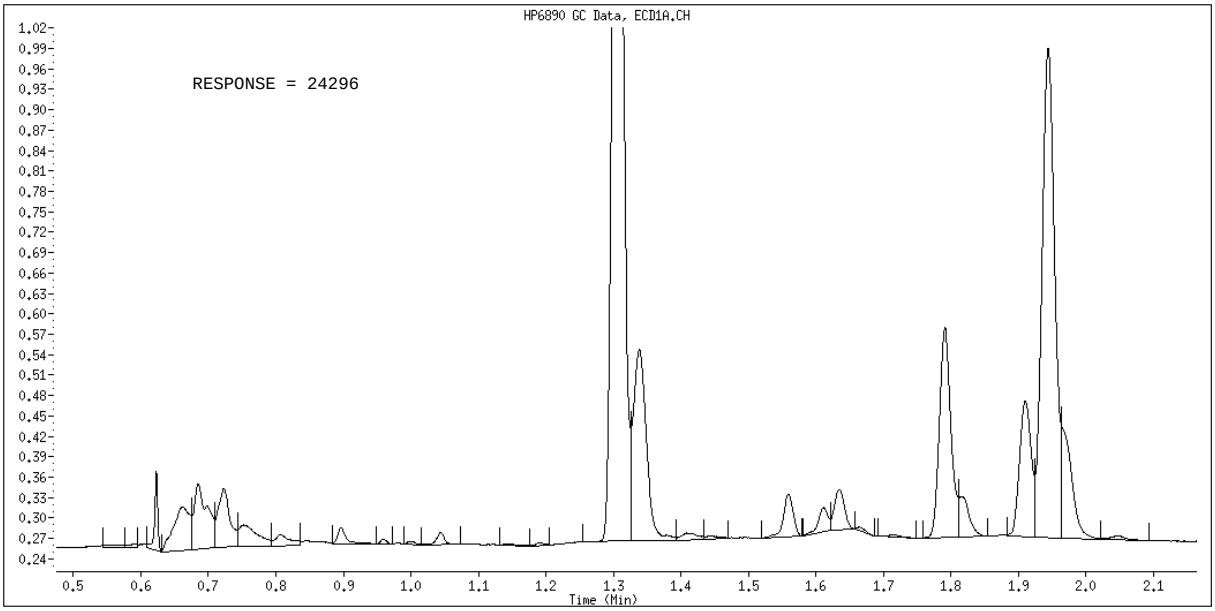
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 018F1801.D
Inj. Date and Time: 03-MAR-2005 16:35
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1221
CAS #: 11104-28-2
Report Date: 03/04/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Poor Chromatography

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\019F1901.D
Report Date: 04-Mar-2005 04:48

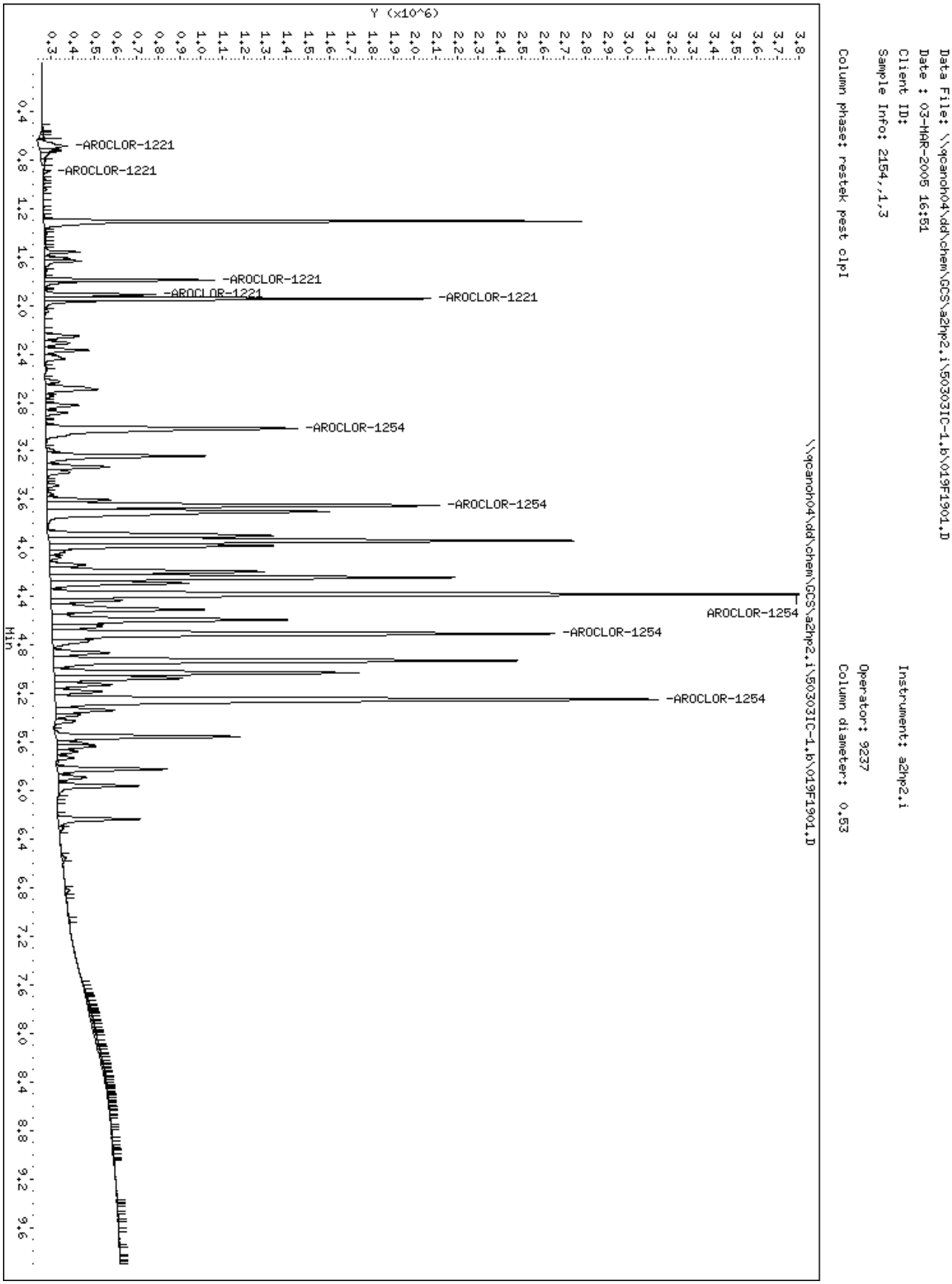
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\019F1901.D
Lab Smp Id: 2154
Inj Date : 03-MAR-2005 16:51
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:46 molm Quant Type: ESTD
Cal Date : 21-FEB-2005 20:52 Cal File: 029F2901.D
Als bottle: 19 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None

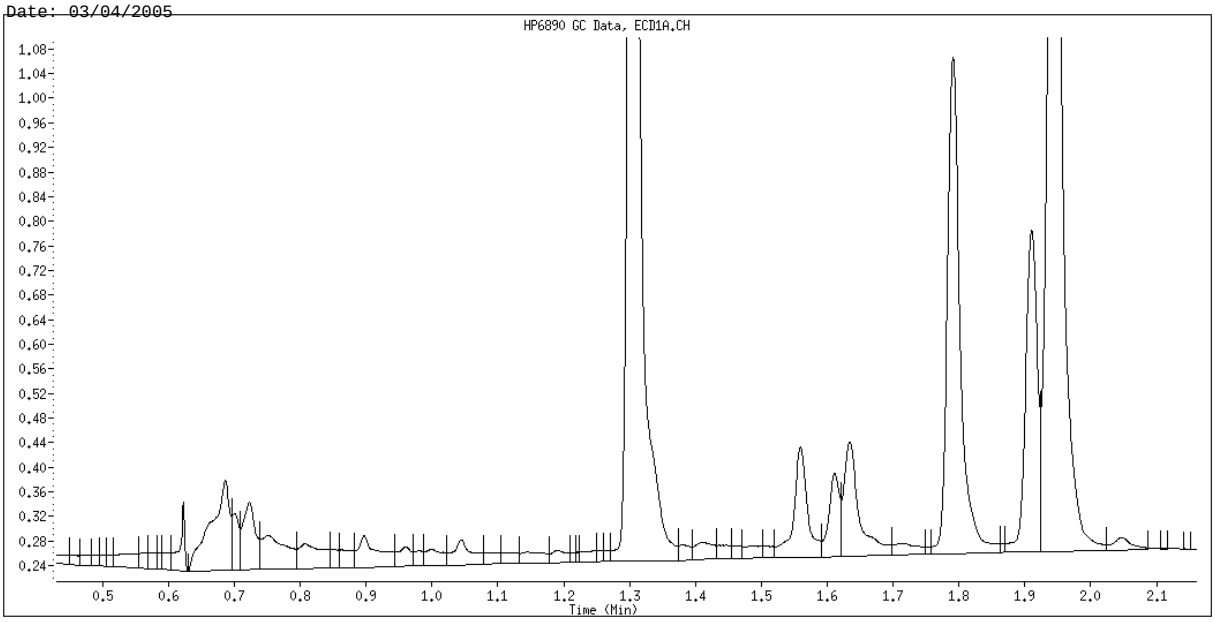
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.013	3.013	0.000	2620766	0.50000	0.4964	75.00- 125.00	100.00
3.648	3.648	0.000	3227996	0.50000	0.4982	92.38- 153.96	123.17
4.381	4.381	0.000	6339515	0.50000	0.5052	181.42- 302.37	241.90
4.707	4.707	0.000	4695767	0.50000	0.5145	134.38- 223.97	179.18
5.247	5.247	0.000	6313167	0.50000	0.5014	180.67- 301.11	240.89
Average of Peak Amounts =					0.50314		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.791	1.791	0.000	797166	0.50000	0.6371	75.00- 125.00	100.00(M)
1.910	1.910	0.000	517225	0.50000	0.6370	48.66- 81.10	64.88
1.944	1.944	0.000	1804588	0.50000	0.6108	169.78- 282.97	226.37
0.686	0.686	0.000	137666	0.50000		12.95- 21.59	17.27
0.897	0.897	0.000	28882	0.50000		2.72- 4.53	3.62
Average of Peak Amounts =					0.37698		

QC Flag Legend

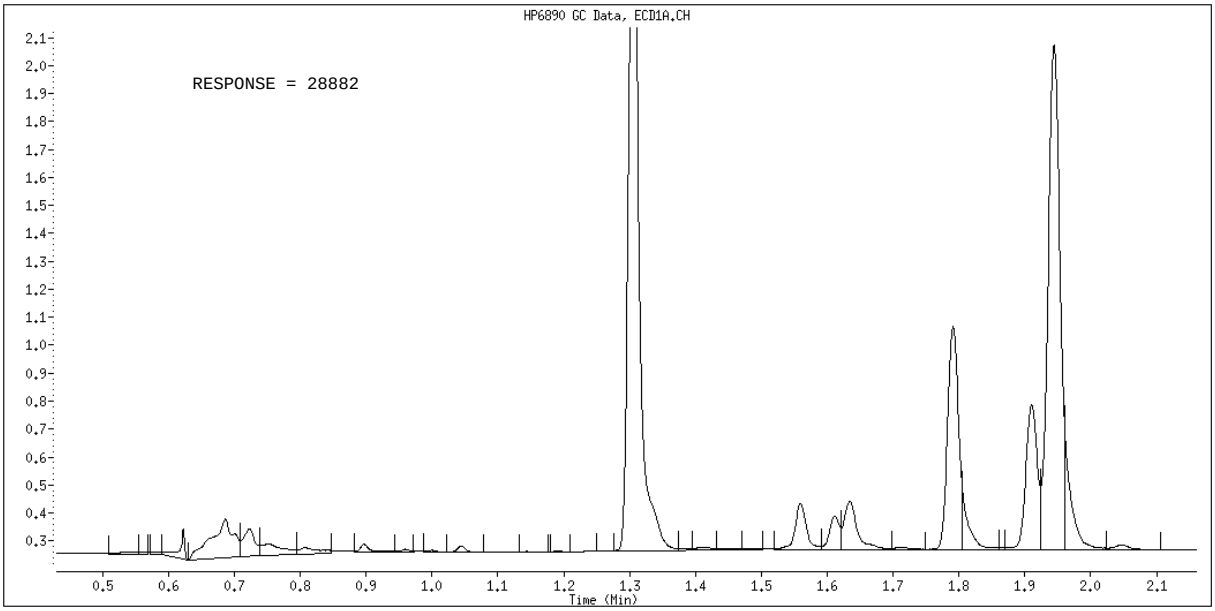
M - Compound response manually integrated.


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\019F1901.D
Date : 03-MAR-2005 16:51
Client ID:
Sample Info: 2154,,1,3
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1254
-AROCLOR-1254
AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
Min
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\019F1901.D

Data File Name: 019F1901.D
Inj. Date and Time: 03-MAR-2005 16:51
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1221
CAS #: 11104-28-2
Report Date: 03/04/2005



Original Integration



Manual Integration

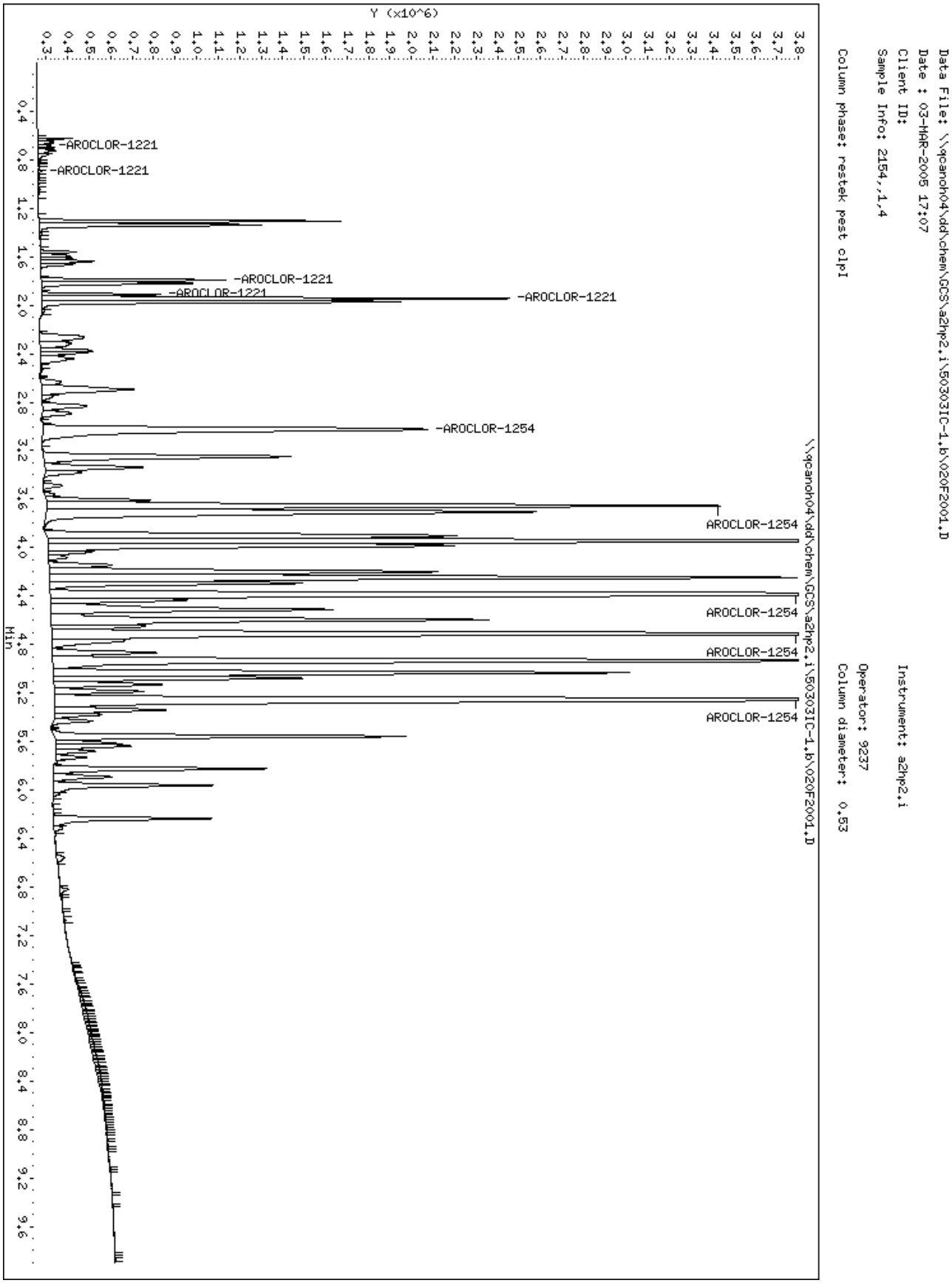
Manually Integrated By: MolM
Manual Integration Reason: Poor Chromatography

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\020F2001.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\020F2001.D
Lab Smp Id: 2154
Inj Date : 03-MAR-2005 17:07
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 16:51 Cal File: 019F1901.D
Als bottle: 20 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.024	3.024	0.000	5005007	1.00000	0.8954	80.00- 120.00	100.00
3.654	3.654	0.000	6318422	1.00000	0.9338	94.68- 157.80	126.24
4.384	4.384	0.000	12399652	1.00000	0.9558	185.81- 309.68	247.74
4.710	4.710	0.000	9223888	1.00000	0.9902	138.22- 230.37	184.29
5.251	5.251	0.000	12342714	1.00000	0.9454	184.96- 308.26	246.61
		Average of Peak Amounts =			0.94412		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.791	1.791	0.000	859439	1.00000	0.5922	80.00- 120.00	100.00
1.911	1.911	0.000	554042	1.00000	0.5755	48.35- 80.58	64.47
1.945	1.945	0.000	2175188	1.00000	0.6311	189.82- 316.37	253.09
0.686	0.686	0.000	58088	1.00000		5.07- 8.45	6.76
0.896	0.896	0.000	14691	1.00000		1.28- 2.14	1.71
		Average of Peak Amounts =			0.35976		

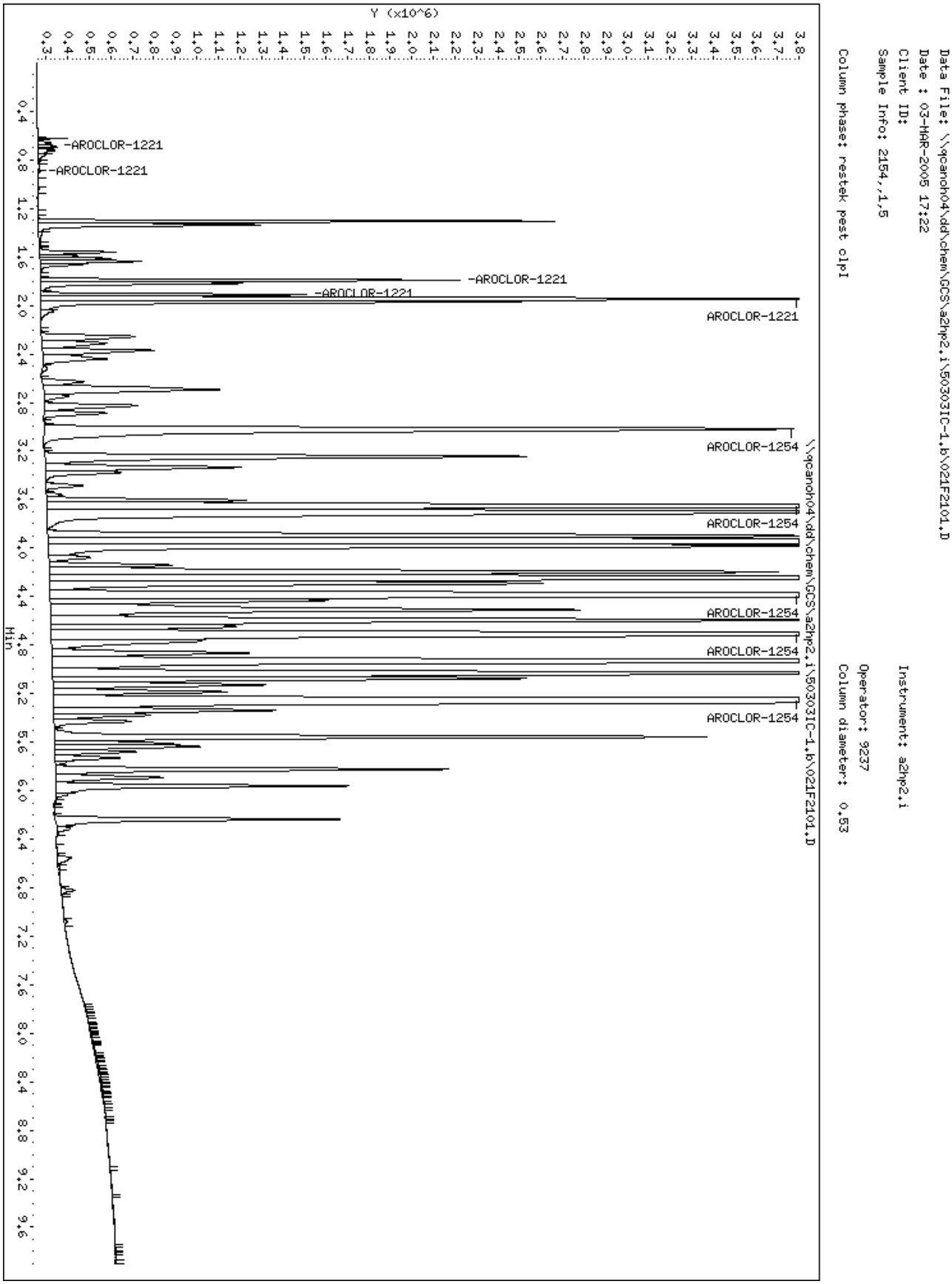

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\020F2001.D
Date : 03-MAR-2005 17:07
Client ID:
Sample Info: 2154,,1,4
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\020F2001.D

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\021F2101.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\021F2101.D
Lab Smp Id: 2154
Inj Date : 03-MAR-2005 17:22
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 17:07 Cal File: 020F2001.D
Als bottle: 21 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.018	3.018	0.000	9244765	2.00000	1.698	75.00- 125.00	100.00
3.652	3.652	0.000	11560222	2.00000	1.737	94.68- 157.80	125.05
4.383	4.383	0.000	22841863	2.00000	1.780	185.81- 309.68	247.08
4.708	4.708	0.000	16920814	2.00000	1.821	138.22- 230.37	183.03
5.249	5.249	0.000	22898114	2.00000	1.778	184.96- 308.26	247.69
Average of Peak Amounts =					1.76280		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.792	1.792	0.000	1950194	2.00000	1.496	75.00- 125.00	100.00
1.911	1.911	0.000	1235060	2.00000	1.435	48.35- 80.58	63.33
1.944	1.944	0.000	4514159	2.00000	1.443	189.82- 316.37	231.47
0.684	0.684	0.000	80639	2.00000		5.07- 8.45	4.13
0.896	0.896	0.000	12086	2.00000		1.28- 2.14	0.62
Average of Peak Amounts =					0.87480		


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\021F2101.D
Date : 03-MAR-2005 17:22
Client ID:
Sample Info: 2154,,1.5
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
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AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\021F2101.D

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\022F2201.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\022F2201.D
Lab Smp Id: 1660
Inj Date : 03-MAR-2005 17:38
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 17:22 Cal File: 021F2101.D
Als bottle: 22 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

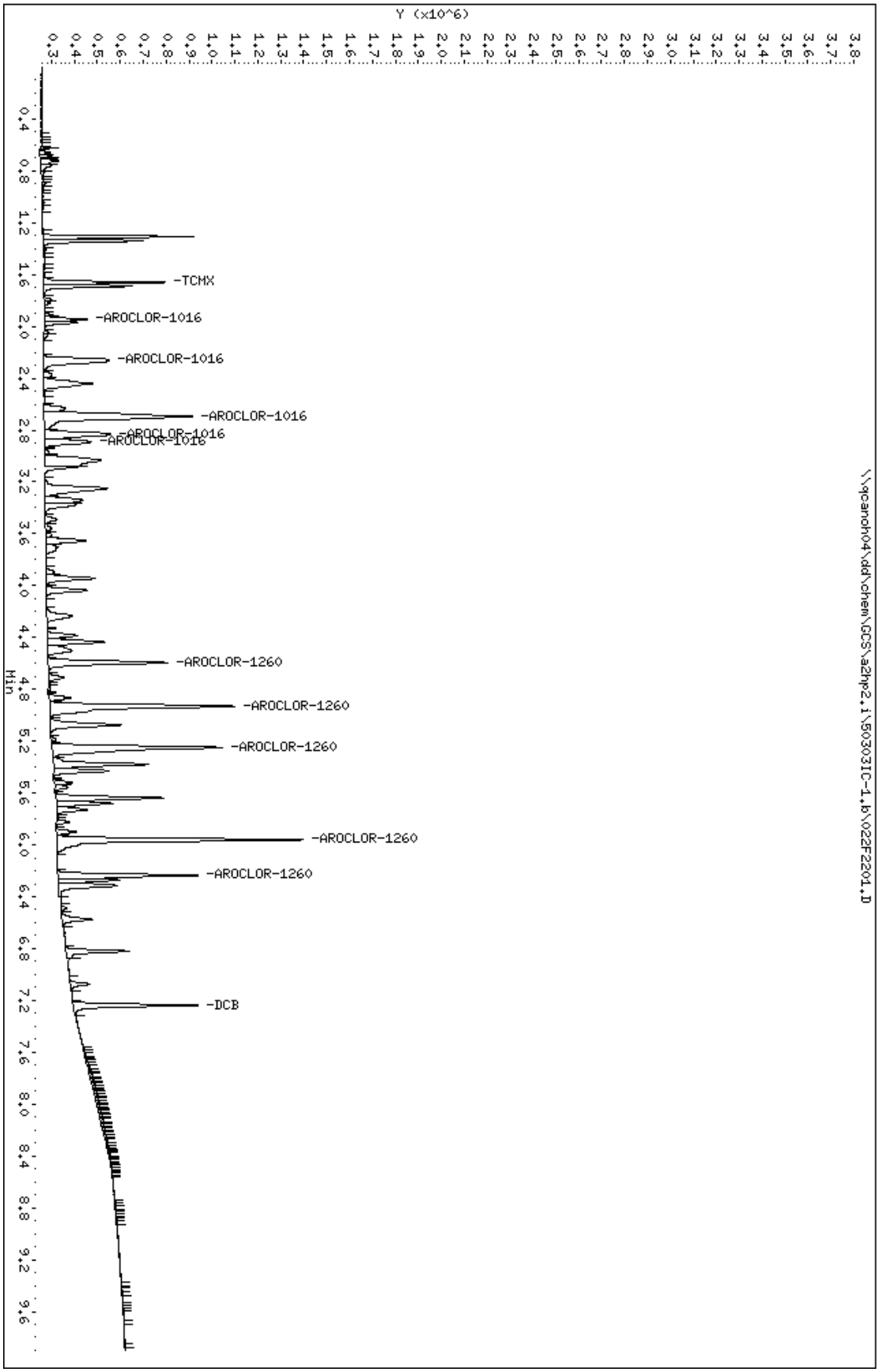
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.659	1.659	0.000	532092	0.00500			
3 AROCLOR-1016					CAS #: 12674-11-2		
1.945	1.945	0.000	248934	0.10000		0.00- 0.00	100.00(M)
2.256	2.256	0.000	845603	0.10000		0.00- 0.00	339.69
2.695	2.695	0.000	1855953	0.10000		0.00- 0.00	745.56
2.831	2.831	0.000	736151	0.10000		0.00- 0.00	295.72
2.891	2.891	0.000	478499	0.10000		0.00- 0.00	192.22
8 AROCLOR-1260					CAS #: 11096-82-5		
4.594	4.594	0.000	1029528	0.10000		0.00- 0.00	100.00
4.931	4.931	0.000	1851353	0.10000		0.00- 0.00	179.83
5.249	5.249	0.000	1779117	0.10000		0.00- 0.00	172.81
5.961	5.961	0.000	2058385	0.10000		0.00- 0.00	199.93
6.236	6.236	0.000	1023247	0.10000		0.00- 0.00	99.39
$ 9 DCB					CAS #: 2051-24-3		
7.238	7.238	0.000	875359	0.00500			

QC Flag Legend

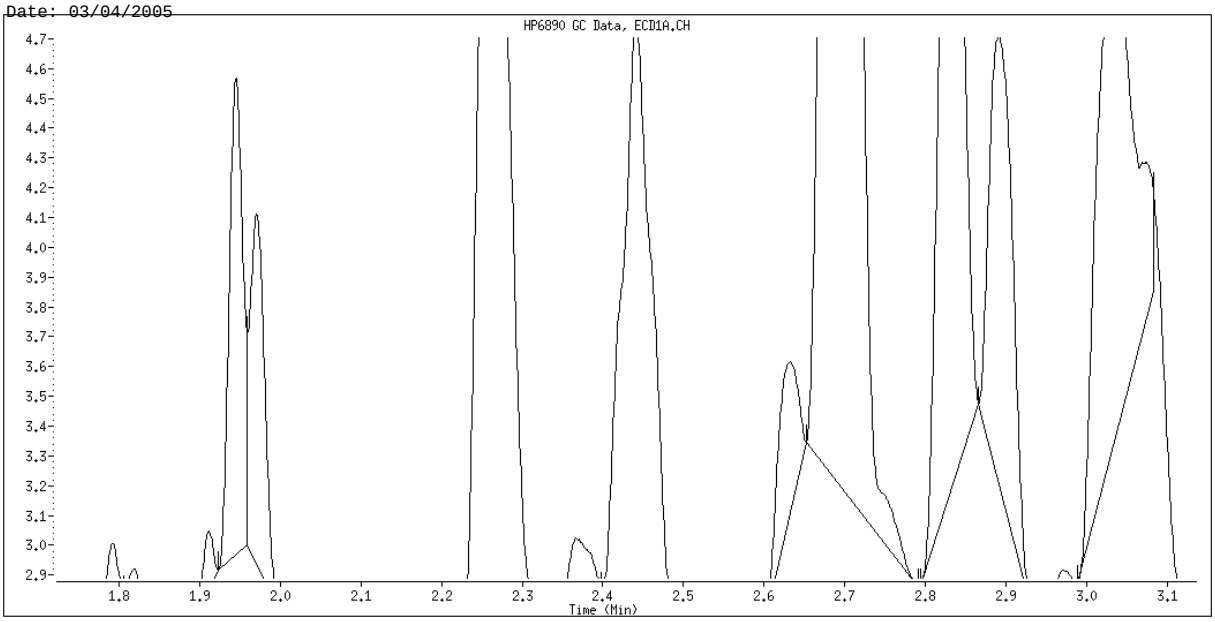
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\022F2201.D
Date : 03-MAR-2005 17:38
Client ID:
Sample Info: 1660,,1,1
Column phase: restek pest clpI

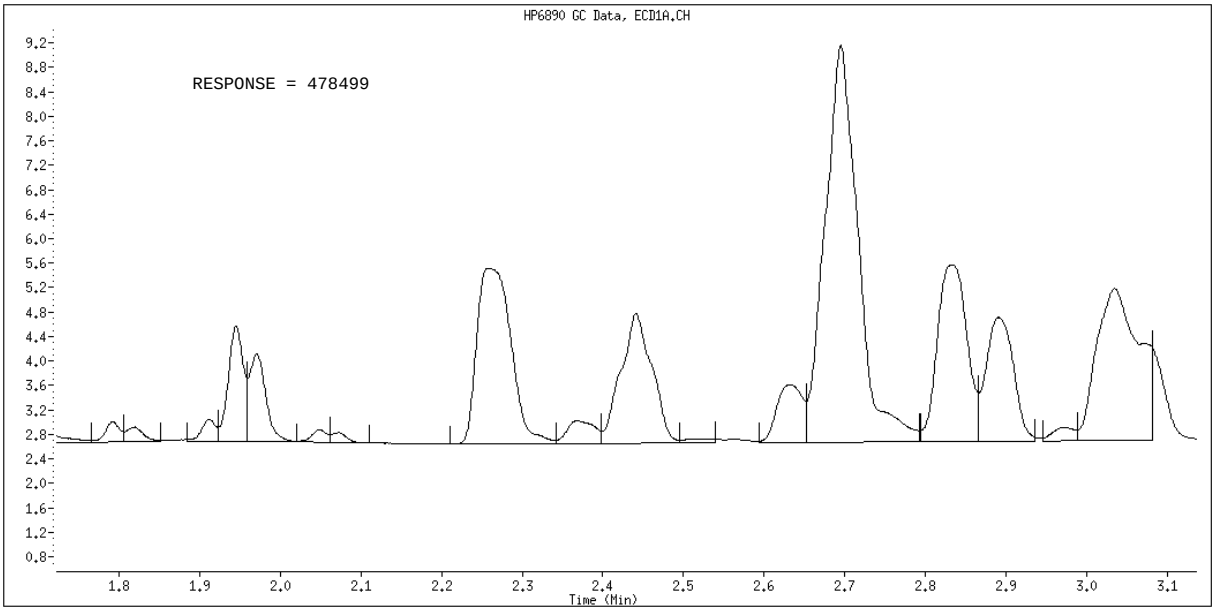
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 022F2201.D
Inj. Date and Time: 03-MAR-2005 17:38
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/04/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\023F2301.D
Report Date: 04-Mar-2005 04:39

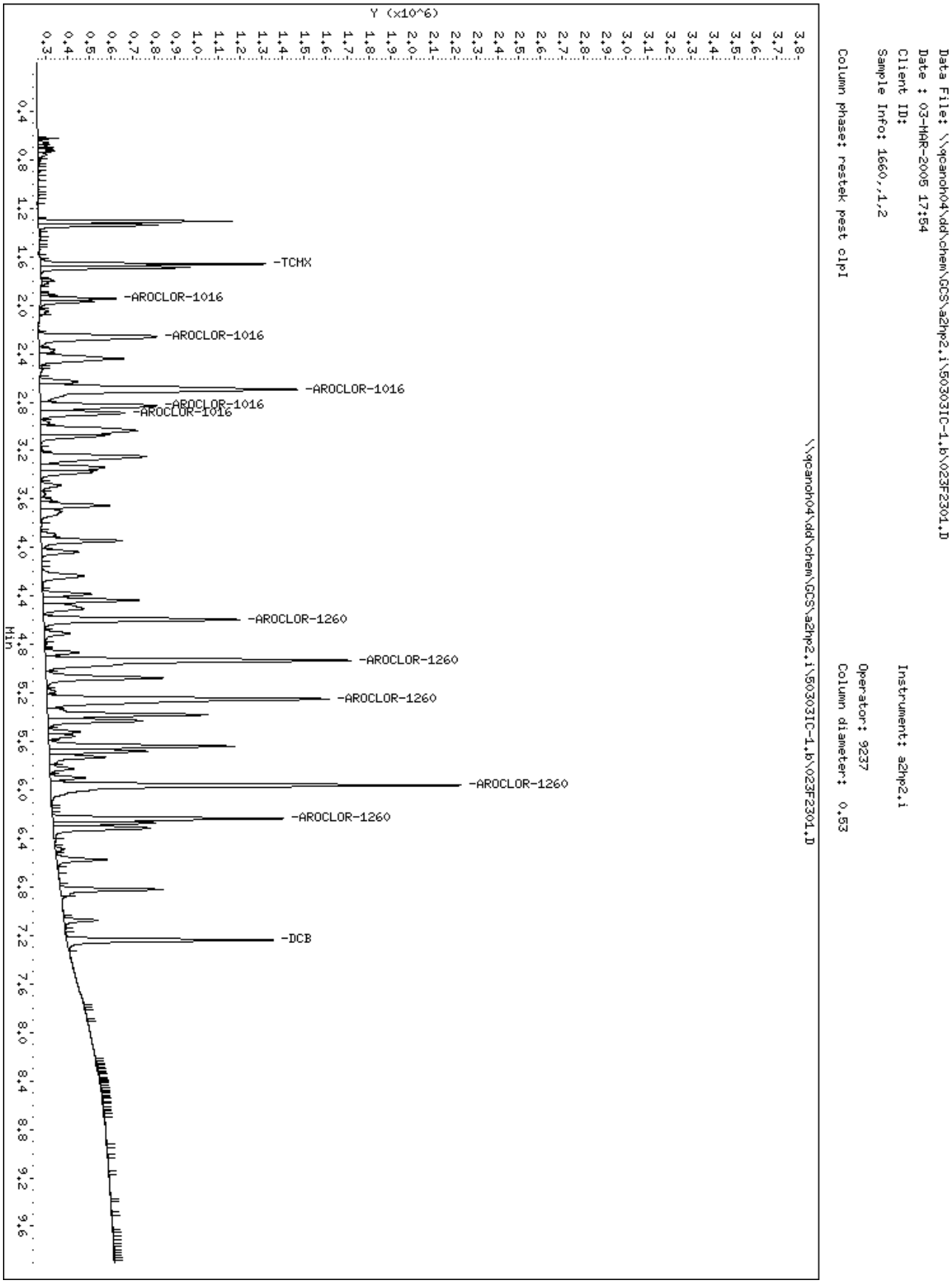
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\023F2301.D
Lab Smp Id: 1660
Inj Date : 03-MAR-2005 17:54
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38 Cal File: 022F2201.D
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.660	1.660	0.000	1045265	0.01000	0.009822		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.945	1.945	0.000	481945	0.20000	0.1936	0.00- 0.00	100.00(M)
2.258	2.258	0.000	1563654	0.20000	0.1849	0.00- 0.00	324.45
2.694	2.694	0.000	3465852	0.20000	0.1867	0.00- 0.00	719.14
2.828	2.828	0.000	1353527	0.20000	0.1839	0.00- 0.00	280.85
2.888	2.888	0.000	903722	0.20000	0.1889	0.00- 0.00	187.52
Average of Peak Amounts =					0.18760		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.593	4.593	0.000	1882329	0.20000	0.1828	0.00- 0.00	100.00
4.931	4.931	0.000	3418497	0.20000	0.1846	0.00- 0.00	181.61
5.248	5.248	0.000	3320413	0.20000	0.1866	0.00- 0.00	176.40
5.961	5.961	0.000	3822677	0.20000	0.1857	0.00- 0.00	203.08
6.235	6.235	0.000	1818214	0.20000	0.1777	0.00- 0.00	96.59
Average of Peak Amounts =					0.18348		
$ 9 DCB					CAS #: 2051-24-3		
7.238	7.238	0.000	1593253	0.01000	0.009100		

QC Flag Legend

M - Compound response manually integrated.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Date : 03-MAR-2005 17:54
Client ID:
Sample Info: 1660,.1,2
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
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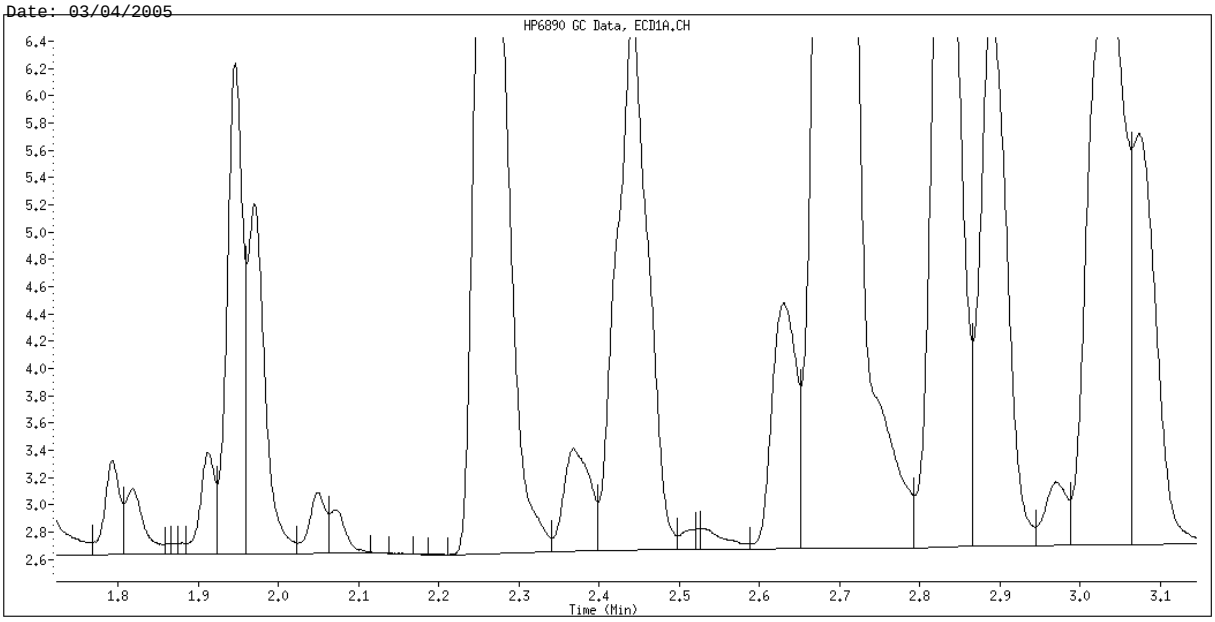
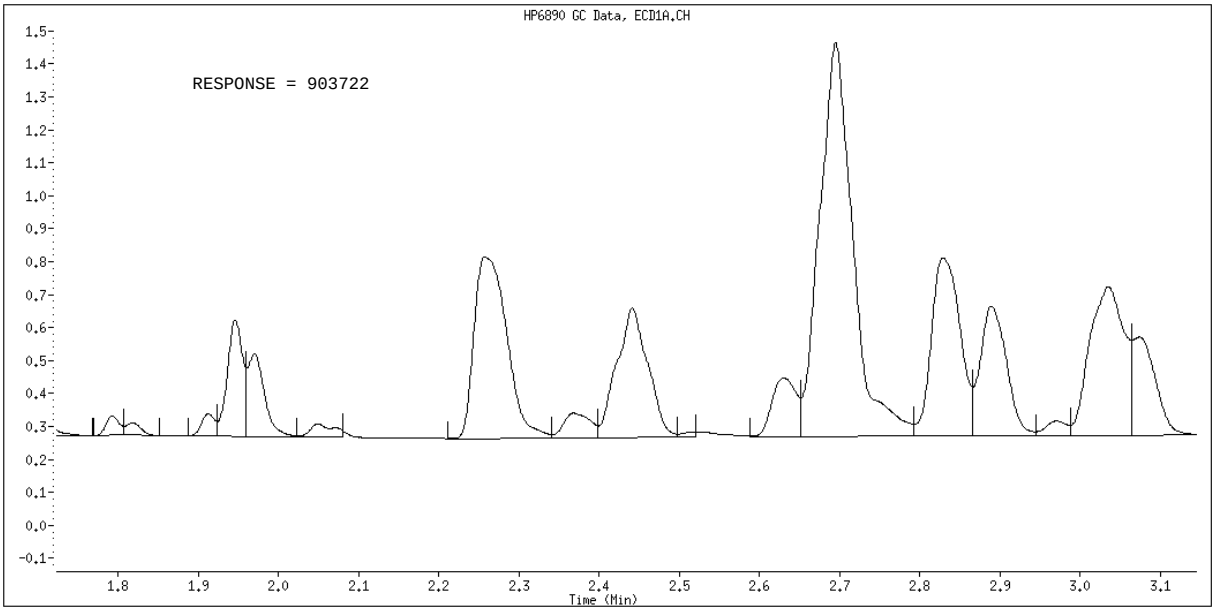
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

Data File Name: 023F2301.D
Inj. Date and Time: 03-MAR-2005 17:54
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/04/2005



Original Integration



Manual Integration

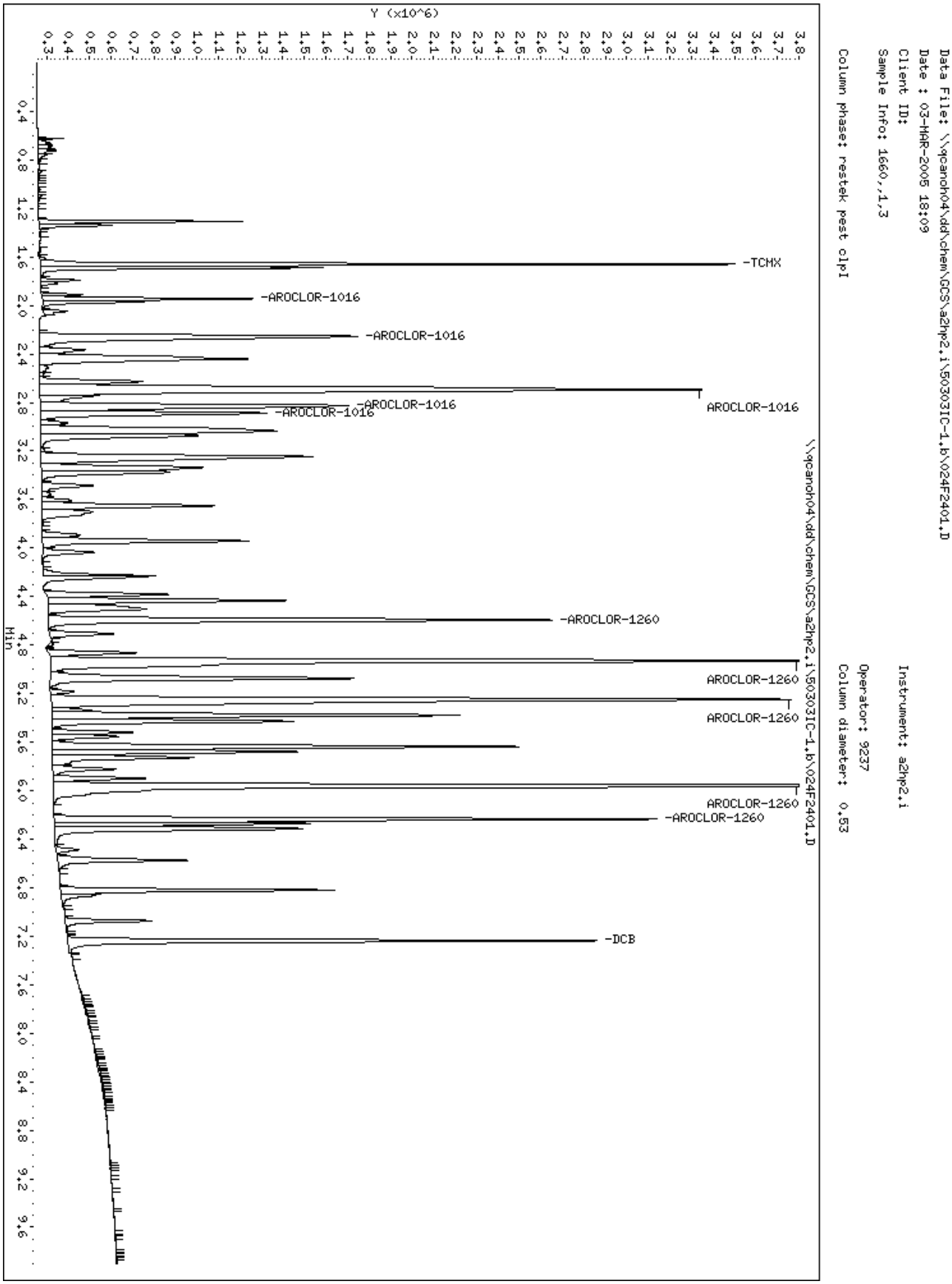
Manually Integrated By: MolM
Manual Integration Reason: Baseline Event

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\024F2401.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\024F2401.D
Lab Smp Id: 1660
Inj Date : 03-MAR-2005 18:09
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 17:54 Cal File: 023F2301.D
Als bottle: 24 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.659	1.659	0.000	3231944	0.02500	0.03064		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.945	1.945	0.000	1309351	0.50000	0.5345	75.00- 125.00	100.00
2.254	2.254	0.000	3683854	0.50000	0.4527	211.01- 351.69	281.35
2.693	2.693	0.000	7984759	0.50000	0.4450	457.37- 762.28	609.83
2.825	2.825	0.000	3284956	0.50000	0.4650	188.16- 313.61	250.88
2.887	2.887	0.000	2203596	0.50000	0.4737	126.22- 210.37	168.30
Average of Peak Amounts =					0.47418		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.593	4.593	0.000	4578118	0.50000	0.4646	75.00- 125.00	100.00
4.930	4.930	0.000	8383421	0.50000	0.4709	137.34- 228.90	183.12
5.248	5.248	0.000	8313918	0.50000	0.4835	136.20- 227.00	181.60
5.960	5.960	0.000	9616949	0.50000	0.4845	157.55- 262.58	210.06
6.235	6.235	0.000	4665924	0.50000	0.4829	76.44- 127.40	101.92
Average of Peak Amounts =					0.47728		
$ 9 DCB					CAS #: 2051-24-3		
7.237	7.237	0.000	4059949	0.02500	0.02428		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Date : 03-MAR-2005 18:09
Client ID:
Sample Info: 1660,1.3
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
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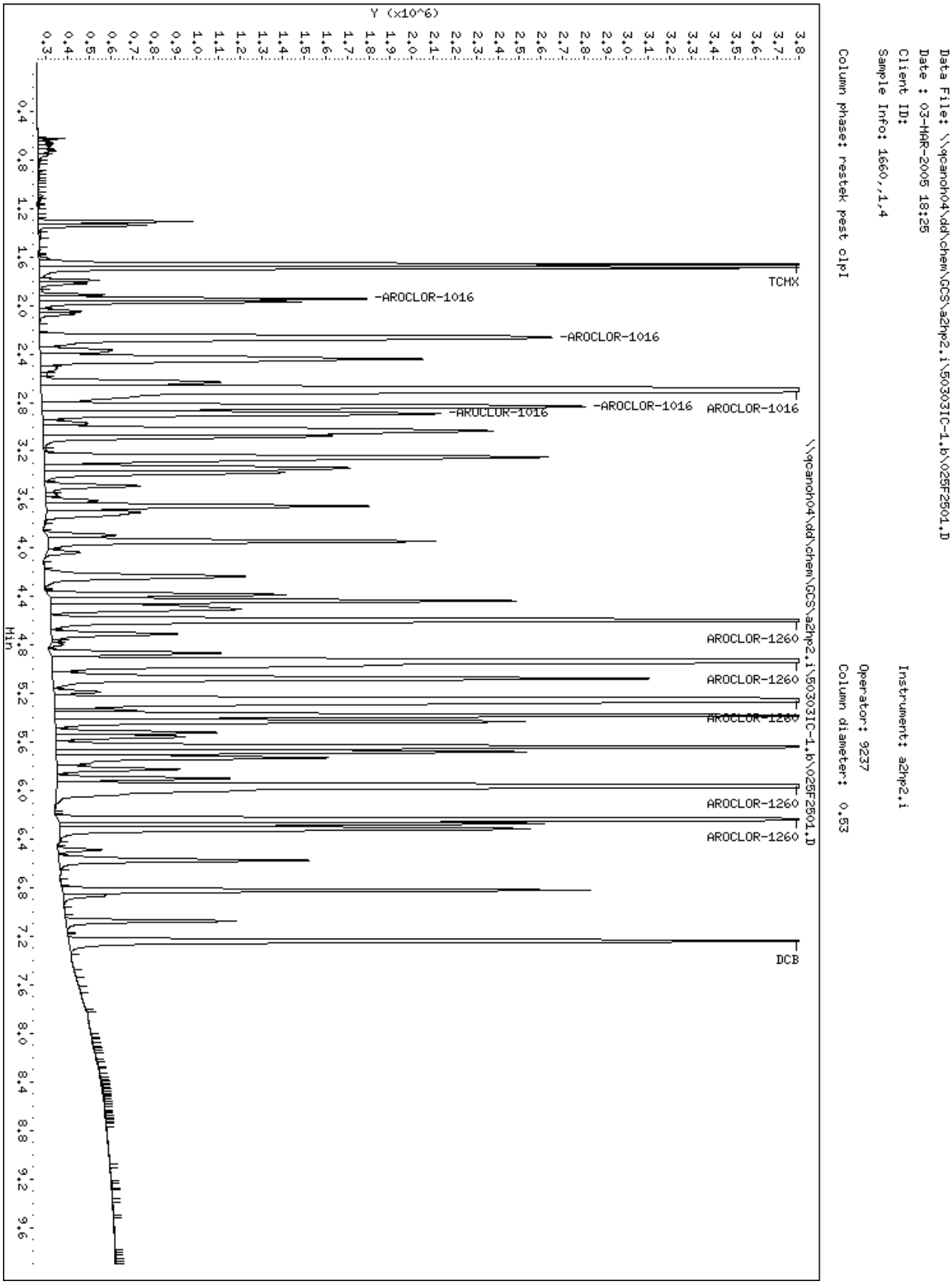
-AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\025F2501.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\025F2501.D
Lab Smp Id: 1660
Inj Date : 03-MAR-2005 18:25
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 18:09 Cal File: 024F2401.D
Als bottle: 25 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.660	1.660	0.000	4575064	0.05000	0.04034		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.945	1.945	0.000	2082050	1.00000	0.8308	80.00- 120.00	100.00
2.263	2.263	0.000	6980845	1.00000	0.8858	251.47- 419.11	335.29
2.695	2.695	0.000	16478892	1.00000	0.9533	593.61- 989.34	791.47
2.833	2.833	0.000	6340454	1.00000	0.9189	228.40- 380.66	304.53
2.891	2.891	0.000	4299680	1.00000	0.9408	154.88- 258.14	206.51
Average of Peak Amounts =					0.90592		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.594	4.594	0.000	8953236	1.00000	0.9306	80.00- 120.00	100.00
4.931	4.931	0.000	16362103	1.00000	0.9372	137.06- 228.44	182.75
5.249	5.249	0.000	16238099	1.00000	0.9548	136.02- 226.71	181.37
5.961	5.961	0.000	18578791	1.00000	0.9458	155.63- 259.39	207.51
6.236	6.236	0.000	8977242	1.00000	0.9398	75.20- 125.34	100.27
Average of Peak Amounts =					0.94164		
$ 9 DCB					CAS #: 2051-24-3		
7.238	7.238	0.000	7641310	0.05000	0.04614		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Date : 03-MAR-2005 18:25
Client ID:
Sample Info: 1660,,1,4
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
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AROCLOR-1260
DCB
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Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\026F2601.D
Report Date: 04-Mar-2005 04:39

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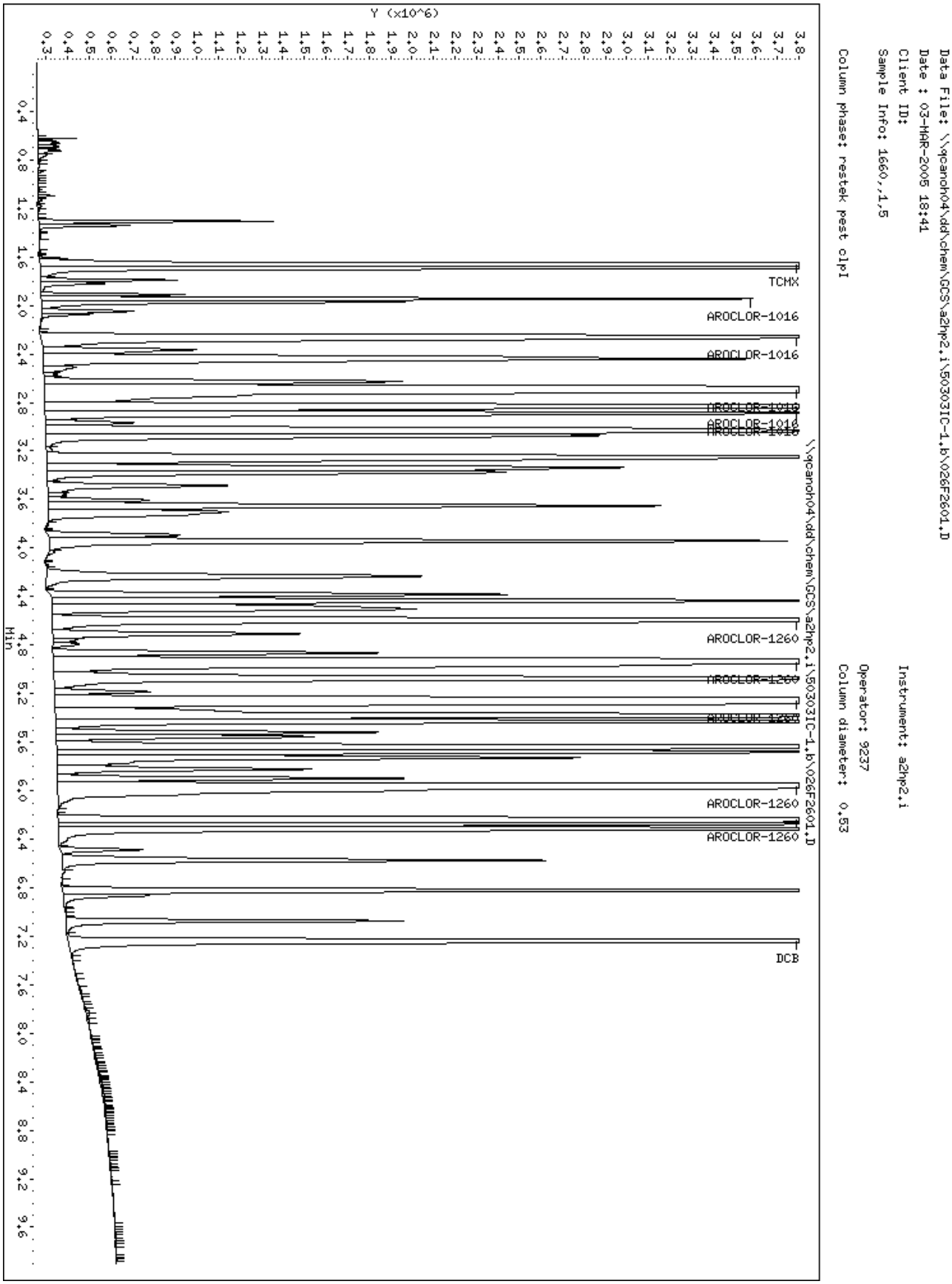
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\026F2601.D
Lab Smp Id: 1660
Inj Date : 03-MAR-2005 18:41
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 18:25 Cal File: 025F2501.D
Als bottle: 26 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.659	1.659	0.000	11538994	0.10000	0.1069		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.944	1.944	0.000	4409975	2.00000	1.838	75.00- 125.00	100.00
2.254	2.254	0.000	12545395	2.00000	1.639	251.47- 419.11	284.48
2.693	2.693	0.000	30542779	2.00000	1.788	593.61- 989.34	692.58
2.825	2.825	0.000	11646819	2.00000	1.723	228.40- 380.66	264.10
2.886	2.886	0.000	8090613	2.00000	1.797	154.88- 258.14	183.46
Average of Peak Amounts =					1.75700		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.594	4.594	0.000	16882323	2.00000	1.786	75.00- 125.00	100.00
4.930	4.930	0.000	30886170	2.00000	1.797	137.06- 228.44	182.95
5.249	5.249	0.000	31140782	2.00000	1.852	136.02- 226.71	184.46
5.960	5.960	0.000	36272203	2.00000	1.872	155.63- 259.39	214.85
6.235	6.235	0.000	17646201	2.00000	1.876	75.20- 125.34	104.52
Average of Peak Amounts =					1.83660		
$ 9 DCB					CAS #: 2051-24-3		
7.238	7.238	0.000	15869674	0.10000	0.09772		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Date : 03-MAR-2005 18:41
Client ID:
Sample Info: 1660,1.5
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
DCB

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\027F2701.D
Report Date: 04-Mar-2005 04:49

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CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 03-MAR-2005 18:56
Lab File ID: 027F2701.D Init. Cal. Date(s): 03-MAR-2005 03-MAR-2005
Analysis Type: Init. Cal. Times: 12:23 19:28
Lab Sample ID: ICV Quant Type: ESTD
Method: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m

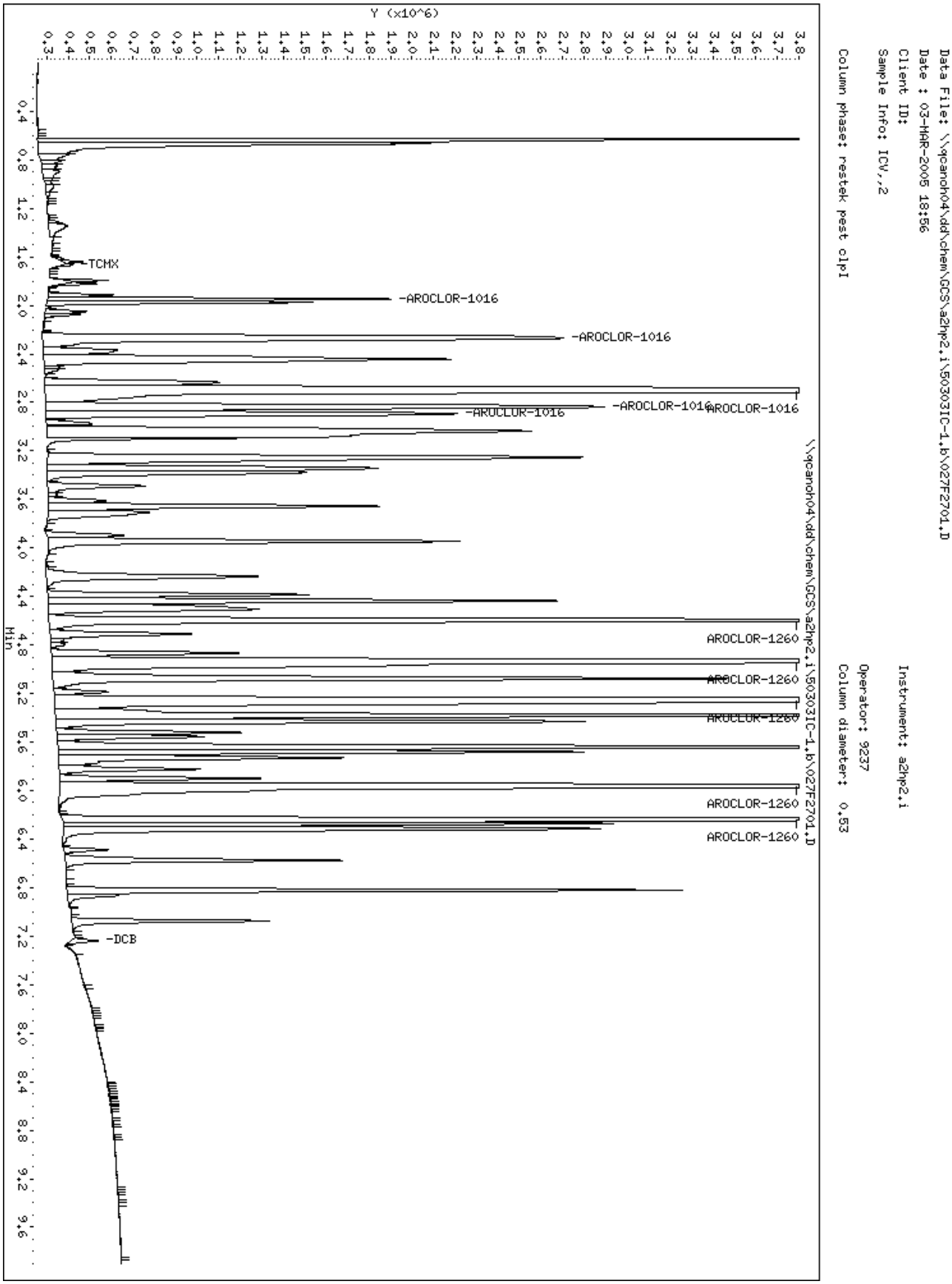
COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	109422776	1074660	0.010	99	15.00000	Averaged	<-
3 AROCLOR-1016(1)	2360961	2153212	0.010	8.79934	15.00000	Averaged	
(2)	7379110	7444037	0.010	-0.87987	15.00000	Averaged	
(3)	16721718	17201513	0.010	-2.86929	15.00000	Averaged	
(4)	6572584	6717715	0.010	-2.20813	15.00000	Averaged	
(5)	4411156	4567713	0.010	-3.54912	15.00000	Averaged	
8 AROCLOR-1260(1)	9251512	9944744	0.010	-7.49318	15.00000	Averaged	
(2)	16835609	18168636	0.010	-7.91790	15.00000	Averaged	
(3)	16565912	18237847	0.010	-10.09262	15.00000	Averaged	
(4)	19129205	21158183	0.010	-10.60670	15.00000	Averaged	
(5)	9291146	10195861	0.010	-9.73739	15.00000	Averaged	
$ 9 DCB	161663600	4432700	0.010	97.25807	15.00000	Averaged	<-

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\027F2701.D
Report Date: 04-Mar-2005 04:49

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\027F2701.D
Lab Smp Id: ICV
Inj Date : 03-MAR-2005 18:56
Operator : 9237 Inst ID: a2hp2.i
Smp Info : ICV,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:49 molm Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38 Cal File: 022F2201.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.667	1.667	0.000	53733	0.05000	0.0004910		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.946	1.946	0.000	2153212	1.00000	0.9120	80.00- 120.00	100.00
2.269	2.269	0.000	7444037	1.00000	1.009	259.29- 432.15	345.72
2.696	2.696	0.000	17201513	1.00000	1.029	599.16- 998.60	798.88
2.839	2.839	0.000	6717715	1.00000	1.022	233.99- 389.98	311.99
2.891	2.891	0.000	4567713	1.00000	1.035	159.10- 265.17	212.13
Average of Peak Amounts =					1.00140		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.594	4.594	0.000	9944744	1.00000	1.075	80.00- 120.00	100.00
4.931	4.931	0.000	18168636	1.00000	1.079	137.02- 228.37	182.70
5.249	5.249	0.000	18237847	1.00000	1.101	137.54- 229.24	183.39
5.961	5.961	0.000	21158183	1.00000	1.106	159.57- 265.95	212.76
6.235	6.235	0.000	10195861	1.00000	1.097	76.89- 128.16	102.53
Average of Peak Amounts =					1.09160		
$ 9 DCB					CAS #: 2051-24-3		
7.238	7.238	0.000	221635	0.05000	0.001371		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Date : 03-MAR-2005 18:56
Client ID:
Sample Info: ICV,.2
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-DCB
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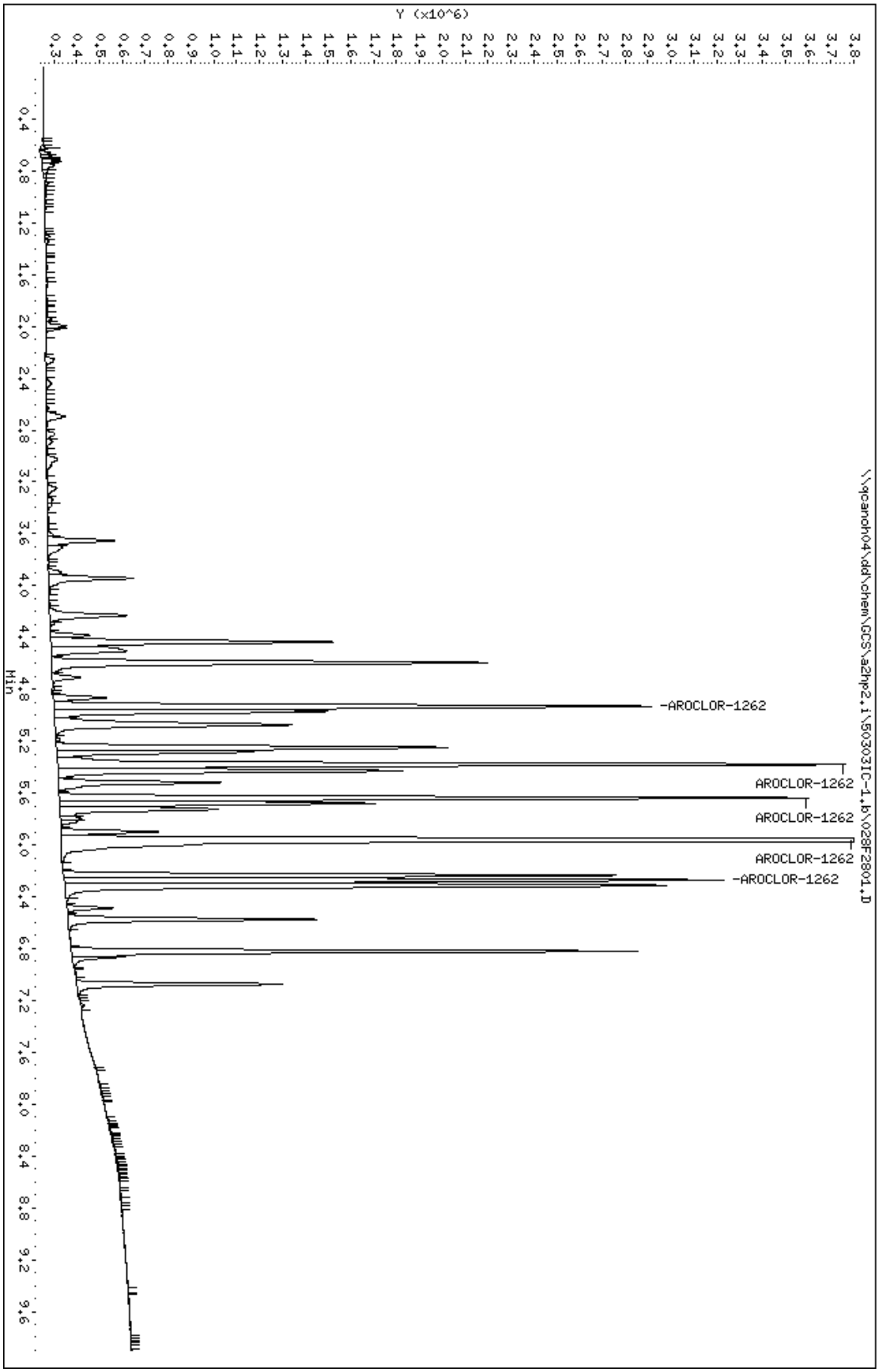
Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\028F2801.D
Report Date: 04-Mar-2005 04:39

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\028F2801.D
Lab Smp Id: 1262
Inj Date : 03-MAR-2005 19:12
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 18:41 Cal File: 026F2601.D
Als bottle: 28 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
14 AROCLOR-1262					CAS #: 37324-23-5		
4.931	4.931	0.000	2609183	0.50000		75.00- 125.00	100.00
5.379	5.379	0.000	3446799	0.50000		99.08- 165.13	132.10
5.638	5.638	0.000	3276188	0.50000		94.17- 156.95	125.56
5.961	5.961	0.000	6769086	0.50000		194.57- 324.29	259.43
6.272	6.272	0.000	2881694	0.50000		82.83- 138.06	110.44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Date : 03-MAR-2005 19:12
Client ID:
Sample Info: 1262,1,3
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\028F2801.D
Y (x10^6)
Min
-AROCLOR-1262
AROCLOR-1262
AROCLOR-1262
AROCLOR-1262
-AROCLOR-1262

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\029F2901.D
Report Date: 04-Mar-2005 04:39

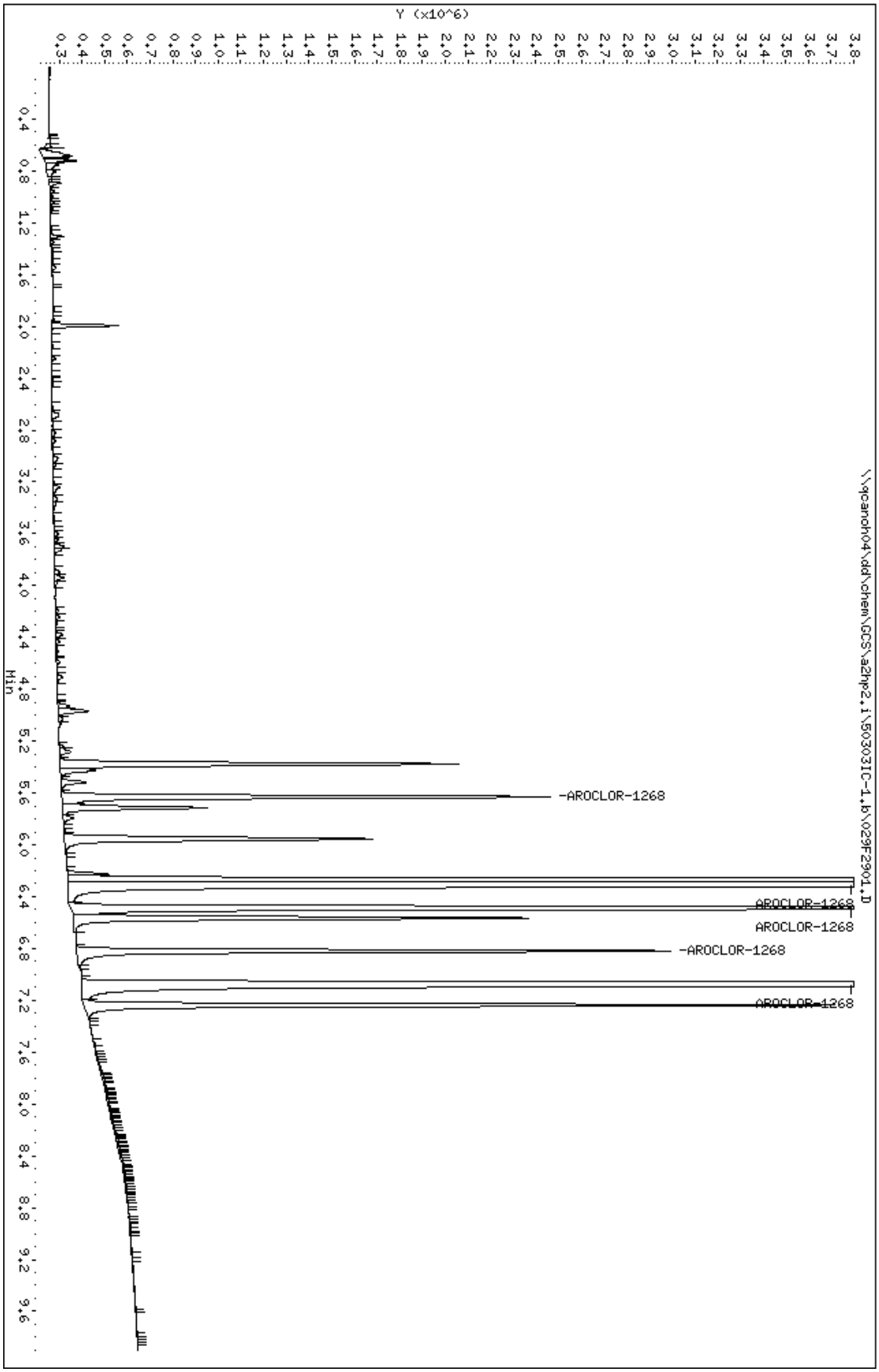
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\029F2901.D
Lab Smp Id: 1268
Inj Date : 03-MAR-2005 19:28
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\HP2PCBF.m
Meth Date : 04-Mar-2005 04:39 a2hp2.i Quant Type: ESTD
Cal Date : 03-MAR-2005 19:12 Cal File: 028F2801.D
Als bottle: 29 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
15 AROCLOR-1268					CAS #: 11100-14-4		
5.630	5.630	0.000	2154175	0.50000		75.00- 125.00	100.00
6.308	6.308	0.000	9028760	0.50000		314.35- 523.91	419.13
6.486	6.486	0.000	6893545	0.50000		240.01- 400.01	320.01
6.819	6.819	0.000	2613482	0.50000		90.99- 151.65	121.32
7.073	7.073	0.000	18423696	0.50000		641.44-1069.07	855.26

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\029F2901.D
Date : 03-MAR-2005 19:28
Client ID:
Sample Info: 1268,,1,3
Column phase: restek pest clpI

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Start Cal Date: 14-MAR-2005 15:49
End Cal Date : 14-MAR-2005 22:51
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
14-MAR-2005 21:02	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\022F2201.D
14-MAR-2005 19:43	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\017F1701.D
14-MAR-2005 18:25	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\012F1201.D
14-MAR-2005 17:07	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\007F0701.D
14-MAR-2005 15:49	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.20000		
14-MAR-2005 21:17	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\023F2301.D
14-MAR-2005 19:59	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\018F1801.D
14-MAR-2005 18:41	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\013F1301.D
14-MAR-2005 17:23	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\008F0801.D
14-MAR-2005 16:05	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.50000		
14-MAR-2005 22:51	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D
14-MAR-2005 22:35	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\028F2801.D
14-MAR-2005 21:33	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\024F2401.D
14-MAR-2005 20:15	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\019F1901.D
14-MAR-2005 18:56	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\014F1401.D
14-MAR-2005 17:38	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\009F0901.D
14-MAR-2005 16:20	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\004F0401.D
Cal Level: 4 , Cal Amount: 1.00000		

```
|14-MAR-2005 21:48 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\025F2501.D                          |
|14-MAR-2005 20:30 |9-AR2154           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\020F2001.D                          |
|14-MAR-2005 19:12 |3-AR1248           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\015F1501.D                          |
|14-MAR-2005 17:54 |2-AR1242           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\010F1001.D                          |
|14-MAR-2005 16:36 |1-AR1232           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\005F0501.D                          |
+------------------+------------------+--------------------------------------------------+

+------------------+------------------+--------------------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                                      |
+==================================================================================+
|14-MAR-2005 22:04 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\026F2601.D                          |
|14-MAR-2005 20:46 |9-AR2154           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\021F2101.D                          |
|14-MAR-2005 19:28 |3-AR1248           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\016F1601.D                          |
|14-MAR-2005 18:10 |2-AR1242           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\011F1101.D                          |
|14-MAR-2005 16:51 |1-AR1232           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\006F0601.D                          |
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Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3
+------------------+------------------+--------------------------------------------------+
|14-MAR-2005 22:20 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\027F2701.D                          |
|15-MAR-2005 03:33 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\047F4701.D                          |
|14-MAR-2005 22:51 |14-AR1268          |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D                          |
|14-MAR-2005 22:35 |13-AR1262          |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\028F2801.D                          |
|14-MAR-2005 22:20 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\027F2701.D                          |
|14-MAR-2005 21:33 |12-AR1660TD        |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\024F2401.D                          |
|14-MAR-2005 20:15 |9-AR2154           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\019F1901.D                          |
|14-MAR-2005 18:56 |3-AR1248           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\014F1401.D                          |
|14-MAR-2005 17:38 |2-AR1242           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\009F0901.D                          |
|14-MAR-2005 16:20 |1-AR1232           |                                                  |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\004F0401.D                          |
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Report Date : 15-Mar-2005 07:27

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAR-2005 15:49
End Cal Date : 14-MAR-2005 22:51
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PC
Last Edit : 15-Mar-2005 06:46 molm
Curve Type : Average

Calibration File Names:
Level 1: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\022F2201.D
Level 2: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\023F2301.D
Level 3: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D
Level 4: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\025F2501.D
Level 5: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\026F2601.D

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221(1)	1697720	1592940	1515236	1444162	1371114	1524234	8.348
(2)	1116400	1042075	979304	928713	871219	987542	9.691
(3)	4128230	3883120	3656350	3485025	3282381	3687021	8.981
3 AROCLOR-1016(1)	2952100	2815050	2652970	2467510	2256003	2628727	10.501
(2)	5843890	5631325	5583326	4940647	4567822	5313402	10.092
(3)	11776160	11735895	11664440	11316037	10660435	11430593	4.088
(4)	4834830	4909690	4789546	4584837	4296549	4683090	5.282
(5)	3885000	3831320	3736280	3617043	3434147	3700758	4.878
4 AROCLOR-1232(1)	3163950	3008065	2778168	2763926	2599681	2862758	7.771
(2)	2643360	2572120	2330712	2322439	2190682	2411863	7.833
(3)	4998370	5011620	4671718	4843872	4775645	4860245	2.999
(4)	2077060	2147720	1924350	2004679	1926892	2016140	4.805
(5)	1480330	1514310	1376088	1407117	1357873	1427144	4.731
5 AROCLOR-1242(1)	1520930	1384630	1231292	1190204	1185979	1302607	11.238
(2)	2264360	2118640	1961948	1854854	1795195	1998999	9.636
(3)	4214750	4136975	4018604	3919744	3899326	4037880	3.383
(4)	2171530	2074745	1952490	1911855	1924772	2007078	5.595
(5)	1920510	1858385	1742822	1703182	1697000	1784380	5.602
6 AROCLOR-1248(1)	1104290	1102580	994166	956993	894019	1010410	9.121
(2)	2482810	2517940	2434236	2408278	2345594	2437772	2.739
(3)	2951950	3034990	2874326	2825260	2705178	2878341	4.352
(4)	3201300	3394500	3330588	3320724	3222387	3293900	2.442
(5)	1712190	1771430	1715786	1690928	1656693	1709405	2.450
7 AROCLOR-1254(1)	2032170	1782135	1767184	1685007	1607264	1774752	9.019
(2)	3399930	3112165	3139420	3037463	2900225	3117841	5.868
(3)	5751580	5501990	5572000	5499574	5297796	5524588	2.951
(4)	3814730	3620750	3651448	3704824	3596049	3677560	2.359
(5)	4584930	4338120	4312784	4310736	4299001	4369114	2.781
8 AROCLOR-1260(1)	4255610	4105200	4046580	3958869	3721719	4017596	4.918

Report Date : 15-Mar-2005 07:27

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 14-MAR-2005 15:49
End Cal Date : 14-MAR-2005 22:51
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PC
Last Edit : 15-Mar-2005 06:46 molm
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	___ RRF	% RSD	
(2)	4980270	4799545	4785890	4700228	4408903	4734967	4.411	
(3)	5311880	5244730	5240298	5105326	4915180	5163483	3.055	
(4)	7428780	7312015	7404704	7264566	7073285	7296670	1.942	
(5)	4628910	4471760	4413428	4388368	4200978	4420689	3.492	
13 AROCLOR-1262(1)	+++++	+++++	3355918	+++++	+++++	3355918	0.000	<-
(2)	+++++	+++++	5646564	+++++	+++++	5646564	0.000	<-
(3)	+++++	+++++	5081328	+++++	+++++	5081328	0.000	<-
(4)	+++++	+++++	9811654	+++++	+++++	9811654	0.000	<-
(5)	+++++	+++++	6130292	+++++	+++++	6130292	0.000	<-
14 AROCLOR-1268(1)	+++++	+++++	3163012	+++++	+++++	3163012	0.000	<-
(2)	+++++	+++++	11754116	+++++	+++++	11754116	0.000	<-
(3)	+++++	+++++	9197122	+++++	+++++	9197122	0.000	<-
(4)	+++++	+++++	3348978	+++++	+++++	3348978	0.000	<-
(5)	+++++	+++++	23775644	+++++	+++++	23775644	0.000	<-
$ 1 TCMX	163056800	161657400	163955800	156372340	160891610	161186790	1.826	
$ 9 DCB	73699800	71017200	67128320	62631640	62693250	67434042	7.330	

Data File: 002F0201.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 14-MAR-2005 15:49
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

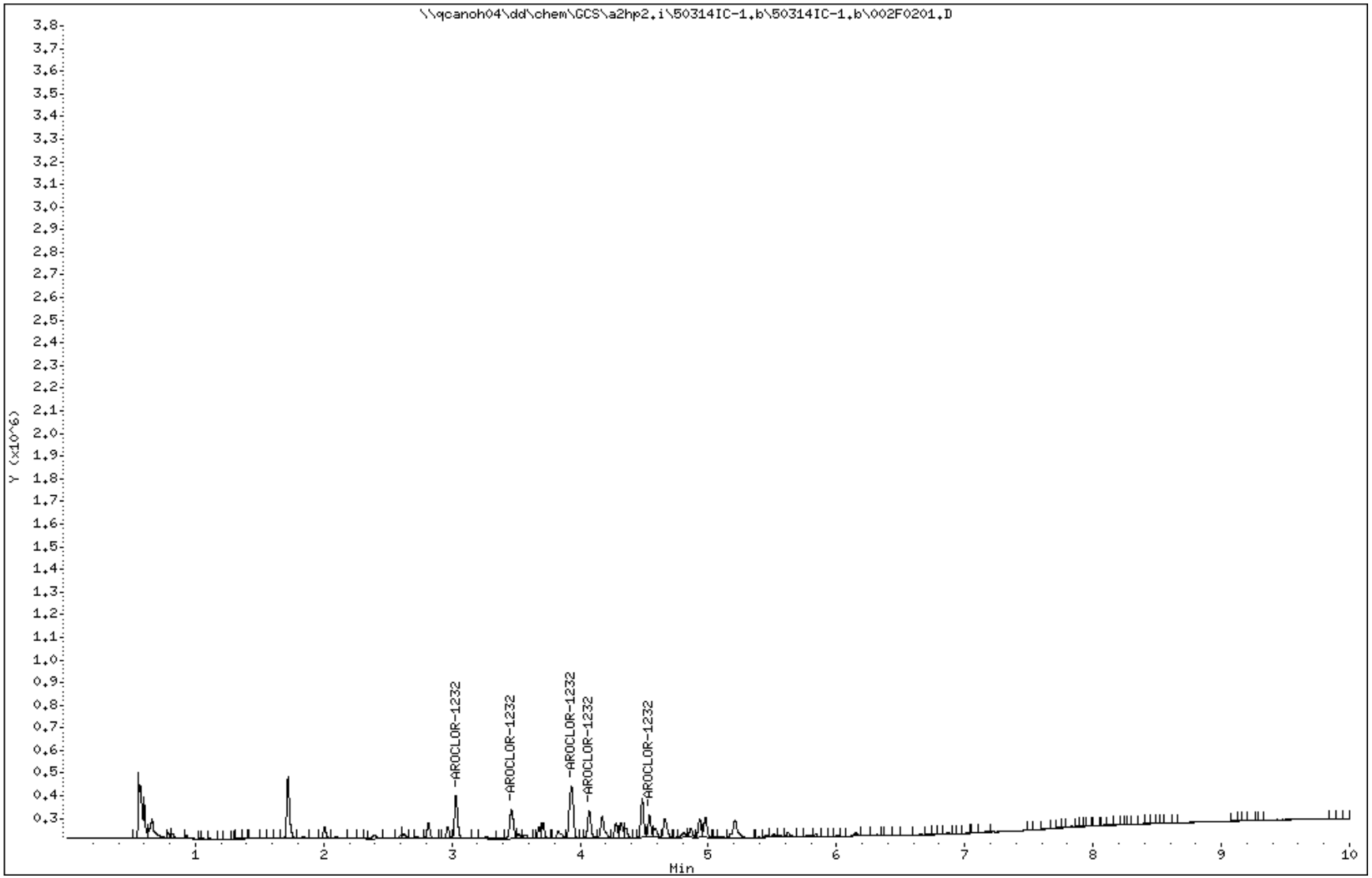
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
3.031	3.031	0.000	316395	0.10000		0.00- 0.00	100.00(M)
3.462	3.462	0.000	264336	0.10000		0.00- 0.00	83.55
3.933	3.933	0.000	499837	0.10000		0.00- 0.00	157.98
4.070	4.070	0.000	207706	0.10000		0.00- 0.00	65.65
4.541	4.541	0.000	148033	0.10000		0.00- 0.00	46.79

QC Flag Legend

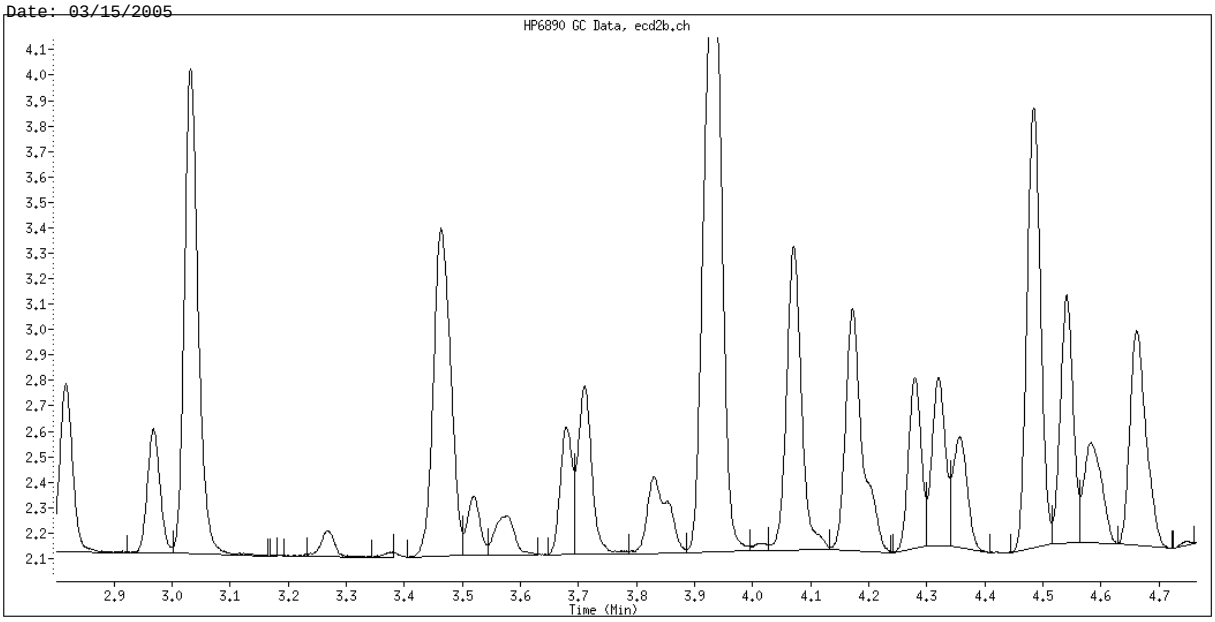
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\002F0201.D
Date : 14-MAR-2005 15:49
Client ID:
Sample Info: 1232,,1,1
Column phase: restek pest clpII

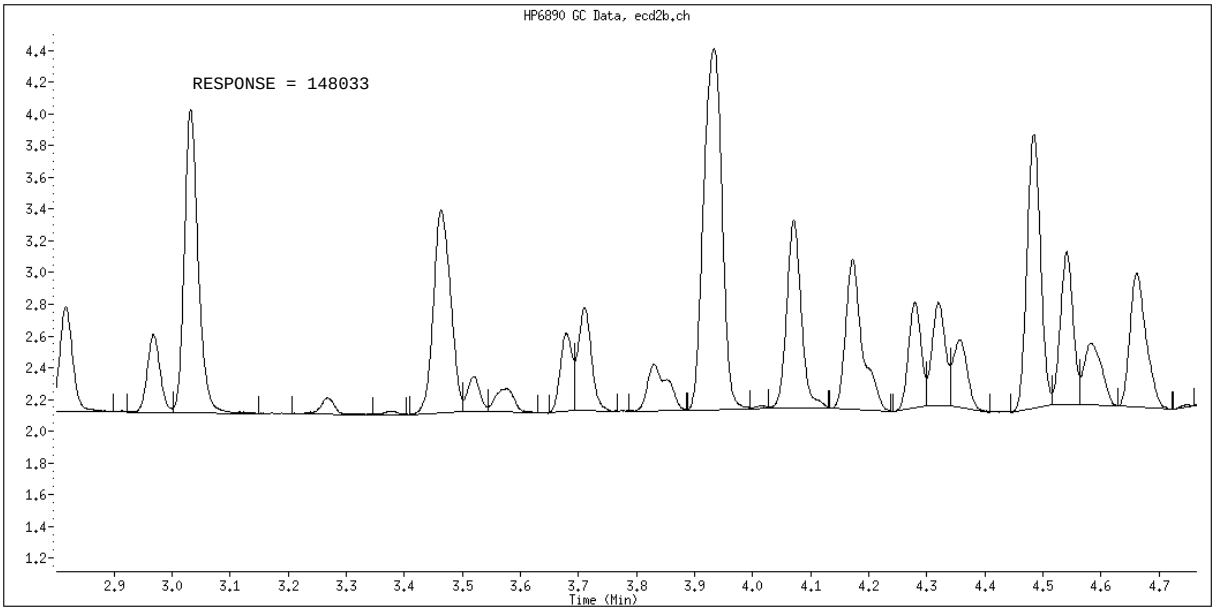
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 002F0201.D
Inj. Date and Time: 14-MAR-2005 15:49
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 003F0301.D
Report Date: 15-Mar-2005 06:31

STL North Canton

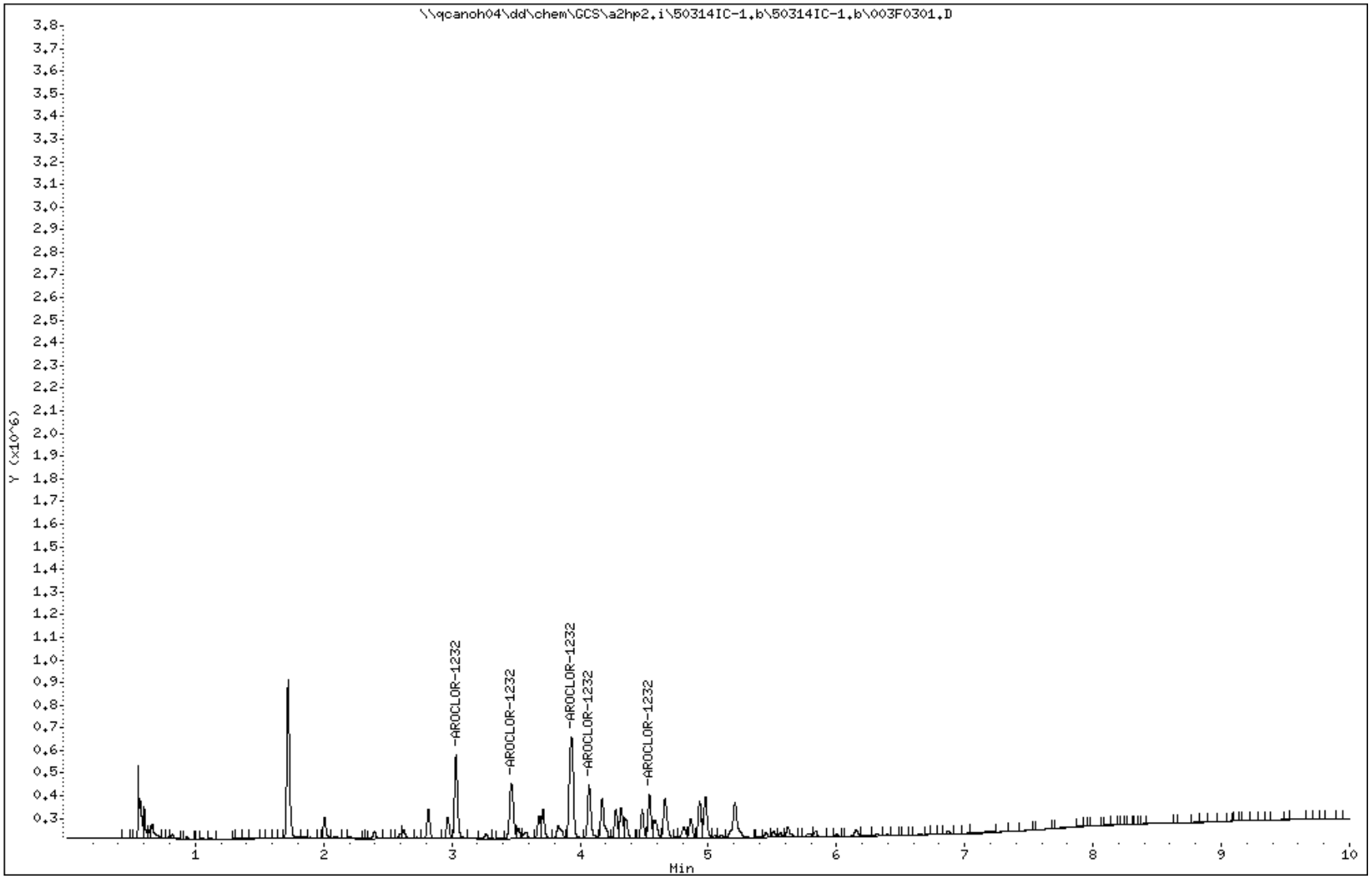
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 14-MAR-2005 16:05
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 15:49 Cal File: 002F0201.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
3.032	3.032	0.000	601613	0.20000	0.1901	0.00- 0.00	100.00
3.464	3.464	0.000	514424	0.20000	0.1946	0.00- 0.00	85.51
3.934	3.934	0.000	1002324	0.20000	0.2005	0.00- 0.00	166.61
4.070	4.070	0.000	429544	0.20000	0.2068	0.00- 0.00	71.40
4.541	4.541	0.000	302862	0.20000	0.2046	0.00- 0.00	50.34

Average of Peak Amounts = 0.19932

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\003F0301.D
Date : 14-MAR-2005 16:05
Client ID:
Sample Info: 1232,,1,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 004F0401.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 14-MAR-2005 16:20
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 16:05 Cal File: 003F0301.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
3.032	3.032	0.000	1389084	0.50000	0.4501	80.00- 120.00	100.00
3.464	3.464	0.000	1165356	0.50000	0.4469	62.92- 104.87	83.89
3.934	3.934	0.000	2335859	0.50000	0.4667	126.12- 210.20	168.16
4.070	4.070	0.000	962175	0.50000	0.4555	51.95- 86.58	69.27
4.540	4.540	0.000	688044	0.50000	0.4595	37.15- 61.92	49.53

Average of Peak Amounts = 0.45574

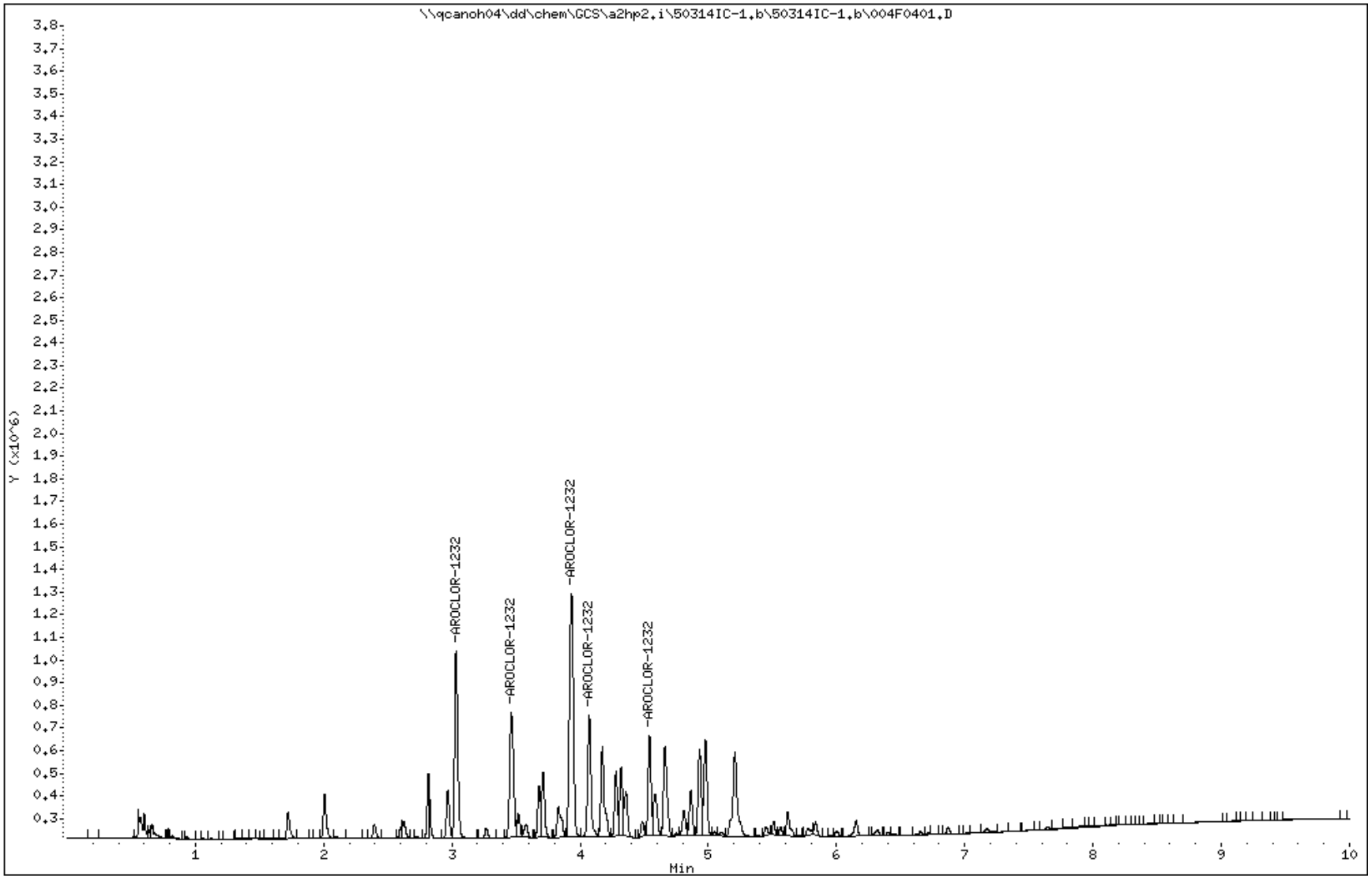
Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\004F0401.D
Date : 14-MAR-2005 16:20
Client ID:
Sample Info: 1232,,1,3

Instrument: a2hp2.i

Operator: 9237

Column phase: restek pest clpII

Column diameter: 0.53



Data File: 005F0501.D
Report Date: 15-Mar-2005 06:31

STL North Canton

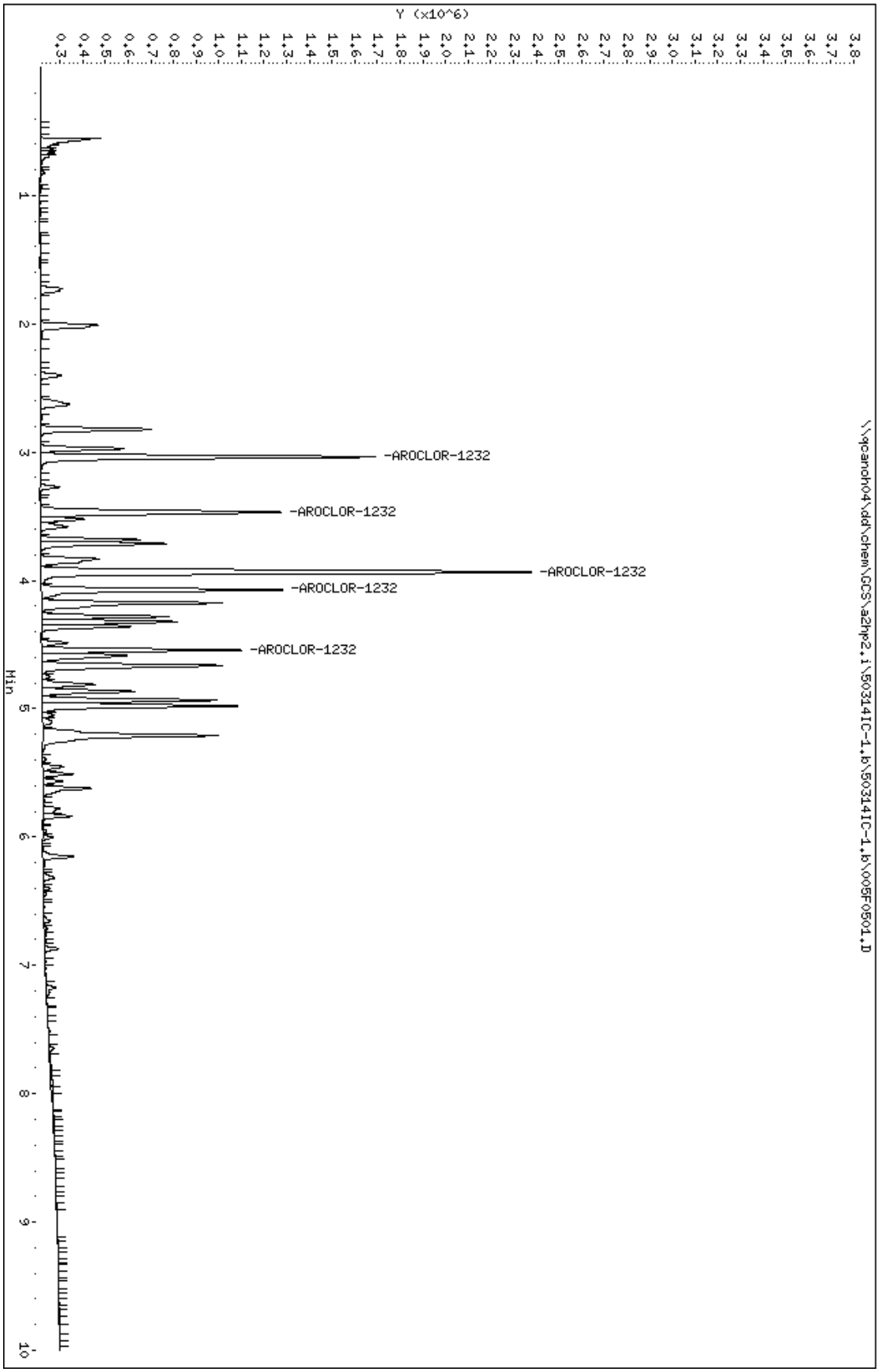
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 14-MAR-2005 16:36
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 16:20 Cal File: 004F0401.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
3.037	3.037	0.000	2763926	1.00000	0.9264	75.00- 125.00	100.00
3.467	3.467	0.000	2322439	1.00000	0.9233	62.92- 104.87	84.03
3.936	3.936	0.000	4843872	1.00000	0.9898	126.12- 210.20	175.25
4.073	4.073	0.000	2004679	1.00000	0.9780	51.95- 86.58	72.53
4.542	4.542	0.000	1407117	1.00000	0.9658	37.15- 61.92	50.91

Average of Peak Amounts = 0.95666

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\005F0501.D
Date : 14-MAR-2005 16:36
Client ID:
Sample Info: 1232,1,4
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 006F0601.D
Report Date: 15-Mar-2005 06:31

STL North Canton

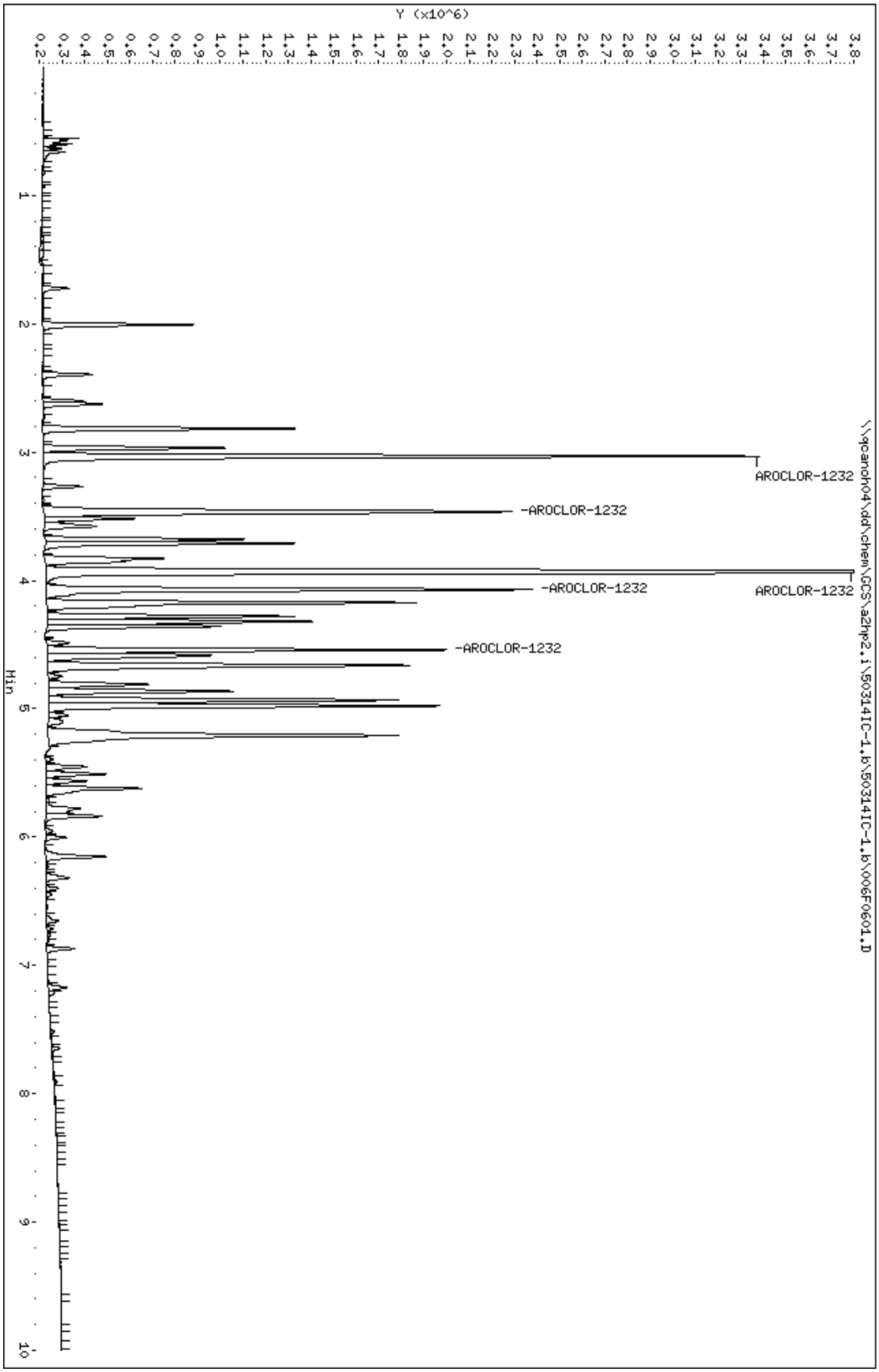
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 14-MAR-2005 16:51
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 16:36 Cal File: 005F0501.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
3.031	3.031	0.000	5199362	2.00000	1.775	75.00- 125.00	100.00
3.462	3.462	0.000	4381364	2.00000	1.776	62.92- 104.87	84.27
3.934	3.934	0.000	9551289	2.00000	1.957	126.12- 210.20	183.70
4.071	4.071	0.000	3853784	2.00000	1.890	51.95- 86.58	74.12
4.541	4.541	0.000	2715745	2.00000	1.880	37.15- 61.92	52.23

Average of Peak Amounts = 1.85560

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\006F0601.D
Date : 14-MAR-2005 16:51
Client ID:
Sample Info: 1232,1.5
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 007F0701.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\007F0701.D
Lab Smp Id: 1242
Inj Date : 14-MAR-2005 17:07
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 16:51 Cal File: 006F0601.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

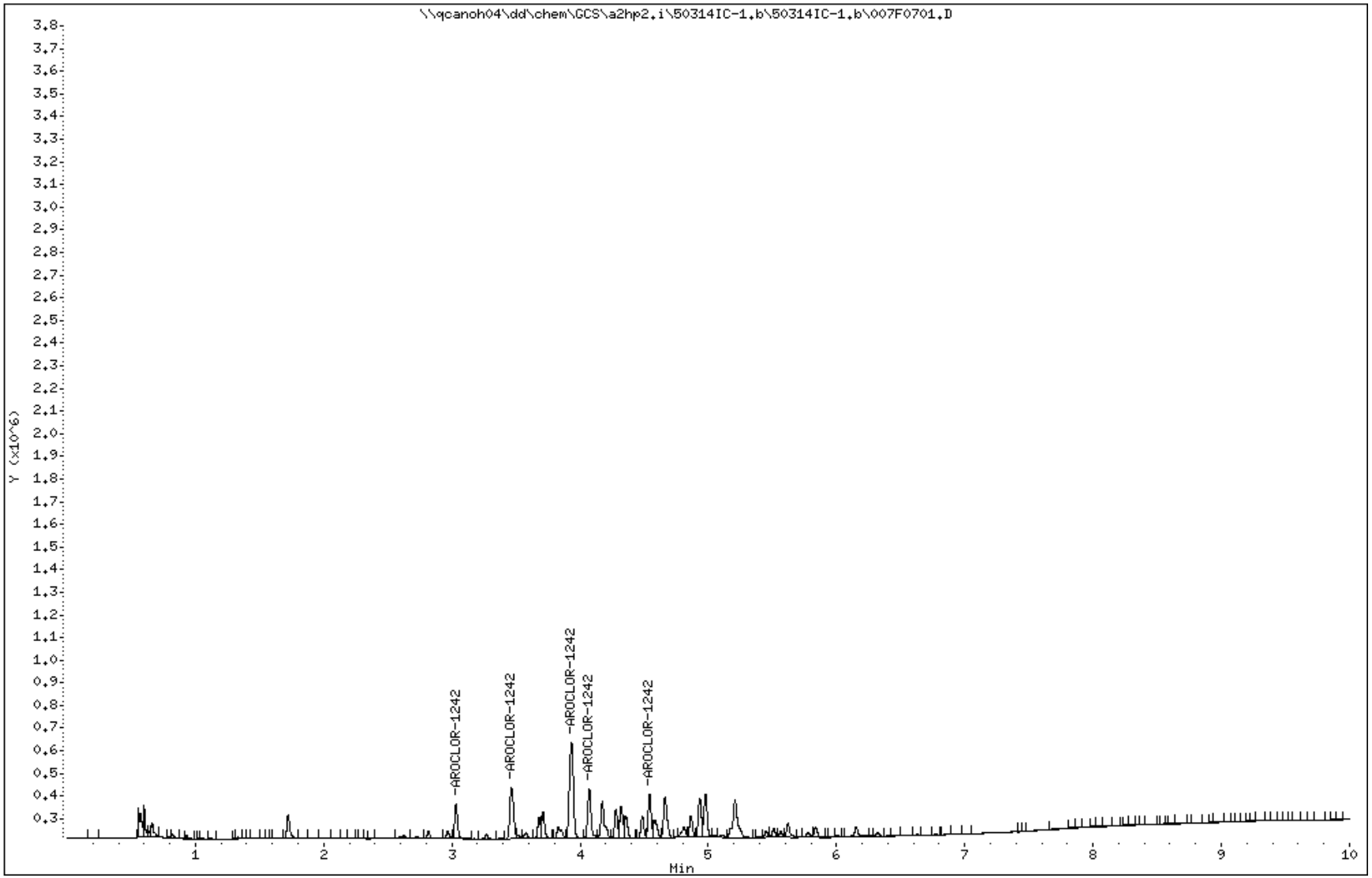
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
3.031	3.031	0.000	152093	0.10000		0.00- 0.00	100.00(M)
3.464	3.464	0.000	226436	0.10000		0.00- 0.00	148.88
3.934	3.934	0.000	421475	0.10000		0.00- 0.00	277.12
4.070	4.070	0.000	217153	0.10000		0.00- 0.00	142.78
4.541	4.541	0.000	192051	0.10000		0.00- 0.00	126.27

QC Flag Legend

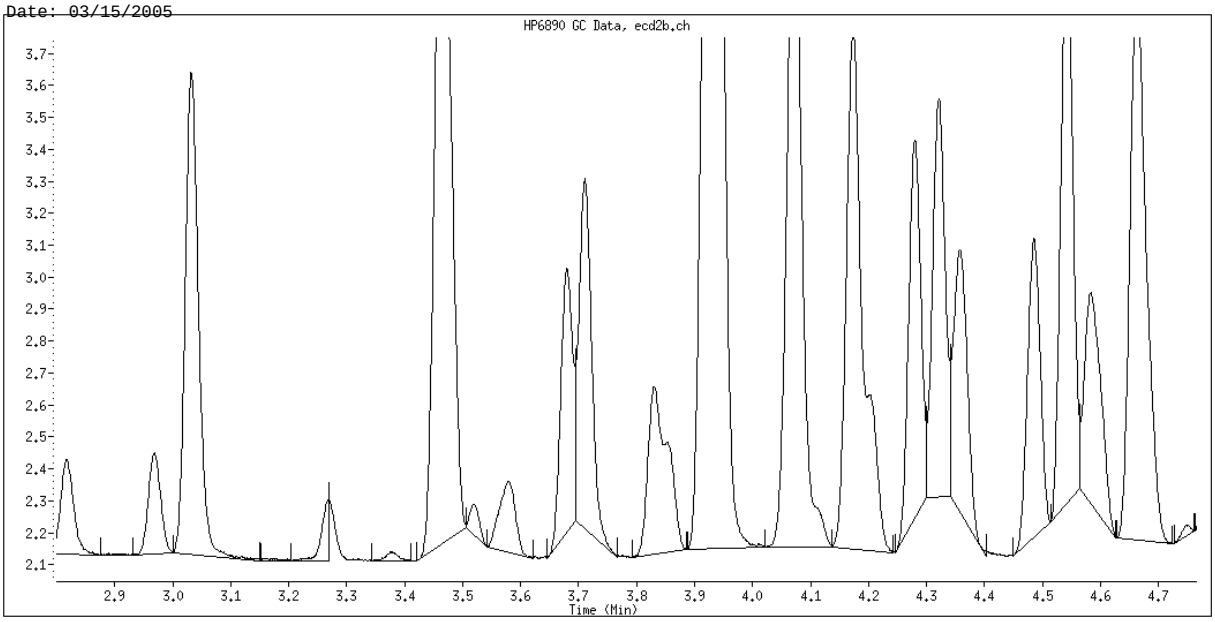
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\007F0701.D
Date : 14-MAR-2005 17:07
Client ID:
Sample Info: 1242,,1,1
Column phase: restek pest clpII

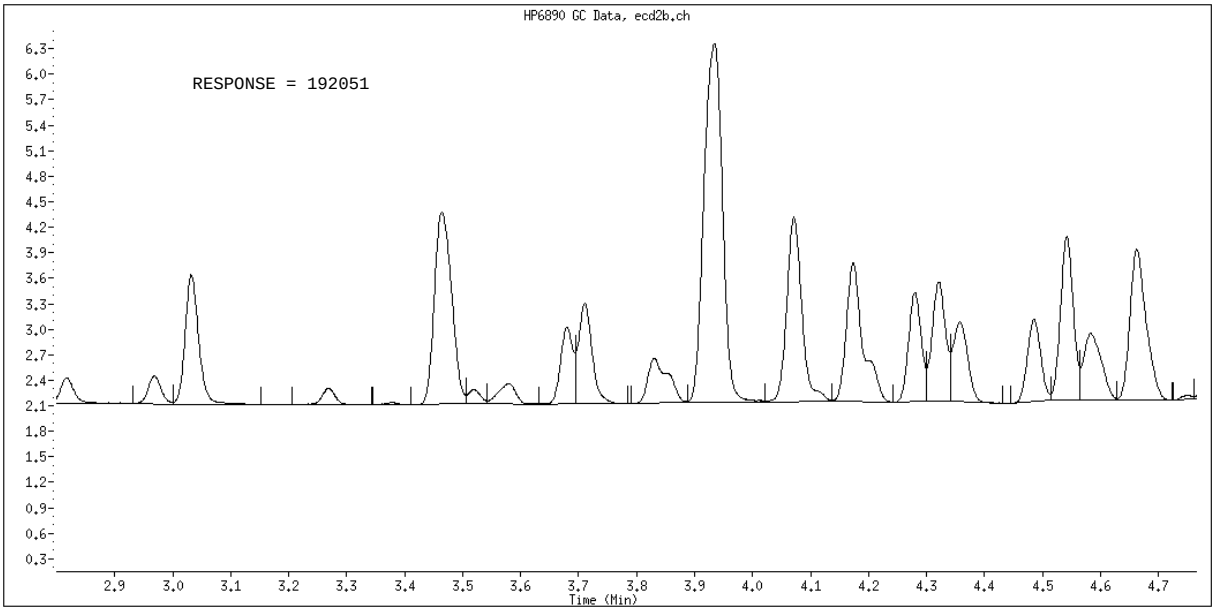
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 007F0701.D
Inj. Date and Time: 14-MAR-2005 17:07
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 008F0801.D
Report Date: 15-Mar-2005 06:31

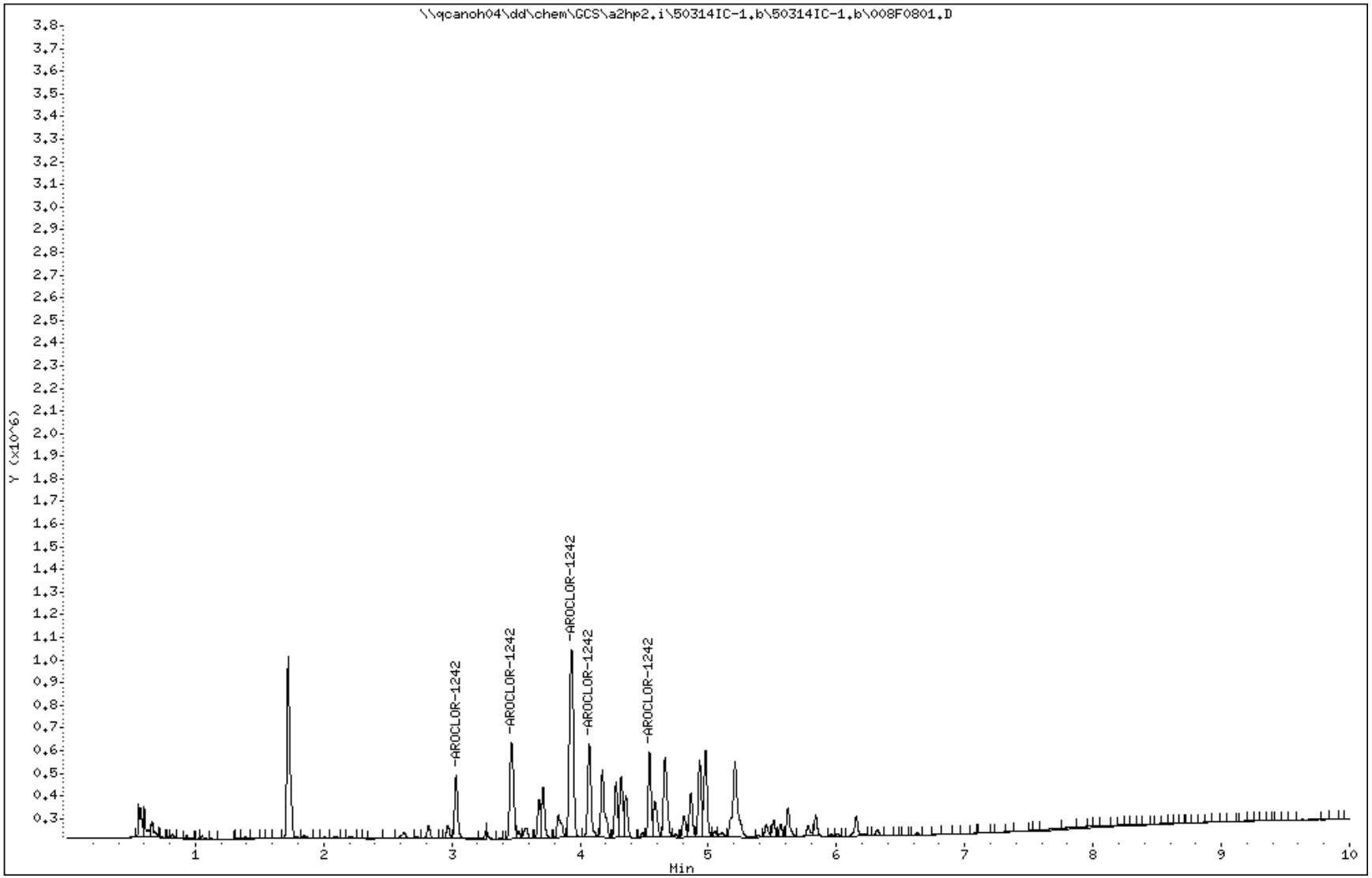
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 14-MAR-2005 17:23
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 17:07 Cal File: 007F0701.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE		RATIO
5 AROCLOR-1242					CAS #: 53469-21-9			
3.032	3.032	0.000	276926	0.20000	0.1821	0.00-	0.00	100.00
3.464	3.464	0.000	423728	0.20000	0.1871	0.00-	0.00	153.01
3.933	3.933	0.000	827395	0.20000	0.1963	0.00-	0.00	298.78
4.071	4.071	0.000	414949	0.20000	0.1911	0.00-	0.00	149.84
4.541	4.541	0.000	371677	0.20000	0.1935	0.00-	0.00	134.22
		Average of Peak Amounts =			0.19002			

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\008F0801.D
Date : 14-MAR-2005 17:23
Client ID:
Sample Info: 1242,,1,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 009F0901.D
Report Date: 15-Mar-2005 06:31

STL North Canton

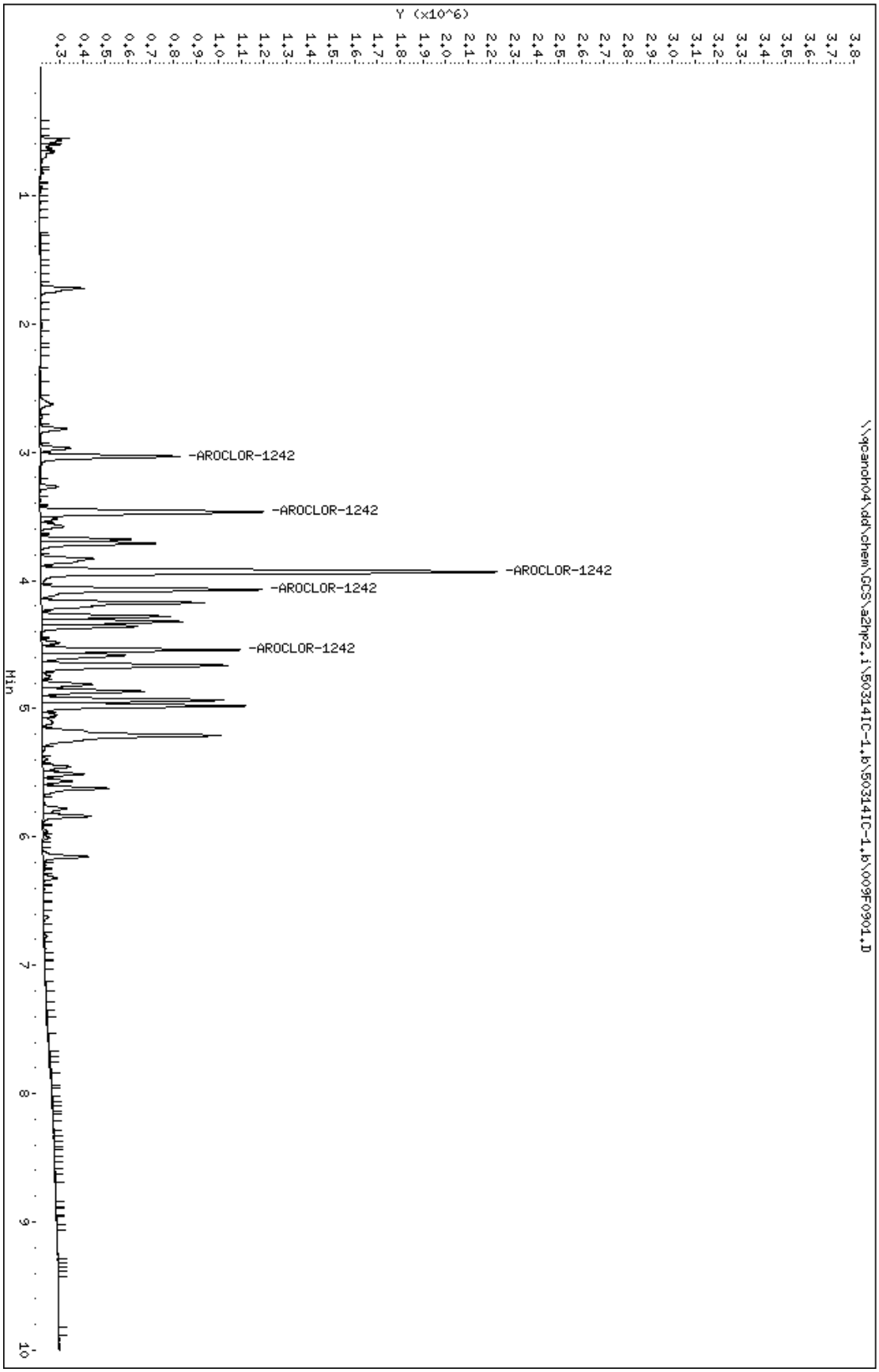
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\009F0901.D
Lab Smp Id: 1242
Inj Date : 14-MAR-2005 17:38
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 17:23 Cal File: 008F0801.D
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
3.034	3.034	0.000	615646	0.50000	0.4238	80.00- 120.00	100.00
3.465	3.465	0.000	980974	0.50000	0.4476	119.51- 199.18	159.34
3.935	3.935	0.000	2009302	0.50000	0.4812	244.78- 407.97	326.37
4.072	4.072	0.000	976245	0.50000	0.4598	118.93- 198.22	158.57
4.542	4.542	0.000	871411	0.50000	0.4612	106.16- 176.93	141.54

Average of Peak Amounts = 0.45472

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\009F0901.D
Date : 14-MAR-2005 17:38
Client ID:
Sample Info: 1242,1,3
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 010F1001.D
Report Date: 15-Mar-2005 06:31

STL North Canton

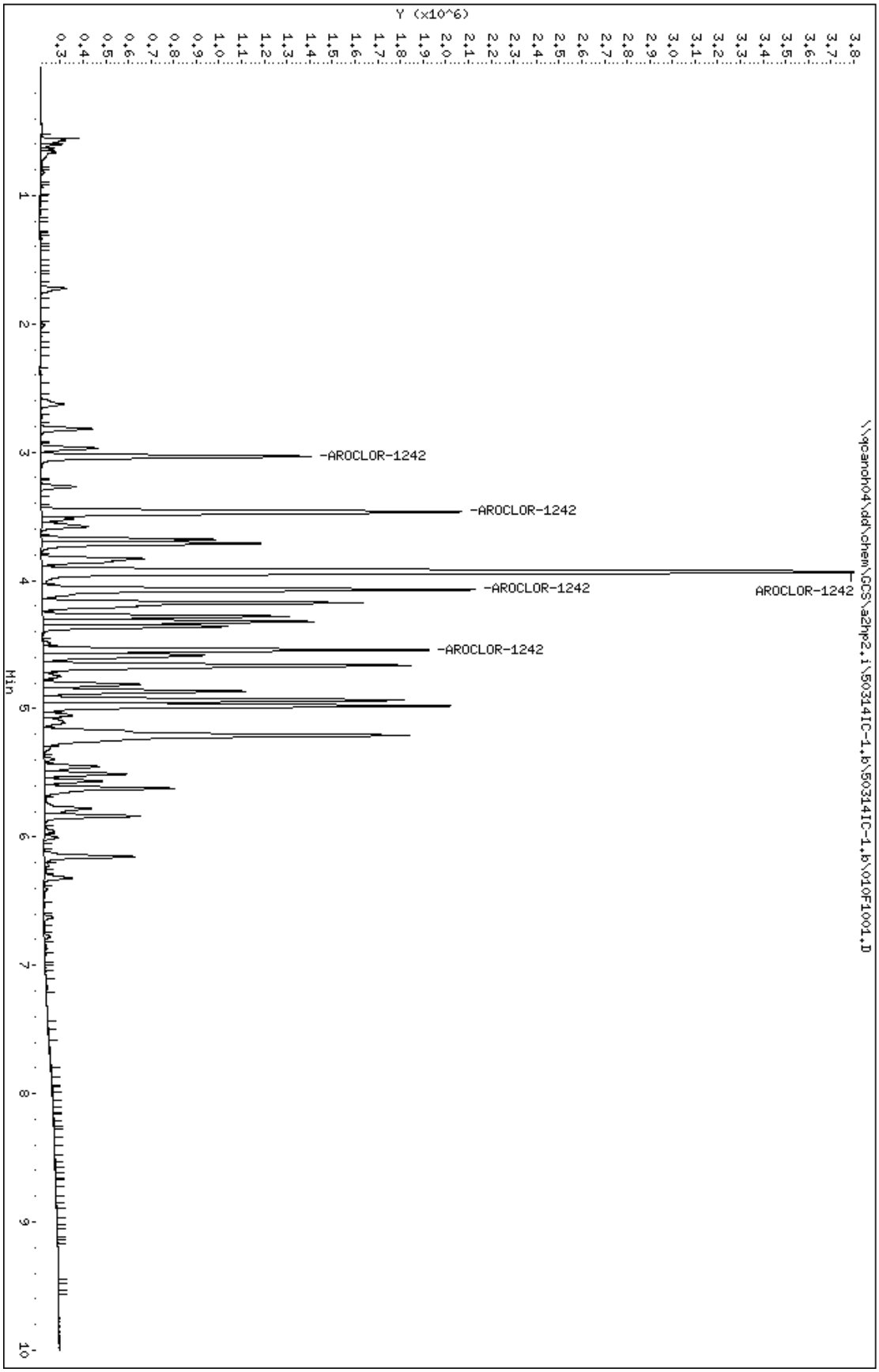
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\010F1001.D
Lab Smp Id: 1242
Inj Date : 14-MAR-2005 17:54
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 17:38 Cal File: 009F0901.D
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
3.033	3.033	0.000	1190204	1.00000	0.8631	75.00- 125.00	100.00
3.465	3.465	0.000	1854854	1.00000	0.8770	119.51- 199.18	155.84
3.935	3.935	0.000	3919744	1.00000	0.9506	244.78- 407.97	329.33
4.071	4.071	0.000	1911855	1.00000	0.9253	118.93- 198.22	160.63
4.542	4.542	0.000	1703182	1.00000	0.9254	106.16- 176.93	143.10

Average of Peak Amounts = 0.90828

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\010F1001.D
Date : 14-MAR-2005 17:54
Client ID:
Sample Info: 1242,,1,4
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 011F1101.D
Report Date: 15-Mar-2005 06:31

STL North Canton

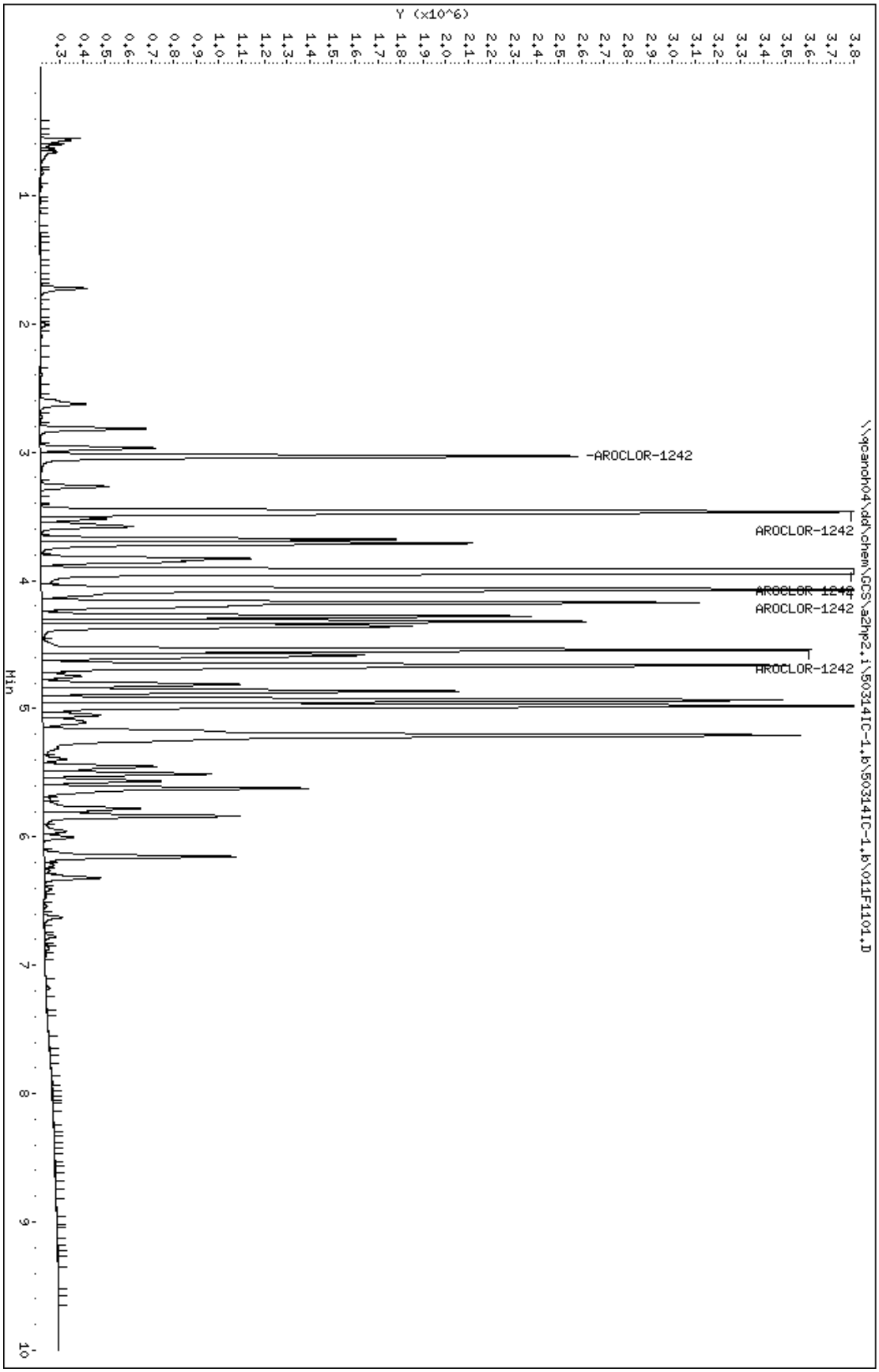
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\011F1101.D
Lab Smp Id: 1242
Inj Date : 14-MAR-2005 18:10
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 17:54 Cal File: 010F1001.D
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
3.032	3.032	0.000	2371958	2.00000	1.781	75.00- 125.00	100.00
3.464	3.464	0.000	3590390	2.00000	1.751	119.51- 199.18	151.37
3.934	3.934	0.000	7798651	2.00000	1.915	244.78- 407.97	328.79
4.070	4.070	0.000	3849543	2.00000	1.898	118.93- 198.22	162.29
4.540	4.540	0.000	3393999	2.00000	1.879	106.16- 176.93	143.09

Average of Peak Amounts = 1.84480

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\011F1101.D
Date : 14-MAR-2005 18:10
Client ID:
Sample Info: 1242,1.5
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 012F1201.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\012F1201.D
Lab Smp Id: 1248
Inj Date : 14-MAR-2005 18:25
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 18:10 Cal File: 011F1101.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

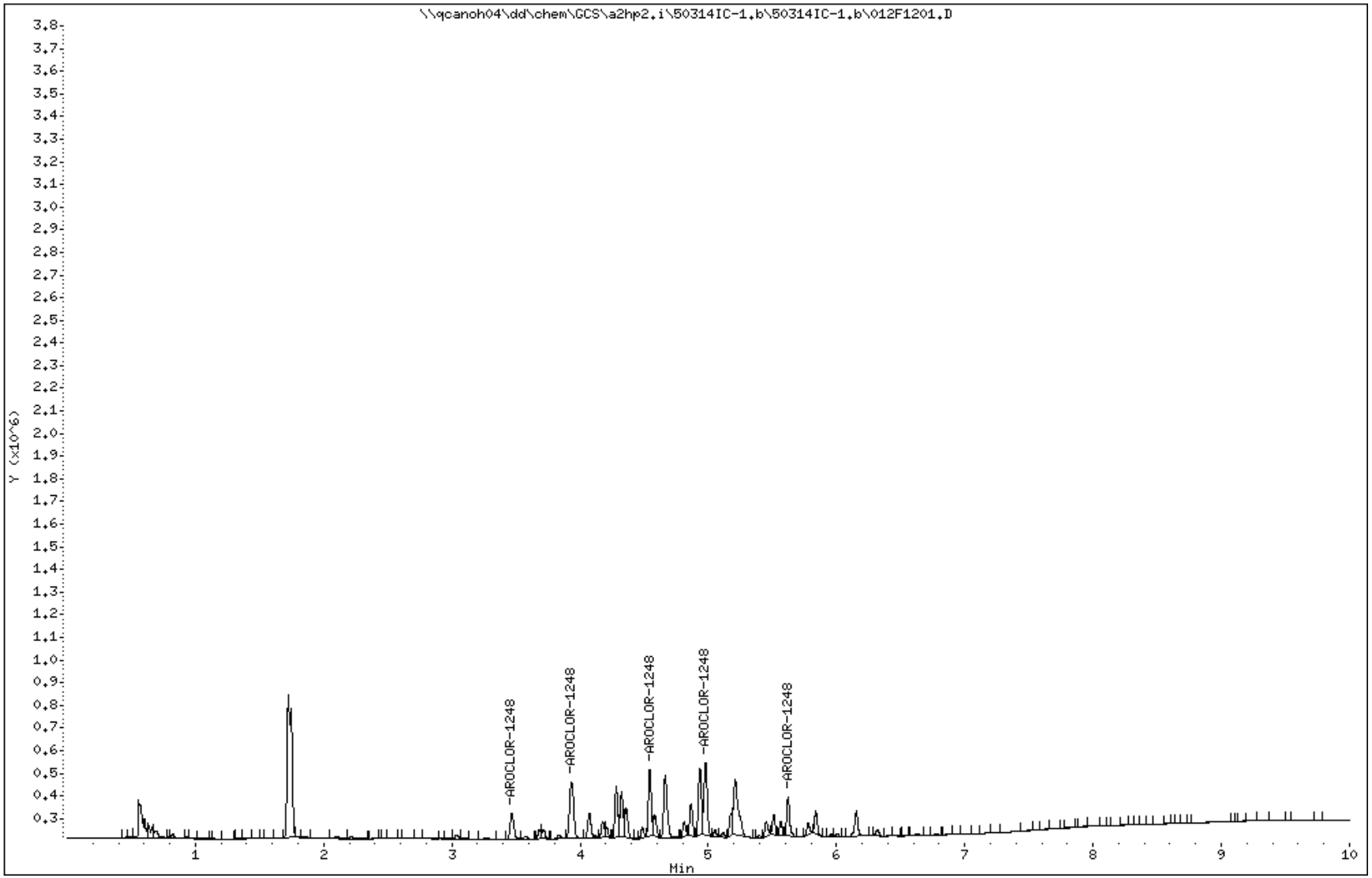
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
3.466	3.466	0.000	110429	0.10000		0.00- 0.00	100.00(M)
3.932	3.932	0.000	248281	0.10000		0.00- 0.00	224.83
4.543	4.543	0.000	295195	0.10000		0.00- 0.00	267.32
4.978	4.978	0.000	320130	0.10000		0.00- 0.00	289.90
5.621	5.621	0.000	171219	0.10000		0.00- 0.00	155.05

QC Flag Legend

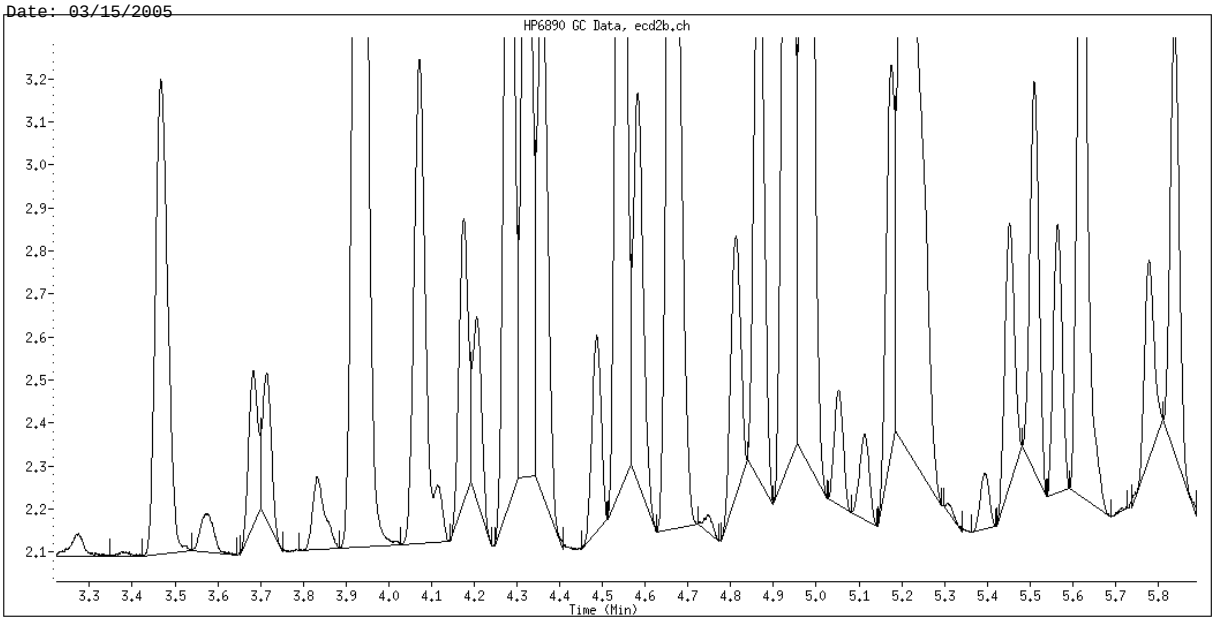
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\012F1201.D
Date : 14-MAR-2005 18:25
Client ID:
Sample Info: 1248,,1,1
Column phase: restek pest clpII

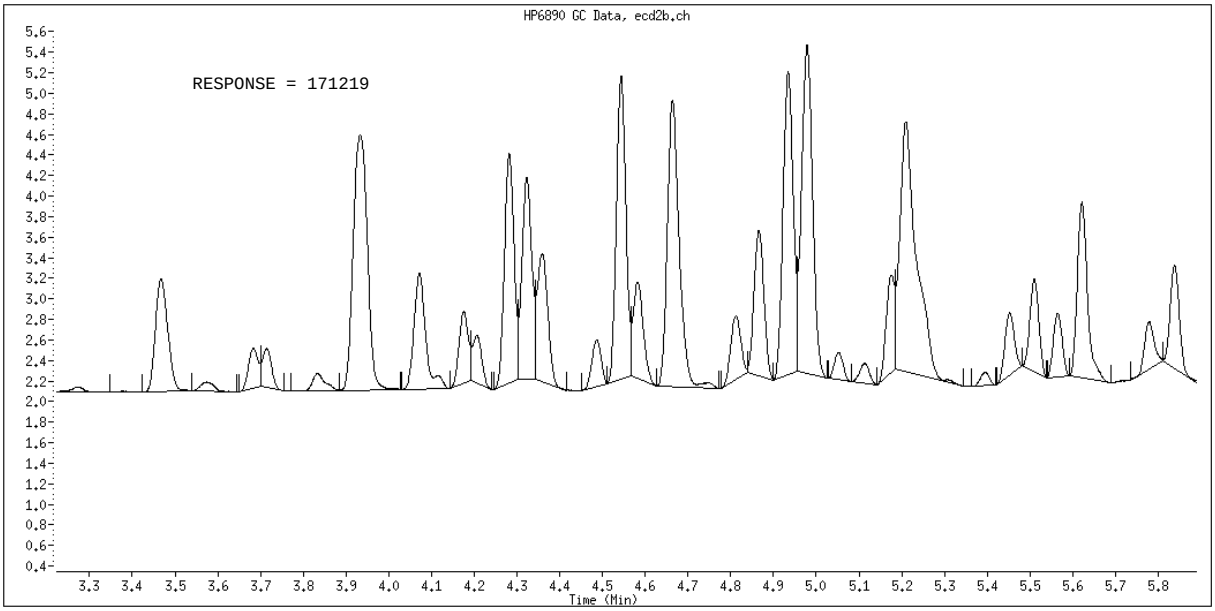
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 012F1201.D
Inj. Date and Time: 14-MAR-2005 18:25
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 013F1301.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\013F1301.D
Lab Smp Id: 1248
Inj Date : 14-MAR-2005 18:41
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 18:25 Cal File: 012F1201.D
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
3.463	3.463	0.000	220516	0.20000	0.1997	0.00- 0.00	100.00
3.930	3.930	0.000	503588	0.20000	0.2028	0.00- 0.00	228.37
4.541	4.541	0.000	606998	0.20000	0.2056	0.00- 0.00	275.26
4.977	4.977	0.000	678900	0.20000	0.2121	0.00- 0.00	307.87
5.621	5.621	0.000	354286	0.20000	0.2069	0.00- 0.00	160.66

Average of Peak Amounts = 0.20542

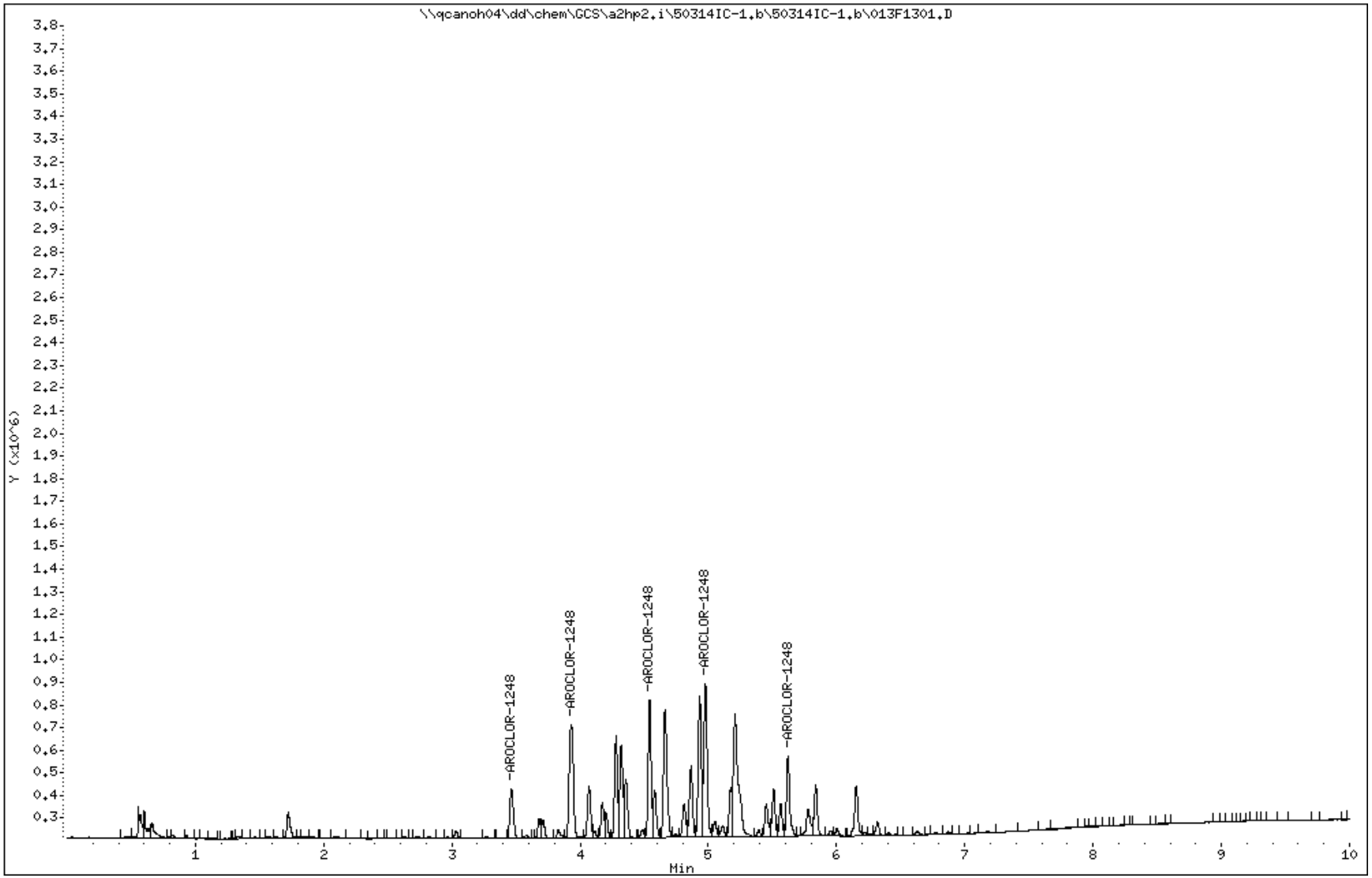
Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\013F1301.D
Date : 14-MAR-2005 18:41
Client ID:
Sample Info: 1248,,1,2

Instrument: a2hp2.i

Operator: 9237

Column phase: restek pest clpII

Column diameter: 0.53



Data File: 014F1401.D
Report Date: 15-Mar-2005 06:31

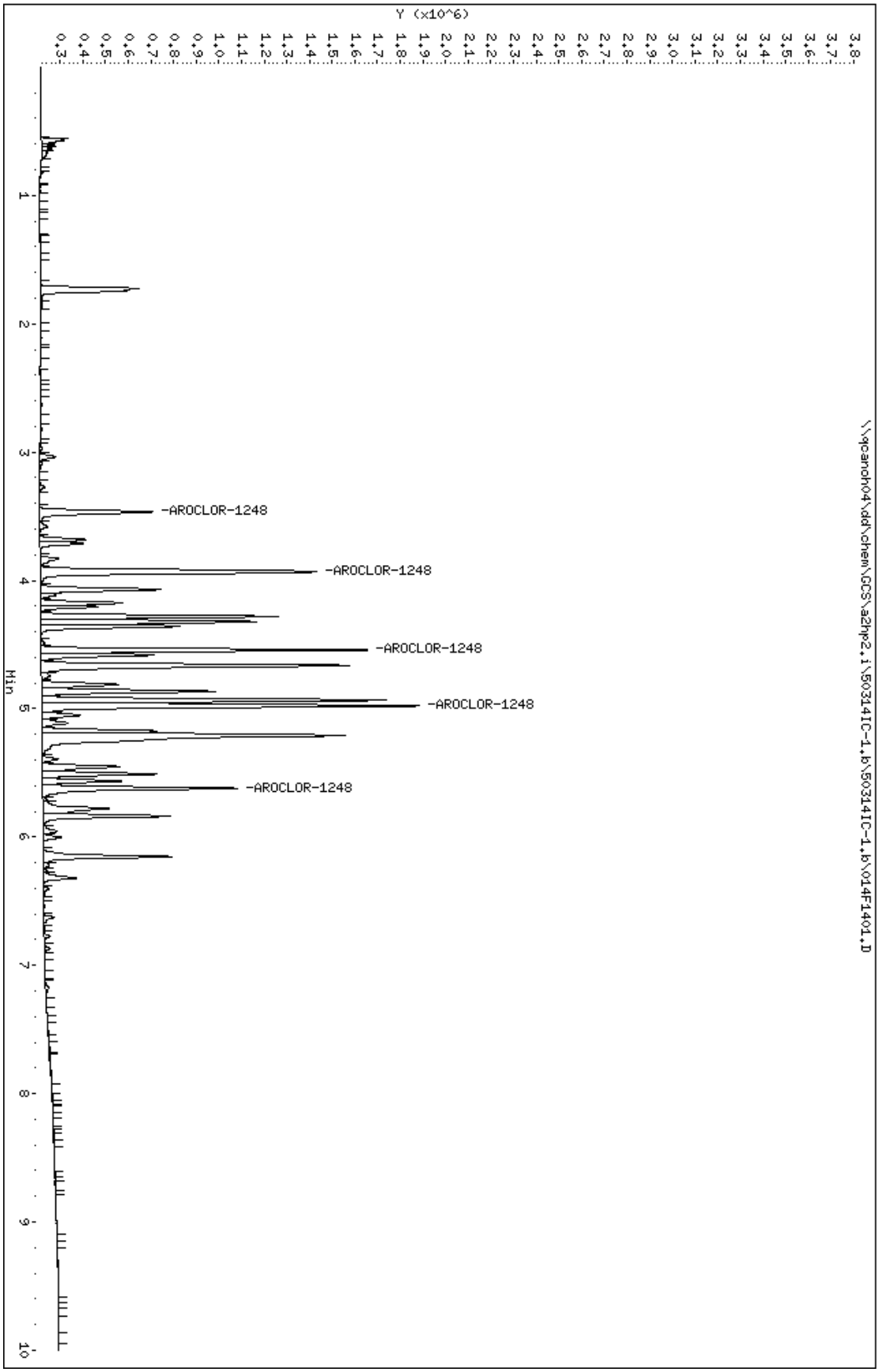
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\014F1401.D
Lab Smp Id: 1248
Inj Date : 14-MAR-2005 18:56
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 18:41 Cal File: 013F1301.D
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
3.466	3.466	0.000	497083	0.50000	0.4505	80.00- 120.00	100.00
3.932	3.932	0.000	1217118	0.50000	0.4868	183.64- 306.07	244.85
4.542	4.542	0.000	1437163	0.50000	0.4801	216.84- 361.40	289.12
4.978	4.978	0.000	1665294	0.50000	0.5050	251.26- 418.77	335.01
5.620	5.620	0.000	857893	0.50000	0.4925	129.44- 215.73	172.59
		Average of Peak Amounts =			0.48298		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\014F1401.D
Date : 14-MAR-2005 18:56
Client ID:
Sample Info: 1248,1,3
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



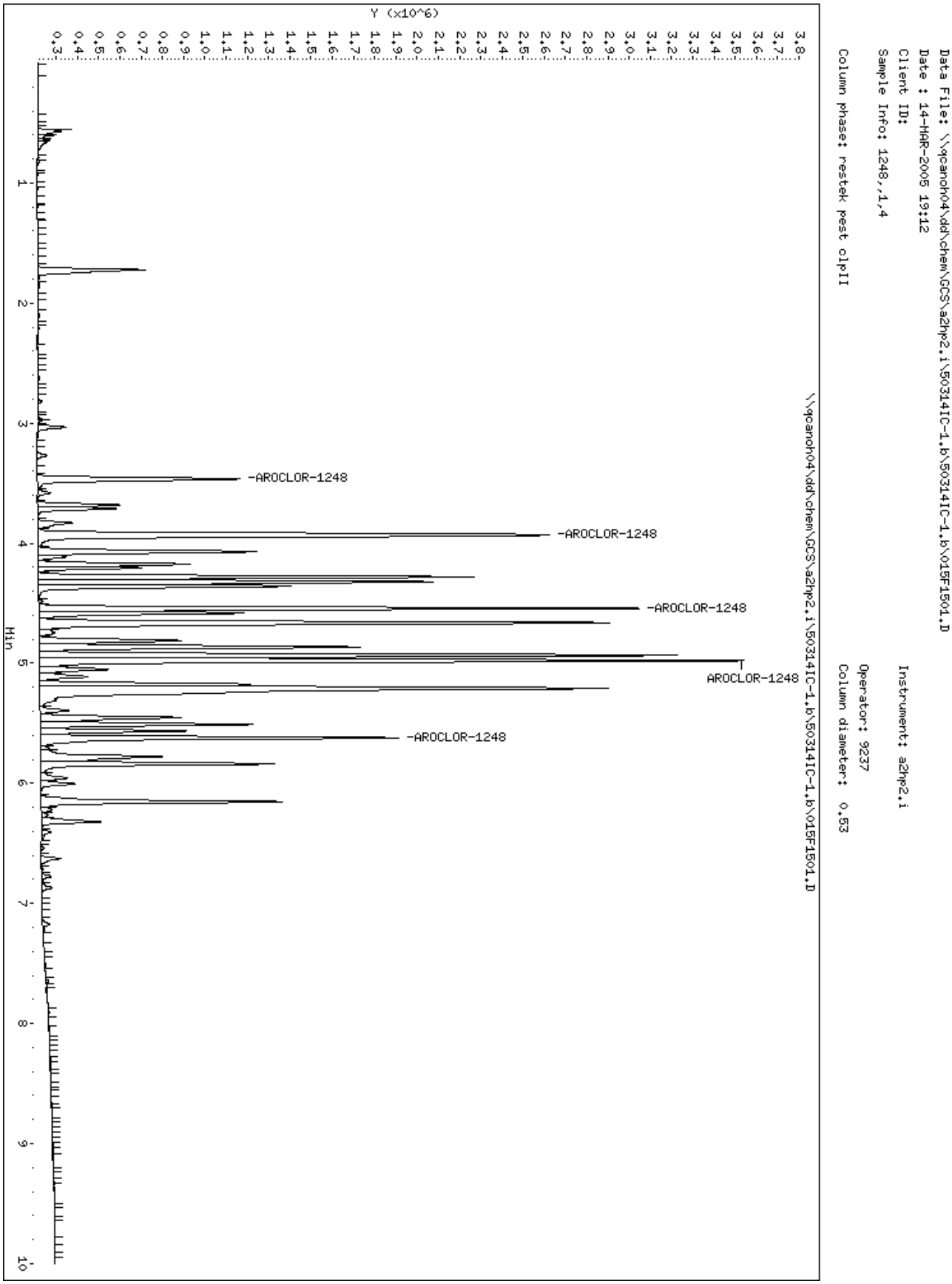
Data File: 015F1501.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\015F1501.D
Lab Smp Id: 1248
Inj Date : 14-MAR-2005 19:12
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 18:56 Cal File: 014F1401.D
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
3.464	3.464	0.000	956993	1.00000	0.8969	75.00- 125.00	100.00
3.933	3.933	0.000	2408278	1.00000	0.9717	183.64- 306.07	251.65
4.543	4.543	0.000	2825260	1.00000	0.9565	216.84- 361.40	295.22
4.978	4.978	0.000	3320724	1.00000	1.004	251.26- 418.77	347.00
5.621	5.621	0.000	1690928	1.00000	0.9756	129.44- 215.73	176.69

Average of Peak Amounts = 0.96094


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\015F1501.D
Date : 14-MAR-2005 19:12
Client ID:
Sample Info: 1248,,1,4
Column phase: restek pest clpII
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1248
-AROCLOR-1248
-AROCLOR-1248
AROCLOR-1248
-AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\015F1501.D

Data File: 016F1601.D
Report Date: 15-Mar-2005 06:31

STL North Canton

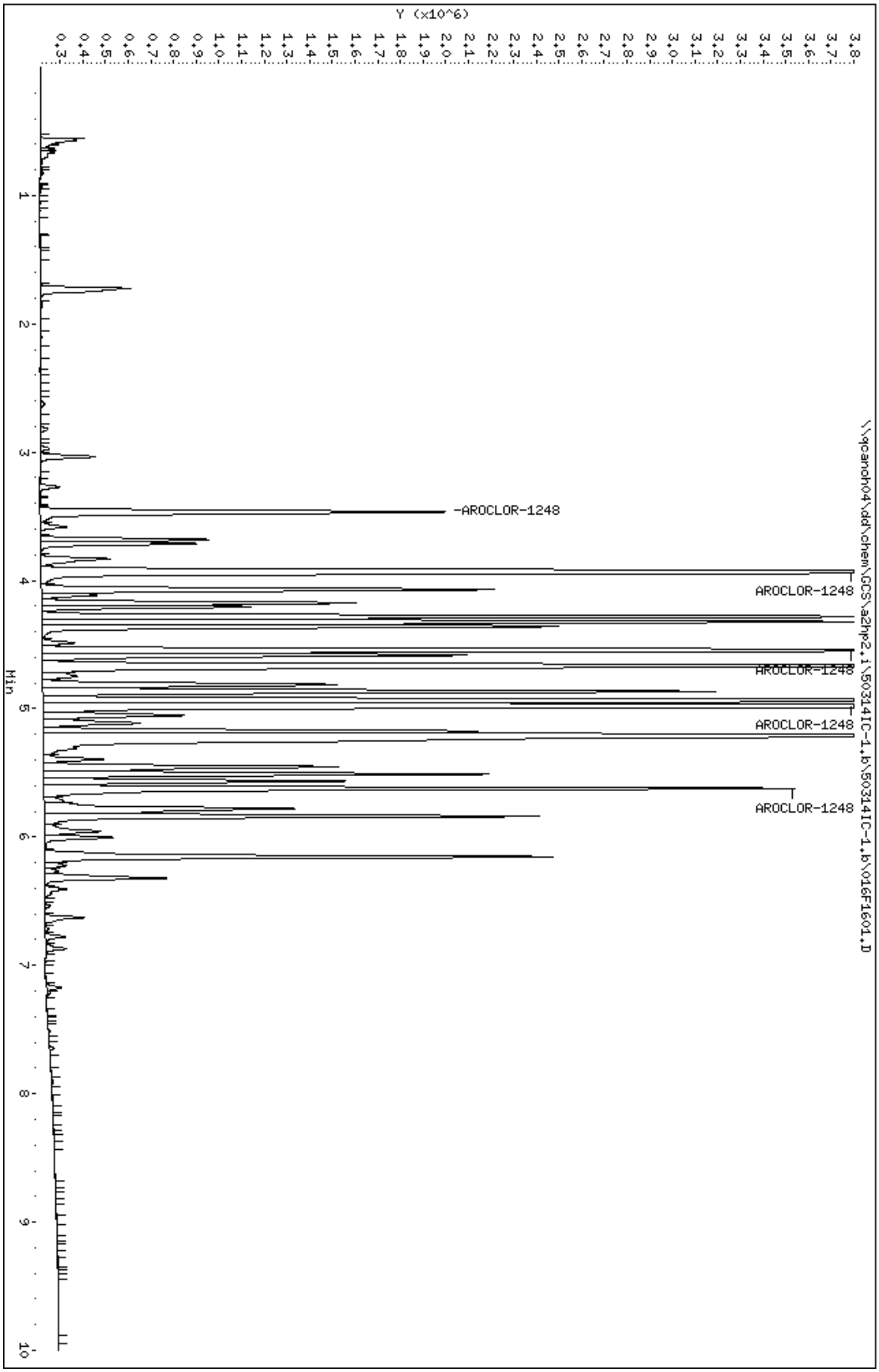
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\016F1601.D
Lab Smp Id: 1248
Inj Date : 14-MAR-2005 19:28
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 19:12 Cal File: 015F1501.D
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
3.465	3.465	0.000	1788037	2.00000	1.720	75.00- 125.00	100.00
3.932	3.932	0.000	4691188	2.00000	1.906	183.64- 306.07	262.37
4.543	4.543	0.000	5410355	2.00000	1.852	216.84- 361.40	302.59
4.978	4.978	0.000	6444774	2.00000	1.946	251.26- 418.77	360.44
5.621	5.621	0.000	3313386	2.00000	1.923	129.44- 215.73	185.31

Average of Peak Amounts = 1.86940

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\016F1601.D
Date : 14-MAR-2005 19:28
Client ID:
Sample Info: 1248,.1,5
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 017F1701.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\017F1701.D
Lab Smp Id: 2154
Inj Date : 14-MAR-2005 19:43
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 19:28 Cal File: 016F1601.D
Als bottle: 17 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

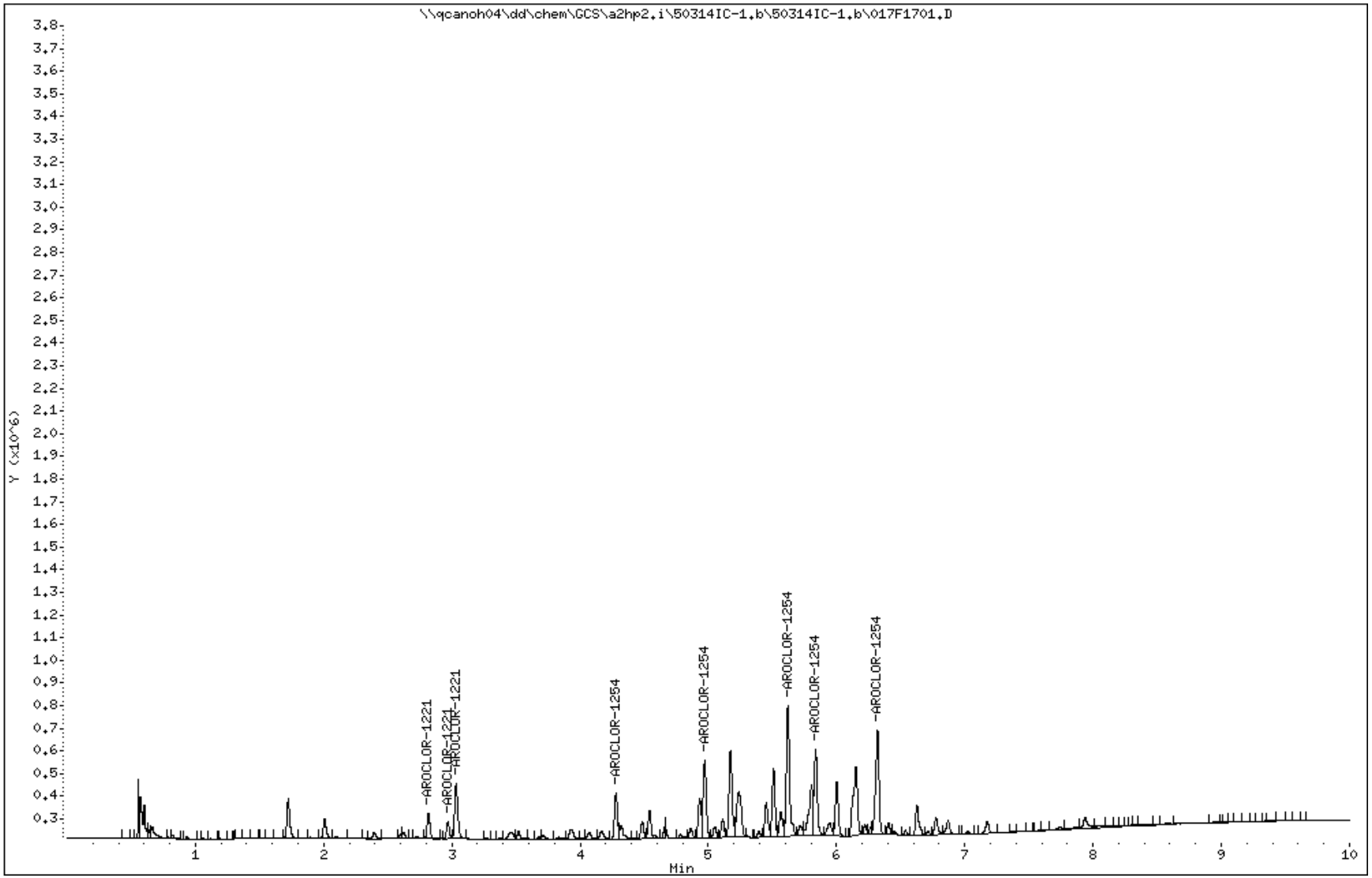
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.279	4.279	0.000	203217	0.10000		0.00- 0.00	100.00(M)
4.971	4.971	0.000	339993	0.10000		0.00- 0.00	167.31
5.620	5.620	0.000	575158	0.10000		0.00- 0.00	283.03
5.837	5.837	0.000	381473	0.10000		0.00- 0.00	187.72
6.319	6.319	0.000	458493	0.10000		0.00- 0.00	225.62
2 AROCLOR-1221					CAS #: 11104-28-2		
2.817	2.817	0.000	169772	0.10000		0.00- 0.00	100.00(M)
2.968	2.968	0.000	111640	0.10000		0.00- 0.00	65.76
3.033	3.033	0.000	412823	0.10000		0.00- 0.00	243.16

QC Flag Legend

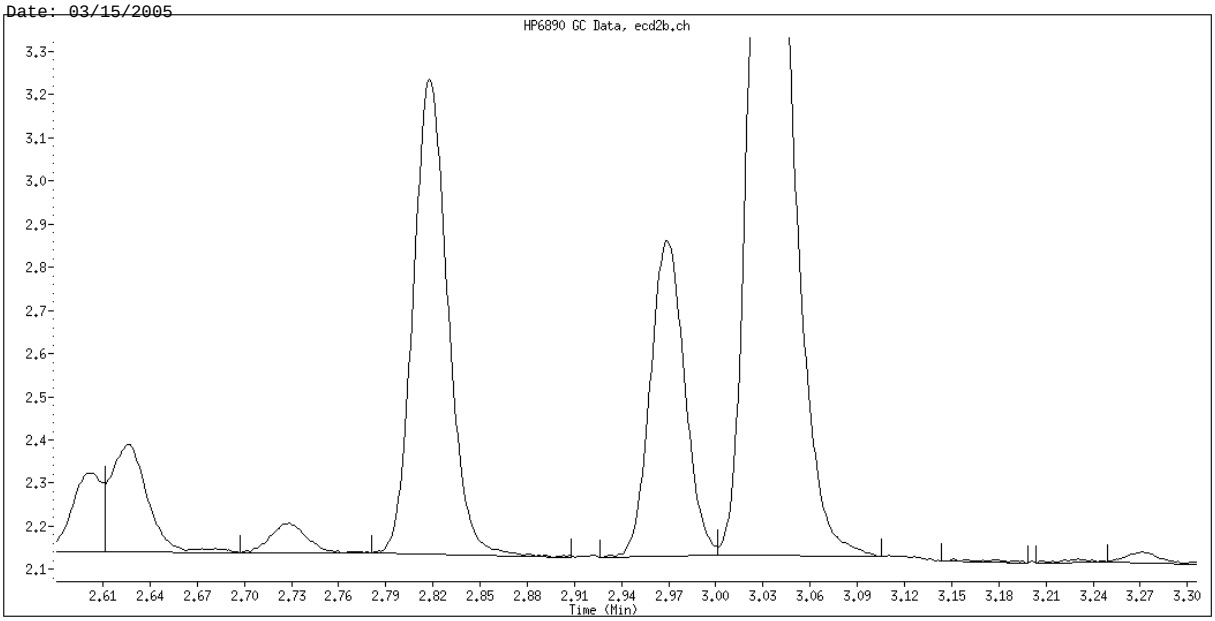
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\017F1701.D
Date : 14-MAR-2005 19:43
Client ID:
Sample Info: 2154,,1,1
Column phase: restek pest clpII

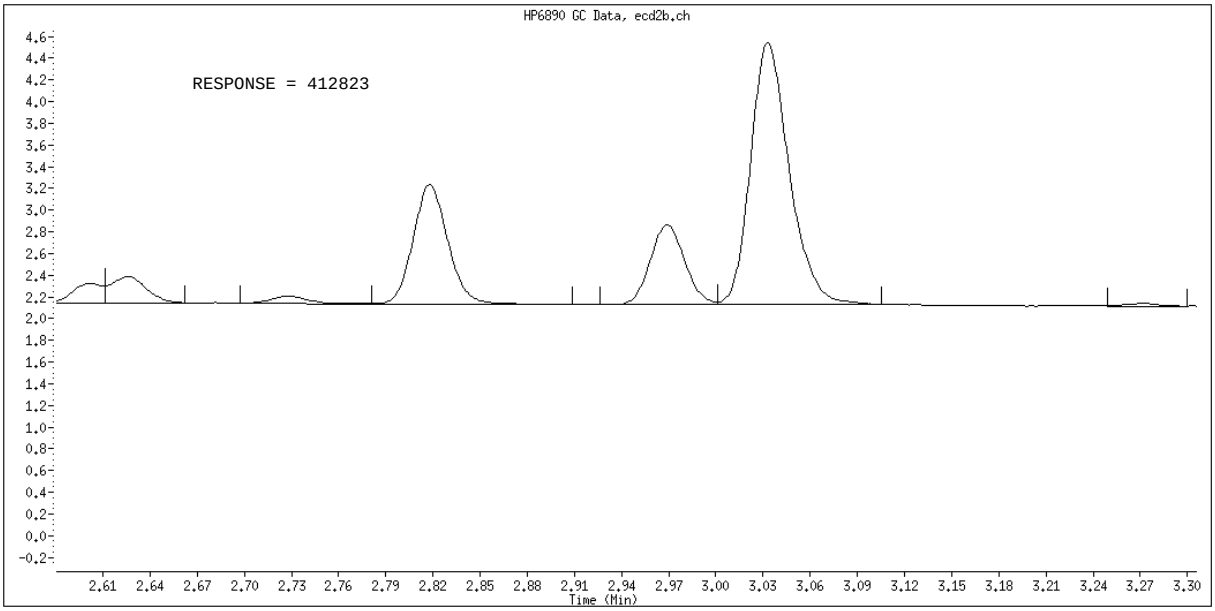
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 017F1701.D
Inj. Date and Time: 14-MAR-2005 19:43
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1221
CAS #: 11104-28-2
Report Date: 03/15/2005



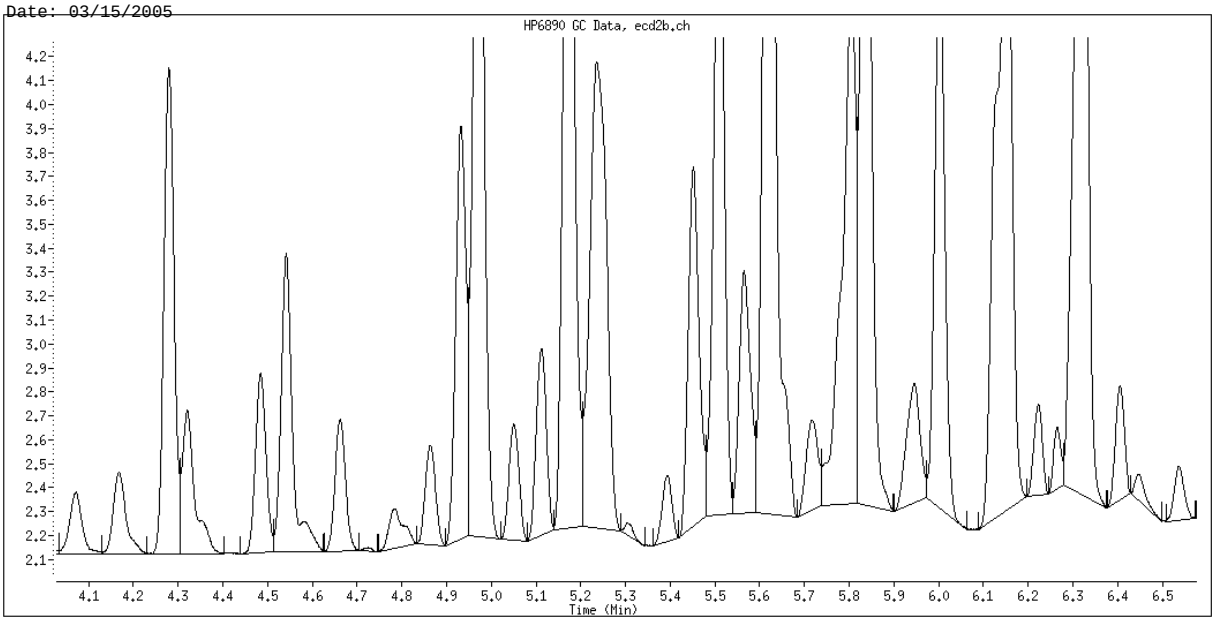
Original Integration



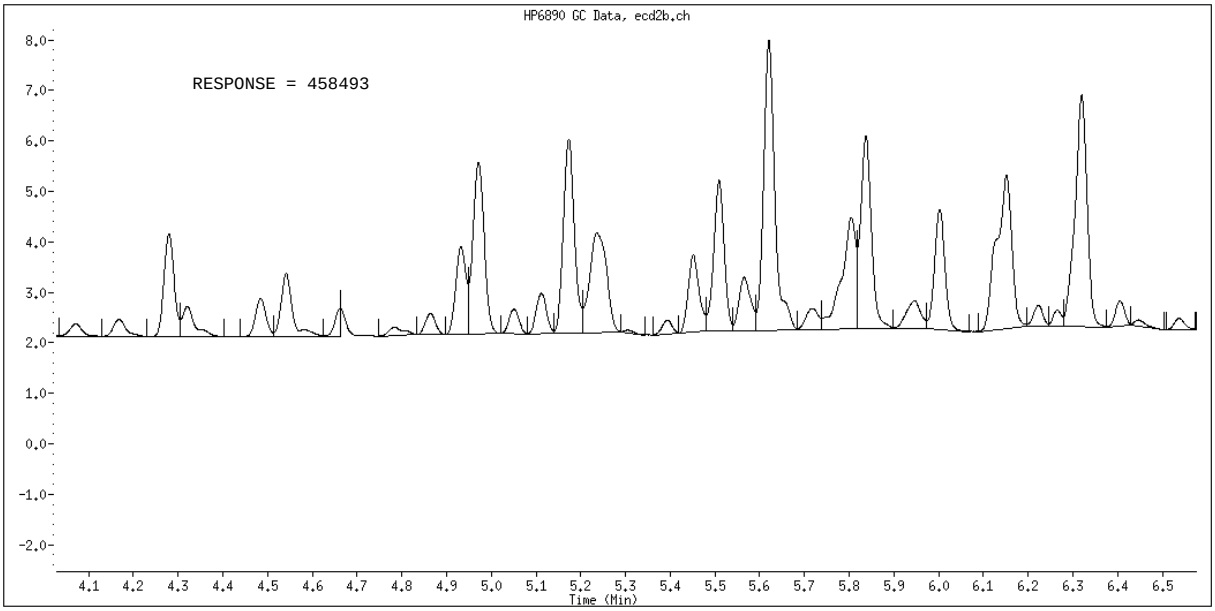
Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File Name: 017F1701.D
Inj. Date and Time: 14-MAR-2005 19:43
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1254
CAS #: 11097-69-1
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 018F1801.D
Report Date: 15-Mar-2005 06:31

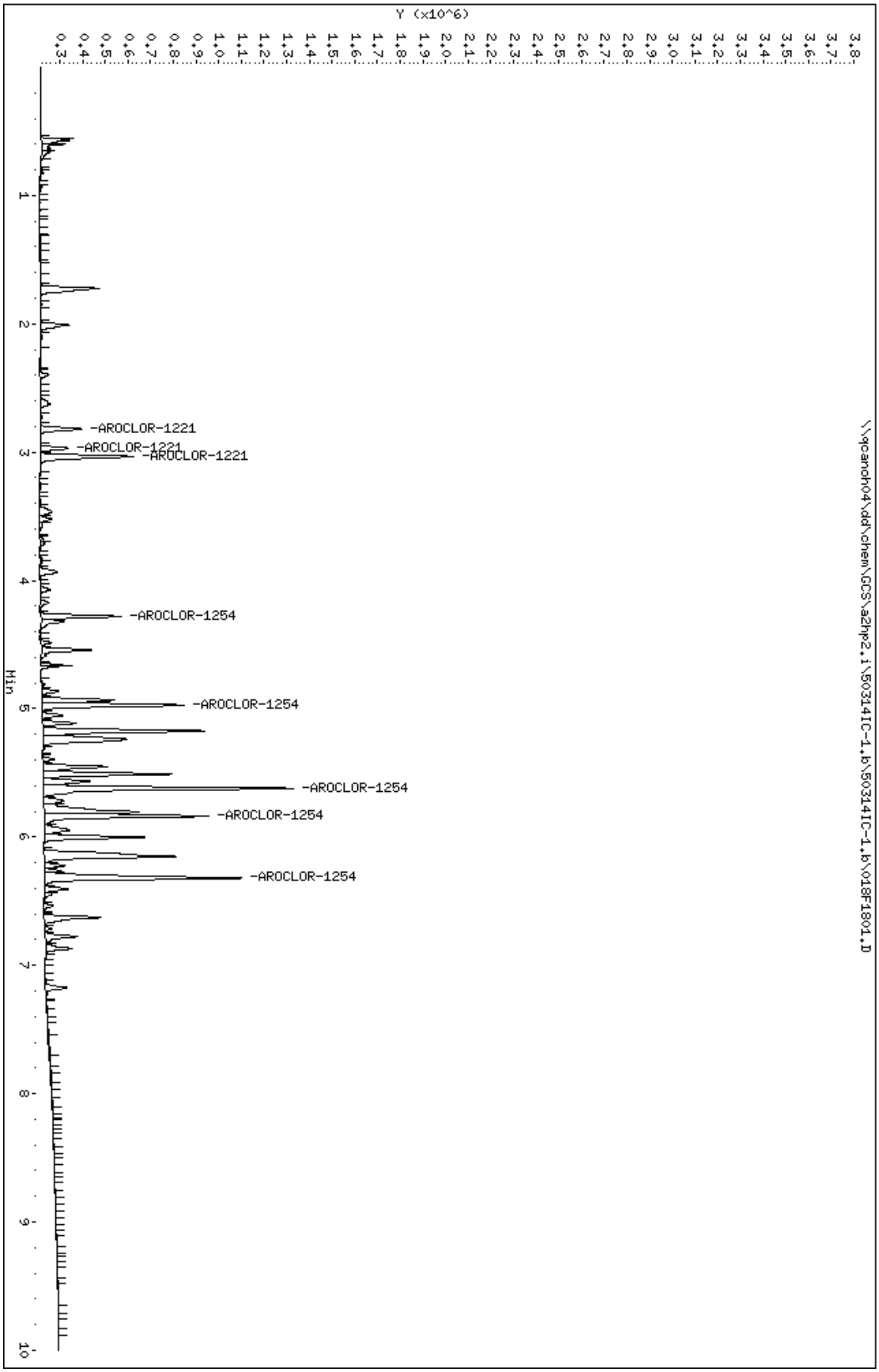
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\018F1801.D
Lab Smp Id: 2154
Inj Date : 14-MAR-2005 19:59
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 19:43 Cal File: 017F1701.D
Als bottle: 18 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.280	4.280	0.000	356427	0.20000	0.1754	0.00- 0.00	100.00
4.972	4.972	0.000	622433	0.20000	0.1831	0.00- 0.00	174.63
5.621	5.621	0.000	1100398	0.20000	0.1913	0.00- 0.00	308.73
5.837	5.837	0.000	724150	0.20000	0.1898	0.00- 0.00	203.17
6.319	6.319	0.000	867624	0.20000	0.1892	0.00- 0.00	243.42
		Average of Peak Amounts =			0.18576		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.819	2.819	0.000	318588	0.20000	0.1876	0.00- 0.00	100.00
2.970	2.970	0.000	208415	0.20000	0.1867	0.00- 0.00	65.42
3.033	3.033	0.000	776624	0.20000	0.1881	0.00- 0.00	243.77
		Average of Peak Amounts =			0.18747		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\018F1801.D
Date : 14-MAR-2005 19:59
Client ID:
Sample Info: 2154,,1,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 019F1901.D
Report Date: 15-Mar-2005 06:31

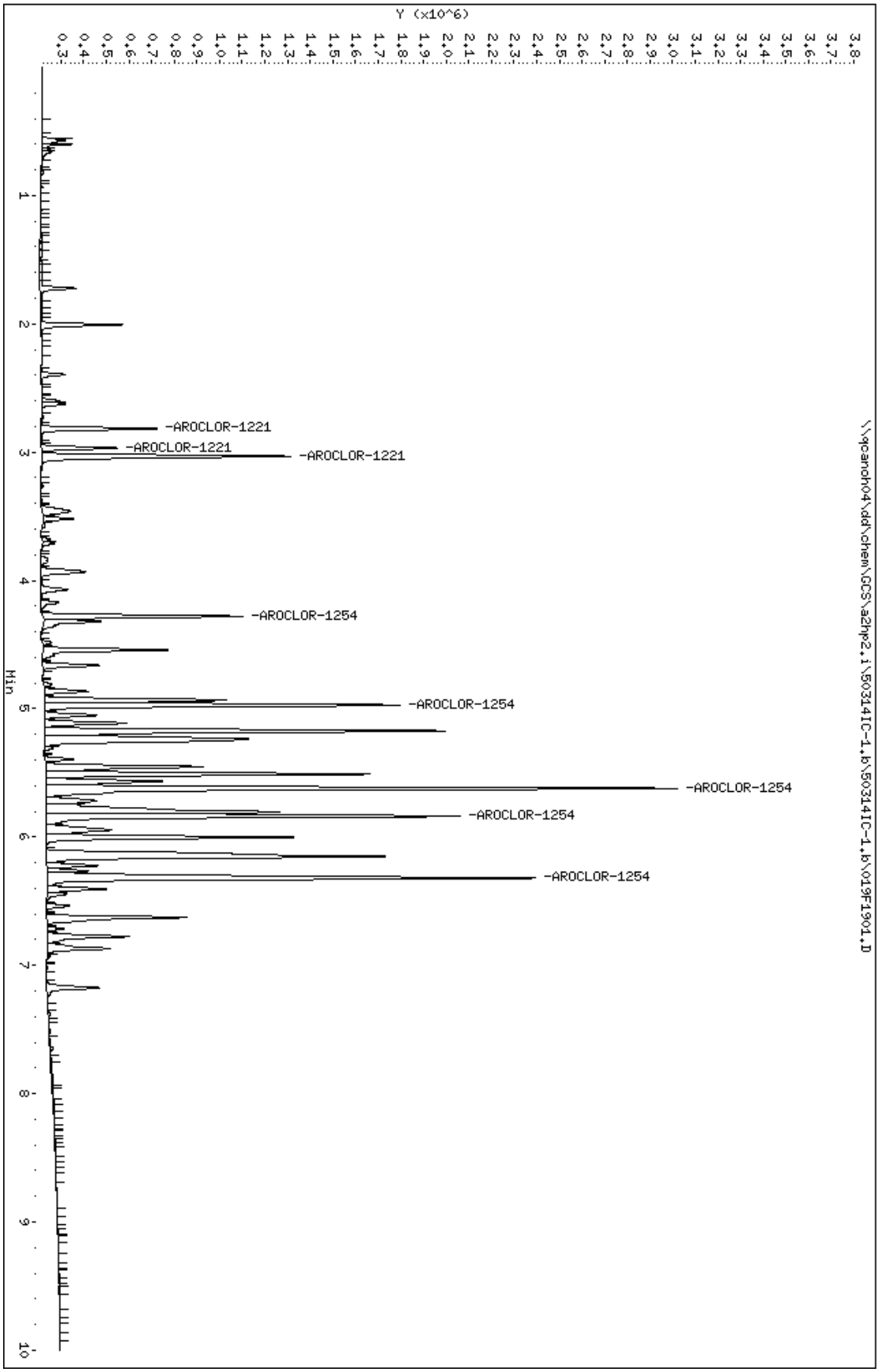
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\019F1901.D
Lab Smp Id: 2154
Inj Date : 14-MAR-2005 20:15
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 19:59 Cal File: 018F1801.D
Als bottle: 19 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.279	4.279	0.000	883592	0.50000	0.4633	80.00- 120.00	100.00
4.972	4.972	0.000	1569710	0.50000	0.4821	133.24- 222.06	177.65
5.621	5.621	0.000	2786000	0.50000	0.4951	236.48- 394.13	315.30
5.837	5.837	0.000	1825724	0.50000	0.4911	154.97- 258.28	206.63
6.319	6.319	0.000	2156392	0.50000	0.4833	183.04- 305.06	244.05
Average of Peak Amounts =					0.48298		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.817	2.817	0.000	757618	0.50000	0.4605	80.00- 120.00	100.00
2.967	2.967	0.000	489652	0.50000	0.4537	48.47- 80.79	64.63
3.032	3.032	0.000	1828175	0.50000	0.4564	180.98- 301.63	241.31
Average of Peak Amounts =					0.45687		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\019F1901.D
Date : 14-MAR-2005 20:15
Client ID:
Sample Info: 2154,,1,3
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53

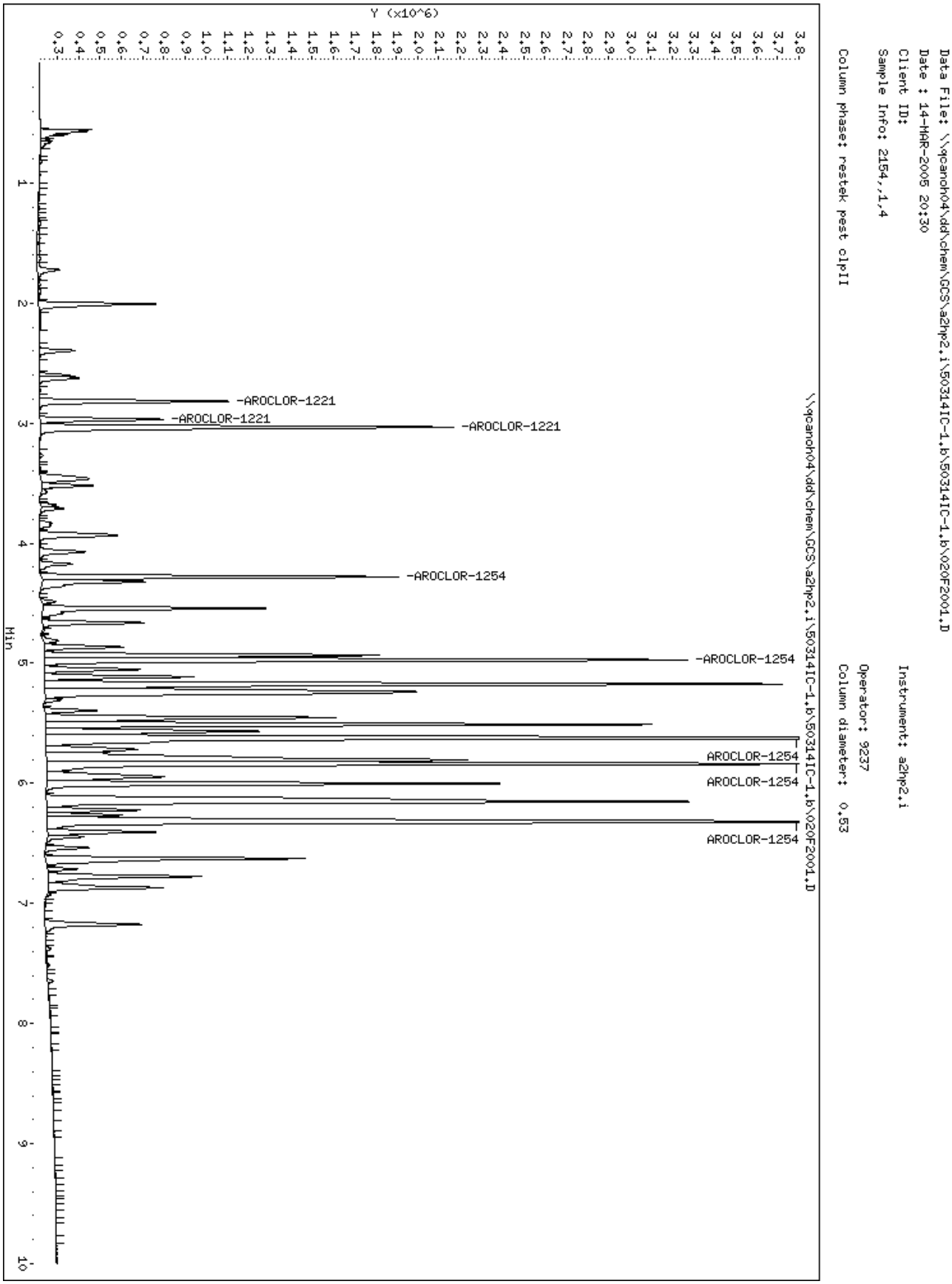


Data File: 020F2001.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\020F2001.D
Lab Smp Id: 2154
Inj Date : 14-MAR-2005 20:30
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 20:15 Cal File: 019F1901.D
Als bottle: 20 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.280	4.280	0.000	1685007	1.00000	0.9057	75.00- 125.00	100.00
4.971	4.971	0.000	3037463	1.00000	0.9441	133.24- 222.06	180.26
5.621	5.621	0.000	5499574	1.00000	0.9806	236.48- 394.13	326.38
5.836	5.836	0.000	3704824	1.00000	1.002	154.97- 258.28	219.87
6.319	6.319	0.000	4310736	1.00000	0.9771	183.04- 305.06	255.83
Average of Peak Amounts =					0.96190		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.817	2.817	0.000	1444162	1.00000	0.9015	75.00- 125.00	100.00
2.968	2.968	0.000	928713	1.00000	0.8879	48.47- 80.79	64.31
3.033	3.033	0.000	3485025	1.00000	0.8961	180.98- 301.63	241.32
Average of Peak Amounts =					0.89517		


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\020F2001.D
Date : 14-MAR-2005 20:30
Client ID:
Sample Info: 2154,,1,4
Column phase: restek pest clpII
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1221
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-AROCLOR-1254
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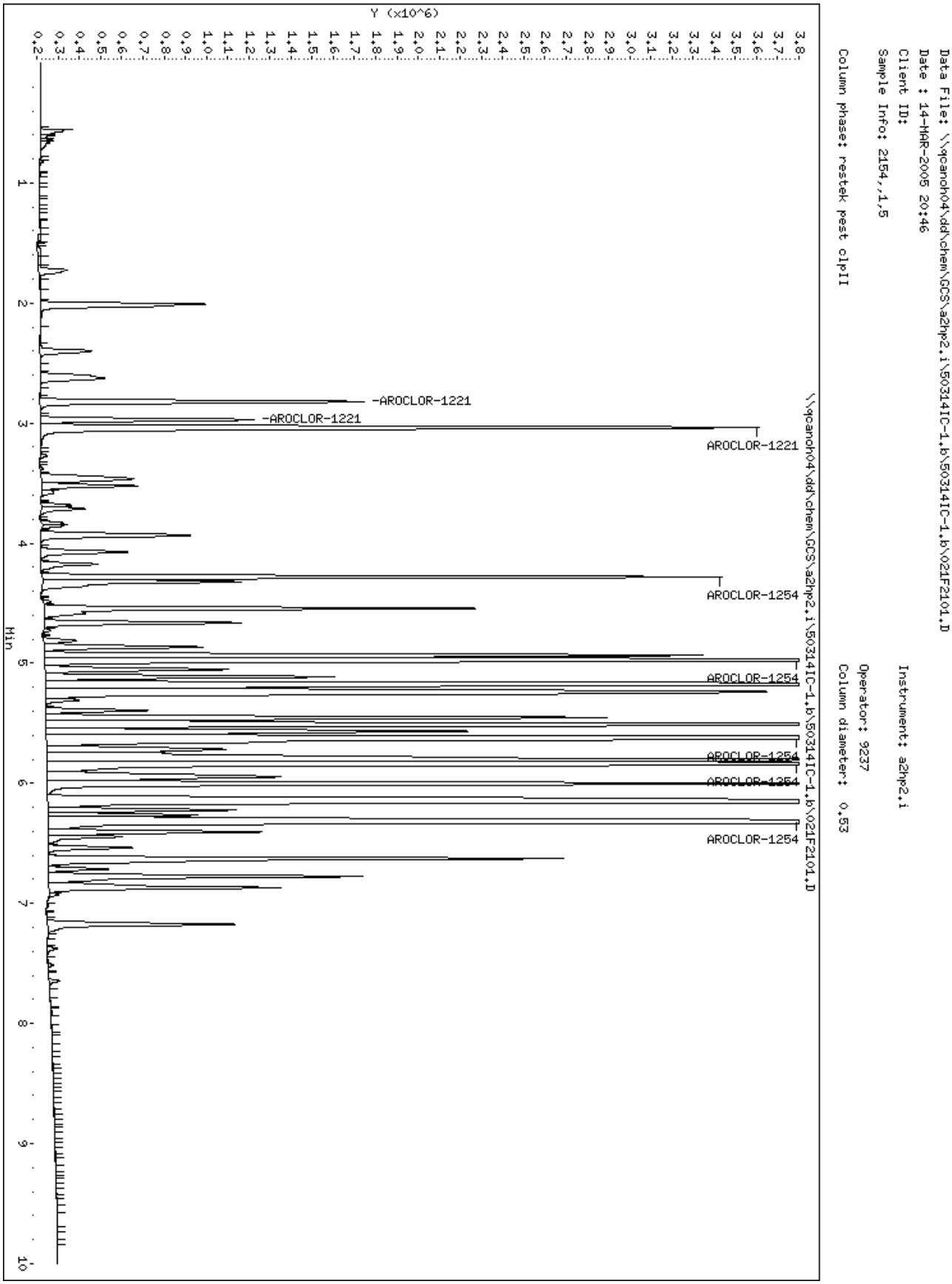
\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\020F2001.D

Data File: 021F2101.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\021F2101.D
Lab Smp Id: 2154
Inj Date : 14-MAR-2005 20:46
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 20:30 Cal File: 020F2001.D
Als bottle: 21 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
4.281	4.281	0.000	3214528	2.00000	1.770	75.00- 125.00	100.00
4.972	4.972	0.000	5800449	2.00000	1.828	133.24- 222.06	180.44
5.620	5.620	0.000	10595591	2.00000	1.898	236.48- 394.13	329.62
5.837	5.837	0.000	7192097	2.00000	1.945	154.97- 258.28	223.74
6.318	6.318	0.000	8598001	2.00000	1.960	183.04- 305.06	267.47
		Average of Peak Amounts =			1.88020		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.821	2.821	0.000	2742227	2.00000	1.755	75.00- 125.00	100.00
2.971	2.971	0.000	1742438	2.00000	1.714	48.47- 80.79	63.54
3.036	3.036	0.000	6564762	2.00000	1.733	180.98- 301.63	239.40
		Average of Peak Amounts =			1.73400		


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\021F2101.D
Date : 14-MAR-2005 20:46
Client ID:
Sample Info: 2154,,1,5
Column phase: restek pest clpII
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\021F2101.D

Data File: 022F2201.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\022F2201.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 21:02
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 20:46 Cal File: 021F2101.D
Als bottle: 22 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

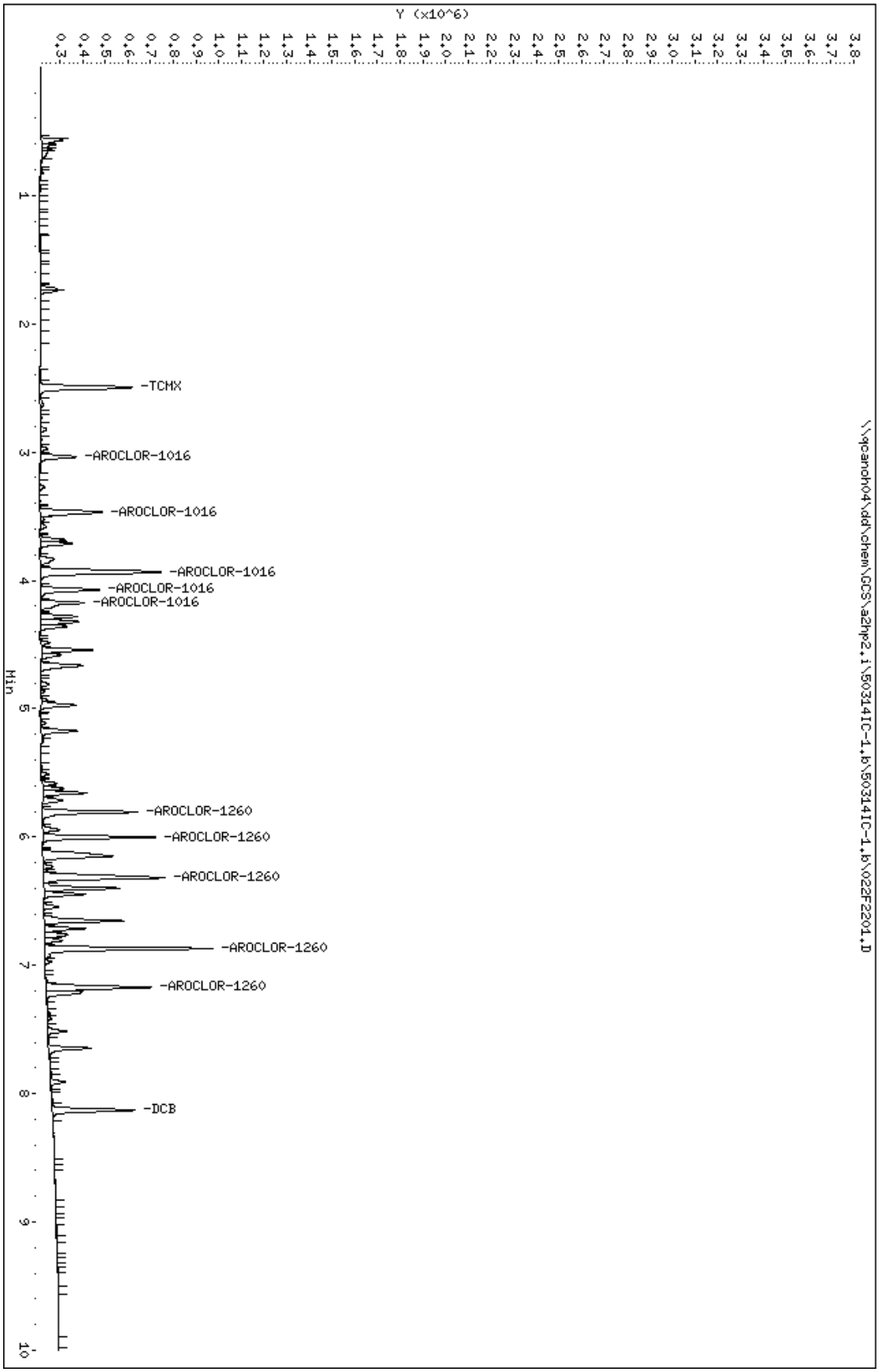
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.496	2.496	0.000	815284	0.00500			(M)
3 AROCLOR-1016					CAS #: 12674-11-2		
3.036	3.036	0.000	295210	0.10000		0.00- 0.00	100.00(M)
3.468	3.468	0.000	584389	0.10000		0.00- 0.00	197.96
3.936	3.936	0.000	1177616	0.10000		0.00- 0.00	398.91
4.074	4.074	0.000	483483	0.10000		0.00- 0.00	163.78
4.175	4.175	0.000	388500	0.10000		0.00- 0.00	131.60
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	425561	0.10000		0.00- 0.00	100.00(M)
6.002	6.002	0.000	498027	0.10000		0.00- 0.00	117.03
6.317	6.317	0.000	531188	0.10000		0.00- 0.00	124.82
6.869	6.869	0.000	742878	0.10000		0.00- 0.00	174.56
7.173	7.173	0.000	462891	0.10000		0.00- 0.00	108.77
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	368499	0.00500			(M)

QC Flag Legend

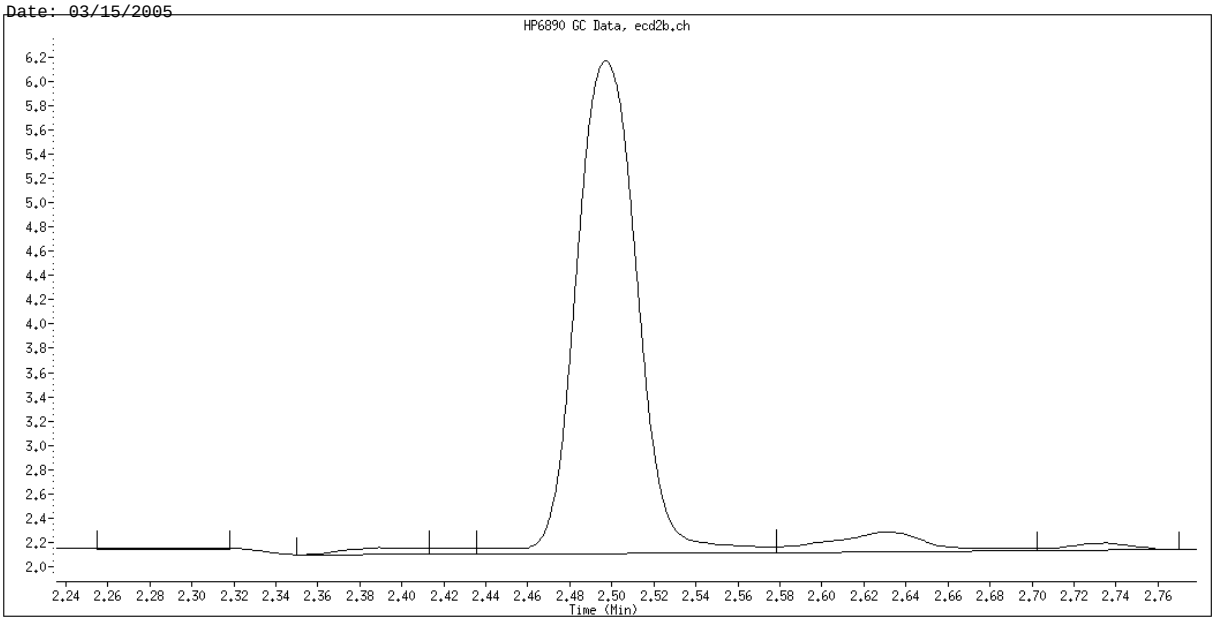
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\022F2201.D
Date : 14-MAR-2005 21:02
Client ID:
Sample Info: 1660,,1,1
Column phase: restek pest clpII

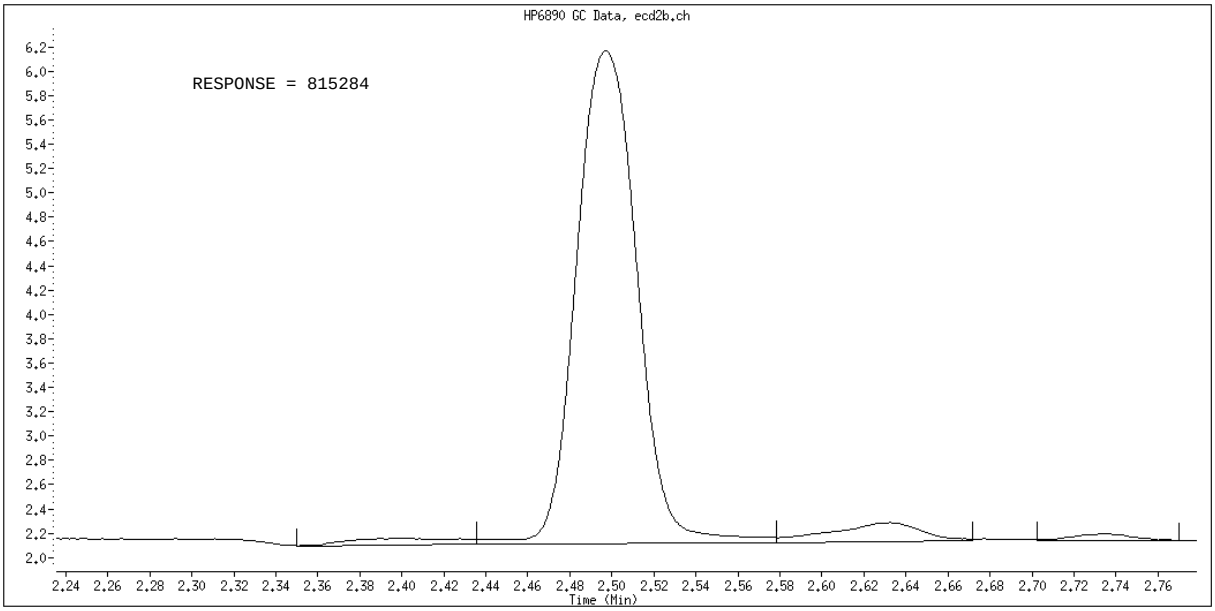
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 022F2201.D
Inj. Date and Time: 14-MAR-2005 21:02
Instrument ID: a2hp2.i
Client ID:
Compound Name: TCMX
CAS #: 877-09-8
Report Date: 03/15/2005



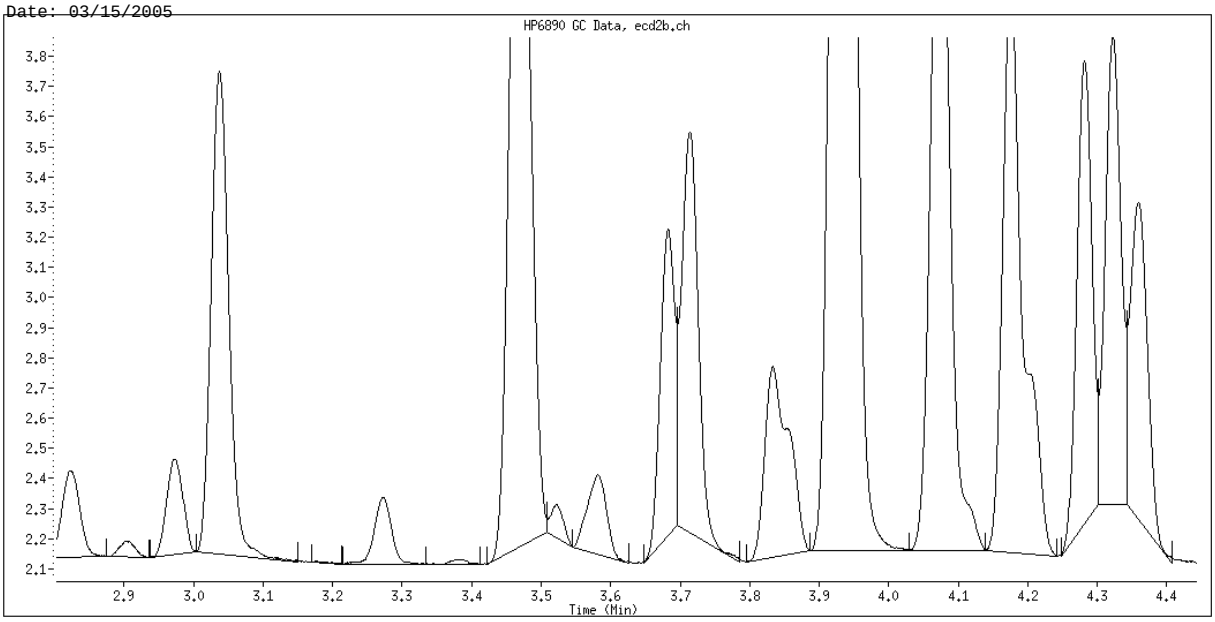
Original Integration



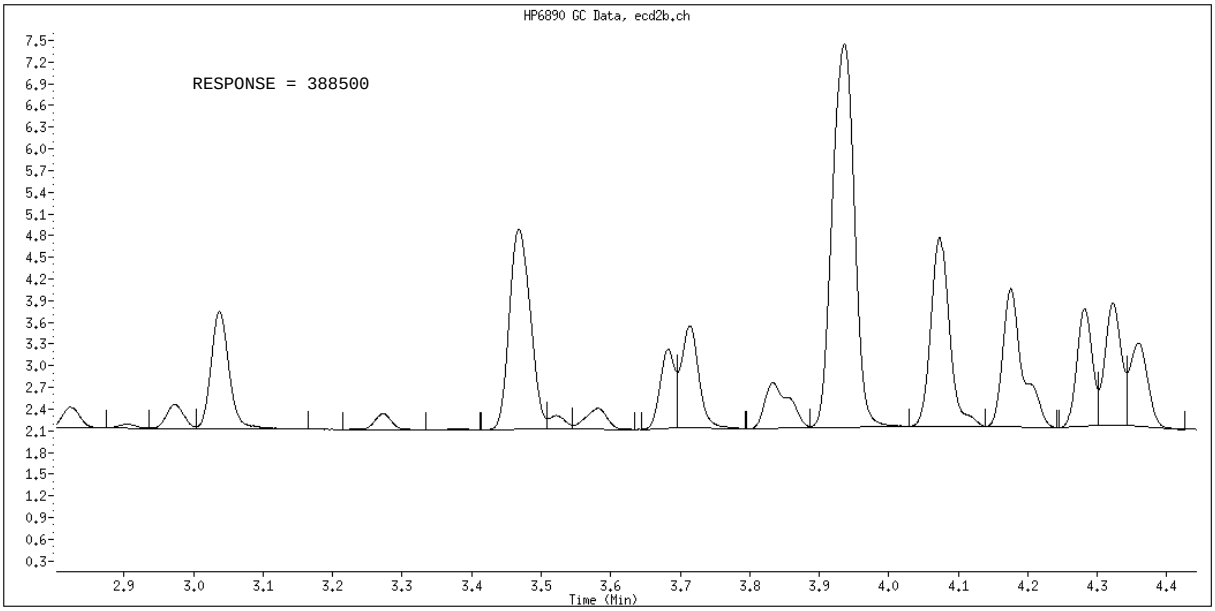
Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File Name: 022F2201.D
Inj. Date and Time: 14-MAR-2005 21:02
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/15/2005



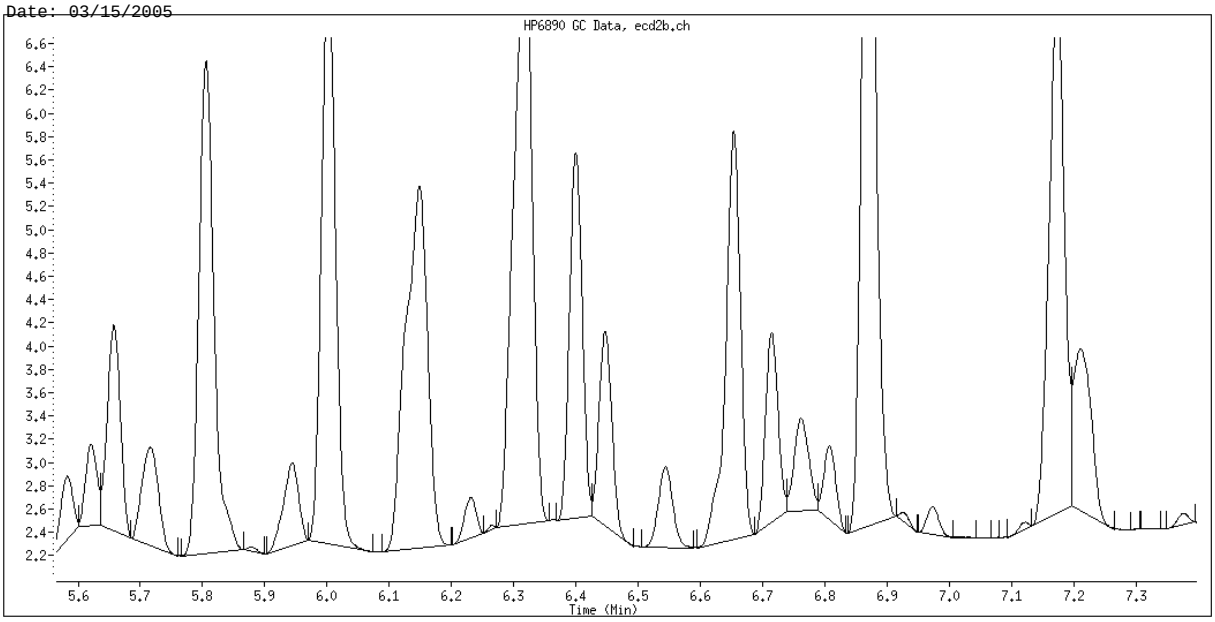
Original Integration



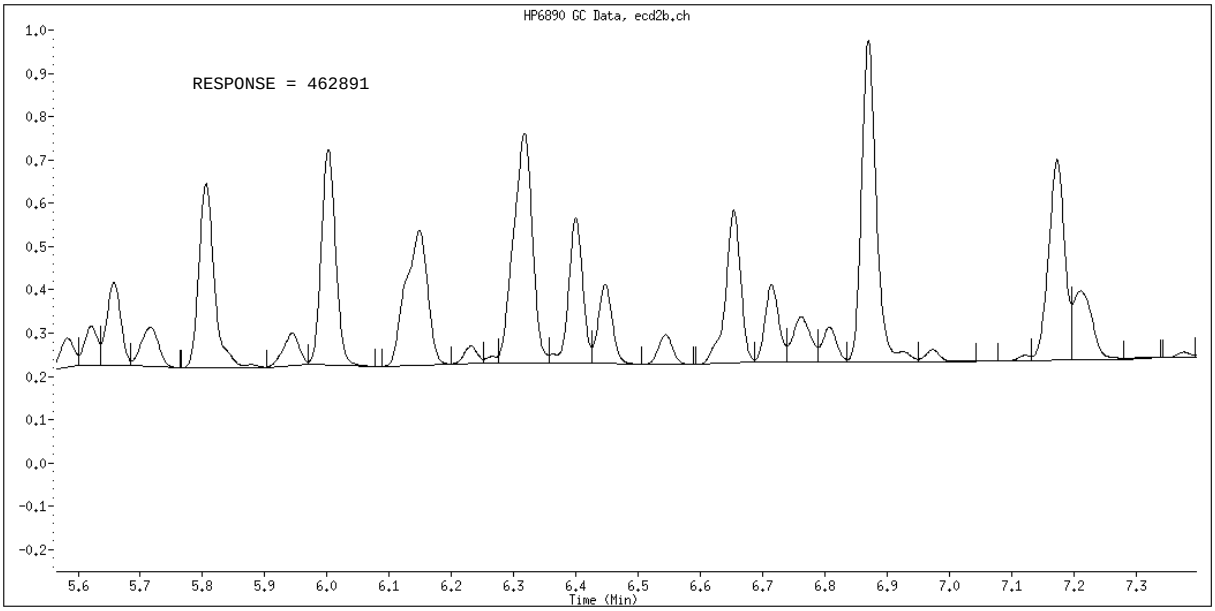
Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File Name: 022F2201.D
Inj. Date and Time: 14-MAR-2005 21:02
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/15/2005



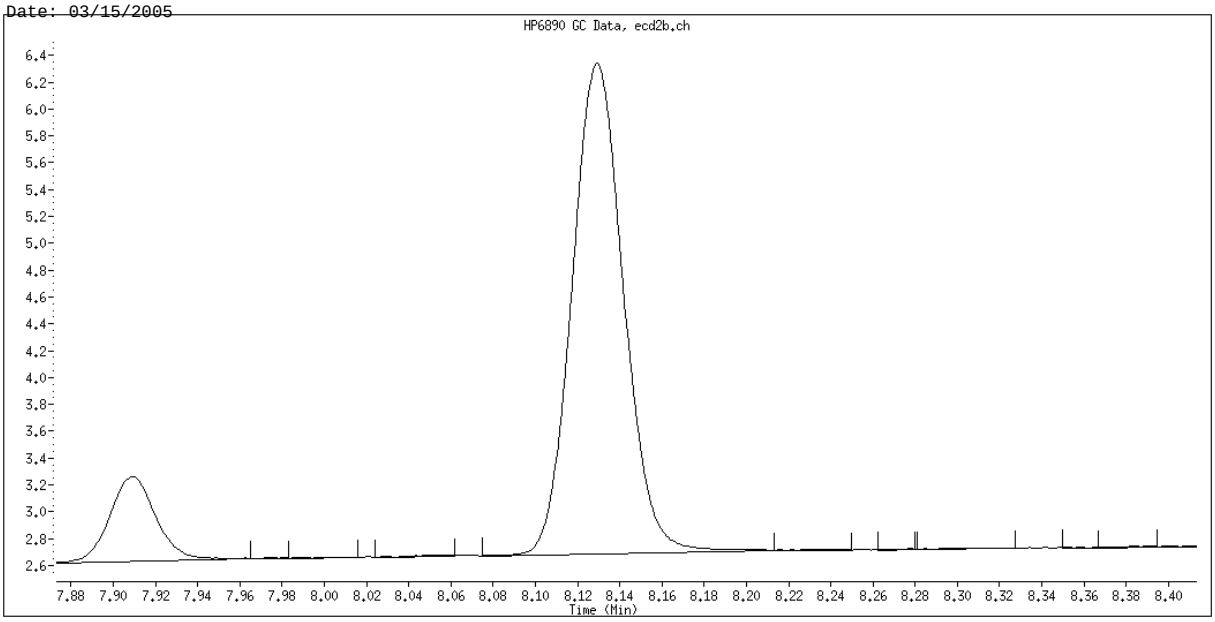
Original Integration



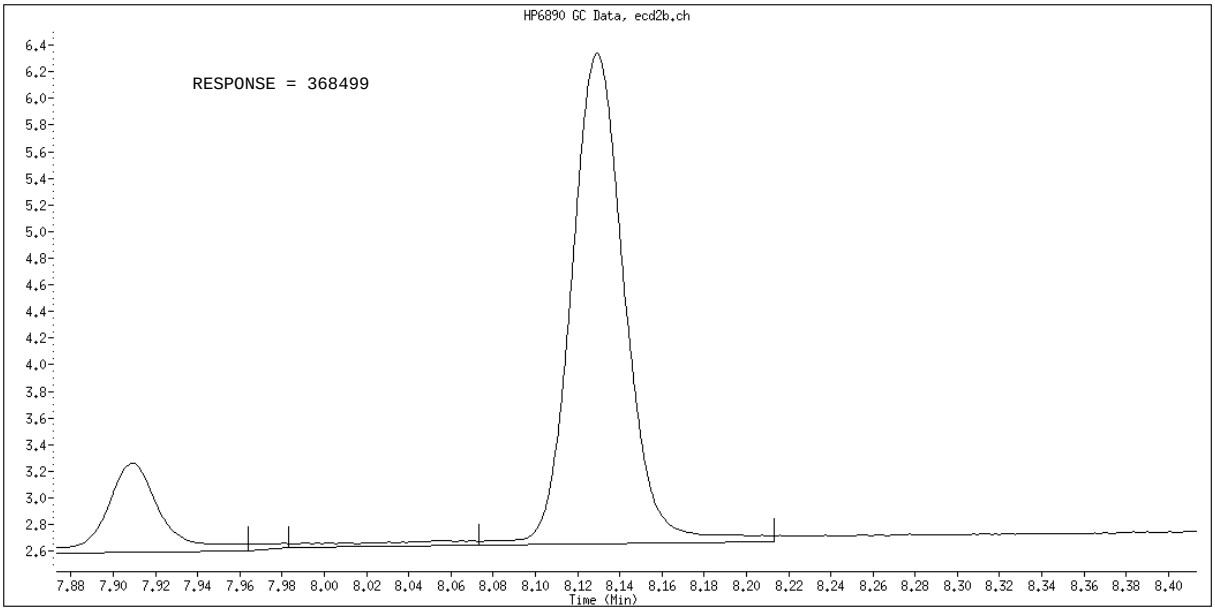
Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File Name: 022F2201.D
Inj. Date and Time: 14-MAR-2005 21:02
Instrument ID: a2hp2.i
Client ID:
Compound Name: DCB
CAS #: 2051-24-3
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 023F2301.D
Report Date: 15-Mar-2005 06:31

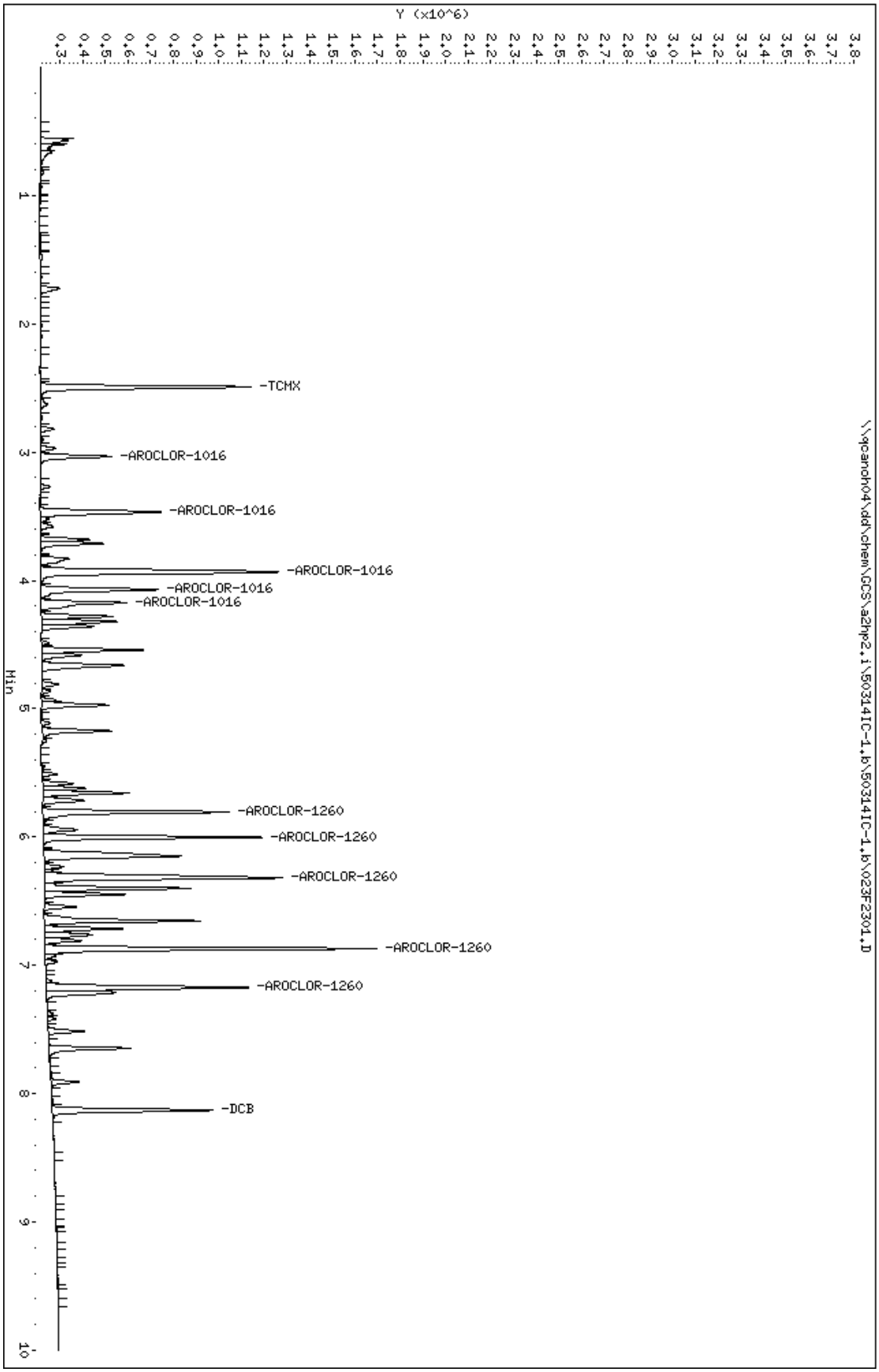
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\023F2301.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 21:17
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 21:02 Cal File: 022F2201.D
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.492	0.000	1616574	0.01000	0.009914		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.034	3.034	0.000	563010	0.20000	0.1907	0.00- 0.00	100.00
3.466	3.466	0.000	1126265	0.20000	0.1927	0.00- 0.00	200.04
3.934	3.934	0.000	2347179	0.20000	0.1993	0.00- 0.00	416.90
4.072	4.072	0.000	981938	0.20000	0.2031	0.00- 0.00	174.41
4.174	4.174	0.000	766264	0.20000	0.1972	0.00- 0.00	136.10
Average of Peak Amounts =					0.19660		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	821040	0.20000	0.1929	0.00- 0.00	100.00
6.002	6.002	0.000	959909	0.20000	0.1927	0.00- 0.00	116.91
6.318	6.318	0.000	1048946	0.20000	0.1975	0.00- 0.00	127.76
6.869	6.869	0.000	1462403	0.20000	0.1968	0.00- 0.00	178.12
7.173	7.173	0.000	894352	0.20000	0.1932	0.00- 0.00	108.93
Average of Peak Amounts =					0.19462		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	710172	0.01000	0.009636		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\023F2301.D
Date : 14-MAR-2005 21:17
Client ID:
Sample Info: 1660,,1,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 024F2401.D
Report Date: 15-Mar-2005 06:31

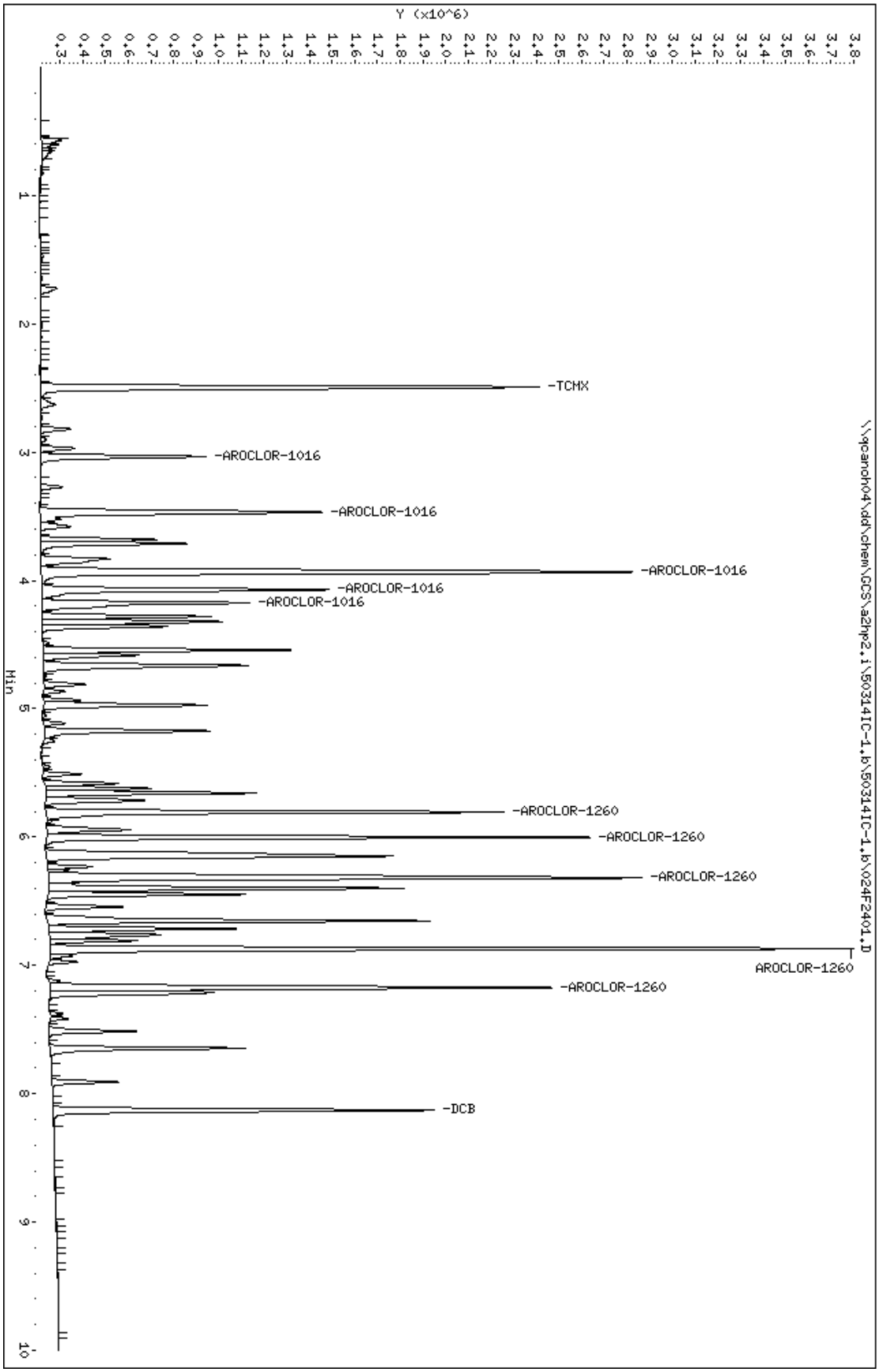
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\024F2401.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 21:33
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 21:17 Cal File: 023F2301.D
Als bottle: 24 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.492	0.000	4098895	0.02500	0.02525		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.034	3.034	0.000	1326485	0.50000	0.4600	80.00- 120.00	100.00
3.467	3.467	0.000	2791663	0.50000	0.4866	157.84- 263.07	210.46
3.935	3.935	0.000	5832220	0.50000	0.4961	329.76- 549.59	439.67
4.072	4.072	0.000	2394773	0.50000	0.4915	135.40- 225.67	180.54
4.174	4.174	0.000	1868140	0.50000	0.4842	105.63- 176.04	140.83
Average of Peak Amounts =					0.48368		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	2023290	0.50000	0.4840	80.00- 120.00	100.00
6.002	6.002	0.000	2392945	0.50000	0.4894	88.70- 147.84	118.27
6.317	6.317	0.000	2620149	0.50000	0.4964	97.12- 161.87	129.50
6.869	6.869	0.000	3702352	0.50000	0.5023	137.24- 228.73	182.99
7.173	7.173	0.000	2206714	0.50000	0.4850	81.80- 136.33	109.07
Average of Peak Amounts =					0.49142		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	1678208	0.02500	0.02319		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\024F2401.D
Date : 14-MAR-2005 21:33
Client ID:
Sample Info: 1660,1,3
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 025F2501.D
Report Date: 15-Mar-2005 06:31

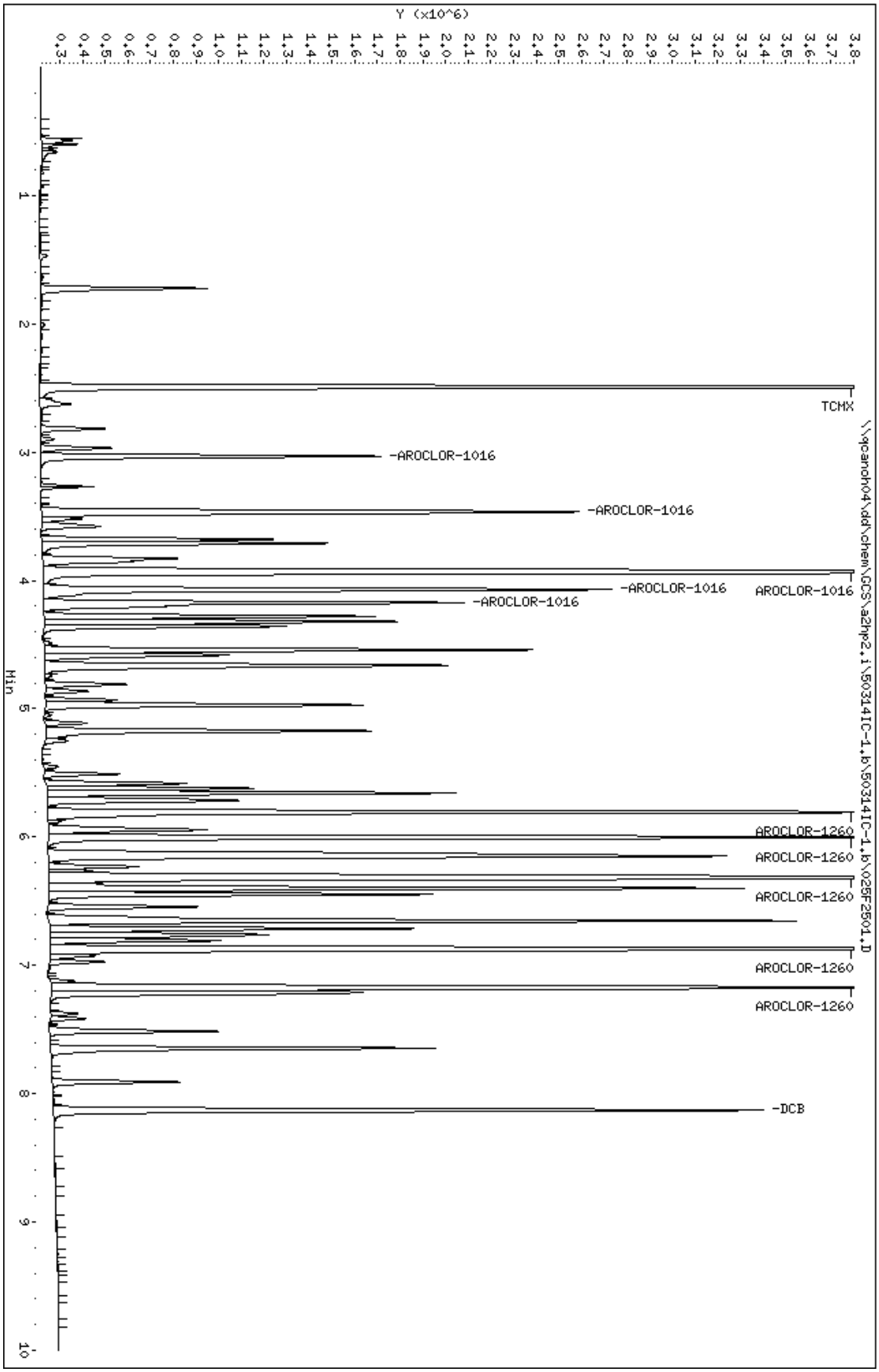
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\025F2501.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 21:48
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 21:33 Cal File: 024F2401.D
Als bottle: 25 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.490	2.490	0.000	7818617	0.05000	0.04800		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.032	3.032	0.000	2467510	1.00000	0.8791	75.00- 125.00	100.00
3.464	3.464	0.000	4940647	1.00000	0.8689	157.84- 263.07	200.23
3.934	3.934	0.000	11316037	1.00000	0.9651	329.76- 549.59	458.60
4.071	4.071	0.000	4584837	1.00000	0.9464	135.40- 225.67	185.81
4.174	4.174	0.000	3617043	1.00000	0.9475	105.63- 176.04	146.59
Average of Peak Amounts =					0.92140		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	3958869	1.00000	0.9572	75.00- 125.00	100.00
6.002	6.002	0.000	4700228	1.00000	0.9681	88.70- 147.84	118.73
6.319	6.319	0.000	5105326	1.00000	0.9696	97.12- 161.87	128.96
6.869	6.869	0.000	7264566	1.00000	0.9841	137.24- 228.73	183.50
7.173	7.173	0.000	4388368	1.00000	0.9742	81.80- 136.33	110.85
Average of Peak Amounts =					0.97064		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	3131582	0.05000	0.04435		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\025F2501.D
Date : 14-MAR-2005 21:48
Client ID:
Sample Info: 1660,,1,4
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 026F2601.D
Report Date: 15-Mar-2005 06:31

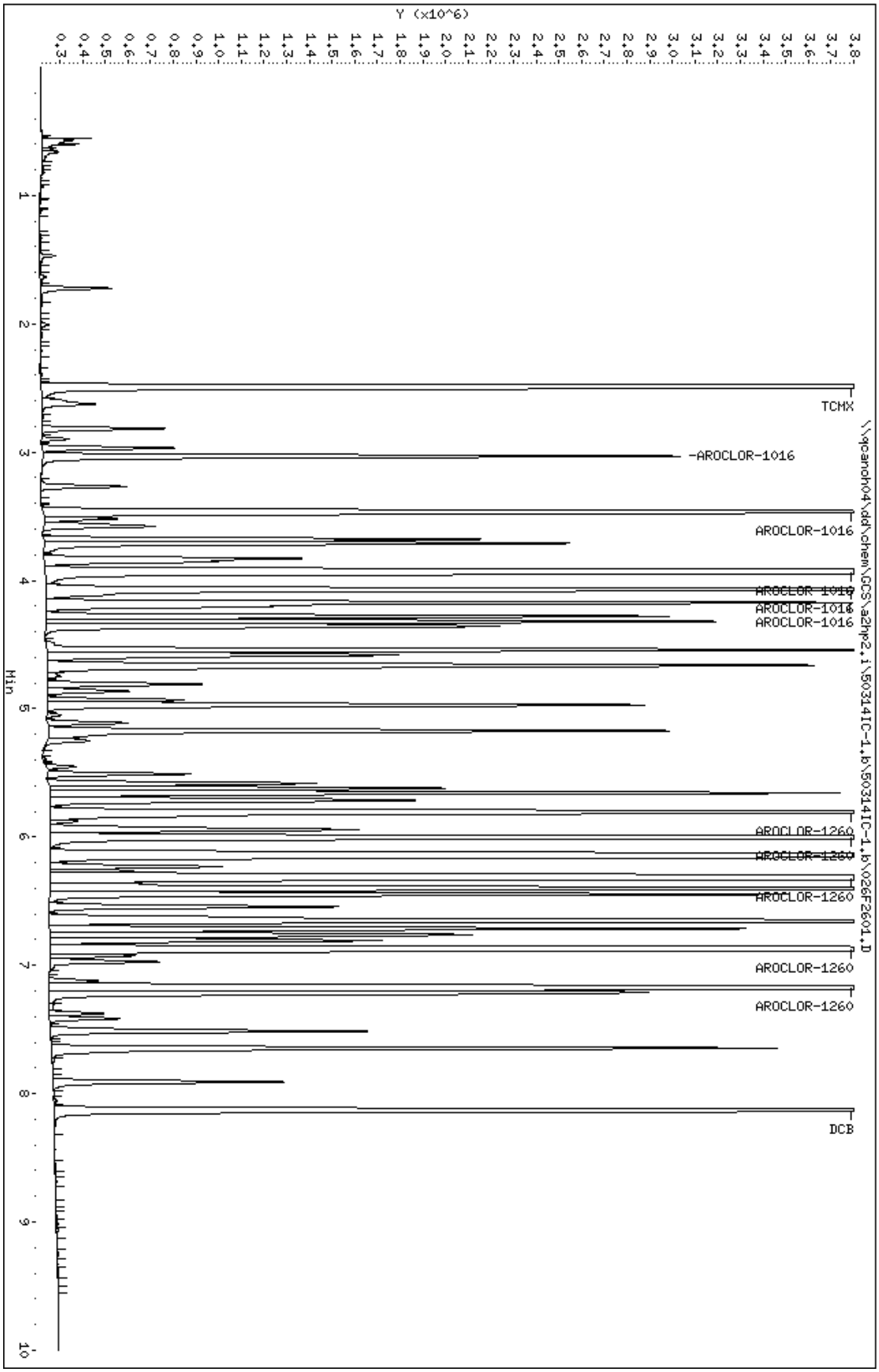
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\026F2601.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 22:04
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 21:48 Cal File: 025F2501.D
Als bottle: 26 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.489	2.489	0.000	16089161	0.10000	0.09977		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.031	3.031	0.000	4512006	2.00000	1.658	75.00- 125.00	100.00
3.463	3.463	0.000	9135643	2.00000	1.661	157.84- 263.07	202.47
3.933	3.933	0.000	21320869	2.00000	1.834	329.76- 549.59	472.54
4.070	4.070	0.000	8593097	2.00000	1.798	135.40- 225.67	190.45
4.173	4.173	0.000	6868293	2.00000	1.823	105.63- 176.04	152.22
Average of Peak Amounts =					1.75480		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.804	5.804	0.000	7443437	2.00000	1.819	75.00- 125.00	100.00
6.001	6.001	0.000	8817806	2.00000	1.831	88.70- 147.84	118.46
6.317	6.317	0.000	9830359	2.00000	1.881	97.12- 161.87	132.07
6.869	6.869	0.000	14146570	2.00000	1.924	137.24- 228.73	190.05
7.173	7.173	0.000	8401955	2.00000	1.877	81.80- 136.33	112.88
Average of Peak Amounts =					1.86640		
$ 9 DCB					CAS #: 2051-24-3		
8.128	8.128	0.000	6269325	0.10000	0.09136		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\026F2601.D
Date : 14-MAR-2005 22:04
Client ID:
Sample Info: 1660,1.5
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 027F2701.D
Report Date: 15-Mar-2005 06:37

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 14-MAR-2005 22:20
Lab File ID: 027F2701.D Init. Cal. Date(s): 14-MAR-2005 14-MAR-2005
Analysis Type: Init. Cal. Times: 15:49 22:51
Lab Sample ID: ICV Quant Type: ESTD
Method: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m

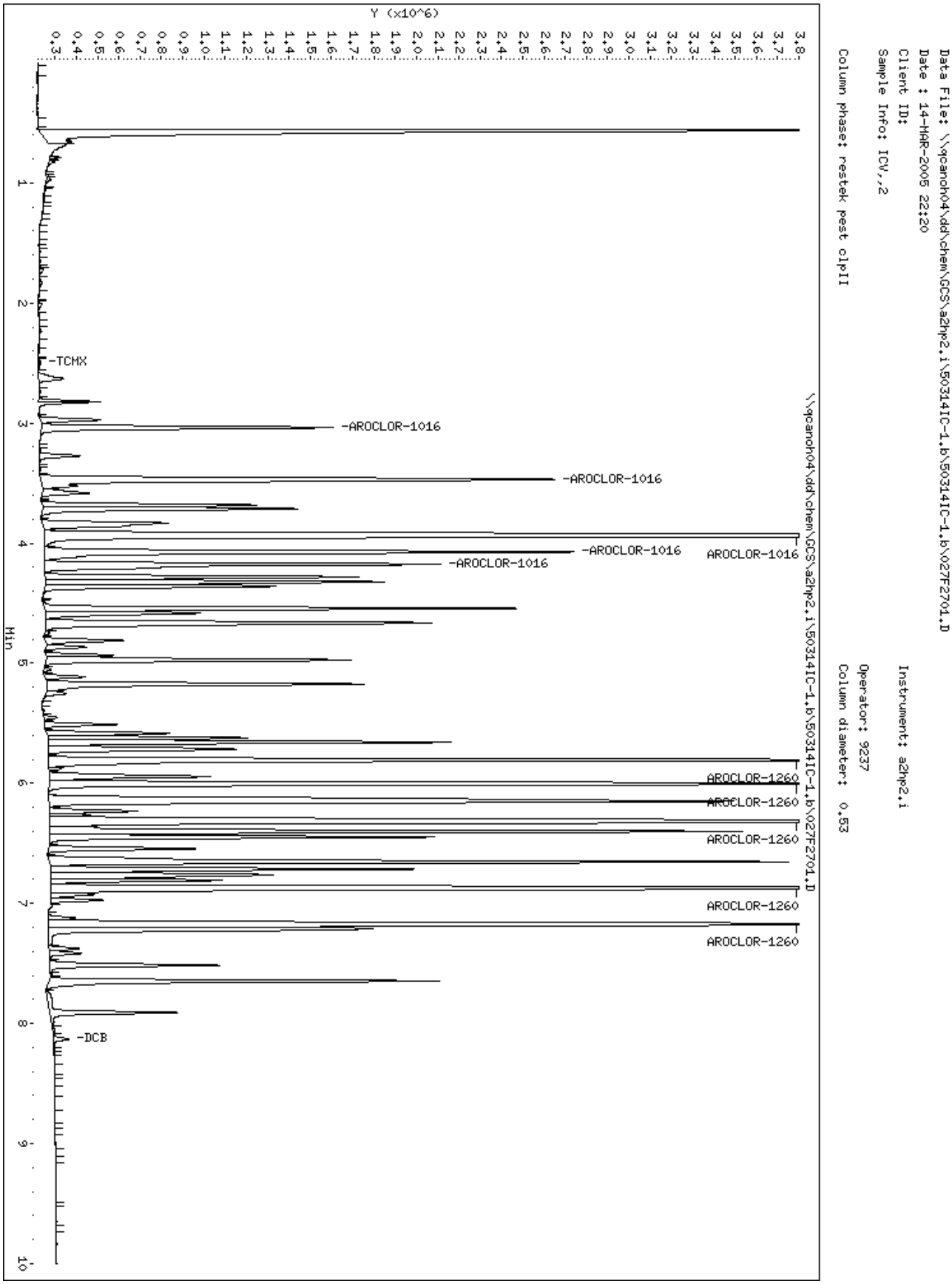
COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	161186790	538640	0.010	100	15.00000	Averaged	<-
3 AROCLOR-1016(1)	2628727	2446303	0.010	6.93962	15.00000	Averaged	
(2)	5313402	5400668	0.010	-1.64238	15.00000	Averaged	
(3)	11430593	11466005	0.010	-0.30980	15.00000	Averaged	
(4)	4683090	4664048	0.010	0.40662	15.00000	Averaged	
(5)	3700758	3660746	0.010	1.08118	15.00000	Averaged	
8 AROCLOR-1260(1)	4017596	4145279	0.010	-3.17811	15.00000	Averaged	
(2)	4734967	5013379	0.010	-5.87991	15.00000	Averaged	
(3)	5163483	5224352	0.010	-1.17884	15.00000	Averaged	
(4)	7296670	7951977	0.010	-8.98090	15.00000	Averaged	
(5)	4420689	4753999	0.010	-7.53978	15.00000	Averaged	
$ 9 DCB	67434042	1511160	0.010	97.75905	15.00000	Averaged	<-

Data File: 027F2701.D
Report Date: 15-Mar-2005 06:37

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\027F2701.D
Lab Smp Id: ICV
Inj Date : 14-MAR-2005 22:20
Operator : 9237 Inst ID: a2hp2.i
Smp Info : ICV,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:37 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.493	2.493	0.000	26932	0.05000	0.0001671		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.036	3.036	0.000	2446303	1.00000	0.9306	80.00- 120.00	100.00
3.468	3.468	0.000	5400668	1.00000	1.016	165.58- 275.96	220.77
3.936	3.936	0.000	11466005	1.00000	1.003	351.53- 585.88	468.71
4.073	4.073	0.000	4664048	1.00000	0.9959	142.99- 238.32	190.66
4.175	4.175	0.000	3660746	1.00000	0.9892	112.23- 187.06	149.64
Average of Peak Amounts =					0.98694		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	4145279	1.00000	1.032	80.00- 120.00	100.00
6.002	6.002	0.000	5013379	1.00000	1.059	90.71- 151.18	120.94
6.318	6.318	0.000	5224352	1.00000	1.012	94.52- 157.54	126.03
6.869	6.869	0.000	7951977	1.00000	1.090	143.87- 239.79	191.83
7.173	7.173	0.000	4753999	1.00000	1.075	86.01- 143.36	114.68
Average of Peak Amounts =					1.05360		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	75558	0.05000	0.001120		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Date : 14-MAR-2005 22:20
Client ID:
Sample Info: ICV,,2
Column phase: restek pest clpII
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\027F2701.D

Data File: 028F2801.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\028F2801.D
Lab Smp Id: 1262
Inj Date : 14-MAR-2005 22:35
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 22:04 Cal File: 026F2601.D
Als bottle: 28 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

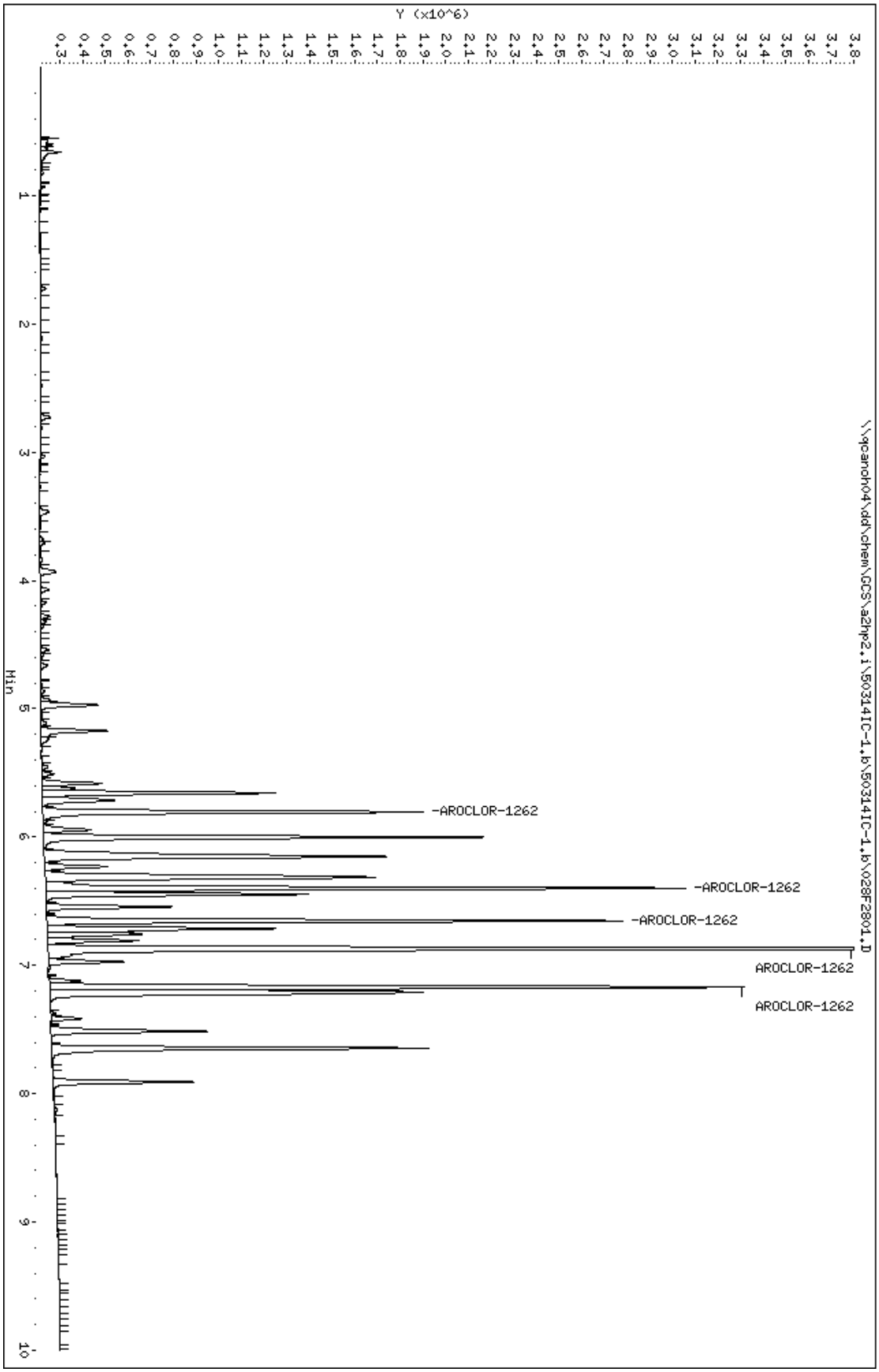
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
13 AROCLOR-1262					CAS #: 37324-23-5		
5.804	5.804	0.000	1677959	0.50000		80.00- 120.00	100.00(M)
6.398	6.398	0.000	2823282	0.50000		126.19- 210.32	168.26
6.653	6.653	0.000	2540664	0.50000		113.56- 189.27	151.41
6.868	6.868	0.000	4905827	0.50000		219.28- 365.46	292.37
7.169	7.169	0.000	3065146	0.50000		137.00- 228.34	182.67

QC Flag Legend

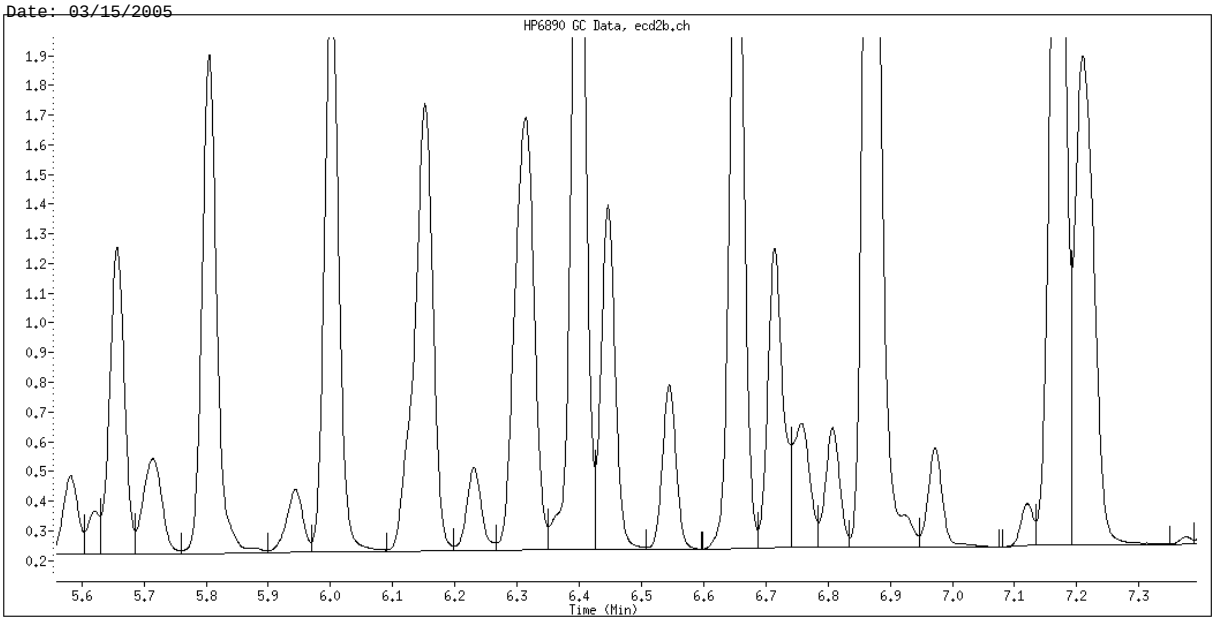
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\028F2801.D
Date : 14-MAR-2005 22:35
Client ID:
Sample Info: 1262,1,3
Column phase: restek pest clpII

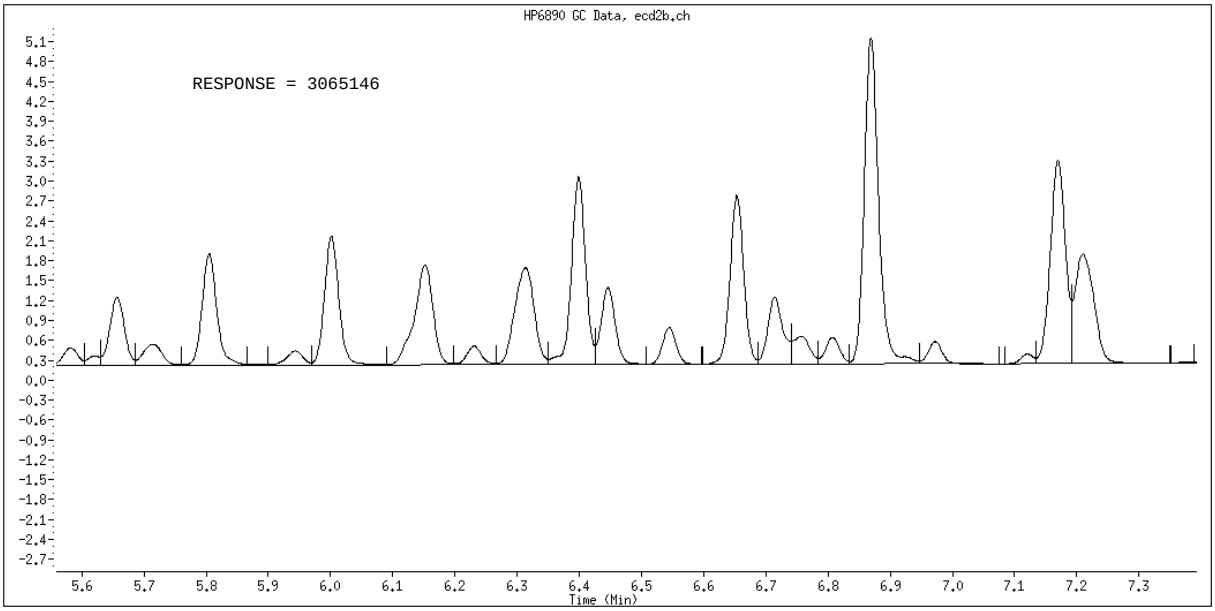
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 028F2801.D
Inj. Date and Time: 14-MAR-2005 22:35
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1262
CAS #: 37324-23-5
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Data File: 029F2901.D
Report Date: 15-Mar-2005 06:31

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D
Lab Smp Id: 1268
Inj Date : 14-MAR-2005 22:51
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 15-Mar-2005 06:31 a2hp2.i Quant Type: ESTD
Cal Date : 14-MAR-2005 22:35 Cal File: 028F2801.D
Als bottle: 29 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

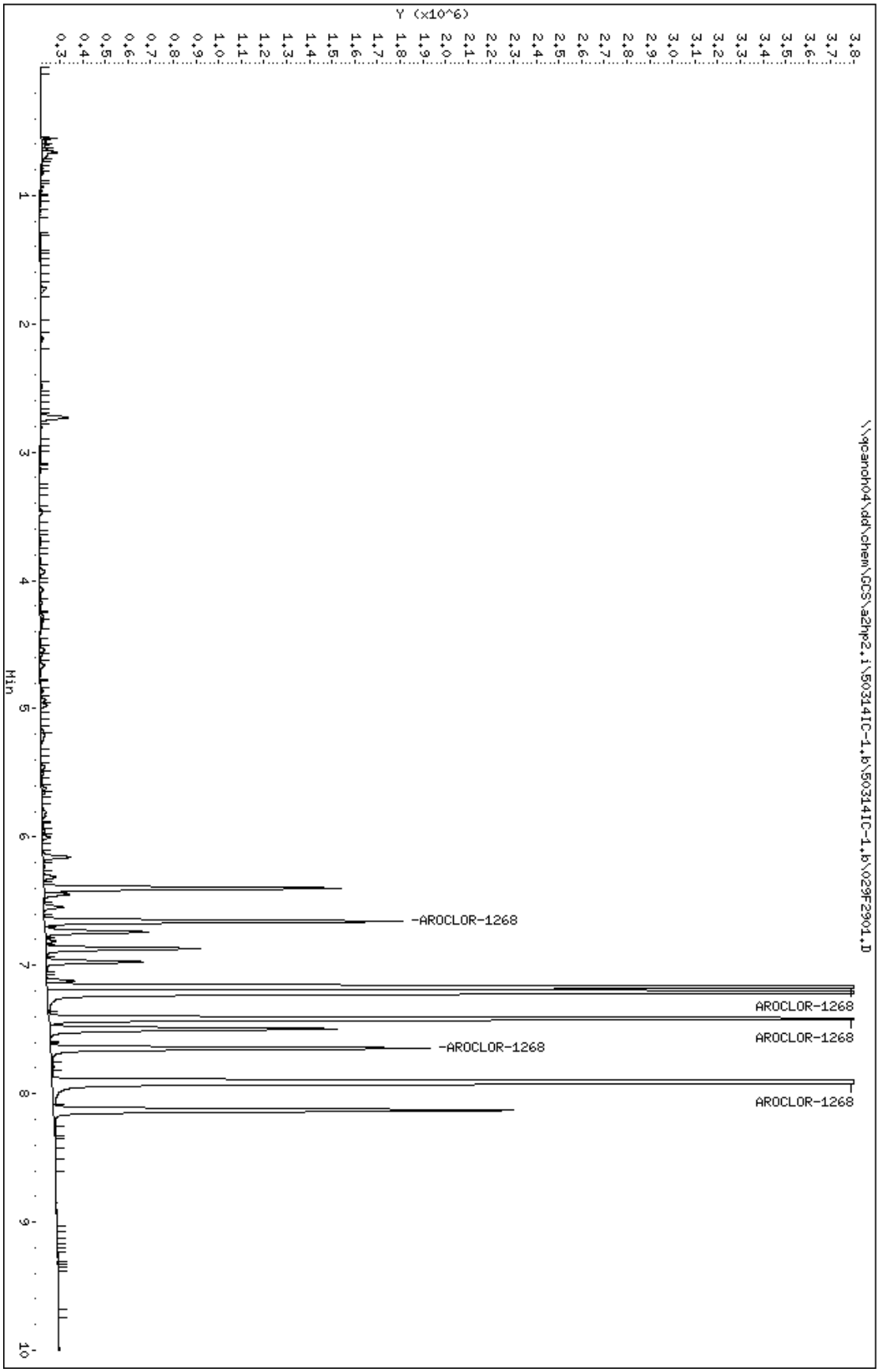
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
14 AROCLOR-1268					CAS #: 11100-14-4		
6.656	6.656	0.000	1581506	0.50000		80.00- 120.00	100.00(M)
7.168	7.168	0.000	5877058	0.50000		278.71- 464.51	371.61
7.415	7.415	0.000	4598561	0.50000		218.08- 363.46	290.77
7.646	7.646	0.000	1674489	0.50000		79.41- 132.35	105.88
7.908	7.908	0.000	11887822	0.50000		563.76- 939.60	751.68

QC Flag Legend

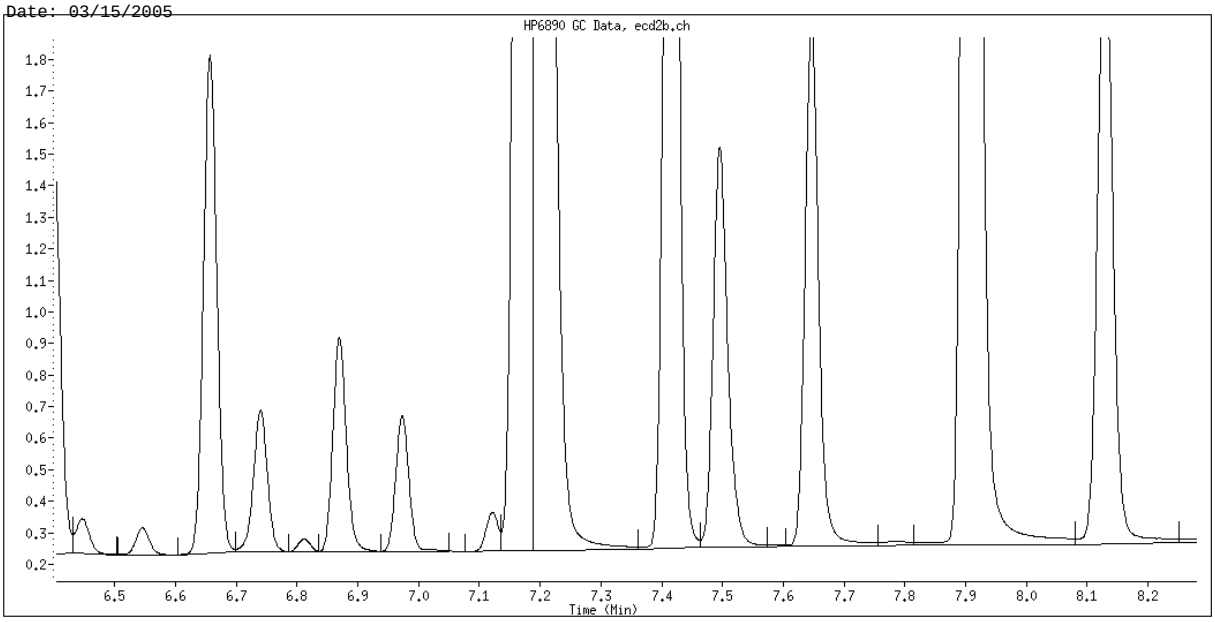
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D
Date : 14-MAR-2005 22:51
Client ID:
Sample Info: 1268,,1,3
Column phase: restek pest clpII

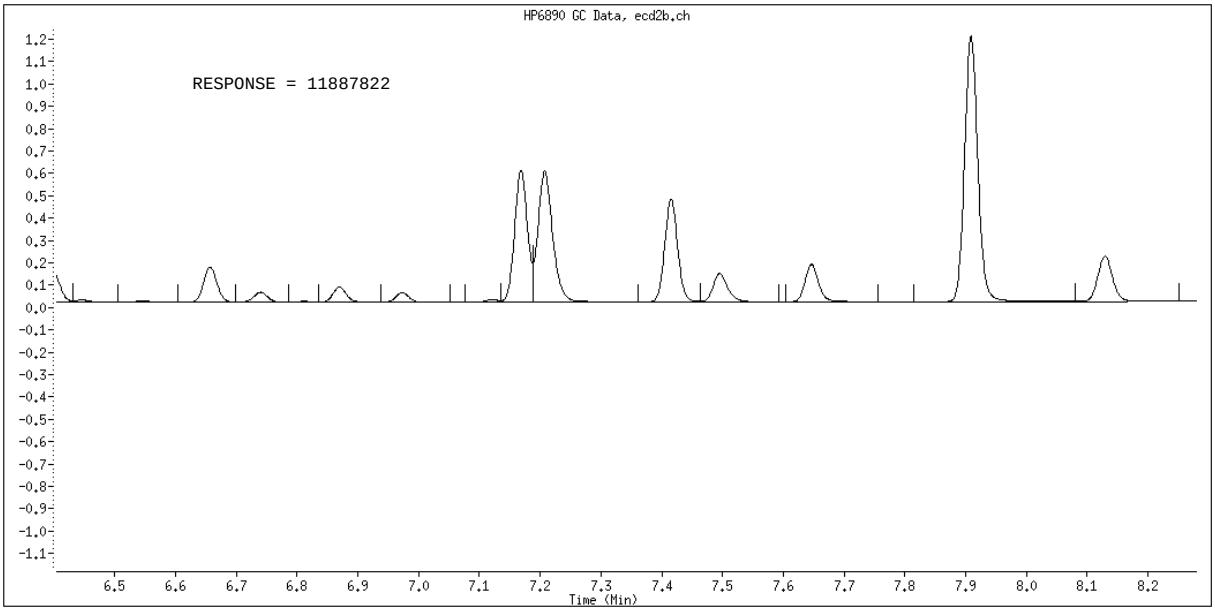
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File Name: 029F2901.D
Inj. Date and Time: 14-MAR-2005 22:51
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1268
CAS #: 11100-14-4
Report Date: 03/15/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Manually Assigned

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\012F0401.D
08-MAR-2005 15:31	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\004F0401.D
Cal Level: 4 , Cal Amount: 1.00000		

08-MAR-2005 20:39	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\025F1201.D
08-MAR-2005 19:38	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\020F0701.D
08-MAR-2005 18:36	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\015F0201.D
08-MAR-2005 17:22	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\010F0201.D
08-MAR-2005 15:07	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\005F0501.D

Cal Level: 5 , Cal Amount: 2.00000

08-MAR-2005 20:51	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\026F1301.D
08-MAR-2005 19:50	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\021F0801.D
08-MAR-2005 18:49	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\016F0301.D
08-MAR-2005 17:34	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\011F0301.D
08-MAR-2005 15:19	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\006F0601.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\028F1501.D
08-MAR-2005 21:03	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\027F1401.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\004F0401.D

Report Date : 09-Mar-2005 08:43

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Last Edit : 09-Mar-2005 08:42 a2hp5.i
Curve Type : Average

Calibration File Names:
Level 1: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\022F0901.D
Level 2: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\023F1001.D
Level 3: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
Level 4: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\025F1201.D
Level 5: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\026F1301.D

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221(1)	1366240	1316865	1263430	1188130	1117485	1250430	7.952
(2)	970450	914095	845496	782436	719246	846345	11.850
(3)	3349290	3184845	3014426	2804350	2605700	2991722	9.884
3 AROCLOR-1016(1)	3198940	2938990	2511230	2453460	2257289	2671982	14.429
(2)	5759440	5340750	4884544	4686084	4375023	5009168	10.911
(3)	11343080	10717160	10297234	10355350	10165996	10575764	4.492
(4)	5122170	4546020	4218246	4158904	4094343	4427937	9.605
(5)	4980940	4427530	4124332	4050151	4001414	4316873	9.416
4 AROCLOR-1232(1)	3197800	2989510	2790322	2682979	2583649	2848852	8.649
(2)	2466660	2219110	2073402	1986279	1951025	2139295	9.826
(3)	4459640	4683085	4368220	4394665	4420086	4465139	2.831
(4)	1869830	2055380	1836306	1818994	1813922	1878886	5.379
(5)	1780860	2056795	1801104	1779368	1719924	1827610	7.204
5 AROCLOR-1242(1)	2702470	2503170	2045178	2016494	1871696	2227802	15.964
(2)	4328570	4130935	3798496	3782116	3526582	3913340	8.078
(3)	8569700	8406560	7872804	8122618	7814872	8157311	4.027
(4)	4013150	3737085	3424200	3435423	3332861	3588544	7.859
(5)	1534280	1519930	1509404	1476476	1435971	1495212	2.633
6 AROCLOR-1248(1)	1452800	1407765	1308238	1177109	1205068	1310196	9.240
(2)	2774130	2695080	2615264	2575539	2532257	2638454	3.664
(3)	3703670	3587495	3425690	3260996	3271970	3449964	5.637
(4)	2057130	2033270	1960902	1884229	1914109	1969928	3.778
(5)	2983030	2930140	2324258	2275964	2296919	2562062	14.092
7 AROCLOR-1254(1)	3583380	3480630	3334880	3206224	3159720	3352967	5.347
(2)	4888830	4712825	4547642	4368479	4444705	4592496	4.572
(3)	6650710	6587040	6445916	6242520	6404584	6466154	2.480
(4)	4635670	4516235	4391034	4241391	4452890	4447444	3.294
(5)	4636630	4448575	4385968	4279011	4486350	4447307	2.963
8 AROCLOR-1260(1)	4792010	4419695	4332808	4305659	4323599	4434754	4.611

Report Date : 09-Mar-2005 08:43

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Last Edit : 09-Mar-2005 08:42 a2hp5.i
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	___ RRF	% RSD	
(2)	6696940	6281380	6201728	6151680	6252324	6316810	3.454	
(3)	5638810	5349220	5376324	5369188	5448354	5436379	2.193	
(4)	3267790	2849010	3026536	2838766	2954409	2987302	5.858	
(5)	7819710	7477550	7767460	7703390	7851646	7723951	1.926	
13 AROCLOR-1262 (1)	+++++	+++++	3667918	+++++	+++++	3667918	0.000	<-
(2)	+++++	+++++	4727840	+++++	+++++	4727840	0.000	<-
(3)	+++++	+++++	6018380	+++++	+++++	6018380	0.000	<-
(4)	+++++	+++++	4649570	+++++	+++++	4649570	0.000	<-
(5)	+++++	+++++	3490548	+++++	+++++	3490548	0.000	<-
14 AROCLOR-1268 (1)	+++++	+++++	2915452	+++++	+++++	2915452	0.000	<-
(2)	+++++	+++++	3493638	+++++	+++++	3493638	0.000	<-
(3)	+++++	+++++	14121246	+++++	+++++	14121246	0.000	<-
(4)	+++++	+++++	11477592	+++++	+++++	11477592	0.000	<-
(5)	+++++	+++++	4193462	+++++	+++++	4193462	0.000	<-
$ 1 TCMX	137017600	143010300	141041120	137570080	150915770	141910974	3.952	
$ 9 DCB	95429800	94036600	90917320	86046900	89162990	91118722	4.132	

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:30
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 12:57 Cal File: 022F2201.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None

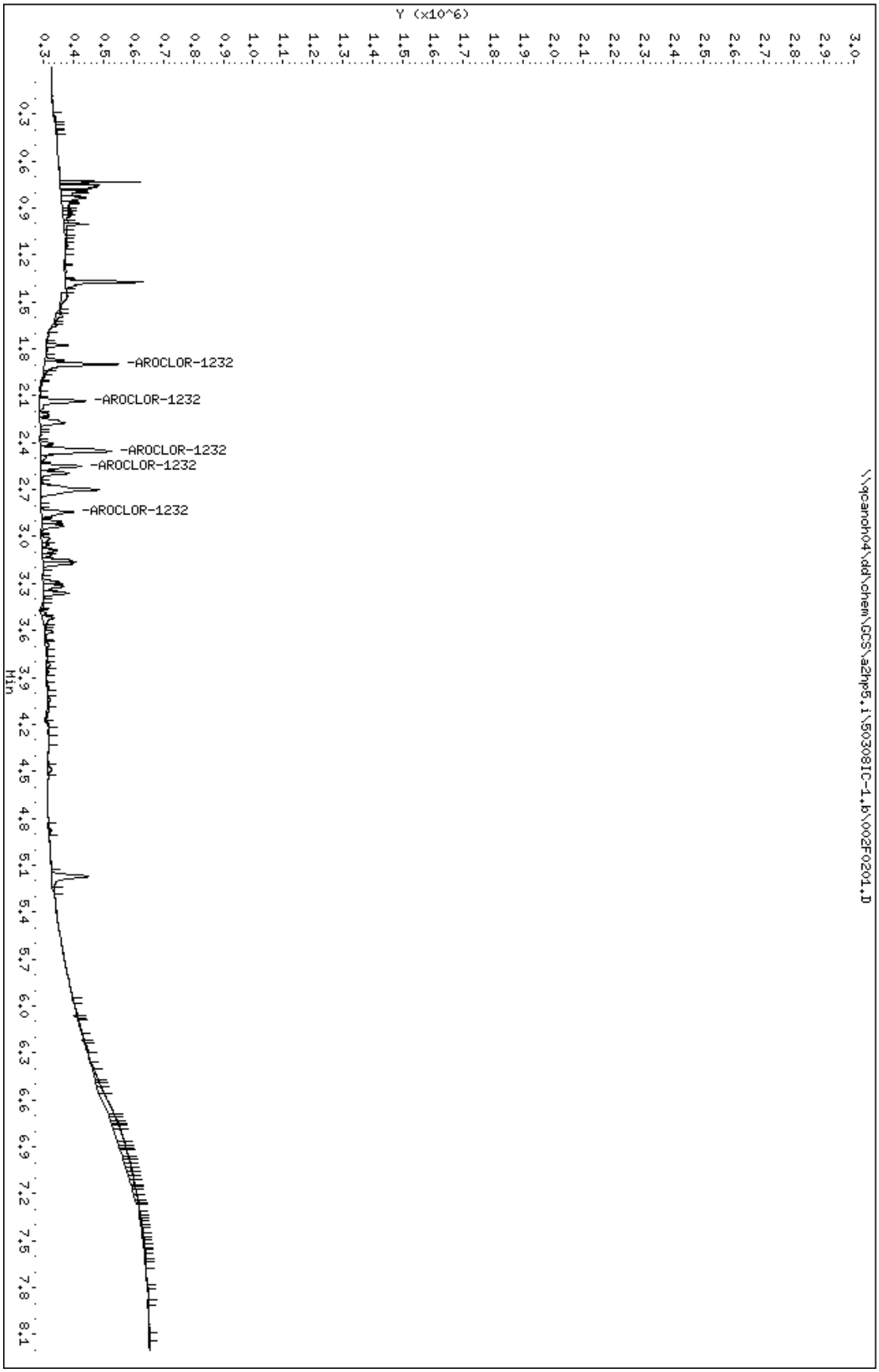
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.899	1.899	0.000	319780	0.10000		75.00- 125.00	100.00(M)
2.133	2.134	-0.001	246666	0.10000		55.73- 92.88	77.14
2.455	2.456	-0.001	445964	0.10000		117.41- 195.69	139.46
2.550	2.551	-0.001	186983	0.10000		49.36- 82.26	58.47
2.842	2.843	-0.001	178086	0.10000		48.41- 80.69	55.69

QC Flag Legend

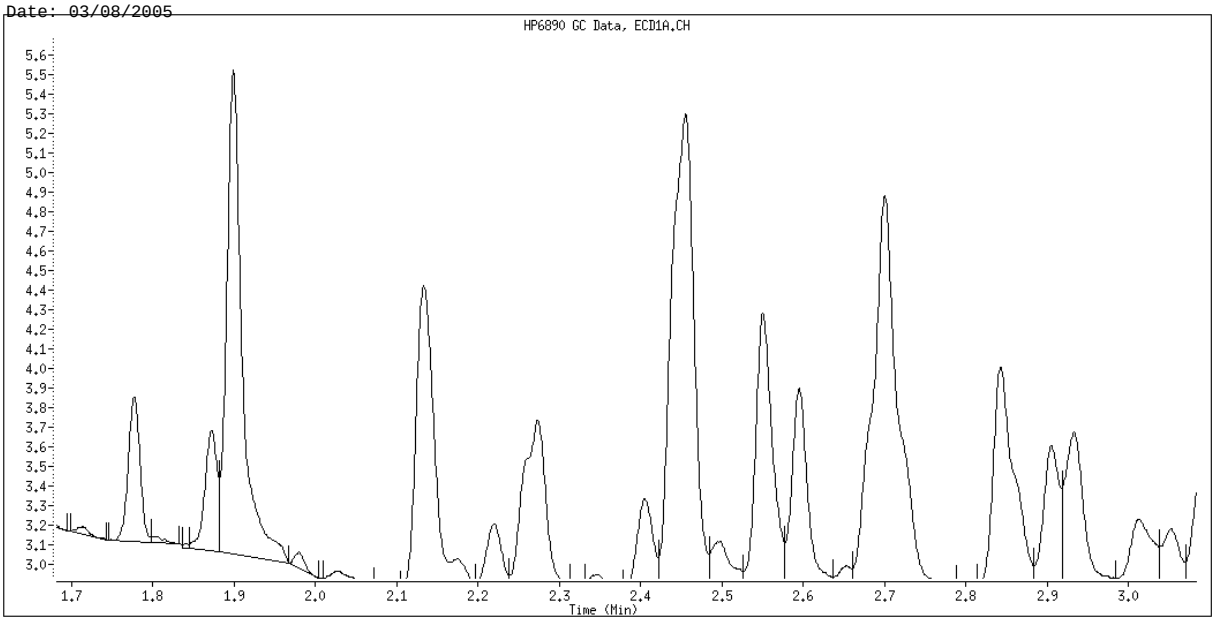
M - Compound response manually integrated.

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\002F0201.D
Date : 08-MAR-2005 14:30
Client ID:
Sample Info: 1232,1:1
Column phase: restek pest clpI

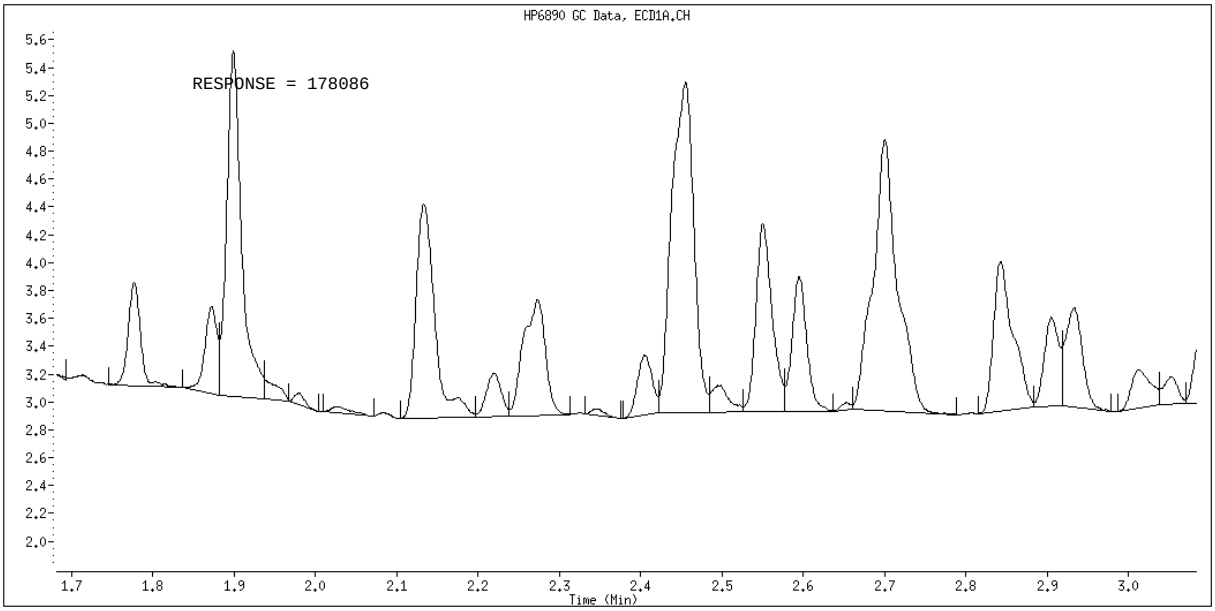
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



Data File Name: 002F0201.D
Inj. Date and Time: 08-MAR-2005 14:30
Instrument ID: a2hp5.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/08/2005



Original Integration



Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Unknown

STL North Canton

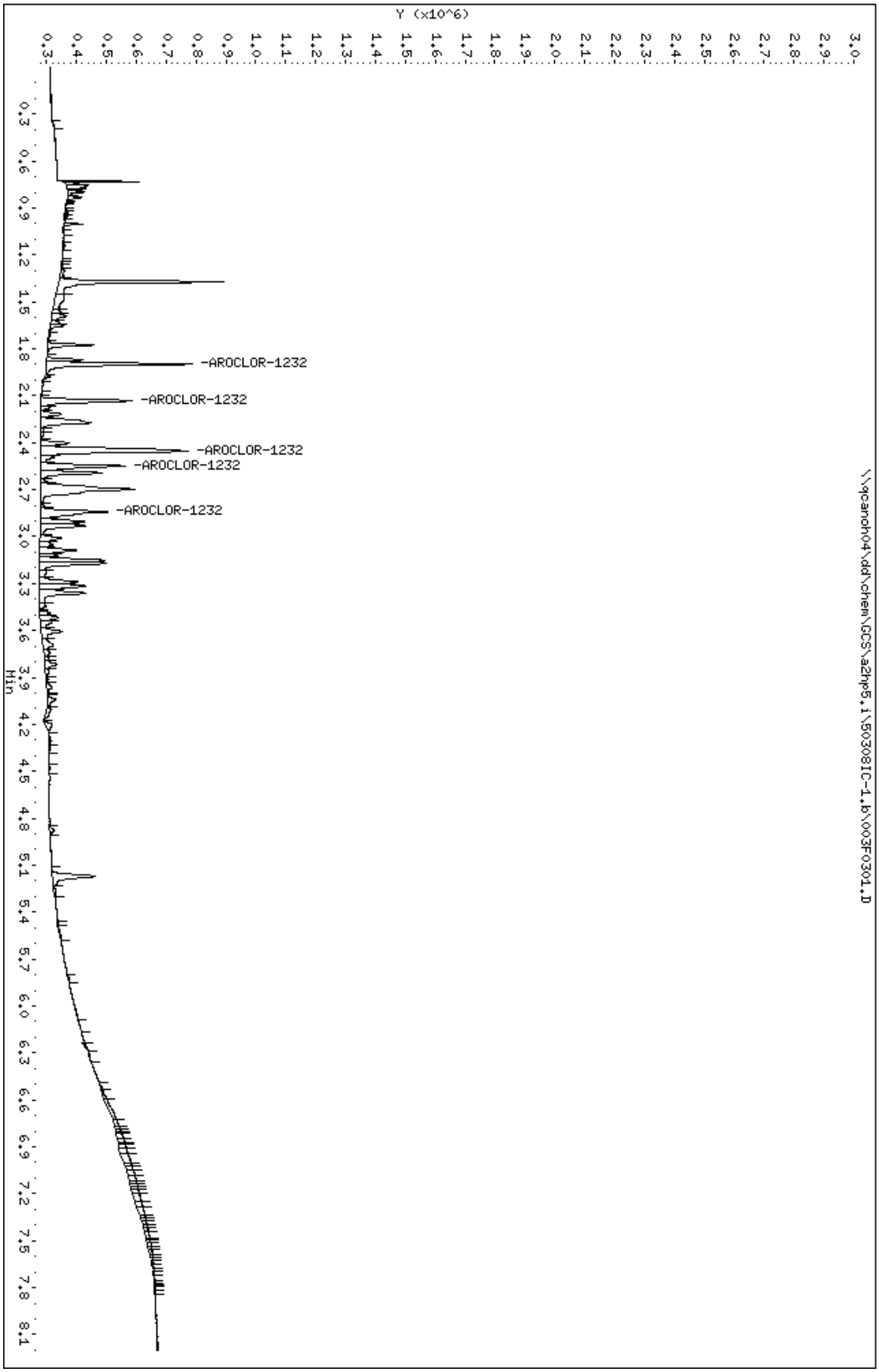
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:42
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 13:08 Cal File: 023F2301.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.898	1.899	-0.001	597902	0.20000	0.1870	75.00- 125.00	100.00
2.132	2.134	-0.002	443822	0.20000	0.1799	55.73- 92.88	74.23
2.454	2.456	-0.002	936617	0.20000	0.2100	117.41- 195.69	156.65
2.549	2.551	-0.002	411076	0.20000	0.2198	49.36- 82.26	68.75
2.841	2.843	-0.002	411359	0.20000	0.2310	48.41- 80.69	68.80

Average of Peak Amounts = 0.20554

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\003F0301.D
Date : 08-MAR-2005 14:42
Client ID:
Sample Info: 1232,1,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



STL North Canton

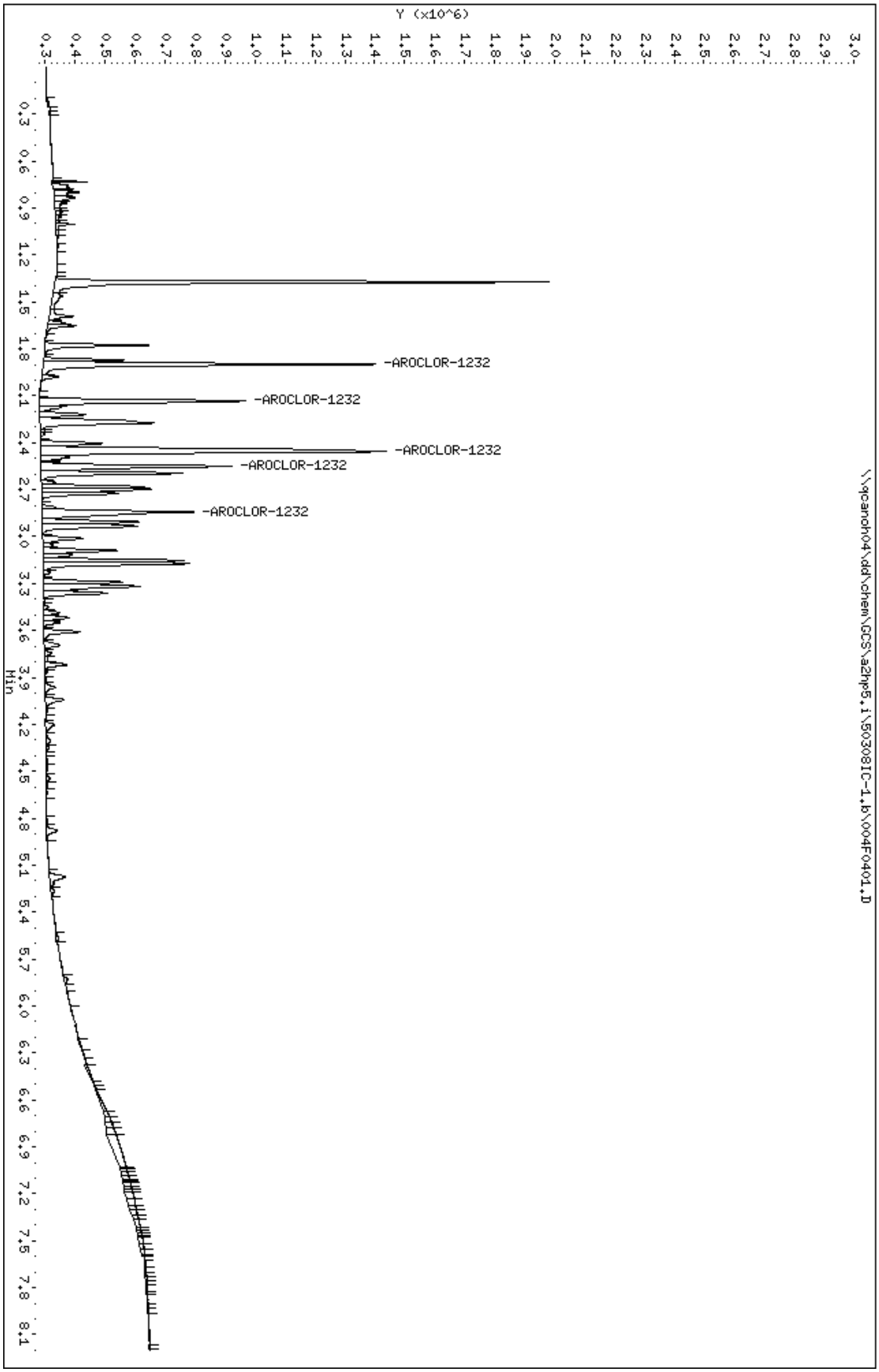
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:55
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.899	1.899	0.000	1395161	0.50000	0.4510	75.00- 125.00	100.00
2.133	2.134	-0.001	1036701	0.50000	0.4425	55.73- 92.88	74.31
2.455	2.456	-0.001	2184110	0.50000	0.4778	117.41- 195.69	156.55
2.550	2.551	-0.001	918153	0.50000	0.4678	49.36- 82.26	65.81
2.843	2.843	0.000	900552	0.50000	0.4693	48.41- 80.69	64.55

Average of Peak Amounts = 0.46168

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\004F0401.D
Date : 08-MAR-2005 14:55
Client ID:
Sample Info: 1232,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



STL North Canton

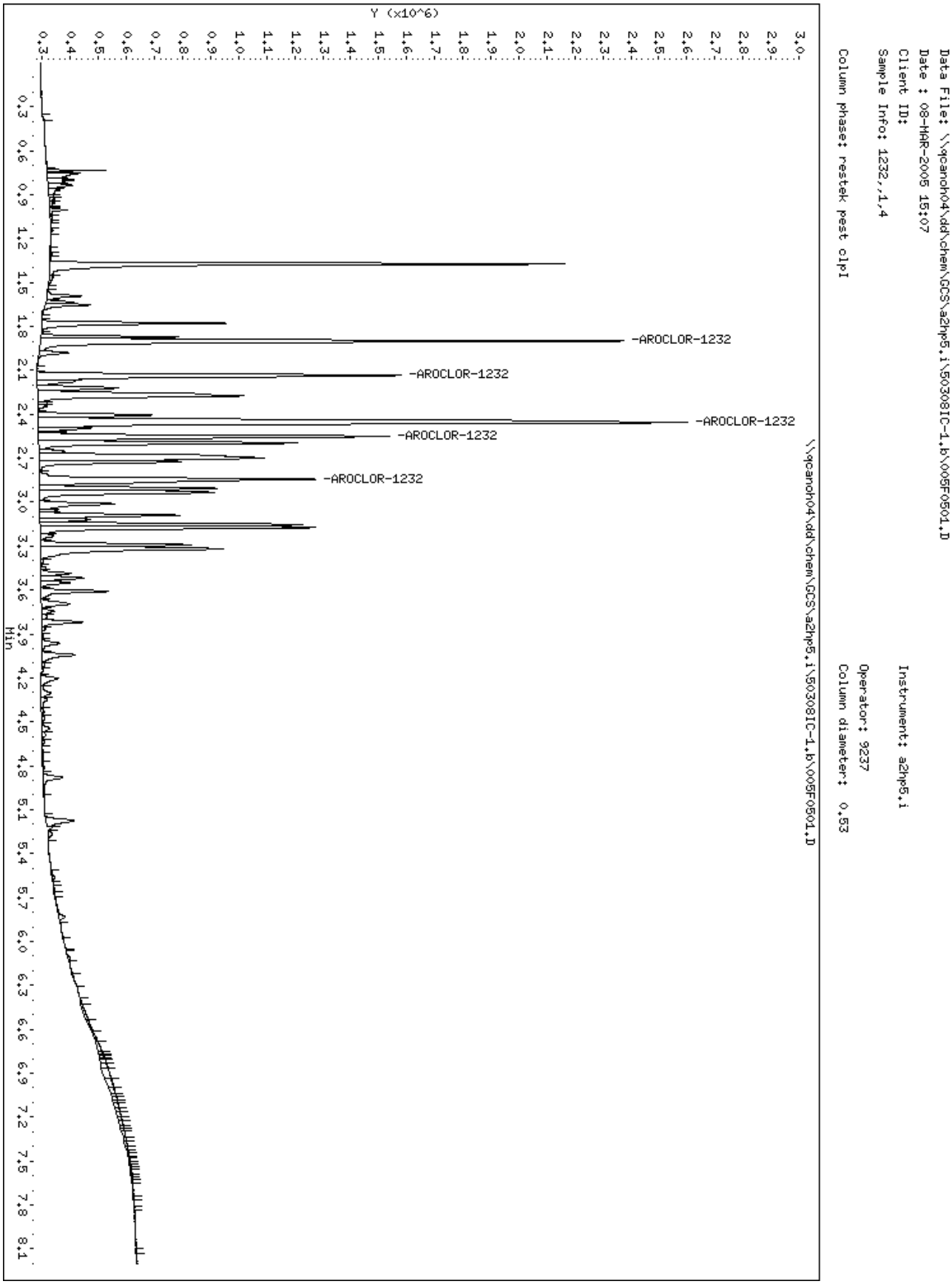
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 15:07
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 14:53 Cal File: 025F2501.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.899	1.899	0.000	2682979	1.00000	0.8966	75.00- 125.00	100.00(M)
2.133	2.134	-0.001	1986279	1.00000	0.8816	55.73- 92.88	74.03
2.455	2.456	-0.001	4394665	1.00000	0.9758	117.41- 195.69	163.80
2.550	2.551	-0.001	1818994	1.00000	0.9471	49.36- 82.26	67.80
2.843	2.843	0.000	1779368	1.00000	0.9467	48.41- 80.69	66.32

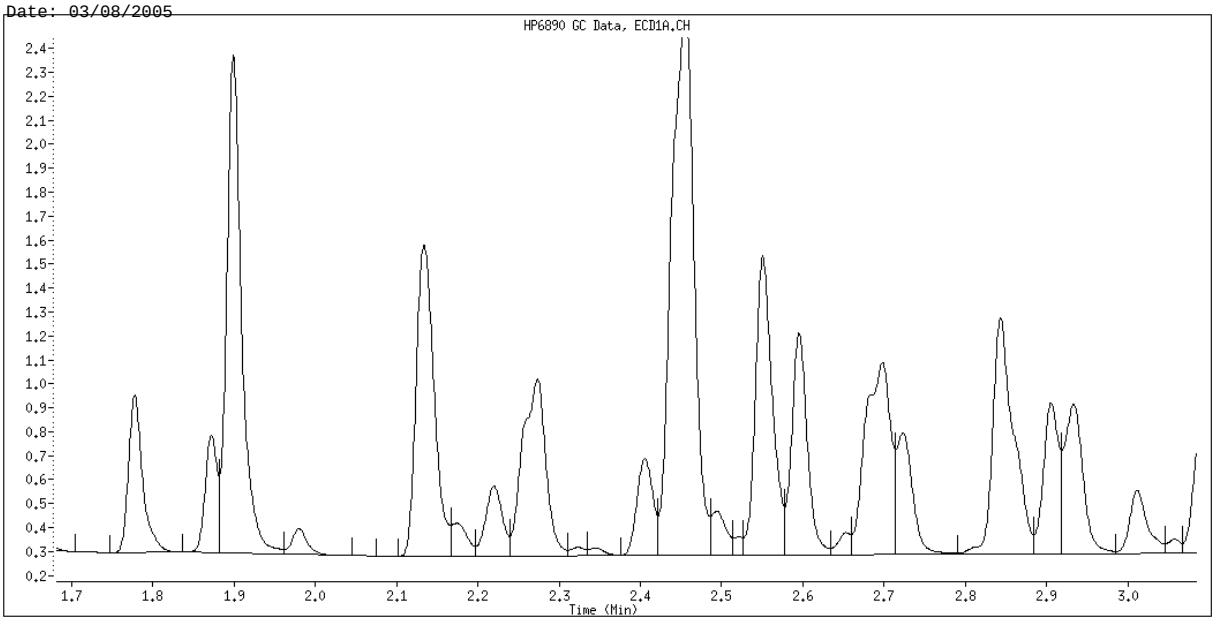
Average of Peak Amounts = 0.92956

QC Flag Legend

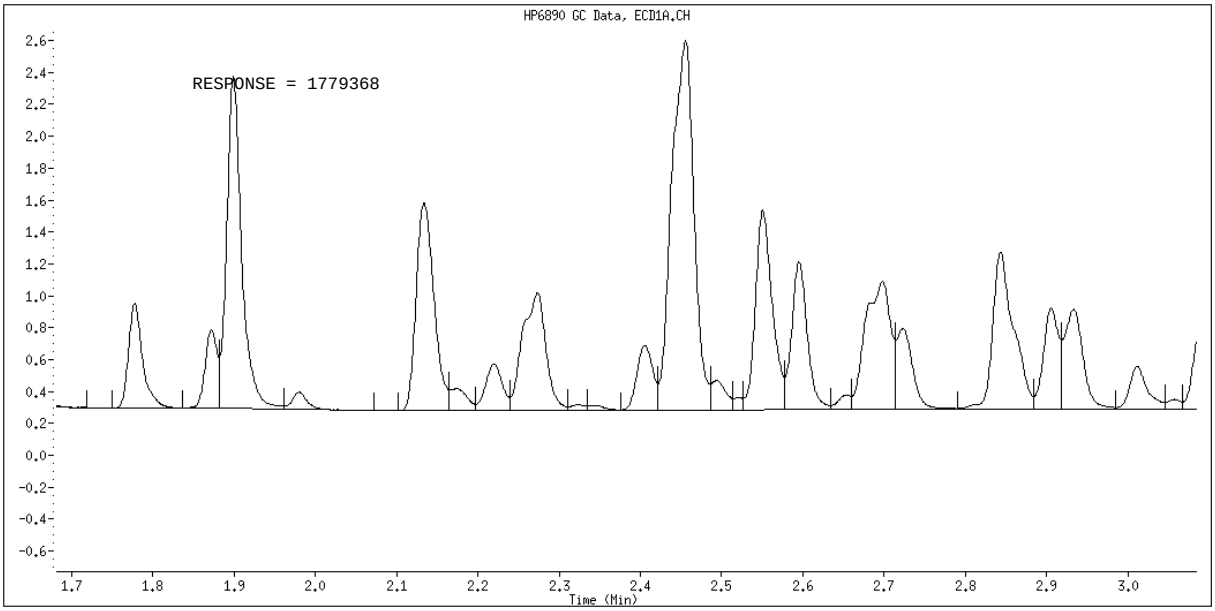
M - Compound response manually integrated.


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\005F0501.D
Date : 08-MAR-2005 15:07
Client ID:
Sample Info: 1232,1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\005F0501.D
Y (x10^6)
-AROCLOR-1232
-AROCLOR-1232
-AROCLOR-1232
-AROCLOR-1232
-AROCLOR-1232
Min

Data File Name: 005F0501.D
Inj. Date and Time: 08-MAR-2005 15:07
Instrument ID: a2hp5.i
Client ID:
Compound Name: AROCLOR-1232
CAS #: 11141-16-5
Report Date: 03/08/2005



Original Integration



Manual Integration

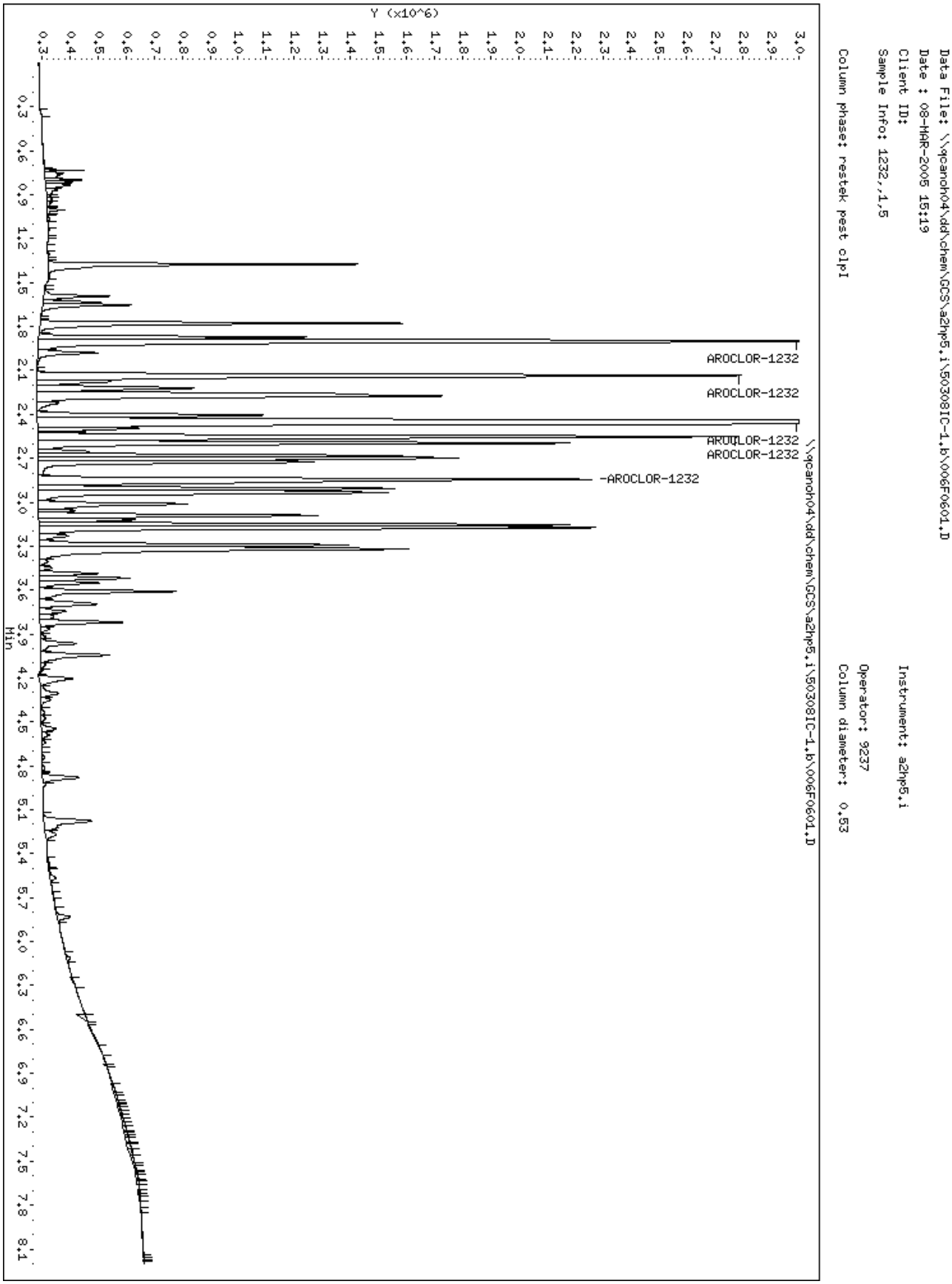
Manually Integrated By: LiC
Manual Integration Reason: Split Peak

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 15:19
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:06 Cal File: 026F2601.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
1.899	1.899	0.000	5167298	2.00000	1.772	75.00- 125.00	100.00
2.134	2.134	0.000	3902050	2.00000	1.785	55.73- 92.88	75.51
2.456	2.456	0.000	8840172	2.00000	1.975	117.41- 195.69	171.08
2.551	2.551	0.000	3627844	2.00000	1.914	49.36- 82.26	70.21
2.843	2.843	0.000	3439847	2.00000	1.855	48.41- 80.69	66.57

Average of Peak Amounts = 1.86020


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\006F0601.D
Date : 08-MAR-2005 15:19
Client ID:
Sample Info: 1232,1,5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\006F0601.D
Y (x10^6)
AROCLOR-1232
AROCLOR-1232
AROCLOR-1232
AROCLOR-1232
-AROCLOR-1232
Min

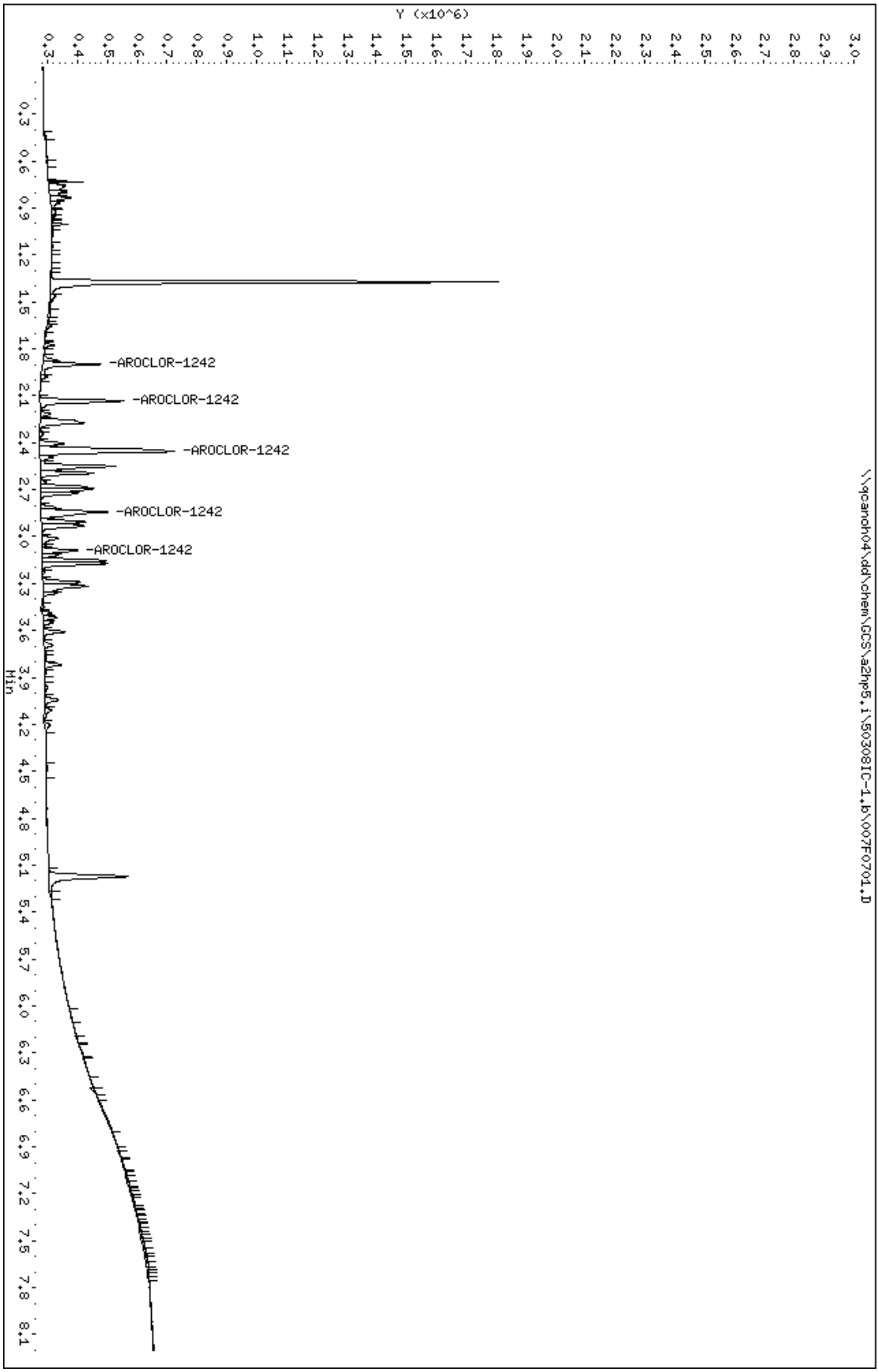
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\007F0701.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 15:31
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 12:57 Cal File: 022F2201.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.898	1.899	-0.001	270247	0.10000		75.00- 125.00	100.00
2.133	2.133	0.000	432857	0.10000		139.30- 232.16	160.17
2.454	2.455	-0.001	856970	0.10000		288.71- 481.18	317.11
2.843	2.842	0.001	401315	0.10000		125.57- 209.28	148.50
3.088	3.089	-0.001	153428	0.10000		55.35- 92.25	56.77

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\007F0701.D
Date : 08-MAR-2005 15:31
Client ID:
Sample Info: 1242,1:1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53

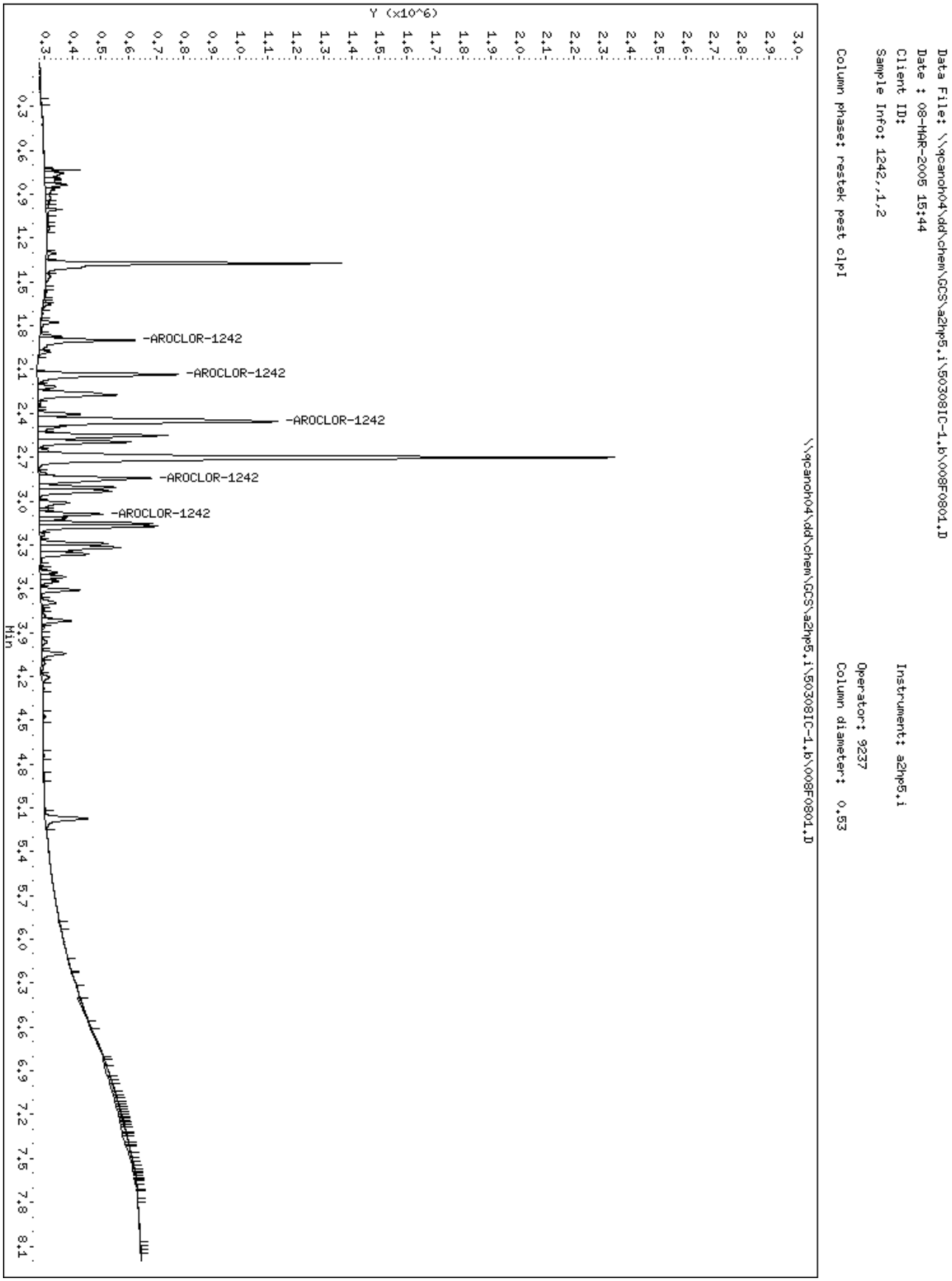


STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 15:44
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 13:08 Cal File: 023F2301.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.899	1.899	0.000	500634	0.20000	0.1852	75.00- 125.00	100.00
2.134	2.133	0.001	826187	0.20000	0.1909	139.30- 232.16	165.03
2.456	2.455	0.001	1681312	0.20000	0.1962	288.71- 481.18	335.84
2.843	2.842	0.001	747417	0.20000	0.1862	125.57- 209.28	149.29
3.090	3.089	0.001	303986	0.20000	0.1981	55.35- 92.25	60.72

Average of Peak Amounts = 0.19132


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\008F0801.D
Date : 08-MAR-2005 15:44
Client ID:
Sample Info: 1242,1,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\008F0801.D
Y (x10^6)
-AROCLOR-1242
-AROCLOR-1242
-AROCLOR-1242
-AROCLOR-1242
-AROCLOR-1242
Min

STL North Canton

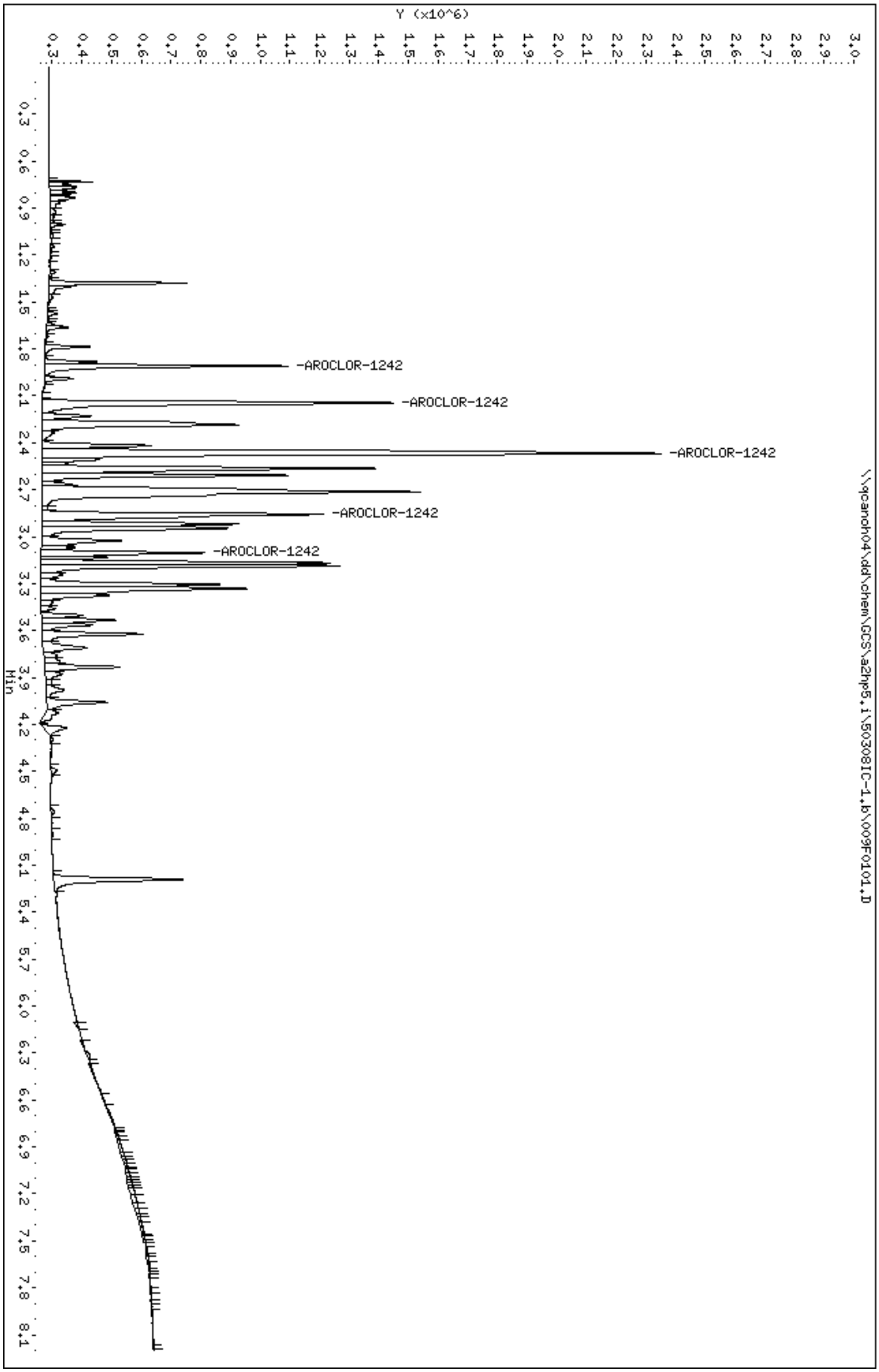
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\009F0101.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:10
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.909	1.899	0.010	1022589	0.50000	0.3929	75.00- 125.00	100.00
2.145	2.133	0.012	1899248	0.50000	0.4490	139.30- 232.16	185.73
2.468	2.455	0.013	3936402	0.50000	0.4638	288.71- 481.18	384.94
2.856	2.842	0.014	1712100	0.50000	0.4418	125.57- 209.28	167.43
3.103	3.089	0.014	754702	0.50000	0.4942	55.35- 92.25	73.80

Average of Peak Amounts = 0.44834

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\009F0101.D
Date : 08-MAR-2005 17:10
Client ID:
Sample Info: 1242,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53

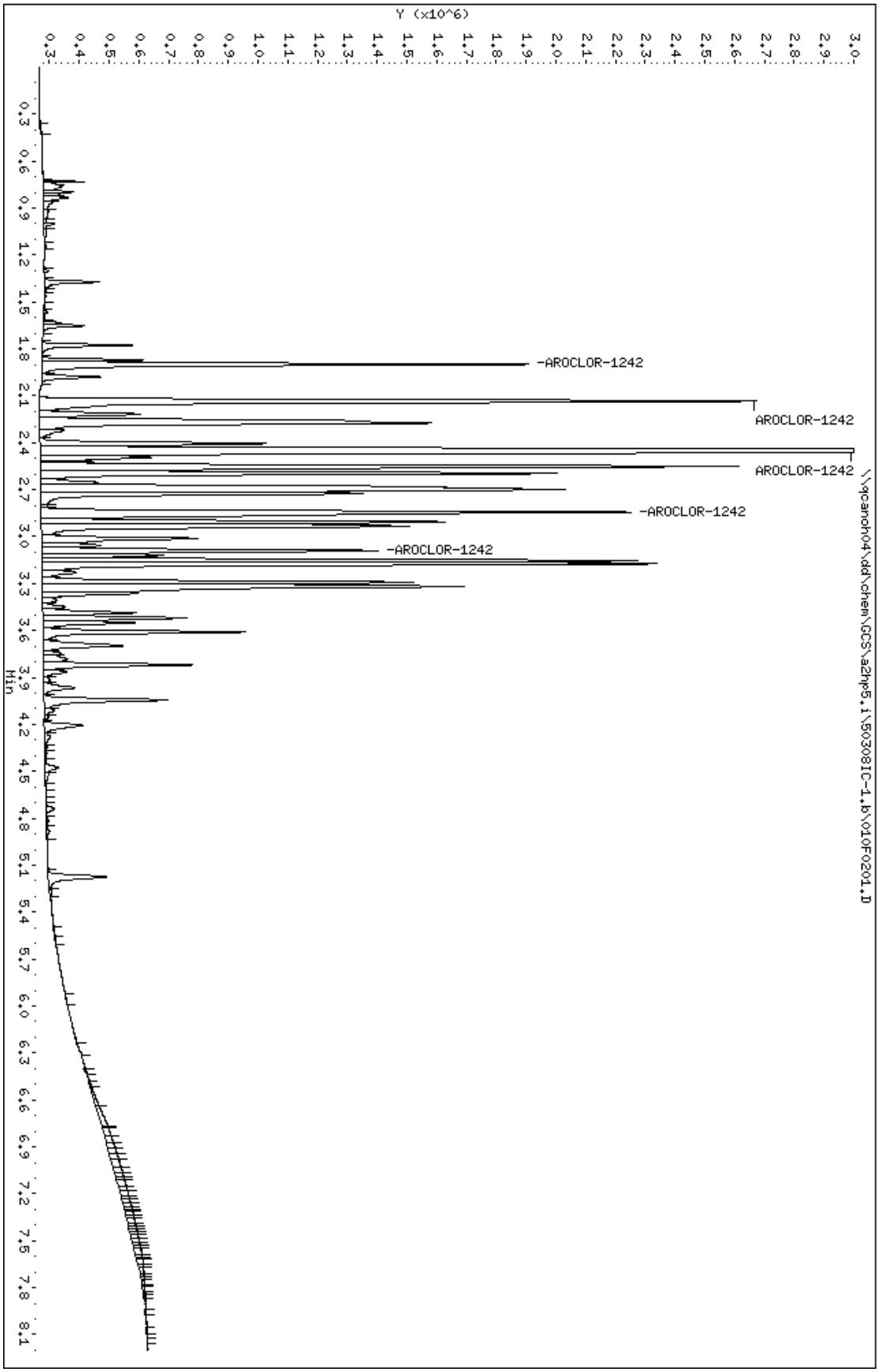


STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\010F0201.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:22
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 14:53 Cal File: 025F2501.D
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.898	1.899	-0.001	2016494	1.00000	0.8343	75.00- 125.00	100.00
2.133	2.133	0.000	3782116	1.00000	0.9256	139.30- 232.16	187.56
2.456	2.455	0.001	8122618	1.00000	0.9806	288.71- 481.18	402.81
2.843	2.842	0.001	3435423	1.00000	0.9223	125.57- 209.28	170.37
3.089	3.089	0.000	1476476	1.00000	0.9706	55.35- 92.25	73.22

Average of Peak Amounts = 0.92668

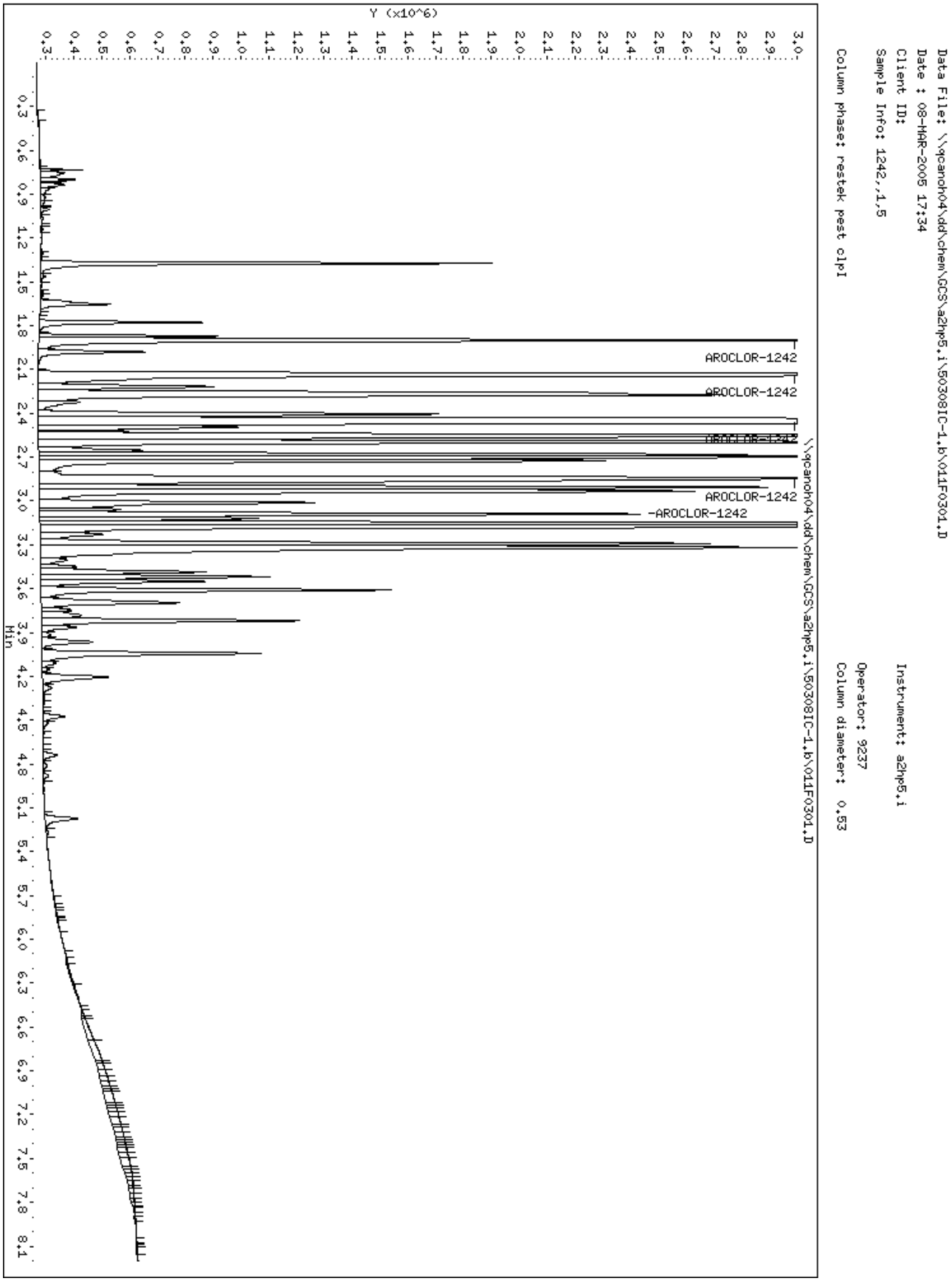

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\010F0201.D
Date : 08-MAR-2005 17:22
Client ID:
Sample Info: 1242,1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
-AROCLOR-1242
-AROCLOR-1242
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\010F0201.D
Min

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\011F0301.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:34
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:06 Cal File: 026F2601.D
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
1.899	1.899	0.000	3743391	2.00000	1.616	75.00- 125.00	100.00
2.133	2.133	0.000	7053163	2.00000	1.759	139.30- 232.16	188.42
2.455	2.455	0.000	15629743	2.00000	1.896	288.71- 481.18	417.53
2.842	2.842	0.000	6665721	2.00000	1.825	125.57- 209.28	178.07
3.089	3.089	0.000	2871941	2.00000	1.902	55.35- 92.25	76.72

Average of Peak Amounts = 1.79960


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\011F0301.D
Date : 08-MAR-2005 17:34
Client ID:
Sample Info: 1242,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
-AROCLOR-1242
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\011F0301.D
Min

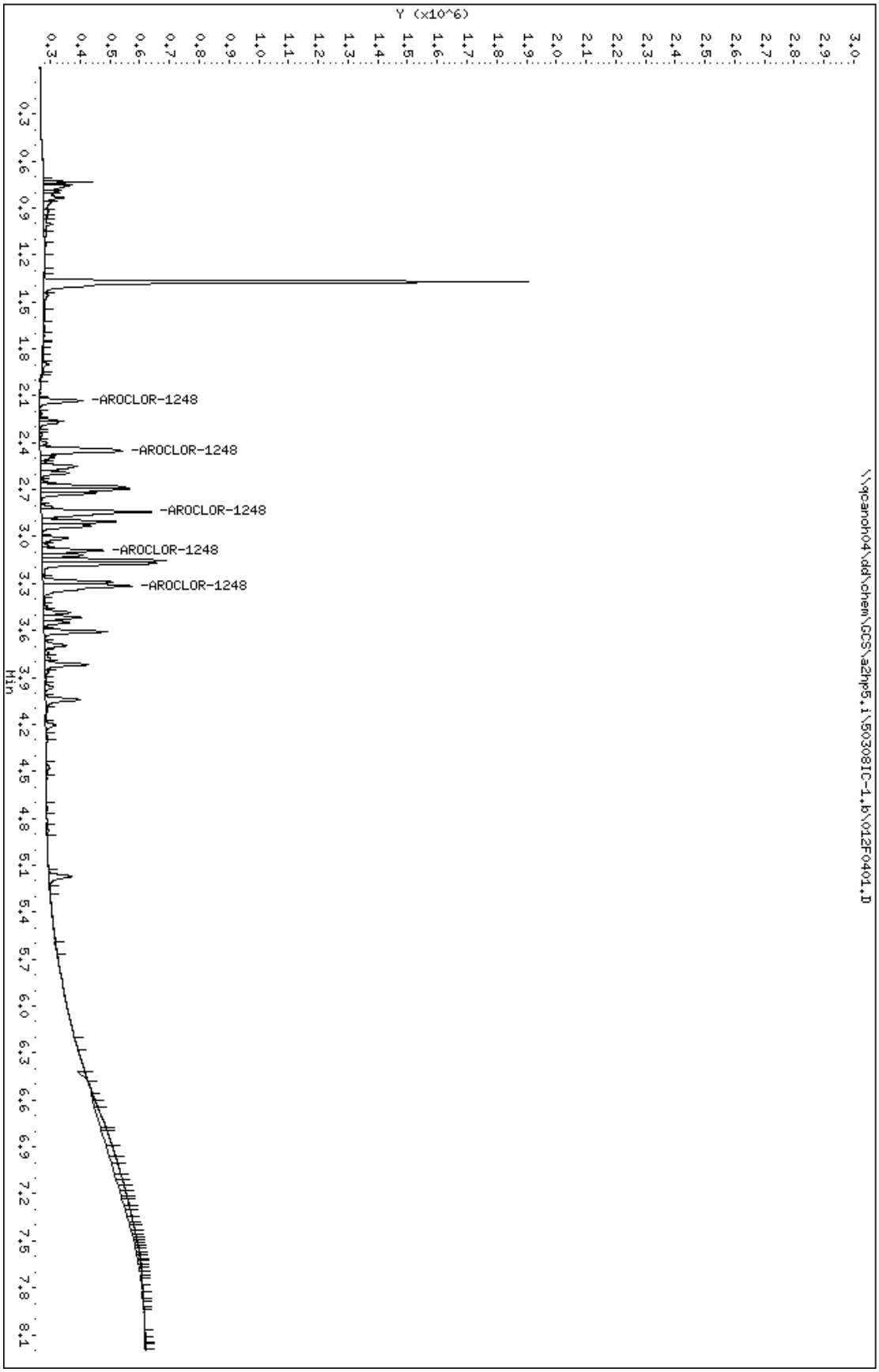
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\012F0401.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 17:46
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 12:57 Cal File: 022F2201.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.132	2.131	0.001	145280	0.10000		75.00- 125.00	100.00
2.453	2.453	0.000	277413	0.10000		149.93- 249.88	190.95
2.842	2.841	0.001	370367	0.10000		196.39- 327.32	254.93
3.088	3.088	0.000	205713	0.10000		112.42- 187.36	141.60
3.316	3.291	0.025	298303	0.10000		133.25- 222.08	205.33

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\012F0401.D
Date : 08-MAR-2005 17:46
Client ID:
Sample Info: 1248,.1,1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



STL North Canton

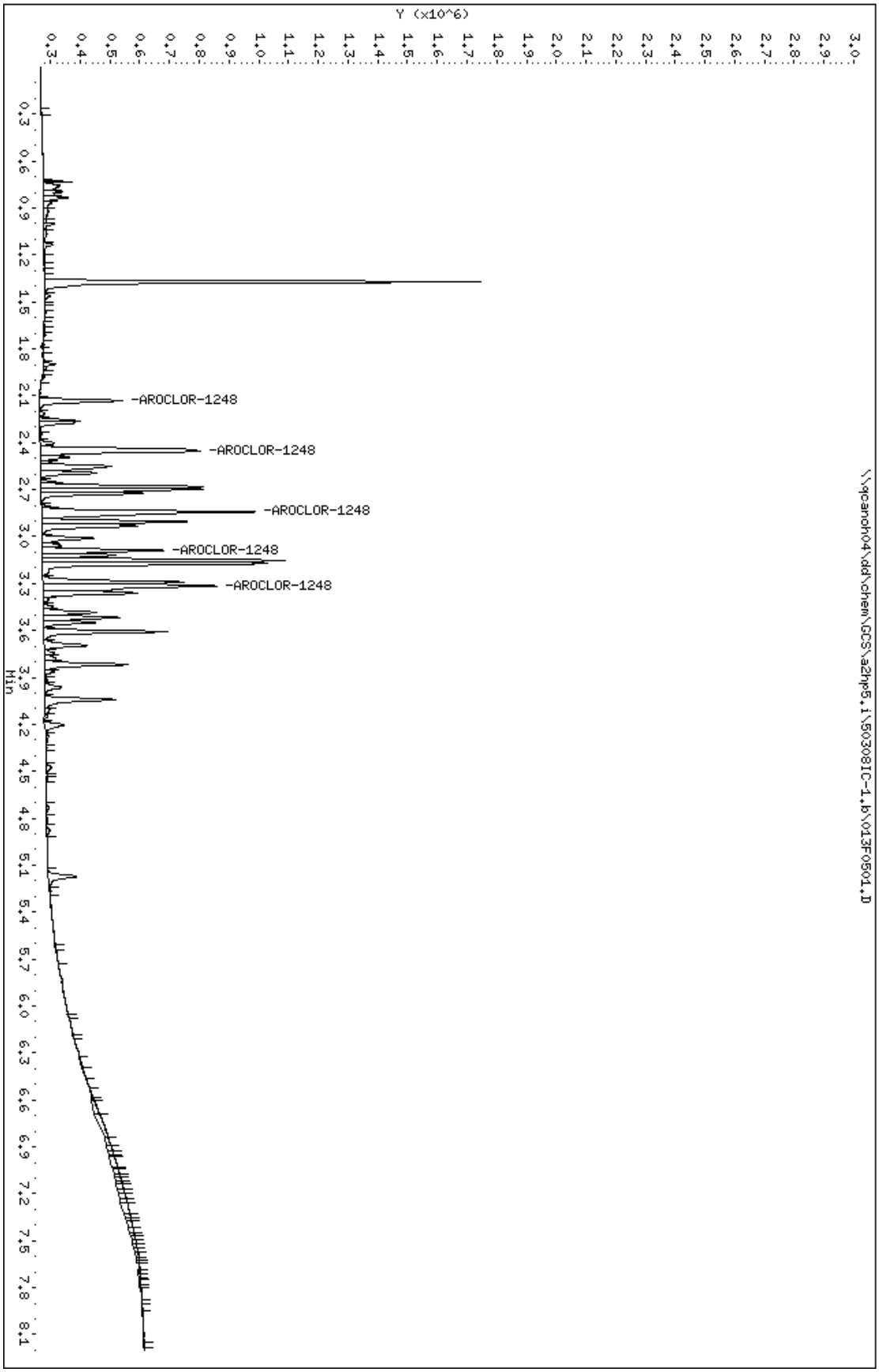
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\013F0501.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 17:58
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 13:08 Cal File: 023F2301.D
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.131	2.131	0.000	281553	0.20000	0.1938	75.00- 125.00	100.00
2.453	2.453	0.000	539016	0.20000	0.1943	149.93- 249.88	191.44
2.842	2.841	0.001	717499	0.20000	0.1937	196.39- 327.32	254.84
3.088	3.088	0.000	406654	0.20000	0.1977	112.42- 187.36	144.43
3.316	3.291	0.025	586028	0.20000	0.1964	133.25- 222.08	208.14

Average of Peak Amounts = 0.19518

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\013F0501.D
Date : 08-MAR-2005 17:58
Client ID:
Sample Info: 1248,.1,2
Column phase: restek pest clpI

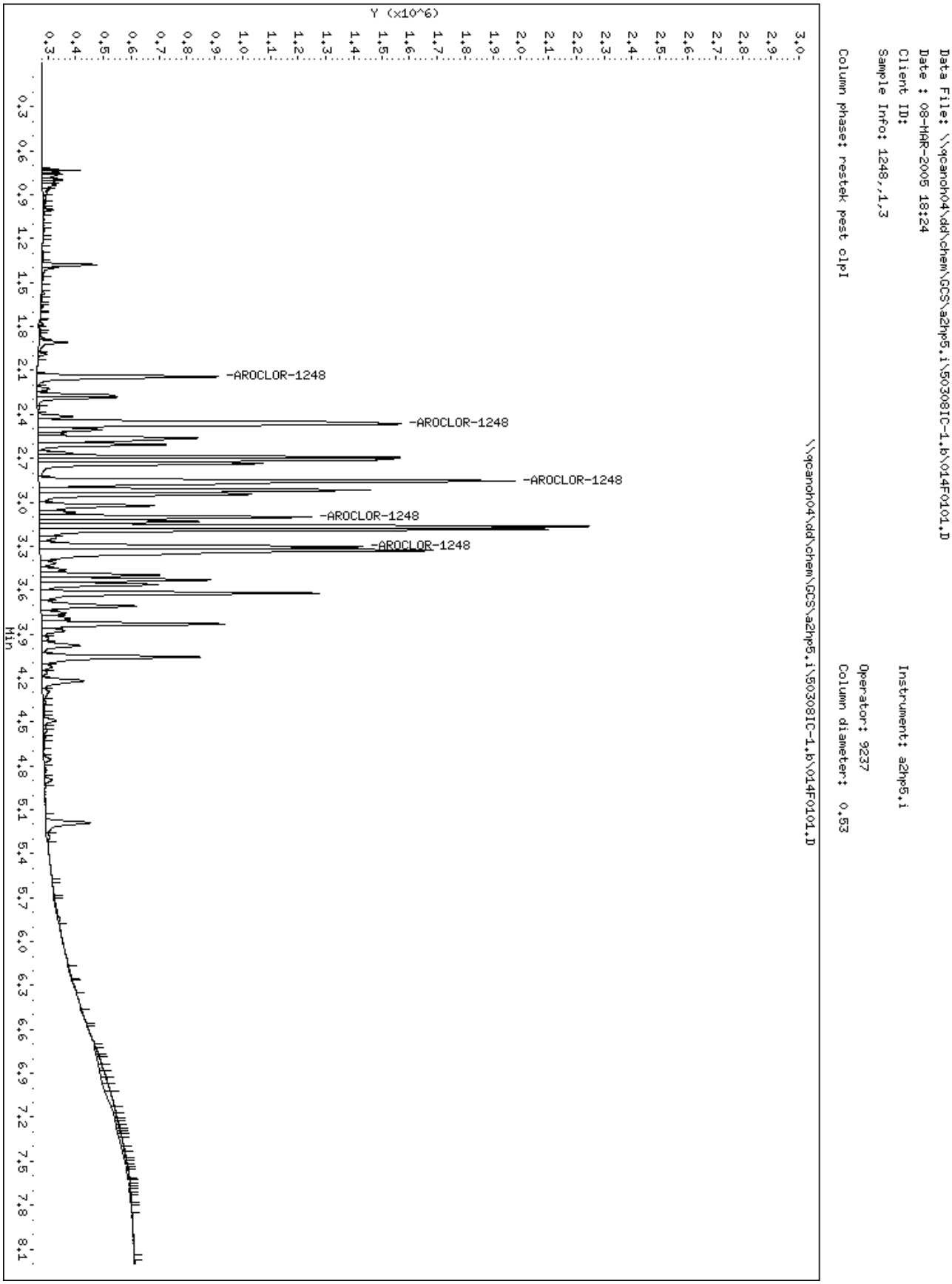
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\014F0101.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:24
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.142	2.131	0.011	654119	0.50000	0.4573	75.00- 125.00	100.00
2.466	2.453	0.013	1307632	0.50000	0.4782	149.93- 249.88	199.91
2.854	2.841	0.013	1712845	0.50000	0.4698	196.39- 327.32	261.86
3.101	3.088	0.013	980451	0.50000	0.4794	112.42- 187.36	149.89
3.304	3.291	0.013	1162129	0.50000	0.3931	133.25- 222.08	177.66
Average of Peak Amounts =					0.45556		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Date : 08-MAR-2005 18:24
Client ID:
Sample Info: 1248,1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
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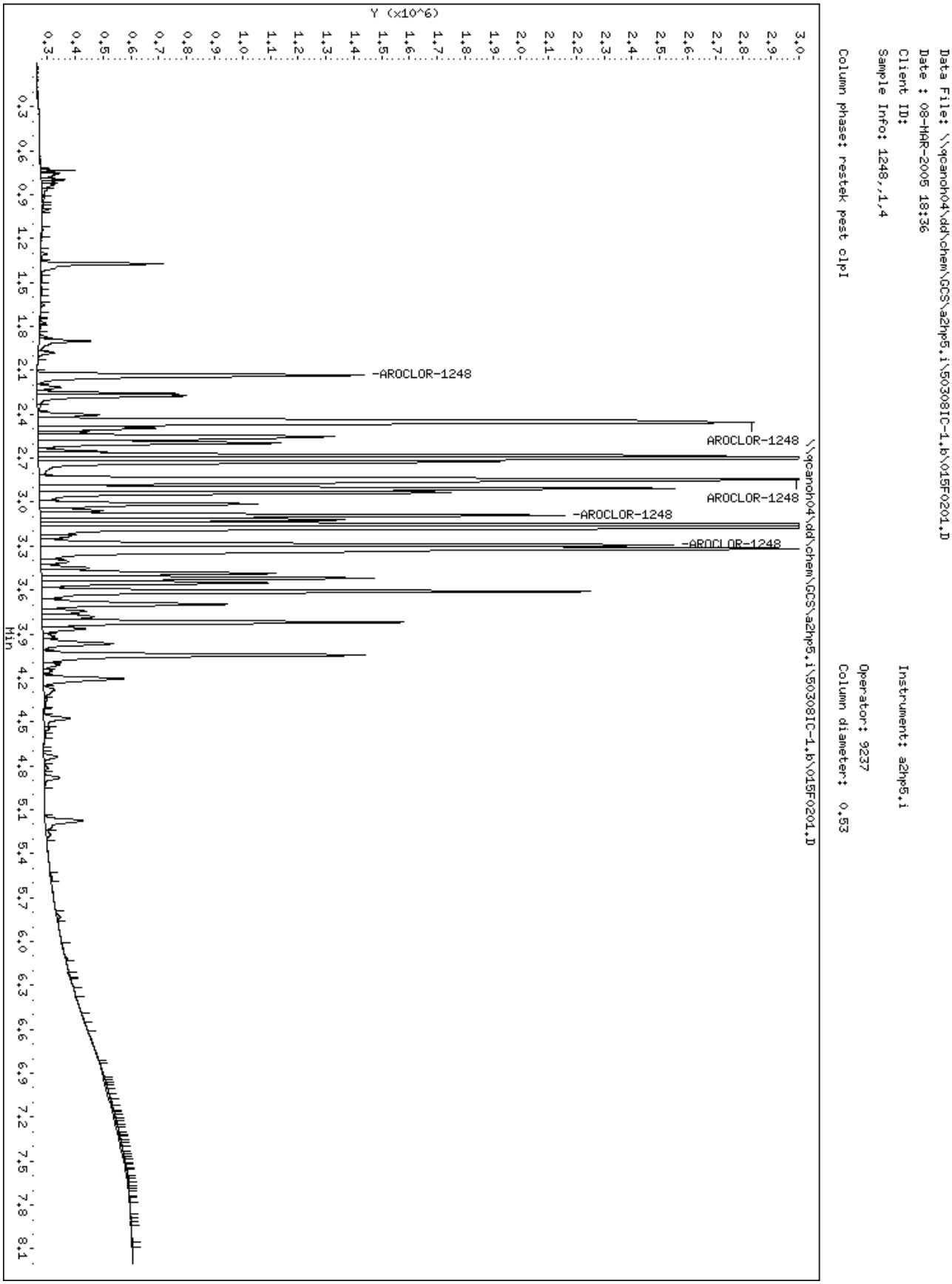
Y (x10^6)
-AROCLOR-1248
-AROCLOR-1248
-AROCLOR-1248
-AROCLOR-1248
-AROCLOR-1248
Min

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\015F0201.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:36
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 14:53 Cal File: 025F2501.D
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.132	2.131	0.001	1177109	1.00000	0.8471	75.00- 125.00	100.00
2.455	2.453	0.002	2575539	1.00000	0.9557	149.93- 249.88	218.80
2.843	2.841	0.002	3260996	1.00000	0.9128	196.39- 327.32	277.03
3.090	3.088	0.002	1884229	1.00000	0.9341	112.42- 187.36	160.07
3.292	3.291	0.001	2275964	1.00000	0.8289	133.25- 222.08	193.35

Average of Peak Amounts = 0.89572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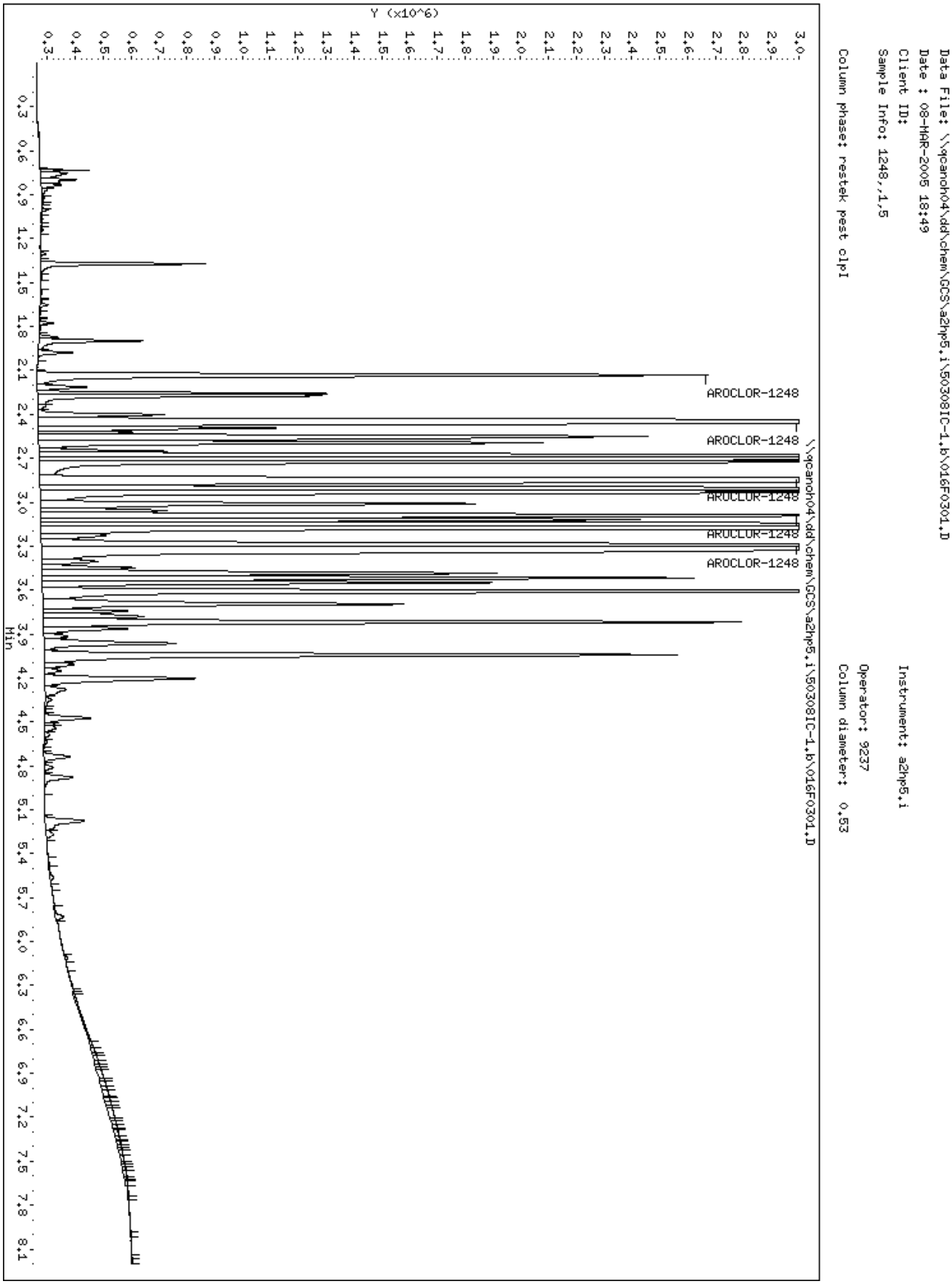
Date : 08-MAR-2005 18:36
Client ID:
Sample Info: 1248,.1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
-AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
-AROCLOR-1248
-AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\015F0201.D
Min

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\016F0301.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:49
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:06 Cal File: 026F2601.D
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.131	2.131	0.000	2410135	2.00000	1.803	75.00- 125.00	100.00
2.453	2.453	0.000	5064513	2.00000	1.900	149.93- 249.88	210.13
2.841	2.841	0.000	6543939	2.00000	1.873	196.39- 327.32	271.52
3.088	3.088	0.000	3828218	2.00000	1.930	112.42- 187.36	158.84
3.291	3.291	0.000	4593838	2.00000	1.748	133.25- 222.08	190.61

Average of Peak Amounts = 1.85080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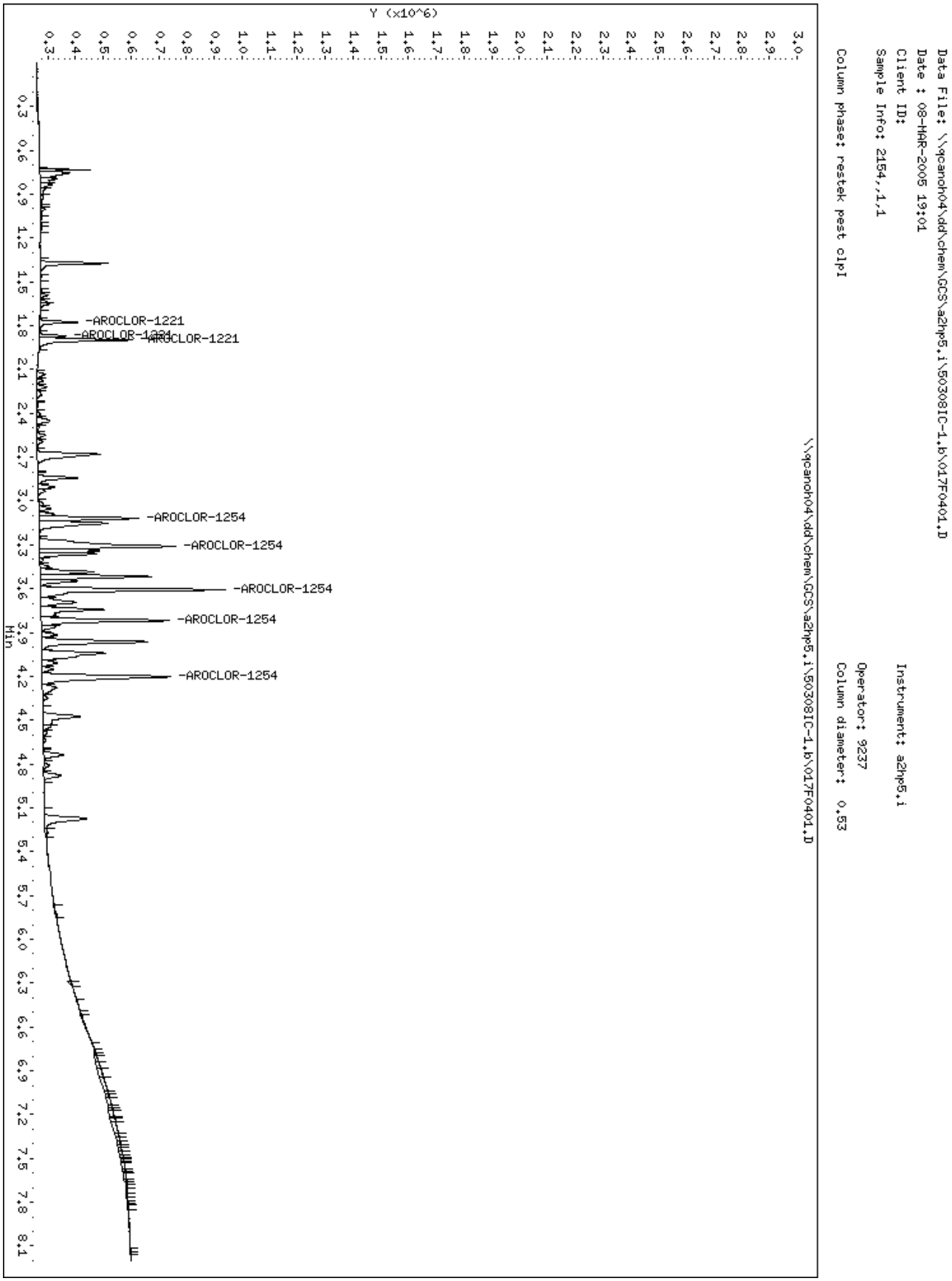
Date : 08-MAR-2005 18:49
Client ID:
Sample Info: 1248,.1,5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\016F0301.D
Min

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\017F0401.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:01
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 12:57 Cal File: 022F2201.D
Als bottle: 17 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.119	3.119	0.000	358338	0.10000		75.00- 125.00	100.00
3.310	3.310	0.000	488883	0.10000		102.27- 170.46	136.43
3.608	3.609	-0.001	665071	0.10000		144.97- 241.61	185.60
3.818	3.819	-0.001	463567	0.10000		98.75- 164.59	129.37
4.203	4.204	-0.001	463663	0.10000		98.64- 164.40	129.39
2 AROCLOR-1221					CAS #: 11104-28-2		
1.777	1.777	0.000	136624	0.10000		75.00- 125.00	100.00
1.871	1.871	0.000	97045	0.10000		50.19- 83.65	71.03
1.898	1.898	0.000	334929	0.10000		178.94- 298.24	245.15


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\017F0401.D
Date : 08-MAR-2005 19:01
Client ID:
Sample Info: 2154,,1,1
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
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Y (x10^6)
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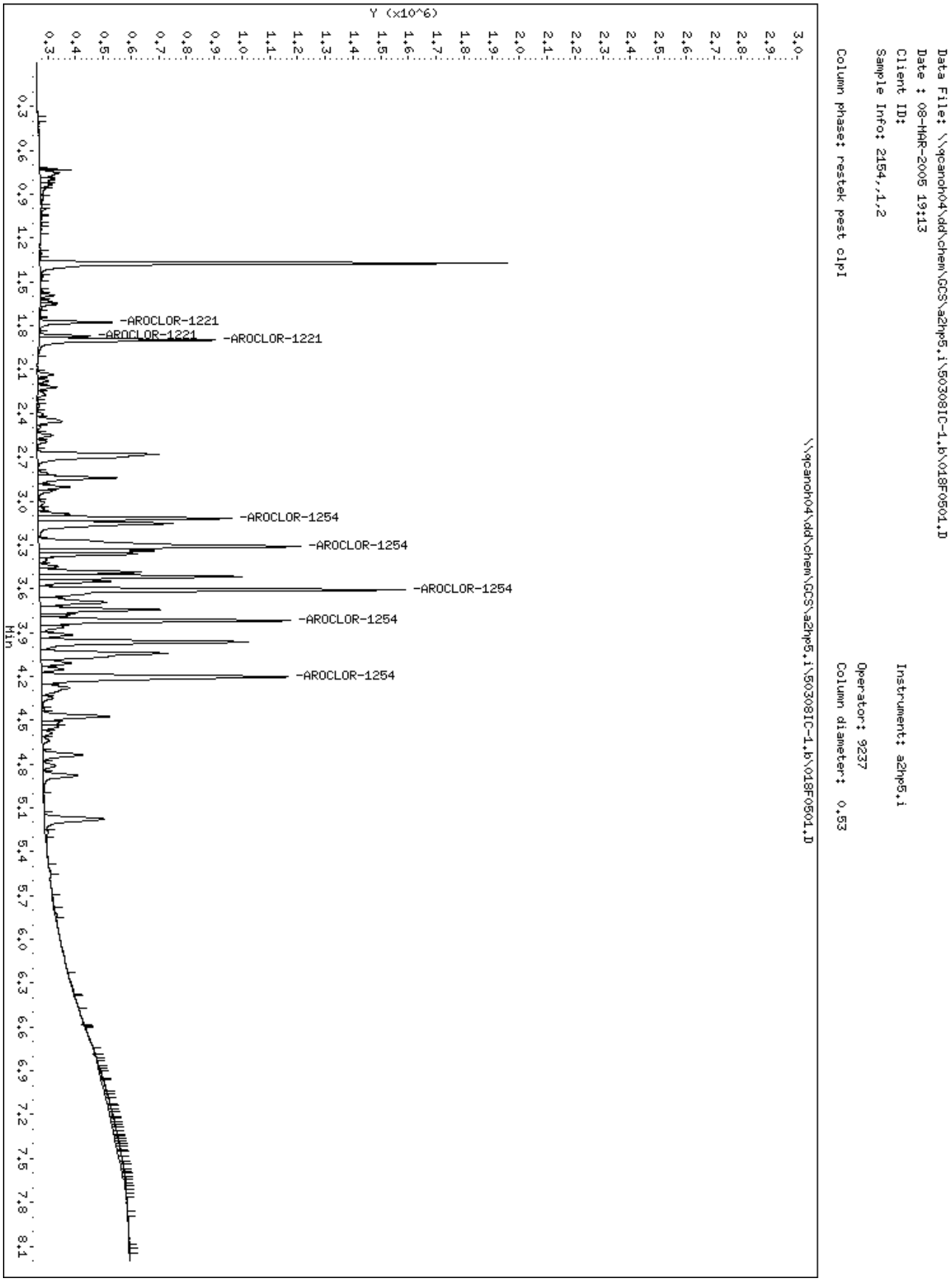
-AROCLOR-1221
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
Min

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\018F0501.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:13
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 13:08 Cal File: 023F2301.D
Als bottle: 18 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.119	3.119	0.000	696126	0.20000	0.1943	75.00- 125.00	100.00
3.311	3.310	0.001	942565	0.20000	0.1928	102.27- 170.46	135.40
3.608	3.609	-0.001	1317408	0.20000	0.1981	144.97- 241.61	189.25
3.818	3.819	-0.001	903247	0.20000	0.1948	98.75- 164.59	129.75
4.203	4.204	-0.001	889715	0.20000	0.1919	98.64- 164.40	127.81
		Average of Peak Amounts =			0.19438		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.776	1.777	-0.001	263373	0.20000	0.1928	75.00- 125.00	100.00
1.871	1.871	0.000	182819	0.20000	0.1884	50.19- 83.65	69.41
1.898	1.898	0.000	636969	0.20000	0.1902	178.94- 298.24	241.85
		Average of Peak Amounts =			0.19047		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Date : 08-MAR-2005 19:13
Client ID:
Sample Info: 2154,.1,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
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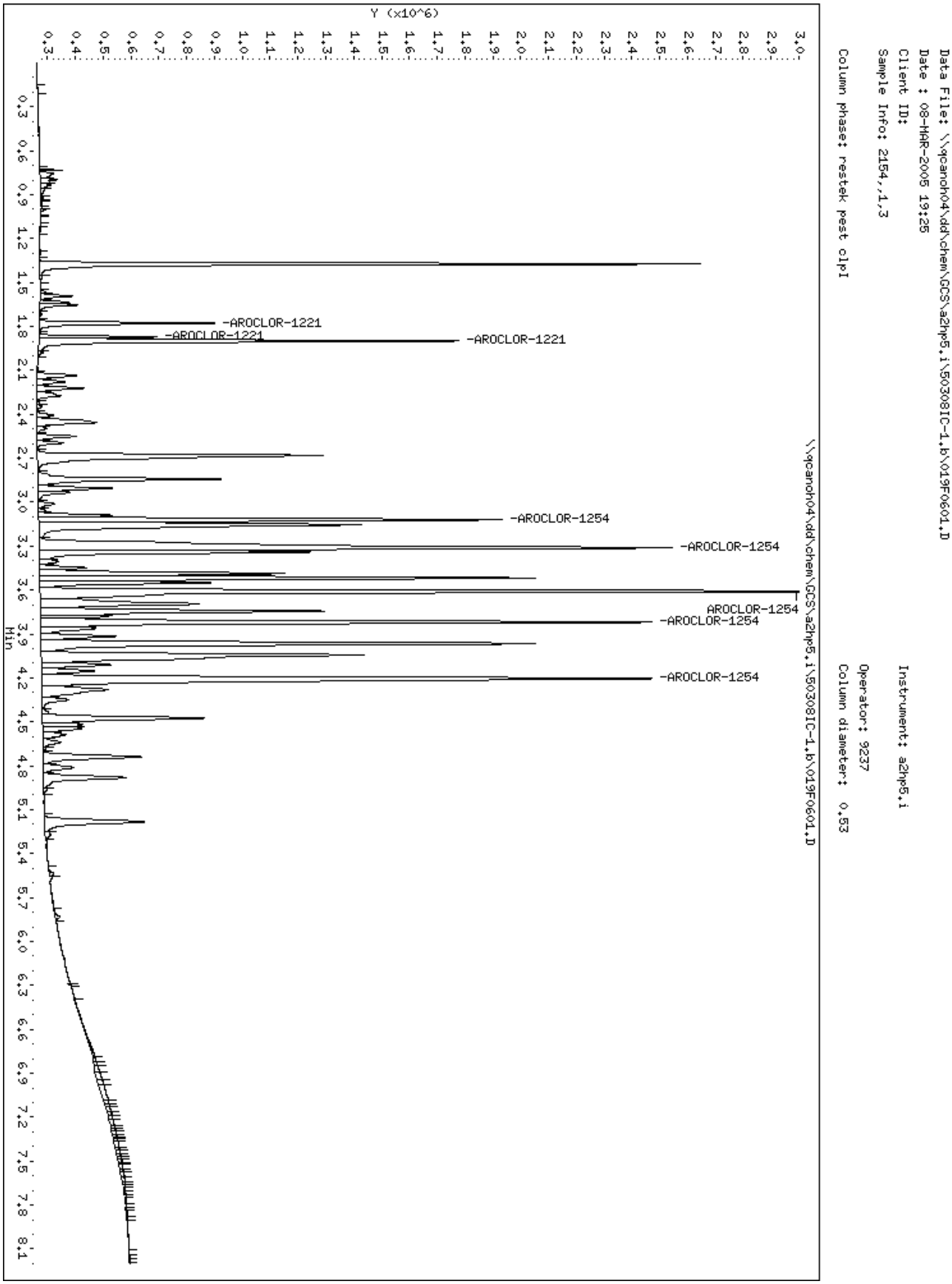
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\019F0601.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:25
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 19 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.119	3.119	0.000	1667440	0.50000	0.4721	75.00- 125.00	100.00
3.311	3.310	0.001	2273821	0.50000	0.4736	102.27- 170.46	136.37
3.608	3.609	-0.001	3222958	0.50000	0.4869	144.97- 241.61	193.29
3.819	3.819	0.000	2195517	0.50000	0.4798	98.75- 164.59	131.67
4.204	4.204	0.000	2192984	0.50000	0.4828	98.64- 164.40	131.52
		Average of Peak Amounts =			0.47904		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.778	1.777	0.001	631715	0.50000	0.4709	75.00- 125.00	100.00
1.872	1.871	0.001	422748	0.50000	0.4486	50.19- 83.65	66.92
1.898	1.898	0.000	1507213	0.50000	0.4613	178.94- 298.24	238.59
		Average of Peak Amounts =			0.46027		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Date : 08-MAR-2005 19:25
Client ID:
Sample Info: 2154,1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
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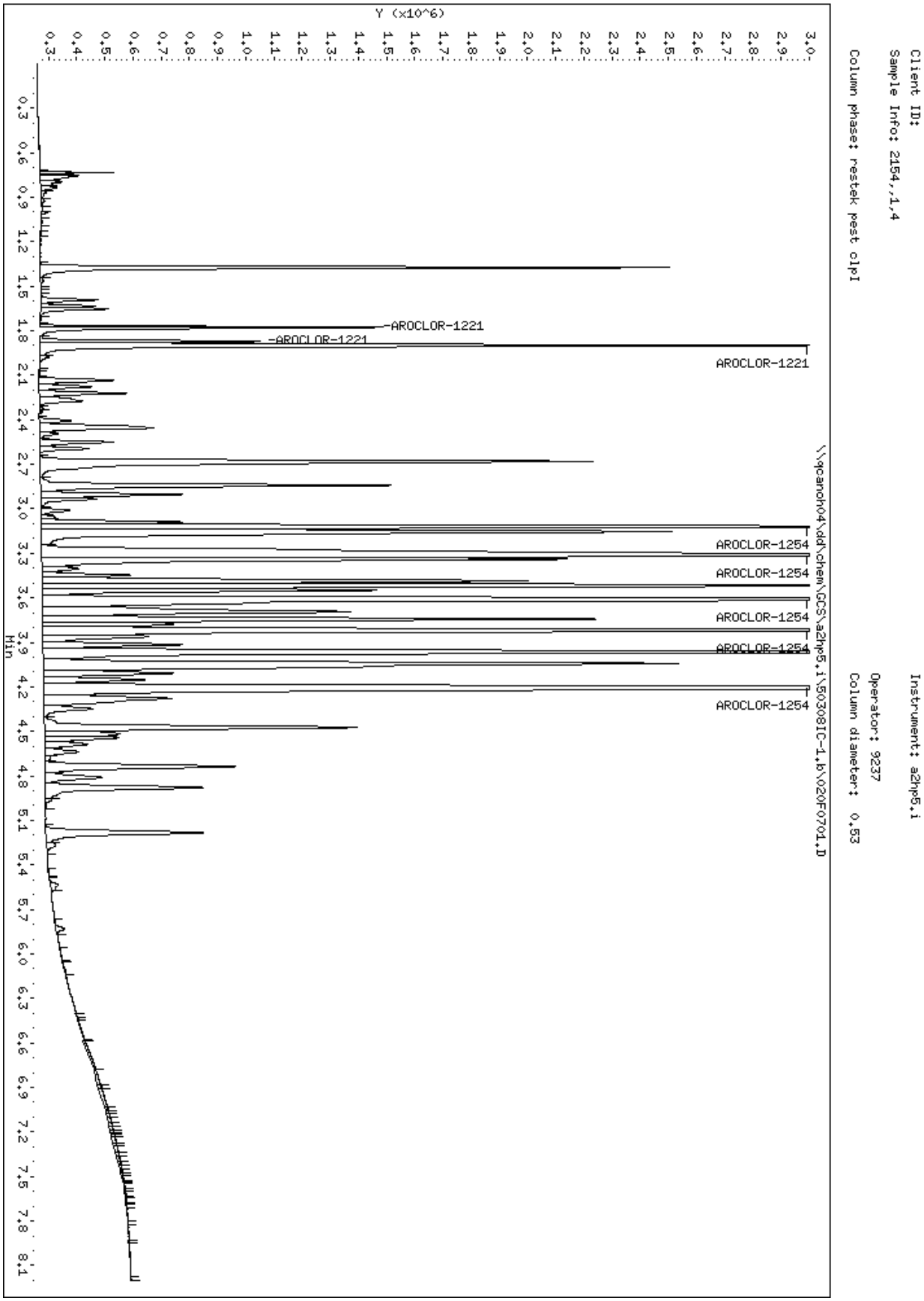
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1254
-AROCLOR-1254
AROCLOR-1254
-AROCLOR-1254
-AROCLOR-1254

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\020F0701.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:38
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 14:53 Cal File: 025F2501.D
Als bottle: 20 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.119	3.119	0.000	3206224	1.00000	0.9250	75.00- 125.00	100.00
3.310	3.310	0.000	4368479	1.00000	0.9262	102.27- 170.46	136.25
3.608	3.609	-0.001	6242520	1.00000	0.9514	144.97- 241.61	194.70
3.818	3.819	-0.001	4241391	1.00000	0.9395	98.75- 164.59	132.29
4.203	4.204	-0.001	4279011	1.00000	0.9529	98.64- 164.40	133.46
Average of Peak Amounts =					0.93900		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.777	1.777	0.000	1188130	1.00000	0.9032	75.00- 125.00	100.00
1.872	1.871	0.001	782436	1.00000	0.8598	50.19- 83.65	65.85
1.899	1.898	0.001	2804350	1.00000	0.8811	178.94- 298.24	236.03
Average of Peak Amounts =					0.88137		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Date : 08-MAR-2005 19:38
Client ID:
Sample Info: 2154,,1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
AROCLOR-1221
AROCLOR-1221
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
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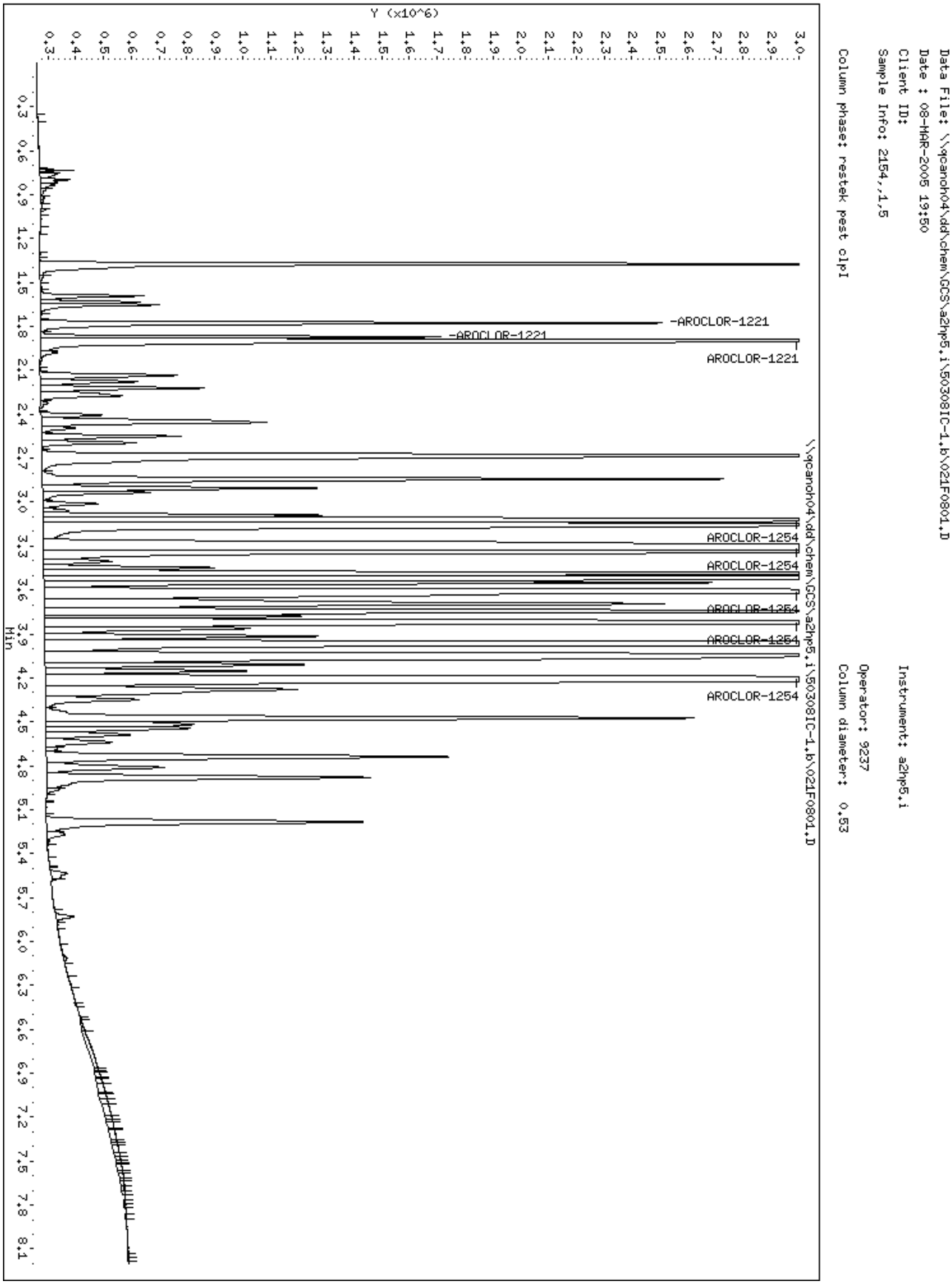
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\021F0801.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:50
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 21 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.119	3.119	0.000	6319439	2.00000	1.885	75.00- 125.00	100.00
3.310	3.310	0.000	8889410	2.00000	1.936	102.27- 170.46	140.67
3.609	3.609	0.000	12809167	2.00000	1.981	144.97- 241.61	202.69
3.819	3.819	0.000	8905780	2.00000	2.002	98.75- 164.59	140.93
4.204	4.204	0.000	8972699	2.00000	2.018	98.64- 164.40	141.99
Average of Peak Amounts =					1.96440		
2 AROCLOR-1221					CAS #: 11104-28-2		
1.777	1.777	0.000	2234970	2.00000	1.787	75.00- 125.00	100.00
1.871	1.871	0.000	1438492	2.00000	1.700	50.19- 83.65	64.36
1.898	1.898	0.000	5211399	2.00000	1.742	178.94- 298.24	233.18
Average of Peak Amounts =					1.74300		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\021F0801.D
Date : 08-MAR-2005 19:50
Client ID:
Sample Info: 2154,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\021F0801.D

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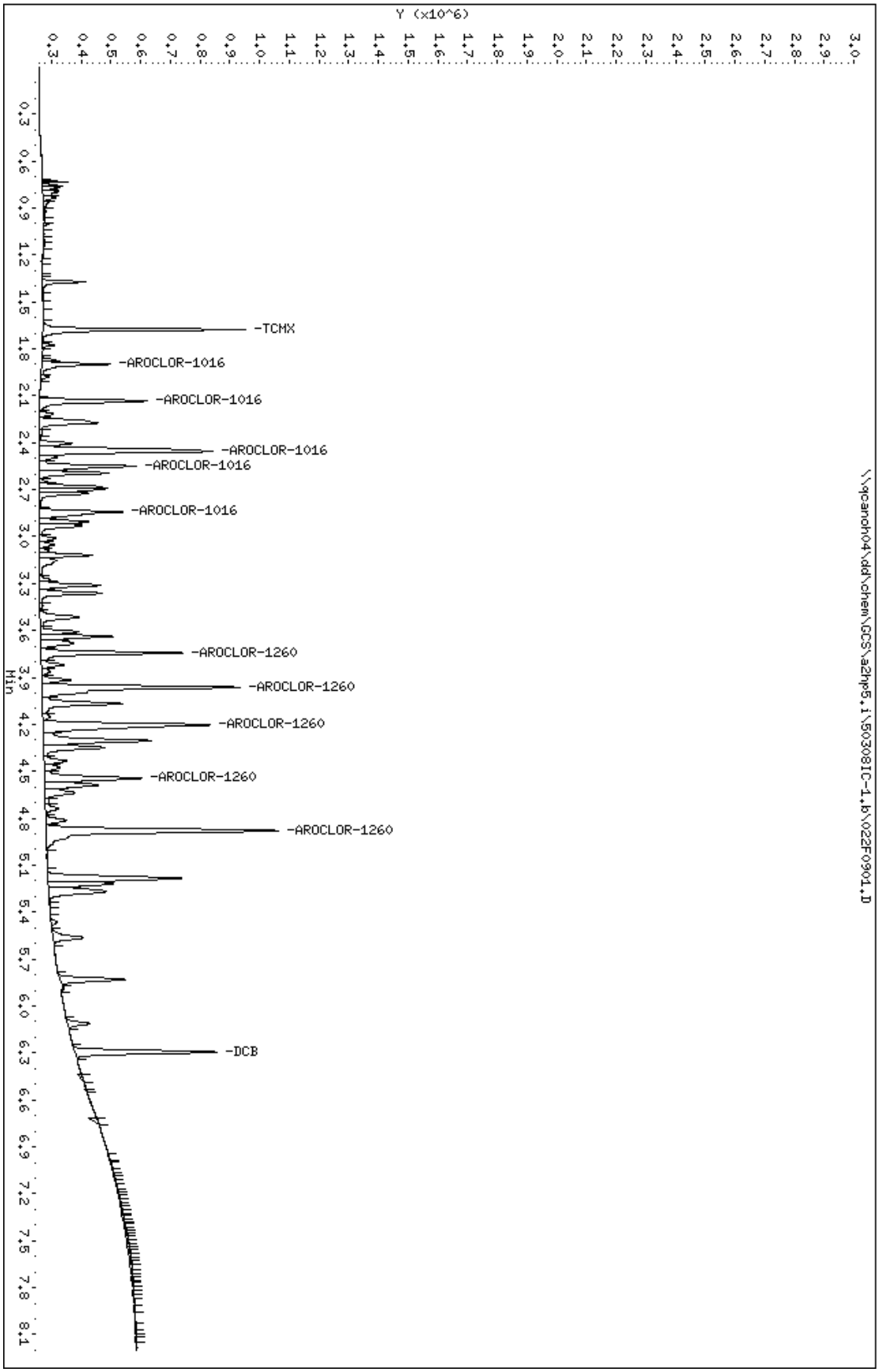
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\022F0901.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:02
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 20:02 Cal File: 022F0901.D
Als bottle: 22 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.677	1.655	0.022	685088	0.00500			
3 AROCLOR-1016					CAS #: 12674-11-2		
1.899	1.900	-0.001	319894	0.10000		80.00- 120.00	100.00
2.133	2.135	-0.002	575944	0.10000		138.12- 230.20	180.04
2.454	2.456	-0.002	1134308	0.10000		305.67- 509.46	354.59
2.549	2.551	-0.002	512217	0.10000		122.12- 203.53	160.12
2.842	2.844	-0.002	498094	0.10000		123.15- 205.25	155.71
8 AROCLOR-1260					CAS #: 11096-82-5		
3.744	3.744	0.000	479201	0.10000		80.00- 120.00	100.00
3.964	3.964	0.000	669694	0.10000		108.05- 180.08	139.75
4.204	4.203	0.001	563881	0.10000		94.28- 157.13	117.67
4.544	4.545	-0.001	326779	0.10000		49.82- 83.04	68.19
4.879	4.880	-0.001	781971	0.10000		135.94- 226.57	163.18
$ 9 DCB					CAS #: 2051-24-3		
6.294	6.290	0.004	477149	0.00500			

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\022F0901.D
Date : 08-MAR-2005 20:02
Client ID:
Sample Info: 1660,,1,1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53



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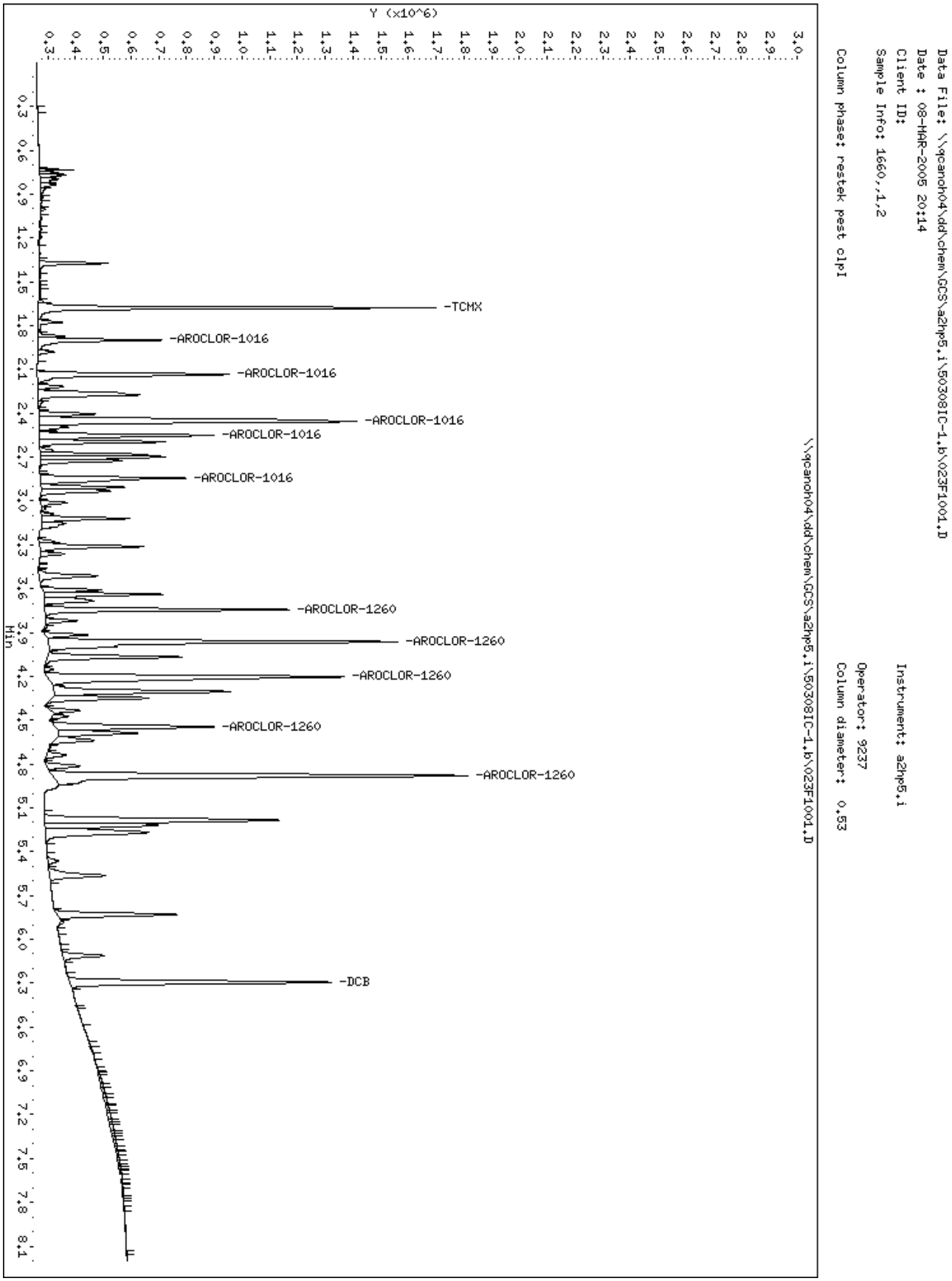
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\023F1001.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:14
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 20:14 Cal File: 023F1001.D
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.677	1.655	0.022	1430103	0.01000	0.01044		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.899	1.900	-0.001	587798	0.20000	0.1837	80.00- 120.00	100.00
2.132	2.135	-0.003	1068150	0.20000	0.1855	138.12- 230.20	181.72
2.455	2.456	-0.001	2143432	0.20000	0.1890	305.67- 509.46	364.65
2.550	2.551	-0.001	909204	0.20000	0.1775	122.12- 203.53	154.68
2.842	2.844	-0.002	885506	0.20000	0.1778	123.15- 205.25	150.65
Average of Peak Amounts =					0.18270		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.743	3.744	-0.001	883939	0.20000	0.1845	80.00- 120.00	100.00
3.963	3.964	-0.001	1256276	0.20000	0.1876	108.05- 180.08	142.12
4.203	4.203	0.000	1069844	0.20000	0.1897	94.28- 157.13	121.03
4.546	4.545	0.001	569802	0.20000	0.1744	49.82- 83.04	64.46
4.880	4.880	0.000	1495510	0.20000	0.1912	135.94- 226.57	169.19
Average of Peak Amounts =					0.18548		
$ 9 DCB					CAS #: 2051-24-3		
6.293	6.290	0.003	940366	0.01000	0.009854		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\023F1001.D
Date : 08-MAR-2005 20:14
Client ID:
Sample Info: 1660,1.2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\023F1001.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

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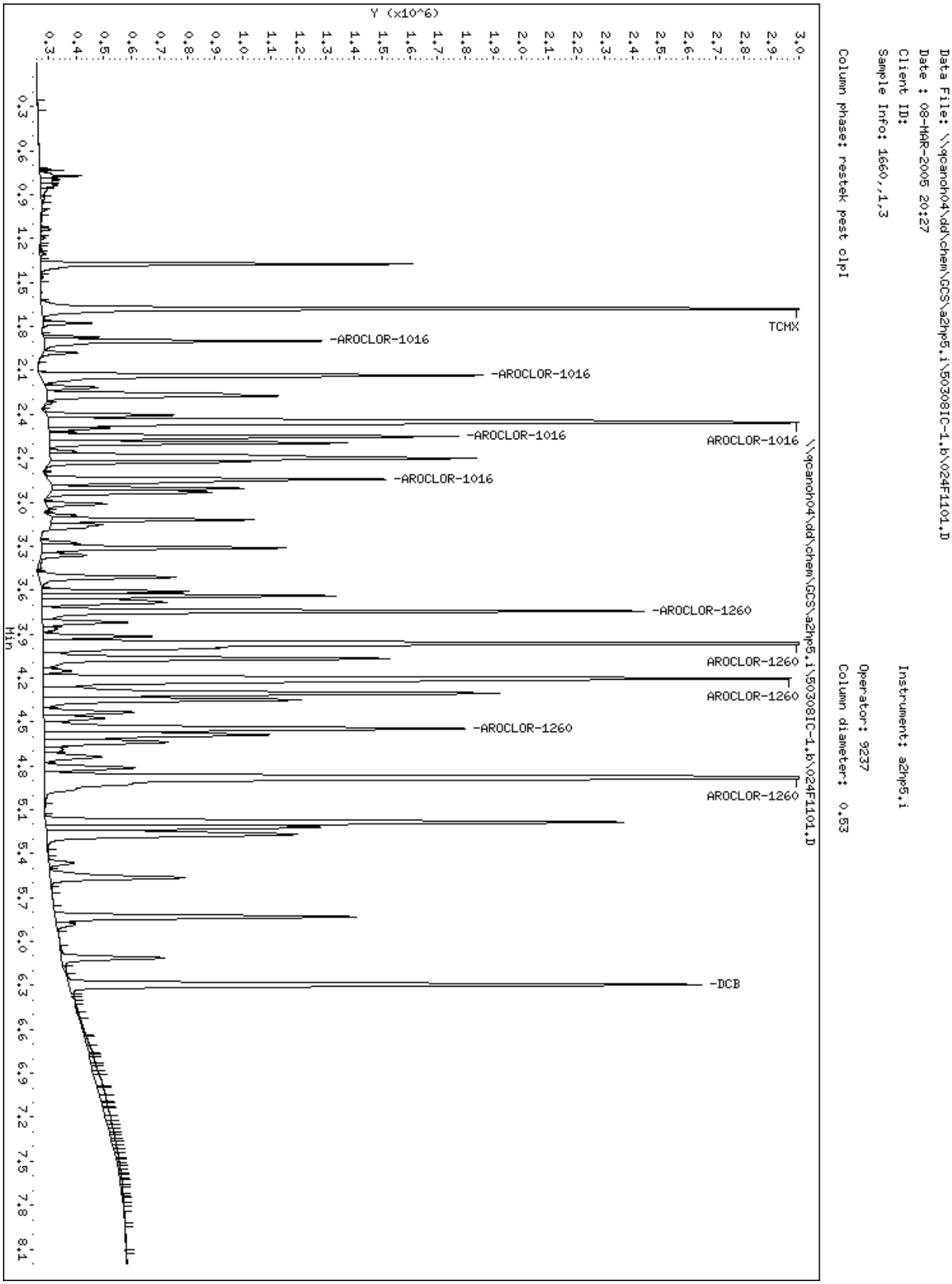
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\024F1101.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:27
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 24 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.678	1.655	0.023	3526028	0.02500	0.02518		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.899	1.900	-0.001	1255615	0.50000	0.4091	80.00- 120.00	100.00
2.133	2.135	-0.002	2442272	0.50000	0.4400	138.12- 230.20	194.51
2.456	2.456	0.000	5148617	0.50000	0.4668	305.67- 509.46	410.05
2.551	2.551	0.000	2109123	0.50000	0.4363	122.12- 203.53	167.98
2.843	2.844	-0.001	2062166	0.50000	0.4384	123.15- 205.25	164.24
Average of Peak Amounts =					0.43812		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.744	3.744	0.000	2166404	0.50000	0.4704	80.00- 120.00	100.00
3.964	3.964	0.000	3100864	0.50000	0.4778	108.05- 180.08	143.13
4.204	4.203	0.001	2688162	0.50000	0.4893	94.28- 157.13	124.08
4.546	4.545	0.001	1513268	0.50000	0.4948	49.82- 83.04	69.85
4.880	4.880	0.000	3883730	0.50000	0.5078	135.94- 226.57	179.27
Average of Peak Amounts =					0.48802		
$ 9 DCB					CAS #: 2051-24-3		
6.294	6.290	0.004	2272933	0.02500	0.02399		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\024F1101.D
Date : 08-MAR-2005 20:27
Client ID:
Sample Info: 1660,1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\024F1101.D

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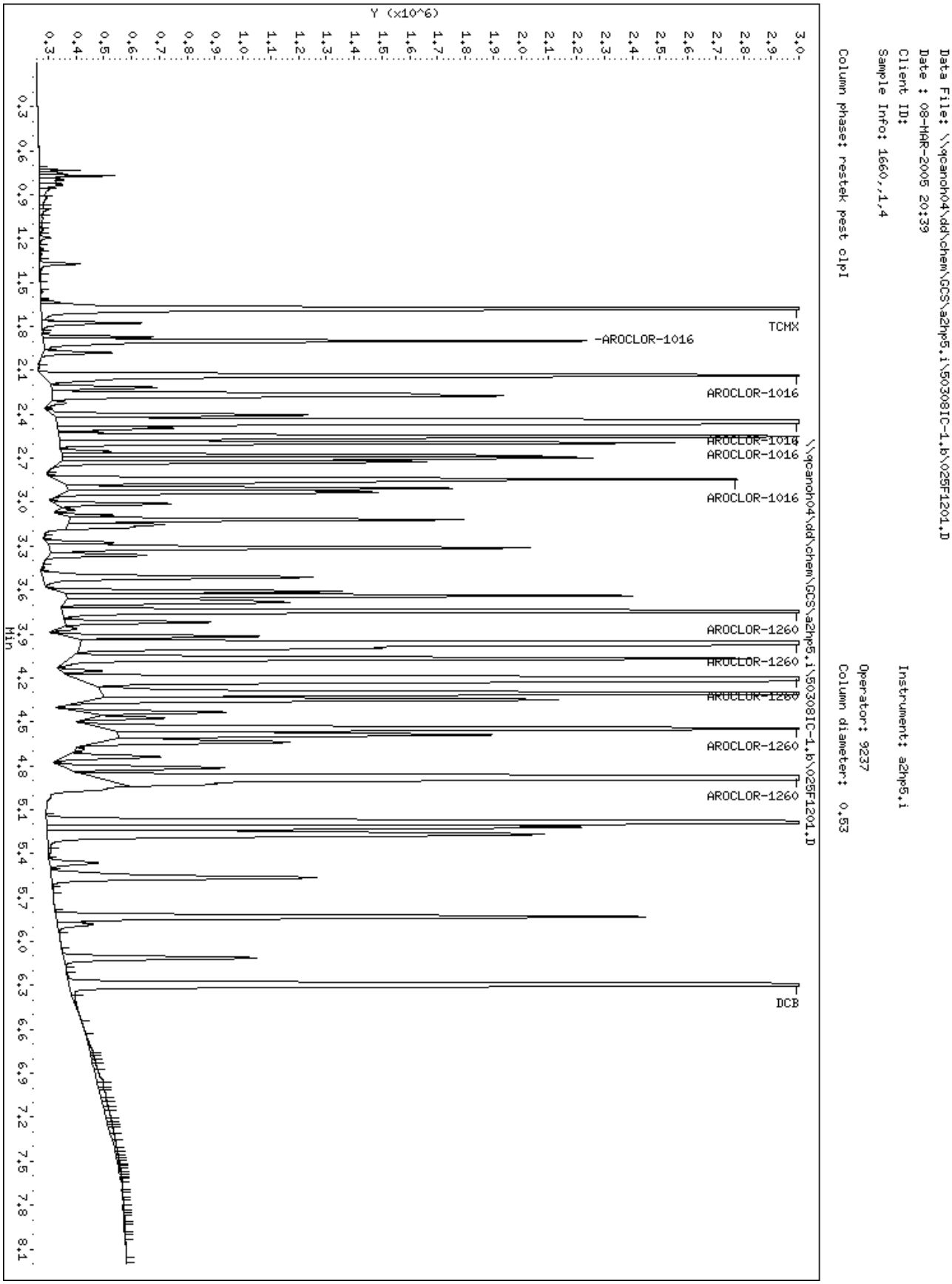
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\025F1201.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:39
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 20:39 Cal File: 025F1201.D
Als bottle: 25 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.677	1.655	0.022	6878504	0.05000	0.04901		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.898	1.900	-0.002	2453460	1.00000	0.8510	80.00- 120.00	100.00
2.132	2.135	-0.003	4686084	1.00000	0.8795	138.12- 230.20	191.00
2.455	2.456	-0.001	10355350	1.00000	0.9601	305.67- 509.46	422.07
2.550	2.551	-0.001	4158904	1.00000	0.8985	122.12- 203.53	169.51
2.842	2.844	-0.002	4050151	1.00000	0.8978	123.15- 205.25	165.08
Average of Peak Amounts =					0.89738		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.742	3.744	-0.002	4305659	1.00000	0.9537	80.00- 120.00	100.00
3.963	3.964	-0.001	6151680	1.00000	0.9622	108.05- 180.08	142.87
4.203	4.203	0.000	5369188	1.00000	0.9843	94.28- 157.13	124.70
4.545	4.545	0.000	2838766	1.00000	0.9314	49.82- 83.04	65.93
4.880	4.880	0.000	7703390	1.00000	1.002	135.94- 226.57	178.91
Average of Peak Amounts =					0.96672		
$ 9 DCB					CAS #: 2051-24-3		
6.293	6.290	0.003	4302345	0.05000	0.04603		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\025F1201.D
Date : 08-MAR-2005 20:39
Client ID:
Sample Info: 1660,1.4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\025F1201.D

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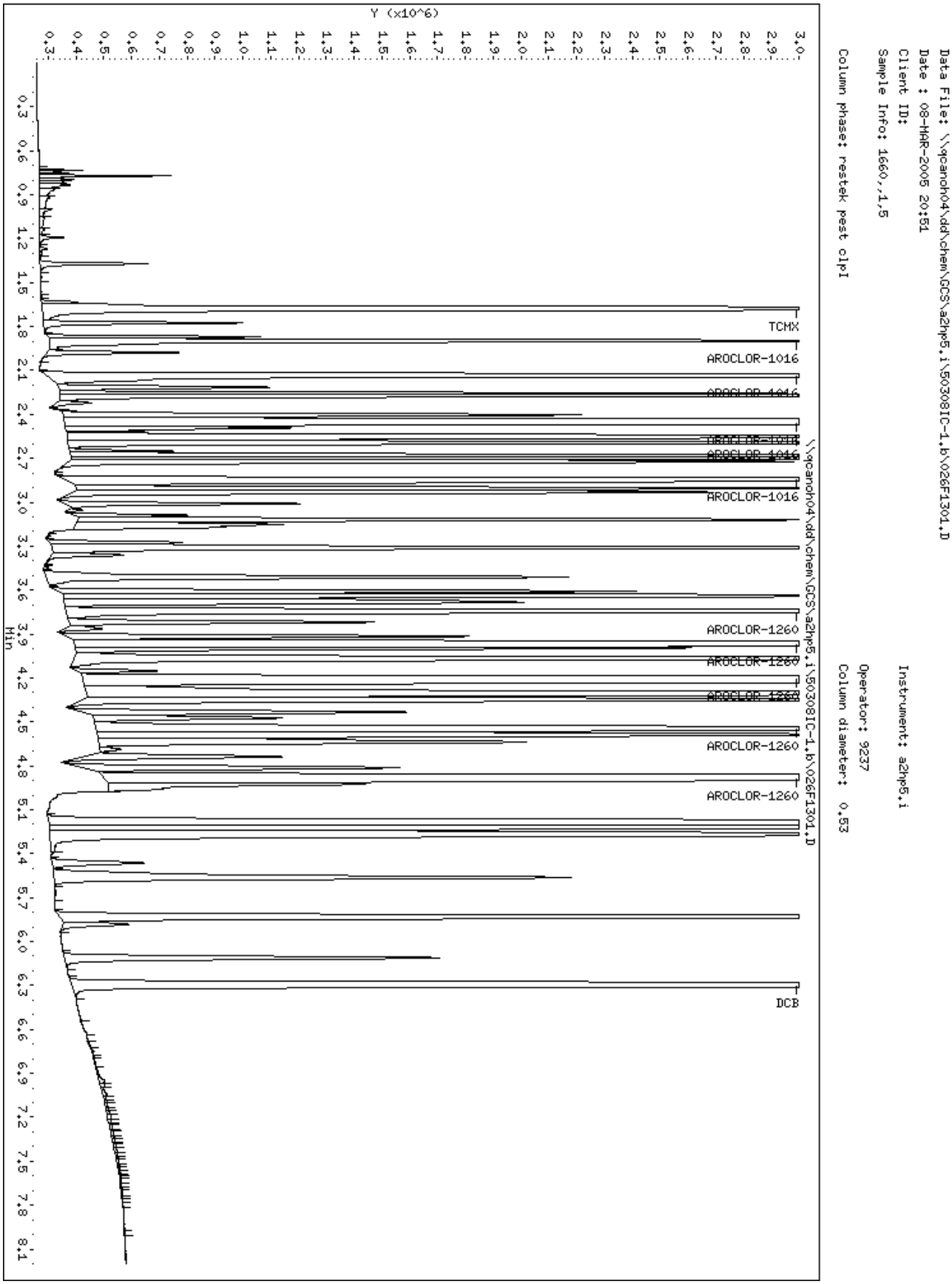
Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\026F1301.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:51
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 20:51 Cal File: 026F1301.D
Als bottle: 26 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.676	1.655	0.021	15091577	0.10000	0.1080		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.897	1.900	-0.003	4514577	2.00000	1.626	80.00- 120.00	100.00
2.131	2.135	-0.004	8750045	2.00000	1.693	138.12- 230.20	193.82
2.454	2.456	-0.002	20331991	2.00000	1.904	305.67- 509.46	450.36
2.548	2.551	-0.003	8188686	2.00000	1.815	122.12- 203.53	181.38
2.841	2.844	-0.003	8002827	2.00000	1.820	123.15- 205.25	177.27
Average of Peak Amounts =					1.77160		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.742	3.744	-0.002	8647197	2.00000	1.938	80.00- 120.00	100.00
3.962	3.964	-0.002	12504647	2.00000	1.974	108.05- 180.08	144.61
4.201	4.203	-0.002	10896707	2.00000	2.006	94.28- 157.13	126.01
4.544	4.545	-0.001	5908818	2.00000	1.972	49.82- 83.04	68.33
4.879	4.880	-0.001	15703291	2.00000	2.042	135.94- 226.57	181.60
Average of Peak Amounts =					1.98640		
$ 9 DCB					CAS #: 2051-24-3		
6.293	6.290	0.003	8916299	0.10000	0.09733		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\026F1301.D
Date : 08-MAR-2005 20:51
Client ID:
Sample Info: 1660,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
DCB

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\027F1401.D
Report Date: 11-Mar-2005 07:27

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CONTINUING CALIBRATION COMPOUNDS

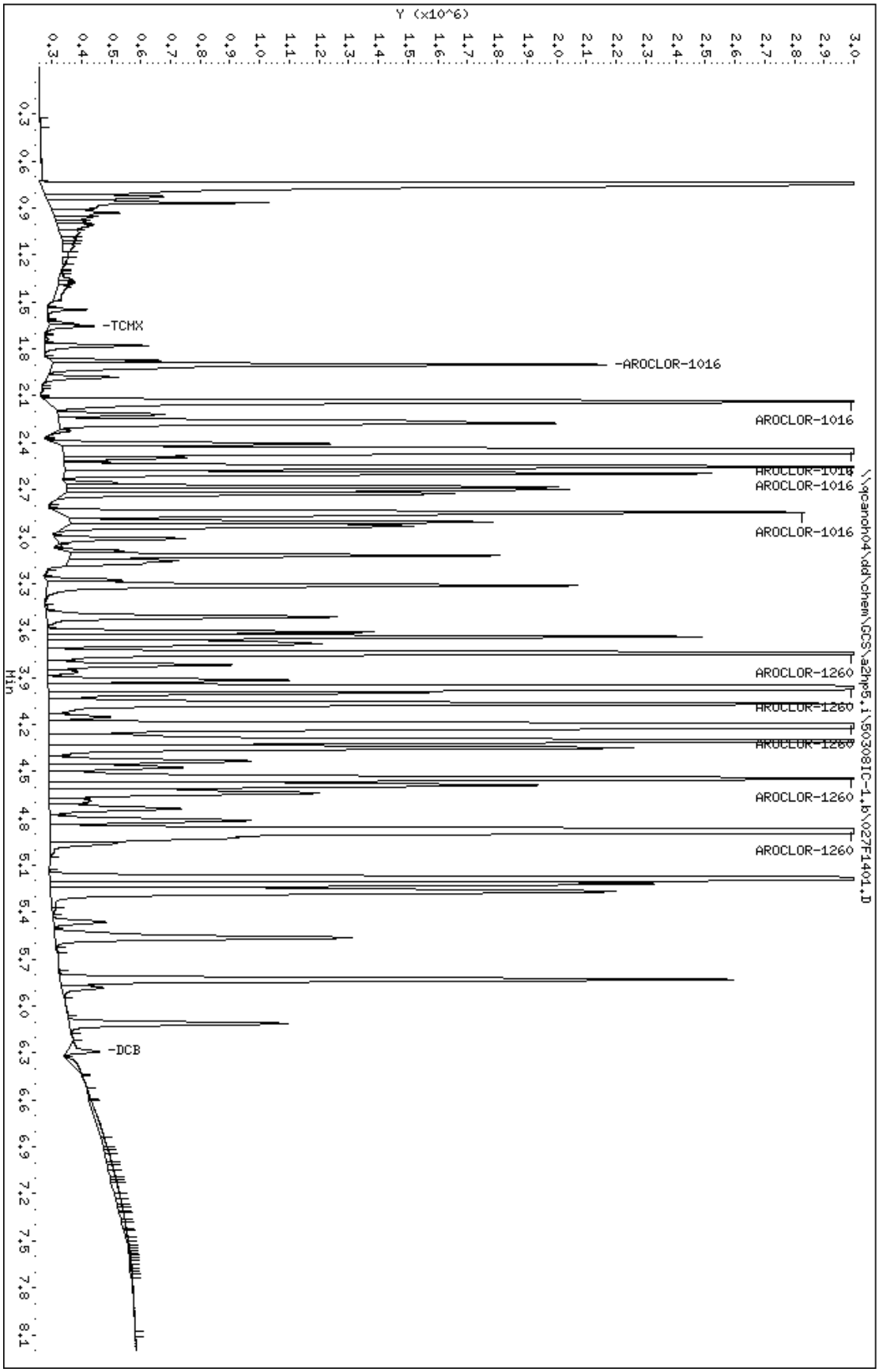
Instrument ID: a2hp5.i Injection Date: 08-MAR-2005 21:03
Lab File ID: 027F1401.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: ICV Quant Type: ESTD
Method: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	141910974	3082980	0.010	97.82753	15.00000	Averaged	<-
3 AROCLOR-1016(1)	2671982	2586533	0.010	3.19795	15.00000	Averaged	
(2)	5009168	4763419	0.010	4.90599	15.00000	Averaged	
(3)	10575764	10541818	0.010	0.32098	15.00000	Averaged	
(4)	4427937	4211416	0.010	4.88988	15.00000	Averaged	
(5)	4316873	4247083	0.010	1.61669	15.00000	Averaged	
8 AROCLOR-1260(1)	4434754	4643714	0.010	-4.71187	15.00000	Averaged	
(2)	6316810	6689894	0.010	-5.90620	15.00000	Averaged	
(3)	5436379	5837429	0.010	-7.37715	15.00000	Averaged	
(4)	2987302	3084786	0.010	-3.26327	15.00000	Averaged	
(5)	7723951	8416973	0.010	-8.97238	15.00000	Averaged	
$ 9 DCB	91118722	2202640	0.010	97.58267	15.00000	Averaged	<-

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\027F1401.D
Lab Smp Id: ICV
Inj Date : 08-MAR-2005 21:03
Operator : 9237 Inst ID: a2hp5.i
Smp Info : ICV,,2
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 11-Mar-2005 07:27 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None

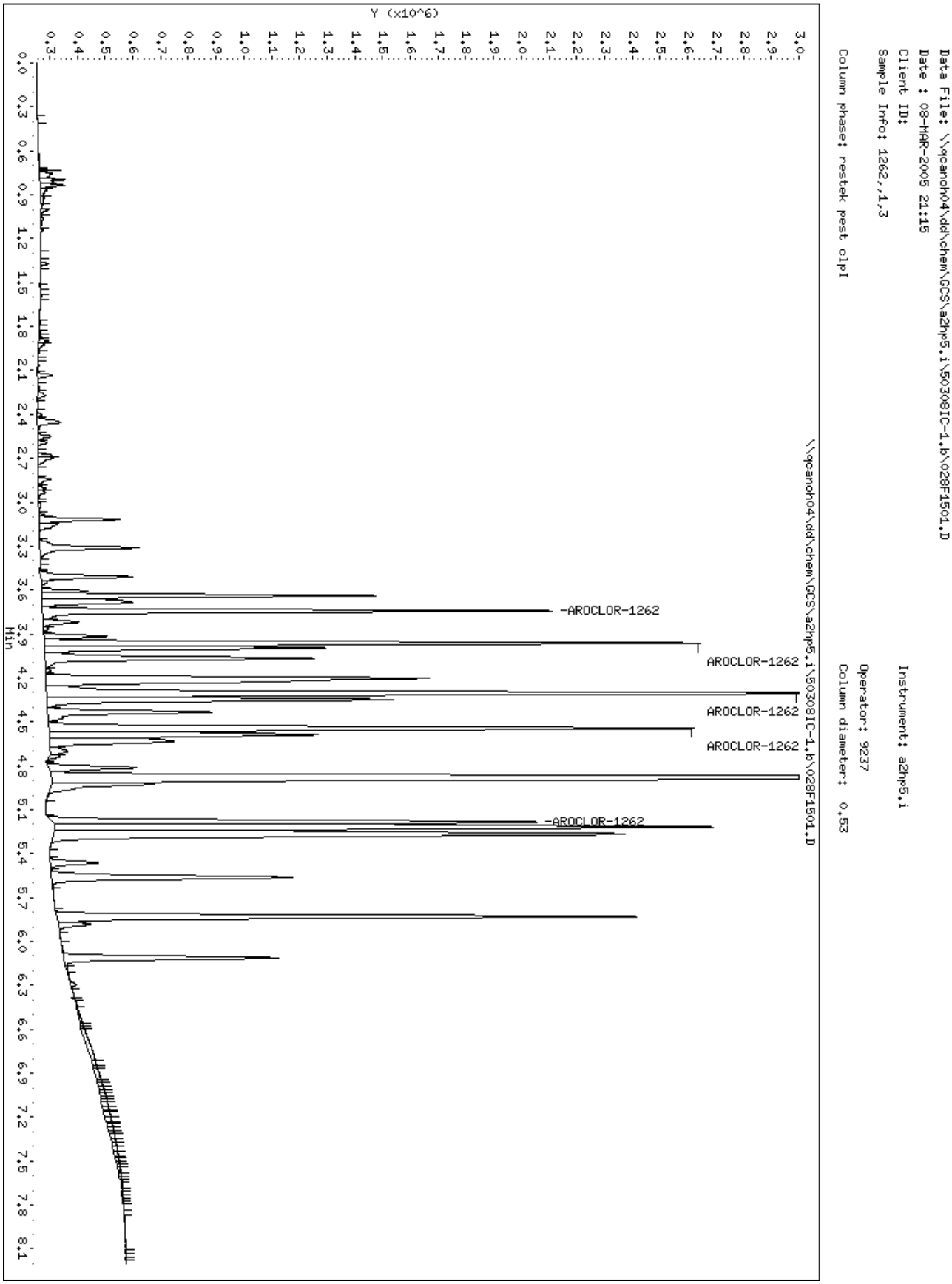
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.655	1.655	0.000	154149	0.05000	0.001086		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.900	1.900	0.000	2586533	1.00000	0.9680	80.00- 120.00	100.00
2.135	2.135	0.000	4763419	1.00000	0.9509	138.12- 230.20	184.16
2.456	2.456	0.000	10541818	1.00000	0.9968	305.67- 509.46	407.57
2.551	2.551	0.000	4211416	1.00000	0.9511	122.12- 203.53	162.82
2.844	2.844	0.000	4247083	1.00000	0.9838	123.15- 205.25	164.20
Average of Peak Amounts =					0.97012		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.744	3.744	0.000	4643714	1.00000	1.047	80.00- 120.00	100.00
3.964	3.964	0.000	6689894	1.00000	1.059	108.05- 180.08	144.06
4.203	4.203	0.000	5837429	1.00000	1.074	94.28- 157.13	125.71
4.545	4.545	0.000	3084786	1.00000	1.033	49.82- 83.04	66.43
4.880	4.880	0.000	8416973	1.00000	1.090	135.94- 226.57	181.26
Average of Peak Amounts =					1.06060		
$ 9 DCB					CAS #: 2051-24-3		
6.290	6.290	0.000	110132	0.05000	0.001209		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\027F1401.D
Date : 08-MAR-2005 21:03
Client ID:
Sample Info: ICV,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\027F1401.D

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\028F1501.D
Lab Smp Id: 1262
Inj Date : 08-MAR-2005 21:15
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 23-FEB-2005 15:42 Cal File: 029F2901.D
Als bottle: 28 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.sub
Target Version: 4.14 Sample Matrix: None

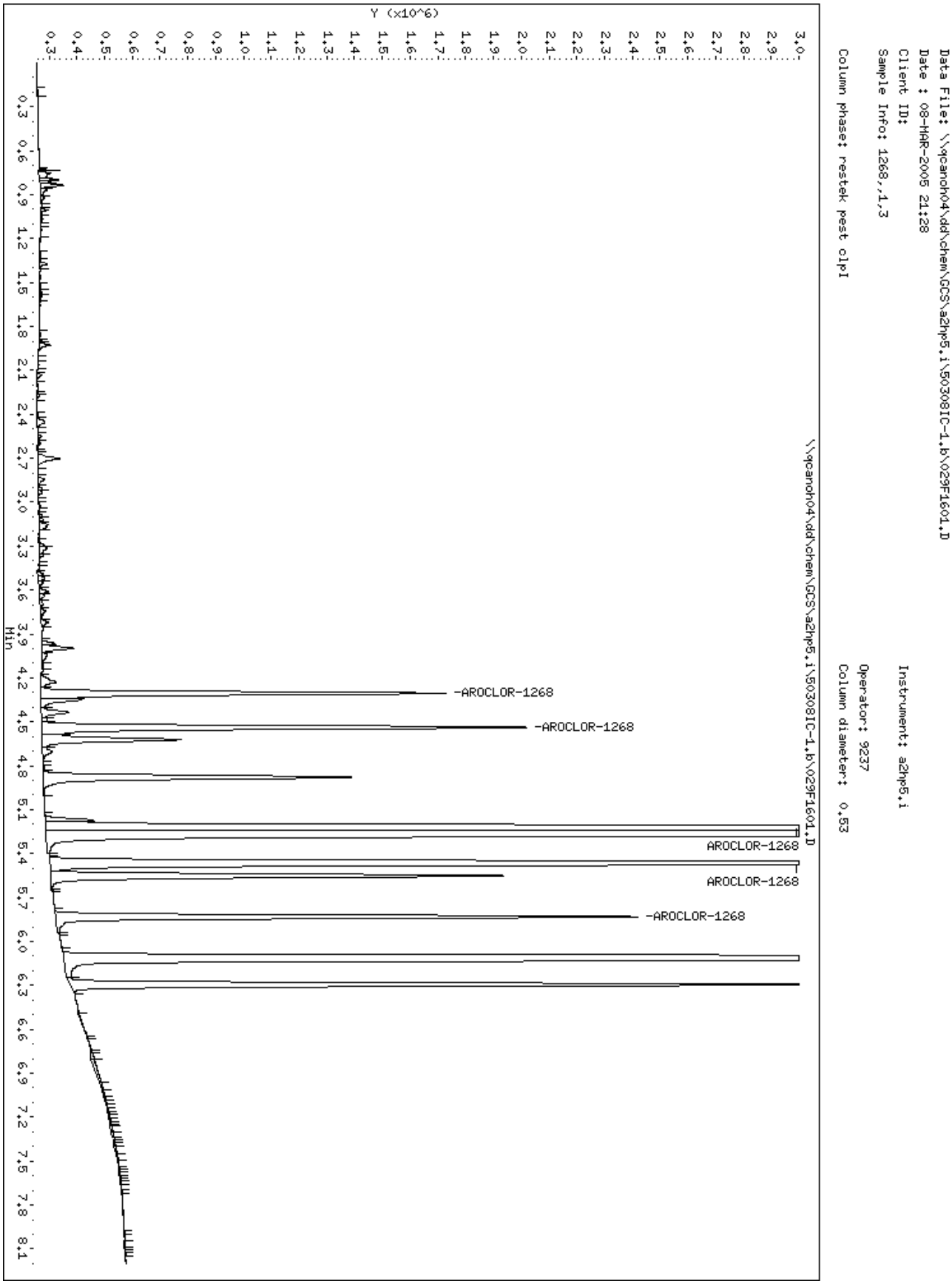
RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
13 AROCLOR-1262					CAS #: 37324-23-5		
3.743	3.743	0.000	1833959	0.50000		80.00- 120.00	100.00
3.962	3.962	0.000	2363920	0.50000		96.67- 161.12	128.90
4.304	4.304	0.000	3009190	0.50000		123.06- 205.10	164.08
4.544	4.544	0.000	2324785	0.50000		95.07- 158.45	126.76
5.184	5.184	0.000	1745274	0.50000		71.37- 118.96	95.16


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\028F1501.D
Date : 08-MAR-2005 21:15
Client ID:
Sample Info: 1262,1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\028F1501.D
Y (x10^6)
Min
-AROCLOR-1262
AROCLOR-1262
AROCLOR-1262
AROCLOR-1262
-AROCLOR-1262

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
Lab Smp Id: 1268
Inj Date : 08-MAR-2005 21:28
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m
Meth Date : 09-Mar-2005 08:44 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 29 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: None

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
14 AROCLOR-1268					CAS #: 11100-14-4		
4.305	4.305	0.000	1457726	0.50000		80.00- 120.00	100.00
4.537	4.537	0.000	1746819	0.50000		89.87- 149.79	119.83
5.220	5.220	0.000	7060623	0.50000		363.27- 605.45	484.36
5.463	5.463	0.000	5738796	0.50000		295.26- 492.10	393.68
5.830	5.830	0.000	2096731	0.50000		107.88- 179.79	143.84


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
Date : 08-MAR-2005 21:28
Client ID:
Sample Info: 1268,.1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\029F1601.D
Y (x10^6)
Min
-AROCLOR-1268
-AROCLOR-1268
AROCLOR-1268
AROCLOR-1268
-AROCLOR-1268

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
08-MAR-2005 15:32	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D
Cal Level: 4 , Cal Amount: 1.00000		

08-MAR-2005 20:39	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
08-MAR-2005 19:38	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D
08-MAR-2005 18:36	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
08-MAR-2005 17:22	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
08-MAR-2005 15:07	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D

Cal Level: 5 , Cal Amount: 2.00000

08-MAR-2005 20:51	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D
08-MAR-2005 19:50	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
08-MAR-2005 18:49	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D
08-MAR-2005 17:34	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
08-MAR-2005 15:19	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 21:03	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\027F1401.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D

Report Date : 09-Mar-2005 08:48

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PC
Last Edit : 09-Mar-2005 08:47 a2hp5.i
Curve Type : Average

Calibration File Names:
Level 1: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
Level 2: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
Level 3: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
Level 4: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
Level 5: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	RRF	% RSD
2 AROCLOR-1221(1)	2283840	2164300	2038124	1901012	1791529	2035761	9.697
(2)	1541310	1450960	1346736	1243074	1147103	1345837	11.708
(3)	4849770	4560785	4282046	3994107	3688806	4275103	10.685
3 AROCLOR-1016(1)	3590870	3445990	3107042	2994778	2869233	3201583	9.544
(2)	5212810	4907530	4417406	4279177	4033383	4570061	10.511
(3)	8640340	8339500	8040118	7998840	7853334	8174426	3.851
(4)	4775940	4575550	4254650	4220998	4132150	4391858	6.202
(5)	3884530	3705810	3433090	3369554	3266204	3531838	7.237
4 AROCLOR-1232(1)	3807590	3744140	3363702	3183477	2999526	3419687	10.247
(2)	2392990	2345565	2092446	1950664	1887551	2133843	10.684
(3)	3831480	3801970	3533278	3524086	3489946	3636152	4.564
(4)	2124430	2076795	1915934	1850224	1857010	1964879	6.496
(5)	1432900	1378540	1299330	1311167	1348763	1354140	3.990
5 AROCLOR-1242(1)	3034610	2702815	2705138	2496164	2342324	2656210	9.815
(2)	4200480	3752545	3654018	3413476	3122341	3628572	11.072
(3)	6962470	6600970	6689422	6188619	5919056	6472107	6.420
(4)	3840390	3538435	3436980	3253561	3089276	3431728	8.337
(5)	3132460	2883865	2744870	2602187	2455132	2763703	9.437
6 AROCLOR-1248(1)	2205820	2100200	1985470	1741340	1743852	1955336	10.702
(2)	4319730	4088525	4160432	3825392	3710217	4020859	6.194
(3)	5250210	5032015	5009832	4532336	4441384	4853155	7.187
(4)	5579010	5295720	5115496	4860604	4697520	5109670	6.828
(5)	4854200	4683535	4581362	4434569	4317321	4574197	4.584
7 AROCLOR-1254(1)	3435530	3161775	2962642	2784568	2703853	3009674	9.841
(2)	5461650	5119440	4704348	4684224	4640658	4922064	7.278
(3)	7847190	7639710	7338624	6985414	7183921	7398972	4.681
(4)	5194110	4947490	4674958	4471790	4634856	4784641	5.971
(5)	5219030	4913940	4705258	4505545	4639518	4796658	5.803
8 AROCLOR-1260(1)	5429400	5048440	4785890	4669151	4634863	4913549	6.735

Report Date : 09-Mar-2005 08:48

STL North Canton

INITIAL CALIBRATION DATA

Start Cal Date : 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PC
Last Edit : 09-Mar-2005 08:47 a2hp5.i
Curve Type : Average

Compound	0.10000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	___ RRF	% RSD	
(2)	6210790	5823570	5520206	5409370	5390546	5670896	6.137	
(3)	5781700	5570010	5404552	5340121	5264006	5472078	3.775	
(4)	4028760	3856960	3651374	3637809	3578119	3750604	5.006	
(5)	5742180	5512470	5367218	5284207	5228522	5426919	3.799	
13 AROCLOR-1262 (1)	+++++	+++++	4496286	+++++	+++++	4496286	0.000	<-
(2)	+++++	+++++	2667056	+++++	+++++	2667056	0.000	<-
(3)	+++++	+++++	2260908	+++++	+++++	2260908	0.000	<-
(4)	+++++	+++++	197608	+++++	+++++	197608	0.000	<-
(5)	+++++	+++++	4217662	+++++	+++++	4217662	0.000	<-
14 AROCLOR-1268 (1)	+++++	+++++	3156740	+++++	+++++	3156740	0.000	<-
(2)	+++++	+++++	3976062	+++++	+++++	3976062	0.000	<-
(3)	+++++	+++++	15627008	+++++	+++++	15627008	0.000	<-
(4)	+++++	+++++	12944574	+++++	+++++	12944574	0.000	<-
(5)	+++++	+++++	4725216	+++++	+++++	4725216	0.000	<-
$ 1 TCMX	223732600	230523400	223881160	217307900	234817330	226052478	2.995	
$ 9 DCB	102531400	100077200	93747480	86620200	89579180	94511092	7.147	

Data File: 002F0201.D
Report Date: 09-Mar-2005 08:45

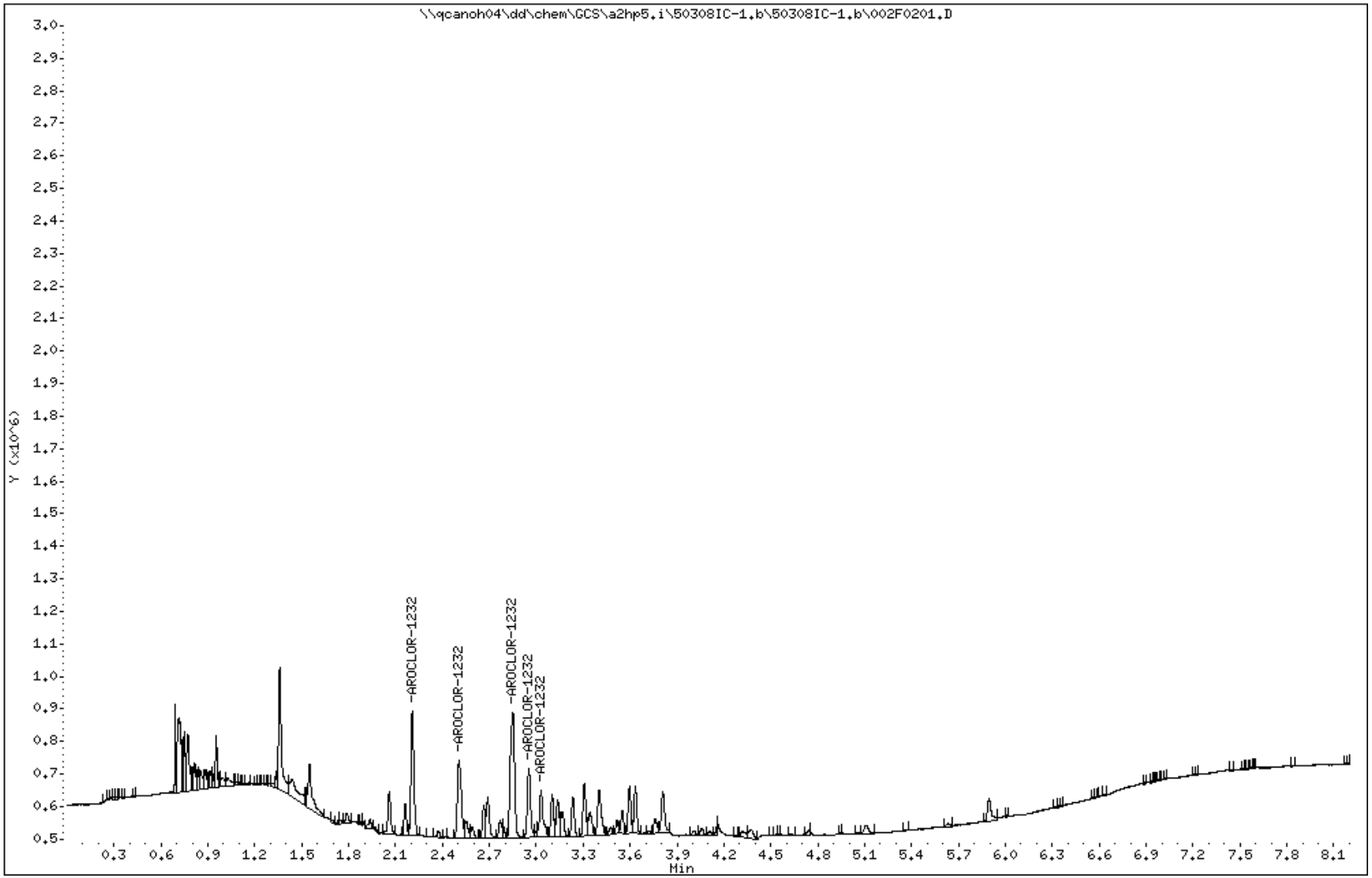
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:30
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,1
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.206	2.206	0.000	380759	0.10000		0.00- 0.00	100.00
2.505	2.505	0.000	239299	0.10000		0.00- 0.00	62.85
2.850	2.850	0.000	383148	0.10000		0.00- 0.00	100.63
2.952	2.952	0.000	212443	0.10000		0.00- 0.00	55.79
3.030	3.030	0.000	143290	0.10000		0.00- 0.00	37.63

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D
Date : 08-MAR-2005 14:30
Client ID:
Sample Info: 1232,,1,1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 003F0301.D
Report Date: 09-Mar-2005 08:45

STL North Canton

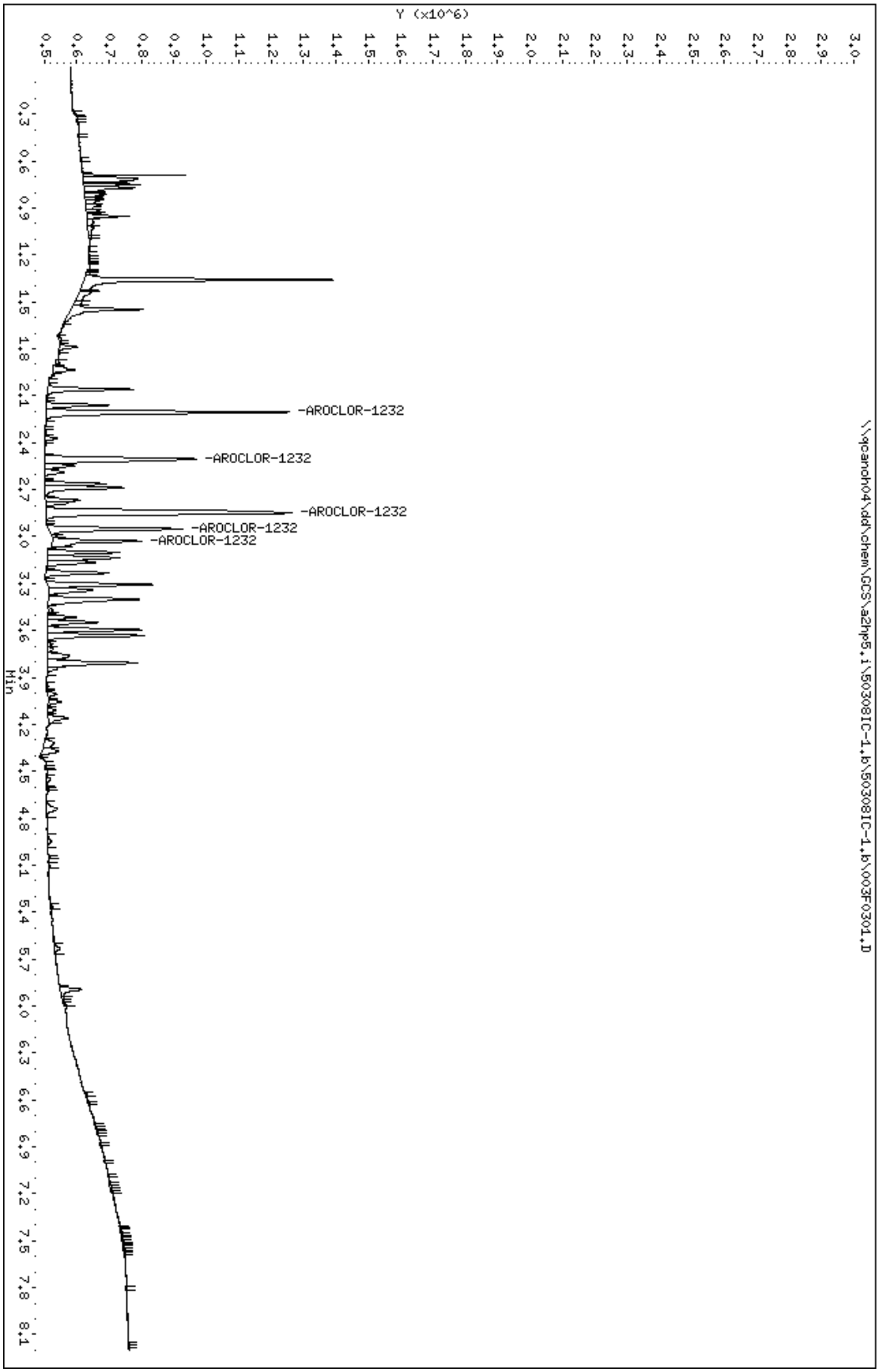
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:42
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,2
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 14:30 Cal File: 002F0201.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.205	2.205	0.000	748828	0.20000	0.1967	0.00- 0.00	100.00
2.504	2.504	0.000	469113	0.20000	0.1960	0.00- 0.00	62.65
2.849	2.849	0.000	760394	0.20000	0.1984	0.00- 0.00	101.54
2.951	2.951	0.000	415359	0.20000	0.1955	0.00- 0.00	55.47
3.029	3.029	0.000	275708	0.20000	0.1924	0.00- 0.00	36.82

Average of Peak Amounts = 0.19580

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D
Date : 08-MAR-2005 14:42
Client ID:
Sample Info: 1232,1,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 004F0401.D
Report Date: 09-Mar-2005 08:45

STL North Canton

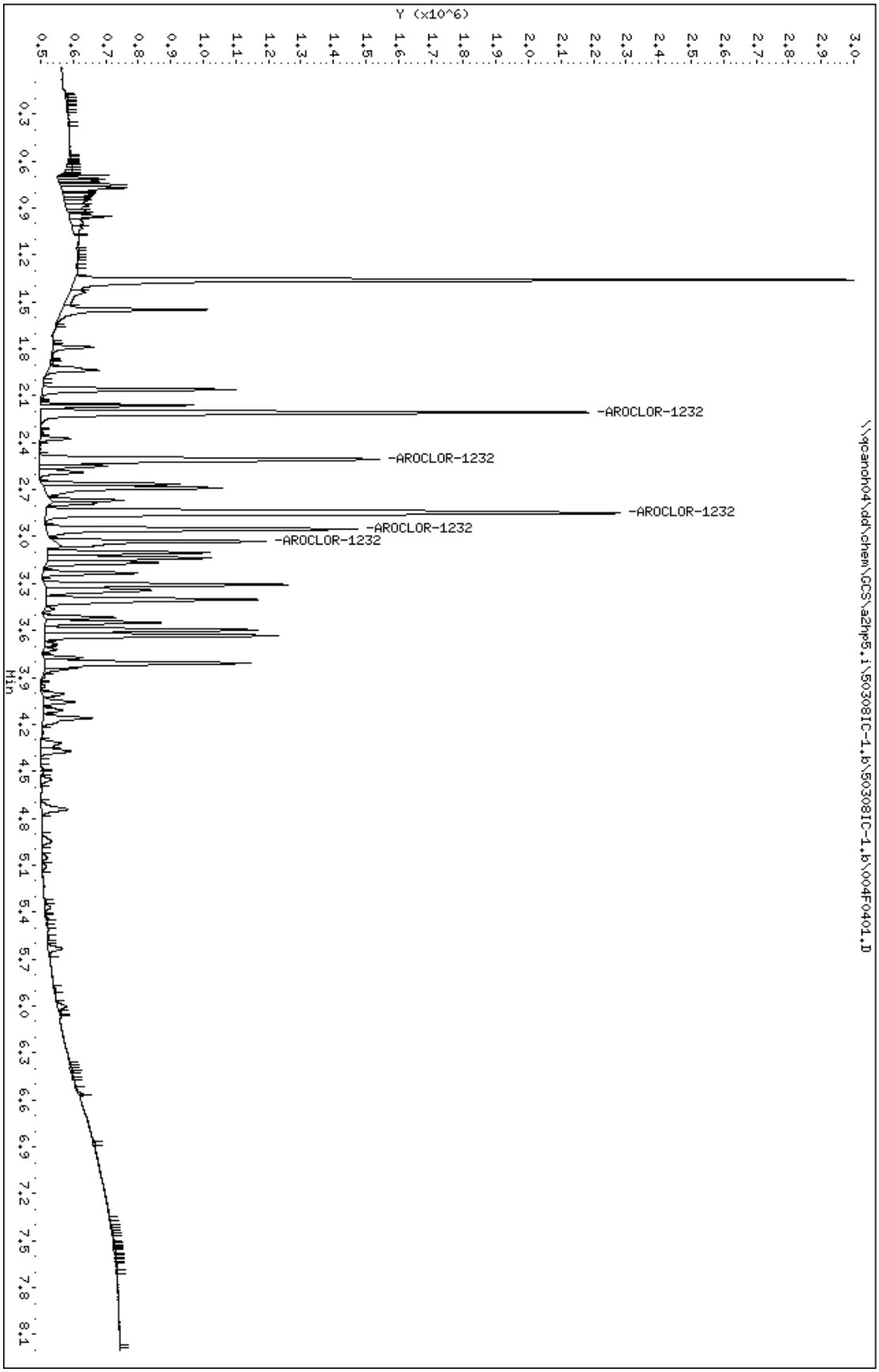
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 14:55
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,3
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 14:42 Cal File: 003F0301.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.206	2.206	0.000	1681851	0.50000	0.4454	80.00- 120.00	100.00
2.506	2.506	0.000	1046223	0.50000	0.4416	46.65- 77.76	62.21
2.850	2.850	0.000	1766639	0.50000	0.4629	78.78- 131.30	105.04
2.953	2.953	0.000	957967	0.50000	0.4560	42.72- 71.20	56.96
3.031	3.031	0.000	649665	0.50000	0.4622	28.97- 48.28	38.63

Average of Peak Amounts = 0.45362

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D
Date : 08-MAR-2005 14:55
Client ID:
Sample Info: 1232,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 005F0501.D
Report Date: 09-Mar-2005 08:45

STL North Canton

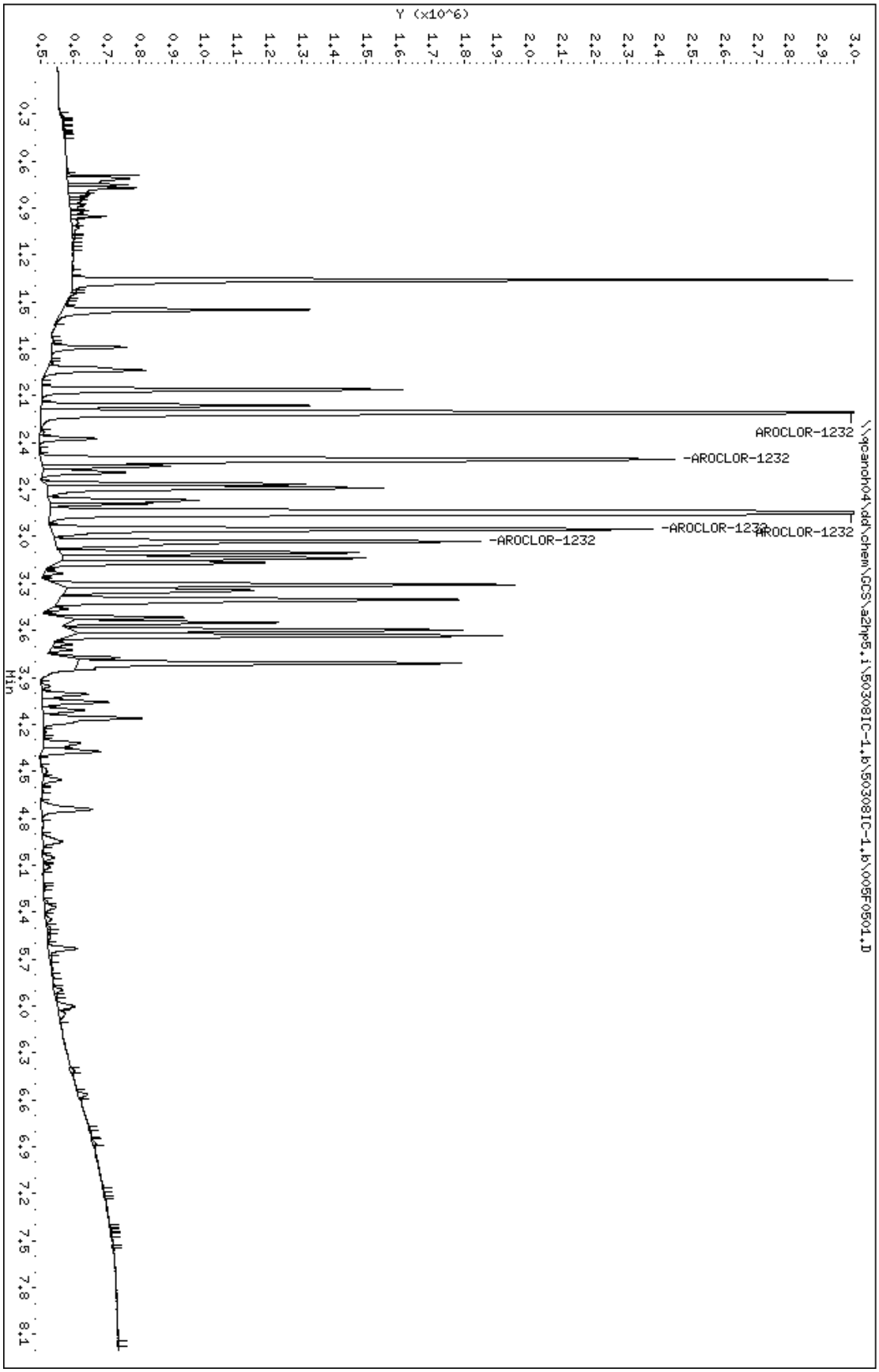
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 15:07
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,4
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 14:55 Cal File: 004F0401.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.206	2.206	0.000	3183477	1.00000	0.8749	75.00- 125.00	100.00
2.505	2.505	0.000	1950664	1.00000	0.8567	46.65- 77.76	61.27
2.850	2.850	0.000	3524086	1.00000	0.9468	78.78- 131.30	110.70
2.953	2.953	0.000	1850224	1.00000	0.9074	42.72- 71.20	58.12
3.030	3.030	0.000	1311167	1.00000	0.9569	28.97- 48.28	41.19

Average of Peak Amounts = 0.90854

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D
Date : 08-MAR-2005 15:07
Client ID:
Sample Info: 1232,1,4
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 006F0601.D
Report Date: 09-Mar-2005 08:45

STL North Canton

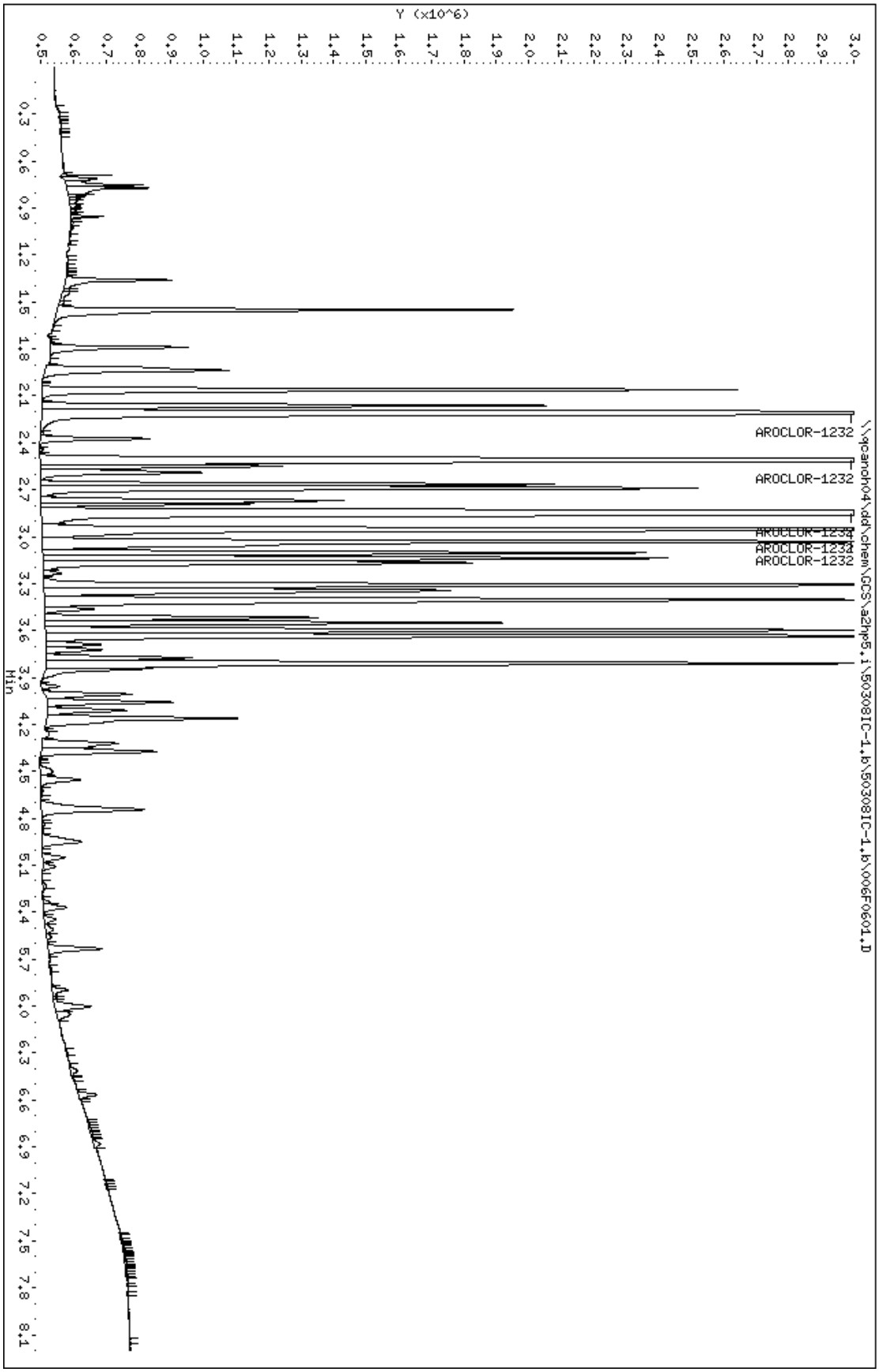
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D
Lab Smp Id: 1232
Inj Date : 08-MAR-2005 15:19
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1232,,1,5
Misc Info : 1-AR1232.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 15:07 Cal File: 005F0501.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 1-AR1232.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
2.206	2.206	0.000	5999052	2.00000	1.702	75.00- 125.00	100.00
2.506	2.506	0.000	3775101	2.00000	1.720	46.65- 77.76	62.93
2.851	2.851	0.000	6979892	2.00000	1.900	78.78- 131.30	116.35
2.953	2.953	0.000	3714020	2.00000	1.865	42.72- 71.20	61.91
3.031	3.031	0.000	2697525	2.00000	1.990	28.97- 48.28	44.97

Average of Peak Amounts = 1.83540

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D
Date : 08-MAR-2005 15:19
Client ID:
Sample Info: 1232,1.5
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 007F0701.D
Report Date: 09-Mar-2005 08:45

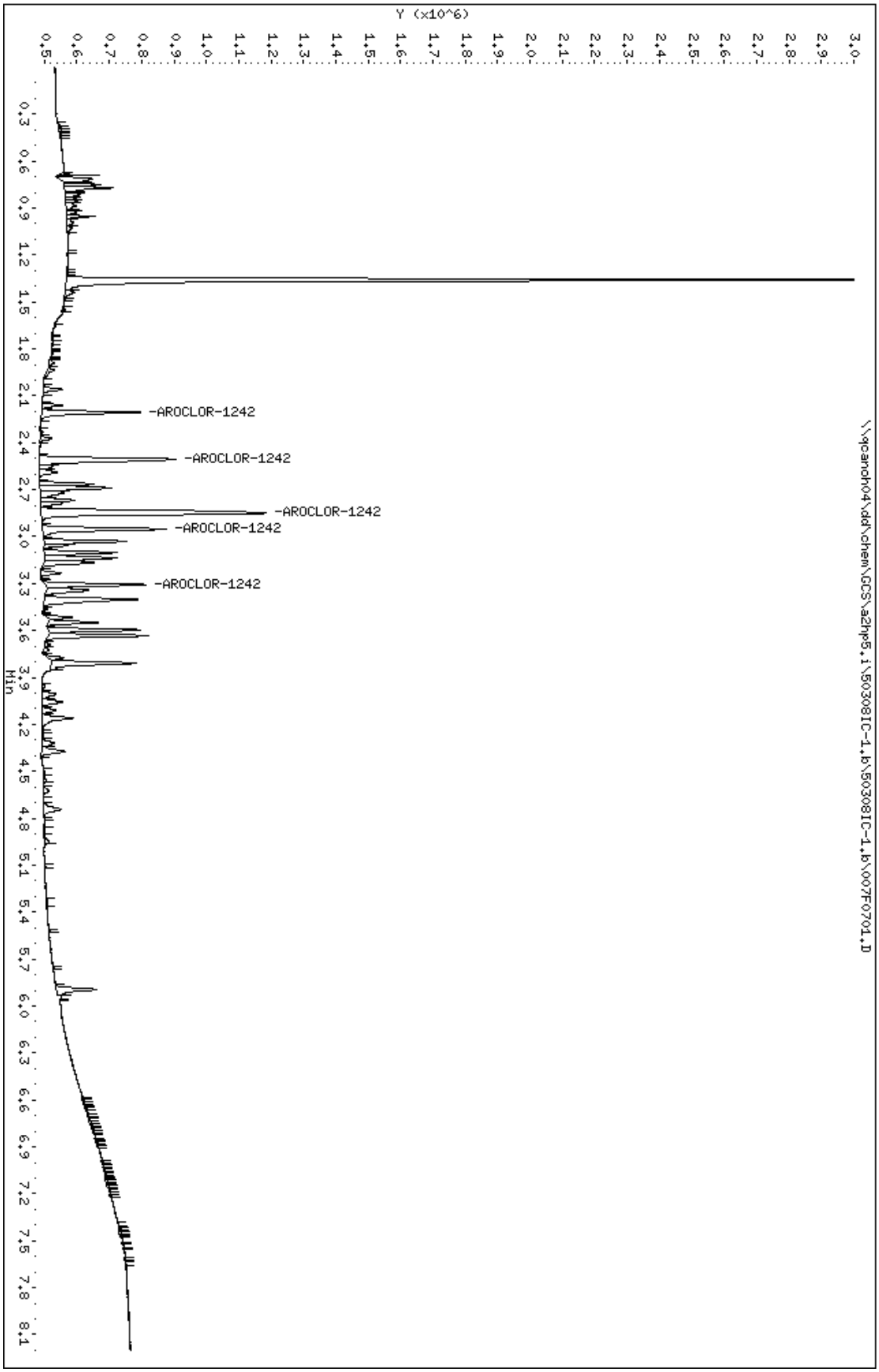
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 15:32
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,1
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 15:19 Cal File: 006F0601.D
Als bottle: 7 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	303461	0.10000		0.00- 0.00	100.00
2.505	2.505	0.000	420048	0.10000		0.00- 0.00	138.42
2.850	2.850	0.000	696247	0.10000		0.00- 0.00	229.44
2.953	2.953	0.000	384039	0.10000		0.00- 0.00	126.55
3.308	3.308	0.000	313246	0.10000		0.00- 0.00	103.22

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
Date : 08-MAR-2005 15:32
Client ID:
Sample Info: 1242,,1,1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 008F0801.D
Report Date: 09-Mar-2005 08:45

STL North Canton

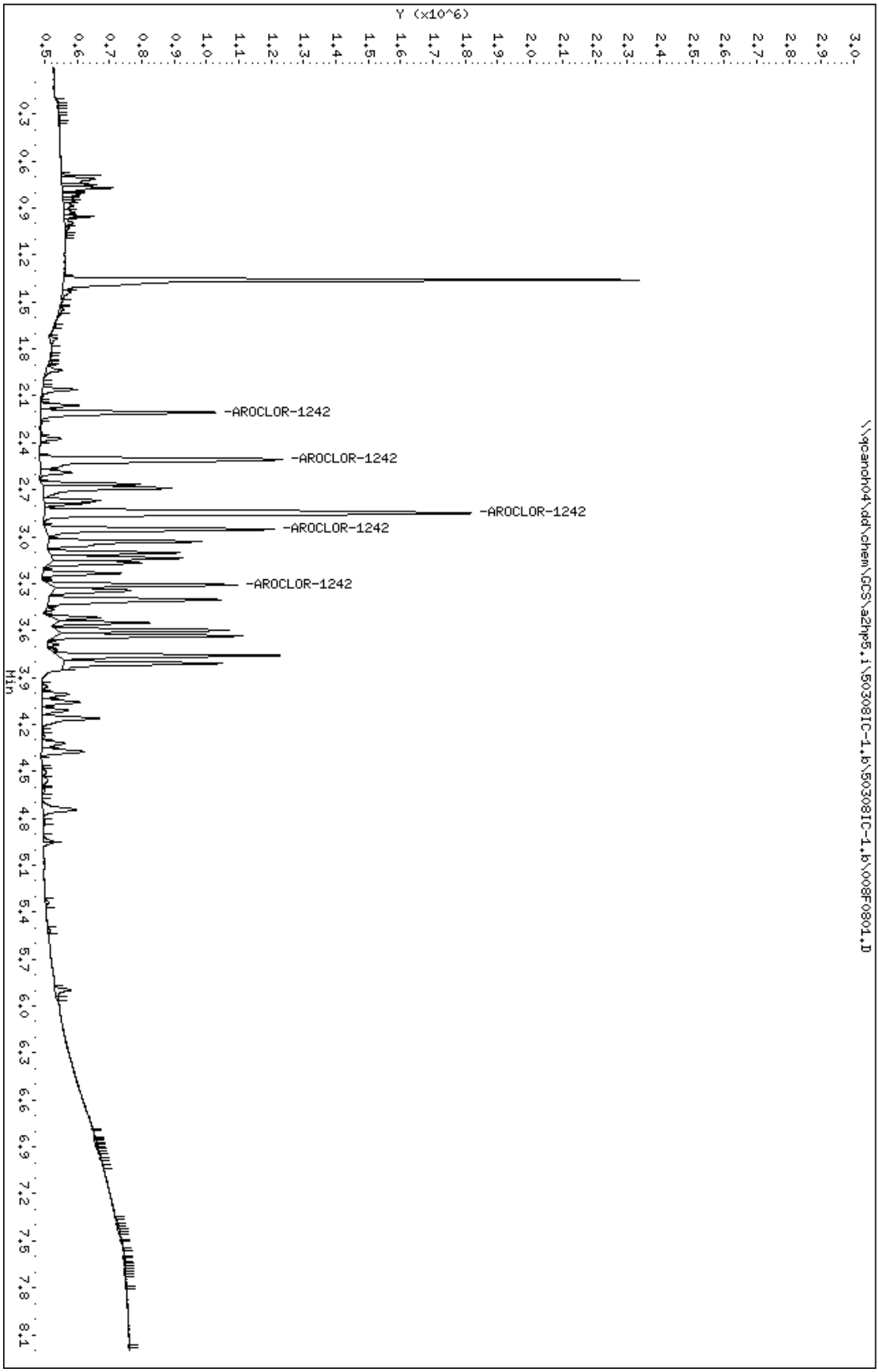
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 15:44
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,2
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 15:32 Cal File: 007F0701.D
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	540563	0.20000	0.1781	0.00- 0.00	100.00
2.506	2.506	0.000	750509	0.20000	0.1787	0.00- 0.00	138.84
2.851	2.851	0.000	1320194	0.20000	0.1896	0.00- 0.00	244.23
2.953	2.953	0.000	707687	0.20000	0.1843	0.00- 0.00	130.92
3.308	3.308	0.000	576773	0.20000	0.1841	0.00- 0.00	106.70

Average of Peak Amounts = 0.18296

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
Date : 08-MAR-2005 15:44
Client ID:
Sample Info: 1242,,1,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 009F0101.D
Report Date: 09-Mar-2005 08:45

STL North Canton

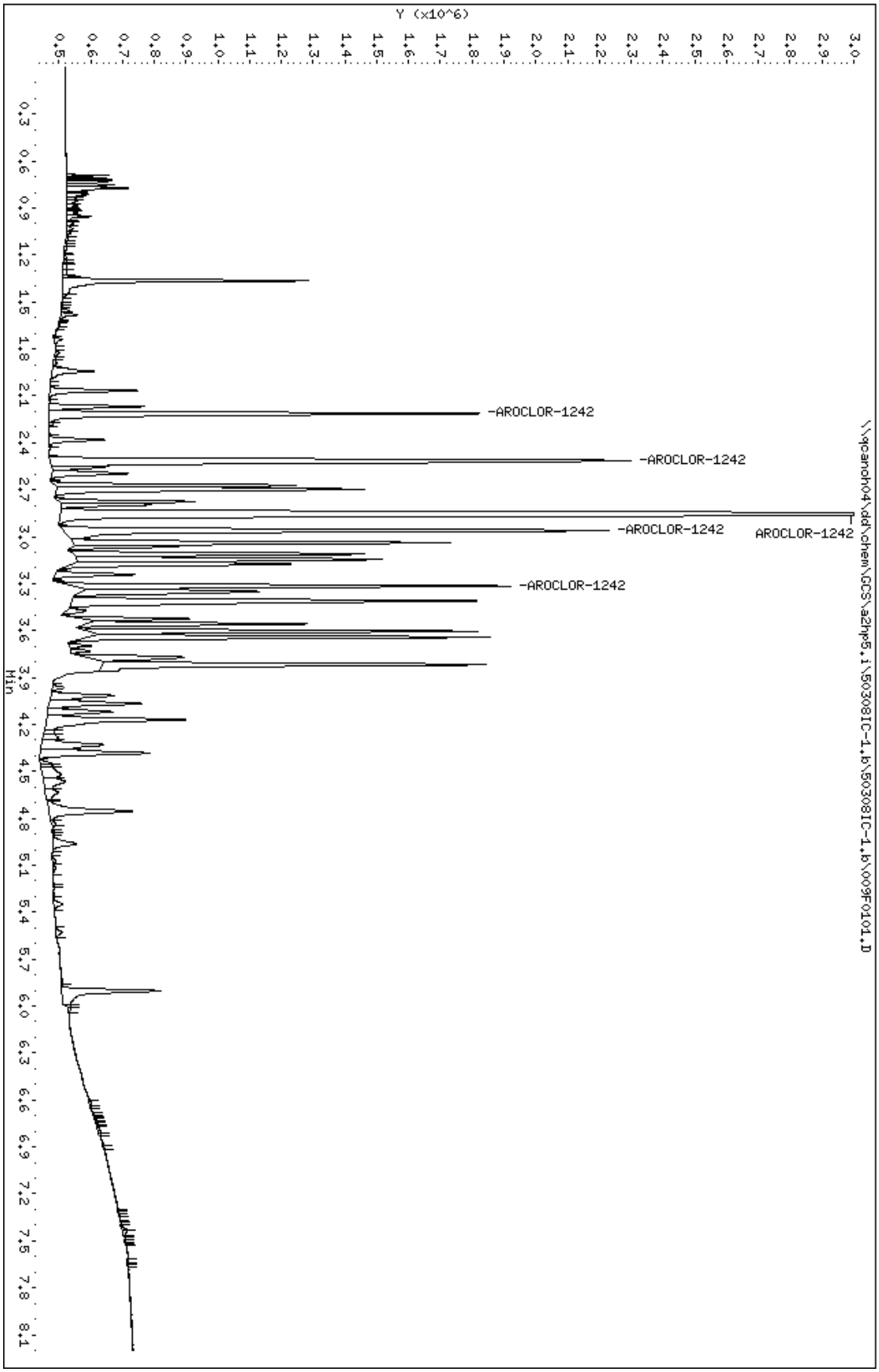
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:10
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,3
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 15:44 Cal File: 008F0801.D
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.213	2.213	0.000	1352569	0.50000	0.4715	80.00- 120.00	100.00
2.514	2.514	0.000	1827009	0.50000	0.4594	101.31- 168.85	135.08
2.858	2.858	0.000	3344711	0.50000	0.4932	185.46- 309.11	247.29
2.961	2.961	0.000	1718490	0.50000	0.4658	95.29- 158.82	127.05
3.316	3.316	0.000	1372435	0.50000	0.4562	76.10- 126.84	101.47

Average of Peak Amounts = 0.46922

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
Date : 08-MAR-2005 17:10
Client ID:
Sample Info: 1242,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



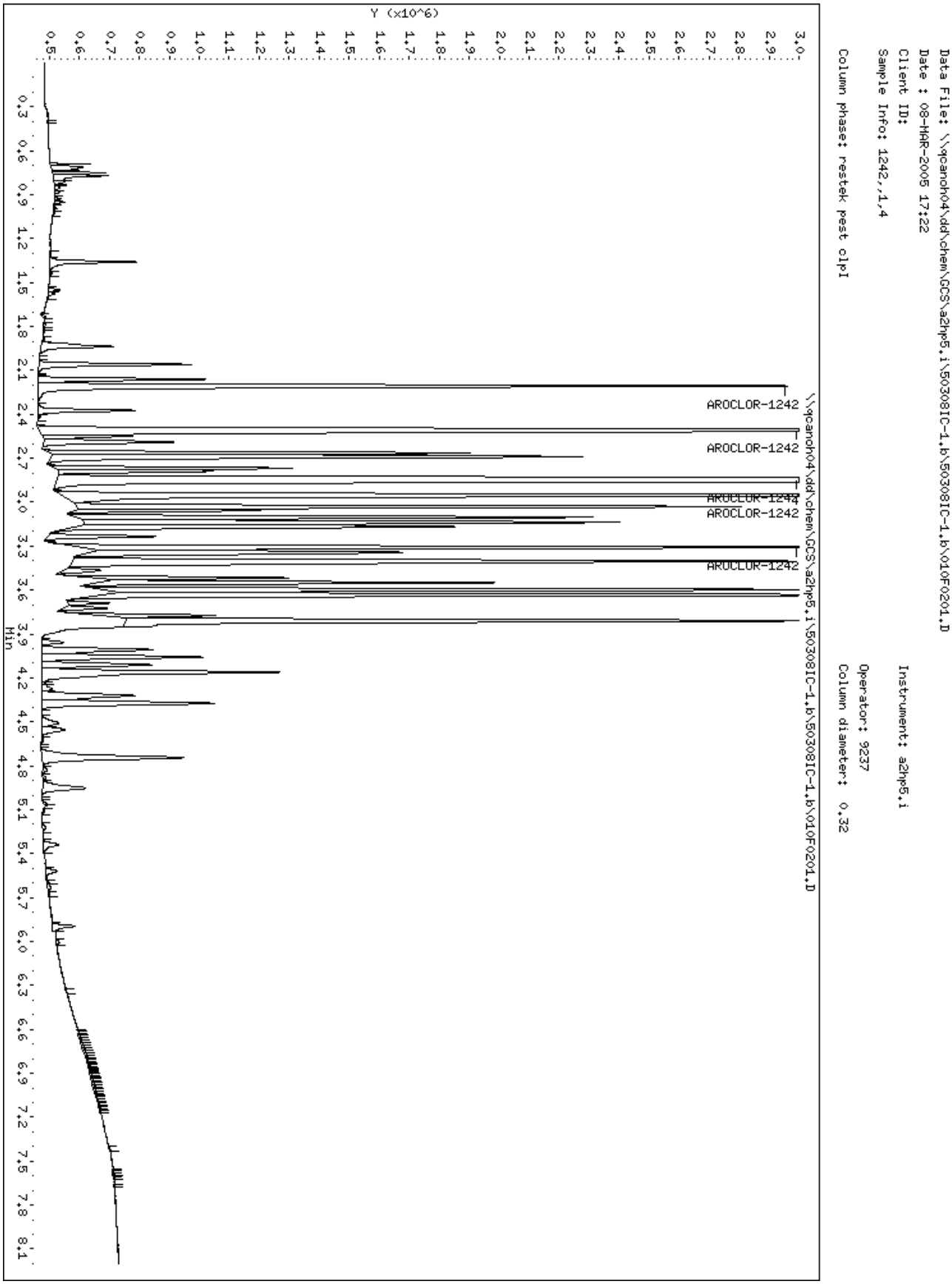
Data File: 010F0201.D
Report Date: 09-Mar-2005 08:45

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:22
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,4
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 17:10 Cal File: 009F0101.D
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	2496164	1.00000	0.8870	75.00- 125.00	100.00
2.506	2.506	0.000	3413476	1.00000	0.8822	101.31- 168.85	136.75
2.850	2.850	0.000	6188619	1.00000	0.9167	185.46- 309.11	247.93
2.953	2.953	0.000	3253561	1.00000	0.9024	95.29- 158.82	130.34
3.308	3.308	0.000	2602187	1.00000	0.8910	76.10- 126.84	104.25

Average of Peak Amounts = 0.89586


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
Date : 08-MAR-2005 17:22
Client ID:
Sample Info: 1242,.1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
Min

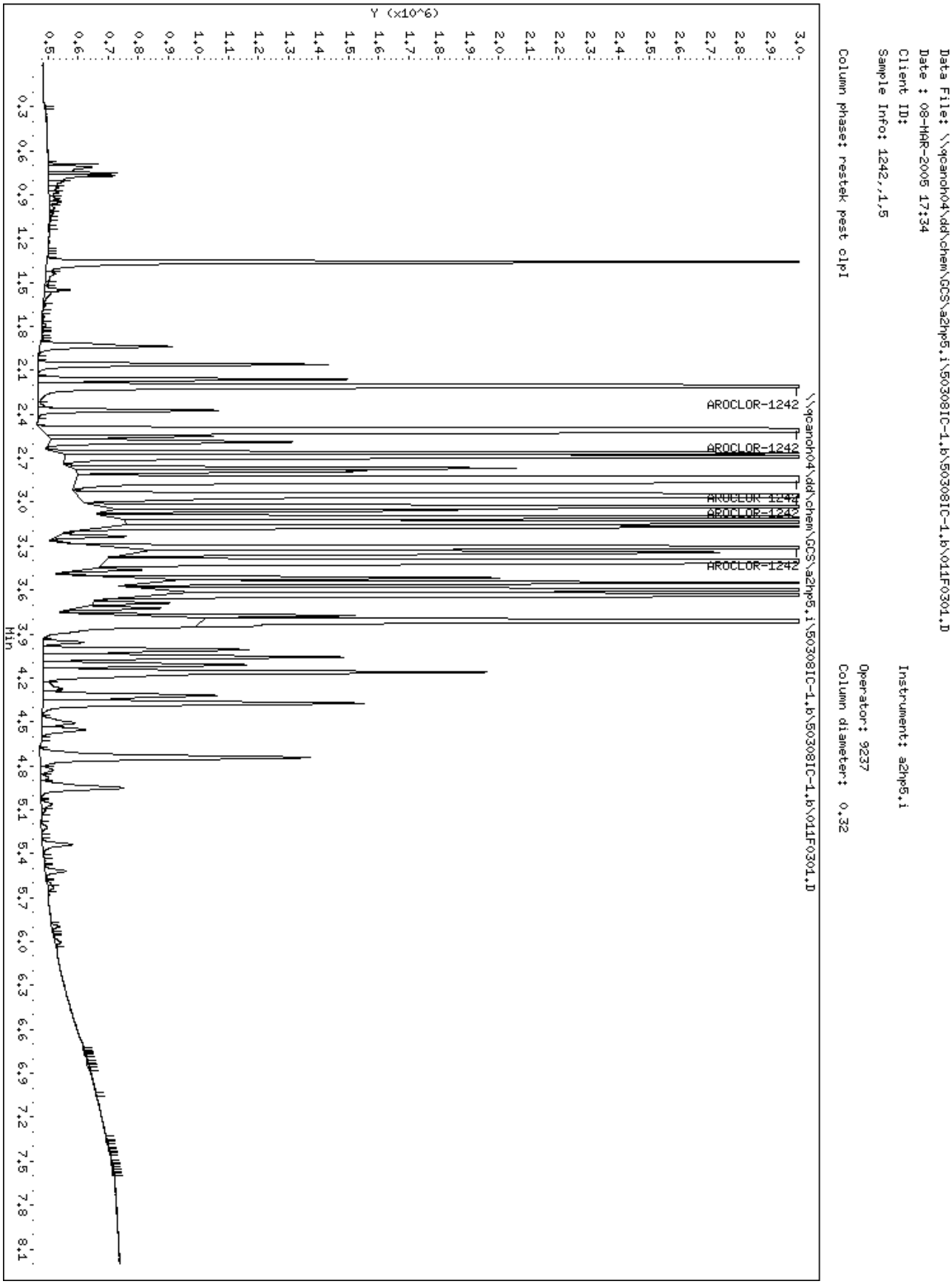
Data File: 011F0301.D
Report Date: 09-Mar-2005 08:45

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
Lab Smp Id: 1242
Inj Date : 08-MAR-2005 17:34
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1242,,1,5
Misc Info : 2-AR1242.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 17:22 Cal File: 010F0201.D
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 2-AR1242.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
2.206	2.206	0.000	4684647	2.00000	1.713	75.00- 125.00	100.00
2.505	2.505	0.000	6244682	2.00000	1.663	101.31- 168.85	133.30
2.850	2.850	0.000	11838111	2.00000	1.791	185.46- 309.11	252.70
2.952	2.952	0.000	6178552	2.00000	1.756	95.29- 158.82	131.89
3.307	3.307	0.000	4910263	2.00000	1.728	76.10- 126.84	104.82

Average of Peak Amounts = 1.73020


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
Date : 08-MAR-2005 17:34
Client ID:
Sample Info: 1242,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
AROCLOR-1242
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
Min

Data File: 012F0401.D
Report Date: 09-Mar-2005 08:45

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 17:46
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,1
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 17:34 Cal File: 011F0301.D
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.504	0.000	220582	0.10000		0.00- 0.00	100.00
2.847	2.847	0.000	431973	0.10000		0.00- 0.00	195.83
3.307	3.307	0.000	525021	0.10000		0.00- 0.00	238.02
3.597	3.597	0.000	557901	0.10000		0.00- 0.00	252.92
3.808	3.808	0.000	485420	0.10000		0.00- 0.00	220.06

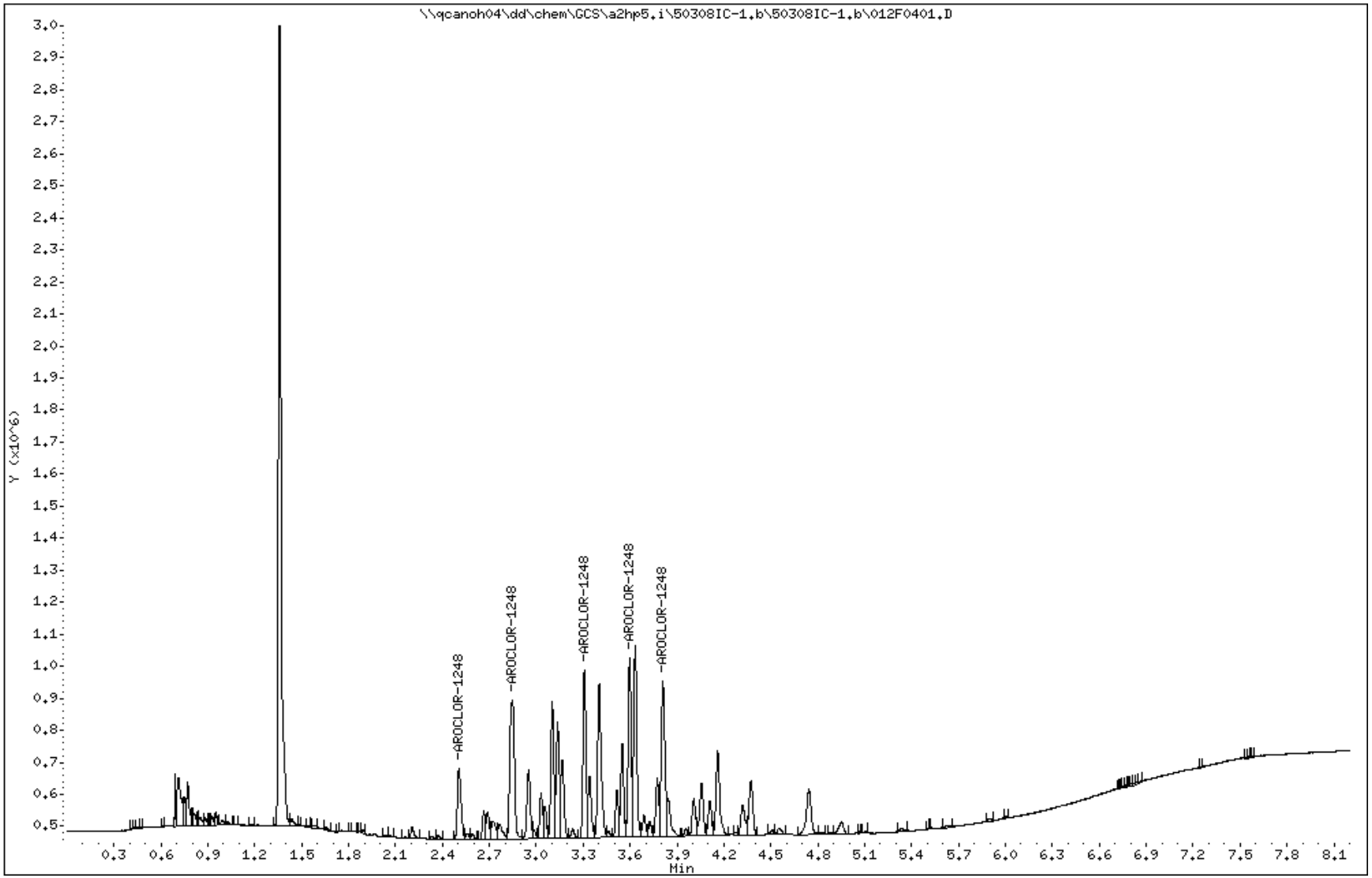
Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
Date : 08-MAR-2005 17:46
Client ID:
Sample Info: 1248,,1,1

Instrument: a2hp5.i

Operator: 9237

Column phase: restek pest clpI

Column diameter: 0.32



Data File: 013F0501.D
Report Date: 09-Mar-2005 08:45

STL North Canton

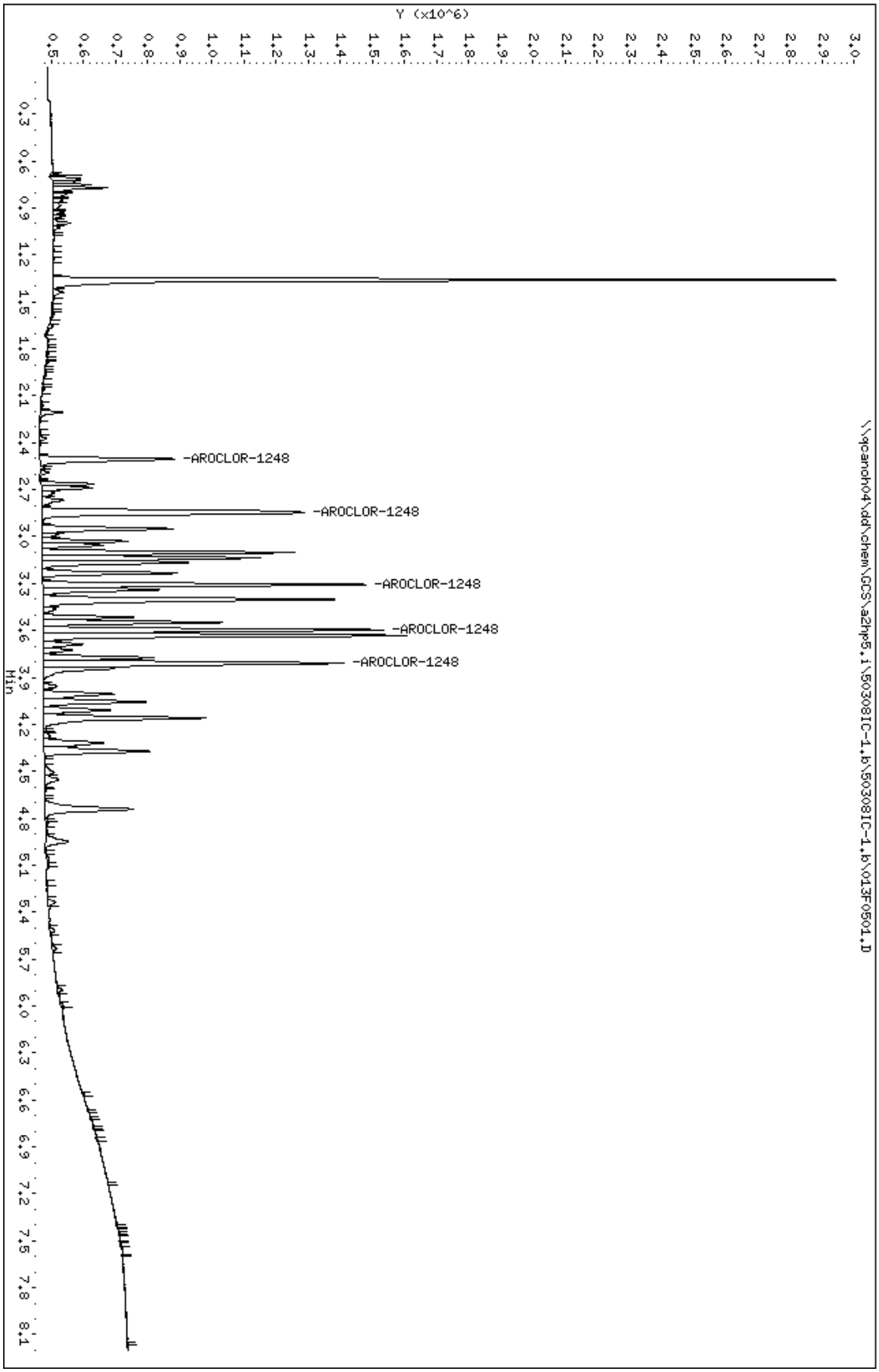
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 17:58
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,2
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 17:46 Cal File: 012F0401.D
Als bottle: 13 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.504	2.504	0.000	420040	0.20000	0.1904	0.00- 0.00	100.00
2.847	2.847	0.000	817705	0.20000	0.1893	0.00- 0.00	194.67
3.307	3.307	0.000	1006403	0.20000	0.1917	0.00- 0.00	239.60
3.596	3.596	0.000	1059144	0.20000	0.1898	0.00- 0.00	252.15
3.808	3.808	0.000	936707	0.20000	0.1930	0.00- 0.00	223.00

Average of Peak Amounts = 0.19084

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
Date : 08-MAR-2005 17:58
Client ID:
Sample Info: 1248,,1,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 014F0101.D
Report Date: 09-Mar-2005 08:45

STL North Canton

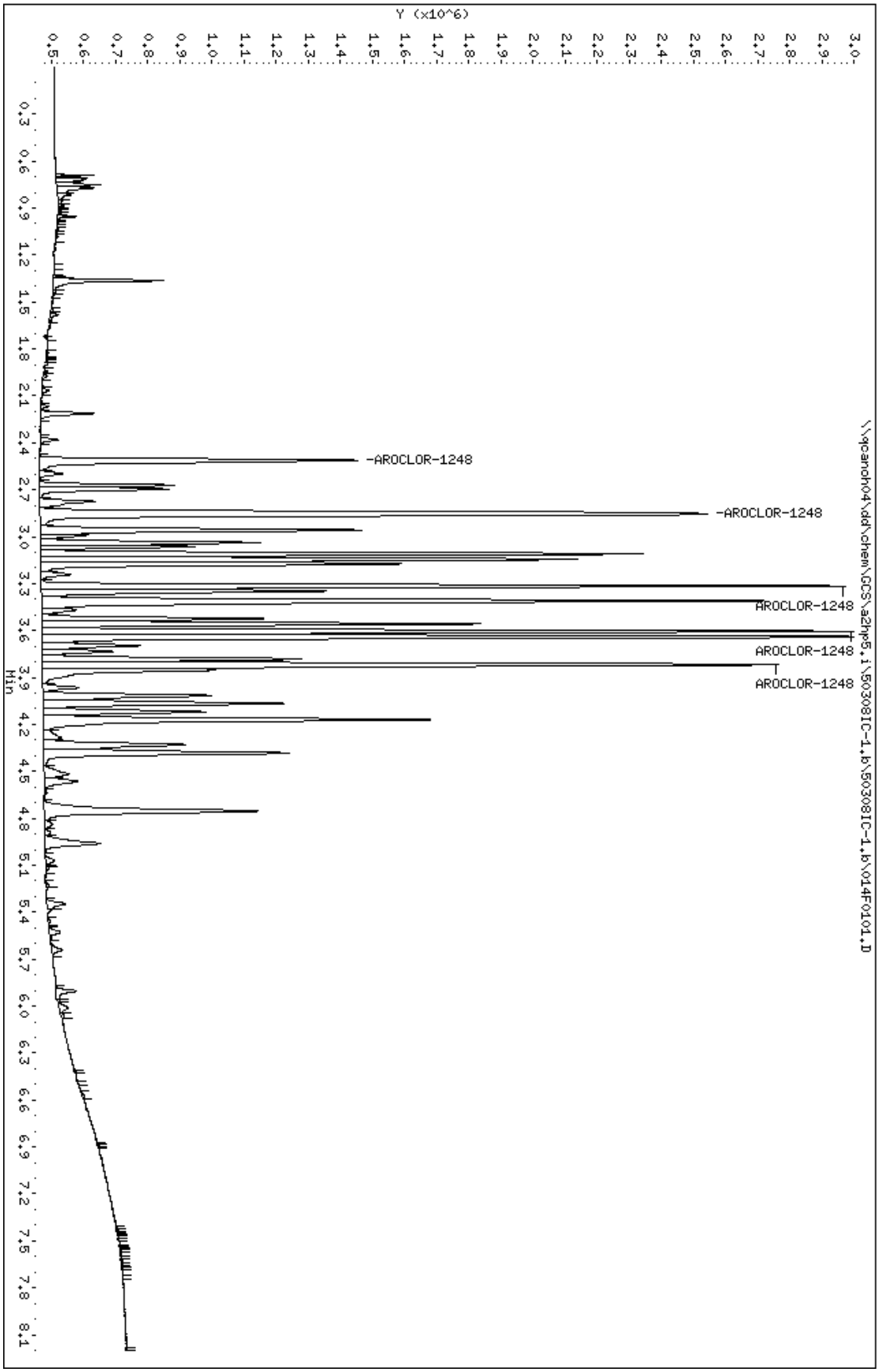
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:24
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,3
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:45 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 17:58 Cal File: 013F0501.D
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.511	2.511	0.000	992735	0.50000	0.4611	80.00- 120.00	100.00
2.855	2.855	0.000	2080216	0.50000	0.4948	157.16- 261.93	209.54
3.315	3.315	0.000	2504916	0.50000	0.4872	189.24- 315.41	252.32
3.605	3.605	0.000	2557748	0.50000	0.4704	193.23- 322.06	257.65
3.817	3.817	0.000	2290681	0.50000	0.4803	173.06- 288.43	230.74

Average of Peak Amounts = 0.47876

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
Date : 08-MAR-2005 18:24
Client ID:
Sample Info: 1248,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



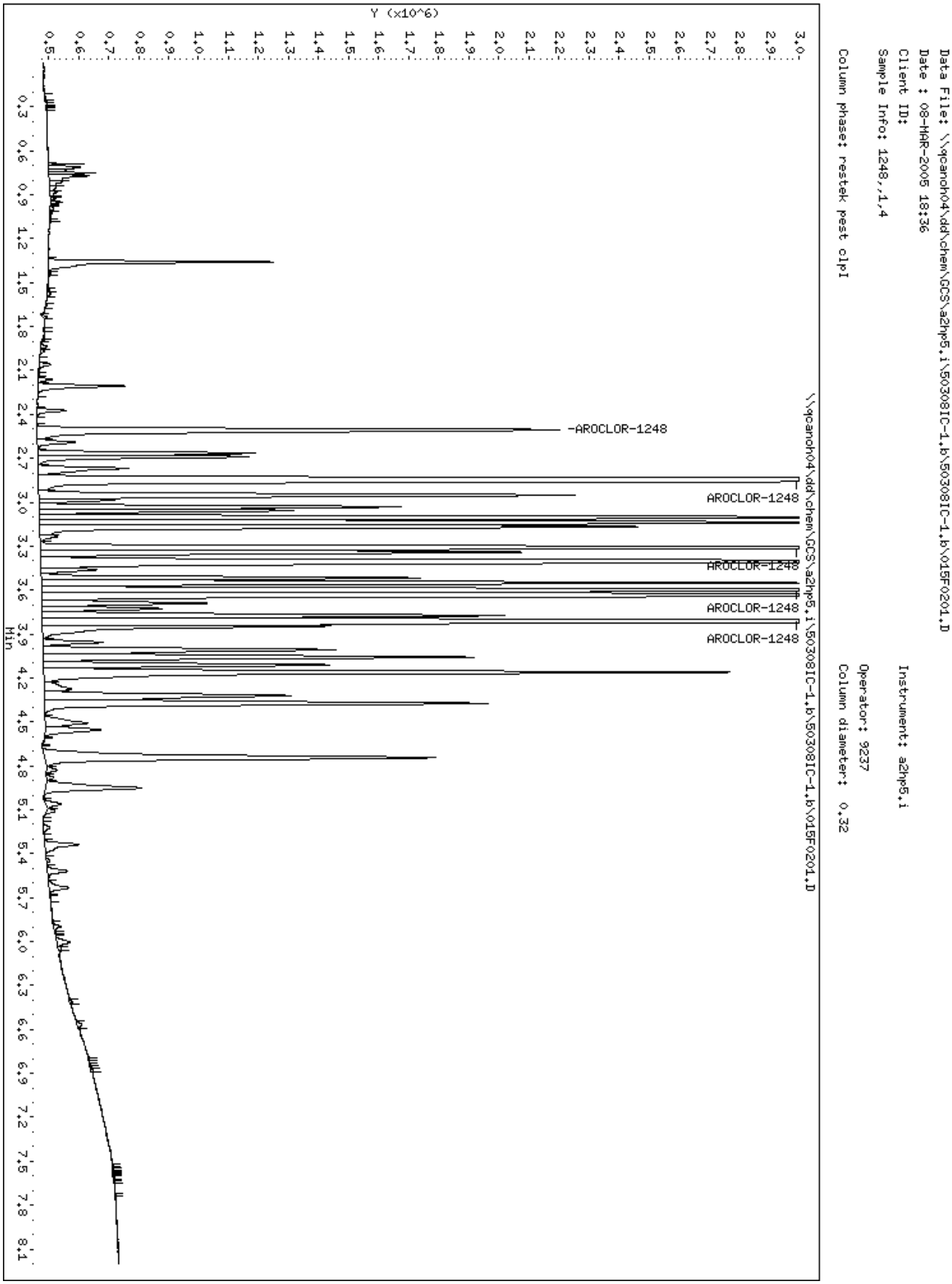
Data File: 015F0201.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:36
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,4
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 18:24 Cal File: 014F0101.D
Als bottle: 15 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.505	0.000	1741340	1.00000	0.8303	75.00- 125.00	100.00
2.848	2.848	0.000	3825392	1.00000	0.9131	157.16- 261.93	219.68
3.308	3.308	0.000	4532336	1.00000	0.8892	189.24- 315.41	260.28
3.597	3.597	0.000	4860604	1.00000	0.9119	193.23- 322.06	279.13
3.810	3.810	0.000	4434569	1.00000	0.9422	173.06- 288.43	254.66

Average of Peak Amounts = 0.89734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Date : 08-MAR-2005 18:36
Client ID:
Sample Info: 1248,,1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
-AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
Min

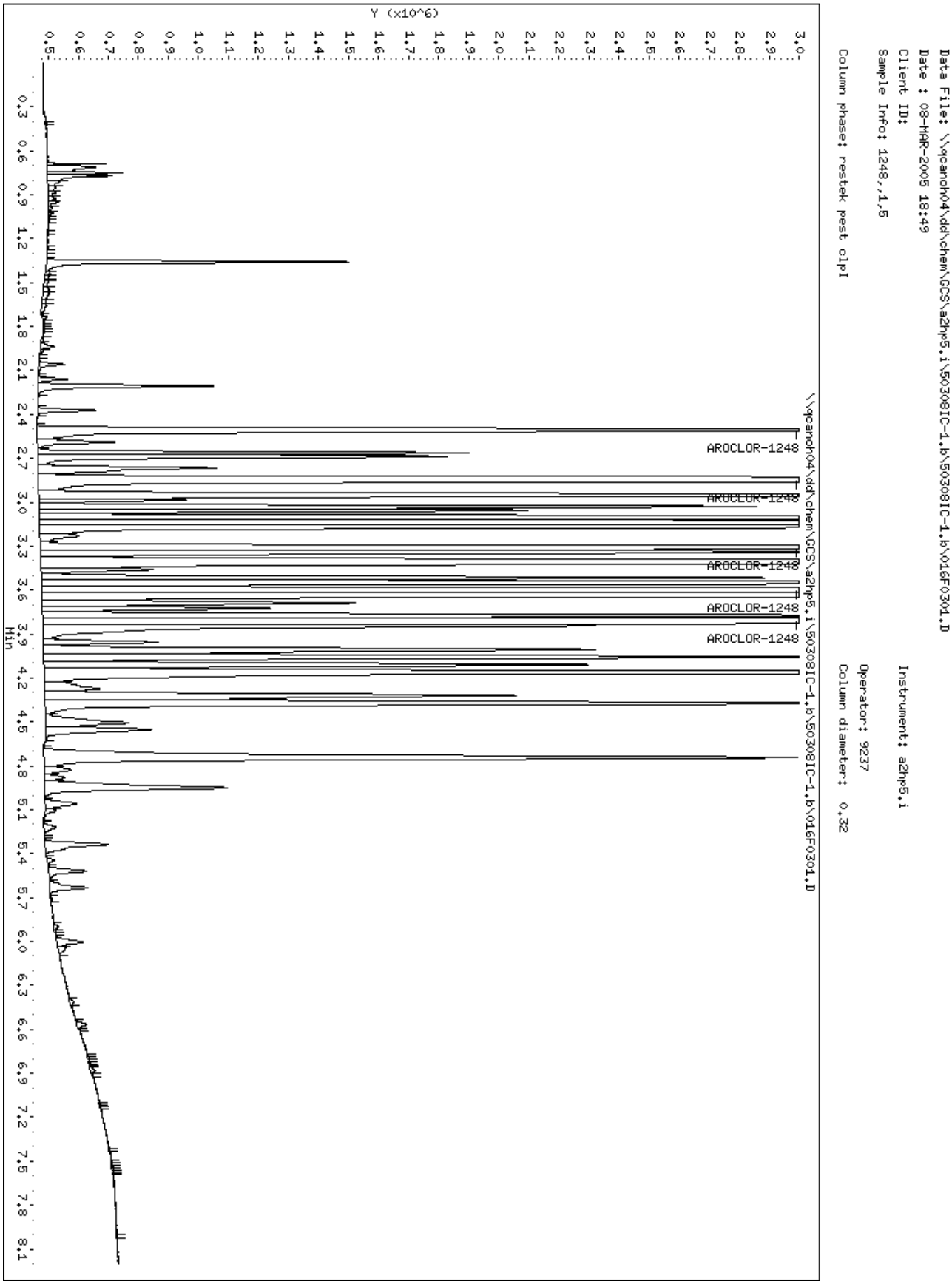
Data File: 016F0301.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D
Lab Smp Id: 1248
Inj Date : 08-MAR-2005 18:49
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1248,,1,5
Misc Info : 3-AR1248.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 18:36 Cal File: 015F0201.D
Als bottle: 16 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 3-AR1248.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
6 AROCLOR-1248					CAS #: 12672-29-6		
2.503	2.503	0.000	3487703	2.00000	1.737	75.00- 125.00	100.00
2.846	2.846	0.000	7420434	2.00000	1.810	157.16- 261.93	212.76
3.306	3.306	0.000	8882768	2.00000	1.792	189.24- 315.41	254.69
3.596	3.596	0.000	9395039	2.00000	1.802	193.23- 322.06	269.38
3.808	3.808	0.000	8634641	2.00000	1.862	173.06- 288.43	247.57

Average of Peak Amounts = 1.80060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Date : 08-MAR-2005 18:49
Client ID:
Sample Info: 1248,.1,5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
AROCLOR-1248
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D

Data File: 017F0401.D
Report Date: 09-Mar-2005 08:46

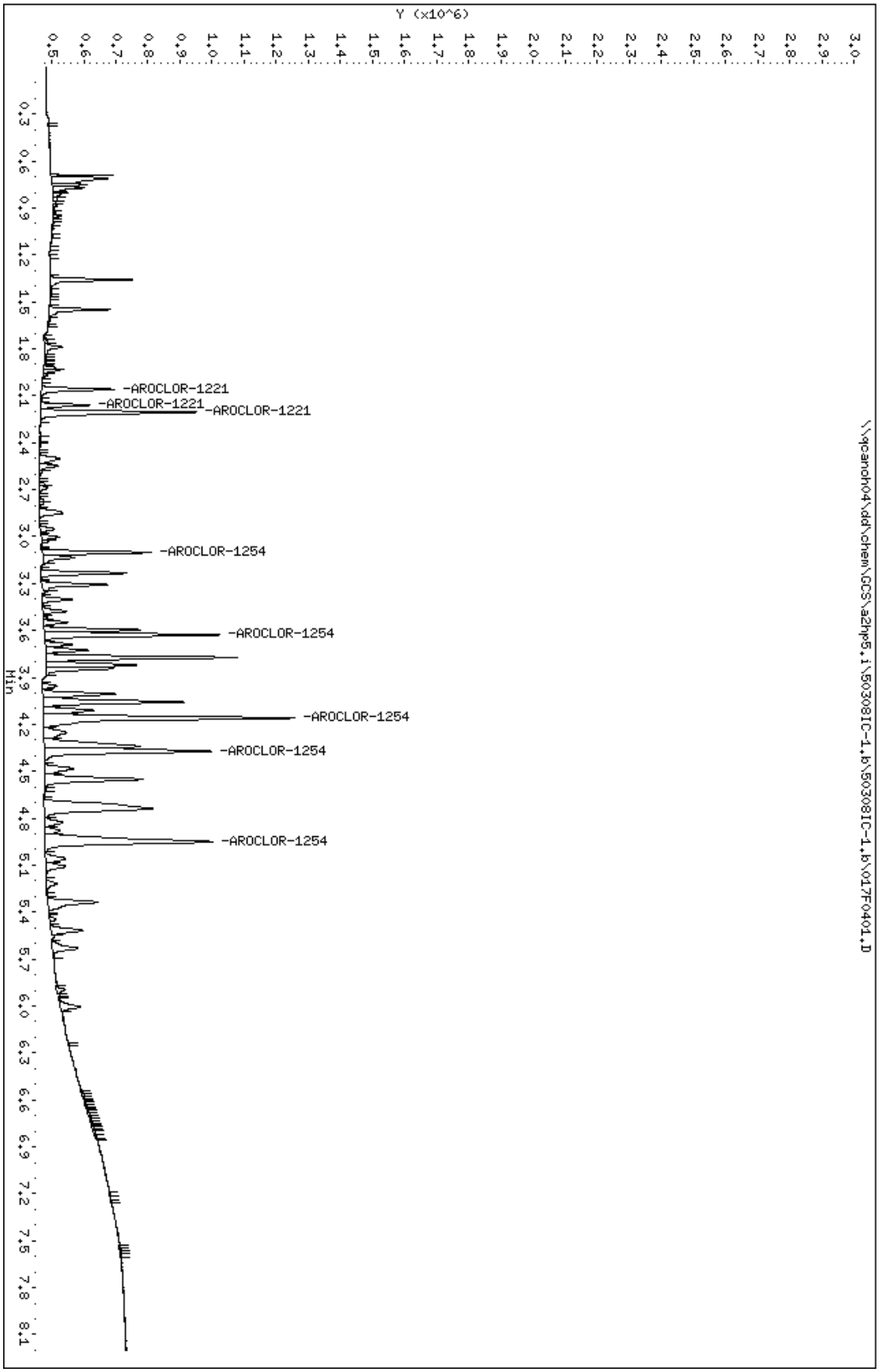
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:01
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,1
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 18:49 Cal File: 016F0301.D
Als bottle: 17 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.101	3.101	0.000	343553	0.10000		0.00- 0.00	100.00
3.628	3.628	0.000	546165	0.10000		0.00- 0.00	158.98
4.159	4.159	0.000	784719	0.10000		0.00- 0.00	228.41
4.372	4.372	0.000	519411	0.10000		0.00- 0.00	151.19
4.949	4.949	0.000	521903	0.10000		0.00- 0.00	151.91
2 AROCLOR-1221					CAS #: 11104-28-2		
2.059	2.059	0.000	228384	0.10000		0.00- 0.00	100.00
2.160	2.160	0.000	154131	0.10000		0.00- 0.00	67.49
2.205	2.205	0.000	484977	0.10000		0.00- 0.00	212.35

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
Date : 08-MAR-2005 19:01
Client ID:
Sample Info: 2154,,1,1
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 018F0501.D
Report Date: 09-Mar-2005 08:46

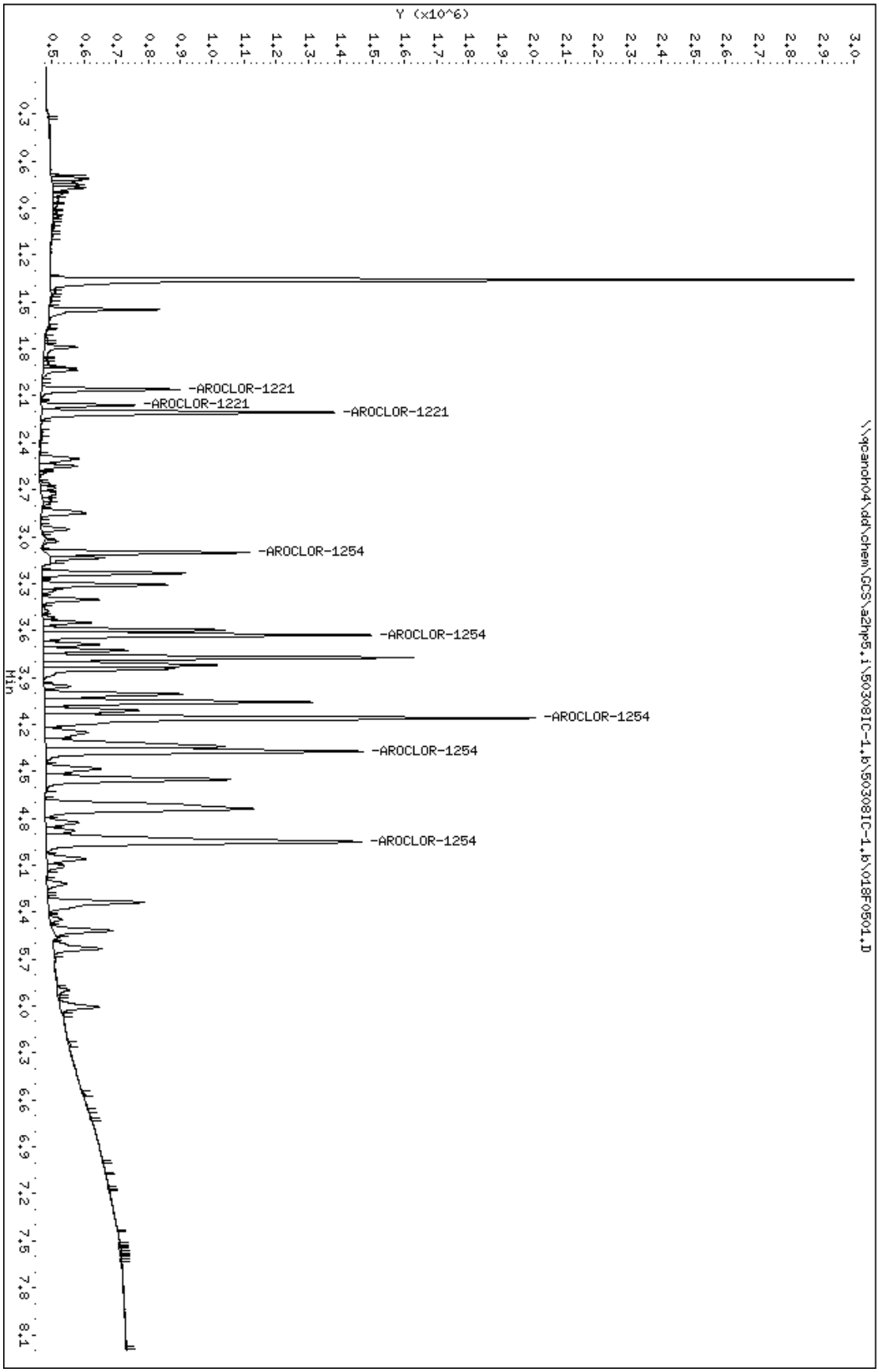
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:13
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,2
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 19:01 Cal File: 017F0401.D
Als bottle: 18 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.101	3.101	0.000	632355	0.20000	0.1841	0.00- 0.00	100.00
3.629	3.629	0.000	1023888	0.20000	0.1875	0.00- 0.00	161.92
4.160	4.160	0.000	1527942	0.20000	0.1947	0.00- 0.00	241.63
4.372	4.372	0.000	989498	0.20000	0.1905	0.00- 0.00	156.48
4.950	4.950	0.000	982788	0.20000	0.1883	0.00- 0.00	155.42
		Average of Peak Amounts =			0.18902		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.059	2.059	0.000	432860	0.20000	0.1895	0.00- 0.00	100.00
2.161	2.161	0.000	290192	0.20000	0.1883	0.00- 0.00	67.04
2.206	2.206	0.000	912157	0.20000	0.1881	0.00- 0.00	210.73
		Average of Peak Amounts =			0.18863		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
Date : 08-MAR-2005 19:13
Client ID:
Sample Info: 2154,1,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32

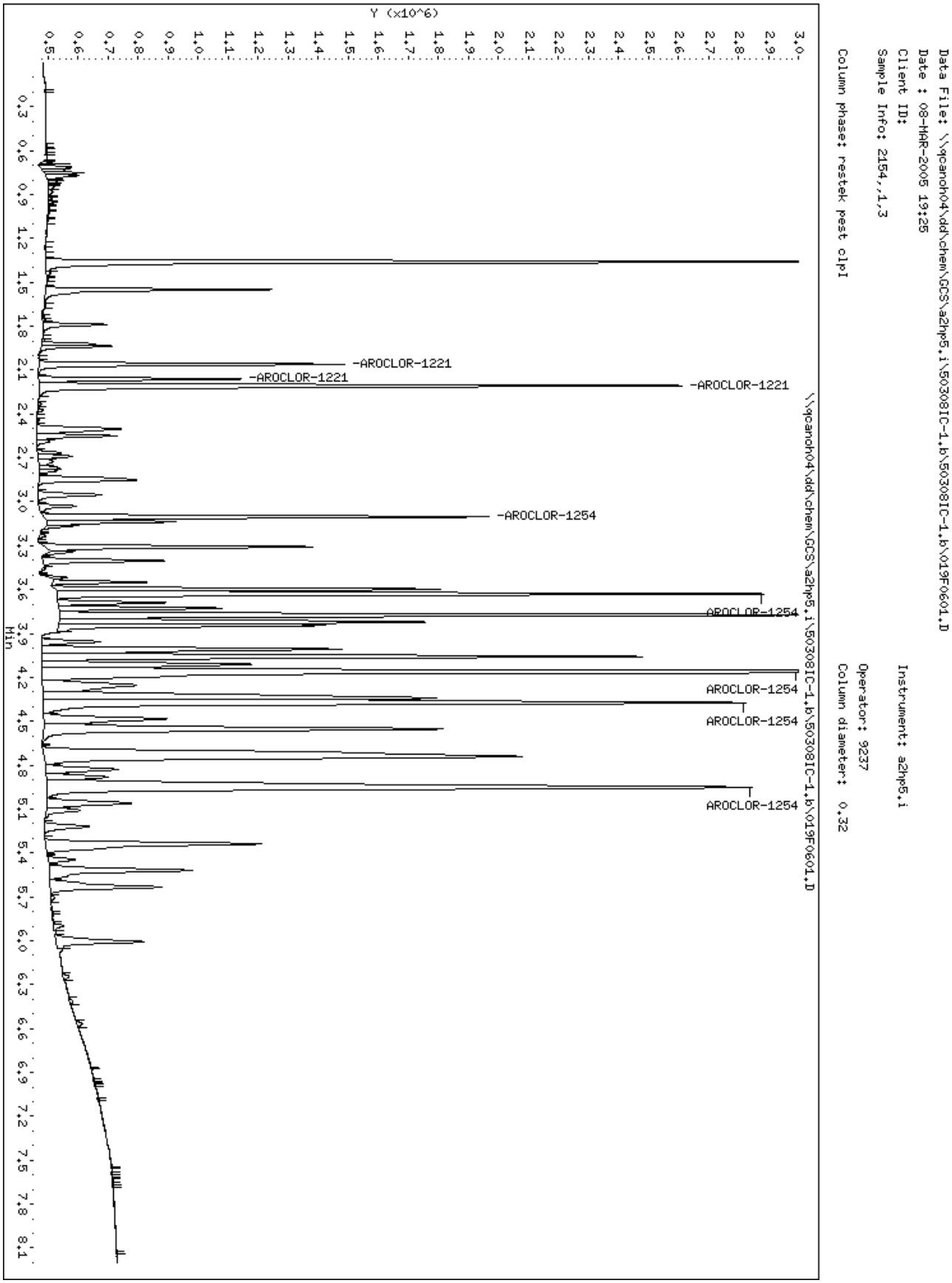


Data File: 019F0601.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:25
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,3
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 19:13 Cal File: 018F0501.D
Als bottle: 19 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.102	3.102	0.000	1481321	0.50000	0.4491	80.00- 120.00	100.00
3.629	3.629	0.000	2352174	0.50000	0.4446	119.09- 198.49	158.79
4.160	4.160	0.000	3669312	0.50000	0.4739	185.78- 309.63	247.71
4.373	4.373	0.000	2337479	0.50000	0.4610	118.35- 197.25	157.80
4.951	4.951	0.000	2352629	0.50000	0.4644	119.11- 198.52	158.82
Average of Peak Amounts =					0.45860		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.060	2.060	0.000	1019062	0.50000	0.4582	80.00- 120.00	100.00
2.161	2.161	0.000	673368	0.50000	0.4501	49.56- 82.60	66.08
2.206	2.206	0.000	2141023	0.50000	0.4550	157.57- 262.62	210.10
Average of Peak Amounts =					0.45443		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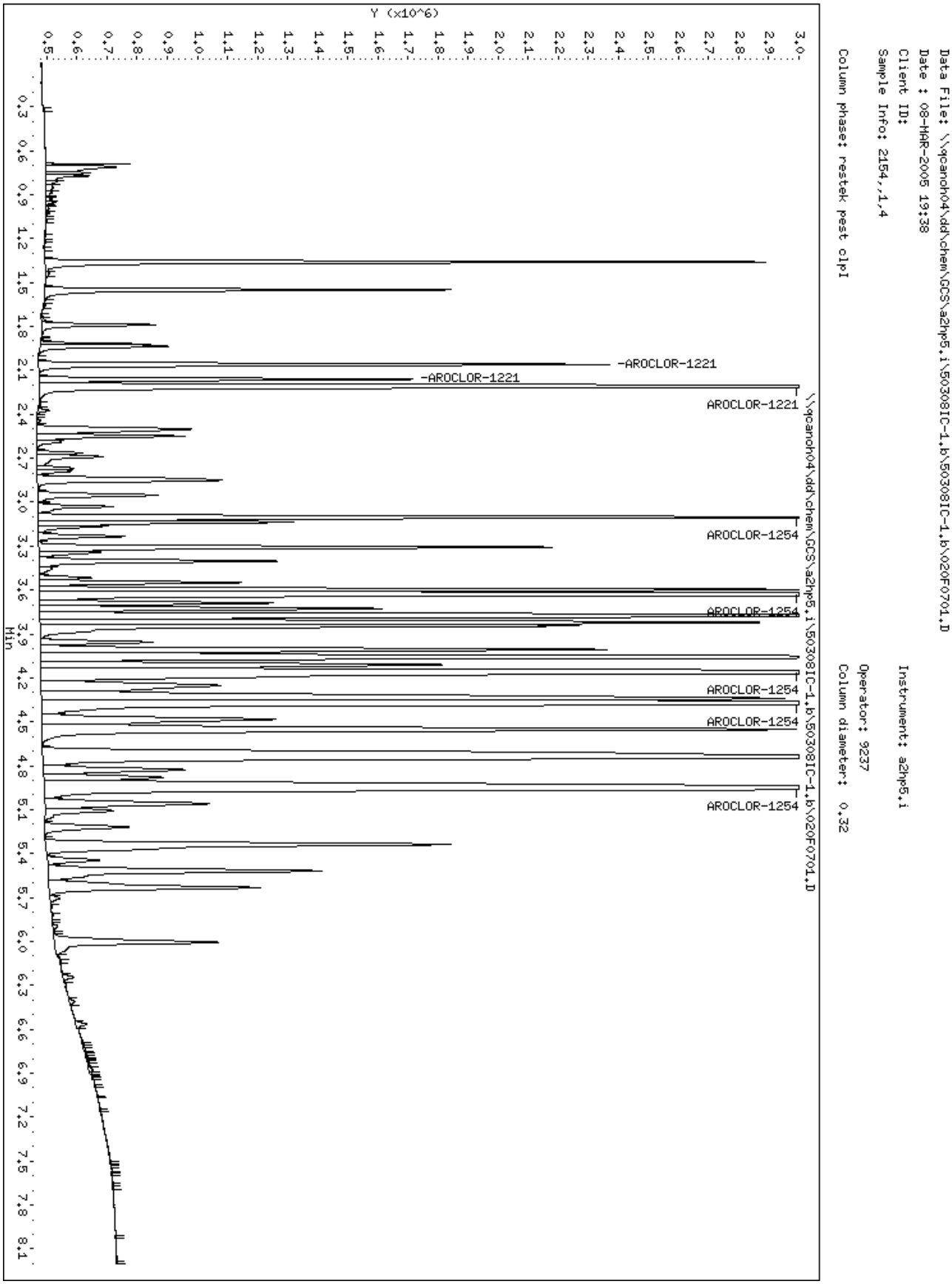
Date : 08-MAR-2005 19:25
Client ID:
Sample Info: 2154,1,3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1221
-AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D

Data File: 020F0701.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:38
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,4
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 19:25 Cal File: 019F0601.D
Als bottle: 20 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.102	3.102	0.000	2784568	1.00000	0.8738	75.00- 125.00	100.00
3.629	3.629	0.000	4684224	1.00000	0.9194	119.09- 198.49	168.22
4.159	4.159	0.000	6985414	1.00000	0.9181	185.78- 309.63	250.86
4.372	4.372	0.000	4471790	1.00000	0.9054	118.35- 197.25	160.59
4.949	4.949	0.000	4505545	1.00000	0.9109	119.11- 198.52	161.80
Average of Peak Amounts =					0.90552		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.059	2.059	0.000	1901012	1.00000	0.8792	75.00- 125.00	100.00
2.161	2.161	0.000	1243074	1.00000	0.8595	49.56- 82.60	65.39
2.206	2.206	0.000	3994107	1.00000	0.8751	157.57- 262.62	210.10
Average of Peak Amounts =					0.87127		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Date : 08-MAR-2005 19:38
Client ID:
Sample Info: 2154,,1,4
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
-AROCLOR-1221
-AROCLOR-1221
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D

Data File: 021F0801.D
Report Date: 09-Mar-2005 08:46

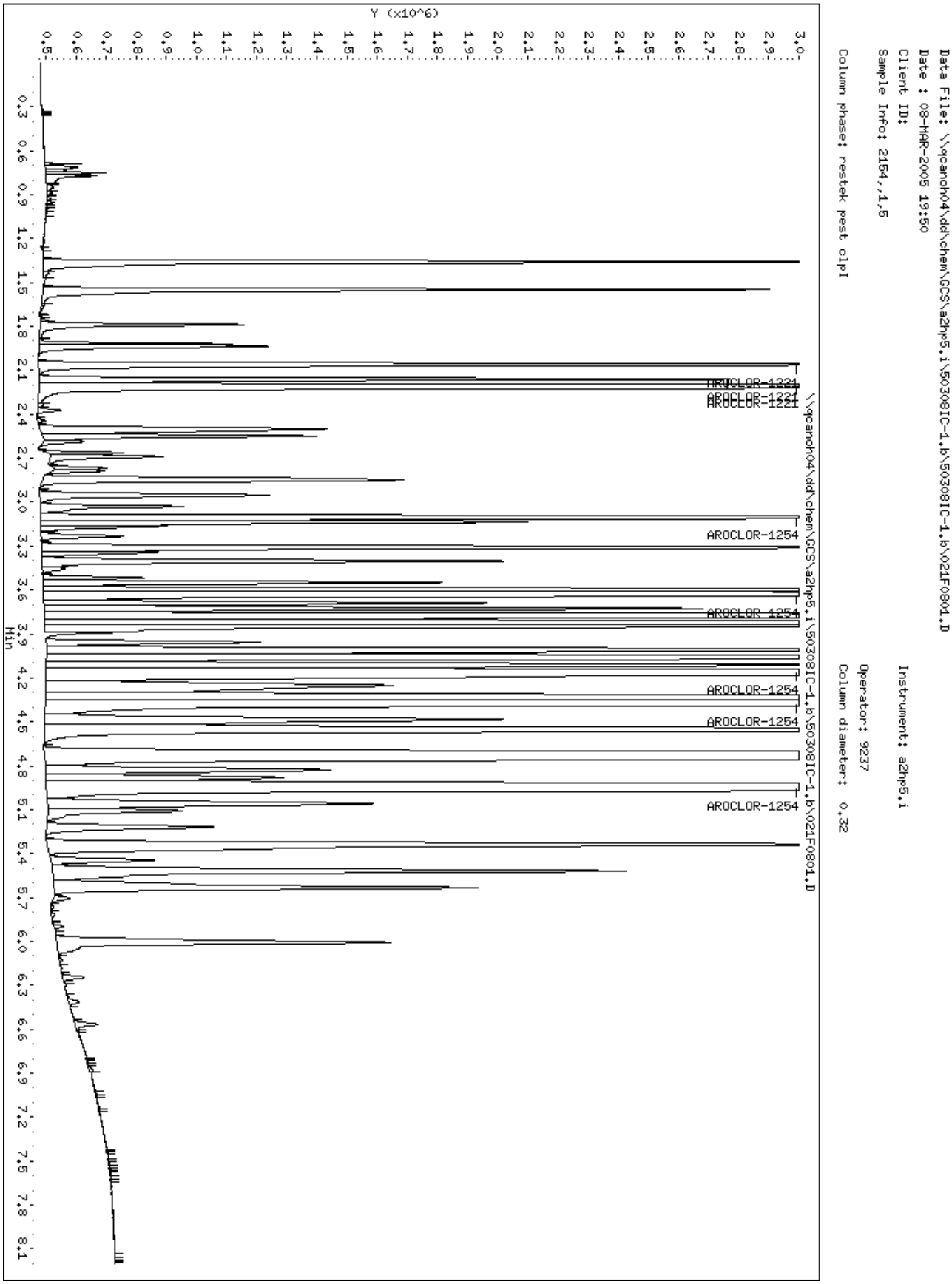
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
Lab Smp Id: 2154
Inj Date : 08-MAR-2005 19:50
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 2154,,1,5
Misc Info : 9-AR2154.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 19:38 Cal File: 020F0701.D
Als bottle: 21 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 9-AR2154.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
7 AROCLOR-1254					CAS #: 11097-69-1		
3.102	3.102	0.000	5407705	2.00000	1.752	75.00- 125.00	100.00(M)
3.629	3.629	0.000	9281316	2.00000	1.859	119.09- 198.49	171.63
4.160	4.160	0.000	14367842	2.00000	1.928	185.78- 309.63	265.69
4.373	4.373	0.000	9269712	2.00000	1.922	118.35- 197.25	171.42
4.951	4.951	0.000	9279035	2.00000	1.919	119.11- 198.52	171.59
Average of Peak Amounts =					1.87600		
2 AROCLOR-1221					CAS #: 11104-28-2		
2.059	2.059	0.000	3583057	2.00000	1.709	75.00- 125.00	100.00
2.160	2.160	0.000	2294206	2.00000	1.644	49.56- 82.60	64.03
2.205	2.205	0.000	7377611	2.00000	1.668	157.57- 262.62	205.90
Average of Peak Amounts =					1.67367		

QC Flag Legend

M - Compound response manually integrated.


Data File: \\qcanch04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
Date : 08-MAR-2005 19:50
Client ID:
Sample Info: 2154,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
AROCLOR-1221
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
AROCLOR-1254
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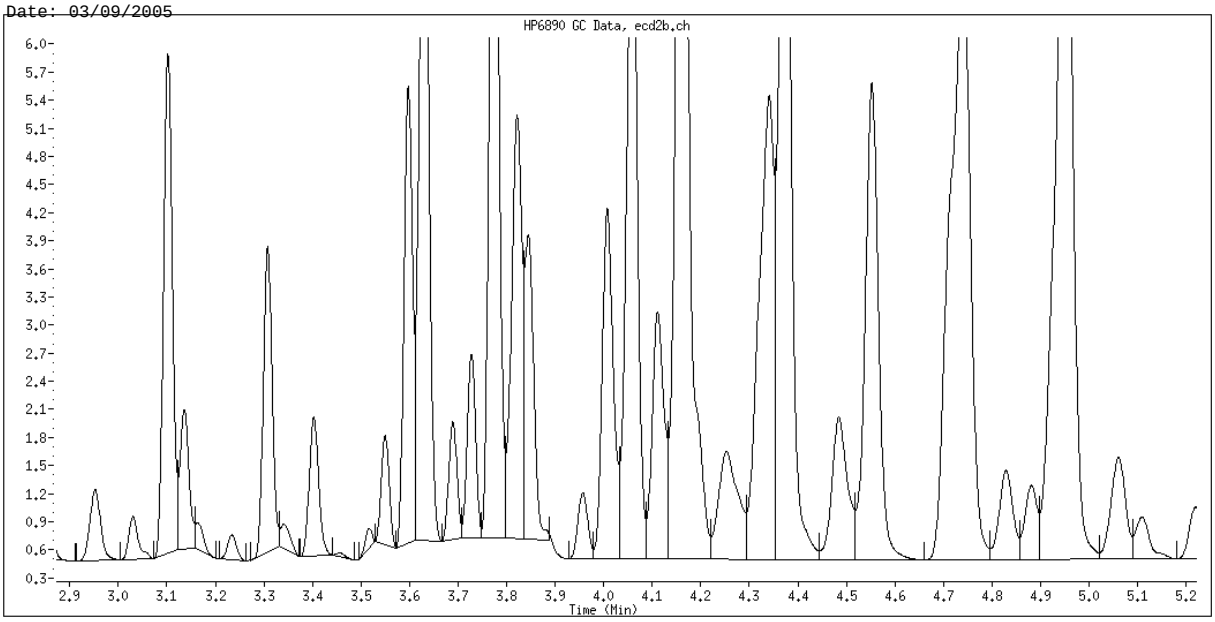
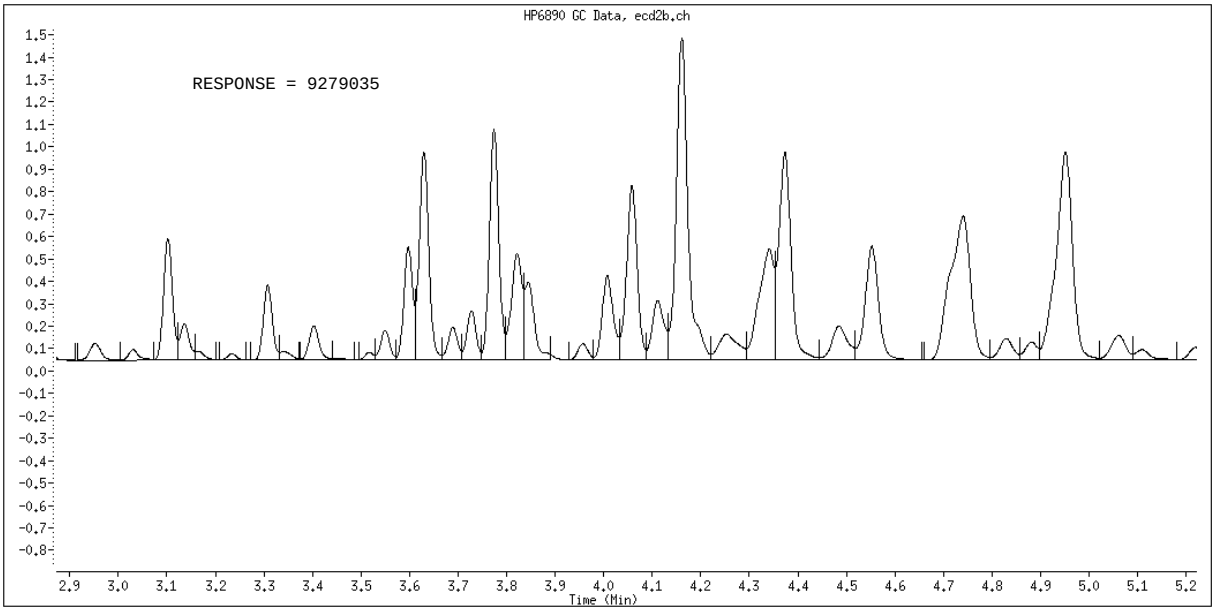
Data File Name: 021F0801.D
Inj. Date and Time: 08-MAR-2005 19:50
Instrument ID: a2hp5.i
Client ID:
Compound Name: AROCLOR-1254
CAS #: 11097-69-1
Report Date: 03/09/2005



Original Integration



Manual Integration

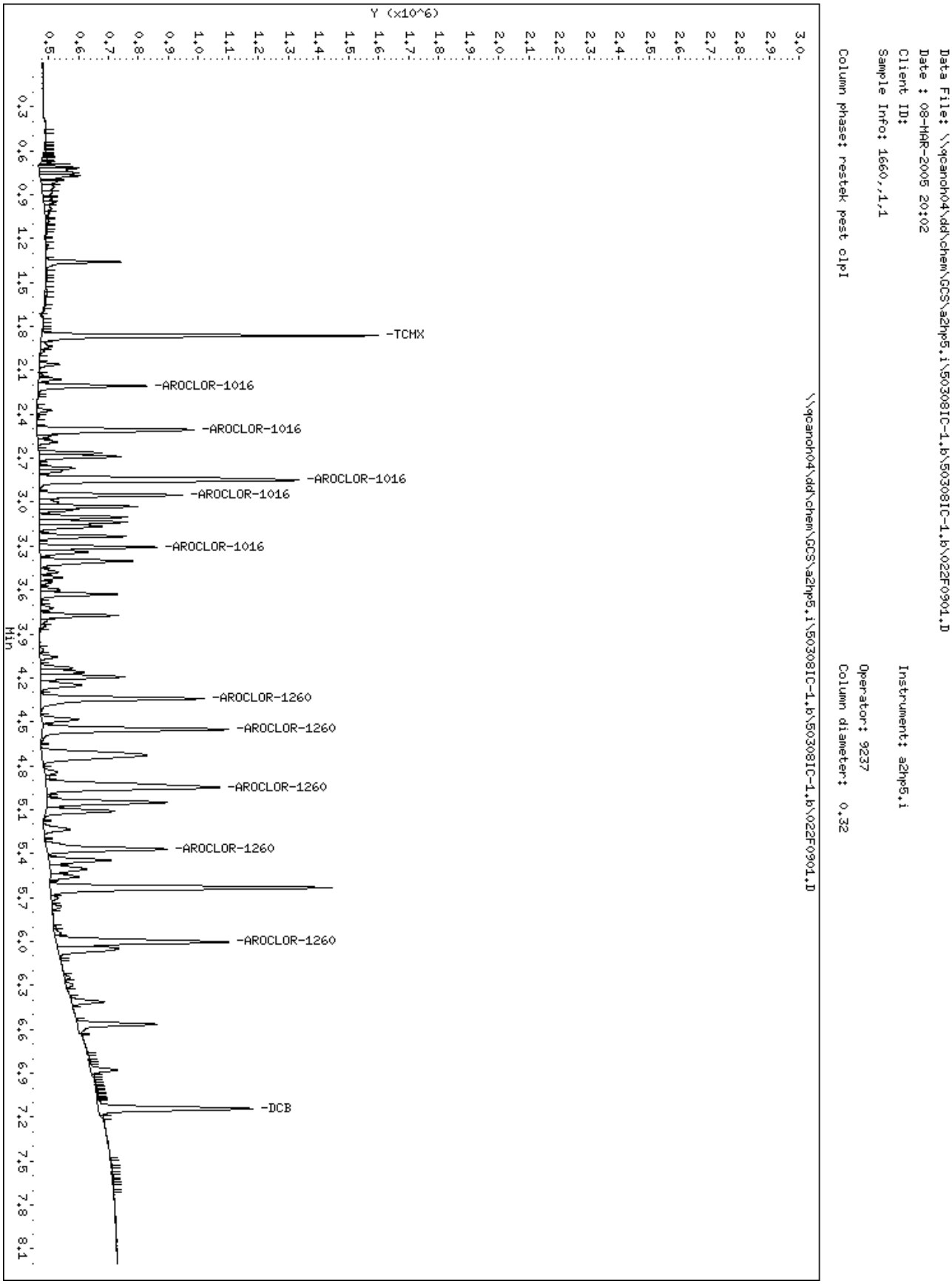
Manually Integrated By: LiC
Manual Integration Reason: Baseline Event

Data File: 022F0901.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:02
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,1
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 19:50 Cal File: 021F0801.D
Als bottle: 22 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.863	1.863	0.000	1118663	0.00500			
3 AROCLOR-1016					CAS #: 12674-11-2		
2.206	2.206	0.000	359087	0.10000		0.00- 0.00	100.00
2.505	2.505	0.000	521281	0.10000		0.00- 0.00	145.17
2.849	2.849	0.000	864034	0.10000		0.00- 0.00	240.62
2.952	2.952	0.000	477594	0.10000		0.00- 0.00	133.00
3.307	3.307	0.000	388453	0.10000		0.00- 0.00	108.18
8 AROCLOR-1260					CAS #: 11096-82-5		
4.342	4.342	0.000	542940	0.10000		0.00- 0.00	100.00
4.551	4.551	0.000	621079	0.10000		0.00- 0.00	114.39
4.948	4.948	0.000	578170	0.10000		0.00- 0.00	106.49
5.369	5.369	0.000	402876	0.10000		0.00- 0.00	74.20
6.004	6.004	0.000	574218	0.10000		0.00- 0.00	105.76
$ 9 DCB					CAS #: 2051-24-3		
7.141	7.141	0.000	512657	0.00500			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Date : 08-MAR-2005 20:02
Client ID:
Sample Info: 1660,,1,1
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
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Y (x10^6)
Min
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-AROCLOR-1016
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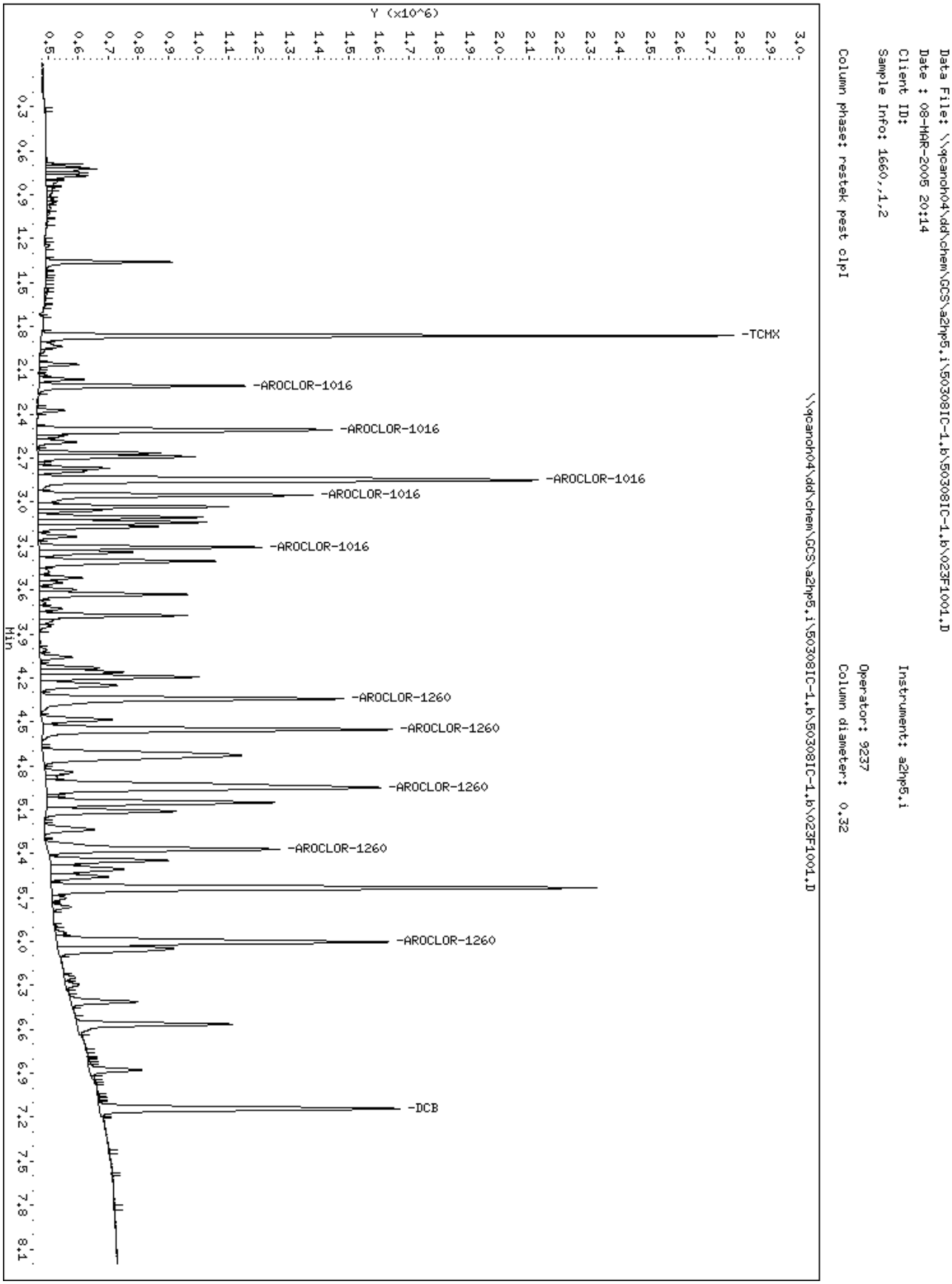
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

Data File: 023F1001.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:14
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,2
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 20:02 Cal File: 022F0901.D
Als bottle: 23 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.863	1.863	0.000	2305234	0.01000	0.01030		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.206	2.206	0.000	689198	0.20000	0.1919	0.00- 0.00	100.00
2.505	2.505	0.000	981506	0.20000	0.1883	0.00- 0.00	142.41
2.849	2.849	0.000	1667900	0.20000	0.1930	0.00- 0.00	242.01
2.952	2.952	0.000	915110	0.20000	0.1916	0.00- 0.00	132.78
3.307	3.307	0.000	741162	0.20000	0.1908	0.00- 0.00	107.54
Average of Peak Amounts =					0.19112		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.342	4.342	0.000	1009688	0.20000	0.1860	0.00- 0.00	100.00
4.552	4.552	0.000	1164714	0.20000	0.1875	0.00- 0.00	115.35
4.949	4.949	0.000	1114002	0.20000	0.1927	0.00- 0.00	110.33
5.370	5.370	0.000	771392	0.20000	0.1915	0.00- 0.00	76.40
6.003	6.003	0.000	1102494	0.20000	0.1920	0.00- 0.00	109.19
Average of Peak Amounts =					0.18994		
$ 9 DCB					CAS #: 2051-24-3		
7.141	7.141	0.000	1000772	0.01000	0.009761		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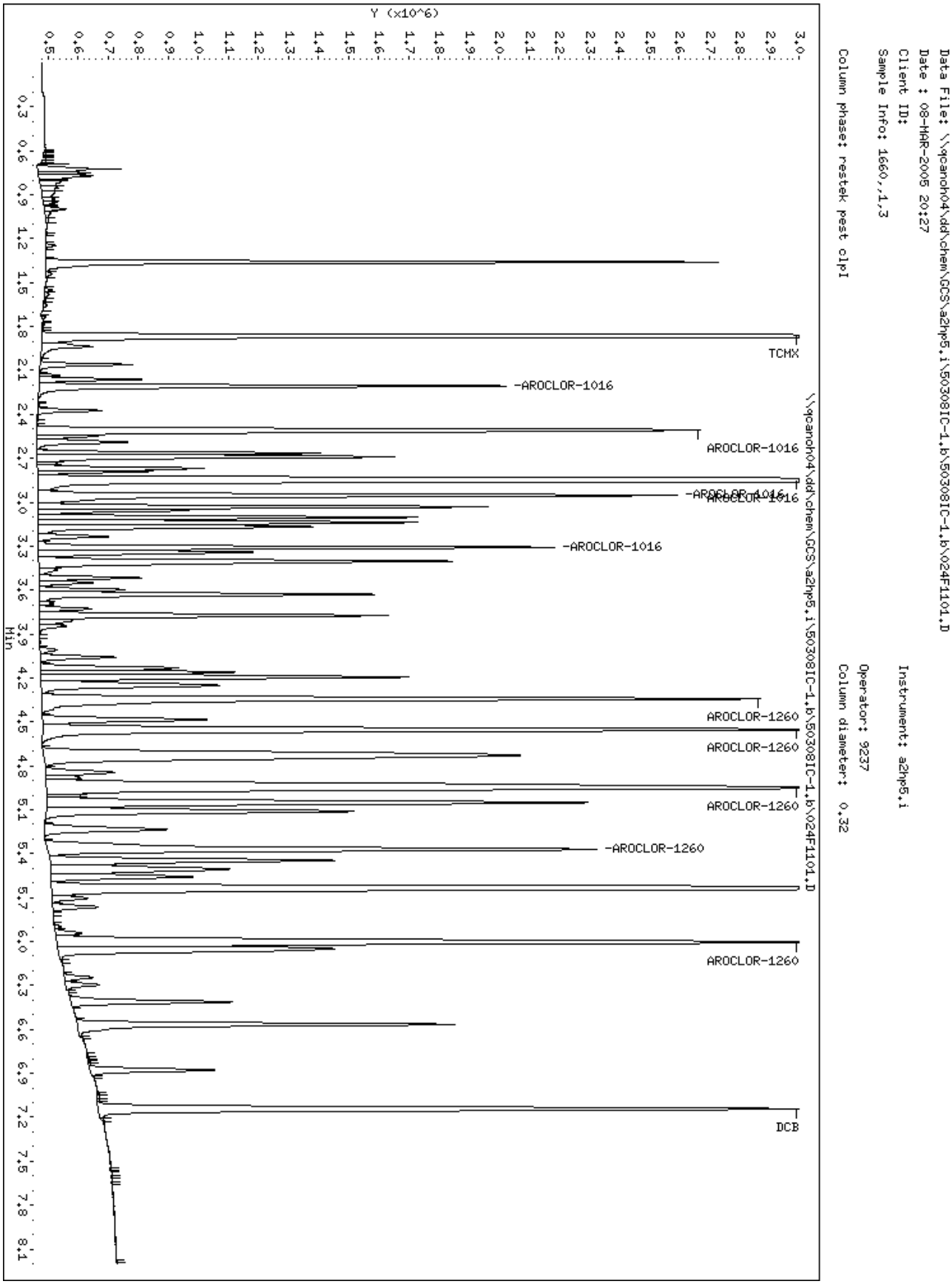
Date : 08-MAR-2005 20:14
Client ID:
Sample Info: 1660,1,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
-DCB

Data File: 024F1101.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:27
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,3
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 20:14 Cal File: 023F1001.D
Als bottle: 24 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.864	1.864	0.000	5597029	0.02500	0.02464		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.206	2.206	0.000	1553521	0.50000	0.4415	80.00- 120.00	100.00
2.506	2.506	0.000	2208703	0.50000	0.4365	106.63- 177.72	142.17
2.851	2.851	0.000	4020059	0.50000	0.4735	194.08- 323.46	258.77
2.953	2.953	0.000	2127325	0.50000	0.4550	102.70- 171.17	136.94
3.308	3.308	0.000	1716545	0.50000	0.4523	82.87- 138.12	110.49
Average of Peak Amounts =					0.45176		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.342	4.342	0.000	2392945	0.50000	0.4568	80.00- 120.00	100.00
4.552	4.552	0.000	2760103	0.50000	0.4587	86.51- 144.18	115.34
4.949	4.949	0.000	2702276	0.50000	0.4761	84.70- 141.16	112.93
5.370	5.370	0.000	1825687	0.50000	0.4630	57.22- 95.37	76.29
6.004	6.004	0.000	2683609	0.50000	0.4769	84.11- 140.18	112.15
Average of Peak Amounts =					0.46630		
$ 9 DCB					CAS #: 2051-24-3		
7.142	7.142	0.000	2343687	0.02500	0.02314		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Date : 08-MAR-2005 20:27
Client ID:
Sample Info: 1660,1.3
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
AROCLOR-1016
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-AROCLOR-1016
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DCB
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Data File: 025F1201.D
Report Date: 09-Mar-2005 08:46

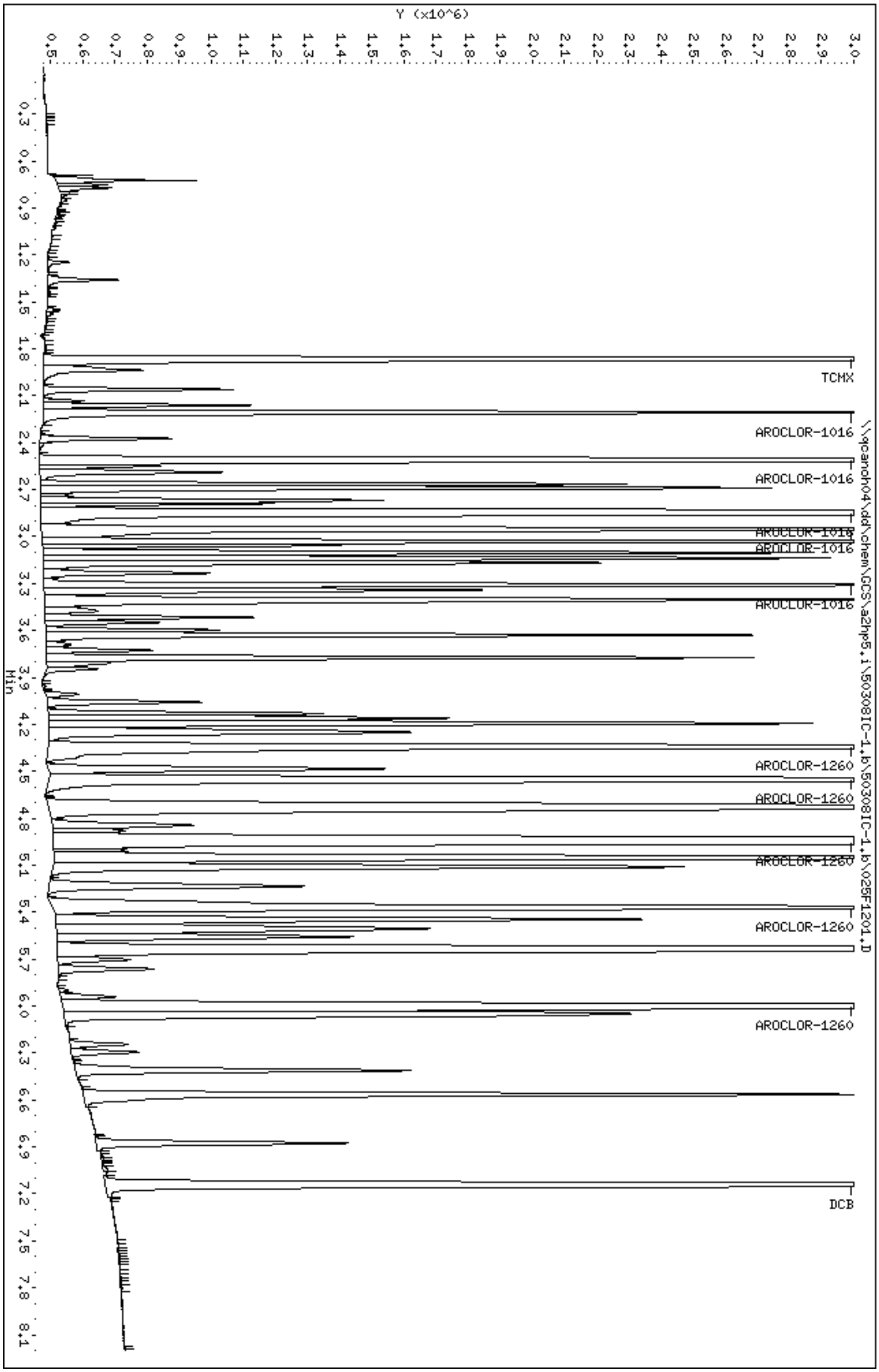
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:39
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,4
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 20:27 Cal File: 024F1101.D
Als bottle: 25 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.863	1.863	0.000	10865395	0.05000	0.04807		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.206	2.206	0.000	2994778	1.00000	0.8857	75.00- 125.00	100.00
2.505	2.505	0.000	4279177	1.00000	0.8830	106.63- 177.72	142.89
2.850	2.850	0.000	7998840	1.00000	0.9591	194.08- 323.46	267.09
2.952	2.952	0.000	4220998	1.00000	0.9307	102.70- 171.17	140.95
3.307	3.307	0.000	3369554	1.00000	0.9170	82.87- 138.12	112.51
Average of Peak Amounts =					0.91510		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.342	4.342	0.000	4669151	1.00000	0.9177	75.00- 125.00	100.00
4.552	4.552	0.000	5409370	1.00000	0.9244	86.51- 144.18	115.85
4.948	4.948	0.000	5340121	1.00000	0.9561	84.70- 141.16	114.37
5.369	5.369	0.000	3637809	1.00000	0.9459	57.22- 95.37	77.91
6.003	6.003	0.000	5284207	1.00000	0.9537	84.11- 140.18	113.17
Average of Peak Amounts =					0.93956		
$ 9 DCB					CAS #: 2051-24-3		
7.141	7.141	0.000	4331010	0.05000	0.04384		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
Date : 08-MAR-2005 20:39
Client ID:
Sample Info: 1660,,1,4
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32

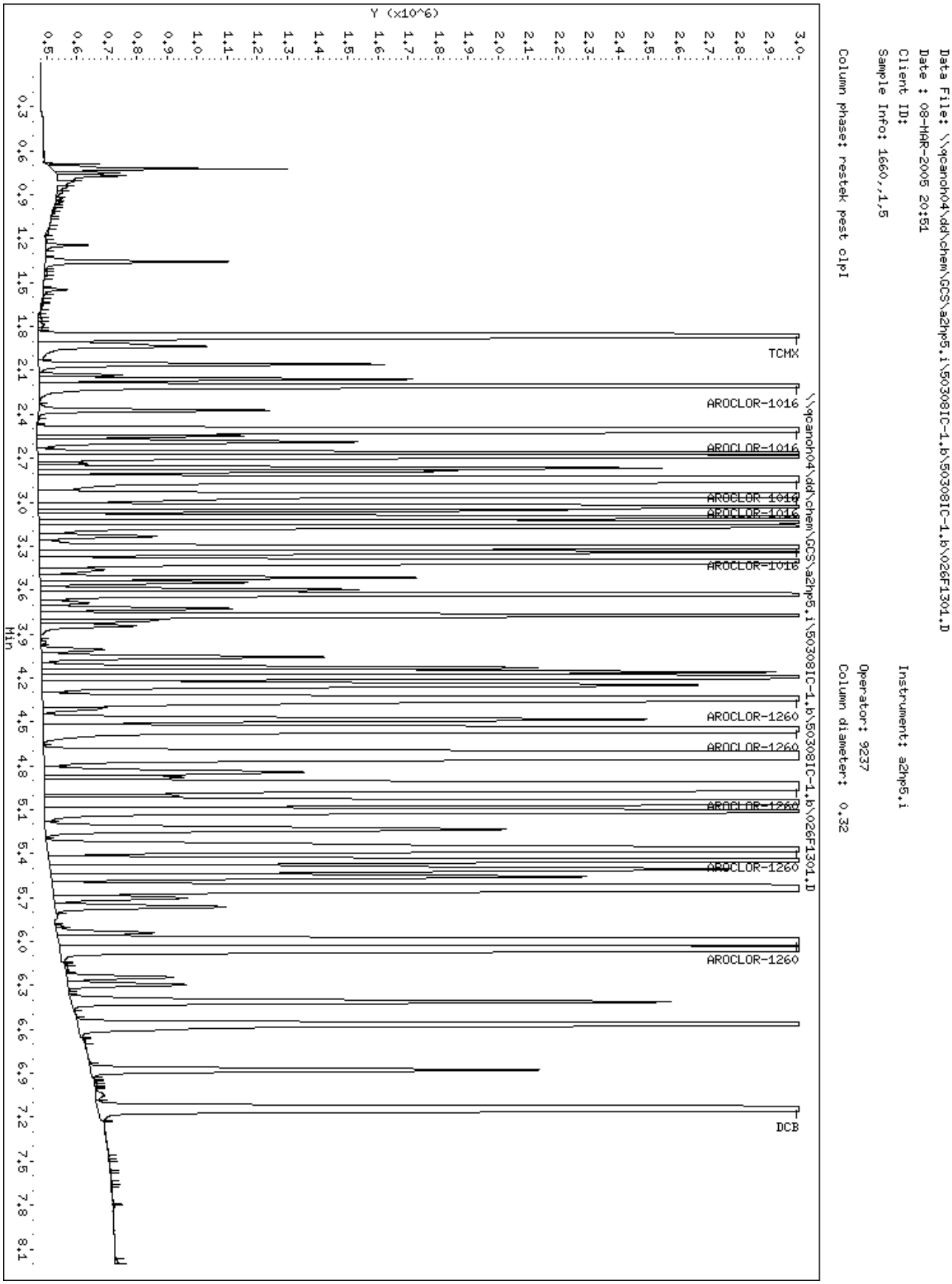


Data File: 026F1301.D
Report Date: 09-Mar-2005 08:46

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 20:51
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,1,5
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:46 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 20:39 Cal File: 025F1201.D
Als bottle: 26 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	23481733	0.10000	0.1049		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.205	2.205	0.000	5738465	2.00000	1.747	75.00- 125.00	100.00
2.505	2.505	0.000	8066765	2.00000	1.715	106.63- 177.72	140.57
2.849	2.849	0.000	15706668	2.00000	1.903	194.08- 323.46	273.71
2.951	2.951	0.000	8264299	2.00000	1.854	102.70- 171.17	144.02
3.306	3.306	0.000	6532408	2.00000	1.815	82.87- 138.12	113.84
Average of Peak Amounts =					1.80680		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.341	4.341	0.000	9269725	2.00000	1.860	75.00- 125.00	100.00
4.551	4.551	0.000	10781092	2.00000	1.878	86.51- 144.18	116.30
4.947	4.947	0.000	10528012	2.00000	1.906	84.70- 141.16	113.57
5.369	5.369	0.000	7156238	2.00000	1.886	57.22- 95.37	77.20
6.002	6.002	0.000	10457044	2.00000	1.909	84.11- 140.18	112.81
Average of Peak Amounts =					1.88780		
$ 9 DCB					CAS #: 2051-24-3		
7.141	7.141	0.000	8957918	0.10000	0.09356		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D
Date : 08-MAR-2005 20:51
Client ID:
Sample Info: 1660,1.5
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
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AROCLOR-1260
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AROCLOR-1260
DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D

Data File: 027F1401.D
Report Date: 11-Mar-2005 07:28

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 08-MAR-2005 21:03
Lab File ID: 027F1401.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: ICV Quant Type: ESTD
Method: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m

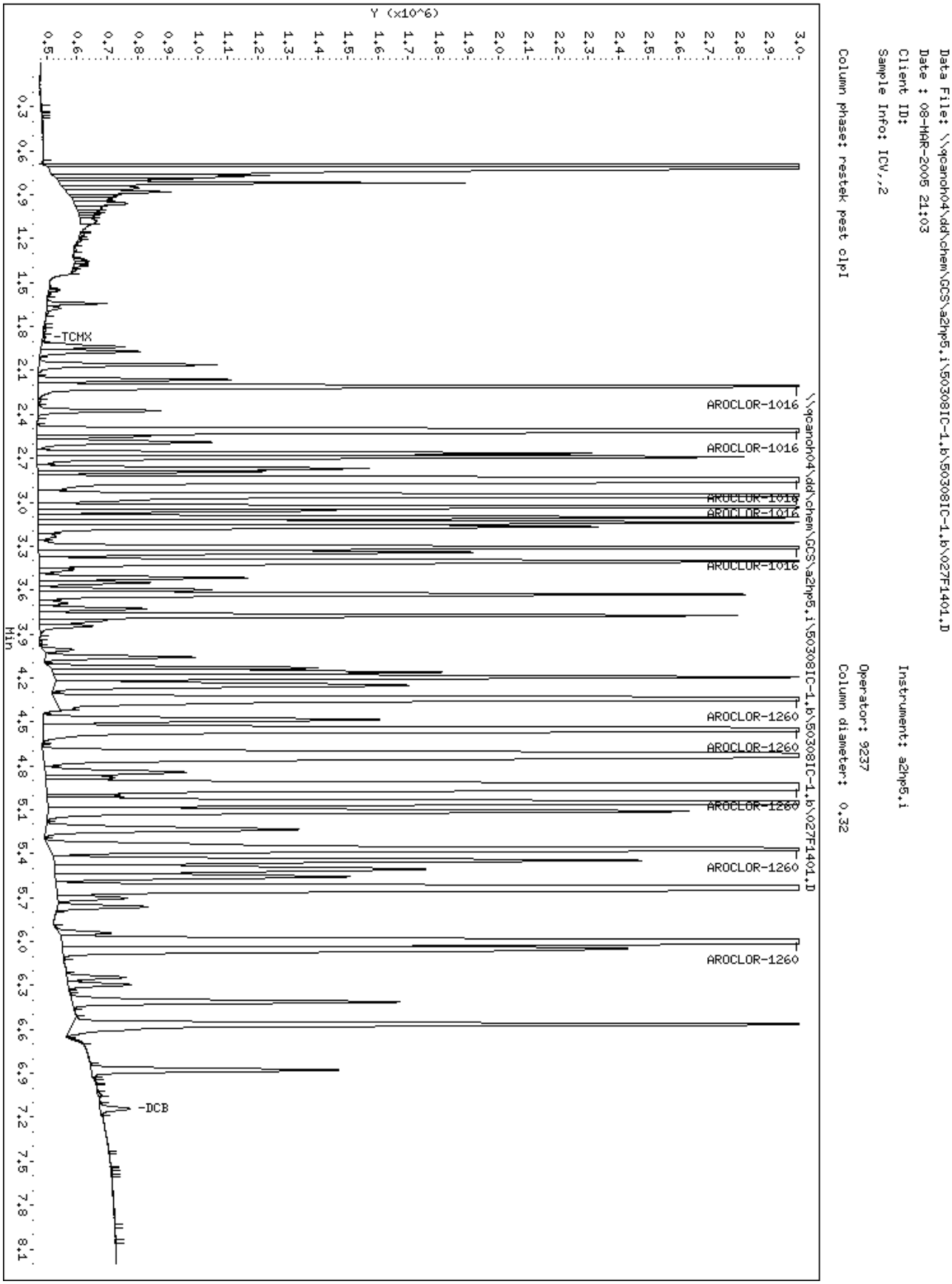
COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	226052478	221980	0.010	100	15.00000	Averaged	<-
3 AROCLOR-1016(1)	3201583	2930719	0.010	8.46030	15.00000	Averaged	
(2)	4570061	4350929	0.010	4.79495	15.00000	Averaged	
(3)	8174426	8265730	0.010	-1.11694	15.00000	Averaged	
(4)	4391858	4324824	0.010	1.52631	15.00000	Averaged	
(5)	3531838	3559155	0.010	-0.77346	15.00000	Averaged	
8 AROCLOR-1260(1)	4913549	5029029	0.010	-2.35024	15.00000	Averaged	
(2)	5670896	5846016	0.010	-3.08804	15.00000	Averaged	
(3)	5472078	5726418	0.010	-4.64796	15.00000	Averaged	
(4)	3750604	3891876	0.010	-3.76664	15.00000	Averaged	
(5)	5426919	5645519	0.010	-4.02806	15.00000	Averaged	
$ 9 DCB	94511092	1985160	0.010	97.89955	15.00000	Averaged	<-

Data File: 027F1401.D
Report Date: 11-Mar-2005 07:28

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\027F1401.D
Lab Smp Id: ICV
Inj Date : 08-MAR-2005 21:03
Operator : 9237 Inst ID: a2hp5.i
Smp Info : ICV,,2
Misc Info : 12-AR1660td.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 11-Mar-2005 07:28 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 27 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCSV02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.873	1.873	0.000	11099	0.05000	0.00004910		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.208	2.208	0.000	2930719	1.00000	0.9154	80.00- 120.00	100.00
2.507	2.507	0.000	4350929	1.00000	0.9520	111.34- 185.57	148.46
2.850	2.850	0.000	8265730	1.00000	1.011	211.53- 352.55	282.04
2.953	2.953	0.000	4324824	1.00000	0.9847	110.68- 184.46	147.57
3.308	3.308	0.000	3559155	1.00000	1.008	91.08- 151.80	121.44
Average of Peak Amounts =					0.97422		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.341	4.341	0.000	5029029	1.00000	1.024	80.00- 120.00	100.00
4.551	4.551	0.000	5846016	1.00000	1.031	87.18- 145.31	116.25
4.949	4.949	0.000	5726418	1.00000	1.046	85.40- 142.33	113.87
5.370	5.370	0.000	3891876	1.00000	1.038	58.04- 96.74	77.39
6.003	6.003	0.000	5645519	1.00000	1.040	84.19- 140.32	112.26
Average of Peak Amounts =					1.03580		
$ 9 DCB					CAS #: 2051-24-3		
7.142	7.142	0.000	99258	0.05000	0.001050		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\027F1401.D
Date : 08-MAR-2005 21:03
Client ID:
Sample Info: ICV,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
-TCMX
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\027F1401.D

Data File: 028F1501.D
Report Date: 09-Mar-2005 08:47

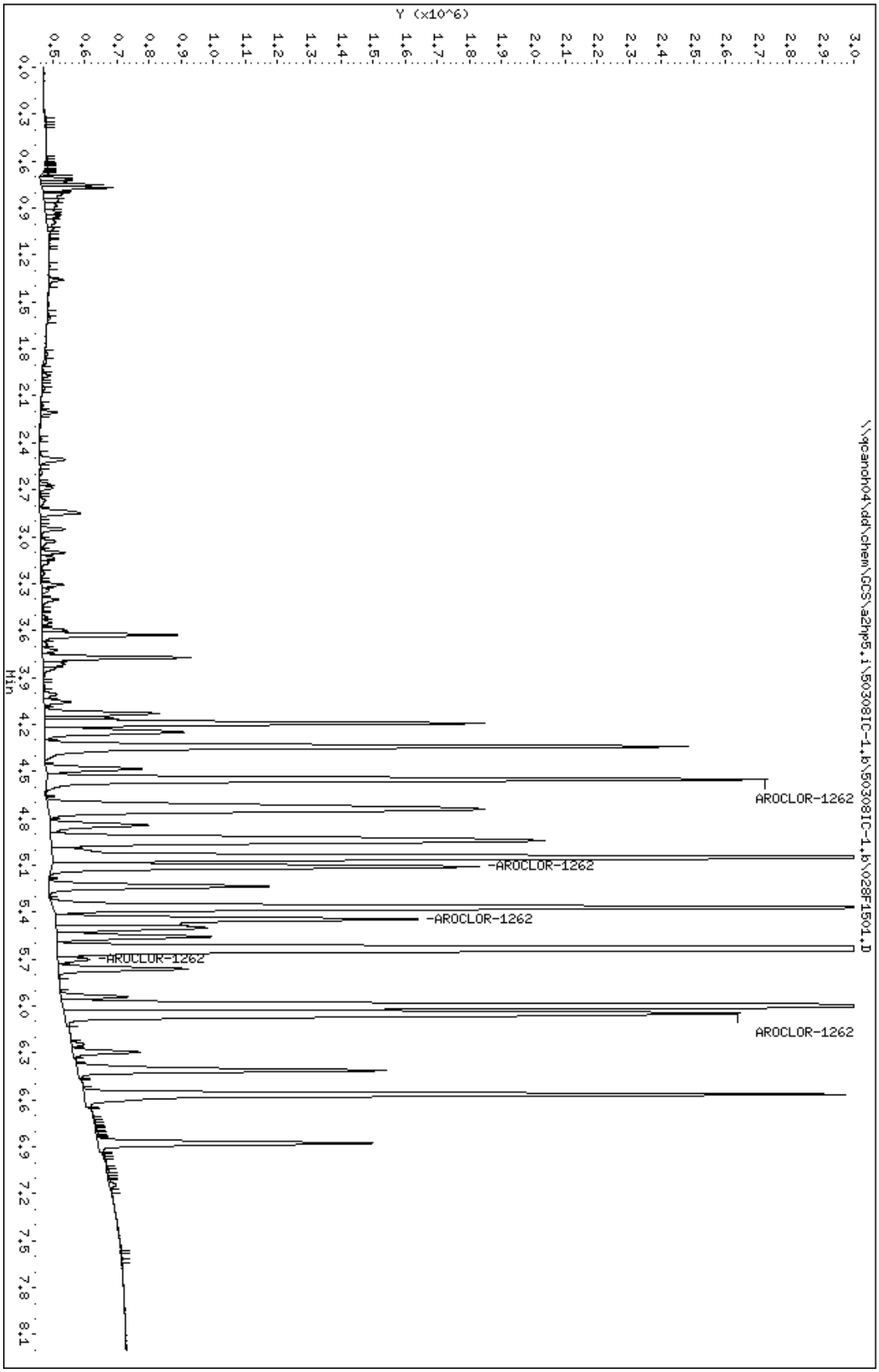
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
Lab Smp Id: 1262
Inj Date : 08-MAR-2005 21:15
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1262,,1,3
Misc Info : 13-AR1262.sub
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:47 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 20:51 Cal File: 026F1301.D
Als bottle: 28 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 13-AR1262.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
13 AROCLOR-1262					CAS #: 37324-23-5		
4.551	4.551	0.000	2248143	0.50000		80.00- 120.00	100.00
5.110	5.110	0.000	1333528	0.50000		44.49- 74.15	59.32
5.445	5.445	0.000	1130454	0.50000		37.71- 62.85	50.28
5.702	5.702	0.000	98804	0.50000		3.30- 5.49	4.39
6.046	6.046	0.000	2108831	0.50000		70.35- 117.25	93.80

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
Date : 08-MAR-2005 21:15
Client ID:
Sample Info: 1262,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 029F1601.D
Report Date: 09-Mar-2005 08:47

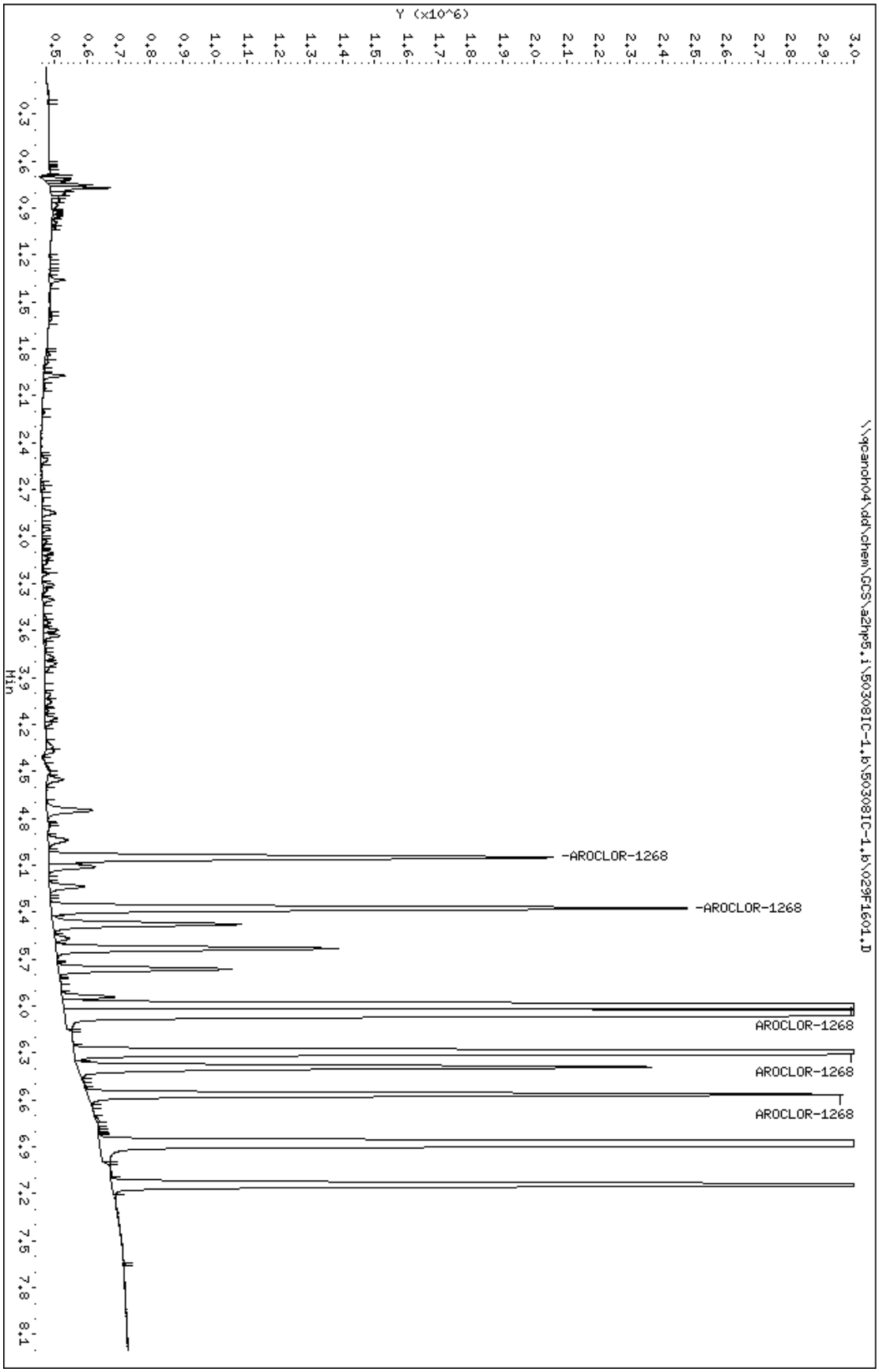
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
Lab Smp Id: 1268
Inj Date : 08-MAR-2005 21:28
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1268,,1,3
Misc Info : 14-AR1268.SUB
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 09-Mar-2005 08:47 a2hp5.i Quant Type: ESTD
Cal Date : 08-MAR-2005 21:15 Cal File: 028F1501.D
Als bottle: 29 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 14-AR1268.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
14 AROCLOR-1268					CAS #: 11100-14-4		
5.050	5.050	0.000	1578370	0.50000		80.00- 120.00	100.00
5.375	5.375	0.000	1988031	0.50000		94.47- 157.44	125.95
5.998	5.998	0.000	7813504	0.50000		371.28- 618.80	495.04
6.295	6.295	0.000	6472287	0.50000		307.55- 512.58	410.06
6.565	6.565	0.000	2362608	0.50000		112.26- 187.11	149.69

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
Date : 08-MAR-2005 21:28
Client ID:
Sample Info: 1268,,1,3
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 03/03/05 03/03/05

Instrument ID: A2HP2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.66 S2 : 7.24

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/08/05	2117	1.66	7.24
02	G5G1LBLK	G5G1L1AA	03/08/05	2339	1.66	7.24
03	G5G1LCHK	G5G1L1AC	03/08/05	2354	1.66	7.24
04		1660	03/09/05	0010	1.66	7.24
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m
Start Cal Date: 03-MAR-2005 12:23
End Cal Date : 03-MAR-2005 19:28
Last Cal Level: 1
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
03-MAR-2005 17:38	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\022F2201.D
03-MAR-2005 16:19	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\017F1701.D
03-MAR-2005 15:01	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\012F1201.D
03-MAR-2005 13:42	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\007F0701.D
03-MAR-2005 12:23	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\002F0201.D

Cal Level: 2 , Cal Amount: 0.20000		
03-MAR-2005 17:54	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\023F2301.D
03-MAR-2005 16:35	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\018F1801.D
03-MAR-2005 15:16	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\013F1301.D
03-MAR-2005 13:58	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\008F0801.D
03-MAR-2005 12:39	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\003F0301.D

Cal Level: 3 , Cal Amount: 0.50000		
03-MAR-2005 19:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\029F2901.D
03-MAR-2005 19:12	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\028F2801.D
03-MAR-2005 18:09	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\024F2401.D
03-MAR-2005 16:51	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\019F1901.D
03-MAR-2005 15:32	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\014F1401.D
03-MAR-2005 14:14	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\009F0901.D
03-MAR-2005 12:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\004F0401.D

Cal Level: 4 , Cal Amount: 1.00000

03-MAR-2005 18:25	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\025F2501.D
03-MAR-2005 17:07	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\020F2001.D
03-MAR-2005 15:48	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\015F1501.D
03-MAR-2005 14:29	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\010F1001.D
03-MAR-2005 13:11	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\005F0501.D

Cal Level: 5 , Cal Amount: 2.00000

03-MAR-2005 18:41	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\026F2601.D
03-MAR-2005 17:22	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\021F2101.D
03-MAR-2005 16:04	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\016F1601.D
03-MAR-2005 14:45	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\011F1101.D
03-MAR-2005 13:26	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50303IC-1.b\006F0601.D

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

09-MAR-2005 00:10	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\034F2301.D
08-MAR-2005 21:17	12-AR1660TD	\\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\023F1201.D
08-MAR-2005 15:09	12-AR1660TD	\\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\002F0201.D
08-MAR-2005 14:25	12-AR1660TD	\\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\007F0201.D
08-MAR-2005 13:47	12-AR1660TD	\\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\005F0501.D
08-MAR-2005 12:38	12-AR1660TD	\\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\001F0101.D

Data File: \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\023F1201.D
Report Date: 08-Mar-2005 21:27

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 08-MAR-2005 21:17
Lab File ID: 023F1201.D Init. Cal. Date(s): 03-MAR-2005 03-MAR-2005
Analysis Type: Init. Cal. Times: 12:23 19:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m

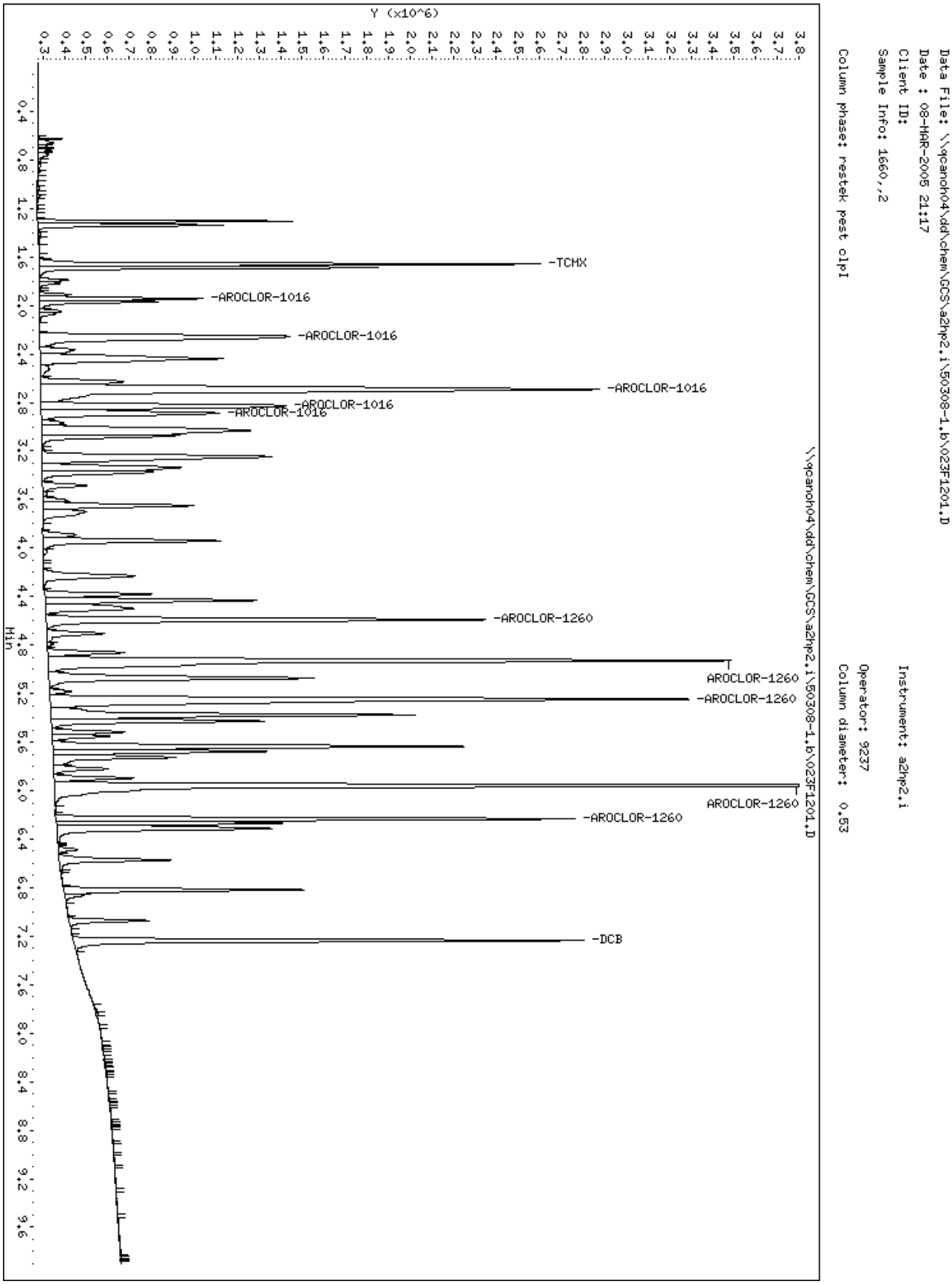
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	109422776	92885200	0.010	15.11347	15.00000	Averaged	<-
3 AROCLOR-1016(1)	2360961	2036612	0.010	13.73800	15.00000	Averaged	
(2)	7379110	6707654	0.010	9.09942	15.00000	Averaged	
(3)	16721718	14951686	0.010	10.58523	15.00000	Averaged	
(4)	6572584	5771272	0.010	12.19174	15.00000	Averaged	
(5)	4411156	3874918	0.010	12.15640	15.00000	Averaged	
8 AROCLOR-1260(1)	9251512	8106422	0.010	12.37733	15.00000	Averaged	
(2)	16835609	14718228	0.010	12.57680	15.00000	Averaged	
(3)	16565912	14458792	0.010	12.71961	15.00000	Averaged	
(4)	19129205	16859518	0.010	11.86504	15.00000	Averaged	
(5)	9291146	8091020	0.010	12.91688	15.00000	Averaged	
$ 9 DCB	161663600	153470760	0.010	5.06783	15.00000	Averaged	

Data File: \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\023F1201.D
Report Date: 08-Mar-2005 21:27

STL North Canton

Data file : \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\023F1201.D
Lab Smp Id: 1660
Inj Date : 08-MAR-2005 21:17
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m
Meth Date : 08-Mar-2005 21:27 Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38 Cal File: 022F2201.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.658	1.658	0.000	2322130	0.02500	0.02122		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.943	1.943	0.000	1018306	0.50000	0.4313	80.00- 120.00	100.00
2.255	2.255	0.000	3353827	0.50000	0.4545	247.02- 411.69	329.35
2.691	2.691	0.000	7475843	0.50000	0.4471	550.61- 917.68	734.14
2.826	2.826	0.000	2885636	0.50000	0.4390	212.53- 354.22	283.38
2.887	2.887	0.000	1937459	0.50000	0.4392	142.70- 237.83	190.26
Average of Peak Amounts =					0.44222		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.591	4.591	0.000	4053211	0.50000	0.4381	80.00- 120.00	100.00
4.928	4.928	0.000	7359114	0.50000	0.4371	136.17- 226.95	181.56
5.246	5.246	0.000	7229396	0.50000	0.4364	133.77- 222.95	178.36
5.958	5.958	0.000	8429759	0.50000	0.4407	155.98- 259.97	207.98
6.233	6.233	0.000	4045510	0.50000	0.4354	74.86- 124.76	99.81
Average of Peak Amounts =					0.43754		
$ 9 DCB					CAS #: 2051-24-3		
7.236	7.236	0.000	3836769	0.02500	0.02373		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Date : 08-MAR-2005 21:17
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\023F1201.D

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\034F2301.D
Report Date: 09-Mar-2005 05:34

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 09-MAR-2005 00:10
Lab File ID: 034F2301.D Init. Cal. Date(s): 03-MAR-2005 03-MAR-2005
Analysis Type: Init. Cal. Times: 12:23 19:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	109422776	176059120	0.010	-60.89806	15.00000	Averaged	<-
3 AROCLOR-1016(1)	2360961	3337488	0.010	-41.36143	15.00000	Averaged	<-
(2)	7379110	7912986	0.010	-7.23496	15.00000	Averaged	
(3)	16721718	16803632	0.010	-0.48987	15.00000	Averaged	
(4)	6572584	6734352	0.010	-2.46125	15.00000	Averaged	
(5)	4411156	4348406	0.010	1.42252	15.00000	Averaged	
8 AROCLOR-1260(1)	9251512	9678926	0.010	-4.61994	15.00000	Averaged	
(2)	16835609	17616242	0.010	-4.63680	15.00000	Averaged	
(3)	16565912	17195386	0.010	-3.79981	15.00000	Averaged	
(4)	19129205	18934038	0.010	1.02026	15.00000	Averaged	
(5)	9291146	8890828	0.010	4.30860	15.00000	Averaged	
$ 9 DCB	161663600	170530600	0.010	-5.48485	15.00000	Averaged	

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\034F2301.D
Report Date: 09-Mar-2005 05:34

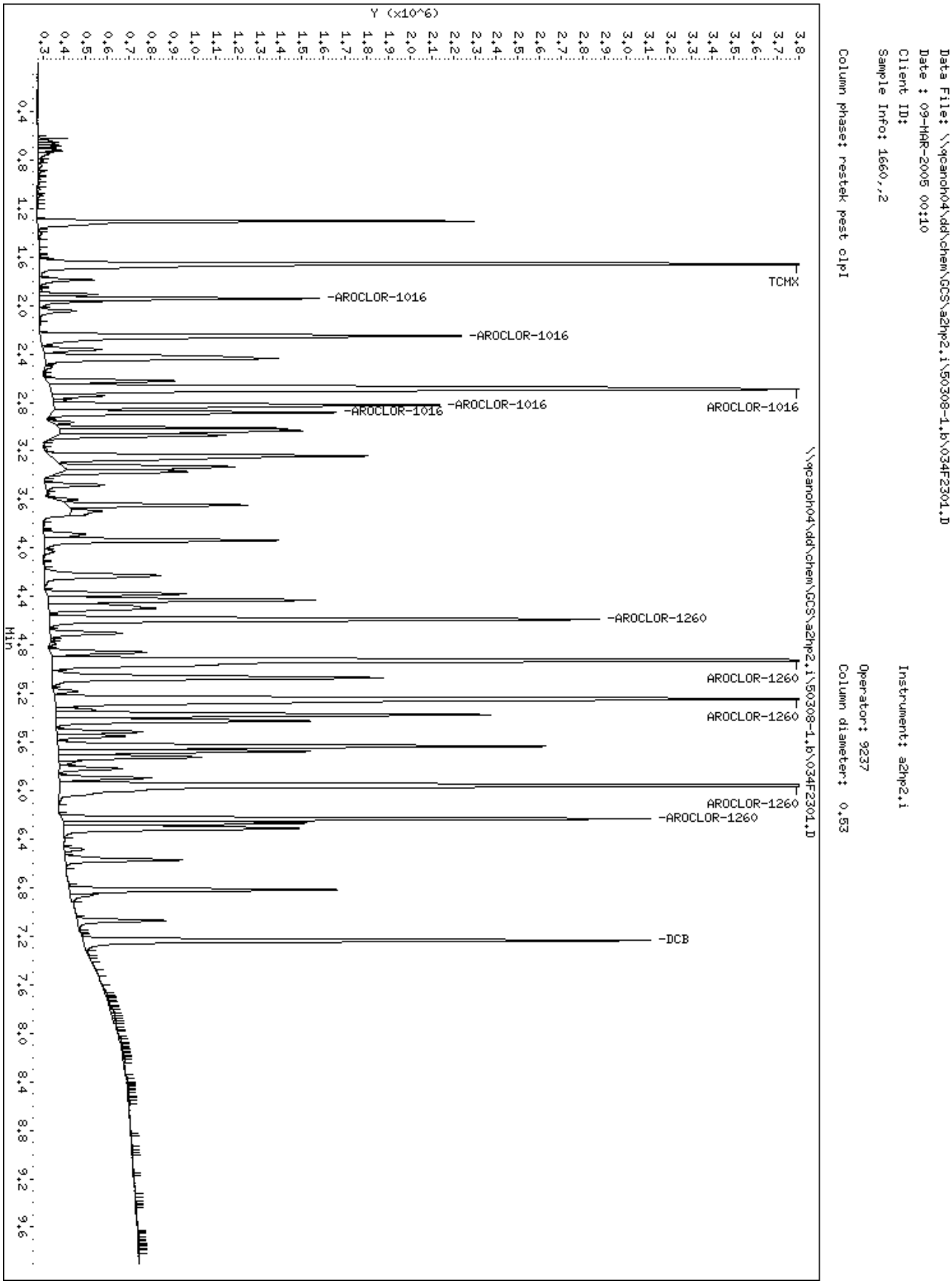
STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\034F2301.D
Lab Smp Id: 1660
Inj Date : 09-MAR-2005 00:10
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m
Meth Date : 09-Mar-2005 00:20 Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38 Cal File: 022F2201.D
Als bottle: 34 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.656	1.656	0.000	4401478	0.02500	0.04022		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.942	1.942	0.000	1668744	0.50000	0.7068	80.00- 120.00	100.00(M)
2.251	2.251	0.000	3956493	0.50000	0.5362	177.82- 296.37	191.29
2.690	2.690	0.000	8401816	0.50000	0.5024	377.61- 629.35	406.21
2.820	2.820	0.000	3367176	0.50000	0.5123	151.33- 252.22	162.80
2.882	2.882	0.000	2174203	0.50000	0.4929	97.72- 162.86	105.12
Average of Peak Amounts =					0.55012		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.587	4.587	0.000	4839463	0.50000	0.5231	80.00- 120.00	100.00
4.925	4.925	0.000	8808121	0.50000	0.5232	136.50- 227.51	182.01
5.244	5.244	0.000	8597693	0.50000	0.5190	133.24- 222.07	177.66
5.956	5.956	0.000	9467019	0.50000	0.4949	146.72- 244.53	195.62
6.231	6.231	0.000	4445414	0.50000	0.4784	68.89- 114.82	91.86
Average of Peak Amounts =					0.50772		
$ 9 DCB					CAS #: 2051-24-3		
7.235	7.235	0.000	4263265	0.02500	0.02637		

QC Flag Legend

M - Compound response manually integrated.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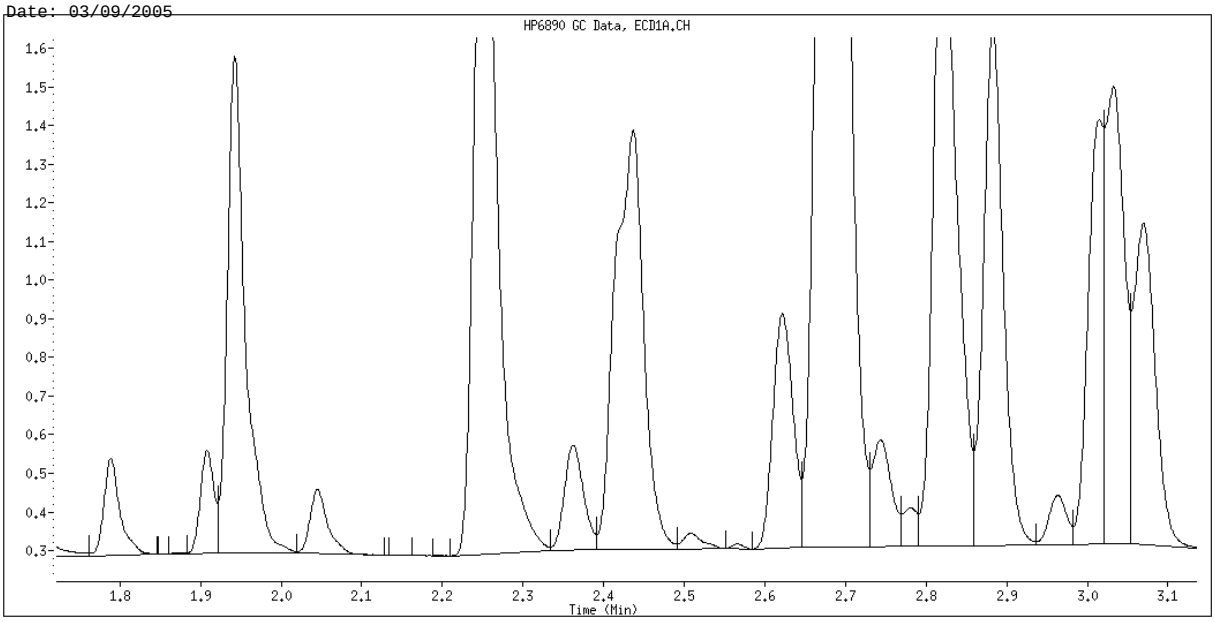
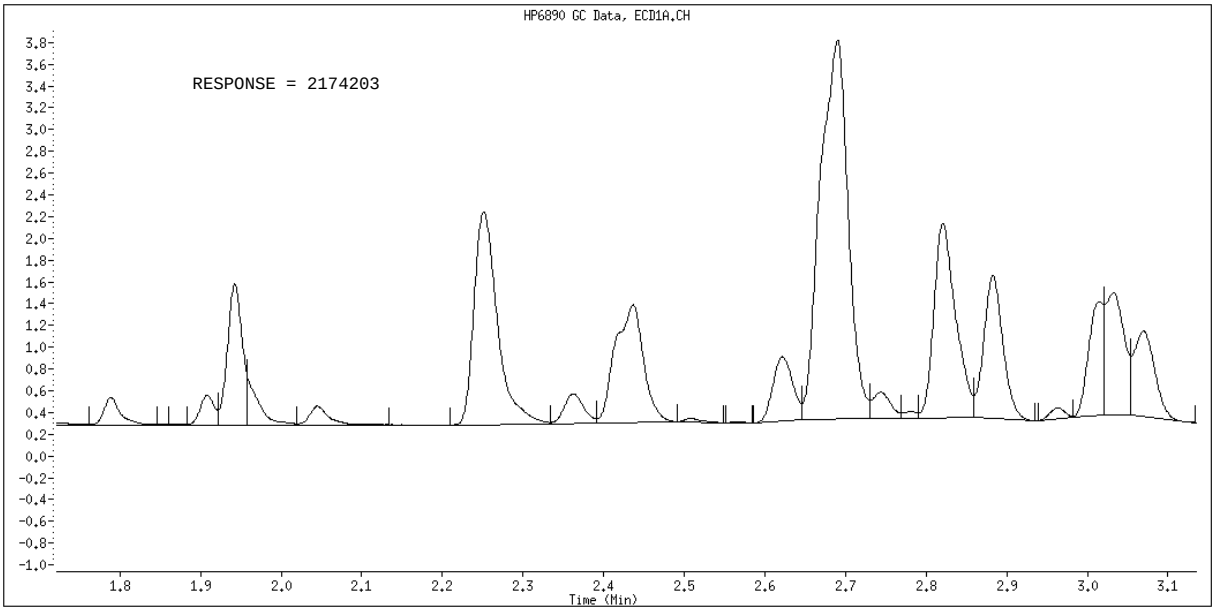
Date : 09-MAR-2005 00:10
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\034F2301.D

Data File Name: 034F2301.D
Inj. Date and Time: 09-MAR-2005 00:10
Instrument ID: a2hp2.i
Client ID:
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/09/2005



Original Integration



Manual Integration

Manually Integrated By: MolM
Manual Integration Reason: Unknown

SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPII ID: 0.53 (mm) Init. Calib. Date(s): 03/14/05 03/14/05

Instrument ID: A2HP2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 2.49 S2 : 8.13

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/17/05	1545	2.49	8.13
02	S-030205-JH-	G5F811AA	03/18/05	0129	2.49	8.13
03	S-030205-JH-	G5F811AF	03/18/05	0144	2.49	8.13
04	S-030205-JH-	G5F811AG	03/18/05	0200	2.49	8.13
05	S-030205-JH-	G5F9D1AA	03/18/05	0216	2.50	8.14
06	G5G2ABLK	G5G2A1AA	03/18/05	0231	2.49	8.13
07	G5G2ACHK	G5G2A1AC	03/18/05	0247	2.49	8.13
08		1660	03/18/05	0302	2.49	8.13
09	S-030205-JH-	G5F9E1AA	03/18/05	0322	2.49	8.13
10	S-030205-JH-	G5F9F1AA	03/18/05	0338	2.49	8.13
11	S-030205-JH-	G5F9G1AA	03/18/05	0353	2.49	8.14
12	S-030205-JH-	G5F9H1AA	03/18/05	0409	2.49	8.14
13	S-030205-JH-	G5F9J1AA	03/18/05	0425	2.49	8.13
14	S-030205-JH-	G5F9J1AF	03/18/05	0440	2.49	8.13
15	S-030205-JH-	G5F9J1AG	03/18/05	0456	2.49	8.13
16	S-030205-JH-	G5F9L1AA	03/18/05	0527	2.49	8.13
17	S-030205-JH-	G5F9M1AA	03/18/05	0543	2.49	8.13
18	S-030205-JH-	G5F9N1AA	03/18/05	0559	2.49	8.13
19	S-030205-JH-	G5F9P1AA	03/18/05	0614	2.49	8.13
20		1660	03/18/05	1008	2.49	8.13
21	S-030205-JH-	G5F9K1AA	03/18/05	1439	2.49	8.13
22		1660	03/18/05	1455	2.49	8.13
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Start Cal Date: 14-MAR-2005 15:49
End Cal Date : 14-MAR-2005 22:51
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
14-MAR-2005 21:02	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\022F2201.D
14-MAR-2005 19:43	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\017F1701.D
14-MAR-2005 18:25	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\012F1201.D
14-MAR-2005 17:07	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\007F0701.D
14-MAR-2005 15:49	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\002F0201.D

Cal Level: 2 , Cal Amount: 0.20000		
14-MAR-2005 21:17	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\023F2301.D
14-MAR-2005 19:59	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\018F1801.D
14-MAR-2005 18:41	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\013F1301.D
14-MAR-2005 17:23	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\008F0801.D
14-MAR-2005 16:05	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\003F0301.D

Cal Level: 3 , Cal Amount: 0.50000		
14-MAR-2005 22:51	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\029F2901.D
14-MAR-2005 22:35	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\028F2801.D
14-MAR-2005 21:33	12-AR1660TD	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\024F2401.D
14-MAR-2005 20:15	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\019F1901.D
14-MAR-2005 18:56	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\014F1401.D
14-MAR-2005 17:38	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\009F0901.D
14-MAR-2005 16:20	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\004F0401.D

```
+------------------+-----------------+----------------------------------------+
| Cal Level: 4 , Cal Amount: 1.00000                                        |
+==========================================================================+
|14-MAR-2005 21:48 |12-AR1660TD      |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\025F2501.D           |
|14-MAR-2005 20:30 |9-AR2154         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\020F2001.D           |
|14-MAR-2005 19:12 |3-AR1248         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\015F1501.D           |
|14-MAR-2005 17:54 |2-AR1242         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\010F1001.D           |
|14-MAR-2005 16:36 |1-AR1232         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\005F0501.D           |
+------------------+-----------------+----------------------------------------+

+------------------+-----------------+----------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                        |
+==========================================================================+
|14-MAR-2005 22:04 |12-AR1660TD      |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\026F2601.D           |
|14-MAR-2005 20:46 |9-AR2154         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\021F2101.D           |
|14-MAR-2005 19:28 |3-AR1248         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\016F1601.D           |
|14-MAR-2005 18:10 |2-AR1242         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\011F1101.D           |
|14-MAR-2005 16:51 |1-AR1232         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp2.i\50314IC-1.b\50314IC-1.b\006F0601.D           |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3
+------------------+-----------------+----------------------------------------+
|18-MAR-2005 14:55 |12-AR1660TD      |                                        |
|\\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\045F0201.D               |
|18-MAR-2005 10:08 |12-AR1660TD      |                                        |
|\\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\043F0901.D               |
|18-MAR-2005 03:02 |12-AR1660td      |                                        |
|\\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\022F2201.D               |
|17-MAR-2005 15:45 |12-AR1660TD      |                                        |
|\\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\002F0201.D               |
+------------------+-----------------+----------------------------------------+
```

Data File: 002F0201.D
Report Date: 17-Mar-2005 15:56

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 17-MAR-2005 15:45
Lab File ID: 002F0201.D Init. Cal. Date(s): 14-MAR-2005 14-MAR-2005
Analysis Type: Init. Cal. Times: 15:49 22:51
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m

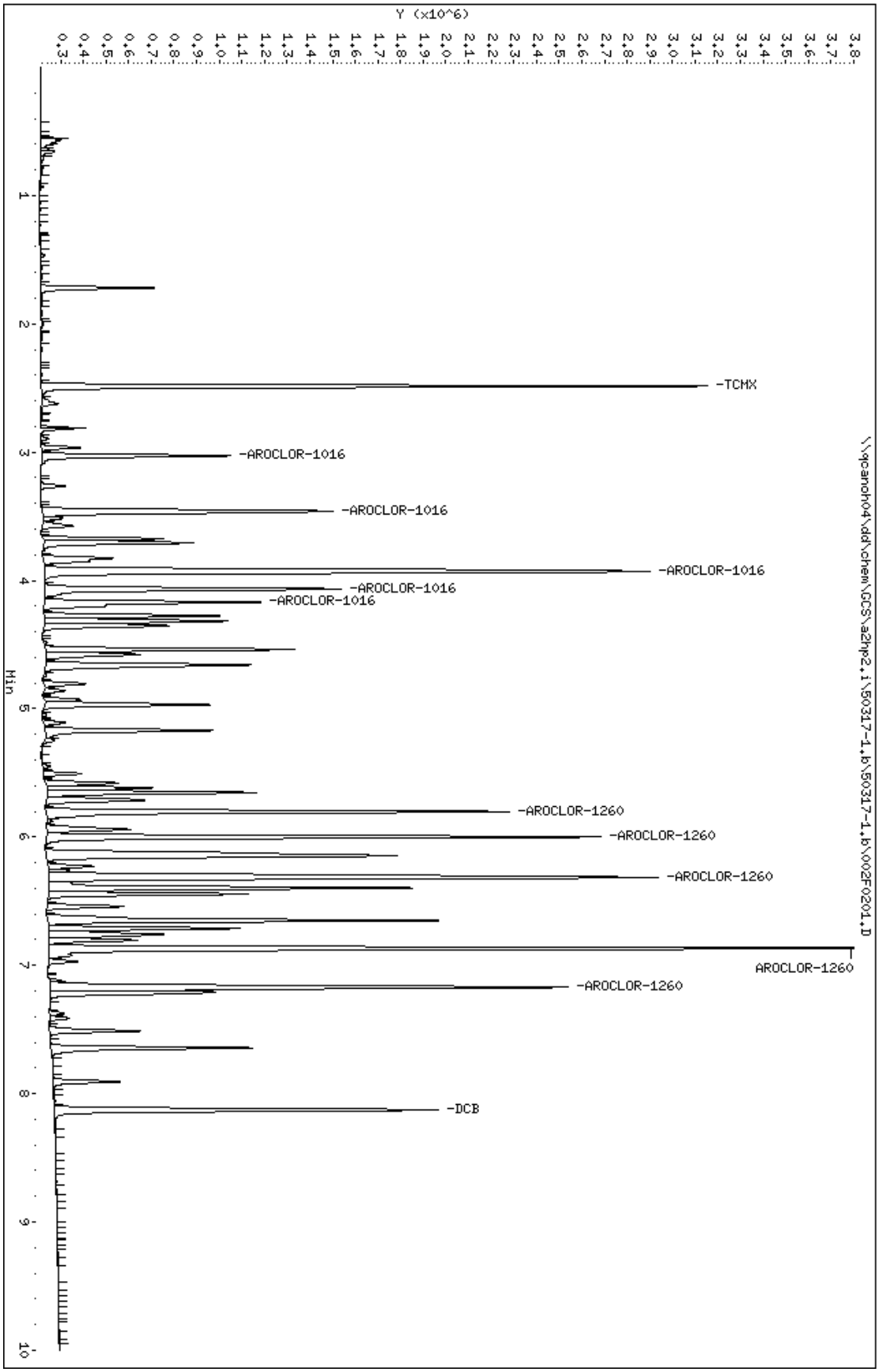
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	161186790	162661800	0.010	-0.91509	15.00000	Averaged
3 AROCLOR-1016(1)	2628727	2606300	0.010	0.85314	15.00000	Averaged
(2)	5313402	5200366	0.010	2.12737	15.00000	Averaged
(3)	11430593	11574038	0.010	-1.25492	15.00000	Averaged
(4)	4683090	4660344	0.010	0.48571	15.00000	Averaged
(5)	3700758	3647200	0.010	1.44721	15.00000	Averaged
8 AROCLOR-1260(1)	4017596	4091188	0.010	-1.83175	15.00000	Averaged
(2)	4734967	4893494	0.010	-3.34800	15.00000	Averaged
(3)	5163483	5388538	0.010	-4.35860	15.00000	Averaged
(4)	7296670	7517260	0.010	-3.02316	15.00000	Averaged
(5)	4420689	4572404	0.010	-3.43194	15.00000	Averaged
$ 9 DCB	67434042	67902840	0.010	-0.69519	15.00000	Averaged

Data File: 002F0201.D
Report Date: 17-Mar-2005 15:56

STL North Canton

Data file : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\002F0201.D
Lab Smp Id: 1660
Inj Date : 17-MAR-2005 15:45
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 17-Mar-2005 15:56 Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.486	2.486	0.000	4066545	0.02500	0.02523		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.028	3.028	0.000	1303150	0.50000	0.4957	80.00- 120.00	100.00
3.460	3.460	0.000	2600183	0.50000	0.4894	149.65- 249.41	199.53
3.930	3.930	0.000	5787019	0.50000	0.5063	333.06- 555.10	444.08
4.067	4.067	0.000	2330172	0.50000	0.4976	134.11- 223.51	178.81
4.169	4.169	0.000	1823600	0.50000	0.4928	104.95- 174.92	139.94
Average of Peak Amounts =					0.49636		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.802	5.802	0.000	2045594	0.50000	0.5092	80.00- 120.00	100.00
5.998	5.998	0.000	2446747	0.50000	0.5167	89.71- 149.51	119.61
6.314	6.314	0.000	2694269	0.50000	0.5218	98.78- 164.64	131.71
6.867	6.867	0.000	3758630	0.50000	0.5151	137.81- 229.68	183.74
7.170	7.170	0.000	2286202	0.50000	0.5172	83.82- 139.70	111.76
Average of Peak Amounts =					0.51600		
$ 9 DCB					CAS #: 2051-24-3		
8.127	8.127	0.000	1697571	0.02500	0.02517		


Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\002F0201.D
Date : 17-MAR-2005 15:45
Client ID:
Sample Info: 1660,,2
Column phase: restek pest clpII
Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53
\\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\002F0201.D
Y (x10^6)
Min
-TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
-AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
-DCB

Data File: 022F2201.D
Report Date: 18-Mar-2005 03:17

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 18-MAR-2005 03:02
Lab File ID: 022F2201.D Init. Cal. Date(s): 14-MAR-2005 14-MAR-2005
Analysis Type: Init. Cal. Times: 15:49 22:51
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	161186790	157883240	0.010	2.04952	15.00000	Averaged
3 AROCLOR-1016(1)	2628727	2574908	0.010	2.04733	15.00000	Averaged
(2)	5313402	5158592	0.010	2.91357	15.00000	Averaged
(3)	11430593	11589744	0.010	-1.39232	15.00000	Averaged
(4)	4683090	4765184	0.010	-1.75298	15.00000	Averaged
(5)	3700758	3733600	0.010	-0.88744	15.00000	Averaged
8 AROCLOR-1260(1)	4017596	3895056	0.010	3.05007	15.00000	Averaged
(2)	4734967	4507794	0.010	4.79778	15.00000	Averaged
(3)	5163483	4467056	0.010	13.48754	15.00000	Averaged
(4)	7296670	5828656	0.010	20.11896	15.00000	Averaged <-
(5)	4420689	3480598	0.010	21.26571	15.00000	Averaged <-
$ 9 DCB	67434042	55383400	0.010	17.87026	15.00000	Averaged <-

Data File: 022F2201.D
Report Date: 18-Mar-2005 03:17

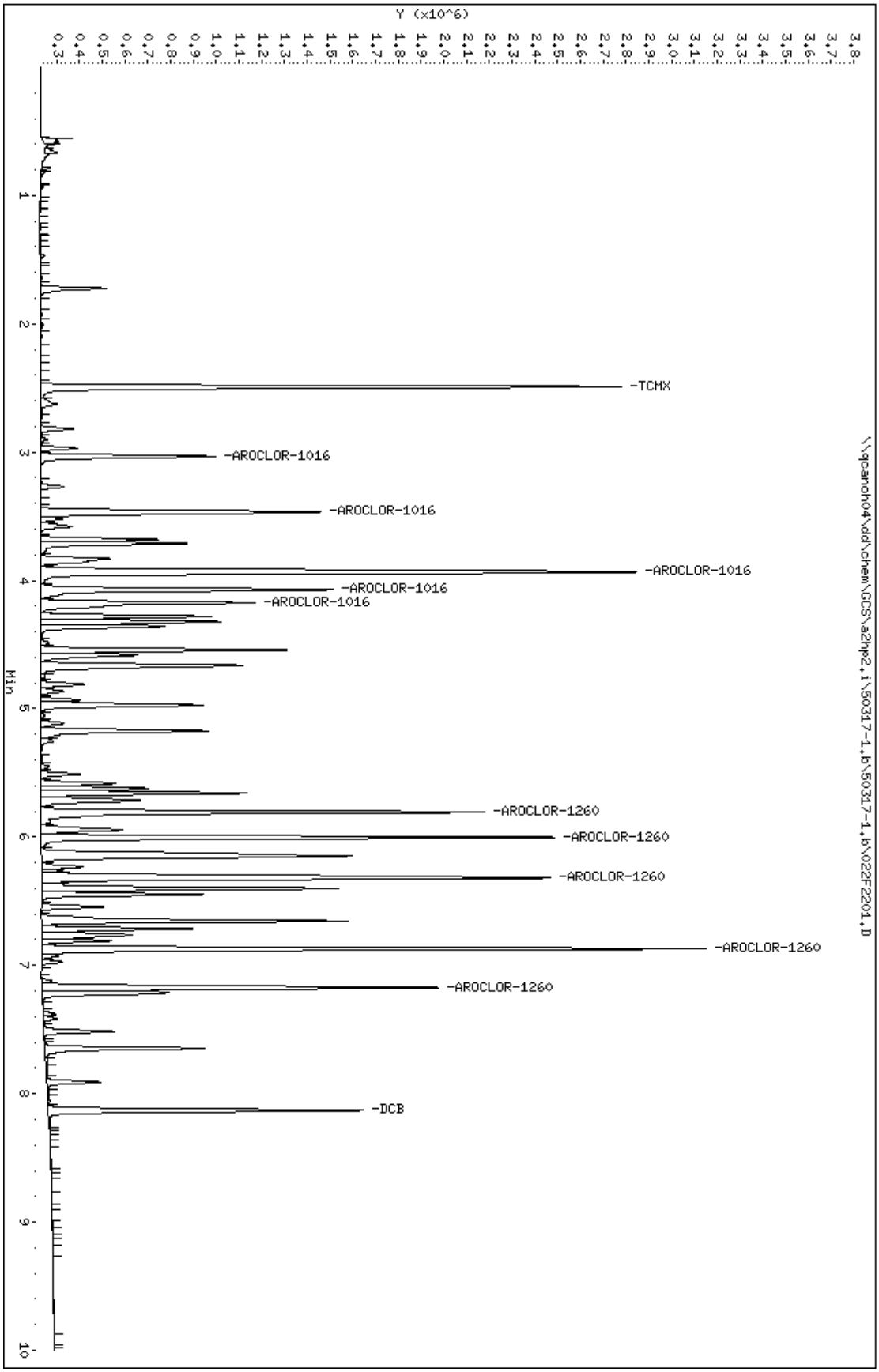
STL North Canton

Data file : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\022F2201.D
Lab Smp Id: 1660
Inj Date : 18-MAR-2005 03:02
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660td.sub
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 03:17 Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 22 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.491	0.000	3947081	0.02500	0.02449		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.032	3.032	0.000	1287454	0.50000	0.4898	80.00- 120.00	100.00
3.465	3.465	0.000	2579296	0.50000	0.4854	150.26- 250.43	200.34
3.935	3.935	0.000	5794872	0.50000	0.5070	337.58- 562.63	450.10
4.071	4.071	0.000	2382592	0.50000	0.5088	138.80- 231.33	185.06
4.174	4.174	0.000	1866800	0.50000	0.5044	108.75- 181.25	145.00
Average of Peak Amounts =					0.49908		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.805	0.000	1947528	0.50000	0.4847	80.00- 120.00	100.00
6.002	6.002	0.000	2253897	0.50000	0.4760	86.80- 144.66	115.73
6.318	6.318	0.000	2233528	0.50000	0.4326	86.01- 143.36	114.69
6.870	6.870	0.000	2914328	0.50000	0.3994	112.23- 187.05	149.64
7.173	7.173	0.000	1740299	0.50000	0.3937	67.02- 111.70	89.36
Average of Peak Amounts =					0.43728		
$ 9 DCB					CAS #: 2051-24-3		
8.130	8.130	0.000	1384585	0.02500	0.02053		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\022F2201.D
Date : 18-MAR-2005 03:02
Client ID:
Sample Info: 1660,,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 043F0901.D
Report Date: 18-Mar-2005 10:19

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 18-MAR-2005 10:08
Lab File ID: 043F0901.D Init. Cal. Date(s): 14-MAR-2005 14-MAR-2005
Analysis Type: Init. Cal. Times: 15:49 22:51
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	161186790	168592080	0.010	-4.59423	15.00000	Averaged
3 AROCLOR-1016(1)	2628727	2711030	0.010	-3.13092	15.00000	Averaged
(2)	5313402	5438694	0.010	-2.35804	15.00000	Averaged
(3)	11430593	12105402	0.010	-5.90353	15.00000	Averaged
(4)	4683090	4925936	0.010	-5.18559	15.00000	Averaged
(5)	3700758	3848726	0.010	-3.99832	15.00000	Averaged
8 AROCLOR-1260(1)	4017596	4097050	0.010	-1.97766	15.00000	Averaged
(2)	4734967	4800018	0.010	-1.37384	15.00000	Averaged
(3)	5163483	5257090	0.010	-1.81287	15.00000	Averaged
(4)	7296670	7396662	0.010	-1.37038	15.00000	Averaged
(5)	4420689	4180368	0.010	5.43627	15.00000	Averaged
$ 9 DCB	67434042	60655640	0.010	10.05190	15.00000	Averaged

Data File: 043F0901.D
Report Date: 18-Mar-2005 10:19

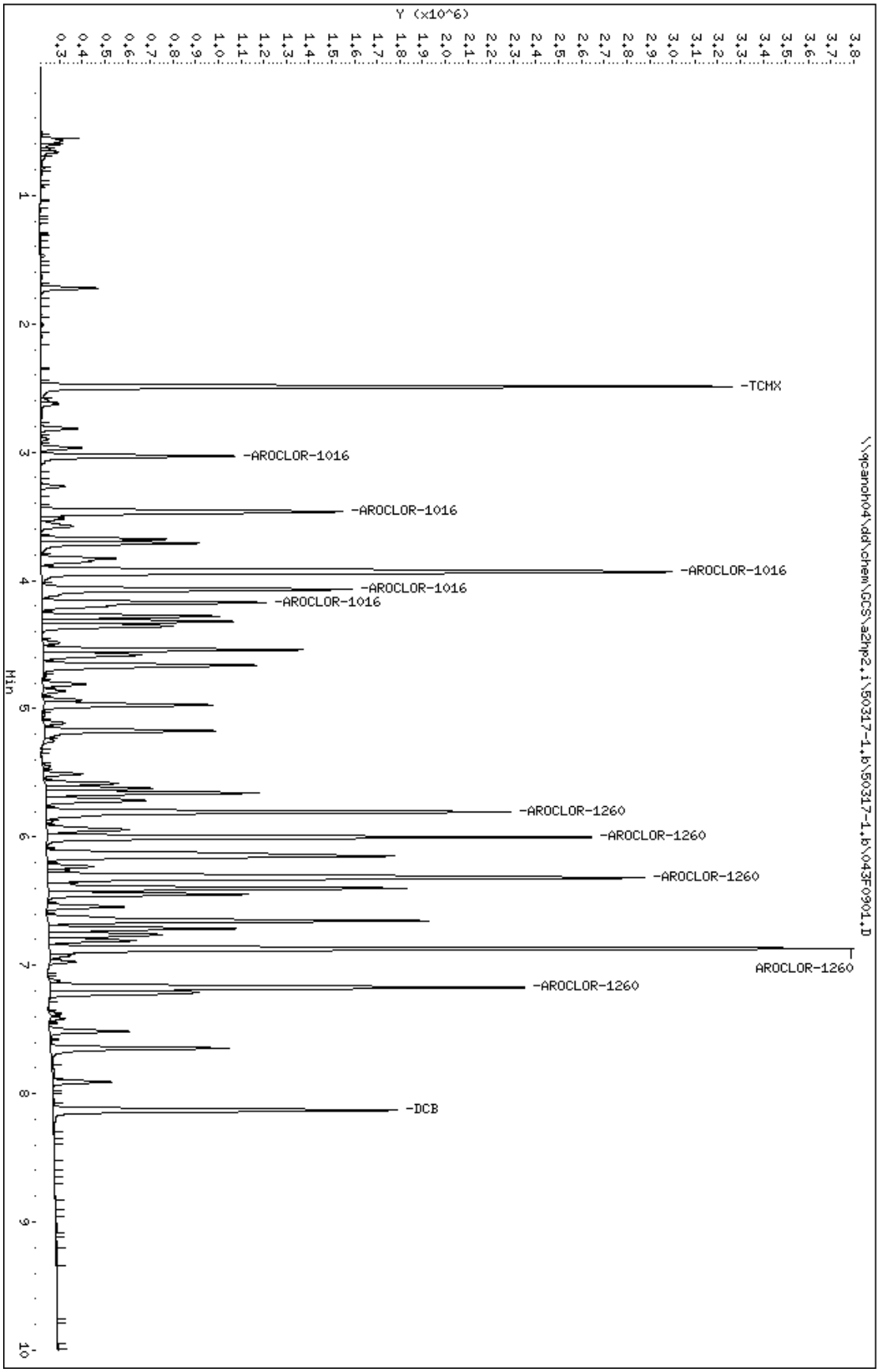
STL North Canton

Data file : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\043F0901.D
Lab Smp Id: 1660
Inj Date : 18-MAR-2005 10:08
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 10:19 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 43 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.489	2.489	0.000	4214802	0.02500	0.02615		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.031	3.031	0.000	1355515	0.50000	0.5156	80.00- 120.00	100.00
3.464	3.464	0.000	2719347	0.50000	0.5118	150.46- 250.77	200.61
3.934	3.934	0.000	6052701	0.50000	0.5295	334.89- 558.16	446.52
4.070	4.070	0.000	2462968	0.50000	0.5259	136.27- 227.12	181.70
4.173	4.173	0.000	1924363	0.50000	0.5200	106.47- 177.46	141.97
Average of Peak Amounts =					0.52056		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.804	5.804	0.000	2048525	0.50000	0.5099	80.00- 120.00	100.00
6.001	6.001	0.000	2400009	0.50000	0.5069	87.87- 146.45	117.16
6.317	6.317	0.000	2628545	0.50000	0.5091	96.24- 160.39	128.31
6.869	6.869	0.000	3698331	0.50000	0.5068	135.40- 225.67	180.54
7.173	7.173	0.000	2090184	0.50000	0.4728	76.53- 127.54	102.03
Average of Peak Amounts =					0.50110		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	1516391	0.02500	0.02249		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\043F0901.D
Date : 18-MAR-2005 10:08
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 045F0201.D
Report Date: 18-Mar-2005 15:06

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp2.i Injection Date: 18-MAR-2005 14:55
Lab File ID: 045F0201.D Init. Cal. Date(s): 14-MAR-2005 14-MAR-2005
Analysis Type: Init. Cal. Times: 15:49 22:51
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	161186790	162956000	0.010	-1.09761	15.00000	Averaged
3 AROCLOR-1016(1)	2628727	2601776	0.010	1.02523	15.00000	Averaged
(2)	5313402	5254920	0.010	1.10065	15.00000	Averaged
(3)	11430593	11757622	0.010	-2.86099	15.00000	Averaged
(4)	4683090	4720358	0.010	-0.79579	15.00000	Averaged
(5)	3700758	3739318	0.010	-1.04195	15.00000	Averaged
8 AROCLOR-1260(1)	4017596	4002402	0.010	0.37817	15.00000	Averaged
(2)	4734967	4736646	0.010	-0.03546	15.00000	Averaged
(3)	5163483	5223408	0.010	-1.16056	15.00000	Averaged
(4)	7296670	7381466	0.010	-1.16212	15.00000	Averaged
(5)	4420689	4268900	0.010	3.43360	15.00000	Averaged
$ 9 DCB	67434042	60348880	0.010	10.50680	15.00000	Averaged

Data File: 045F0201.D
Report Date: 18-Mar-2005 15:06

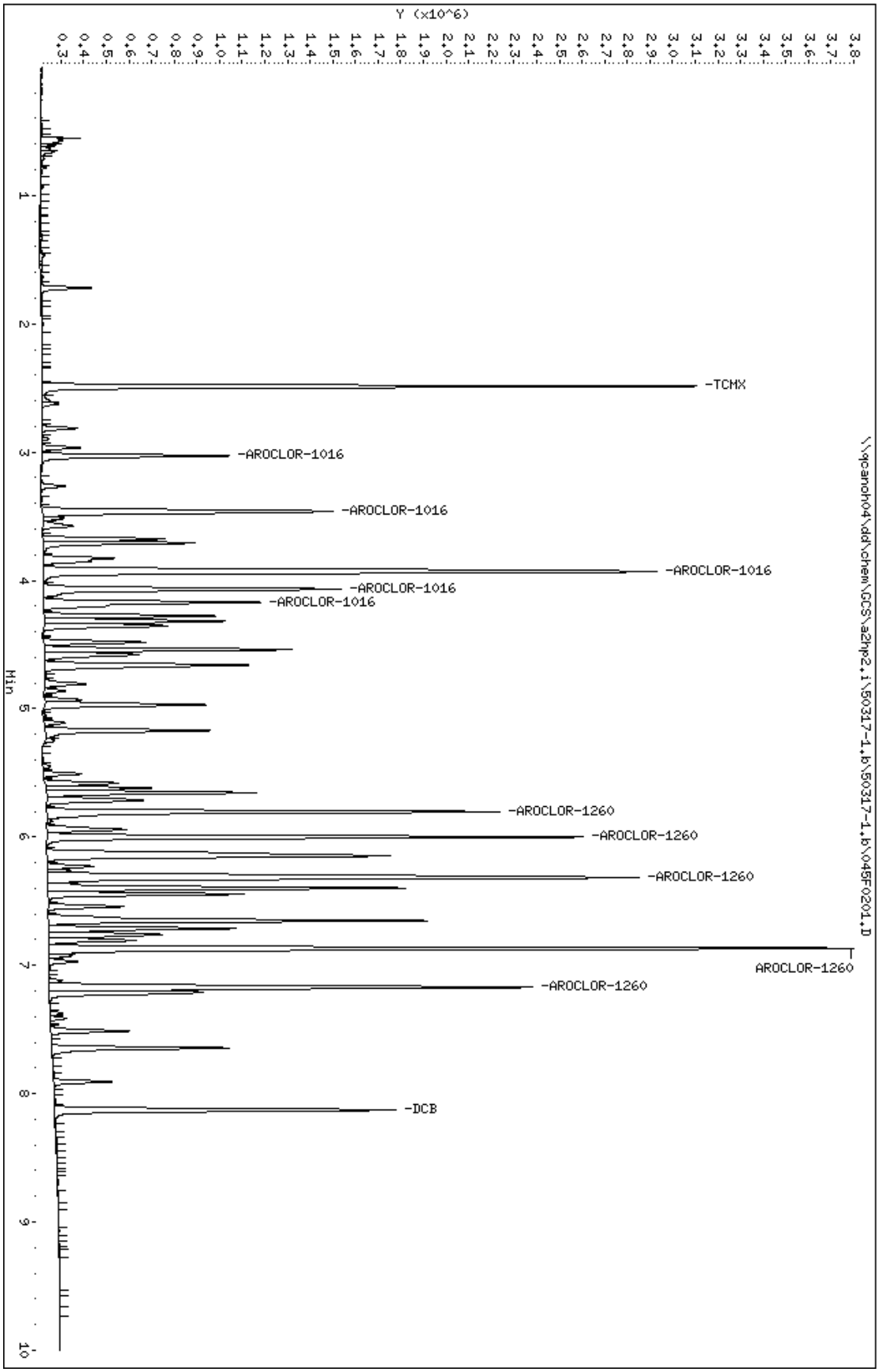
STL North Canton

Data file : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\045F0201.D
Lab Smp Id: 1660
Inj Date : 18-MAR-2005 14:55
Operator : 9237 Inst ID: a2hp2.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 15:05 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 45 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.487	2.487	0.000	4073900	0.02500	0.02527		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.029	3.029	0.000	1300888	0.50000	0.4949	80.00- 120.00	100.00
3.461	3.461	0.000	2627460	0.50000	0.4945	151.48- 252.47	201.97
3.931	3.931	0.000	5878811	0.50000	0.5143	338.93- 564.88	451.91
4.068	4.068	0.000	2360179	0.50000	0.5040	136.07- 226.79	181.43
4.170	4.170	0.000	1869659	0.50000	0.5052	107.79- 179.65	143.72
Average of Peak Amounts =					0.50258		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.803	5.803	0.000	2001201	0.50000	0.4981	80.00- 120.00	100.00
5.999	5.999	0.000	2368323	0.50000	0.5002	88.76- 147.93	118.35
6.315	6.315	0.000	2611704	0.50000	0.5058	97.88- 163.13	130.51
6.868	6.868	0.000	3690733	0.50000	0.5058	138.32- 230.53	184.43
7.171	7.171	0.000	2134450	0.50000	0.4828	79.99- 133.32	106.66
Average of Peak Amounts =					0.49854		
$ 9 DCB					CAS #: 2051-24-3		
8.127	8.127	0.000	1508722	0.02500	0.02237		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\045F0201.D
Date : 18-MAR-2005 14:55
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.32 (mm) Init. Calib. Date(s): 03/08/05 03/08/05

Instrument ID: A2HP5

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.86 S2 : 7.14

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/11/05	1656	1.86	7.14
02	S-030105-JH-	G5C751AA	03/11/05	2000	1.86	7.15
03	S-030105-JH-	G5C761AA	03/11/05	2012	1.86	7.15
04	S-030105-JH-	G5C771AA	03/11/05	2024	1.86	7.15
05	S-030105-JH-	G5C781AA	03/11/05	2037	1.86	7.15
06	S-030105-JH-	G5C791AA	03/11/05	2049	1.86	7.15
07	S-030105-JH-	G5C8A1AA	03/11/05	2101	1.86	7.15
08		1660	03/11/05	2114	1.86	7.14
09	S-030105-JH-	G5C8C1AA	03/11/05	2126	1.86	7.14
10	S-030105-JH-	G5C8D1AA	03/11/05	2138	1.86	7.14
11	S-030105-JH-	G5C8E1AA	03/11/05	2150	1.86	7.15
12	S-030105-JH-	G5C8F1AA	03/11/05	2203	1.86	7.15
13	S-030105-JH-	G5C8G1AA	03/11/05	2215	1.86	7.15
14	S-030105-JH-	G5C8K1AA	03/11/05	2227	1.86	7.15
15	S-030105-JH-	G5C8L1AA	03/11/05	2239	1.86	7.15
16	S-030105-JH-	G5C8M1AA	03/11/05	2252	1.86	7.15
17	S-030105-JH-	G5C8N1AA	03/11/05	2304	1.86	7.15
18	S-030105-JH-	G5C8R1AA	03/11/05	2316	1.86	7.14
19	S-030105-JH-	G5C8T1AA	03/11/05	2328	1.86	7.14
20	S-030105-JH-	G5C8V1AA	03/11/05	2340	1.86	7.14
21	S-030105-JH-	G5C8V1AF	03/11/05	2353	1.86	7.14
22	S-030105-JH-	G5C8V1AG	03/12/05	0005	1.86	7.14
23	S-030105-JH-	G5C8W1AA	03/12/05	0017	1.86	7.14
24	S-030105-JH-	G5C821AA	03/12/05	0029	1.86	7.14
25	G5D6RBLK	G5D6R1AA	03/12/05	0041	1.86	7.14
26	G5D6RCHK	G5D6R1AC	03/12/05	0054	1.86	7.14
27		1660	03/12/05	0106	1.86	7.14
28	S-030205-JH-	G5F751AA	03/12/05	0243	1.86	7.15
29	S-030205-JH-	G5F781AA	03/12/05	0256	1.86	7.15
30	S-030205-JH-	G5F791AA	03/12/05	0308	1.86	7.15
31	S-030205-JH-	G5F8C1AA	03/12/05	0320	1.86	7.15
32	S-030205-JH-	G5F801AA	03/12/05	0332	1.86	7.14

QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.32 (mm) Init. Calib. Date(s): 03/08/05 03/08/05

Instrument ID: A2HP5

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.86 S2 : 7.14

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	S-030205-JH-	G5F841AA	03/12/05	0344	1.86	7.14
02	S-030205-JH-	G5F851AA	03/12/05	0357	1.86	7.15
03	S-030205-JH-	G5F861AA	03/12/05	0409	1.86	7.14
04	S-030205-JH-	G5F881AA	03/12/05	0421	1.86	7.14
05	S-030205-JH-	G5F891AA	03/12/05	0433	1.86	7.15
06	S-030205-JH-	G5F8D1AA	03/12/05	0445	1.86	7.15
07	S-030205-JH-	G5F8E1AA	03/12/05	0458	1.86	7.15
08	S-030205-JH-	G5F8F1AA	03/12/05	0510	1.88	7.15
09		1660	03/12/05	0522	1.86	7.14
10	S-030205-JH-	G5F8F1AF	03/12/05	0534	1.86	7.15
11	S-030205-JH-	G5F8F1AG	03/12/05	0547	1.88	7.16
12	S-030205-JH-	G5F8H1AA	03/12/05	0611	1.86	7.15
13	S-030205-JH-	G5F8J1AA	03/12/05	0623	1.86	7.15
14	S-030205-JH-	G5F8K1AA	03/12/05	0636	1.86	7.15
15	S-030205-JH-	G5F8L1AA	03/12/05	0648	1.86	7.14
16	S-030205-JH-	G5F8M1AA	03/12/05	0700	1.86	7.14
17	S-030205-JH-	G5F8N1AA	03/12/05	0713	1.86	7.15
18	S-030205-JH-	G5F8P1AA	03/12/05	0725	1.86	7.15
19	S-030205-JH-	G5F8Q1AA	03/12/05	0737	1.86	7.15
20	S-030205-JH-	G5F8R1AA	03/12/05	0749	1.86	7.14
21	S-030205-JH-	G5F8T1AA	03/12/05	0801	1.86	7.14
22	S-030205-JH-	G5F8V1AA	03/12/05	0814	1.86	7.14
23	S-030205-JH-	G5F8W1AA	03/12/05	0826	1.86	7.14
24	S-030205-JH-	G5F8X1AA	03/12/05	0838	1.86	7.14
25	S-030205-JH-	G5F831AA	03/12/05	0850	1.86	7.14
26	S-030205-JH-	G5F9C1AA	03/12/05	0903	1.86	7.14
27	G5G14BLK	G5G141AA	03/12/05	0915	1.86	7.14
28	G5G14CHK	G5G141AC	03/12/05	0927	1.86	7.14
29		1660	03/12/05	0939	1.86	7.14
30						
31						
32						

		QC LIMITS
S1	= TCMX	(+/- 0.10 MINUTES)
S2	= DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
08-MAR-2005 15:32	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D

Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D

Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D

Cal Level: 4 , Cal Amount: 1.00000

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|08-MAR-2005 20:39 |12-AR1660td        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
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|08-MAR-2005 18:36 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
|08-MAR-2005 17:22 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
|08-MAR-2005 15:07 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D
+------------------+-----------------+-----------------------------------------+

+------------------+-----------------+-----------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                            |
+==================================================================================+
|08-MAR-2005 20:51 |12-AR1660td        |
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|08-MAR-2005 19:50 |9-AR2154           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
|08-MAR-2005 18:49 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D
|08-MAR-2005 17:34 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
|08-MAR-2005 15:19 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D
+------------------+-----------------+-----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3
+------------------+-----------------+-----------------------------------------+
|12-MAR-2005 09:39 |12-AR1660TD        |
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|12-MAR-2005 05:22 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\063F6301.D
|12-MAR-2005 01:06 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\042F4201.D
|11-MAR-2005 21:14 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\023F2301.D
|11-MAR-2005 16:56 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\002F0201.D
+------------------+-----------------+-----------------------------------------+
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Data File: 002F0201.D
Report Date: 11-Mar-2005 17:05

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 11-MAR-2005 16:56
Lab File ID: 002F0201.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m

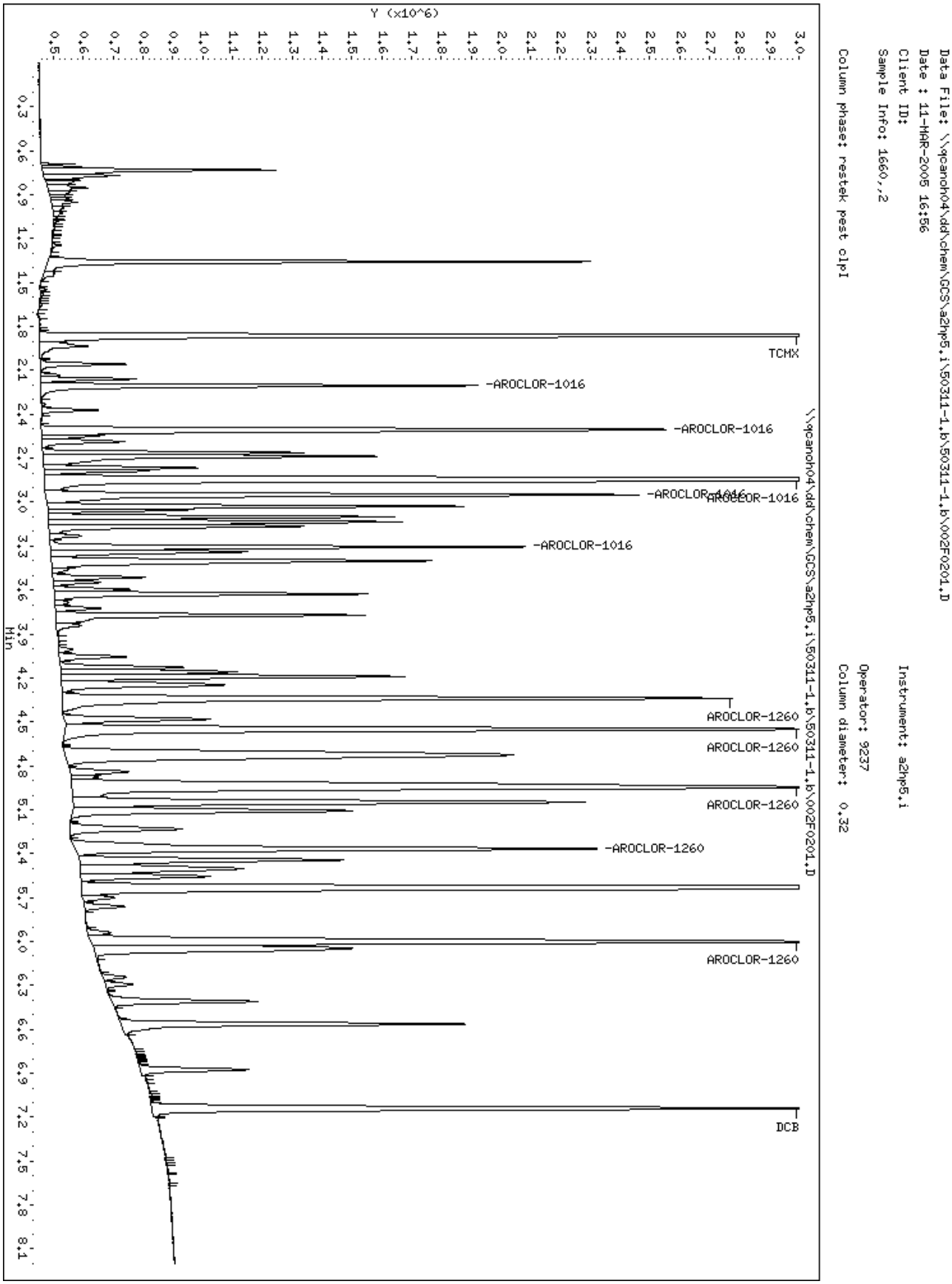
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	213799040	0.010	5.42062	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	2933036	0.010	8.38793	15.00000	Averaged
(2)	4570061	4189600	0.010	8.32508	15.00000	Averaged
(3)	8174426	7551882	0.010	7.61576	15.00000	Averaged
(4)	4391858	3978586	0.010	9.40995	15.00000	Averaged
(5)	3531838	3186248	0.010	9.78498	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4500300	0.010	8.41039	15.00000	Averaged
(2)	5670896	5160820	0.010	8.99463	15.00000	Averaged
(3)	5472078	5180194	0.010	5.33406	15.00000	Averaged
(4)	3750604	3499440	0.010	6.69664	15.00000	Averaged
(5)	5426919	5126612	0.010	5.53366	15.00000	Averaged
$ 9 DCB	94511092	87672120	0.010	7.23616	15.00000	Averaged

Data File: 002F0201.D
Report Date: 11-Mar-2005 17:05

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\002F0201.D
Lab Smp Id: 1660
Inj Date : 11-MAR-2005 16:56
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 11-Mar-2005 17:05 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.861	0.000	5344976	0.02500	0.02364		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.203	0.000	1466518	0.50000	0.4581	80.00- 120.00	100.00
2.503	2.503	0.000	2094800	0.50000	0.4584	107.13- 178.55	142.84
2.847	2.847	0.000	3775941	0.50000	0.4619	193.11- 321.85	257.48
2.950	2.950	0.000	1989293	0.50000	0.4530	101.74- 169.56	135.65
3.305	3.305	0.000	1593124	0.50000	0.4511	81.47- 135.79	108.63
Average of Peak Amounts =					0.45650		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.339	4.339	0.000	2250150	0.50000	0.4579	80.00- 120.00	100.00
4.549	4.549	0.000	2580410	0.50000	0.4550	86.01- 143.35	114.68
4.946	4.946	0.000	2590097	0.50000	0.4733	86.33- 143.88	115.11
5.367	5.367	0.000	1749720	0.50000	0.4665	58.32- 97.20	77.76
6.001	6.001	0.000	2563306	0.50000	0.4723	85.44- 142.40	113.92
Average of Peak Amounts =					0.46500		
$ 9 DCB					CAS #: 2051-24-3		
7.139	7.139	0.000	2191803	0.02500	0.02319		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\002F0201.D
Date : 11-MAR-2005 16:56
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
\\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\002F0201.D
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
DCB

Data File: 023F2301.D
Report Date: 11-Mar-2005 21:22

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 11-MAR-2005 21:14
Lab File ID: 023F2301.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m

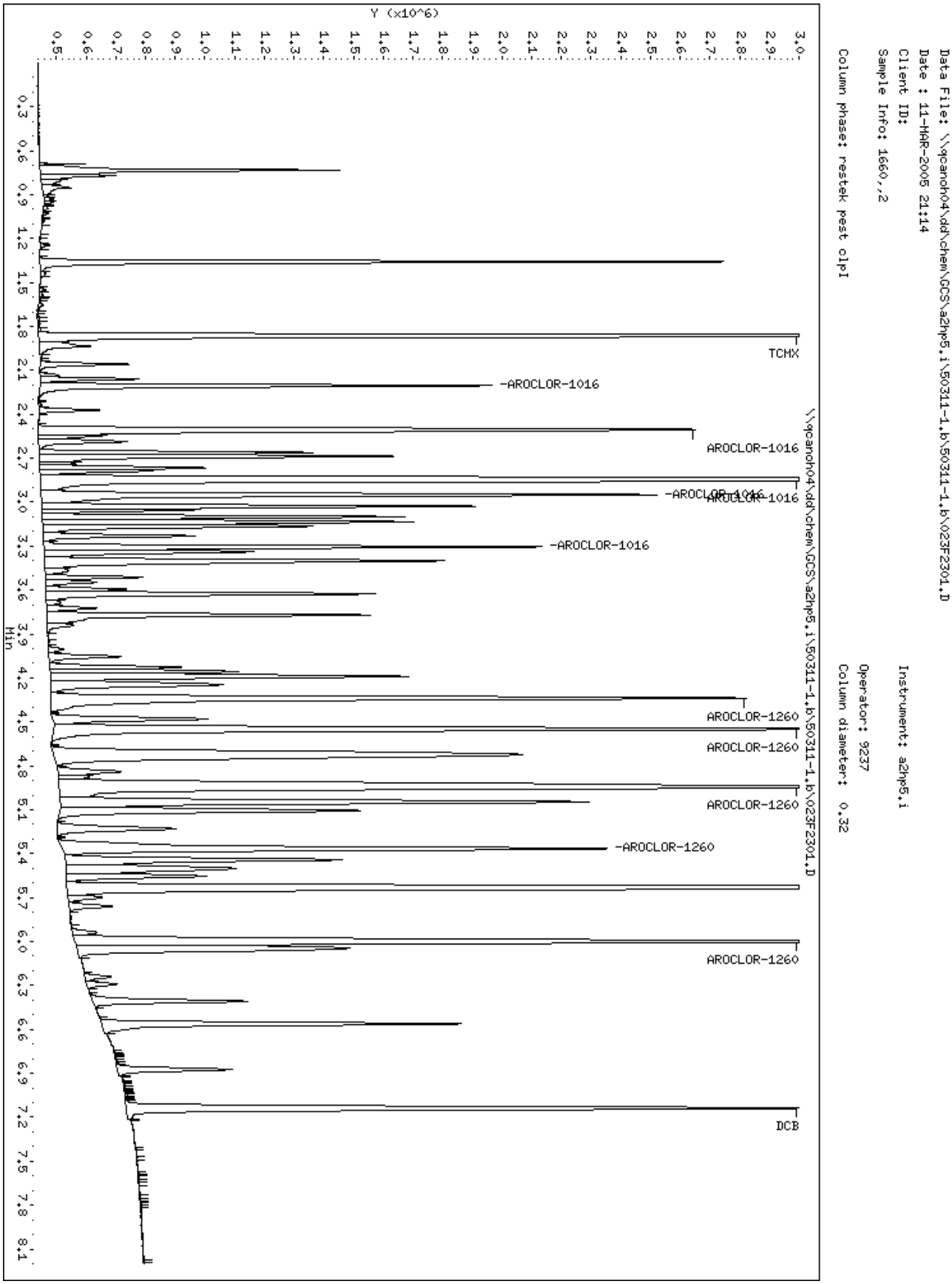
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	222873920	0.010	1.40612	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	3040832	0.010	5.02097	15.00000	Averaged
(2)	4570061	4422182	0.010	3.23582	15.00000	Averaged
(3)	8174426	7900852	0.010	3.34671	15.00000	Averaged
(4)	4391858	4149770	0.010	5.51219	15.00000	Averaged
(5)	3531838	3354002	0.010	5.03521	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4684452	0.010	4.66255	15.00000	Averaged
(2)	5670896	5448034	0.010	3.92993	15.00000	Averaged
(3)	5472078	5424126	0.010	0.87630	15.00000	Averaged
(4)	3750604	3671642	0.010	2.10532	15.00000	Averaged
(5)	5426919	5397832	0.010	0.53598	15.00000	Averaged
$ 9 DCB	94511092	91138320	0.010	3.56865	15.00000	Averaged

Data File: 023F2301.D
Report Date: 11-Mar-2005 21:22

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\023F2301.D
Lab Smp Id: 1660
Inj Date : 11-MAR-2005 21:14
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 11-Mar-2005 21:22 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 23 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	5571848	0.02500	0.02465		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.203	0.000	1520416	0.50000	0.4749	80.00- 120.00	100.00
2.503	2.503	0.000	2211091	0.50000	0.4838	109.07- 181.78	145.43
2.847	2.847	0.000	3950426	0.50000	0.4833	194.87- 324.78	259.83
2.949	2.949	0.000	2074885	0.50000	0.4724	102.35- 170.59	136.47
3.304	3.304	0.000	1677001	0.50000	0.4748	82.72- 137.87	110.30
Average of Peak Amounts =					0.47784		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.337	0.000	2342226	0.50000	0.4767	80.00- 120.00	100.00
4.547	4.547	0.000	2724017	0.50000	0.4804	87.23- 145.38	116.30
4.944	4.944	0.000	2712063	0.50000	0.4956	86.84- 144.74	115.79
5.366	5.366	0.000	1835821	0.50000	0.4895	58.78- 97.97	78.38
5.999	5.999	0.000	2698916	0.50000	0.4973	86.42- 144.04	115.23
Average of Peak Amounts =					0.48790		
$ 9 DCB					CAS #: 2051-24-3		
7.137	7.137	0.000	2278458	0.02500	0.02411		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Date : 11-MAR-2005 21:14
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\023F2301.D

Data File: 042F4201.D
Report Date: 12-Mar-2005 01:15

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

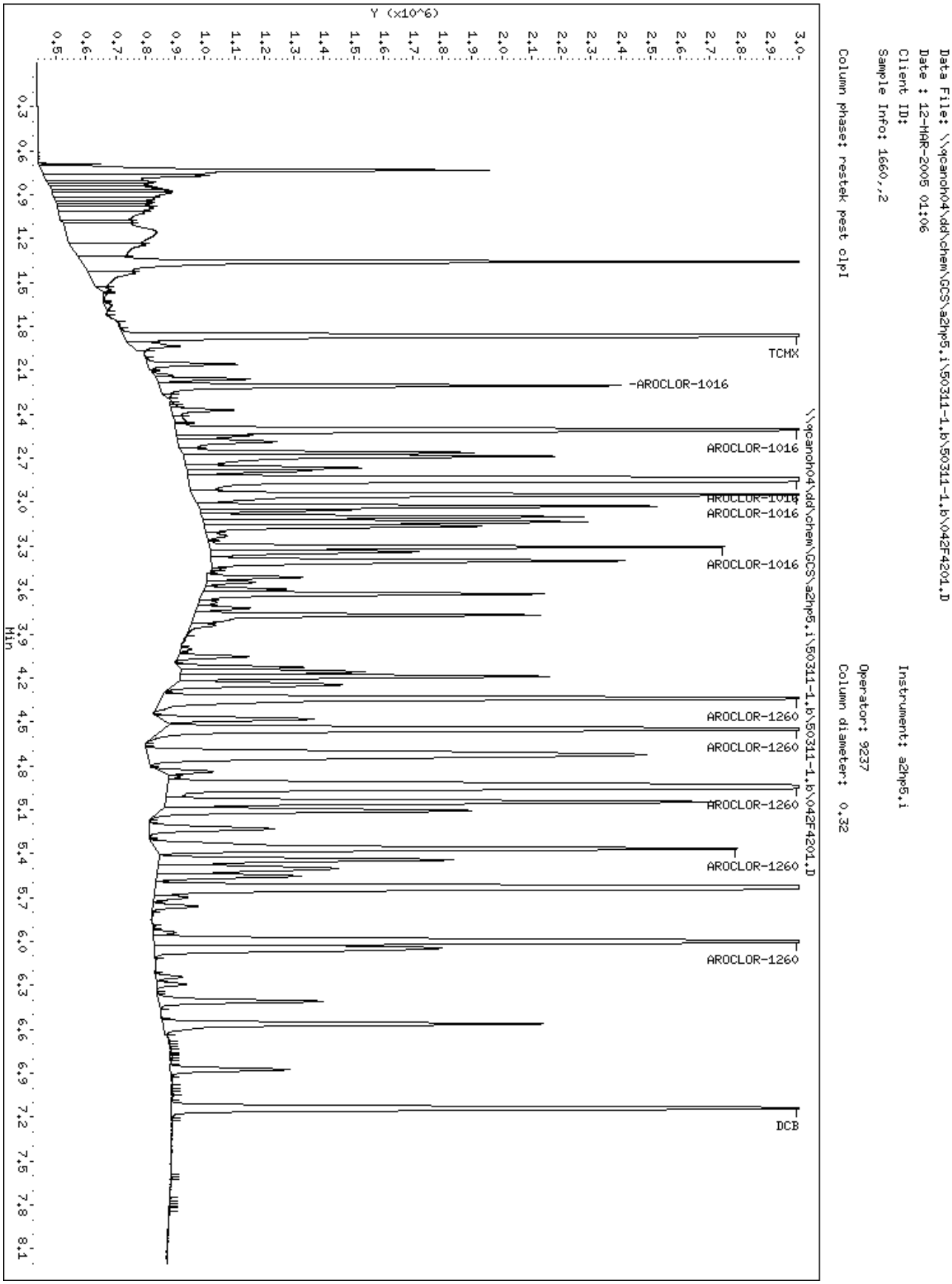
Instrument ID: a2hp5.i Injection Date: 12-MAR-2005 01:06
Lab File ID: 042F4201.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	227455920	0.010	-0.62085	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	3106384	0.010	2.97348	15.00000	Averaged
(2)	4570061	4613014	0.010	-0.93988	15.00000	Averaged
(3)	8174426	8533478	0.010	-4.39238	15.00000	Averaged
(4)	4391858	4430230	0.010	-0.87372	15.00000	Averaged
(5)	3531838	3471184	0.010	1.71734	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	5051450	0.010	-2.80655	15.00000	Averaged
(2)	5670896	5792650	0.010	-2.14699	15.00000	Averaged
(3)	5472078	5692164	0.010	-4.02199	15.00000	Averaged
(4)	3750604	3915952	0.010	-4.40856	15.00000	Averaged
(5)	5426919	5856774	0.010	-7.92078	15.00000	Averaged
$ 9 DCB	94511092	96426360	0.010	-2.02650	15.00000	Averaged

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\042F4201.D
Lab Smp Id: 1660
Inj Date : 12-MAR-2005 01:06
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 12-Mar-2005 09:48 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 42 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPGCV04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	5686398	0.02500	0.02516		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.204	2.201	0.003	1553192	0.50000	0.4851	80.00- 120.00	100.00
2.504	2.500	0.004	2306507	0.50000	0.5047	107.51- 179.18	148.50
2.848	2.845	0.003	4266739	0.50000	0.5220	192.23- 320.39	274.71
2.949	2.947	0.002	2215115	0.50000	0.5044	101.51- 169.19	142.62
3.305	3.302	0.003	1735592	0.50000	0.4914	79.65- 132.74	111.74
Average of Peak Amounts =					0.50152		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.339	4.335	0.004	2525725	0.50000	0.5140	80.00- 120.00	100.00
4.549	4.545	0.004	2896325	0.50000	0.5107	87.22- 145.36	114.67
4.944	4.942	0.002	2846082	0.50000	0.5201	86.81- 144.68	112.68
5.366	5.364	0.002	1957976	0.50000	0.5220	57.97- 96.61	77.52
6.000	5.997	0.003	2928387	0.50000	0.5396	85.17- 141.95	115.94
Average of Peak Amounts =					0.52128		
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	2410659	0.02500	0.02551		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\042F4201.D
Date : 12-MAR-2005 01:06
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
DCB

Data File: 063F6301.D
Report Date: 12-Mar-2005 05:31

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 12-MAR-2005 05:22
Lab File ID: 063F6301.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	230417600	0.010	-1.93102	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	3176082	0.010	0.79650	15.00000	Averaged
(2)	4570061	4542638	0.010	0.60006	15.00000	Averaged
(3)	8174426	8205608	0.010	-0.38145	15.00000	Averaged
(4)	4391858	4237972	0.010	3.50388	15.00000	Averaged
(5)	3531838	3407452	0.010	3.52184	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4962604	0.010	-0.99837	15.00000	Averaged
(2)	5670896	5665970	0.010	0.08687	15.00000	Averaged
(3)	5472078	5702716	0.010	-4.21482	15.00000	Averaged
(4)	3750604	3896442	0.010	-3.88838	15.00000	Averaged
(5)	5426919	5640296	0.010	-3.93182	15.00000	Averaged
$ 9 DCB	94511092	96631880	0.010	-2.24396	15.00000	Averaged

Data File: 063F6301.D
Report Date: 12-Mar-2005 05:31

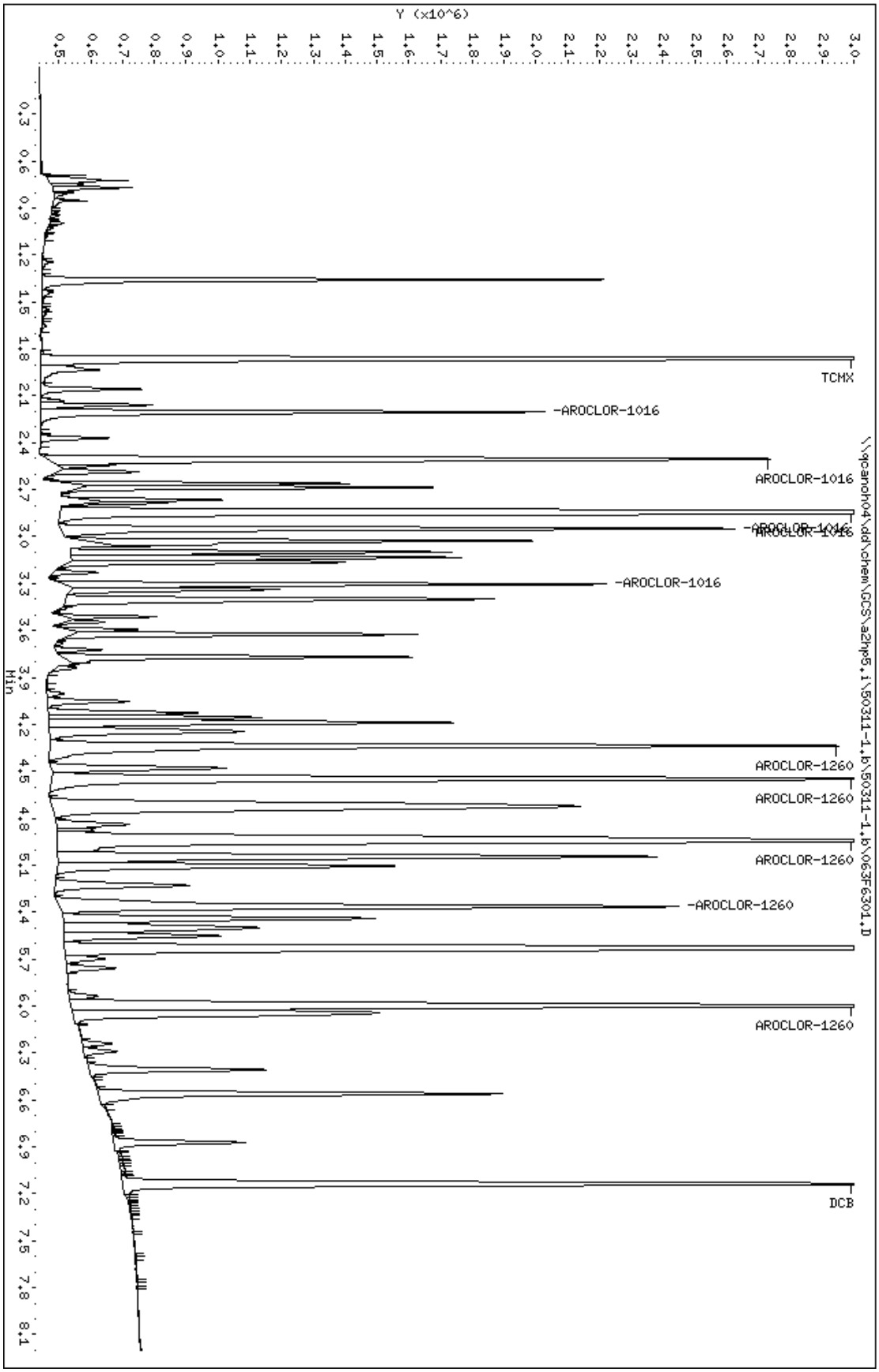
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\063F6301.D
Lab Smp Id: 1660
Inj Date : 12-MAR-2005 05:22
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 12-Mar-2005 05:31 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 63 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	5760440	0.02500	0.02548		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.203	0.000	1588041	0.50000	0.4960	80.00- 120.00	100.00
2.503	2.503	0.000	2271319	0.50000	0.4970	107.27- 178.78	143.03
2.847	2.847	0.000	4102804	0.50000	0.5019	193.77- 322.95	258.36
2.948	2.948	0.000	2118986	0.50000	0.4825	100.08- 166.79	133.43
3.303	3.303	0.000	1703726	0.50000	0.4824	80.46- 134.11	107.28
Average of Peak Amounts =					0.49196		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.336	4.336	0.000	2481302	0.50000	0.5050	80.00- 120.00	100.00
4.547	4.547	0.000	2832985	0.50000	0.4996	85.63- 142.72	114.17
4.943	4.943	0.000	2851358	0.50000	0.5211	86.19- 143.64	114.91
5.363	5.363	0.000	1948221	0.50000	0.5194	58.89- 98.15	78.52
5.998	5.998	0.000	2820148	0.50000	0.5196	85.24- 142.07	113.66
Average of Peak Amounts =					0.51294		
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.136	0.000	2415797	0.02500	0.02556		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\063F6301.D
Date : 12-MAR-2005 05:22
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 084F8401.D
Report Date: 12-Mar-2005 09:48

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 12-MAR-2005 09:39
Lab File ID: 084F8401.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m

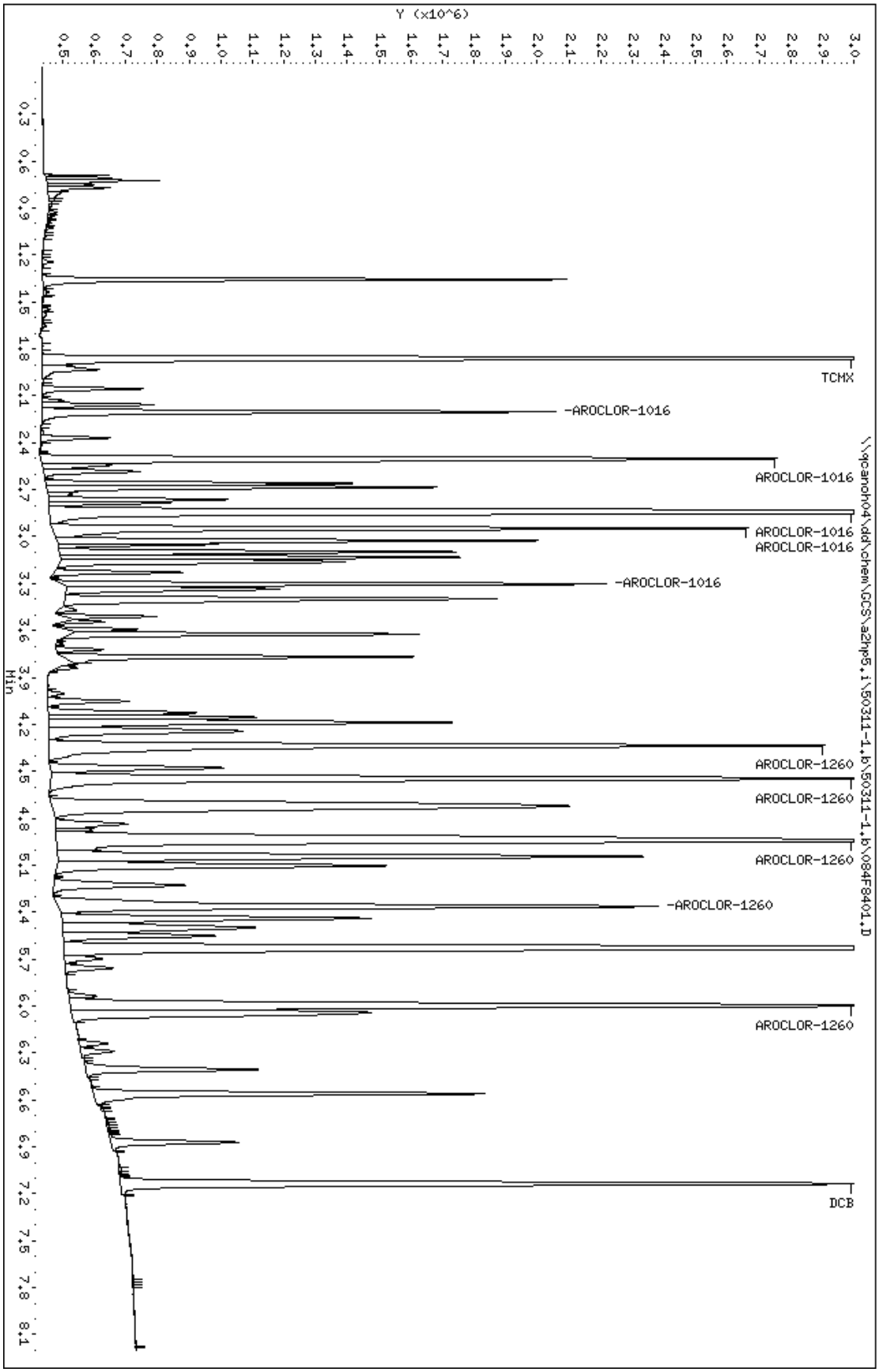
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	234750720	0.010	-3.84789	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	3247396	0.010	-1.43096	15.00000	Averaged
(2)	4570061	4654996	0.010	-1.85851	15.00000	Averaged
(3)	8174426	8323344	0.010	-1.82175	15.00000	Averaged
(4)	4391858	4395336	0.010	-0.07920	15.00000	Averaged
(5)	3531838	3448560	0.010	2.35791	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4904116	0.010	0.19197	15.00000	Averaged
(2)	5670896	5703050	0.010	-0.56699	15.00000	Averaged
(3)	5472078	5676122	0.010	-3.72882	15.00000	Averaged
(4)	3750604	3790480	0.010	-1.06318	15.00000	Averaged
(5)	5426919	5569230	0.010	-2.62231	15.00000	Averaged
$ 9 DCB	94511092	94692720	0.010	-0.19218	15.00000	Averaged

Data File: 084F8401.D
Report Date: 12-Mar-2005 09:48

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\084F8401.D
Lab Smp Id: 1660
Inj Date : 12-MAR-2005 09:39
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 12-Mar-2005 09:48 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 84 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	5868768	0.02500	0.02596		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.201	2.201	0.000	1623698	0.50000	0.5072	80.00- 120.00	100.00
2.500	2.500	0.000	2327498	0.50000	0.5093	107.51- 179.18	143.35
2.845	2.845	0.000	4161672	0.50000	0.5091	192.23- 320.39	256.31
2.947	2.947	0.000	2197668	0.50000	0.5004	101.51- 169.19	135.35
3.302	3.302	0.000	1724280	0.50000	0.4882	79.65- 132.74	106.19
Average of Peak Amounts =					0.50284		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.335	4.335	0.000	2452058	0.50000	0.4990	80.00- 120.00	100.00
4.545	4.545	0.000	2851525	0.50000	0.5028	87.22- 145.36	116.29
4.942	4.942	0.000	2838061	0.50000	0.5186	86.81- 144.68	115.74
5.364	5.364	0.000	1895240	0.50000	0.5053	57.97- 96.61	77.29
5.997	5.997	0.000	2784615	0.50000	0.5131	85.17- 141.95	113.56
Average of Peak Amounts =					0.50776		
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	2367318	0.02500	0.02505		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\084F8401.D
Date : 12-MAR-2005 09:39
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\084F8401.D

SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.32 (mm) Init. Calib. Date(s): 03/08/05 03/08/05

Instrument ID: A2HP5

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.86 S2 : 7.14

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/14/05	2029	1.86	7.14
02	S-030105-JH-	G5C831AA	03/14/05	2041	1.86	7.14
03	S-030105-JH-	G5C851AA	03/14/05	2053	1.86	7.15
04	S-030105-JH-	G5C861AA	03/14/05	2106	1.86	7.14
05	S-030105-JH-	G5C871AA	03/14/05	2118	1.86	7.15
06	S-030105-JH-	G5C881AA	03/14/05	2130	1.86	7.14
07	S-030105-JH-	G5C891AA	03/14/05	2142	1.86	7.14
08	S-030105-JH-	G5C9A1AA	03/14/05	2154	1.86	7.14
09	S-030105-JH-	G5C9C1AA	03/14/05	2207	1.86	7.14
10	S-030105-JH-	G5C9D1AA	03/14/05	2219	1.86	7.13
11	S-030105-JH-	G5C9E1AA	03/14/05	2231	1.86	7.14
12	S-030105-JH-	G5C9F1AA	03/14/05	2243	1.86	7.15
13	S-030105-JH-	G5C9G1AA	03/14/05	2256	1.86	7.15
14	G5D5FBLK	G5D5F1AA	03/14/05	2308	1.86	7.14
15	G5D5FCHK	G5D5F1AC	03/14/05	2320	1.86	7.13
16	G5D5FCHKDUP	G5D5F1AD	03/14/05	2332	1.86	7.14
17		1660	03/14/05	2345	1.86	7.13
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
S1 = TCMX	(+/- 0.10 MINUTES)
S2 = DCB	(+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
08-MAR-2005 15:32	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D

Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D

Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D

Cal Level: 4 , Cal Amount: 1.00000		

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|08-MAR-2005 20:39 |12-AR1660td        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
|08-MAR-2005 19:38 |9-AR2154           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D
|08-MAR-2005 18:36 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
|08-MAR-2005 17:22 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
|08-MAR-2005 15:07 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D
+------------------+-----------------+-----------------------------------------+

+------------------+-----------------+-----------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                           |
+==================================================================================+
|08-MAR-2005 20:51 |12-AR1660td        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D
|08-MAR-2005 19:50 |9-AR2154           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
|08-MAR-2005 18:49 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D
|08-MAR-2005 17:34 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
|08-MAR-2005 15:19 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D
+------------------+-----------------+-----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3
+------------------+-----------------+-----------------------------------------+
|15-MAR-2005 05:05 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\058F5401.D
|15-MAR-2005 03:39 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\052F4801.D
|14-MAR-2005 23:45 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\041F3701.D
|14-MAR-2005 20:29 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\025F2101.D
|14-MAR-2005 14:25 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\004F0401.D
|14-MAR-2005 14:01 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\002F0201.D
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Data File: 025F2101.D
Report Date: 14-Mar-2005 20:38

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 14-MAR-2005 20:29
Lab File ID: 025F2101.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	225280040	0.010	0.34171	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	3087938	0.010	3.54964	15.00000	Averaged
(2)	4570061	4427284	0.010	3.12418	15.00000	Averaged
(3)	8174426	7981648	0.010	2.35831	15.00000	Averaged
(4)	4391858	4143454	0.010	5.65600	15.00000	Averaged
(5)	3531838	3273940	0.010	7.30208	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4763710	0.010	3.04950	15.00000	Averaged
(2)	5670896	5418448	0.010	4.45165	15.00000	Averaged
(3)	5472078	5457214	0.010	0.27163	15.00000	Averaged
(4)	3750604	3650672	0.010	2.66443	15.00000	Averaged
(5)	5426919	5322928	0.010	1.91621	15.00000	Averaged
$ 9 DCB	94511092	89433800	0.010	5.37217	15.00000	Averaged

Data File: 025F2101.D
Report Date: 14-Mar-2005 20:38

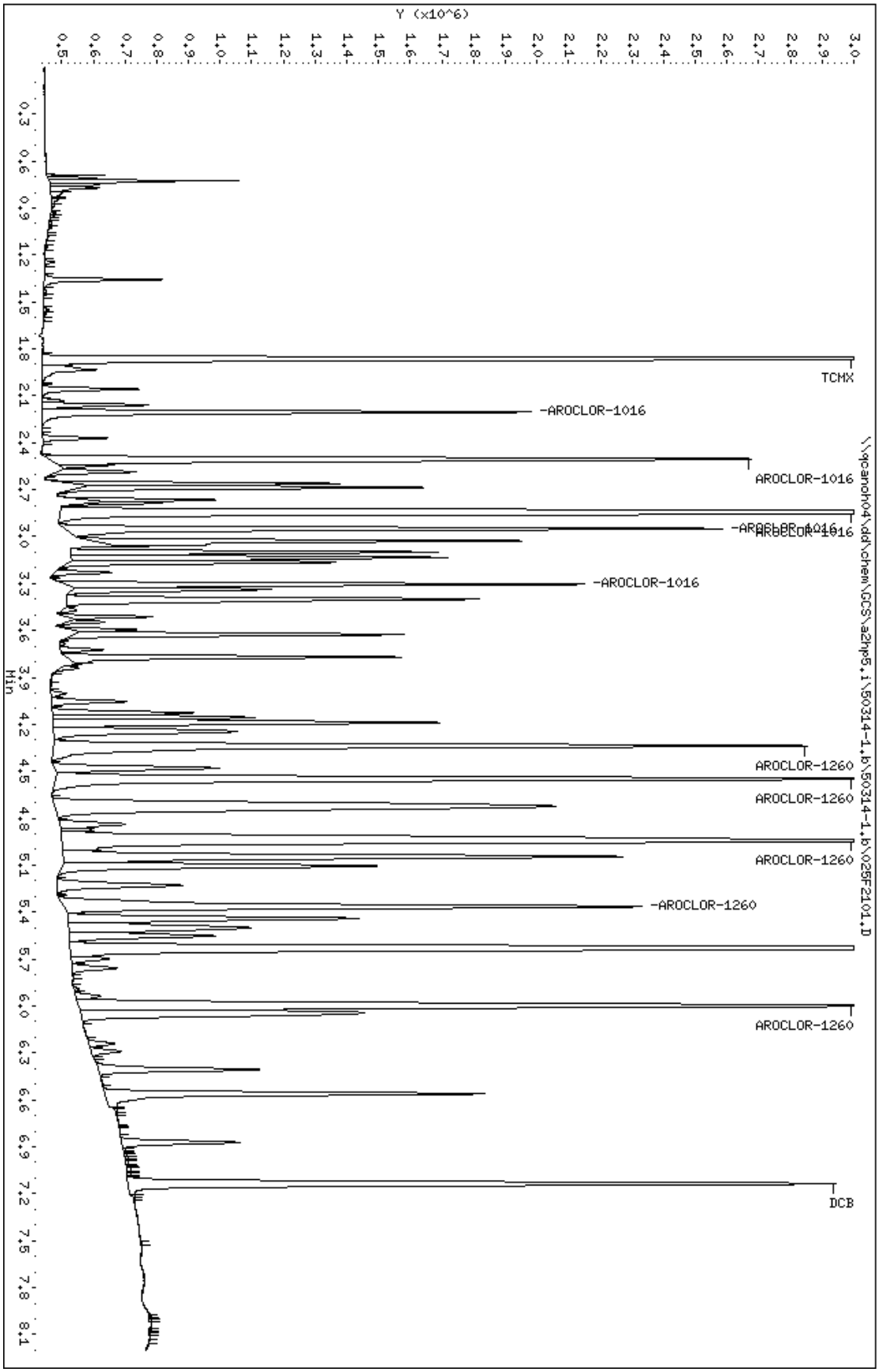
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\025F2101.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 20:29
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 20:38 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 25 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	5632001	0.02500	0.02491		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.204	2.204	0.000	1543969	0.50000	0.4822	80.00- 120.00	100.00
2.504	2.504	0.000	2213642	0.50000	0.4844	107.53- 179.22	143.37
2.847	2.847	0.000	3990824	0.50000	0.4882	193.86- 323.10	258.48
2.949	2.949	0.000	2071727	0.50000	0.4717	100.64- 167.73	134.18
3.304	3.304	0.000	1636970	0.50000	0.4635	79.52- 132.53	106.02
Average of Peak Amounts =					0.47800		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.337	0.000	2381855	0.50000	0.4848	80.00- 120.00	100.00
4.547	4.547	0.000	2709224	0.50000	0.4777	85.31- 142.18	113.74
4.943	4.943	0.000	2728607	0.50000	0.4986	85.92- 143.20	114.56
5.364	5.364	0.000	1825336	0.50000	0.4867	57.48- 95.79	76.64
5.999	5.999	0.000	2661464	0.50000	0.4904	83.80- 139.67	111.74
Average of Peak Amounts =					0.48764		
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	2235845	0.02500	0.02366		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\025F2101.D
Date : 14-MAR-2005 20:29
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



Data File: 041F3701.D
Report Date: 14-Mar-2005 23:53

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 14-MAR-2005 23:45
Lab File ID: 041F3701.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	220176400	0.010	2.59943	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	2957220	0.010	7.63255	15.00000	Averaged
(2)	4570061	4210008	0.010	7.87852	15.00000	Averaged
(3)	8174426	7864370	0.010	3.79300	15.00000	Averaged
(4)	4391858	4044696	0.010	7.90466	15.00000	Averaged
(5)	3531838	3312316	0.010	6.21551	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4666450	0.010	5.02893	15.00000	Averaged
(2)	5670896	5357470	0.010	5.52693	15.00000	Averaged
(3)	5472078	5345050	0.010	2.32138	15.00000	Averaged
(4)	3750604	3603856	0.010	3.91266	15.00000	Averaged
(5)	5426919	5212986	0.010	3.94208	15.00000	Averaged
$ 9 DCB	94511092	87646840	0.010	7.26291	15.00000	Averaged

Data File: 041F3701.D
Report Date: 14-Mar-2005 23:53

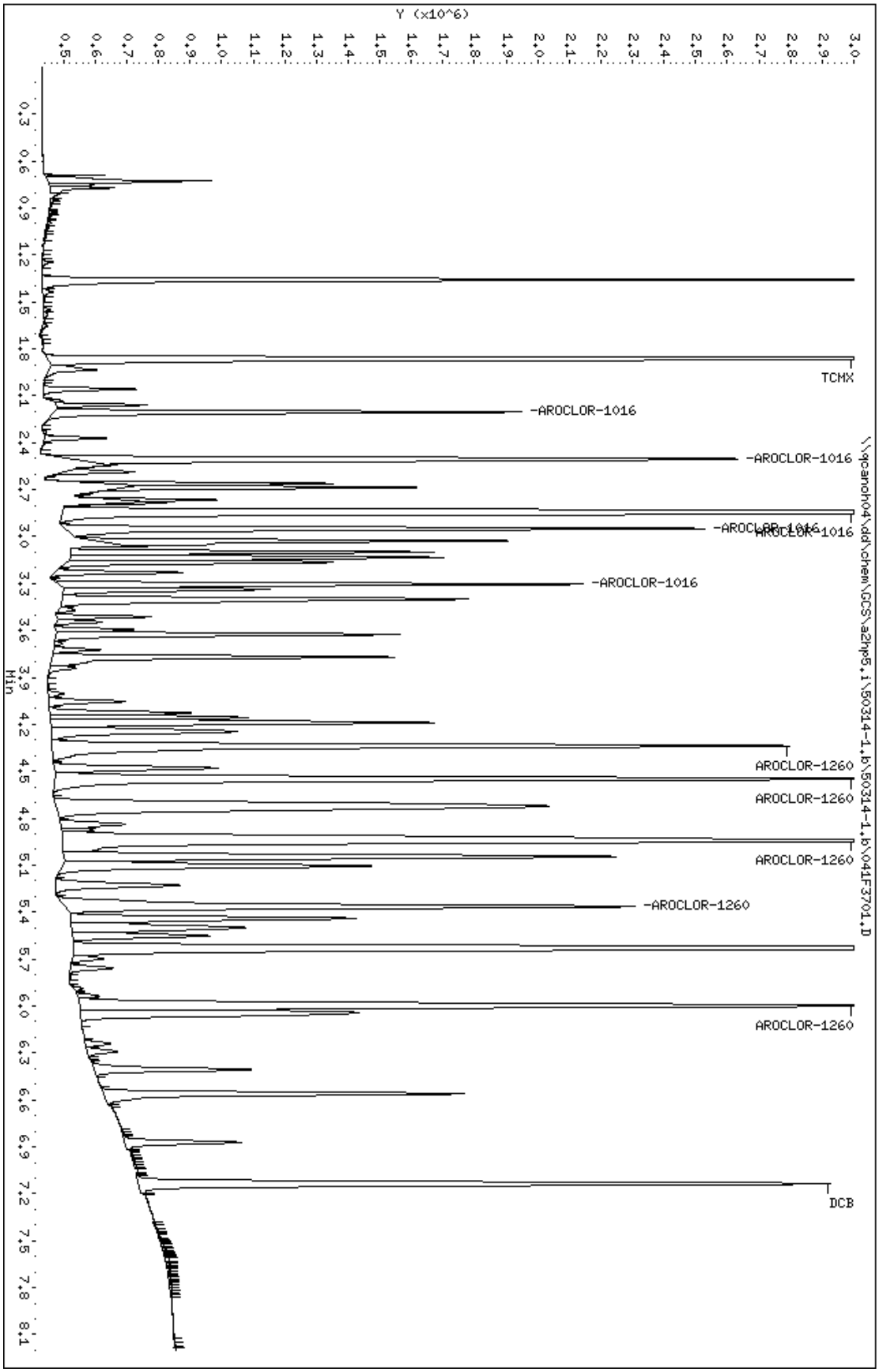
STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\041F3701.D
Lab Smp Id: 1660
Inj Date : 14-MAR-2005 23:45
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 23:53 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 41 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	5504410	0.02500	0.02435		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.203	0.000	1478610	0.50000	0.4618	80.00- 120.00	100.00
2.503	2.503	0.000	2105004	0.50000	0.4606	106.77- 177.95	142.36
2.847	2.847	0.000	3932185	0.50000	0.4810	199.45- 332.42	265.94
2.948	2.948	0.000	2022348	0.50000	0.4605	102.58- 170.97	136.77
3.303	3.303	0.000	1656158	0.50000	0.4689	84.01- 140.01	112.01
Average of Peak Amounts =					0.46656		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.337	0.000	2333225	0.50000	0.4748	80.00- 120.00	100.00
4.547	4.547	0.000	2678735	0.50000	0.4724	86.11- 143.51	114.81
4.943	4.943	0.000	2672525	0.50000	0.4884	85.91- 143.18	114.54
5.364	5.364	0.000	1801928	0.50000	0.4804	57.92- 96.54	77.23
5.998	5.998	0.000	2606493	0.50000	0.4803	83.78- 139.64	111.71
Average of Peak Amounts =					0.47926		
$ 9 DCB					CAS #: 2051-24-3		
7.134	7.134	0.000	2191171	0.02500	0.02318		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\041F3701.D
Date : 14-MAR-2005 23:45
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.32 (mm) Init. Calib. Date(s): 03/08/05 03/08/05

Instrument ID: A2HP5

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.86 S2 : 7.13

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/15/05	0850	1.86	7.14
02	S-030205-JH-	G5F8G1AA	03/15/05	0939	1.86	7.15
03		1660	03/15/05	0951	1.86	7.13
04						
05						
06						
07						
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32						

QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
08-MAR-2005 15:32	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D
Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D
Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D
Cal Level: 4 , Cal Amount: 1.00000		

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|08-MAR-2005 20:39 |12-AR1660td        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D
|08-MAR-2005 19:38 |9-AR2154           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D
|08-MAR-2005 18:36 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D
|08-MAR-2005 17:22 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D
|08-MAR-2005 15:07 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D
+------------------+-----------------+-------------------------------------+

+------------------+-----------------+-------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                        |
+==========================================================================+
|08-MAR-2005 20:51 |12-AR1660td        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D
|08-MAR-2005 19:50 |9-AR2154           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D
|08-MAR-2005 18:49 |3-AR1248           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D
|08-MAR-2005 17:34 |2-AR1242           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D
|08-MAR-2005 15:19 |1-AR1232           |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D
+------------------+-----------------+-------------------------------------+
```

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3

```
+------------------+-----------------+-------------------------------------+
|15-MAR-2005 14:25 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\013F0601.D
|15-MAR-2005 09:51 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\007F0701.D
|15-MAR-2005 08:50 |12-AR1660TD        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\002F0201.D
+------------------+-----------------+-------------------------------------+
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Data File: 002F0201.D
Report Date: 15-Mar-2005 08:59

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

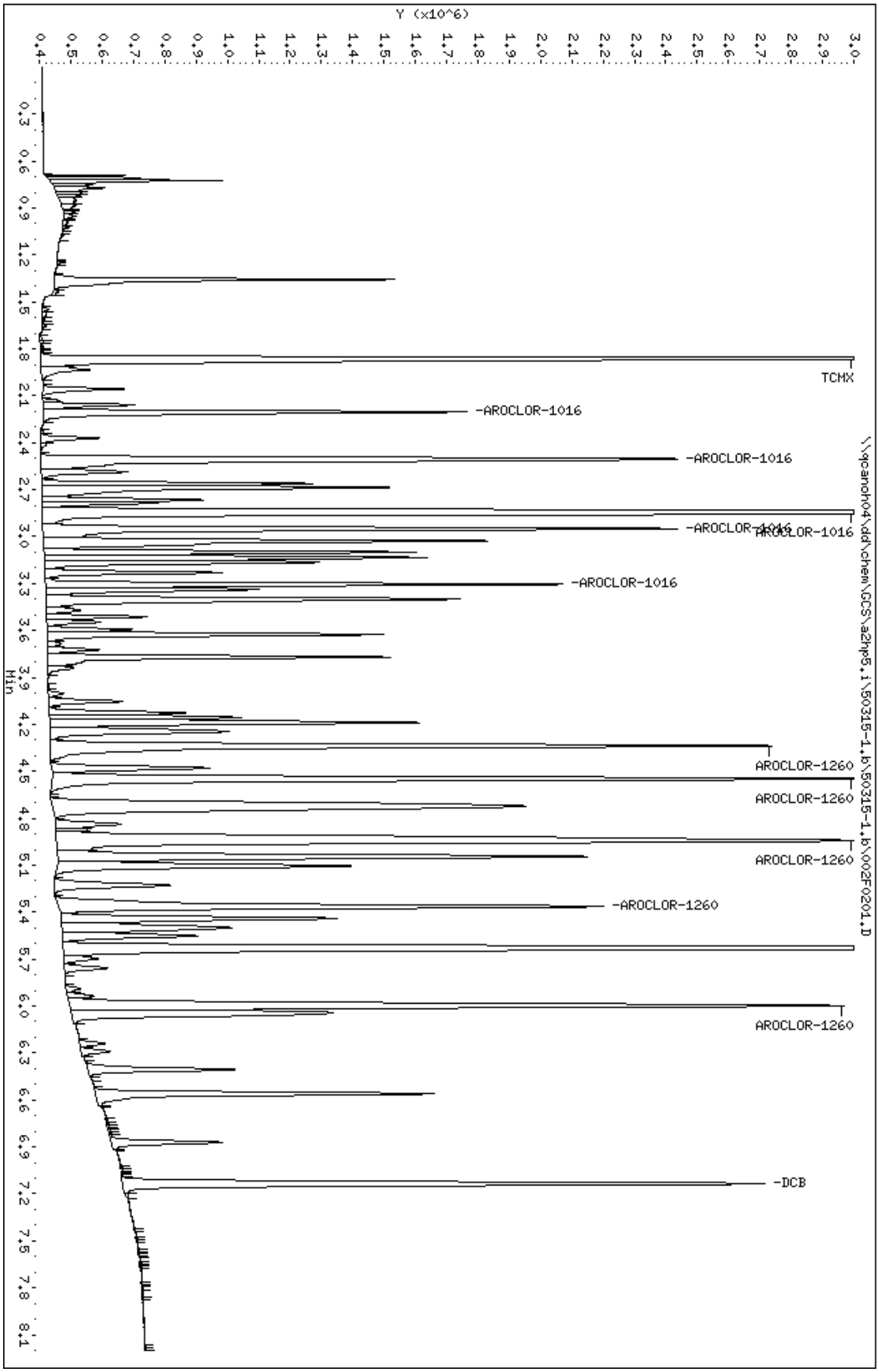
Instrument ID: a2hp5.i Injection Date: 15-MAR-2005 08:50
Lab File ID: 002F0201.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 TCMX	226052478	193579640	0.010	14.36518	15.00000	Averaged	
3 AROCLOR-1016(1)	3201583	2705212	0.010	15.50391	15.00000	Averaged	<-
(2)	4570061	4067770	0.010	10.99091	15.00000	Averaged	
(3)	8174426	7839606	0.010	4.09595	15.00000	Averaged	
(4)	4391858	4050936	0.010	7.76258	15.00000	Averaged	
(5)	3531838	3306004	0.010	6.39422	15.00000	Averaged	
8 AROCLOR-1260(1)	4913549	4604134	0.010	6.29717	15.00000	Averaged	
(2)	5670896	5250484	0.010	7.41351	15.00000	Averaged	
(3)	5472078	5152276	0.010	5.84425	15.00000	Averaged	
(4)	3750604	3479292	0.010	7.23383	15.00000	Averaged	
(5)	5426919	4947302	0.010	8.83775	15.00000	Averaged	
$ 9 DCB	94511092	82130600	0.010	13.09951	15.00000	Averaged	

STL - North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\002F0201.D
Lab Smp Id: 1660
Inj Date : 15-MAR-2005 08:50
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 10:00 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: CANPADMIN02

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4839491	0.02500	0.02141		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.202	2.202	0.000	1352606	0.50000	0.4225	80.00- 120.00	100.00
2.503	2.502	0.001	2033885	0.50000	0.4450	108.66- 181.11	150.37
2.847	2.845	0.002	3919803	0.50000	0.4795	204.76- 341.27	289.80
2.949	2.947	0.002	2025468	0.50000	0.4612	105.80- 176.33	149.75
3.304	3.302	0.002	1653002	0.50000	0.4680	84.71- 141.19	122.21
Average of Peak Amounts =					0.45524		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.334	0.003	2302067	0.50000	0.4685	80.00- 120.00	100.00
4.547	4.544	0.003	2625242	0.50000	0.4629	86.39- 143.99	114.04
4.942	4.940	0.002	2576138	0.50000	0.4708	84.23- 140.38	111.91
5.363	5.361	0.002	1739646	0.50000	0.4638	57.12- 95.19	75.57
5.997	5.995	0.002	2473651	0.50000	0.4558	80.88- 134.81	107.45
Average of Peak Amounts =					0.46436		
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.132	0.003	2053265	0.02500	0.02172		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\002F0201.D
Date : 15-MAR-2005 08:50
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
\\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\002F0201.D
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-DCB

Data File: 007F0701.D
Report Date: 15-Mar-2005 10:00

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a2hp5.i Injection Date: 15-MAR-2005 09:51
Lab File ID: 007F0701.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m

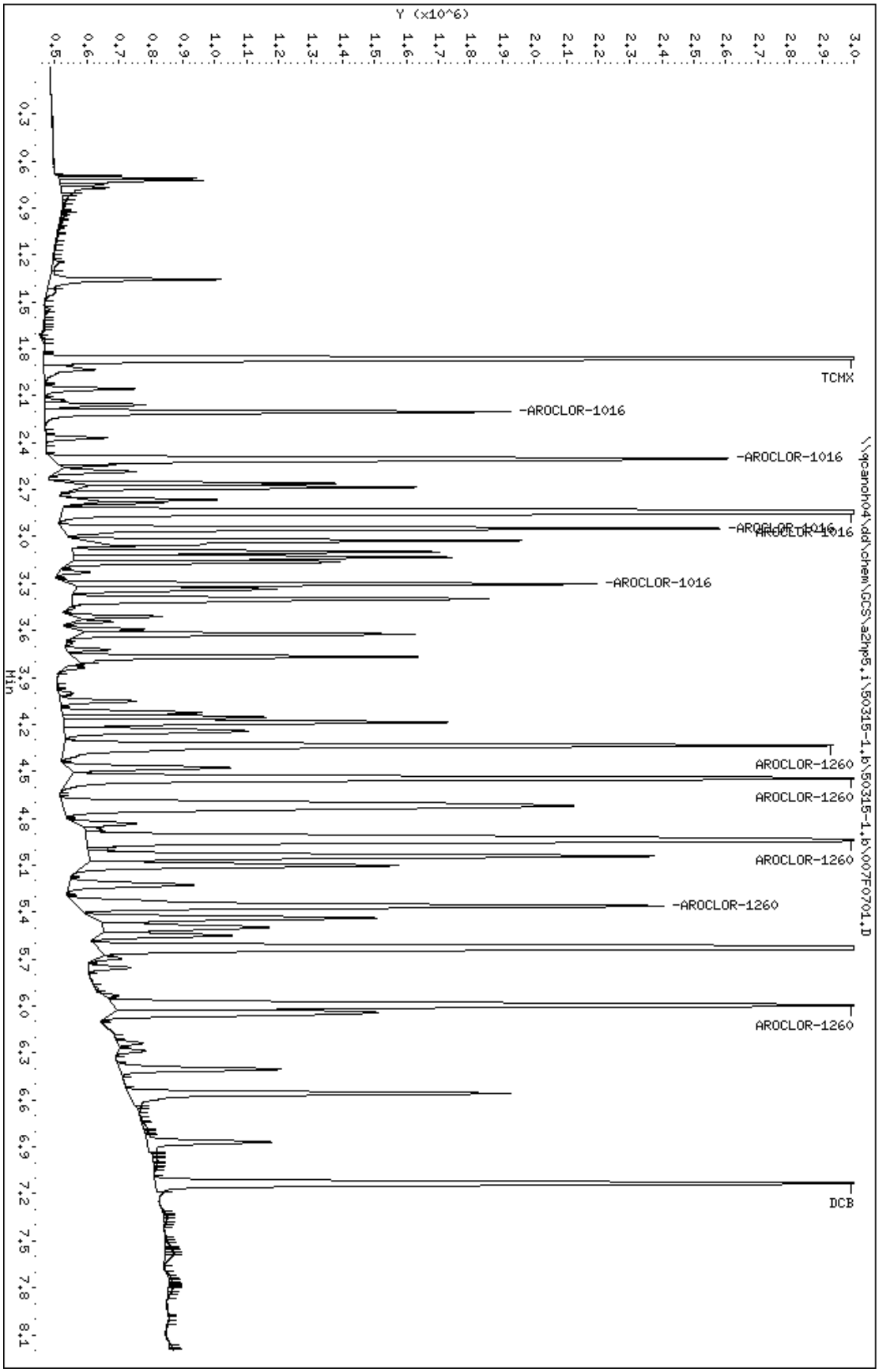
COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	226052478	209079200	0.010	7.50856	15.00000	Averaged
3 AROCLOR-1016(1)	3201583	2919110	0.010	8.82290	15.00000	Averaged
(2)	4570061	4229348	0.010	7.45533	15.00000	Averaged
(3)	8174426	7969694	0.010	2.50455	15.00000	Averaged
(4)	4391858	4117818	0.010	6.23972	15.00000	Averaged
(5)	3531838	3297078	0.010	6.64695	15.00000	Averaged
8 AROCLOR-1260(1)	4913549	4815834	0.010	1.98868	15.00000	Averaged
(2)	5670896	5547332	0.010	2.17892	15.00000	Averaged
(3)	5472078	5408528	0.010	1.16135	15.00000	Averaged
(4)	3750604	3667438	0.010	2.21741	15.00000	Averaged
(5)	5426919	5193708	0.010	4.29731	15.00000	Averaged
$ 9 DCB	94511092	90488600	0.010	4.25611	15.00000	Averaged

Data File: 007F0701.D
Report Date: 15-Mar-2005 10:00

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\007F0701.D
Lab Smp Id: 1660
Inj Date : 15-MAR-2005 09:51
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50315-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 10:00 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	5226980	0.02500	0.02312		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.202	2.202	0.000	1459555	0.50000	0.4559	80.00- 120.00	100.00
2.502	2.502	0.000	2114674	0.50000	0.4627	108.66- 181.11	144.88
2.845	2.845	0.000	3984847	0.50000	0.4875	204.76- 341.27	273.02
2.947	2.947	0.000	2058909	0.50000	0.4688	105.80- 176.33	141.06
3.302	3.302	0.000	1648539	0.50000	0.4668	84.71- 141.19	112.95
Average of Peak Amounts =					0.46834		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.334	4.334	0.000	2407917	0.50000	0.4900	80.00- 120.00	100.00
4.544	4.544	0.000	2773666	0.50000	0.4891	86.39- 143.99	115.19
4.940	4.940	0.000	2704264	0.50000	0.4942	84.23- 140.38	112.31
5.361	5.361	0.000	1833719	0.50000	0.4889	57.12- 95.19	76.15
5.995	5.995	0.000	2596854	0.50000	0.4785	80.88- 134.81	107.85
Average of Peak Amounts =					0.48814		
$ 9 DCB					CAS #: 2051-24-3		
7.132	7.132	0.000	2262215	0.02500	0.02394		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\007F0701.D
Date : 15-MAR-2005 09:51
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
\\qcanoh04\dd\chem\GCS\a2hp5.i\50315-1.b\50315-1.b\007F0701.D
AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
DCB

SEMIVOLATILE ANALYTICAL SEQUENCE

Lab Name: STL - NORTH CANTON Contract:

Lab Code: QESOH Case No.: SAS No.: SDG No.: 5C02144

GC Column: RESTEK PEST CLPI ID: 0.53 (mm) Init. Calib. Date(s): 03/08/05 03/08/05

Instrument ID: A2HP5

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 1.68 S2 : 6.29

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		1660	03/21/05	1003	1.68	6.29
02	S-030205-JH-	G5F9Q1AA	03/21/05	1015	1.67	6.29
03	S-030205-JH-	G5F9R1AA	03/21/05	1027	1.67	6.29
04		1660	03/21/05	1242	1.68	6.29
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
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21						
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24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

S1 = TCMX (+/- 0.10 MINUTES)
S2 = DCB (+/- 0.10 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

Calibration History

Method : \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m\HP5PCBr.m
Start Cal Date: 08-MAR-2005 14:30
End Cal Date : 08-MAR-2005 21:28
Last Cal Level: 3
Last Cal Type : Continuing Calibration

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.10000		
08-MAR-2005 20:02	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\022F0901.D
08-MAR-2005 19:01	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\017F0401.D
08-MAR-2005 17:46	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\012F0401.D
08-MAR-2005 15:32	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\007F0701.D
08-MAR-2005 14:30	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\002F0201.D

Cal Level: 2 , Cal Amount: 0.20000		
08-MAR-2005 20:14	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\023F1001.D
08-MAR-2005 19:13	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\018F0501.D
08-MAR-2005 17:58	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\013F0501.D
08-MAR-2005 15:44	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\008F0801.D
08-MAR-2005 14:42	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\003F0301.D

Cal Level: 3 , Cal Amount: 0.50000		
08-MAR-2005 21:28	14-AR1268	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\029F1601.D
08-MAR-2005 21:15	13-AR1262	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\028F1501.D
08-MAR-2005 20:27	12-AR1660td	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\024F1101.D
08-MAR-2005 19:25	9-AR2154	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\019F0601.D
08-MAR-2005 18:24	3-AR1248	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\014F0101.D
08-MAR-2005 17:10	2-AR1242	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\009F0101.D
08-MAR-2005 14:55	1-AR1232	\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\004F0401.D

```
+------------------+-----------------+----------------------------------------+
| Cal Level: 4 , Cal Amount: 1.00000                                        |
+==========================================================================+
|08-MAR-2005 20:39 |12-AR1660td      |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\025F1201.D           |
|08-MAR-2005 19:38 |9-AR2154         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\020F0701.D           |
|08-MAR-2005 18:36 |3-AR1248         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\015F0201.D           |
|08-MAR-2005 17:22 |2-AR1242         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\010F0201.D           |
|08-MAR-2005 15:07 |1-AR1232         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\005F0501.D           |
+------------------+-----------------+----------------------------------------+

+------------------+-----------------+----------------------------------------+
| Cal Level: 5 , Cal Amount: 2.00000                                        |
+==========================================================================+
|08-MAR-2005 20:51 |12-AR1660td      |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\026F1301.D           |
|08-MAR-2005 19:50 |9-AR2154         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\021F0801.D           |
|08-MAR-2005 18:49 |3-AR1248         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\016F0301.D           |
|08-MAR-2005 17:34 |2-AR1242         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\011F0301.D           |
|08-MAR-2005 15:19 |1-AR1232         |                                        |
|\\qcanoh04\dd\chem\GCS\a2hp5.i\50308IC-1.b\50308IC-1.b\006F0601.D           |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 3
+------------------+-----------------+----------------------------------------+
|21-MAR-2005 14:56 |12-AR1660TD      |                                        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\50321-1.b\026F2601.D               |
|21-MAR-2005 12:42 |12-AR1660TD      |                                        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\50321-1.b\015F1501.D               |
|21-MAR-2005 10:03 |12-AR1660TD      |                                        |
|\\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\50321-1.b\002F0201.D               |
+------------------+-----------------+----------------------------------------+
```

Data File: \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\002F0201.D
Report Date: 21-Mar-2005 10:12

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

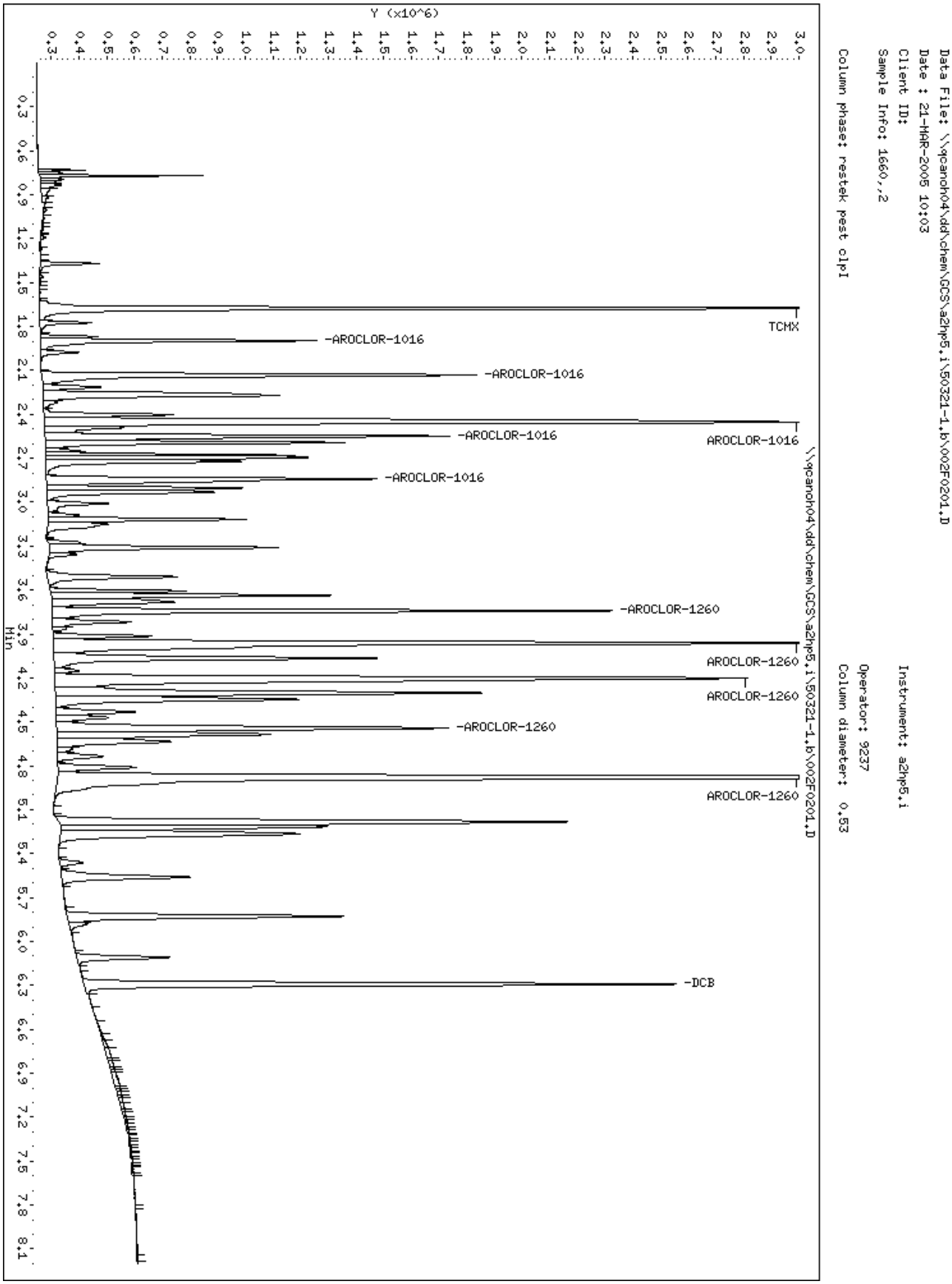
Instrument ID: a2hp5.i Injection Date: 21-MAR-2005 10:03
Lab File ID: 002F0201.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	141910974	139350040	0.010	1.80461	15.00000	Averaged
3 AROCLOR-1016(1)	2671982	2664886	0.010	0.26556	15.00000	Averaged
(2)	5009168	5084968	0.010	-1.51322	15.00000	Averaged
(3)	10575764	10675136	0.010	-0.93962	15.00000	Averaged
(4)	4427937	4419624	0.010	0.18773	15.00000	Averaged
(5)	4316873	4324888	0.010	-0.18566	15.00000	Averaged
8 AROCLOR-1260(1)	4434754	4047046	0.010	8.74249	15.00000	Averaged
(2)	6316810	5828896	0.010	7.72406	15.00000	Averaged
(3)	5436379	5006182	0.010	7.91330	15.00000	Averaged
(4)	2987302	2828918	0.010	5.30191	15.00000	Averaged
(5)	7723951	7166690	0.010	7.21472	15.00000	Averaged
$ 9 DCB	91118722	85523560	0.010	6.14052	15.00000	Averaged

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\002F0201.D
Lab Smp Id: 1660
Inj Date : 21-MAR-2005 10:03
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m
Meth Date : 21-Mar-2005 10:12 Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.675	1.675	0.000	3483751	0.02500	0.02455		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.897	1.897	0.000	1332443	0.50000	0.4987	80.00- 120.00	100.00
2.131	2.131	0.000	2542484	0.50000	0.5076	143.11- 238.52	190.81
2.453	2.453	0.000	5337568	0.50000	0.5047	300.44- 500.73	400.59
2.548	2.548	0.000	2209812	0.50000	0.4991	124.38- 207.31	165.85
2.841	2.841	0.000	2162444	0.50000	0.5009	121.72- 202.86	162.29
Average of Peak Amounts =					0.50220		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.742	3.742	0.000	2023523	0.50000	0.4563	80.00- 120.00	100.00
3.962	3.962	0.000	2914448	0.50000	0.4614	108.02- 180.04	144.03
4.201	4.201	0.000	2503091	0.50000	0.4604	92.77- 154.62	123.70
4.543	4.543	0.000	1414459	0.50000	0.4735	52.43- 87.38	69.90
4.878	4.878	0.000	3583345	0.50000	0.4639	132.81- 221.36	177.08
Average of Peak Amounts =					0.46310		
$ 9 DCB					CAS #: 2051-24-3		
6.291	6.291	0.000	2138089	0.02500	0.02346		


Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\002F0201.D
Date : 21-MAR-2005 10:03
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\002F0201.D

Data File: \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\015F1501.D
Report Date: 21-Mar-2005 12:51

STL North Canton

CONTINUING CALIBRATION COMPOUNDS

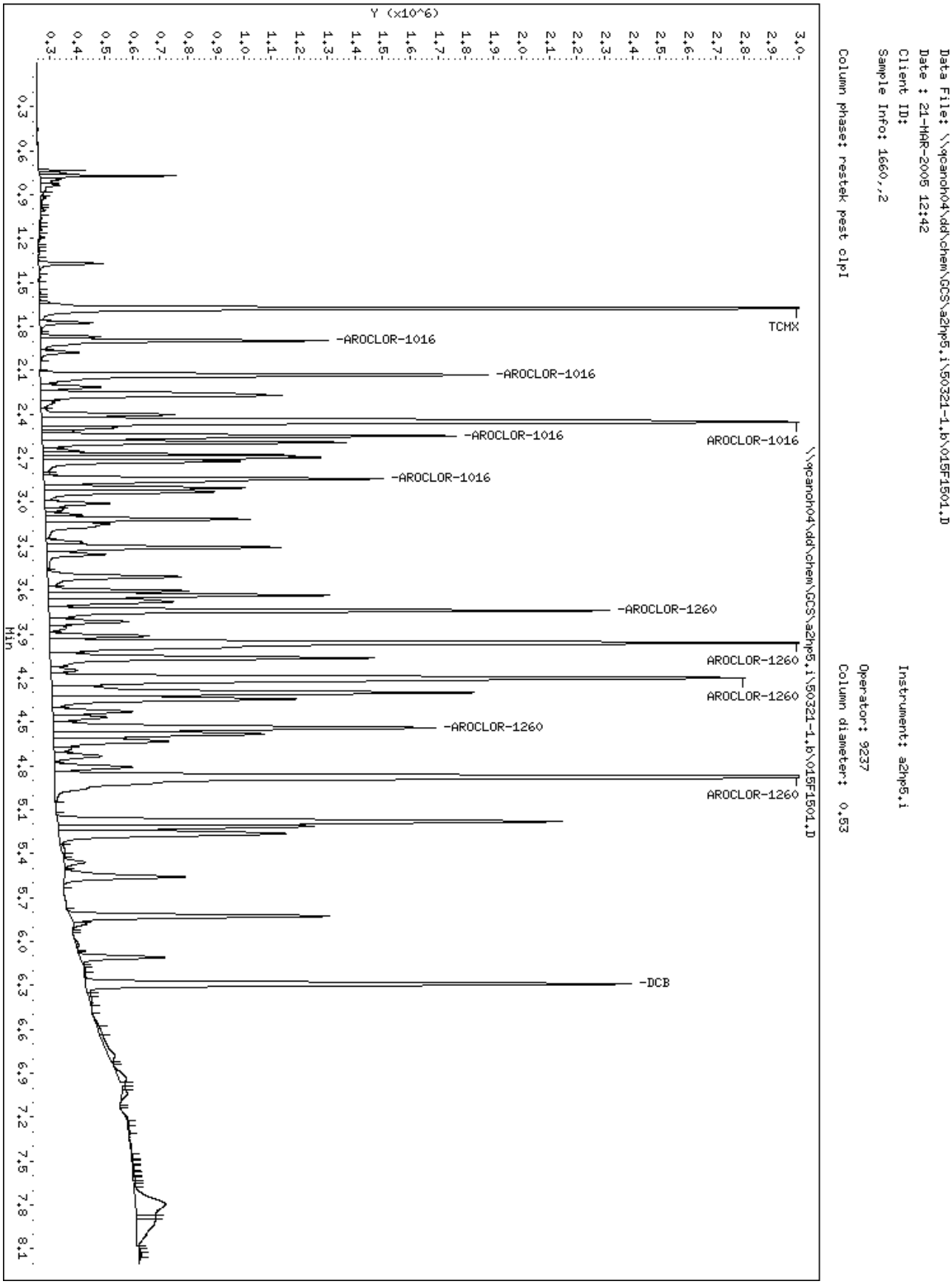
Instrument ID: a2hp5.i Injection Date: 21-MAR-2005 12:42
Lab File ID: 015F1501.D Init. Cal. Date(s): 08-MAR-2005 08-MAR-2005
Analysis Type: Init. Cal. Times: 14:30 21:28
Lab Sample ID: 1660 Quant Type: ESTD
Method: \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m

COMPOUND	RRF / AMOUNT	RF0.500	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 TCMX	141910974	145431680	0.010	-2.48093	15.00000	Averaged
3 AROCLOR-1016(1)	2671982	2697188	0.010	-0.94336	15.00000	Averaged
(2)	5009168	5127672	0.010	-2.36574	15.00000	Averaged
(3)	10575764	10618950	0.010	-0.40835	15.00000	Averaged
(4)	4427937	4440082	0.010	-0.27429	15.00000	Averaged
(5)	4316873	4375512	0.010	-1.35836	15.00000	Averaged
8 AROCLOR-1260(1)	4434754	4040762	0.010	8.88419	15.00000	Averaged
(2)	6316810	5824566	0.010	7.79261	15.00000	Averaged
(3)	5436379	4992276	0.010	8.16910	15.00000	Averaged
(4)	2987302	2756368	0.010	7.73053	15.00000	Averaged
(5)	7723951	7023068	0.010	9.07415	15.00000	Averaged
$ 9 DCB	91118722	78491800	0.010	13.85766	15.00000	Averaged

STL North Canton

Data file : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\015F1501.D
Lab Smp Id: 1660
Inj Date : 21-MAR-2005 12:42
Operator : 9237 Inst ID: a2hp5.i
Smp Info : 1660,,2
Misc Info : 12-AR1660TD.SUB
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50321-1.b\HP5PCBF.m
Meth Date : 21-Mar-2005 12:51 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 15 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: None
Processing Host: QCANOH04

RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng)	AMOUNTS ON-COL (ng)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.675	1.675	0.000	3635792	0.02500	0.02562		
3 AROCLOR-1016					CAS #: 12674-11-2		
1.897	1.897	0.000	1348594	0.50000	0.5047	80.00- 120.00	100.00
2.131	2.131	0.000	2563836	0.50000	0.5118	142.58- 237.64	190.11
2.452	2.452	0.000	5309475	0.50000	0.5020	295.28- 492.13	393.70
2.547	2.547	0.000	2220041	0.50000	0.5014	123.46- 205.77	164.62
2.840	2.840	0.000	2187756	0.50000	0.5068	121.67- 202.78	162.22
Average of Peak Amounts =					0.50534		
8 AROCLOR-1260					CAS #: 11096-82-5		
3.740	3.740	0.000	2020381	0.50000	0.4556	80.00- 120.00	100.00
3.960	3.960	0.000	2912283	0.50000	0.4610	108.11- 180.18	144.15
4.199	4.199	0.000	2496138	0.50000	0.4592	92.66- 154.43	123.55
4.540	4.540	0.000	1378184	0.50000	0.4613	51.16- 85.27	68.21
4.875	4.875	0.000	3511534	0.50000	0.4546	130.35- 217.26	173.81
Average of Peak Amounts =					0.45834		
$ 9 DCB					CAS #: 2051-24-3		
6.289	6.289	0.000	1962295	0.02500	0.02154		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Date : 21-MAR-2005 12:42
Client ID:
Sample Info: 1660,2
Column phase: restek pest clpI
Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.53
Y (x10^6)
Min
TCMX
-AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1016
AROCLOR-1016
-AROCLOR-1016
-AROCLOR-1260
AROCLOR-1260
AROCLOR-1260
-AROCLOR-1260
AROCLOR-1260
-DCB
\\qcanoh04\dd\chem\GCS\a2hp5.i\50321-1.b\015F1501.D

RAW QC DATA

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D6R1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C020000-334
Prep Date.....: 03/03/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5061334
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**86**	**(41 - 130)**	**SW846 8082**
Aroclor 1260	**93**	**(42 - 130)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
Decachlorobiphenyl	92	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D6R1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C020000-334
Prep Date.....: 03/03/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5061334
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**290**	**ug/kg**	**86**	**SW846 8082**
Aroclor 1260	**330**	**310**	**ug/kg**	**93**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
Decachlorobiphenyl	92	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: 041F4101.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\041F4101.D
Lab Smp Id: G5D6R1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 12-MAR-2005 00:54
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5D6R1AC
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 41 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4014957	0.01776	5.920		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.201	0.002	2659026	0.83053	276.8	80.00- 120.00	100.00
2.503	2.500	0.003	3746979	0.81990	273.3	107.51- 179.18	140.92
2.847	2.845	0.002	7581903	0.92751	309.2	192.23- 320.39	285.14
2.949	2.947	0.002	3785743	0.86199	287.3	101.51- 169.19	142.37
3.304	3.302	0.002	3106529	0.87958	293.2	79.65- 132.74	116.83
		Average of Peak Concentrations =			288.0		

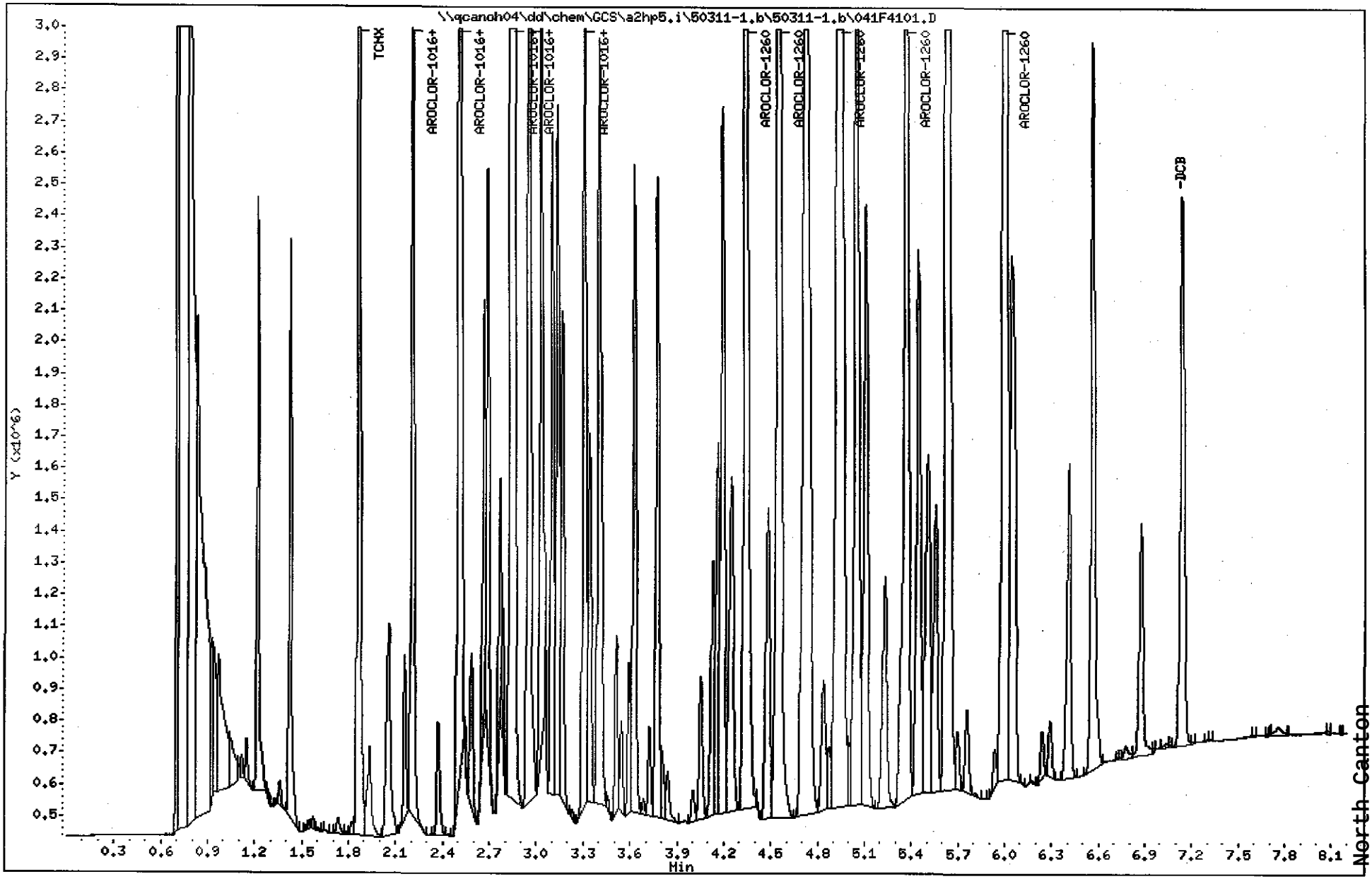
Data File: 041F4101.D
Report Date: 14-Mar-2005 15:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.203	2.206	-0.003	2659026	1.00106	333.7	75.00- 125.00	100.00
2.503	2.505	-0.002	3746979	1.03263	344.2	101.31- 168.85	140.92
2.847	2.850	-0.003	7581903	1.17147	390.5	185.46- 309.11	285.14
2.949	2.952	-0.003	3785743	1.10316	367.7	95.29- 158.82	142.37
3.304	3.307	-0.003	3106529	1.12405	374.7	76.10- 126.84	116.83
Average of Peak Concentrations =					362.2		
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
4.338	4.335	0.003	4477359	0.91123	303.7	80.00- 120.00	100.00
4.548	4.545	0.003	5205399	0.91791	306.0	87.22- 145.36	116.26
4.944	4.942	0.002	5162575	0.94344	314.5	86.81- 144.68	115.30
5.365	5.364	0.001	3493527	0.93146	310.5	57.97- 96.61	78.03
5.999	5.997	0.002	5157841	0.95042	316.8	85.17- 141.95	115.20
Average of Peak Concentrations =					310.3		
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	1742640	0.01844	6.146		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\041F4101.D
Date : 12-MAR-2005 00:54
Client ID: INTRA-LAB CHECK
Sample Info: G5D6R1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



820

STL North Canton

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D5F1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A5C020000-335 G5D5F1AD-LCSD
Prep Date.....: 03/02/05 **Analysis Date..:** 03/14/05
Prep Batch #...: 5061335
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**90**	**(41 - 130)**			**SW846 8082**
	96	**(41 - 130)**	**6.9**	**(0-30)**	**SW846 8082**
Aroclor 1260	**98**	**(42 - 130)**			**SW846 8082**
	96	**(42 - 130)**	**1.6**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 172)
	95	(10 - 172)
Decachlorobipheny1	96	(40 - 138)
	89	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D5F1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: A5C020000-335 G5D5F1AD-LCSD
Prep Date.....: 03/02/05 **Analysis Date..:** 03/14/05
Prep Batch #...: 5061335
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Aroclor 1016	**330**	**300**	**ug/kg**	**90**		**SW846 8082**
	330	**320**	**ug/kg**	**96**	**6.9**	**SW846 8082**
Aroclor 1260	**330**	**330**	**ug/kg**	**98**		**SW846 8082**
	330	**320**	**ug/kg**	**96**	**1.6**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	87	(10 - 172)
	95	(10 - 172)
Decachlorobiphenyl	96	(40 - 138)
	89	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: 039F3501.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\039F3501.D
Lab Smp Id: G5D5F1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 14-MAR-2005 23:20
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5D5F1AC
Misc Info : 12-AR1660TD.SUB,SLCS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 39 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

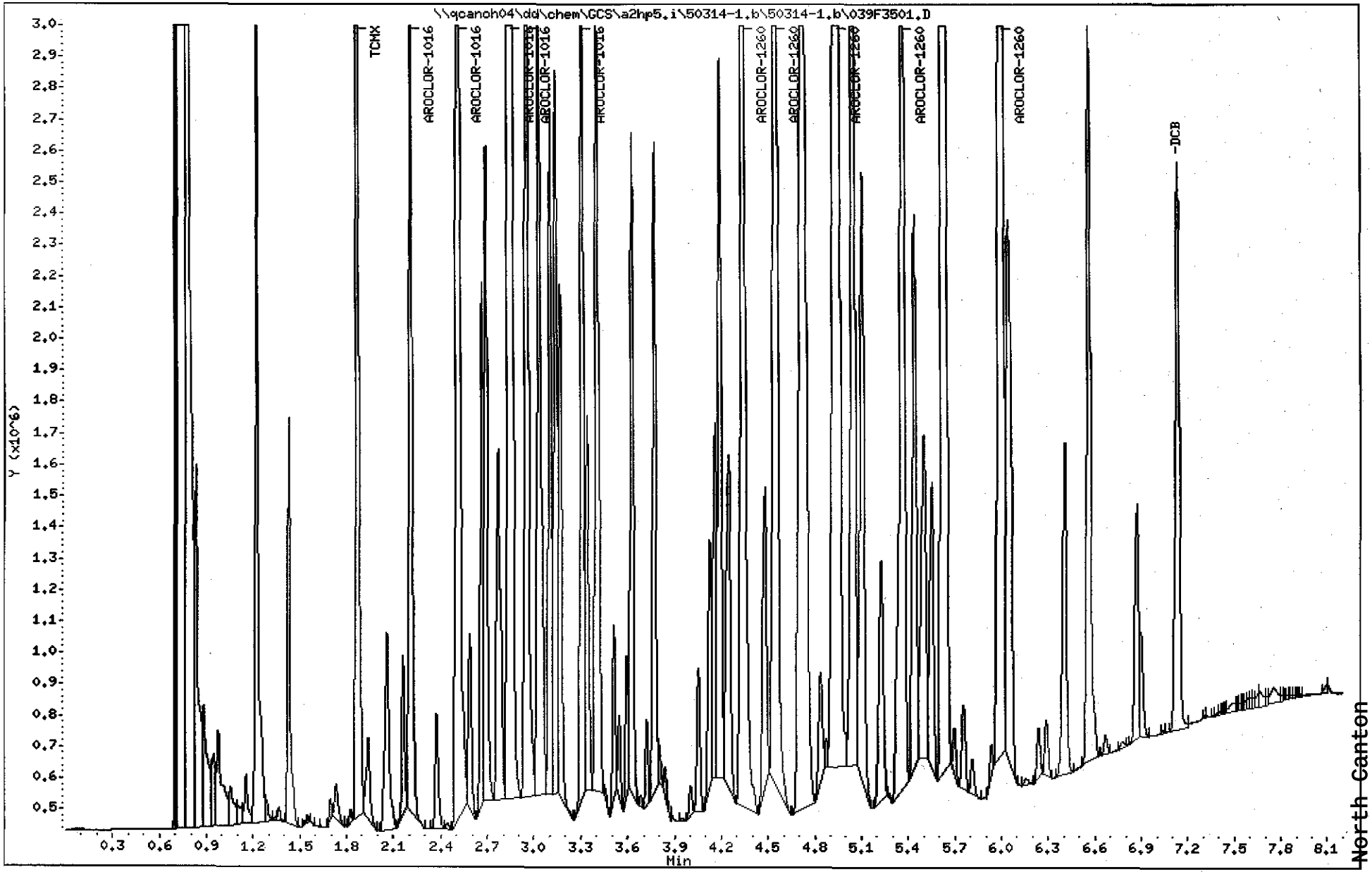
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.862	0.000	3936345	0.01741	5.804		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.204	-0.001	2714835	0.84797	282.6	80.00- 120.00	100.00
2.503	2.504	-0.001	3963978	0.86738	289.1	114.82- 191.37	146.01
2.848	2.848	0.000	8000355	0.97871	326.2	217.02- 361.70	294.69
2.949	2.950	-0.001	3942565	0.89770	299.2	110.78- 184.64	145.22
3.303	3.304	-0.001	3182156	0.90099	300.3	90.00- 149.99	117.21
		Average of Peak Concentrations =			299.5		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.336	4.337	-0.001	4740912	0.96487	321.6	80.00- 120.00	100.00
4.546	4.547	-0.001	5392143	0.95084	316.9	84.97- 141.61	113.74
4.942	4.942	0.000	5421767	0.99081	330.3	83.94- 139.89	114.36
5.363	5.364	-0.001	3668452	0.97810	326.0	56.35- 93.92	77.38
5.997	5.997	0.000	5403796	0.99574	331.9	80.90- 134.84	113.98
		Average of Peak Concentrations =			325.4		
$ 9 DCB					CAS #: 2051-24-3		
7.134	7.135	-0.001	1811147	0.01916	6.388		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\039F3501.D
Date : 14-MAR-2005 23:20
Client ID: INTRA-LAB CHECK
Sample Info: G5D5F1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Data File: 040F3601.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\040F3601.D
Lab Smp Id: G5D5F1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 14-MAR-2005 23:32
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5D5F1AD
Misc Info : 12-AR1660TD.SUB,SLCS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 40 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

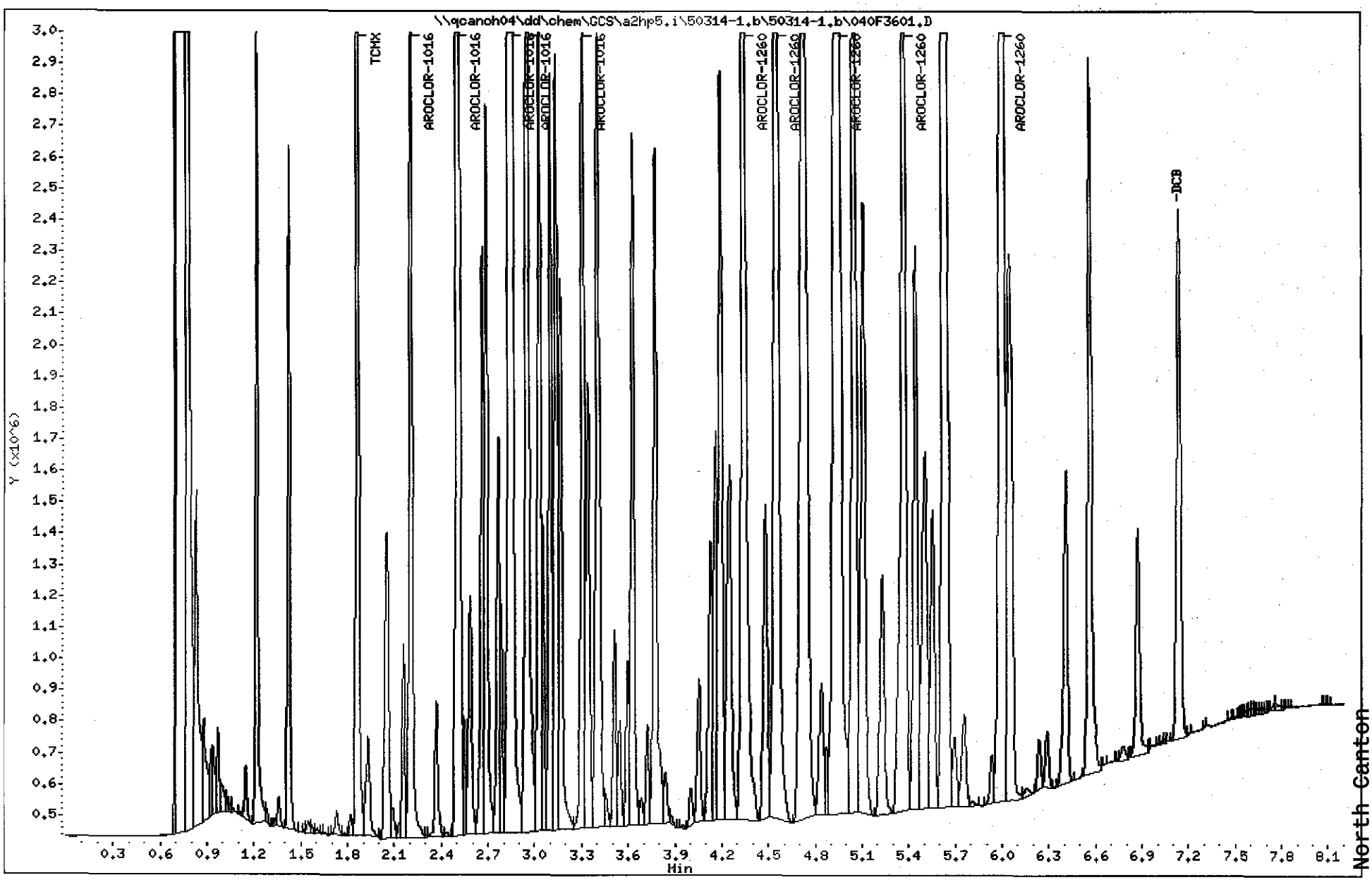
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	4275640	0.01891	6.305		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.204	-0.001	3005315	0.93870	312.9	80.00- 120.00	100.00
2.502	2.504	-0.002	4410753	0.96514	321.7	114.82- 191.37	146.77
2.846	2.848	-0.002	8182951	1.00104	333.7	217.02- 361.70	272.28
2.948	2.950	-0.002	4204483	0.95734	319.1	110.78- 184.64	139.90
3.303	3.304	-0.001	3364631	0.95266	317.6	90.00- 149.99	111.96
		Average of Peak Concentrations =			321.0		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.337	4.337	0.000	4639768	0.94428	314.8	80.00- 120.00	100.00
4.547	4.547	0.000	5316563	0.93752	312.5	84.97- 141.61	114.59
4.943	4.942	0.001	5347154	0.97717	325.7	83.94- 139.89	115.25
5.363	5.364	-0.001	3584196	0.95563	318.5	56.35- 93.92	77.25
5.998	5.997	0.001	5356838	0.98709	329.0	80.90- 134.84	115.45
		Average of Peak Concentrations =			320.1		
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	1687025	0.01785	5.950		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\040F3601.D
Date : 14-MAR-2005 23:32
Client ID: INTRA-LAB CHECK
Sample Info: G5D5F1AD
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



STL North Canton

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G1L1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-344
Prep Date.....: 03/03/05 **Analysis Date..:** 03/08/05
Prep Batch #...: 5062344
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**113**	**(41 - 130)**	**SW846 8082**
Aroclor 1260	**102**	**(42 - 130)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	171	(10 - 172)
Decachlorobiphenyl	105	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G1L1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-344
Prep Date.....: 03/03/05 **Analysis Date..:** 03/08/05
Prep Batch #...: 5062344
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**380**	**ug/kg**	**113**	**SW846 8082**
Aroclor 1260	**330**	**340**	**ug/kg**	**102**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	171	(10 - 172)
Decachlorobiphenyl	105	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\033F2201.D
Report Date: 09-Mar-2005 07:45

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\033F2201.D
Lab Smp Id: G5G1L1AC
Client Smp ID: INTRA-LAB CHECK
Inj Date : 08-MAR-2005 23:54
Operator : 9237
Inst ID: a2hp2.i
Smp Info : G5G1L1AC
Misc Info : 12-AR1660TD.SUB,SLCS.SPK
Comment :
Method : \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m
Meth Date : 09-Mar-2005 07:43 molm
Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38
Cal File: 022F2201.D
Als bottle: 33
QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon
Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14
Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.656	1.656	0.000	3751206	0.03428	11.43			(R)
3 AROCLOR-1016					CAS #: 12674-11-2			
1.942	1.942	0.000	3623070	1.53457	511.5	80.00- 120.00	100.00	
2.250	2.251	-0.001	7434380	1.00749	335.8	177.82- 296.37	205.20	
2.690	2.690	0.000	16705759	0.99905	333.0	377.61- 629.35	461.09	
2.820	2.820	0.000	6950615	1.05752	352.5	151.33- 252.22	191.84	
2.882	2.882	0.000	4595407	1.04177	347.2	97.72- 162.86	126.84	
Average of Peak Concentrations =					376.0			
8 AROCLOR-1260					CAS #: 11096-82-5			
4.588	4.587	0.001	9667061	1.04492	348.3	80.00- 120.00	100.00	
4.925	4.925	0.000	17621222	1.04666	349.9	136.50- 227.51	182.28	
5.244	5.244	0.000	17393167	1.04994	350.0	133.24- 222.07	179.92	
5.957	5.956	0.001	18853706	0.98560	328.5	146.72- 244.53	195.03	
6.231	6.231	0.000	8942230	0.96245	320.8	68.89- 114.82	92.50	
Average of Peak Concentrations =					339.3			
$ 9 DCB					CAS #: 2051-24-3			
7.235	7.235	0.000	3386916	0.02095	6.983			

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\033F2201.D
Report Date: 09-Mar-2005 07:45

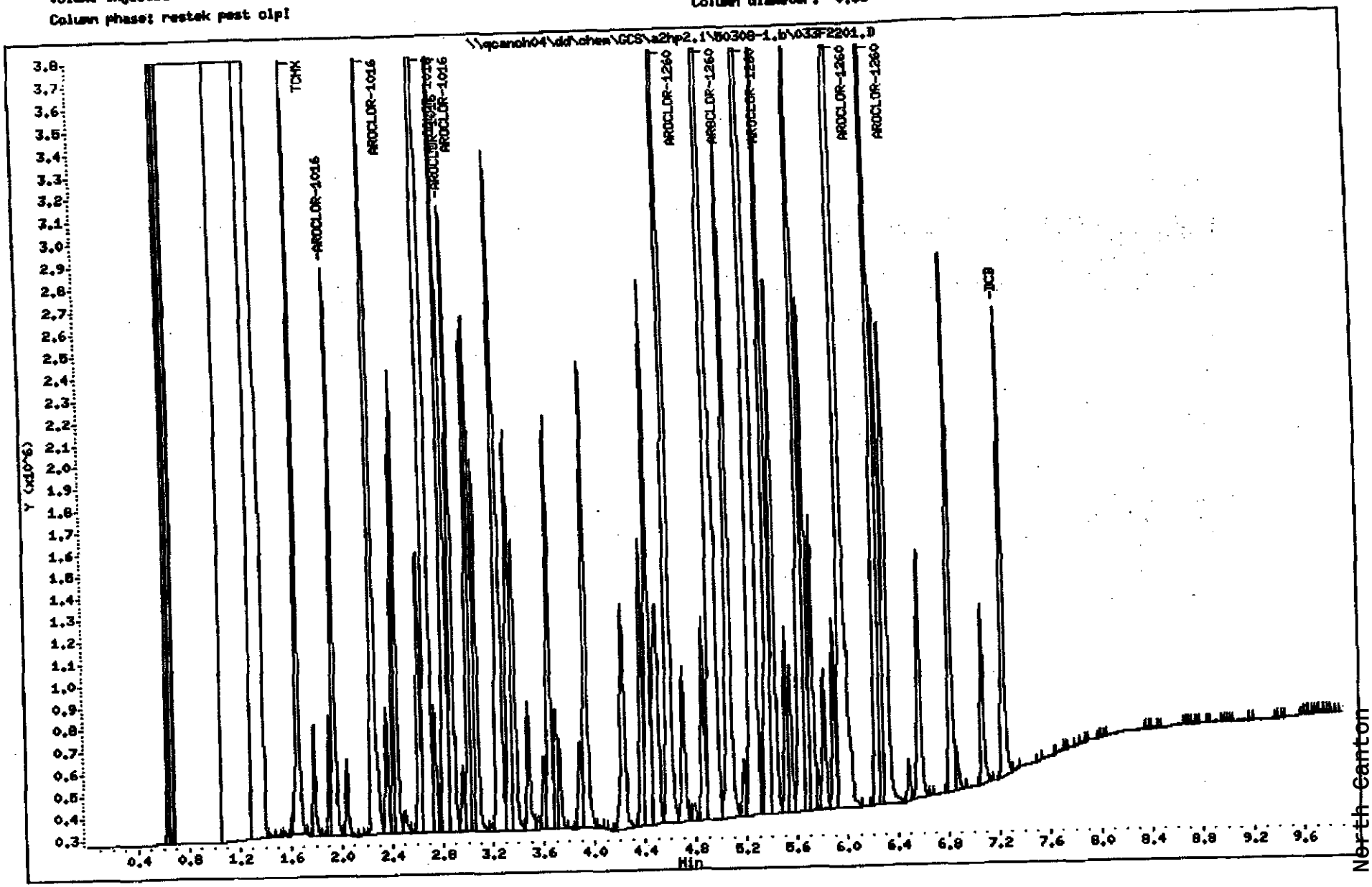
QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\033F2201.D
Date : 08-MAR-2006 23:54
Client ID: INTRA-LAB CHECK
Sample Info: G8G1L1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp2.i

Operator: 9237
Column diameter: 0.53



LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G141AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-354
Prep Date.....: 03/04/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5062354
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**97**	**(41 - 130)**	**SW846 8082**
Aroclor 1260	**104**	**(42 - 130)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 172)
Decachlorobiphenyl	103	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G141AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-354
Prep Date.....: 03/04/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5062354
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**320**	**ug/kg**	**97**	**SW846 8082**
Aroclor 1260	**330**	**350**	**ug/kg**	**104**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 172)
Decachlorobiphenyl	103	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: 083F8301.D
Report Date: 14-Mar-2005 16:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\083F8301.D
Lab Smp Id: G5G141AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 12-MAR-2005 09:27
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5G141AC
Misc Info : 12-AR1660TD.SUB,SLCS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 83 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

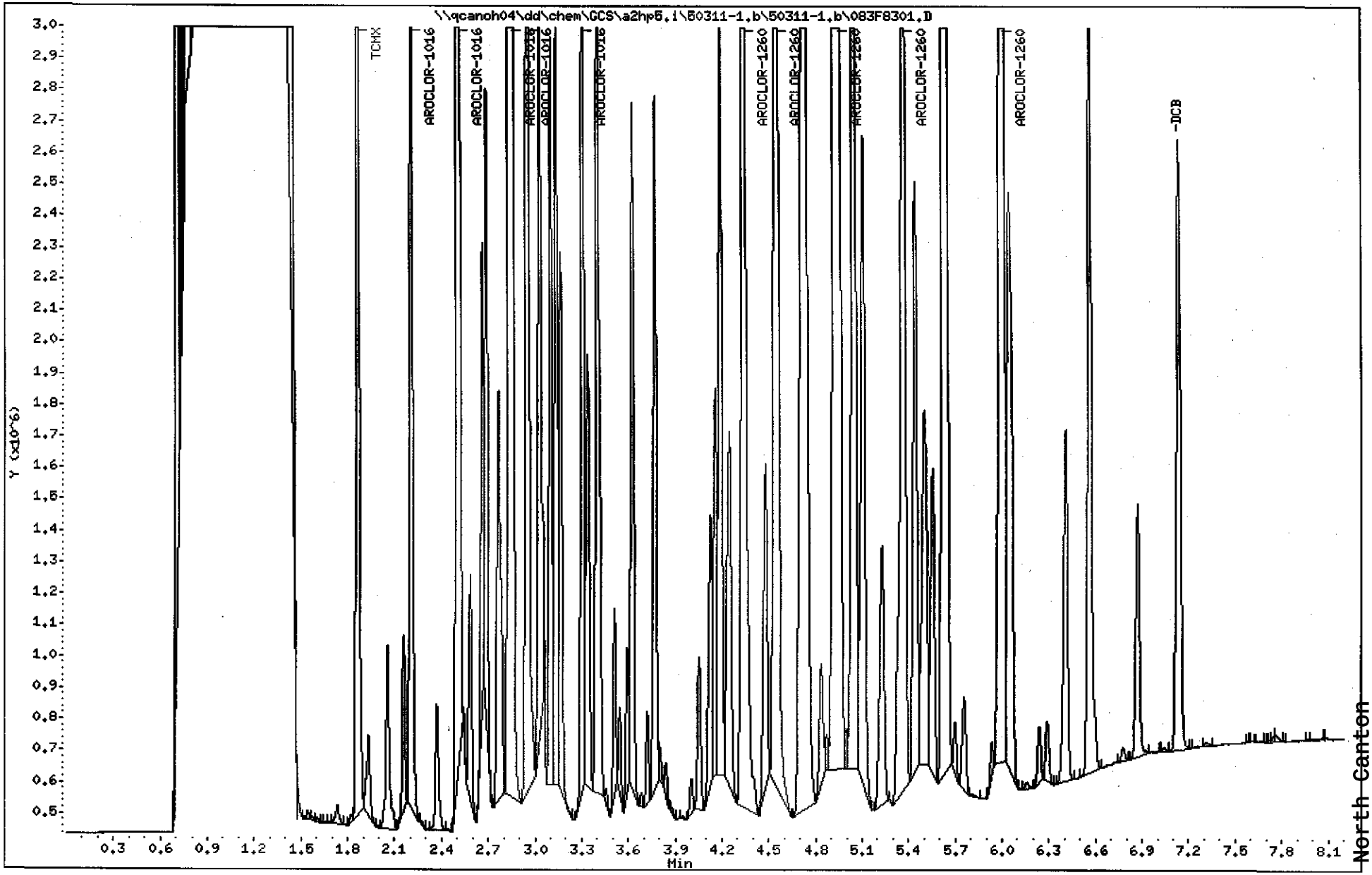
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	4251948	0.01881	6.270		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.202	2.201	0.001	2930275	0.91526	305.1	80.00- 120.00	100.00
2.502	2.500	0.002	4195714	0.91809	306.0	107.51- 179.18	143.18
2.846	2.845	0.001	8533588	1.04394	348.0	192.23- 320.39	291.22
2.948	2.947	0.001	4286398	0.97599	325.3	101.51- 169.19	146.28
3.303	3.302	0.001	3483803	0.98640	328.8	79.65- 132.74	118.89
		Average of Peak Concentrations =			322.6		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.336	4.335	0.001	5064568	1.03074	343.6	80.00- 120.00	100.00
4.546	4.545	0.001	5799258	1.02264	340.9	87.22- 145.36	114.51
4.941	4.942	-0.001	5761605	1.05291	351.0	86.81- 144.68	113.76
5.363	5.364	-0.001	3920935	1.04541	348.5	57.97- 96.61	77.42
5.997	5.997	0.000	5796088	1.06803	356.0	85.17- 141.95	114.44
		Average of Peak Concentrations =			348.0		
$ 9 DCB					CAS #: 2051-24-3		
7.136	7.135	0.001	1941701	0.02054	6.848		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\083F8301.D
Date : 12-MAR-2005 09:27
Client ID: INTRA-LAB CHECK
Sample Info: G5C141AC
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G2A1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-356
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Aroclor 1016	**91**	**(41 - 130)**	**SW846 8082**
Aroclor 1260	**81**	**(42 - 130)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 172)
Decachlorobiphenyl	75	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G2A1AC **Matrix.....:** SOLID
LCS Lot-Sample#: A5C030000-356
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 1 **Final Wgt/Vol..:** 10 mL
Initial Wgt/Vol: 30 g

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aroclor 1016	**330**	**300**	**ug/kg**	**91**	**SW846 8082**
Aroclor 1260	**330**	**270**	**ug/kg**	**81**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(10 - 172)
Decachlorobiphenyl	75	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Data File: 021F2101.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\021F2101.D
Lab Smp Id: G5G2A1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 18-MAR-2005 02:47
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5G2A1AC
Misc Info : 12-AR1660td.sub,SLCS.spk
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 21 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660td.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

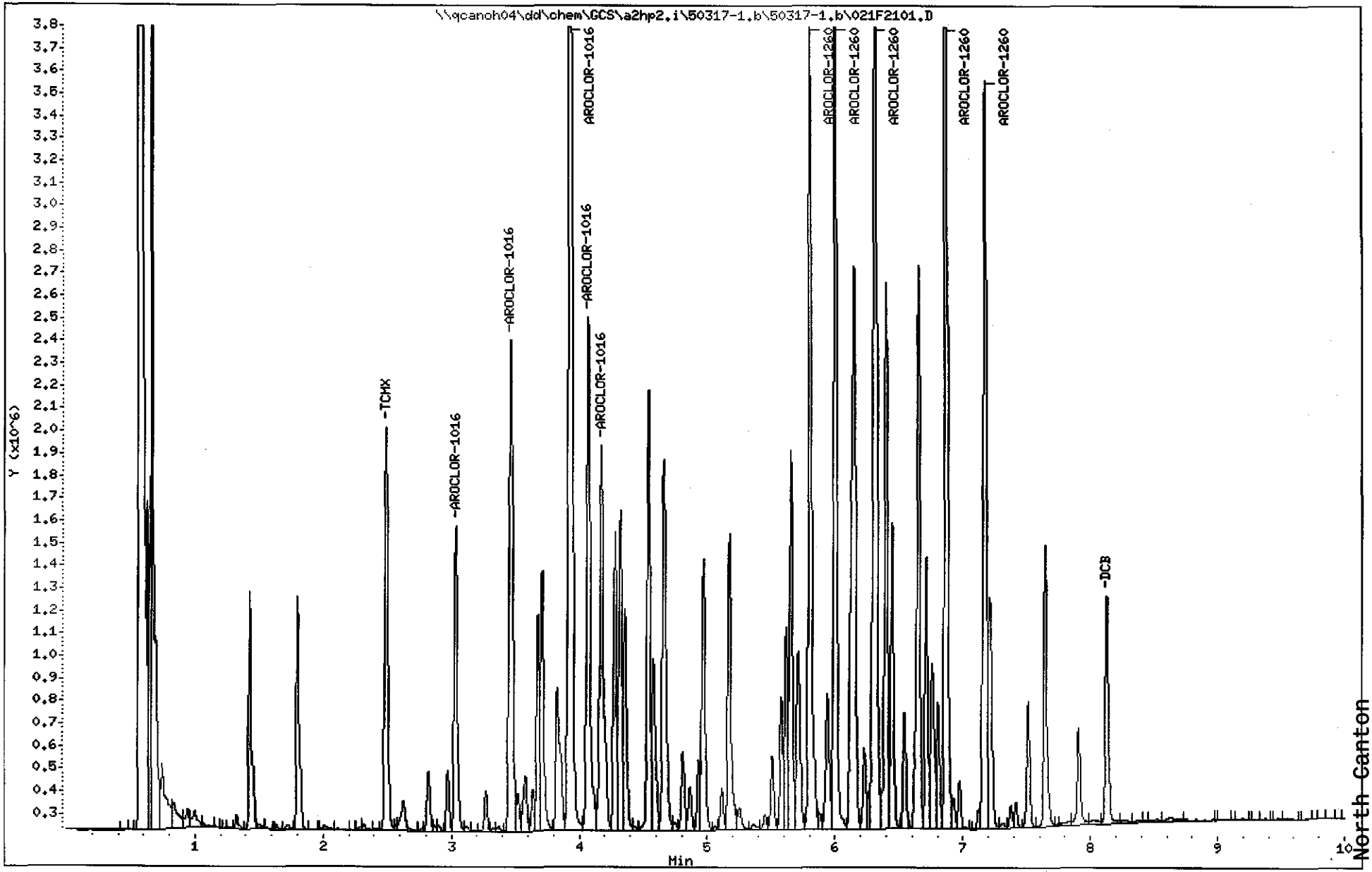
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.491	2.489	0.002	2955633	0.01834	6.112		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.034	3.031	0.003	2296276	0.87353	291.2	80.00- 120.00	100.00
3.466	3.464	0.002	4604533	0.86659	288.9	150.46- 250.77	200.52
3.935	3.934	0.001	10617834	0.92890	309.6	334.89- 558.16	462.39
4.071	4.070	0.001	4275949	0.91306	304.4	136.27- 227.12	186.21
4.174	4.173	0.001	3588231	0.96959	323.2	106.47- 177.46	156.26
Average of Peak Concentrations =					303.4		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.806	5.804	0.002	3580027	0.89109	297.0	80.00- 120.00	100.00
6.002	6.001	0.001	4065913	0.85870	286.2	87.87- 146.45	113.57
6.318	6.317	0.001	4137542	0.80131	267.1	96.24- 160.39	115.57
6.871	6.869	0.002	5467997	0.74938	249.8	135.40- 225.67	152.74
7.175	7.173	0.002	3323127	0.75172	250.6	76.53- 127.54	92.82
Average of Peak Concentrations =					270.1		
$ 9 DCB					CAS #: 2051-24-3		
8.131	8.129	0.002	1009003	0.01496	4.988		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\021F2101.D
Date : 18-MAR-2005 02:47
Client ID: INTRA-LAB CHECK
Sample Info: G5G2A1AC
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D6R1AA **Matrix.....:** SOLID
MB Lot-Sample #: A5C020000-334

Prep Date.....: 03/03/05 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 03/12/05 **Prep Batch #...:** 5061334
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	86	(10 - 172)
Decachlorobiphenyl	80	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: 040F4001.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\040F4001.D
Lab Smp Id: G5D6R1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 12-MAR-2005 00:41
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5D6R1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 40 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	3879515	0.01716	5.721		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							
5 AROCLOR-1242					CAS #: 53469-21-9		
2.204	2.206	-0.002	138223	0.05204	17.34	75.00- 125.00	100.00(M)
2.509	2.505	0.004	163808	0.04514	15.05	101.31- 168.85	118.51
2.849	2.850	-0.001	277823	0.04293	14.31	185.46- 309.11	201.00
2.956	2.952	0.004	71975	0.02097	6.991	95.29- 158.82	52.07
3.305	3.307	-0.002	39028	0.01412	4.707	76.10- 126.84	28.24
Average of Peak Concentrations =					11.68		

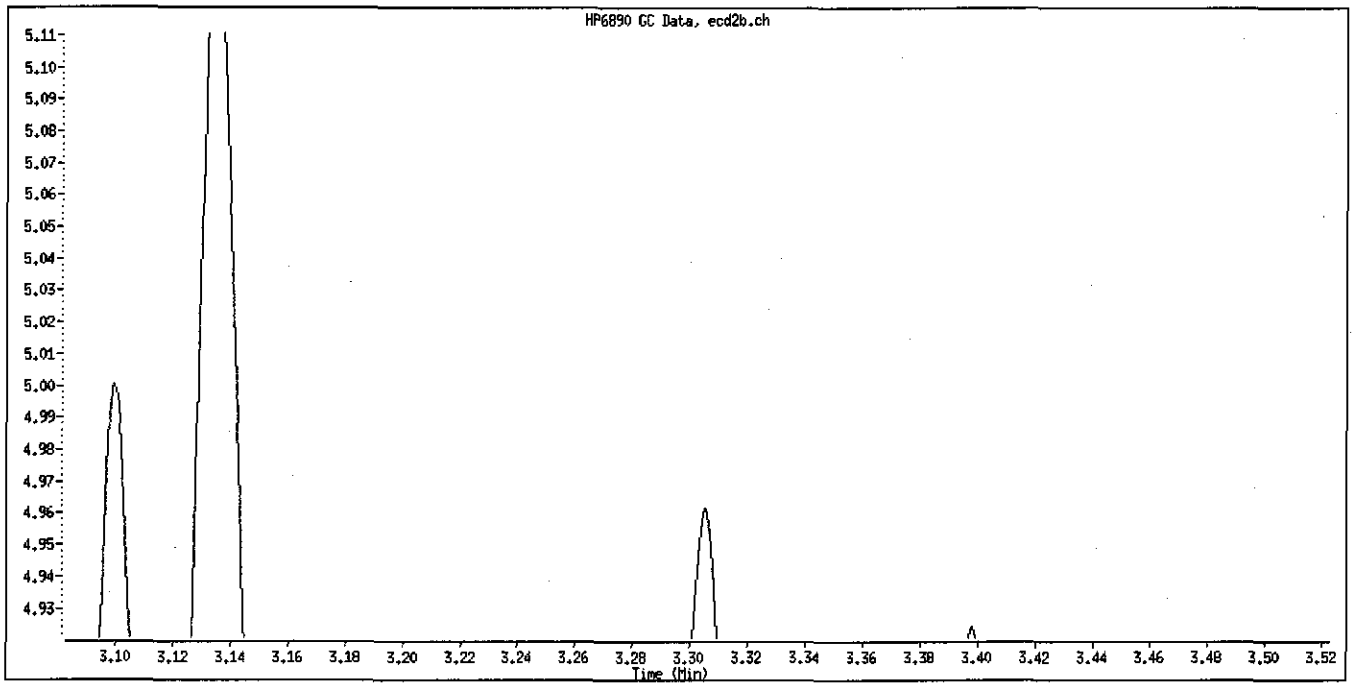
Data File: 040F4001.D
Report Date: 14-Mar-2005 15:57

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	CONCENTRATIONS FINAL (ug/kg)	TARGET RANGE	RATIO
6 AROCLOR-1248						CAS #: 12672-29-6	
Compound Not Detected							
7 AROCLOR-1254						CAS #: 11097-69-1	
Compound Not Detected							
8 AROCLOR-1260						CAS #: 11096-82-5	
Compound Not Detected							
$ 9 DCB						CAS #: 2051-24-3	
7.140	7.135	0.005	1520407	0.01609	5.362		

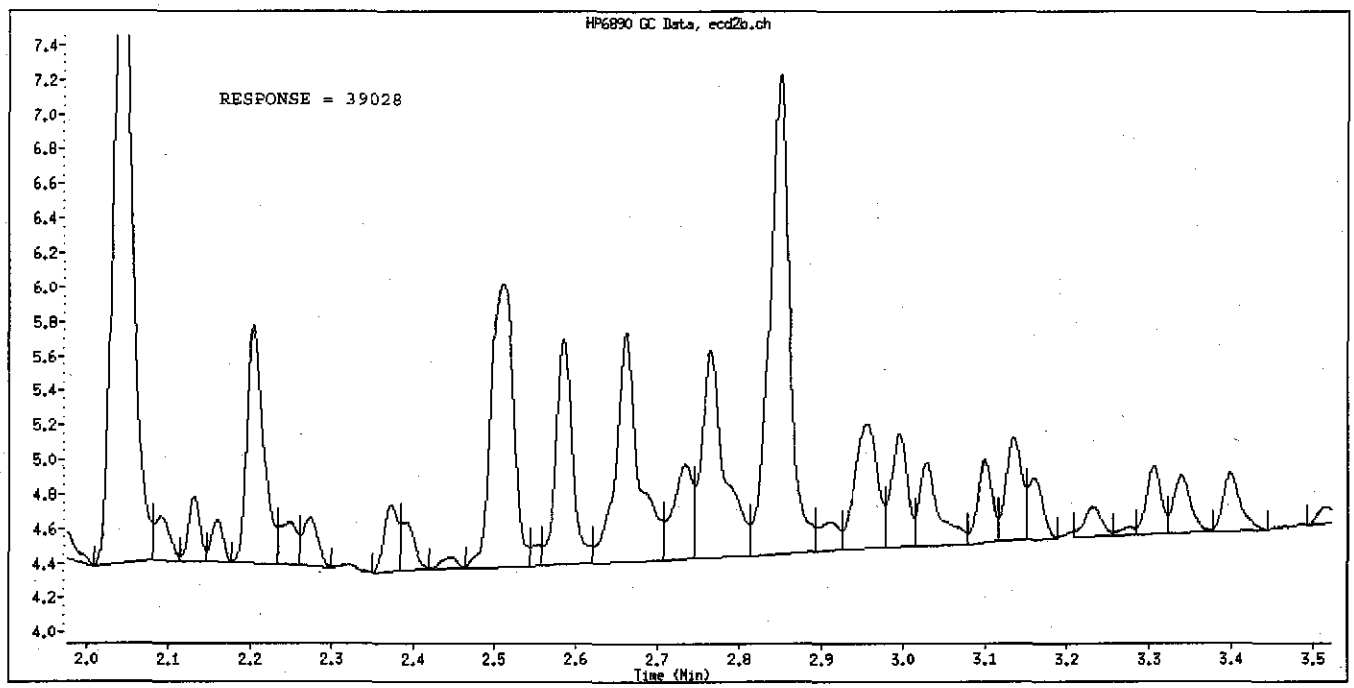
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 12-MAR-2005 00:41
Instrument ID: a2hp5.i
Client ID: INTRA-LAB BLANK
Compound Name: AROCLOR-1242
CAS #: 53469-21-9
Report Date: 03/14/2005



Original Integration



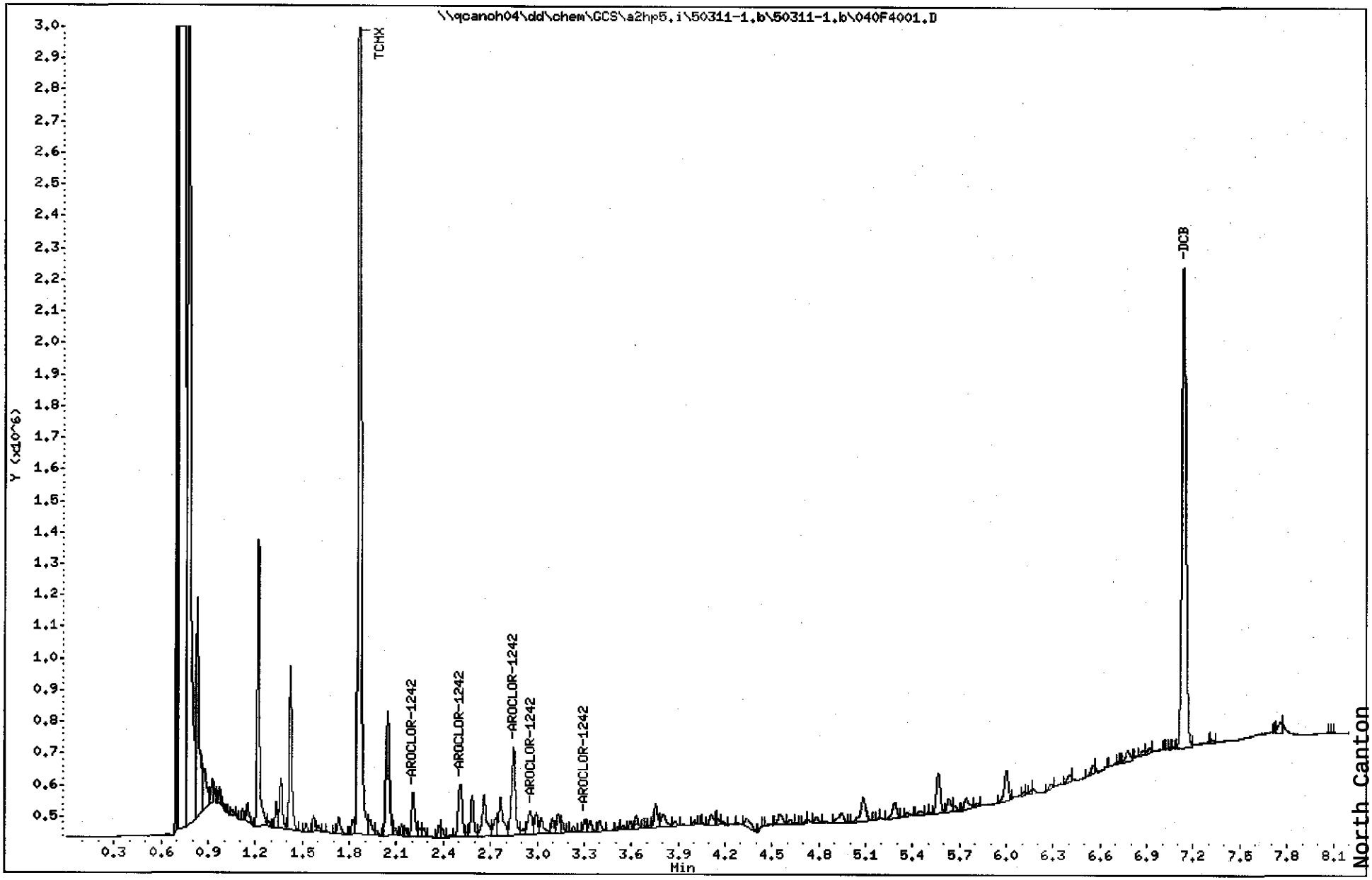
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\040F4001.D
Date : 12-MAR-2005 00:41
Client ID: INTRA-LAB BLANK
Sample Info: G5D6R1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5D5F1AA **Matrix.....:** SOLID
MB Lot-Sample #: A5C020000-335

Prep Date.....: 03/02/05 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 03/14/05 **Prep Batch #...:** 5061335
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	84	(10 - 172)
Decachlorobiphenyl	95	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: 038F3401.D
Report Date: 15-Mar-2005 14:14

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\038F3401.D
Lab Smp Id: G5D5F1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 14-MAR-2005 23:08
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5D5F1AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50314-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 15-Mar-2005 13:56 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 38 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.862	-0.001	3796076	0.01679	5.598		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

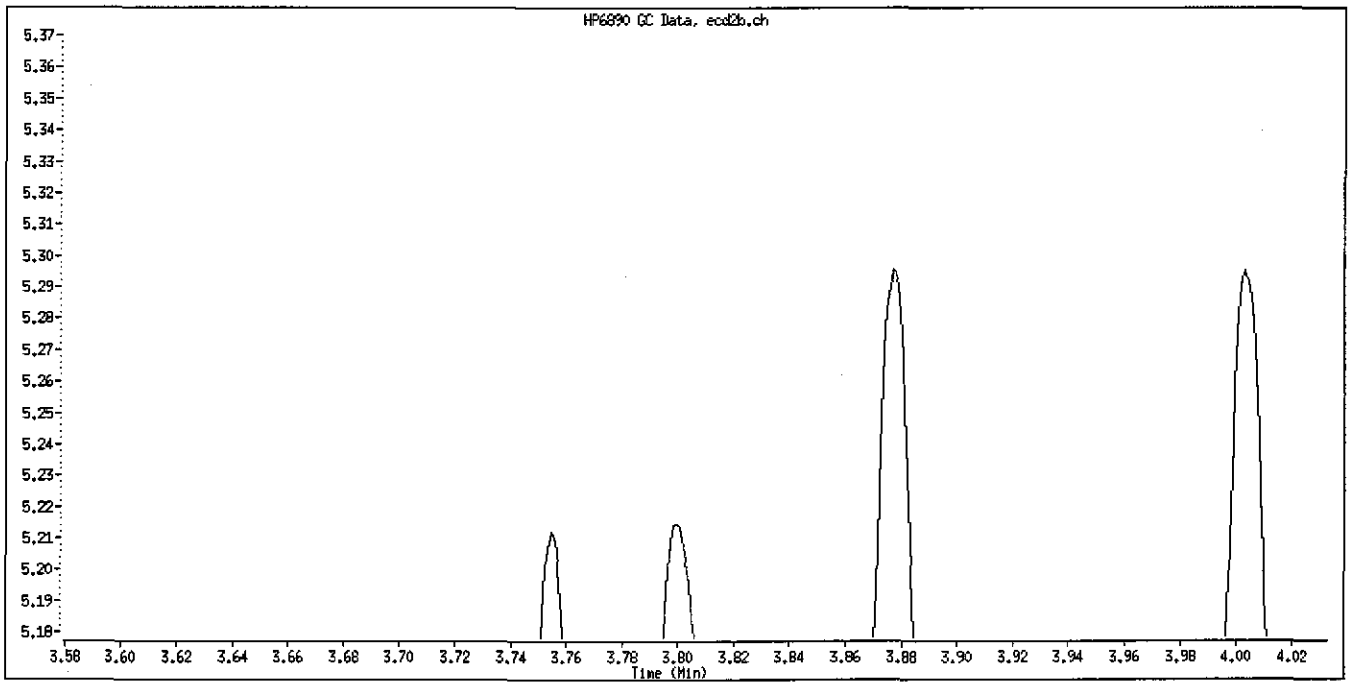
Data File: 038F3401.D
Report Date: 15-Mar-2005 14:14

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
2.505	2.503	0.002	121950	0.06237	20.79	75.00- 125.00	100.00(M)
2.848	2.846	0.002	148485	0.03693	12.31	157.16- 261.93	121.76
3.302	3.306	-0.004	32598	0.00672	2.239	189.24- 315.41	26.73
3.592	3.596	-0.004	26037	0.00510	1.698	193.23- 322.06	21.35
3.799	3.808	-0.009	34269	0.00749	2.497	173.06- 288.43	28.10
Average of Peak Concentrations =					7.907		
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.135	7.135	0.000	1786656	0.01890	6.301		

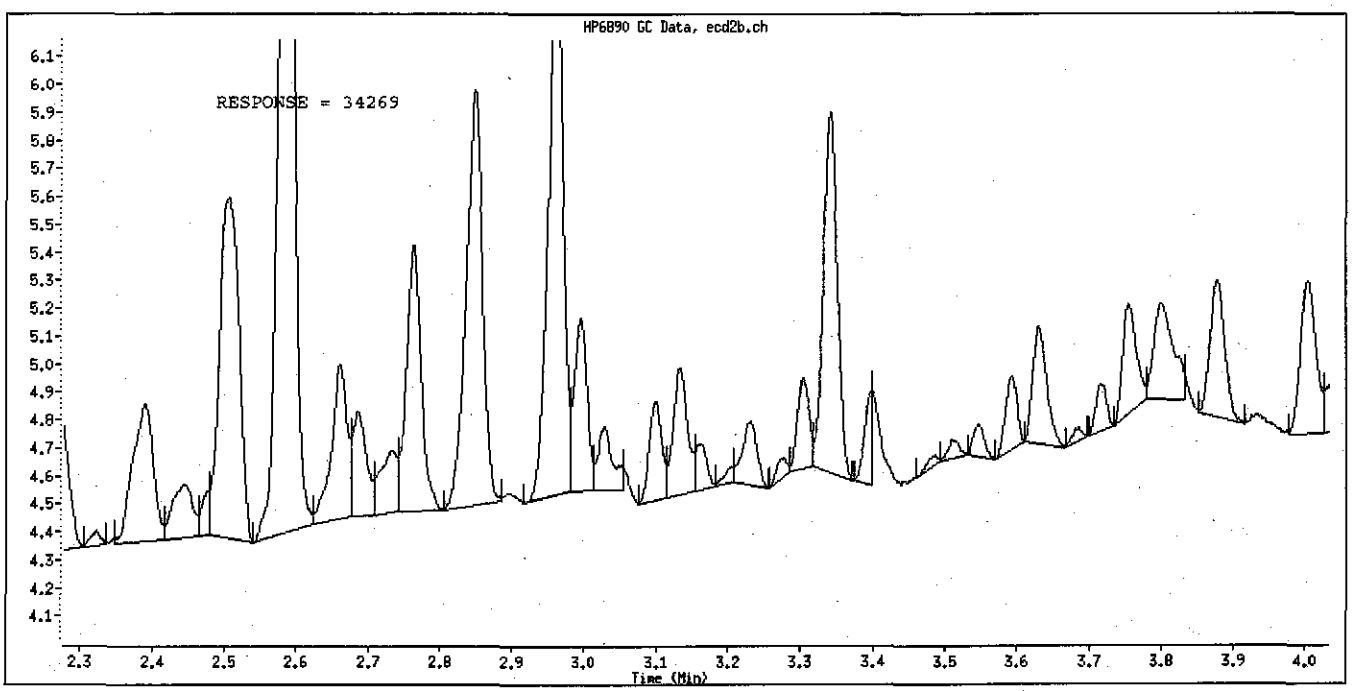
QC Flag Legend

M - Compound response manually integrated.

Inj. Date and Time: 14-MAR-2005 23:08
Instrument ID: a2hp5.i
Client ID: INTRA-LAB BLANK
Compound Name: AROCLOR-1248
CAS #: 12672-29-6
Report Date: 03/15/2005



Original Integration

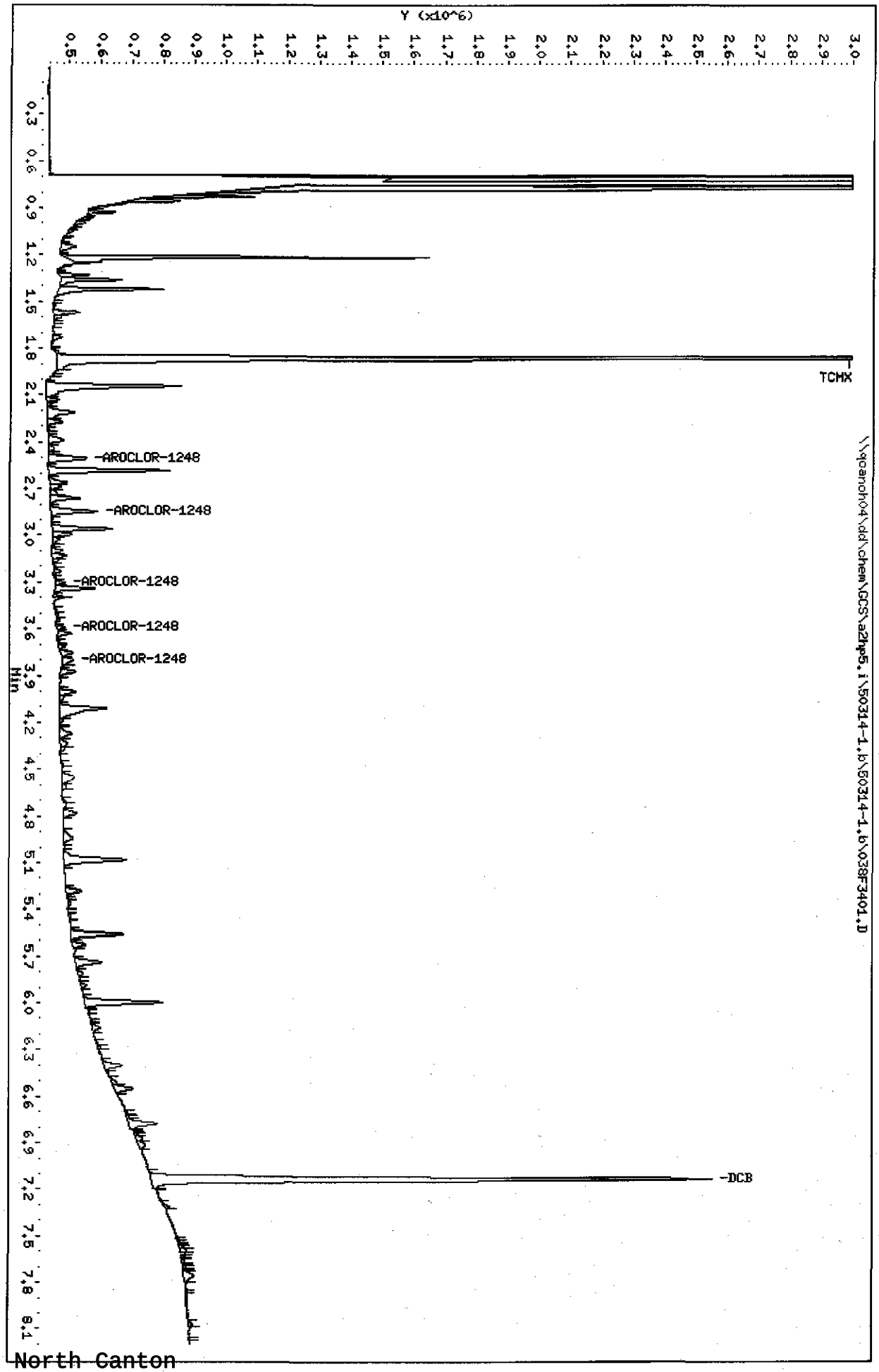


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp5.i\50314-1.b\50314-1.b\038F3401.D
Date : 14-MAR-2005 23:08
Client ID: INTRA-LAB BLANK
Sample Info: G5D5F1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G1L1AA **Matrix.....:** SOLID
MB Lot-Sample #: A5C030000-344

Prep Date.....: 03/03/05 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 03/08/05 **Prep Batch #...:** 5062344
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	136	(10 - 172)
Decachlorobiphenyl	84	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\032F2101.D
Report Date: 09-Mar-2005 07:45

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\032F2101.D
Lab Smp Id: G5G1L1AA
Client Smp ID: INTRA-LAB BLANK
Inj Date : 08-MAR-2005 23:39
Inst ID: a2hp2.i
Operator : 9237
Smp Info : G5G1L1AA
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50308-1.b\HP2PCBF.m
Meth Date : 09-Mar-2005 07:43 molm
Quant Type: ESTD
Cal Date : 03-MAR-2005 17:38
Cal File: 022F2201.D
Als bottle: 32
QC Sample: METHOD BLANK
Dil Factor: 1.00000
Compound Sublist: pcb.sub
Integrator: Falcon
Sample Matrix: SOIL
Target Version: 4.14
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

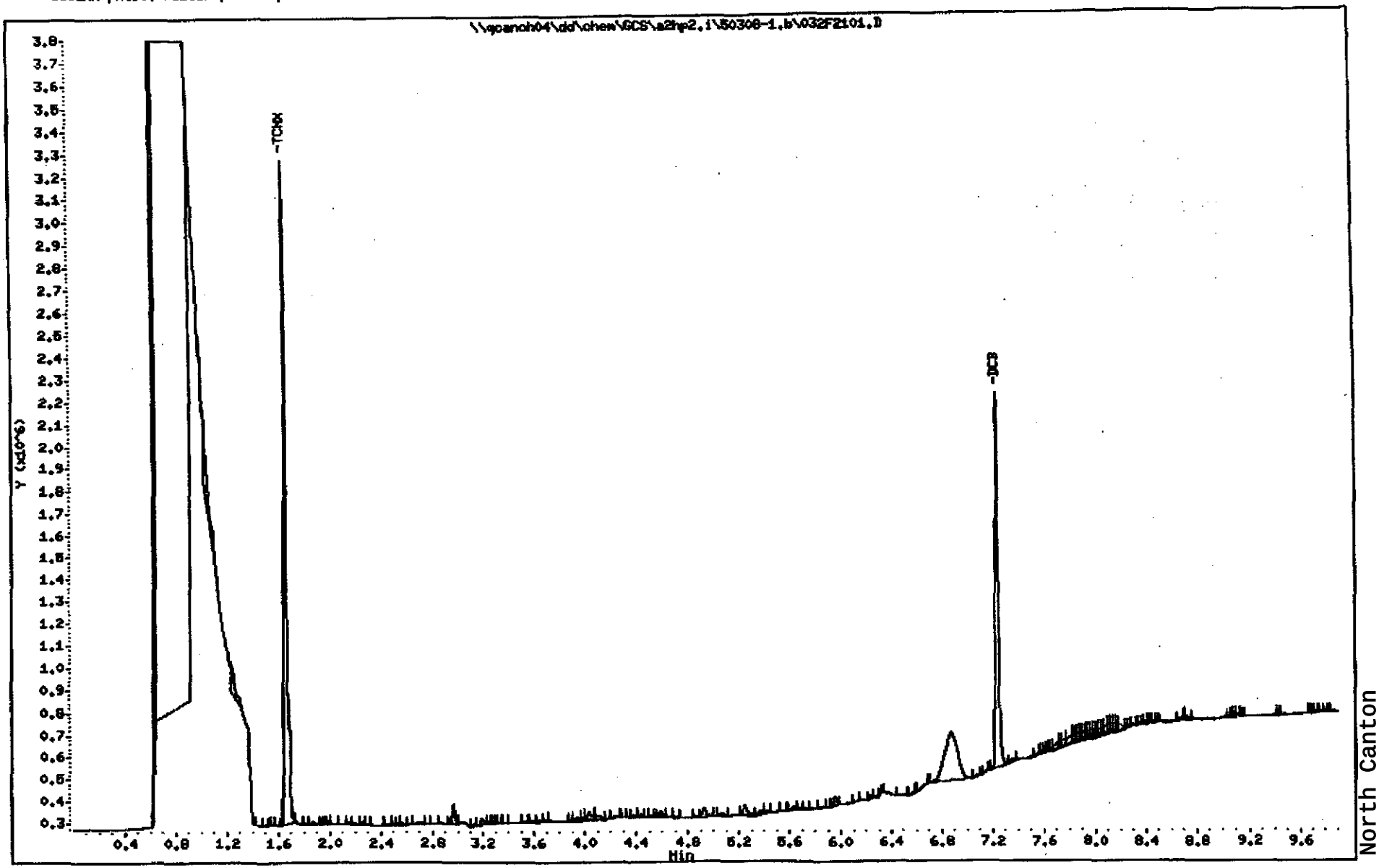
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
6 1 TCMX					CAS #: 877-09-8		
1.658	1.656	0.002	2976531	0.02720	9.067		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Peaks not detected for Quant. or Qual. signal(s).							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50308-1.b\032F2101.D
Report Date: 09-Mar-2005 07:45

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
5 AROCLOR-1242					CAS #: 53469-21-9		
Compound Not Detected							
6 AROCLOR-1248					CAS #: 12672-29-6		
Compound Not Detected							
7 AROCLOR-1254					CAS #: 11097-69-1		
Compound Not Detected							
8 AROCLOR-1260					CAS #: 11096-82-5		
Compound Not Detected							
$ 9 DCB					CAS #: 2051-24-3		
7.236	7.235	0.001	2709012	0.01676	5.586		

Data File: \\qpanch04\dd\chem\GCS\a2hp2.i\50308-1.b\032F2101.D
Date : 08-MAR-2005 23:39
Client ID: INTRA-LAB BLANK
Sample Info: C8GIL1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G141AA **Matrix.....:** SOLID
MB Lot-Sample #: A5C030000-354

Prep Date.....: 03/04/05 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 03/12/05 **Prep Batch #...:** 5062354
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(10 - 172)
Decachlorobiphenyl	89	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: 082F8201.D
Report Date: 14-Mar-2005 16:55

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\082F8201.D
Lab Smp Id: G5G141AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 12-MAR-2005 09:15
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5G141AA
Misc Info :
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 82 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	4345594	0.01922	6.408		

2 AROCLOR-1221 CAS #: 11104-28-2

Compound Not Detected

3 AROCLOR-1016 CAS #: 12674-11-2

Compound Not Detected

4 AROCLOR-1232 CAS #: 11141-16-5

Compound Not Detected

Data File: 082F8201.D
Report Date: 14-Mar-2005 16:55

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

5 AROCLOR-1242 CAS #: 53469-21-9

Compound Not Detected

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6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

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7 AROCLOR-1254 CAS #: 11097-69-1

Peaks not detected for Quant. or Qual. signal(s).

---

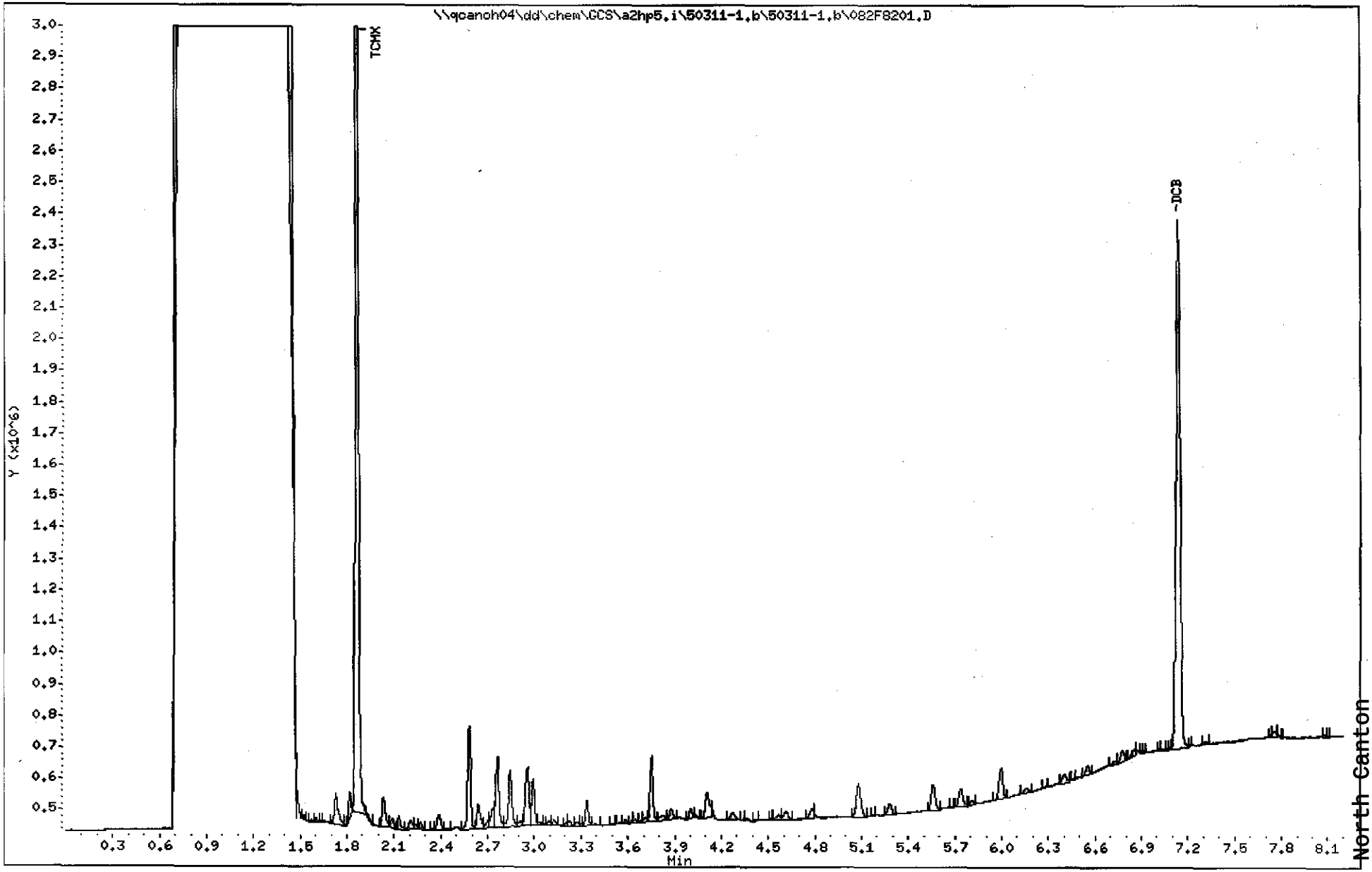
8 AROCLOR-1260 CAS #: 11096-82-5

Peaks not detected for Quant. or Qual. signal(s).

$	9 DCB					CAS #: 2051-24-3	
7.136	7.135	0.001	1686830	0.01785	5.949		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\082F8201.D
Date : 12-MAR-2005 09:15
Client ID: INTRA-LAB BLANK
Sample Info: G5G141AA
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5G2A1AA **Matrix.....:** SOLID
MB Lot-Sample #: A5C030000-356

Prep Date.....: 03/04/05 **Final Wgt/Vol..:** 10 mL
Analysis Date..: 03/18/05 **Prep Batch #...:** 5062356
Dilution Factor: 1 **Initial Wgt/Vol:** 30 g

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aroclor 1016	ND	33	ug/kg	SW846 8082
Aroclor 1221	ND	33	ug/kg	SW846 8082
Aroclor 1232	ND	33	ug/kg	SW846 8082
Aroclor 1242	ND	33	ug/kg	SW846 8082
Aroclor 1248	ND	33	ug/kg	SW846 8082
Aroclor 1254	ND	33	ug/kg	SW846 8082
Aroclor 1260	ND	33	ug/kg	SW846 8082

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(10 - 172)
Decachlorobiphenyl	76	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Data File: 020F2001.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\020F2001.D
Lab Smp Id: G5G2A1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 18-MAR-2005 02:31
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5G2A1AA
Misc Info :
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 20 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.490	2.489	0.001	3032246	0.01881	6.271		
2 AROCLOR-1221					CAS #: 11104-28-2		
Compound Not Detected							
3 AROCLOR-1016					CAS #: 12674-11-2		
Compound Not Detected							
4 AROCLOR-1232					CAS #: 11141-16-5		
Compound Not Detected							

Data File: 020F2001.D
Report Date: 18-Mar-2005 14:19

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO

5 AROCLOR-1242 CAS #: 53469-21-9

Compound Not Detected

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6 AROCLOR-1248 CAS #: 12672-29-6

Compound Not Detected

---

7 AROCLOR-1254 CAS #: 11097-69-1

Compound Not Detected

---

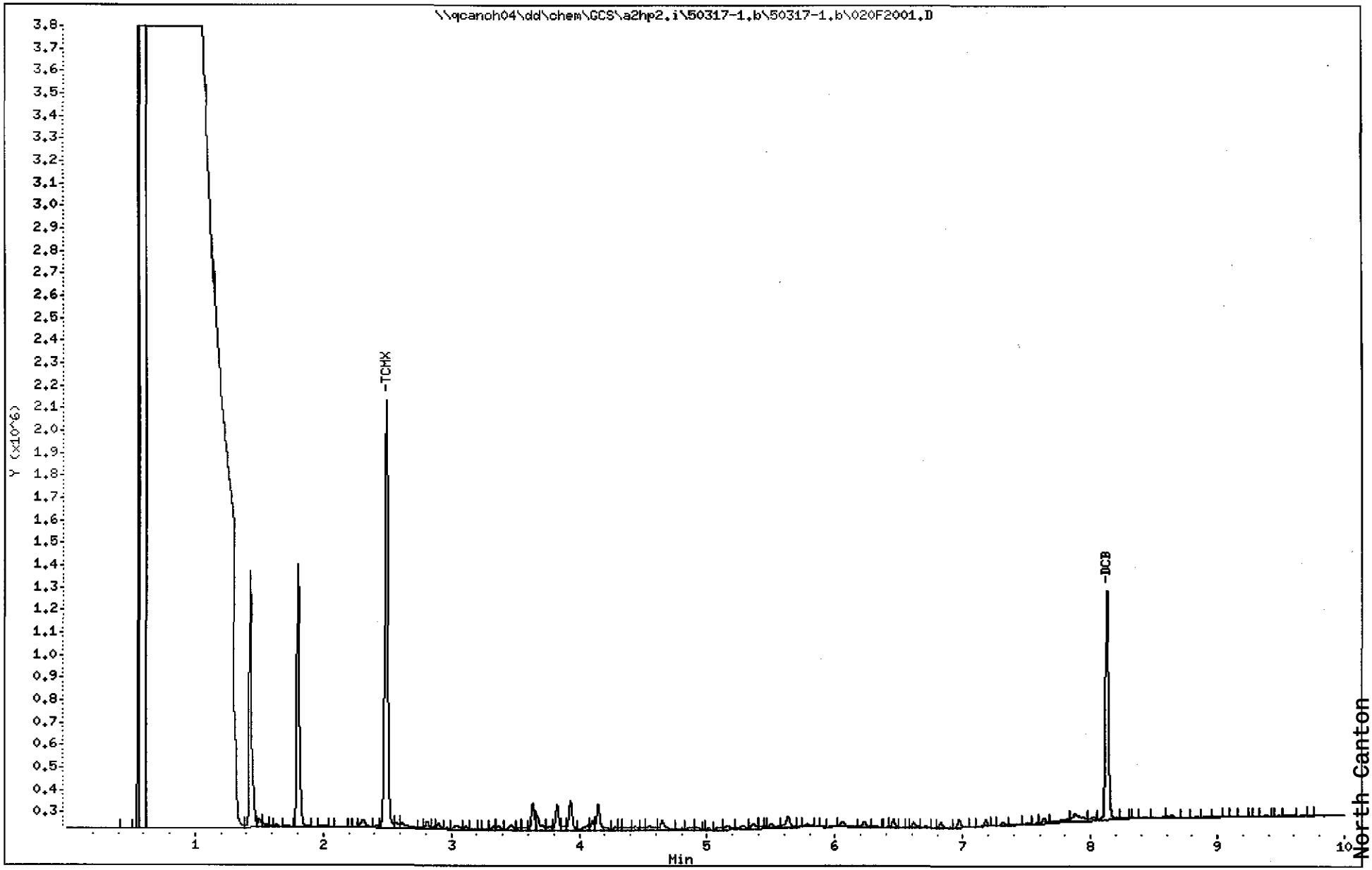
8 AROCLOR-1260 CAS #: 11096-82-5

Compound Not Detected

$ 9 DCB					CAS #: 2051-24-3		
8.130	8.129	0.001	1021142	0.01514	5.048		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\020F2001.D
Date : 18-MAR-2005 02:31
Client ID: INTRA-LAB BLANK
Sample Info: G5G2A1AA
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



STL North Canton

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5C8V1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C020144-018 G5C8V1AG-MSD
Date Sampled...: 03/01/05 13:40 **Date Received..:** 03/02/05
Prep Date.....: 03/03/05 **Analysis Date..:** 03/11/05
Prep Batch #...: 5061334
Dilution Factor: 1 **Initial Wgt/Vol:** 30.02 g **Final Wgt/Vol..:** 10 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**88**	**(10 - 200)**			**SW846 8082**
	84	**(10 - 200)**	**5.0**	**(0-30)**	**SW846 8082**
Aroclor 1260	**91**	**(10 - 200)**			**SW846 8082**
	89	**(10 - 200)**	**2.2**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
	81	(10 - 172)
Decachlorobiphenyl	90	(40 - 138)
	87	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C020144 **Work Order #...:** G5C8V1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C020144-018 G5C8V1AG-MSD
Date Sampled...: 03/01/05 13:40 **Date Received..:** 03/02/05
Prep Date.....: 03/03/05 **Analysis Date..:** 03/11/05
Prep Batch #...: 5061334
Dilution Factor: 1 **Initial Wgt/Vol:** 30.02 g **Final Wgt/Vol..:** 10 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**350**	**310**	**ug/kg**	**88**		**SW846 8082**
	ND	**350**	**290**	**ug/kg**	**84**	**5.0**	**SW846 8082**
Aroclor 1260	**ND**	**350**	**310**	**ug/kg**	**91**		**SW846 8082**
	ND	**350**	**310**	**ug/kg**	**89**	**2.2**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	89	(10 - 172)
	81	(10 - 172)
Decachlorobiphenyl	90	(40 - 138)
	87	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

Data File: 036F3601.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\036F3601.D
Lab Smp Id: G5C8V1AF Client Smp ID: S-030105-JH-018
Inj Date : 11-MAR-2005 23:53
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8V1AF
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 36 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

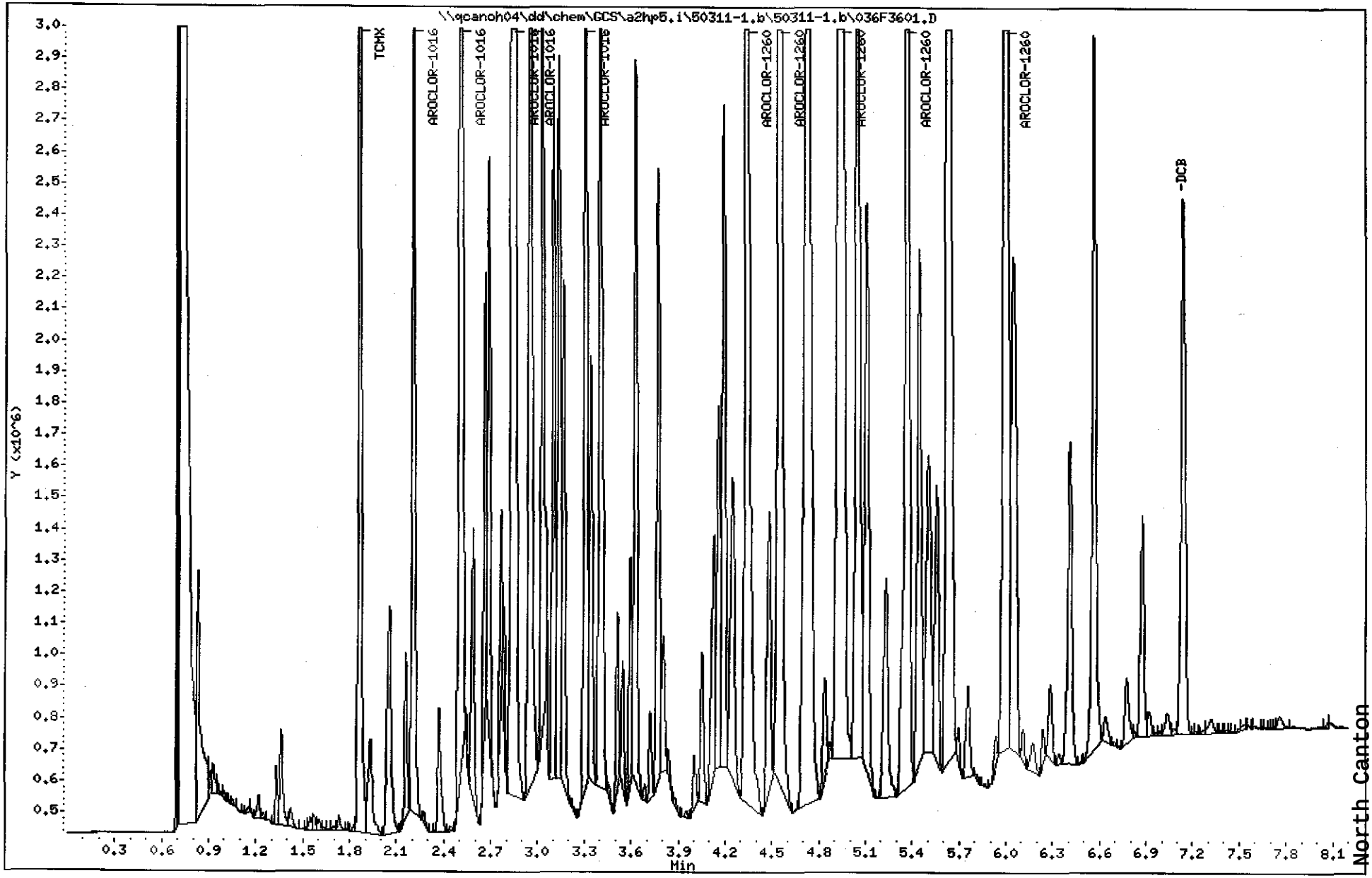
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.020	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.862	1.860	0.002	4025683	0.01781	5.932		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.201	0.002	2682603	0.83790	279.1	80.00- 120.00	100.00
2.503	2.500	0.003	3879500	0.84889	282.8	107.51- 179.18	144.62
2.847	2.845	0.002	7732527	0.94594	315.1	192.23- 320.39	288.25
2.950	2.947	0.003	3881837	0.88387	294.4	101.51- 169.19	144.70
3.305	3.302	0.003	3202671	0.90680	302.1	79.65- 132.74	119.39
		Average of Peak Concentrations =			294.7		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.338	4.335	0.003	4354973	0.88632	295.2	80.00- 120.00	100.00
4.548	4.545	0.003	4987139	0.87943	292.9	87.22- 145.36	114.52
4.944	4.942	0.002	4967428	0.90778	302.4	86.81- 144.68	114.06
5.366	5.364	0.002	3401591	0.90694	302.1	57.97- 96.61	78.11
6.000	5.997	0.003	5270596	0.97119	323.5	85.17- 141.95	121.02
		Average of Peak Concentrations =			303.2		
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	1703922	0.01803	6.006		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\036F3601.D
Date : 11-MAR-2005 23:53
Client ID: S-030105-JH-018
Sample Info: G5C8V1AF
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



STL North Canton

Data File: 037F3701.D
Report Date: 14-Mar-2005 15:57

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\037F3701.D
Lab Smp Id: G5C8V1AG Client Smp ID: S-030105-JH-018
Inj Date : 12-MAR-2005 00:05
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5C8V1AG
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 37 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

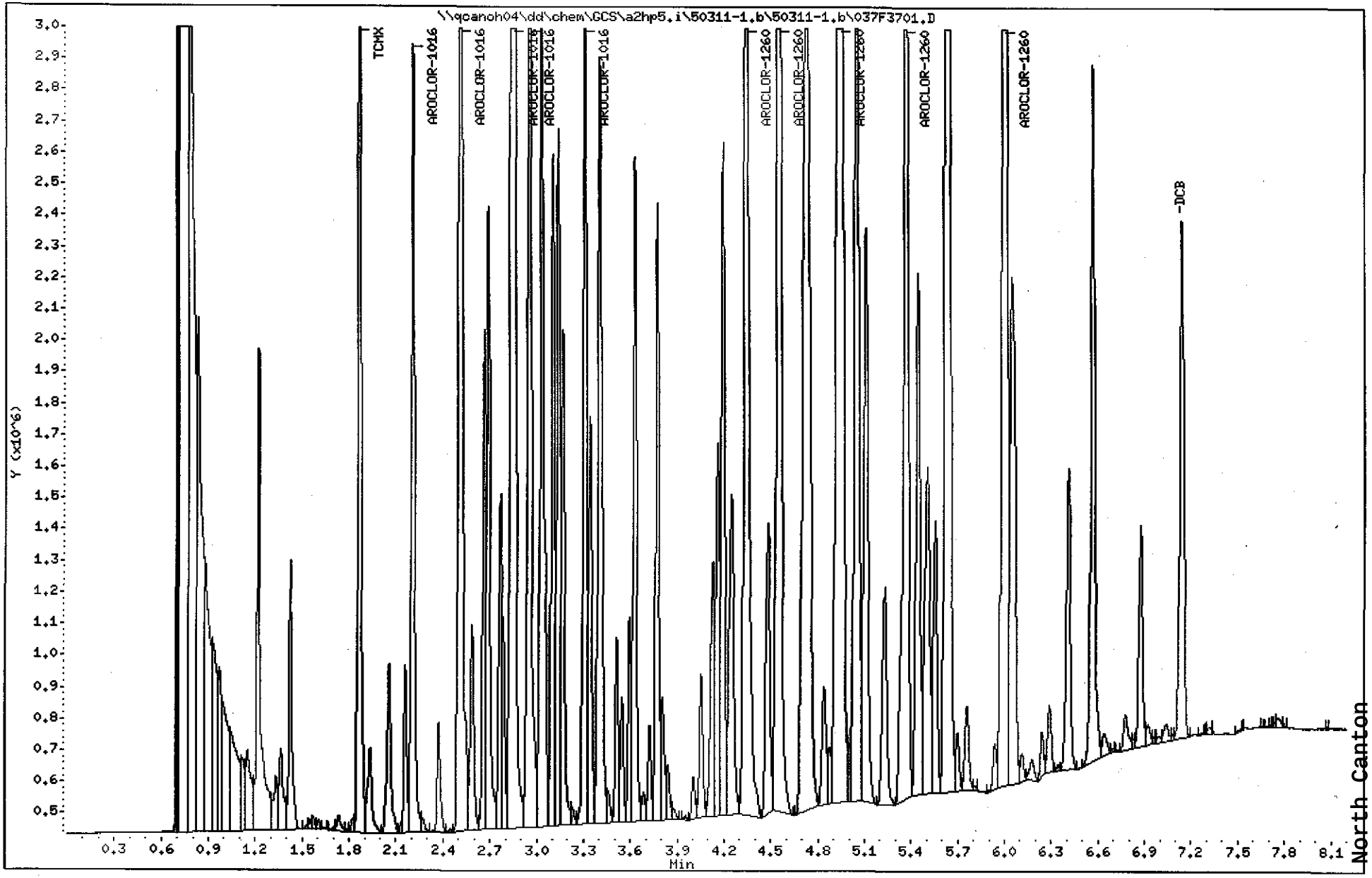
Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.010	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.861	1.860	0.001	3647386	0.01614	5.376		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.204	2.201	0.003	2510030	0.78400	261.2	80.00- 120.00	100.00
2.504	2.500	0.004	3711094	0.81204	270.6	107.51- 179.18	147.85
2.848	2.845	0.003	7397074	0.90490	301.5	192.23- 320.39	294.70
2.950	2.947	0.003	3722974	0.84770	282.5	101.51- 169.19	148.32
3.305	3.302	0.003	3027227	0.85713	285.6	79.65- 132.74	120.61
Average of Peak Concentrations =					280.3		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.338	4.335	0.003	4252337	0.86543	288.4	80.00- 120.00	100.00
4.548	4.545	0.003	4908292	0.86552	288.4	87.22- 145.36	115.43
4.944	4.942	0.002	4920446	0.89919	299.6	86.81- 144.68	115.71
5.365	5.364	0.001	3327103	0.88708	295.6	57.97- 96.61	78.24
6.000	5.997	0.003	5058539	0.93212	310.6	85.17- 141.95	118.96
Average of Peak Concentrations =					296.5		
$ 9 DCB					CAS #: 2051-24-3		
7.138	7.135	0.003	1648110	0.01744	5.811		

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\037F3701.D
Date : 12-MAR-2005 00:05
Client ID: S-030105-JH-018
Sample Info: G5C8V1AG
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



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STL North Canton

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F8F1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-007 G5F8F1AG-MSD
Date Sampled...: 03/02/05 08:35 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5062354
Dilution Factor: 1000 **Initial Wgt/Vol:** 30.09 g **Final Wgt/Vol..:** 10 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**82500**	**(10 - 200)**			**SW846 8082**
	Qualifiers: DIL,a				
	46800	**(10 - 200)**	**55**	**(0-30)**	**SW846 8082**
	Qualifiers: DIL,a,p				
Aroclor 1260	**1280 DIL,**	**(10 - 200)**			**SW846 8082**
	810	**(10 - 200)**	**45**	**(0-30)**	**SW846 8082**
	Qualifiers: DIL,a,p				

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90 DIL	(10 - 172)
	203	(10 - 172)
	Qualifiers: DIL,*	
Decachlorobiphenyl	2270	(40 - 138)
	Qualifiers: DIL,*	
	931	(40 - 138)
	Qualifiers: DIL,*	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F8F1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-007 G5F8F1AG-MSD
Date Sampled...: 03/02/05 08:35 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/12/05
Prep Batch #...: 5062354
Dilution Factor: 1000 **Initial Wgt/Vol:** 30.09 g **Final Wgt/Vol..:** 10 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**360**	**300000**	**ug/kg**	**82500**		**SW846 8082**
	Qualifiers:	DIL,a					
	ND	**370**	**170000**	**ug/kg**	**46800**	**55**	**SW846 8082**
	Qualifiers:	DIL,a,p					
Aroclor 1260	**ND**	**360**		**ug/kg**	**1280**		**SW846 8082**
	Qualifiers:	DIL,a					
	ND	**370**		**ug/kg**	**810**	**45**	**SW846 8082**
	Qualifiers:	DIL,a,p					

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90 DIL	(10 - 172)
	203	(10 - 172)
	Qualifiers: DIL,*	
Decachlorobiphenyl	2270	(40 - 138)
	Qualifiers: DIL,*	
	931	(40 - 138)
	Qualifiers: DIL,*	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

* Surrogate recovery is outside stated control limits.

Data File: 064F6401.D
Report Date: 14-Mar-2005 16:52

STL North Canton

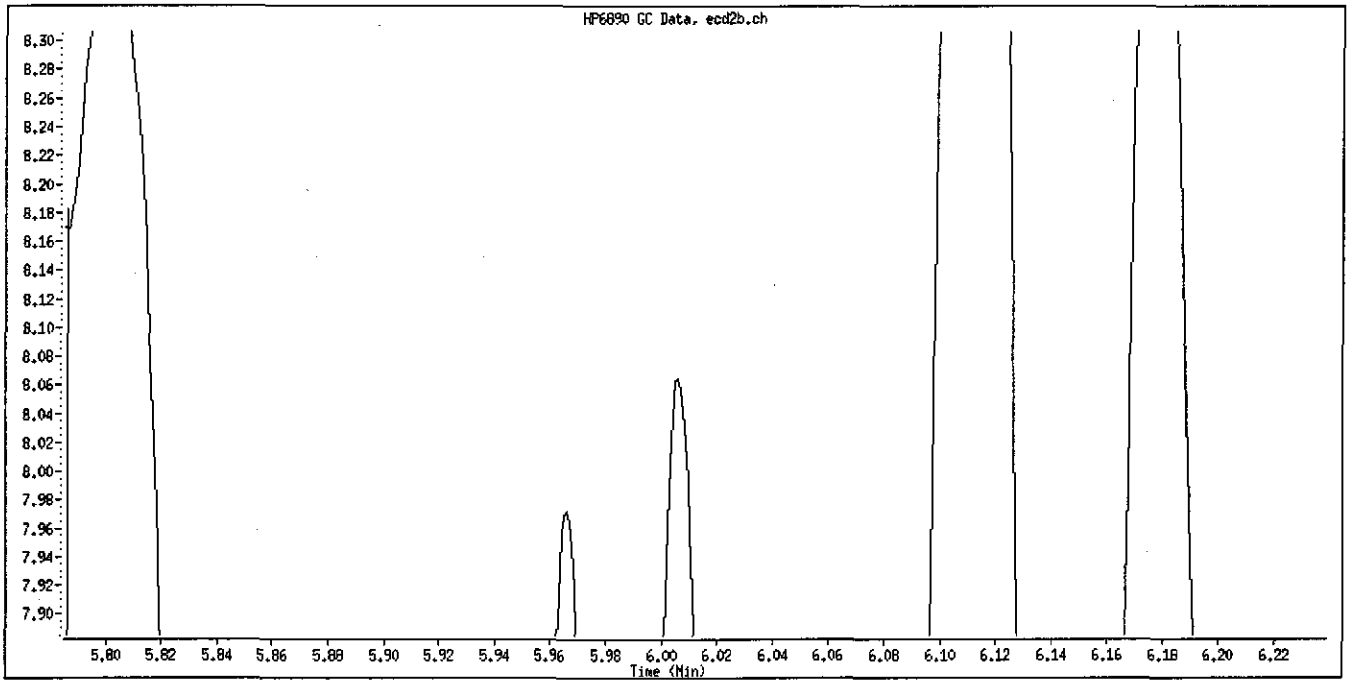
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\064F6401.D
Lab Smp Id: G5F8F1AF Client Smp ID: S-030205-JH-039
Inj Date : 12-MAR-2005 05:34
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8F1AF,1000
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 64 QC Sample: MS
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

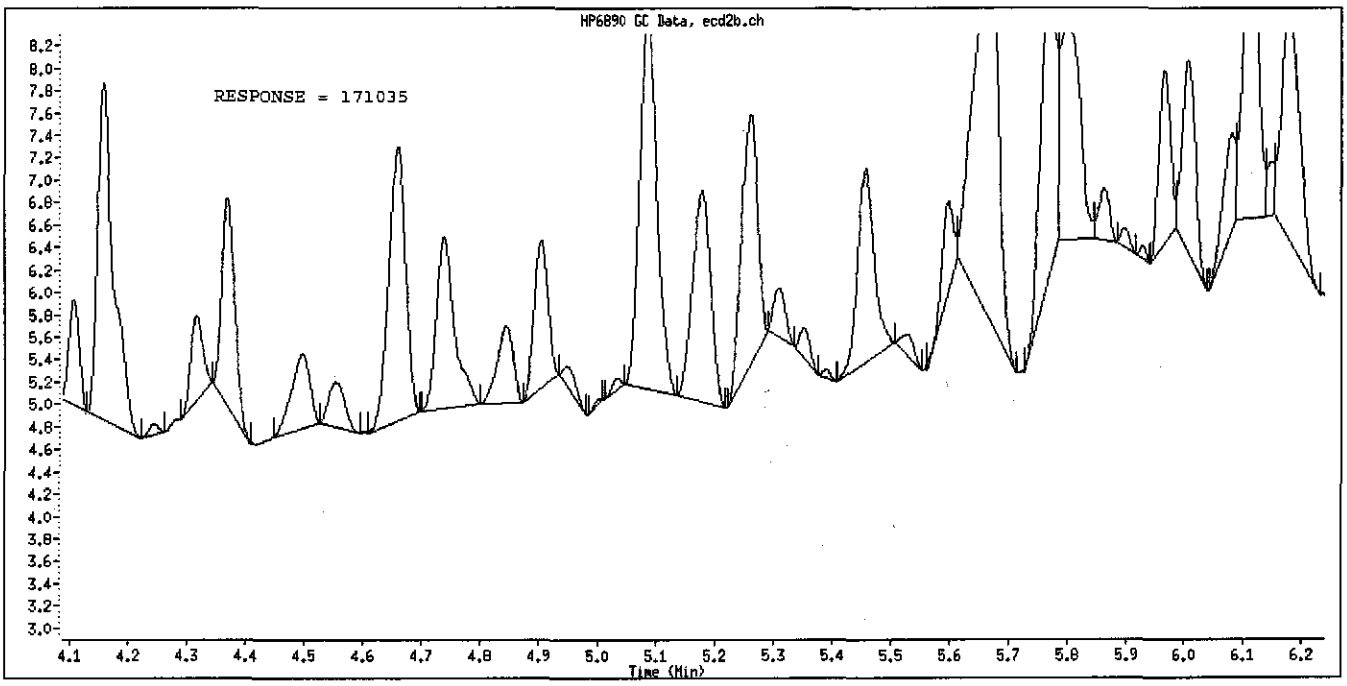
Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.090	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
1.860	1.860	0.000	4071	2e-005	5.985		
3 AROCLOR-1016					CAS #: 12674-11-2		
2.203	2.201	0.002	5259858	1.64289	546000	80.00- 120.00	100.00(RM)
2.512	2.500	0.012	5042697	1.10342	366700	107.51- 179.18	95.87
2.848	2.845	0.003	6080413	0.74383	247200	192.23- 320.39	115.60
2.946	2.947	-0.001	1380025	0.31422	104400	101.51- 169.19	26.24
3.304	3.302	0.002	1121496	0.31754	105500	79.65- 132.74	21.32
Average of Peak Concentrations =					274000		
8 AROCLOR-1260					CAS #: 11096-82-5		
4.315	4.335	-0.020	75610	0.01539	5114	80.00- 120.00	100.00(RM)
4.551	4.545	0.006	39288	0.00693	2302	87.22- 145.36	51.96
4.947	4.942	0.005	16238	0.00297	986.2	86.81- 144.68	21.48
5.352	5.364	-0.012	26803	0.00715	2375	57.97- 96.61	35.45
6.005	5.997	0.008	171035	0.03152	10470	85.17- 141.95	226.21
Average of Peak Concentrations =					4250		
$ 9 DCB					CAS #: 2051-24-3		
7.149	7.135	0.014	42889	5e-004	150.8		(R)

Inj. Date and Time: 12-MAR-2005 05:34
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



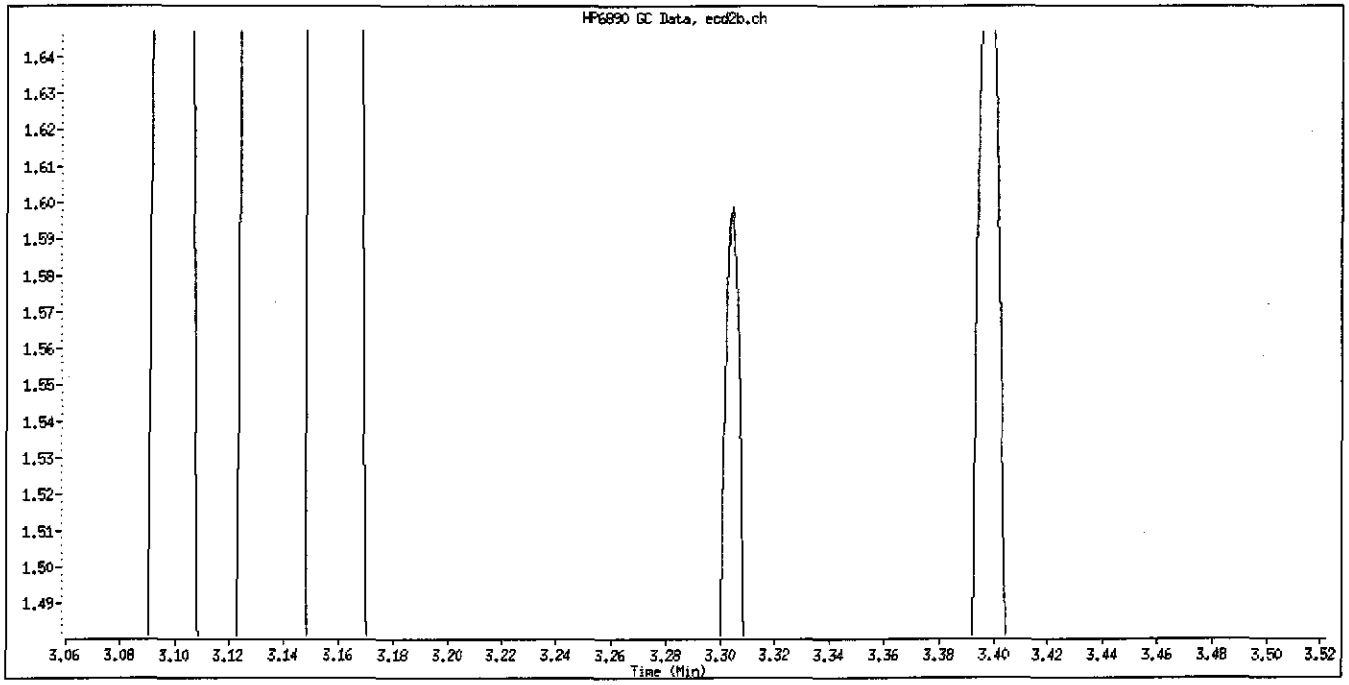
Original Integration



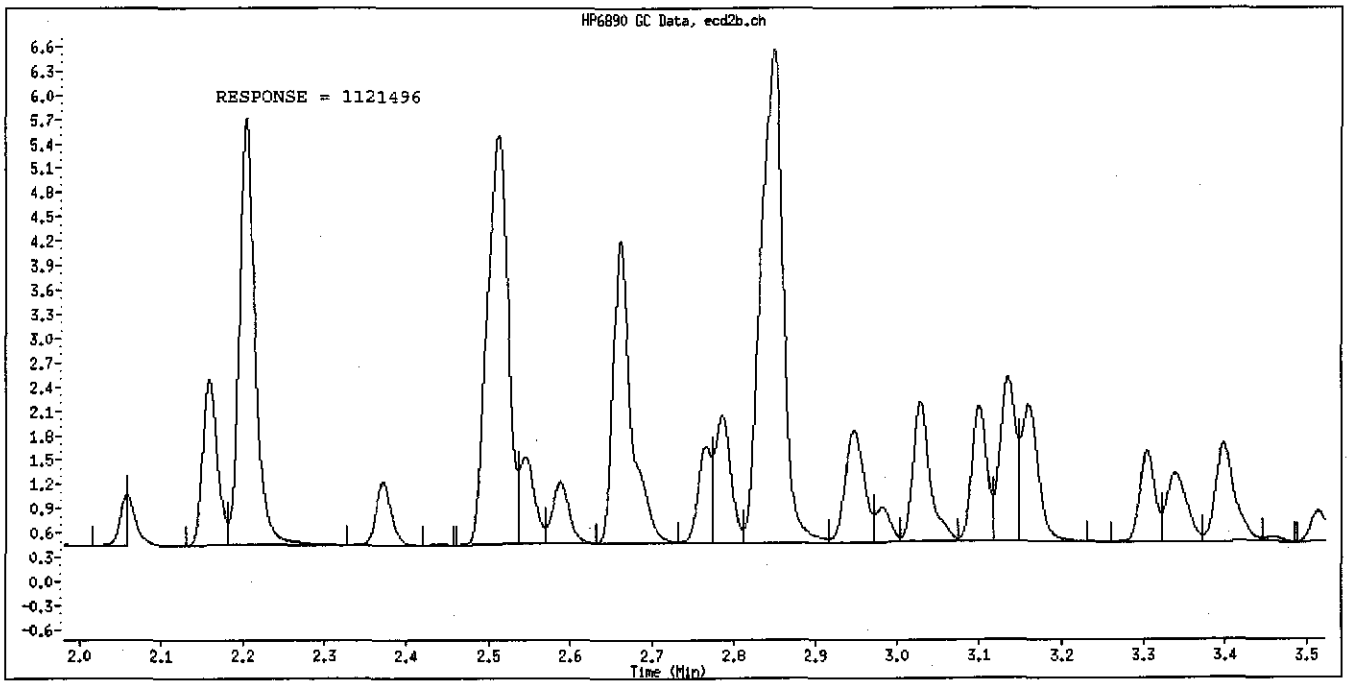
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 05:34
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/14/2005



Original Integration



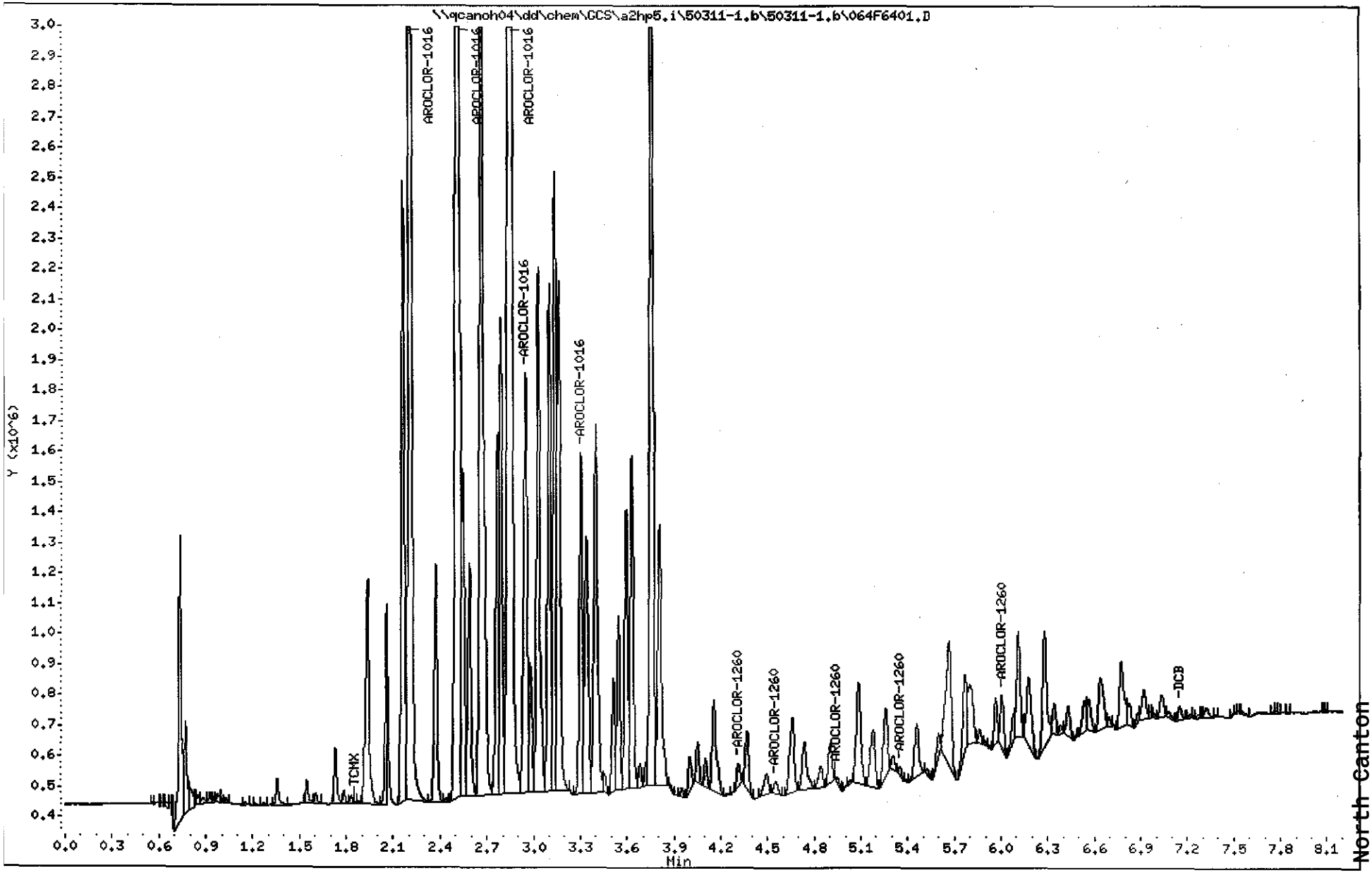
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\064F6401.D
Date : 12-MAR-2005 05:34
Client ID: S-030205-JH-039
Sample Info: G5F8F1AF,1000
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i

Operator: 9237
Column diameter: 0.32



Data File: 065F6501.D
Report Date: 14-Mar-2005 16:52

STL North Canton

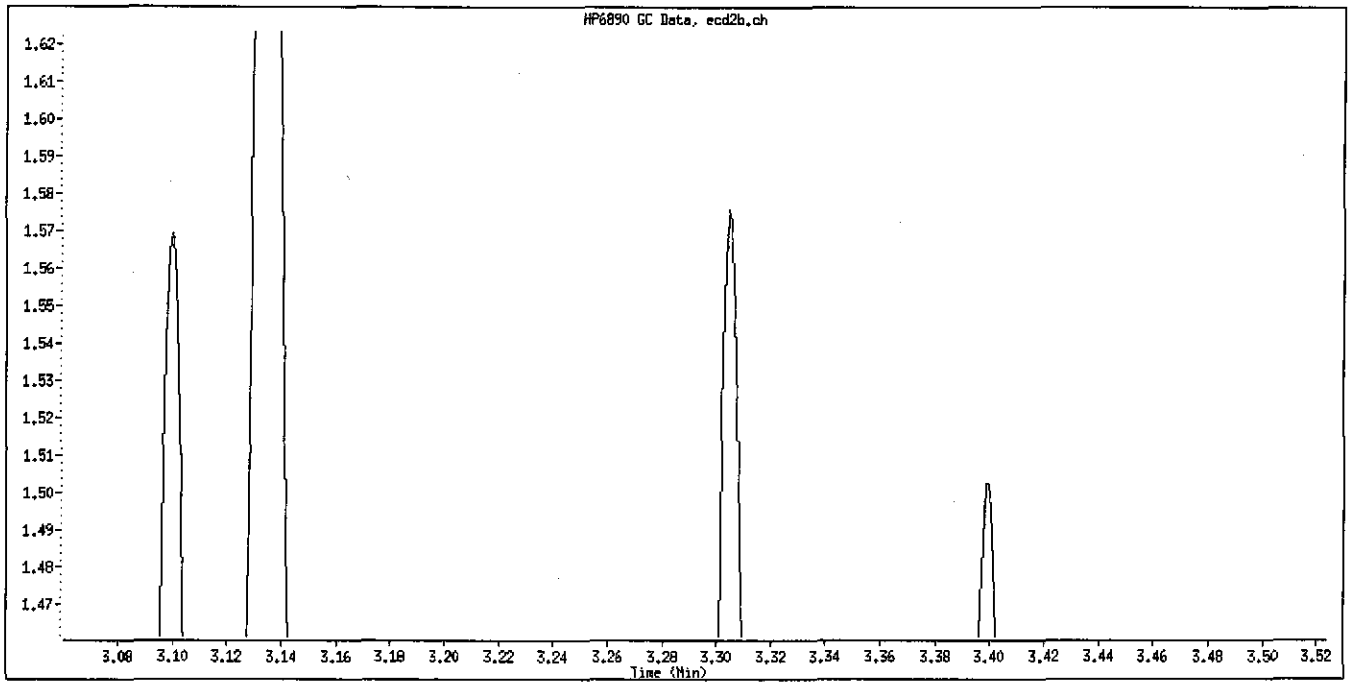
Data file : \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\065F6501.D
Lab Smp Id: G5F8F1AG Client Smp ID: S-030205-JH-039
Inj Date : 12-MAR-2005 05:47
Operator : 9237 Inst ID: a2hp5.i
Smp Info : G5F8F1AG,1000
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\dd\chem\GCS\a2hp5.i\50311-1.b\HP5PCBF.m\HP5PCBr.m
Meth Date : 14-Mar-2005 15:35 lic Quant Type: ESTD
Cal Date : 08-MAR-2005 21:28 Cal File: 029F1601.D
Als bottle: 65 QC Sample: MSD
Dil Factor: 1000.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

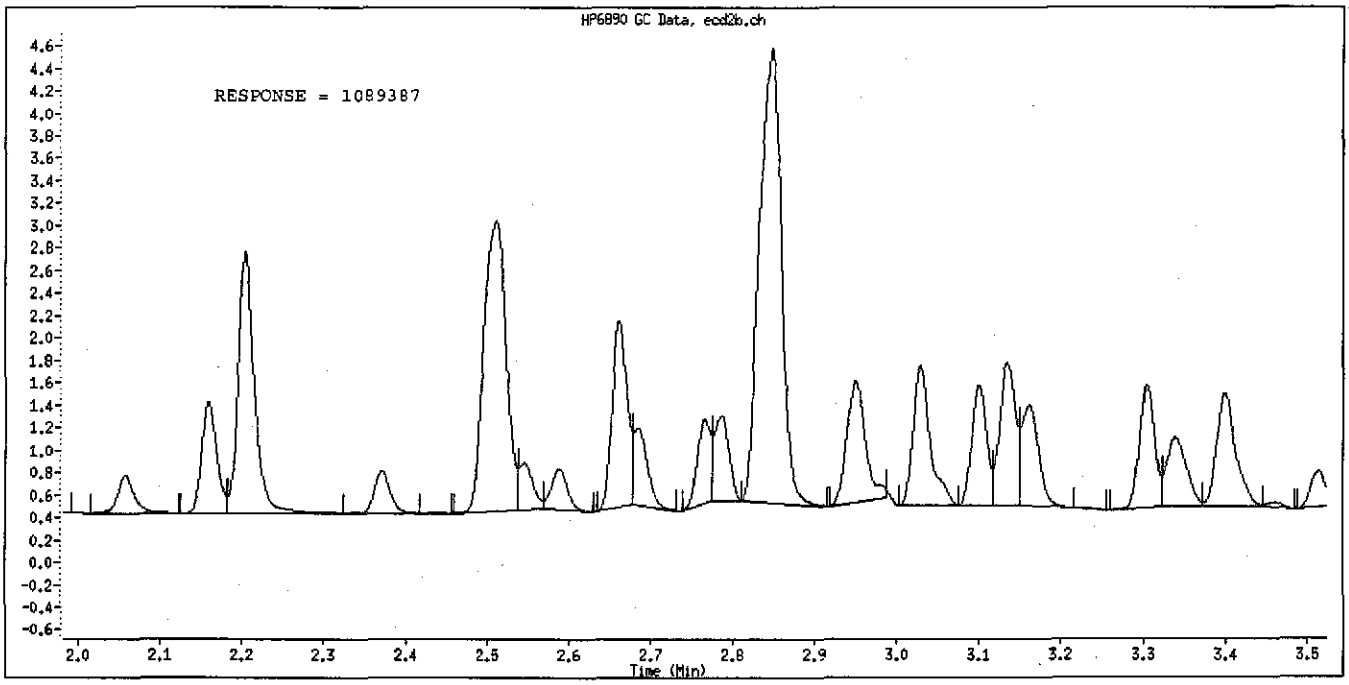
Name	Value	Description
DF	1000.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.030	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO	
$ 1 TCMX					CAS #: 877-09-8			
1.881	1.860	0.021	9200	4e-005	13.55			(R)
3 AROCLOR-1016					CAS #: 12674-11-2			
2.203	2.201	0.002	2327325	0.72693	242100	80.00- 120.00	100.00	(RM)
2.511	2.500	0.011	2581632	0.56490	188100	107.51- 179.18	110.93	
2.848	2.845	0.003	4047045	0.49509	164900	192.23- 320.39	173.89	
2.949	2.947	0.002	1084545	0.24694	82230	101.51- 169.19	46.60	
3.304	3.302	0.002	1089387	0.30845	102700	79.65- 132.74	46.81	
Average of Peak Concentrations =					156000			
8 AROCLOR-1260					CAS #: 11096-82-5			
4.316	4.335	-0.019	82805	0.01685	5612	80.00- 120.00	100.00	(RM)
4.551	4.545	0.006	24247	0.00428	1424	87.22- 145.36	29.28	
4.947	4.942	0.005	27410	0.00501	1668	86.81- 144.68	33.10	
5.353	5.364	-0.011	9746	0.00260	865.3	57.97- 96.61	11.77	
6.006	5.997	0.009	63839	0.01176	3917	85.17- 141.95	77.10	
Average of Peak Concentrations =					2697			
$ 9 DCB					CAS #: 2051-24-3			
7.155	7.135	0.020	17600	2e-004	62.01			(R)

Inj. Date and Time: 12-MAR-2005 05:47
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/14/2005



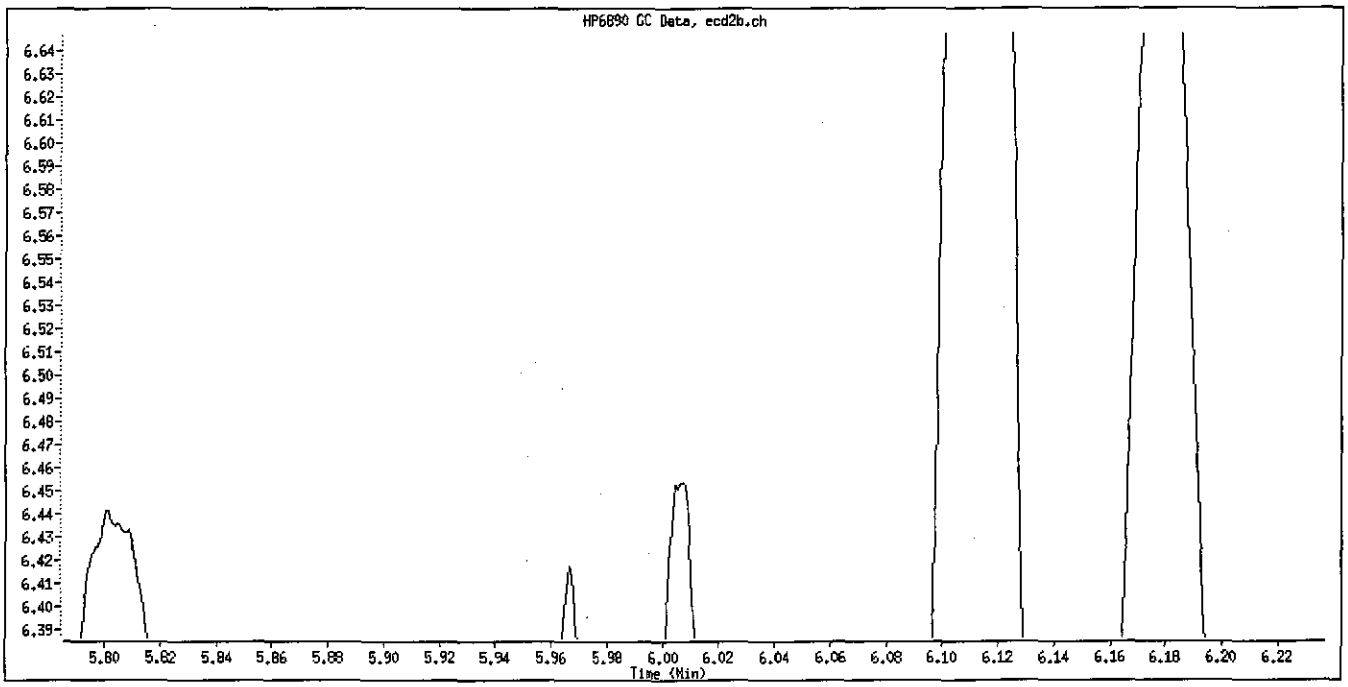
Original Integration



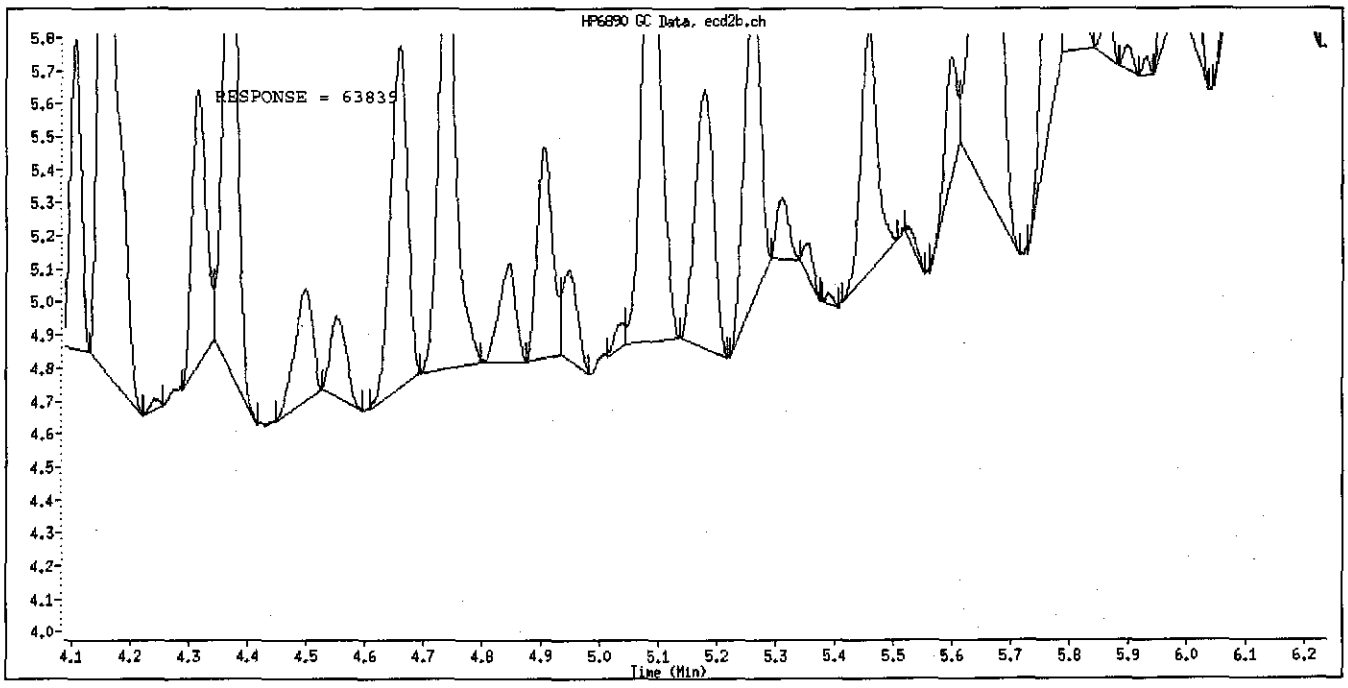
Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Inj. Date and Time: 12-MAR-2005 05:47
Instrument ID: a2hp5.i
Client ID: S-030205-JH-039
Compound Name: AROCLOR-1260
CAS #: 11096-82-5
Report Date: 03/14/2005



Original Integration

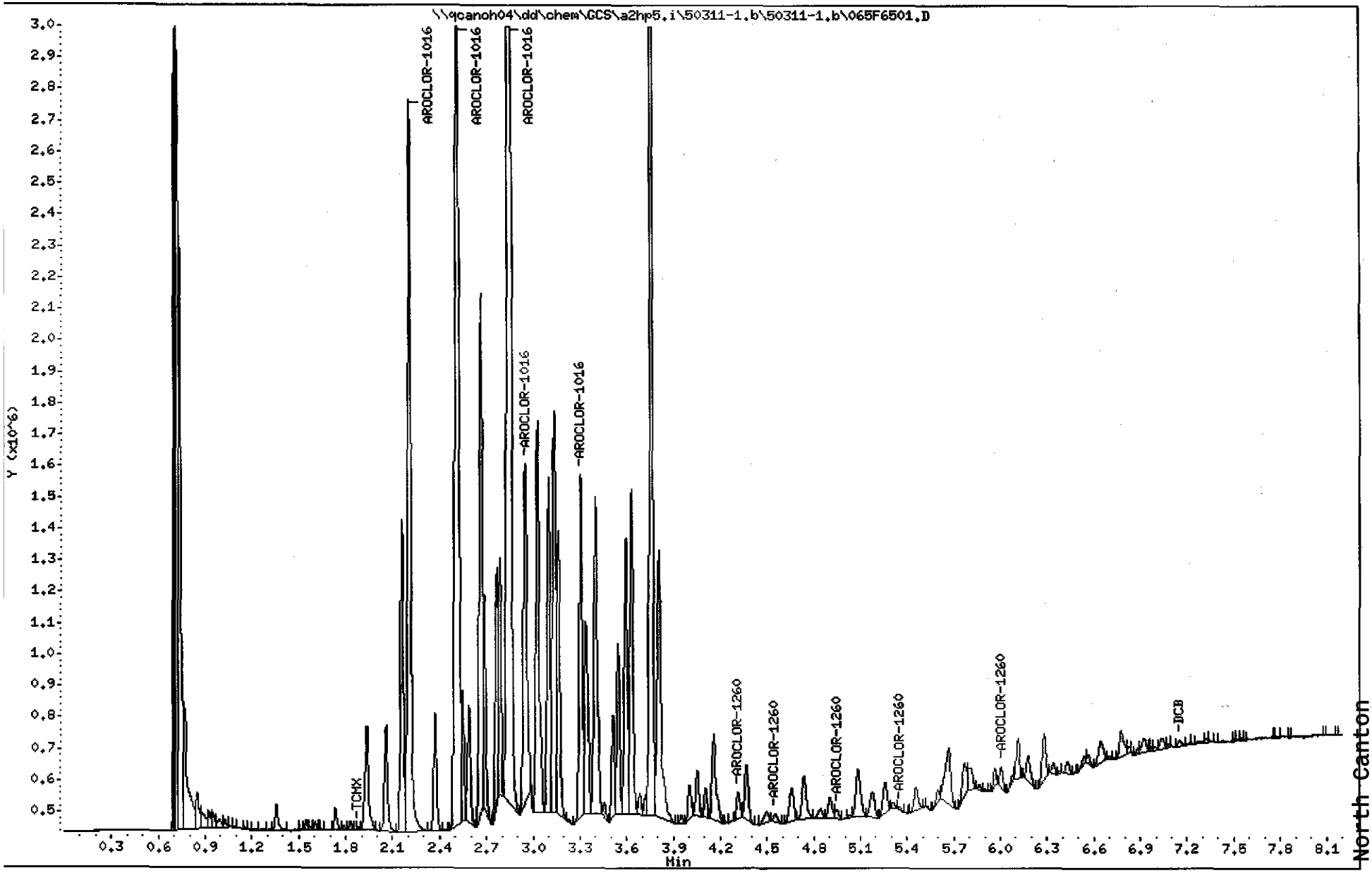


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp5.i\50311-1.b\50311-1.b\065F6501.D
Date : 12-MAR-2005 05:47
Client ID: S-030205-JH-039
Sample Info: G5F8F1AG,1000
Volume Injected (uL): 1.0
Column phase: restek pest clpI

Instrument: a2hp5.i
Operator: 9237
Column diameter: 0.32



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F811AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-023 G5F811AG-MSD
Date Sampled...: 03/02/05 10:20 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 1 **Initial Wgt/Vol:** 30.11 g **Final Wgt/Vol..:** 10 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**96**	**(10 - 200)**			**SW846 8082**
	92	**(10 - 200)**	**4.5**	**(0-30)**	**SW846 8082**
Aroclor 1260	**87**	**(10 - 200)**			**SW846 8082**
	83	**(10 - 200)**	**5.0**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 172)
	93	(10 - 172)
Decachlorobiphenyl	85	(40 - 138)
	81	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F811AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-023 G5F811AG-MSD
Date Sampled...: 03/02/05 10:20 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 1 **Initial Wgt/Vol:** 30.11 g **Final Wgt/Vol..:** 10 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**380**	**360**	**ug/kg**	**96**		**SW846 8082**
	ND	**380**	**350**	**ug/kg**	**92**	**4.5**	**SW846 8082**
Aroclor 1260	**ND**	**380**	**330**	**ug/kg**	**87**		**SW846 8082**
	ND	**380**	**310**	**ug/kg**	**83**	**5.0**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(10 - 172)
	93	(10 - 172)
Decachlorobiphenyl	85	(40 - 138)
	81	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

Data File: 017F1701.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\017F1701.D
Lab Smp Id: G5F811AF Client Smp ID: S-030205-JH-055
Inj Date : 18-MAR-2005 01:44
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F811AF
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 17 QC Sample: MS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

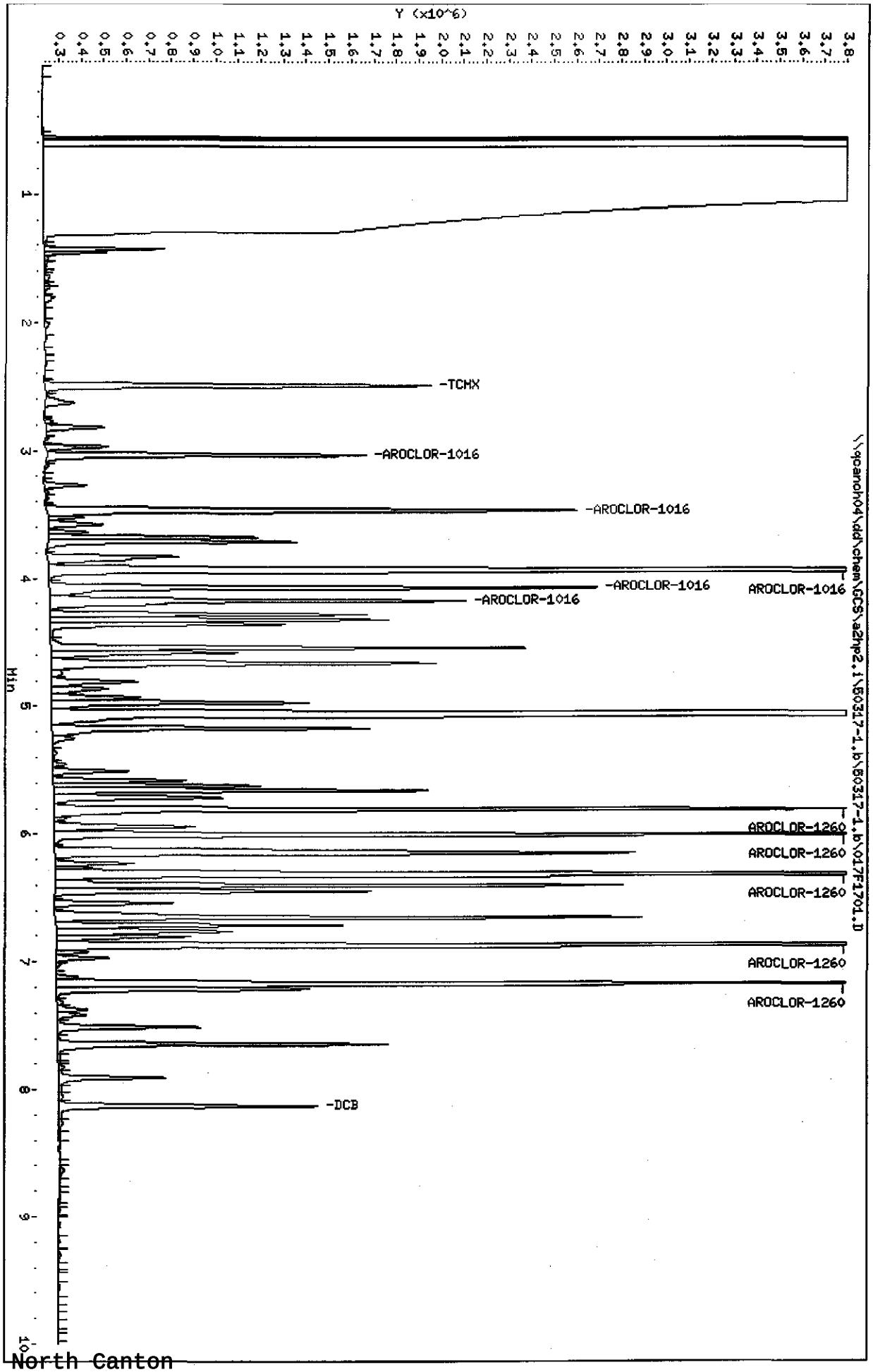
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.110	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.494	2.489	0.005	3136675	0.01946	6.463		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.036	3.031	0.005	2431170	0.92485	307.2	80.00- 120.00	100.00
3.468	3.464	0.004	4935606	0.92890	308.5	150.46- 250.77	203.01
3.937	3.934	0.003	11240905	0.98341	326.6	334.89- 558.16	462.37
4.074	4.070	0.004	4467927	0.95406	316.8	136.27- 227.12	183.78
4.176	4.173	0.003	3786135	1.02307	339.8	106.47- 177.46	155.73
Average of Peak Concentrations =					319.8		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.806	5.804	0.002	3557340	0.88544	294.1	80.00- 120.00	100.00
6.003	6.001	0.002	4094137	0.86466	287.2	87.87- 146.45	115.09
6.319	6.317	0.002	4470075	0.86571	287.5	96.24- 160.39	125.66
6.870	6.869	0.001	6190497	0.84840	281.8	135.40- 225.67	174.02
7.174	7.173	0.001	3871997	0.87588	290.9	76.53- 127.54	108.85
Average of Peak Concentrations =					288.3		
$ 9 DCB					CAS #: 2051-24-3		
8.130	8.129	0.001	1151114	0.01707	5.669		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\017F1701.D
Date : 18-MAR-2005 01:44
Client ID: S-030205-JH-055
Sample Info: C5F811AF
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 018F1801.D
Report Date: 18-Mar-2005 14:19

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\018F1801.D
Lab Smp Id: G5F811AG Client Smp ID: S-030205-JH-055
Inj Date : 18-MAR-2005 02:00
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F811AG
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 18 QC Sample: MSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

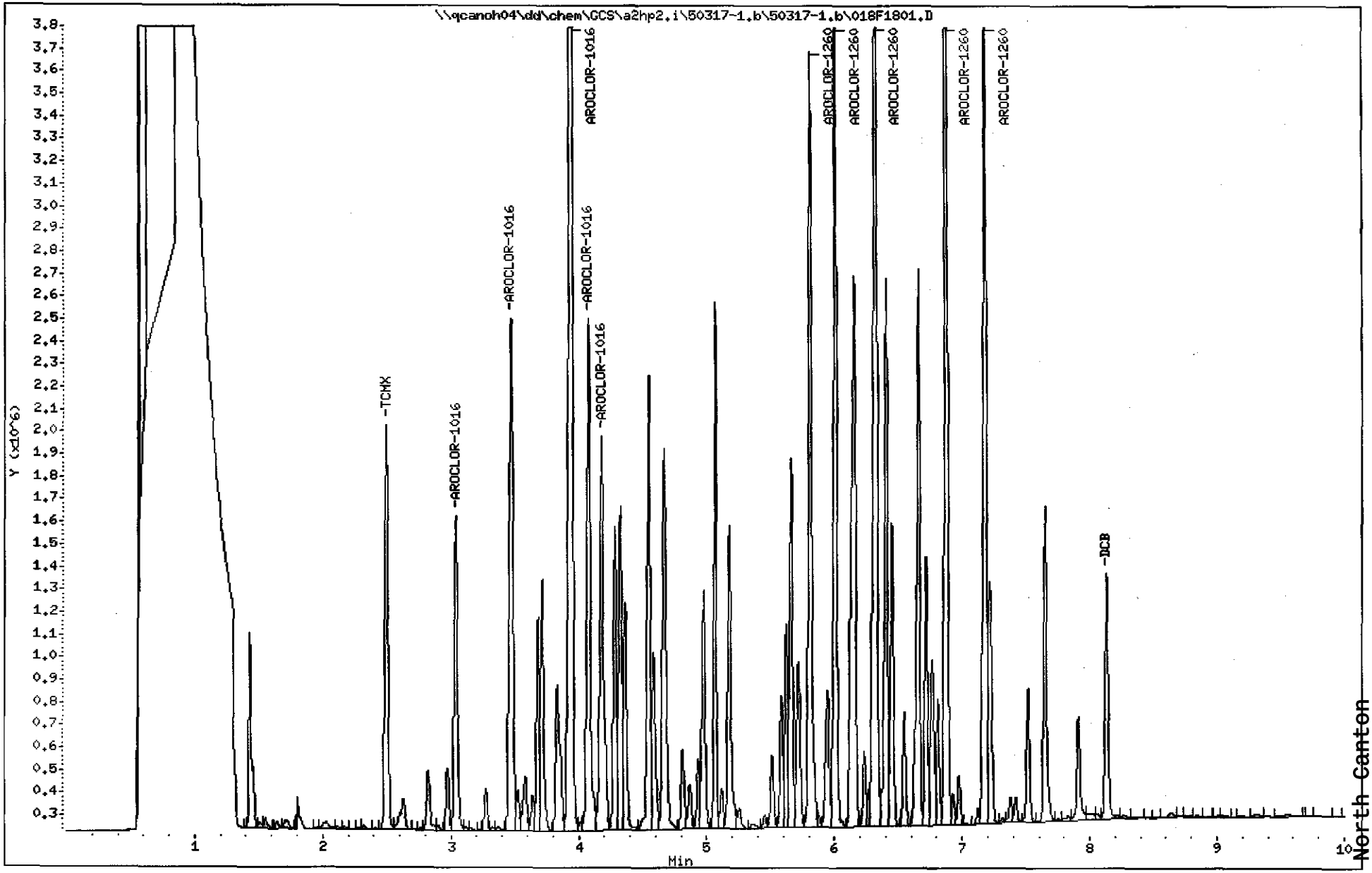
Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.180	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.489	0.003	3002371	0.01863	6.172		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.034	3.031	0.003	2402220	0.91383	302.8	80.00- 120.00	100.00
3.466	3.464	0.002	4771556	0.89802	297.6	150.46- 250.77	198.63
3.936	3.934	0.002	10668460	0.93333	309.2	334.89- 558.16	444.11
4.072	4.070	0.002	4208109	0.89858	297.7	136.27- 227.12	175.18
4.174	4.173	0.001	3585421	0.96883	321.0	106.47- 177.46	149.25
		Average of Peak Concentrations =			305.7		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.806	5.804	0.002	3439805	0.85618	283.7	80.00- 120.00	100.00
6.003	6.001	0.002	3925868	0.82912	274.7	67.87- 146.45	114.13
6.318	6.317	0.001	4280681	0.82903	274.7	96.24- 160.39	124.45
6.869	6.869	0.000	5827803	0.79869	264.6	135.40- 225.67	169.42
7.173	7.173	0.000	3642849	0.82405	273.0	76.53- 127.54	105.90
		Average of Peak Concentrations =			274.2		
$ 9 DCB					CAS #: 2051-24-3		
8.130	8.129	0.001	1087045	0.01612	5.341		

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\018F1801.D
Date : 18-MAR-2005 02:00
Client ID: S-030205-JH-055
Sample Info: G5F811AG
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



STL North Canton

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F9J1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-036 G5F9J1AG-MSD
Date Sampled...: 03/02/05 13:20 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 10 **Initial Wgt/Vol:** 29.96 g **Final Wgt/Vol..:** 10 mL

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Aroclor 1016	**425 DIL,a**	**(10 - 200)**			**SW846 8082**
	386 DIL,a	**(10 - 200)**	**9.6**	**(0-30)**	**SW846 8082**
Aroclor 1260	**117 DIL**	**(10 - 200)**			**SW846 8082**
	110 DIL	**(10 - 200)**	**6.0**	**(0-30)**	**SW846 8082**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102 DIL	(10 - 172)
	99 DIL	(10 - 172)
Decachlorobiphenyl	114 DIL	(40 - 138)
	104 DIL	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: A5C030182 **Work Order #...:** G5F9J1AF-MS **Matrix.....:** SO
MS Lot-Sample #: A5C030182-036 G5F9J1AG-MSD
Date Sampled...: 03/02/05 13:20 **Date Received..:** 03/03/05
Prep Date.....: 03/04/05 **Analysis Date..:** 03/18/05
Prep Batch #...: 5062356
Dilution Factor: 10 **Initial Wgt/Vol:** 29.96 g **Final Wgt/Vol..:** 10 mL

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aroclor 1016	**ND**	**370**	**1600**	**ug/kg**	**425**		**SW846 8082**
	Qualifiers:		DIL,a				
	ND	**370**	**1400**	**ug/kg**	**386**	**9.6**	**SW846 8082**
	Qualifiers:		DIL,a				
Aroclor 1260	**ND**	**370**	**440**	**ug/kg**	**117**		**SW846 8082**
	Qualifiers:		DIL				
	ND	**370**	**410**	**ug/kg**	**110**	**6.0**	**SW846 8082**
	Qualifiers:		DIL				

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	102 DIL	(10 - 172)
	99 DIL	(10 - 172)
Decachlorobiphenyl	114 DIL	(40 - 138)
	104 DIL	(40 - 138)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

DIL The concentration is estimated or not reported due to dilution or the presence of interfering analytes.

a Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

Data File: 028F2801.D
Report Date: 18-Mar-2005 14:20

STL North Canton

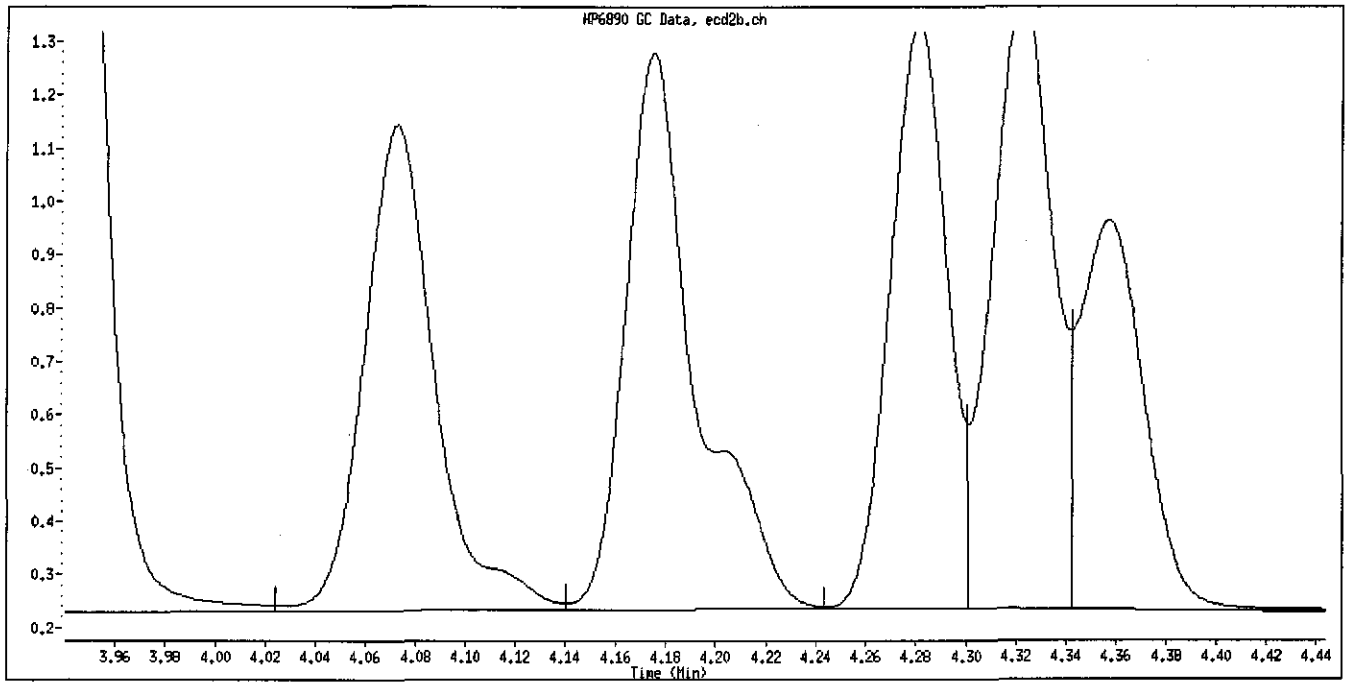
Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\028F2801.D
Lab Smp Id: G5F9J1AF Client Smp ID: S-030205-JH-068
Inj Date : 18-MAR-2005 04:40
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9J1AF,10
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 28 QC Sample: MS
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

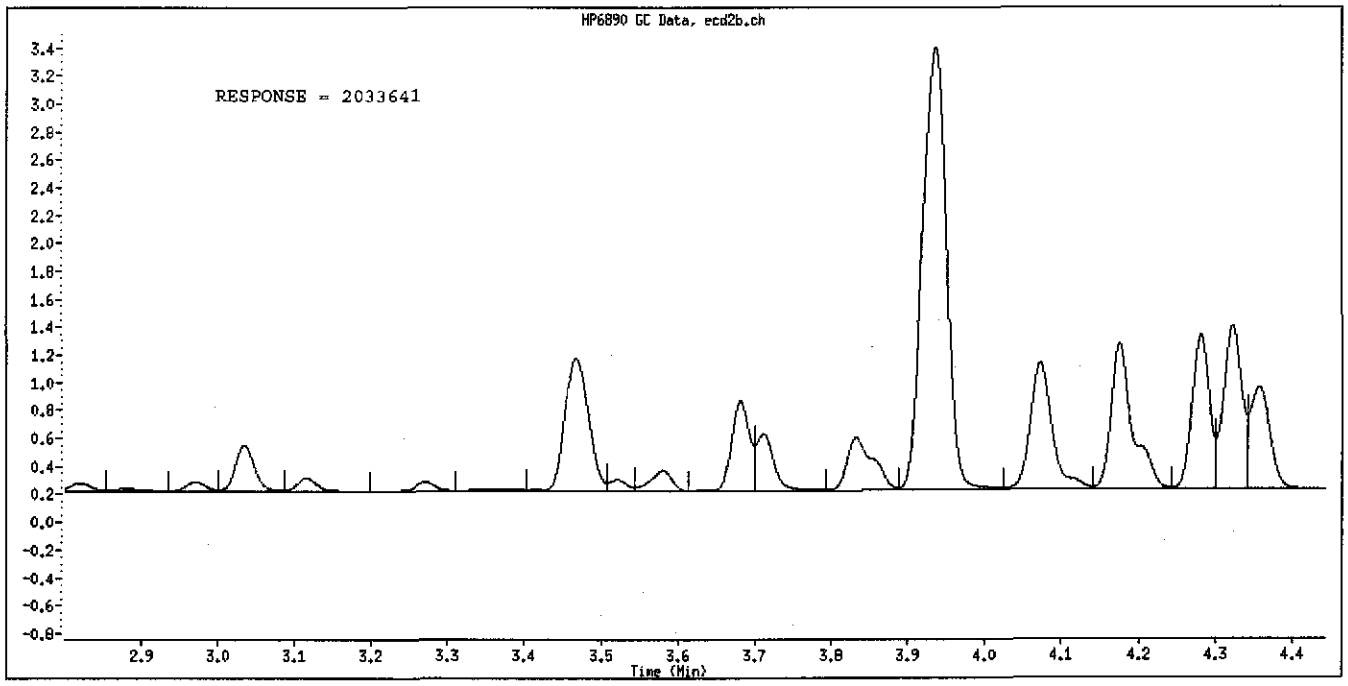
Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	29.960	initial volume
Cpnd Variable		Local Compound Variable

RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.492	2.489	0.003	328754	0.00204	6.808		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.034	3.031	0.003	562995	0.21417	714.8	80.00- 120.00	100.00(RM)
3.465	3.464	0.001	2005711	0.37748	1260	150.46- 250.77	356.26
3.935	3.934	0.001	6875166	0.60147	2008	334.89- 558.16	1221.18
4.072	4.070	0.002	1785966	0.38136	1273	136.27- 227.12	317.23
4.175	4.173	0.002	2033641	0.54952	1834	106.47- 177.46	361.22
		Average of Peak Concentrations =			1418		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.804	0.001	532519	0.13255	442.4	80.00- 120.00	100.00
6.003	6.001	0.002	592109	0.12505	417.4	87.87- 146.45	111.19
6.318	6.317	0.001	624817	0.12101	403.9	96.24- 160.39	117.33
6.870	6.869	0.001	723371	0.09914	330.9	135.40- 225.67	135.84
7.174	7.173	0.001	472610	0.10691	356.8	76.53- 127.54	88.75
		Average of Peak Concentrations =			390.3		
$ 9 DCB					CAS #: 2051-24-3		
8.130	8.129	0.001	153137	0.00227	7.580		

Inj. Date and Time: 18-MAR-2005 04:40
Instrument ID: a2hp2.i
Client ID: S-030205-JH-068
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/18/2005



Original Integration

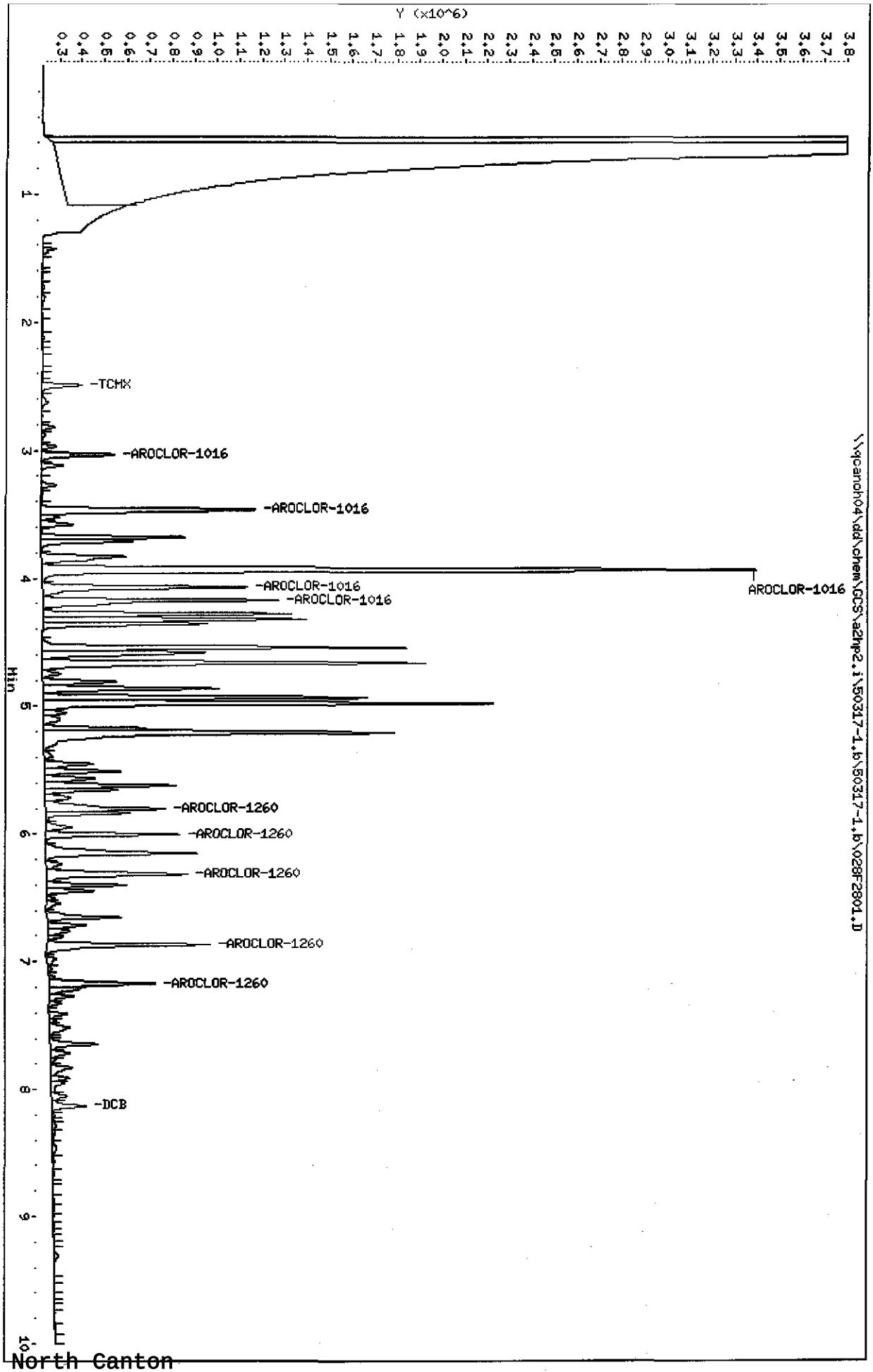


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanch04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\028F2801.D
Date : 18-MAR-2005 04:40
Client ID: S-030205-JH-068
Sample Info: G5F931AF,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



Data File: 029F2901.D
Report Date: 18-Mar-2005 14:20

STL North Canton

Data file : \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\029F2901.D
Lab Smp Id: G5F9J1AG Client Smp ID: S-030205-JH-068
Inj Date : 18-MAR-2005 04:56
Operator : 9237 Inst ID: a2hp2.i
Smp Info : G5F9J1AG,10
Misc Info : 12-AR1660TD.SUB,SMS.SPK
Comment :
Method : \\QCANOH04\DD\chem\GCS\a2hp2.i\50317-1.b\HP2PCBF.m\HP2PCBR.m
Meth Date : 18-Mar-2005 14:00 lic Quant Type: ESTD
Cal Date : 14-MAR-2005 22:51 Cal File: 029F2901.D
Als bottle: 29 QC Sample: MSD
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: 12-AR1660TD.SUB
Target Version: 4.14 Sample Matrix: SOIL
Processing Host: QCANOH04

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	10000.000	final volume
Vo	30.000	initial volume
Cpnd Variable		Local Compound Variable

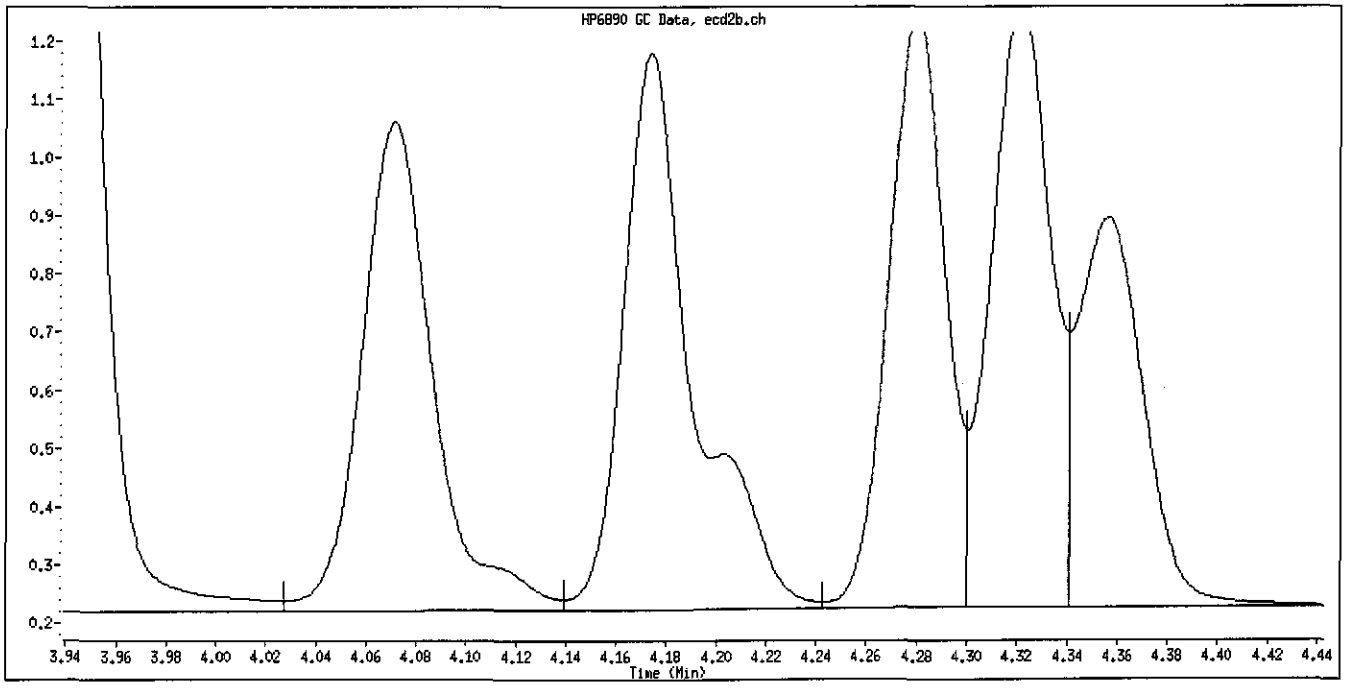
RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COL (ng)	FINAL (ug/kg)	TARGET RANGE	RATIO
$ 1 TCMX					CAS #: 877-09-8		
2.490	2.489	0.001	319270	0.00198	6.602		
3 AROCLOR-1016					CAS #: 12674-11-2		
3.031	3.031	0.000	518776	0.19735	657.8	80.00- 120.00	100.00(RM)
3.464	3.464	0.000	1795404	0.33790	1126	150.46- 250.77	346.08
3.935	3.934	0.001	6149664	0.53800	1793	334.89- 558.16	1185.42
4.070	4.070	0.000	1669899	0.35658	1189	136.27- 227.12	321.89
4.174	4.173	0.001	1858217	0.50212	1674	106.47- 177.46	358.19
Average of Peak Concentrations =					1288		
8 AROCLOR-1260					CAS #: 11096-82-5		
5.805	5.804	0.001	506687	0.12612	420.4	80.00- 120.00	100.00
6.003	6.001	0.002	563094	0.11892	396.4	87.87- 146.45	111.13
6.318	6.317	0.001	595697	0.11537	384.6	96.24- 160.39	117.57
6.870	6.869	0.001	681844	0.09345	311.5	135.40- 225.67	134.57
7.173	7.173	0.000	432102	0.09775	325.8	76.53- 127.54	85.28
Average of Peak Concentrations =					367.7		
$ 9 DCB					CAS #: 2051-24-3		
8.129	8.129	0.000	140375	0.00208	6.939		

Data File: 029F2901.D
Report Date: 18-Mar-2005 14:20

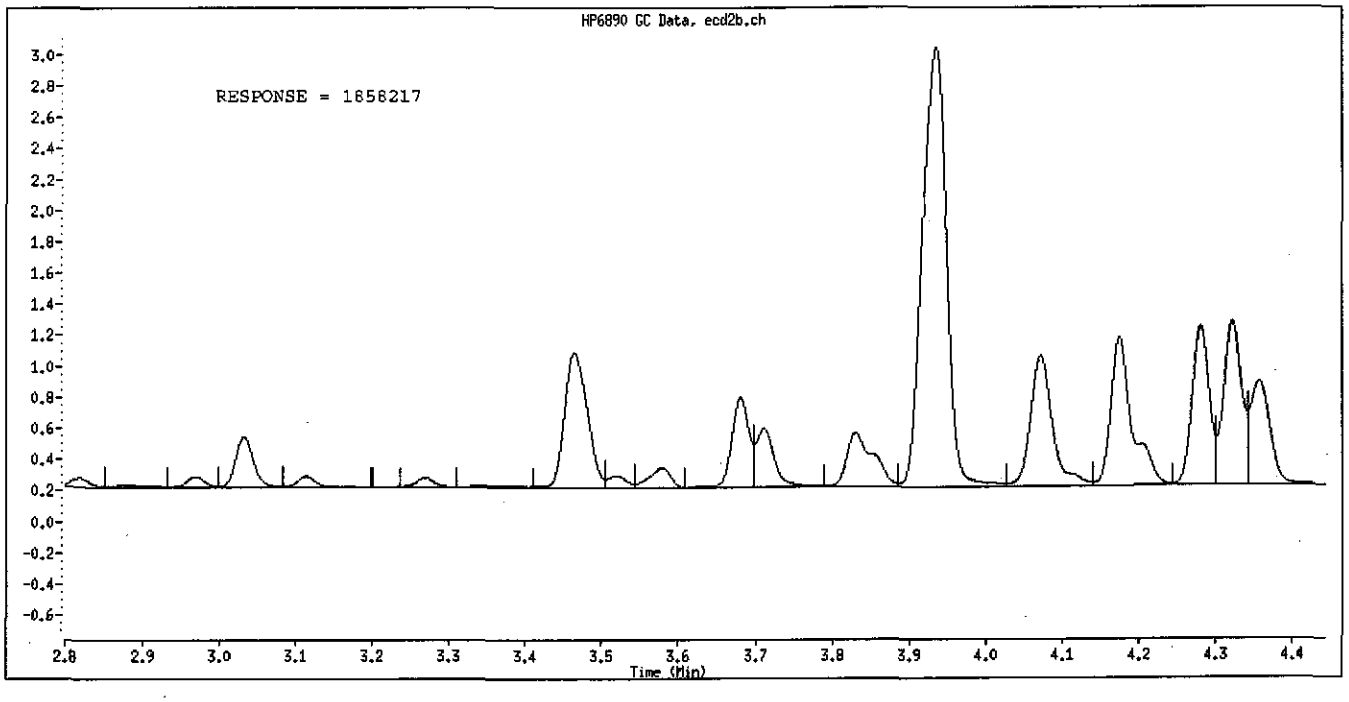
QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Inj. Date and Time: 18-MAR-2005 04:56
Instrument ID: a2hp2.i
Client ID: S-030205-JH-068
Compound Name: AROCLOR-1016
CAS #: 12674-11-2
Report Date: 03/18/2005



Original Integration

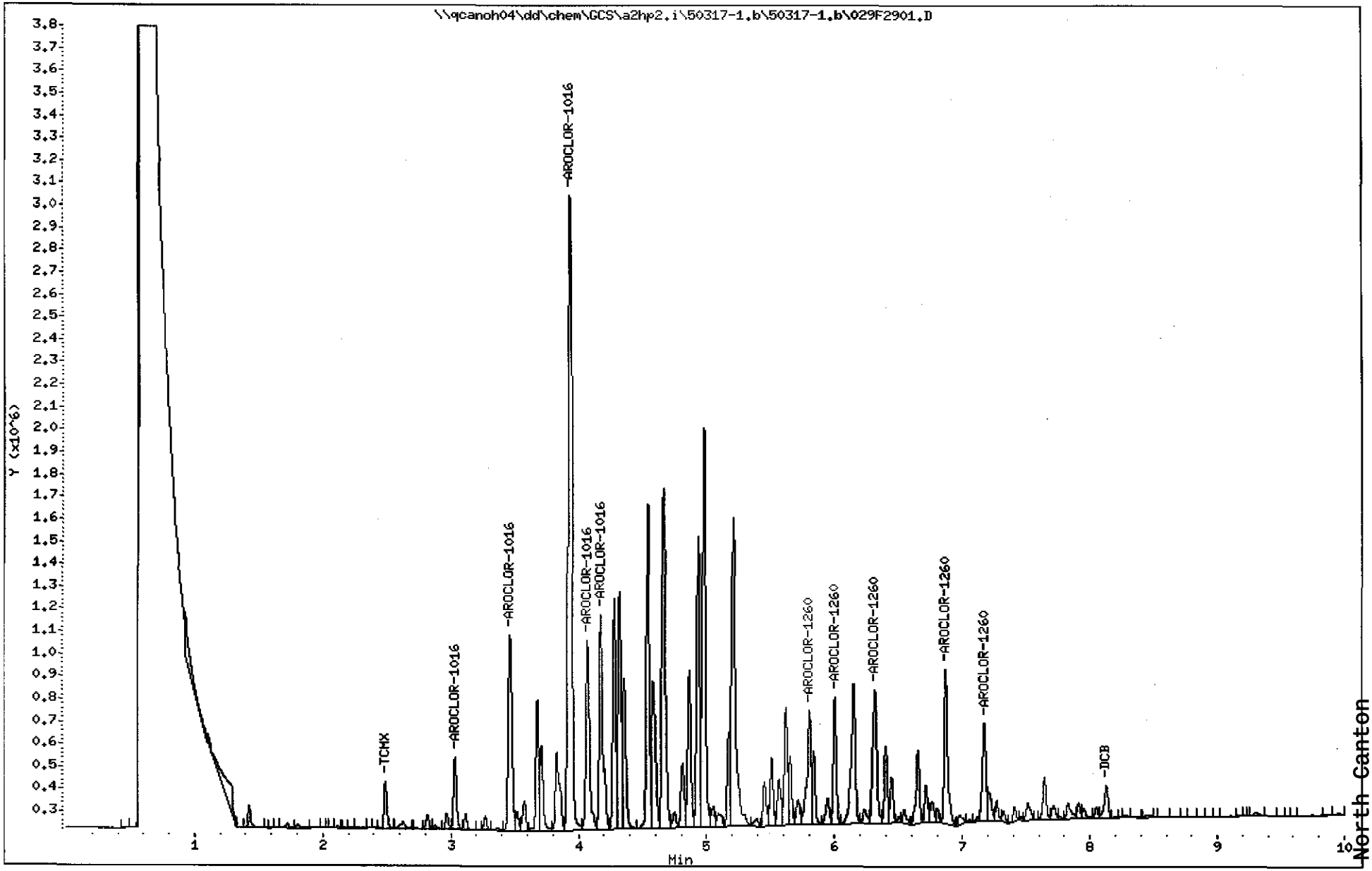


Manual Integration

Manually Integrated By: LiC
Manual Integration Reason: Manually Assigned

Data File: \\qcanoh04\dd\chem\GCS\a2hp2.i\50317-1.b\50317-1.b\029F2901.D
Date : 18-MAR-2005 04:56
Client ID: S-030205-JH-068
Sample Info: G5F9J1AG,10
Volume Injected (uL): 1.0
Column phase: restek pest clpII

Instrument: a2hp2.i
Operator: 9237
Column diameter: 0.53



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STL North Canton

SEVERN TRENT STL

MISCELLANEOUS DATA

==========

HP6890 GC METHOD

==========

OVEN
Initial temp: 160 'C (On)
Initial time: 1.00 min
Ramps:

#	Rate	Final temp	Final time
1	25.00	240	0.20
2	25.00	280	2.00
3	0.0(Off)		

Post temp: 170 'C
Post time: 0.00 min
Run time: 8.00 min

Maximum temp: 330 'C
Equilibration time: 3.00 min

FRONT INLET (UNKNOWN)
Mode: Pulsed Splitless
Initial temp: 225 'C (On)
Pressure: 12.00 psi (On)
Pulse pressure: 15.0 psi
Pulse time: 0.20 min
Purge flow: 40.0 mL/min
Purge time: 0.75 min
Total flow: 100.3 mL/min
Gas saver: Off
Gas type: Hydrogen

BACK INLET ()

COLUMN 1
Capillary Column
Model Number: RESTEK CLPI
CLPI
Max temperature: 300 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: constant pressure
Pressure: 12.00 psi
Nominal initial flow: 27.1 mL/min
Average velocity: 206 cm/sec
Inlet: Front Inlet
Outlet: Front Detector
Outlet pressure: ambient

COLUMN 2
Capillary Column
Model Number: RESTEK CLPI
CLPI
Max temperature: 300 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: (see column 1)
Pressure: 12.00 psi
Nominal initial flow: 27.1 mL/min
Average velocity: 206 cm/sec
Inlet: Front Inlet
Outlet: Back Detector
Outlet pressure: ambient

FRONT DETECTOR (μECD)
Temperature: 300 'C (On)
Mode: Constant makeup flow
Makeup flow: 60.0 mL/min (On)
Makeup Gas Type: Nitrogen
Electrometer: On

BACK DETECTOR (μECD)
Temperature: 300 'C (On)
Mode: Constant makeup flow
Makeup flow: 60.0 mL/min (On)
Makeup Gas Type: Nitrogen
Electrometer: On

SIGNAL 1
Data rate: 20 Hz
Type: front detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

SIGNAL 2
Data rate: 20 Hz
Type: back detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

7673 Injector

Front Injector:

Sample Washes	2
Sample Pumps	3
Injection Volume	1.0 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	4
PostInj Solvent B Washes	4
Viscosity Delay	0 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

Back Injector:
No parameters specified

BLS
3-4-05

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50303IC
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP2PCBF	1	Sample		
2	2	1232,,1,1 passF/P	HP2PCBF	1	Sample		
3	3	1232,,1,2	HP2PCBF	1	Sample		
4	4	1232,,1,3	HP2PCBF	1	Sample		
5	5	1232,,1,4	HP2PCBF	1	Sample		
6	6	1232,,1,5	HP2PCBF	1	Sample		
7	7	1242,,1,1	HP2PCBF	1	Sample		
8	8	1242,,1,2	HP2PCBF	1	Sample		
9	9	1242,,1,3	HP2PCBF	1	Sample		
10	10	1242,,1,4	HP2PCBF	1	Sample		
11	11	1242,,1,5	HP2PCBF	1	Sample		
12	12	1248,,1,1	HP2PCBF	1	Sample		
13	13	1248,,1,2	HP2PCBF	1	Sample		
14	14	1248,,1,3	HP2PCBF	1	Sample		
15	15	1248,,1,4	HP2PCBF	1	Sample		
16	16	1248,,1,5	HP2PCBF	1	Sample		
17	17	2154,,1,1	HP2PCBF	1	Sample		
18	18	2154,,1,2	HP2PCBF	1	Sample		
19	19	2154,,1,3	HP2PCBF	1	Sample		
20	20	2154,,1,4	HP2PCBF	1	Sample		
21	21	2154,,1,5	HP2PCBF	1	Sample		
22	22	1660,,1,1	HP2PCBF	1	Sample		
23	23	1660,,1,2	HP2PCBF	1	Sample		
24	24	1660,,1,3	HP2PCBF	1	Sample		
25	25	1660,,1,4	HP2PCBF	1	Sample		

Sequence: C:\HPCHEM\2\SEQUENCE\50303IC.S

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
26	26	1660,,1,5 pass F/R	HP2PCBF	1	Sample		
27	27	ICV,,2	HP2PCBF	1	Sample		
28	28	1262,,1,3	HP2PCBF	1	Sample		
29	29	1268,,1,3	HP2PCBF	1	Sample		
30	30	G5DE21AA RR10x	HP2PCBF	1	Sample	5061259	
31	31	G5DGH1AA RR10x	HP2PCBF	1	Sample	water	
32	32	G5DG91AA	HP2PCBF	1	Sample	rear	
33	33	G5DG91AC,5	HP2PCBF	1	Sample		
34	34	G5DG91AD,5	HP2PCBF	1	Sample		
35	35	G46CE2AL	HP2PCBF	1	Sample	2.0	
36	36	G49N31AA	HP2PCBF	1	Sample	2.0	
37	37	G49N31AC,2	HP2PCBF	1	Sample	2.0	
38	38	G49N31AD,2	HP2PCBF	1	Sample	2.0	
39	39	G5AAK1AC	HP2PCBF	1	Sample		
40	40	G5AAN1AC	HP2PCBF	1	Sample		
41	41	G5ARJ1AA	HP2PCBF	1	Sample		
42	42	G5ARJ1AC,2	HP2PCBF	1	Sample		
43	43	1660,,2 pass F/R	HP2PCBF	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR): No
Dest of individual reports for each run: as specified in Method

Sequence Summary Parameters:

One page header: No
Print Configuration: No
Print Sequence: No
Print Logbook: No
Print Method(s): No
Print Analysis reports: No
Print Statistics for Calib. runs: No
Print Statistics for Sample runs: No
Summary style: Sample Summary

equence: C:\HPCHEM\2\SEQUENCE\50308A.S

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50308
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

	Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
14:53	~~1~~	~~1~~	HEX	HP2PCBF	1	Sample	~~2.0~~	
15:09	~~2~~	~~2~~	1660,,2 passFIR	HP2PCBF	1	Sample		
15:25	~~3~~	~~3~~	G5L451AA	HP2PCBF	1	Sample		
15:41	~~4~~	~~4~~	G5NXN1AA	HP2PCBF	1	Sample		Front
	5	5	G5NXN1AC	HP2PCBF	1	Sample		
	6	6	G5NXN1AD	HP2PCBF	1	Sample		
	~~7~~	~~7~~	G5LKK1AA	HP2PCBF	1	Sample		
7:11	~~8~~	~~8~~	G5L441AA	HP2PCBF	1	Sample		restarted GC
	9	9	G5L441AJ	HP2PCBF	1	Sample		
	10	10	G5L441AK	HP2PCBF	1	Sample		
	11	11	G5L461AA	HP2PCBF	1	Sample		
	12	12	G5L471AA	HP2PCBF	1	Sample		
	13	13	G5L481AA	HP2PCBF	1	Sample		
	14	14	G5L491AA	HP2PCBF	1	Sample		
	15	15	G5L5A1AA	HP2PCBF	1	Sample		
	16	16	G5L5C1AA	HP2PCBF	1	Sample		
	17	17	G5L5D1AA	HP2PCBF	1	Sample		
	18	18	G5L5E1AA	HP2PCBF	1	Sample		
	19	19	G5L5F1AA	HP2PCBF	1	Sample		
	20	20	G5L5G1AA	HP2PCBF	1	Sample		
	21	21	G5L5H1AA	HP2PCBF	1	Sample		
	22	22	G5M0Q1AA	HP2PCBF	1	Sample		
	23	23	1660,,2	HP2PCBF	1	Sample		
	24	24	G5M0Q1AC	HP2PCBF	1	Sample		
	25	25	1660,,2	HP2PCBF	1	Sample		

Sequence Table (Back Injector):

MM 3/10/05

Sequence: C:\HPCHEM\2\SEQUENCE\50308A.S

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50308
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	8	G5L441AA	HP2PCBF	1	Sample		
2	9	G5L441AJ	HP2PCBF	1	Sample		
3	10	G5L441AK	HP2PCBF	1	Sample		
4	11	G5L461AA	HP2PCBF	1	Sample		
5	12	G5L471AA	HP2PCBF	1	Sample		
6	13	G5L481AA	HP2PCBF	1	Sample		
7	14	G5L491AA	HP2PCBF	1	Sample		
8	15	G5L5A1AA	HP2PCBF	1	Sample		
9	16	G5L5C1AA	HP2PCBF	1	Sample		
10	17	G5L5D1AA	HP2PCBF	1	Sample		
11	18	G5L5E1AA	HP2PCBF	1	Sample		
12	19	G5L5F1AA	HP2PCBF	1	Sample		
13	20	G5L5G1AA	HP2PCBF	1	Sample		
14	21	G5L5H1AA	HP2PCBF	1	Sample		
15	22	G5M0Q1AA	HP2PCBF	1	Sample		
16	23	1660,,2 P055F/Fail	HP2PCBF	1	Sample		
17	24	G5M0Q1AC	HP2PCBF	1	Sample		
18	25	G5FJE1AD RRhit	HP2PCBF	1	Sample		
19	26	G5FJJ1AN RRhit	HP2PCBF	1	Sample		
20	27	G5FJ21AC RRhit	HP2PCBF	1	Sample		
21	28	G5FJ21AF	HP2PCBF	1	Sample		
22	29	G5FJ21AG	HP2PCBF	1	Sample		
23	30	G5FJ41AC RRhit	HP2PCBF	1	Sample		
24	31	G5GG61AE RRhit	HP2PCBF	1	Sample		
25	32	G5G1L1AA	HP2PCBF	1	Sample		
26	33	G5G1L1AC	HP2PCBF	1	Sample		
27	34	1660,,2 P055F/R (Ave)	HP2PCBF	1	Sample		

Front

Front

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50314IC
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP2PCBF	3	Sample		
2	2	1232,,1,1	HP2PCBF	1	Sample		
3	3	1232,,1,2	HP2PCBF	1	Sample		
4	4	1232,,1,3	HP2PCBF	1	Sample		
5	5	1232,,1,4	HP2PCBF	1	Sample		
6	6	1232,,1,5	HP2PCBF	1	Sample		
7	7	1242,,1,1	HP2PCBF	1	Sample		
8	8	1242,,1,2	HP2PCBF	1	Sample		
9	9	1242,,1,3	HP2PCBF	1	Sample		
10	10	1242,,1,4	HP2PCBF	1	Sample		
11	11	1242,,1,5	HP2PCBF	1	Sample		
12	12	1248,,1,1	HP2PCBF	1	Sample		
13	13	1248,,1,2	HP2PCBF	1	Sample		
14	14	1248,,1,3	HP2PCBF	1	Sample		
15	15	1248,,1,4	HP2PCBF	1	Sample		
16	16	1248,,1,5	HP2PCBF	1	Sample		
17	17	2154,,1,1	HP2PCBF	1	Sample		
18	18	2154,,1,2	HP2PCBF	1	Sample		
19	19	2154,,1,3	HP2PCBF	1	Sample		
20	20	2154,,1,4	HP2PCBF	1	Sample		
21	21	2154,,1,5	HP2PCBF	1	Sample		
22	22	1660,,1,1	HP2PCBF	1	Sample		
23	23	1660,,1,2	HP2PCBF	1	Sample		
24	24	1660,,1,3	HP2PCBF	1	Sample		
25	25	1660,,1,4	HP2PCBF	1	Sample		
26	26	1660,,1,5	HP2PCBF	1	Sample		
27	27	ICV,,2	HP2PCBF	1	Sample		
28	28	1262,,1,3	HP2PCBF	1	Sample		
29	29	1268,,1,3	HP2PCBF	1	Sample		

Q955F / Q955R

122 fail

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50317
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP2PCBF	1	Sample		
2	2	1660,,2 P955F/R	HP2PCBF	1	Sample		
3	3	G50QK1AC	HP2PCBF	1	Sample		
4	4	G50Q71AN	HP2PCBF	1	Sample		
5	5	G50Q81AN	HP2PCBF	1	Sample		
6	6	G50Q91AN	HP2PCBF	1	Sample		
7	7	G50RE1AN	HP2PCBF	1	Sample		
8	8	G54L81AF	HP2PCBF	1	Sample		
9	9	G54L81D5	HP2PCBF	1	Sample		
10	10	G54L81D6	HP2PCBF	1	Sample		
11	11	G54MM1AQ	HP2PCBF	1	Sample		
12	12	G54MP1AQ	HP2PCBF	1	Sample		
13	13	G54MQ1AQ	HP2PCBF	1	Sample		
14	14	G545Q1AA	HP2PCBF	1	Sample		
15	15	G545Q1AC	HP2PCBF	1	Sample		
16	16	G5F811AA	HP2PCBF	1	Sample		
17	17	G5F811AF	HP2PCBF	1	Sample		
18	18	G5F811AG	HP2PCBF	1	Sample		
19	19	G5F9D1AA,20	HP2PCBF	1	Sample		
20	20	G5G2A1AA	HP2PCBF	1	Sample		
21	21	G5G2A1AC	HP2PCBF	1	Sample		
22	22	1660,,2 P955F/R	HP2PCBF	1	Sample		
23	23	G5F9E1AA,5	HP2PCBF	1	Sample		
24	24	G5F9F1AA,10	HP2PCBF	1	Sample		
25	25	G5F9G1AA,50	HP2PCBF	1	Sample		
26	26	G5F9H1AA,50	HP2PCBF	1	Sample		
27	27	G5F9J1AA,10	HP2PCBF	1	Sample		
28	28	G5F9J1AF,10	HP2PCBF	1	Sample		
29	29	G5F9J1AG,10	HP2PCBF	1	Sample		

rear

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
30	30	G5F9K1AA,10 RR-Miss inj.	HP2PCBF	1	Sample		
31	31	G5F9L1AA,10	HP2PCBF	1	Sample		
32	32	G5F9M1AA,2	HP2PCBF	1	Sample		
33	33	G5F9N1AA,10	HP2PCBF	1	Sample		
34	34	G5F9P1AA,10	HP2PCBF	1	Sample		
35	35	G5F9Q1AA,50	HP2PCBF	1	Sample		
36	36	G5F9R1AA,2	HP2PCBF	1	Sample		
37	37	G5P7C1AA	HP2PCBF	1	Sample		
38	38	G5P7F1AA,5	HP2PCBF	1	Sample		
39	39	G5P7H1AA	HP2PCBF	1	Sample		
40	40	G5P7J1AA	HP2PCBF	1	Sample		
41	41	G5P7M1AA	HP2PCBF	1	Sample		
42	42	G5P7Q1AA	HP2PCBF	1	Sample		
43	43	1660,,2	HP2PCBF	1	Sample		
44	44	G5P7T1AA,50	HP2PCBF	1	Sample		
45	45	G5P771AA	HP2PCBF	1	Sample		
46	46	G5P781AA	HP2PCBF	1	Sample		
47	47	G5P791AA	HP2PCBF	1	Sample		
48	48	G5P8C1AA	HP2PCBF	1	Sample		
49	49	G5P8E1AA	HP2PCBF	1	Sample		
50	50	G5P8G1AA,20	HP2PCBF	1	Sample		
51	51	G5P8H1AA,20	HP2PCBF	1	Sample		
52	52	G5P8J1AA	HP2PCBF	1	Sample		
53	53	G5P8M1AA,50	HP2PCBF	1	Sample		
54	54	G5QA21AA	HP2PCBF	1	Sample		
55	55	G5QCC1AA	HP2PCBF	1	Sample		
56	56	G5QCC1AC	HP2PCBF	1	Sample		
57	57	G5QCC1AD	HP2PCBF	1	Sample		
58	58	G5QGV1AA	HP2PCBF	1	Sample		
59	59	G5QGV1AC	HP2PCBF	1	Sample		
60	60	1660,,2	HP2PCBF	1	Sample		

restarted GC

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\2\DATA\
Data Subdirectory:	50317
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D531
1242 D536
1248 D541
2154 D546
1660 D556

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	35	G6C681AC,100 RR- Miss inj.	HP2PCBF	1	Sample		
2	36	G6C7G1AC,100	HP2PCBF	1	Sample		
3	37	G6C7H1AC,100	HP2PCBF	1	Sample		
4	38	G6C7K1AC,50	HP2PCBF	1	Sample		
5	39	G6C7L1AC,100	HP2PCBF	1	Sample		
6	40	G6C7M1AC,100	HP2PCBF	1	Sample		
7	41	G6D9N1AA	HP2PCBF	1	Sample		
8	42	G6D9N1AC	HP2PCBF	1	Sample		
9	43	1660,,2 pass r/R	HP2PCBF	1	Sample		
10	44	G5F9K1AA,10	HP2PCBF	1	Sample		
11	45	1660,,2 pass r/R	HP2PCBF	1	Sample		

Rear

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

Pre-Run Cmd/Macro: off

Data Acquisition: on

Standard Data Analysis: on

Customized Data Analysis: off

Save GLP Data: off

Post-Run Cmd/Macro: on
Name: macro "gcacq5.mac", go

Save Method with Data: off

Injection Source and Location

Injection Source: HP GC Injector

Injection Location: Front

==========

HP6890 GC METHOD

==========

OVEN
Initial temp: 175 'C (On)
Initial time: 1.50 min
Ramps:

#	Rate	Final temp	Final time
1	28.00	250	1.50
2	25.00	300	2.00
3	0.0(Off)		

Post temp: 0 'C
Post time: 0.00 min
Run time: 9.68 min

Maximum temp: 325 'C
Equilibration time: 1.00 min

FRONT INLET (SPLIT/SPLITLESS)
Mode: Splitless
Initial temp: 225 'C (On)
Pressure: 7.50 psi (On)
Purge flow: 40.0 mL/min
Purge time: 0.75 min
Total flow: 75.3 mL/min
Gas saver: Off
Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)
Mode: Split
Initial temp: 0 'C (Off)
Pressure: 0.00 psi (Off)
Total flow: 0.1 mL/min
Gas saver: Off
Gas type: Hydrogen

COLUMN 1
Capillary Column
Model Number: restek 11140
clppestI
Max temperature: 300 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: constant pressure
Pressure: 7.50 psi

COLUMN 2
Capillary Column
Model Number: restek 11340
pestclpII
Max temperature: 300 'C
Nominal length: 30.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.42 um
Mode: (see column 1)
Pressure: 7.50 psi

Nominal initial flow: 14.2 mL/min
Average velocity: 128 cm/sec
Inlet: Front Inlet
Outlet: Front Detector
Outlet pressure: ambient

Nominal initial flow: 14.3 mL/min
Average velocity: 128 cm/sec
Inlet: Front Inlet
Outlet: Back Detector
Outlet pressure: ambient

FRONT DETECTOR (µECD)
Temperature: 300 'C (On)
Mode: Constant makeup flow
Makeup flow: 60.0 mL/min (On)
Makeup Gas Type: Nitrogen
Electrometer: On

BACK DETECTOR (µECD)
Temperature: 300 'C (On)
Mode: Constant makeup flow
Makeup flow: 60.0 mL/min (On)
Makeup Gas Type: Nitrogen
Electrometer: On

SIGNAL 1
Data rate: 20 Hz
Type: front detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

SIGNAL 2
Data rate: 20 Hz
Type: back detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

COLUMN COMP 1
Derive from front detector

COLUMN COMP 2
Derive from back detector

POST RUN
Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint

7673 Injector

Front Injector:

Sample Washes	4
Sample Pumps	4
Injection Volume	2.0 microliters
Syringe Size	10.0 microliters
PostInj Solvent A Washes	4
PostInj Solvent B Washes	4
Viscosity Delay	0 seconds
Plunger Speed	Fast
PreInjection Dwell	0.00 minutes
PostInjection Dwell	0.00 minutes

Back Injector:
No parameters specified

PDF

Sequence: C:\HPCHEM\3\SEQUENCE\50308IC.S

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50308IC
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP5PCBF	3	Sample		
2	2	1232,,1,1	HP5PCBF	1	Sample		
3	3	1232,,1,2	HP5PCBF	1	Sample		
4	4	1232,,1,3	HP5PCBF	1	Sample		
5	5	1232,,1,4	HP5PCBF	1	Sample		
6	6	1232,,1,5	HP5PCBF	1	Sample		
7	7	1242,,1,1	HP5PCBF	1	Sample		
8	8	1242,,1,2	HP5PCBF	1	Sample		
9	9	1242,,1,3	HP5PCBF	1	Sample		
10	10	1242,,1,4	HP5PCBF	1	Sample		
11	11	1242,,1,5	HP5PCBF	1	Sample		
12	12	1248,,1,1	HP5PCBF	1	Sample		
13	13	1248,,1,2	HP5PCBF	1	Sample		
14	14	1248,,1,3	HP5PCBF	1	Sample		
15	15	1248,,1,4	HP5PCBF	1	Sample		
16	16	1248,,1,5	HP5PCBF	1	Sample		
17	17	2154,,1,1	HP5PCBF	1	Sample		
18	18	2154,,1,2	HP5PCBF	1	Sample		
19	19	2154,,1,3	HP5PCBF	1	Sample		
20	20	2154,,1,4	HP5PCBF	1	Sample		
21	21	2154,,1,5	HP5PCBF	1	Sample		
22	22	1660,,1,1	HP5PCBF	1	Sample		
23	23	1660,,1,2	HP5PCBF	1	Sample		
24	24	1660,,1,3	HP5PCBF	1	Sample		
25	25	1660,,1,4	HP5PCBF	1	Sample		
26	26	1660,,1,5	HP5PCBF	1	Sample		
27	27	ICV,,2	HP5PCBF	1	Sample		
28	28	1262,,1,3	HP5PCBF	1	Sample		
29	29	1268,,1,3	HP5PCBF	1	Sample		

restarted GC

MM 3/11/05

Sequence: C:\HPCHEM\3\SEQUENCE\50308IC.S

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50308IC
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	9	1242,,1,3	HP5PCBF	1	Sample		
2	10	1242,,1,4	HP5PCBF	1	Sample		
3	11	1242,,1,5	HP5PCBF	1	Sample		
4	12	1248,,1,1	HP5PCBF	1	Sample		
5	13	1248,,1,2	HP5PCBF	1	Sample		
6	14	1248,,1,3	HP5PCBF	1	Sample		
7	15	1248,,1,4	HP5PCBF	1	Sample		
8	16	1248,,1,5	HP5PCBF	1	Sample		
9	17	2154,,1,1	HP5PCBF	1	Sample		
10	18	2154,,1,2	HP5PCBF	1	Sample		
11	19	2154,,1,3	HP5PCBF	1	Sample		
12	20	2154,,1,4	HP5PCBF	1	Sample		
13	21	2154,,1,5	HP5PCBF	1	Sample		
14	22	1660,,1,1	HP5PCBF	1	Sample		
15	23	1660,,1,2	HP5PCBF	1	Sample		
16	24	1660,,1,3	HP5PCBF	1	Sample		
17	25	1660,,1,4	HP5PCBF	1	Sample		
18	26	1660,,1,5	HP5PCBF	1	Sample		
19	27	ICV,,2	HP5PCBF	1	Sample		
20	28	1262,,1,3	HP5PCBF	1	Sample		
21	29	1268,,1,3	HP5PCBF	1	Sample		
22	30	G5P411AA	HP5PCBF	1	Sample		
23	31	G5P421AA RR 5x	HP5PCBF	1	Sample		
24	32	G5P431AA	HP5PCBF	1	Sample		
25	33	G5P441AA	HP5PCBF	1	Sample		
26	34	G5P451AA	HP5PCBF	1	Sample		
27	35	G5P461AA	HP5PCBF	1	Sample		
28	36	G5P471AA	HP5PCBF	1	Sample		
29	37	G5P481AA	HP5PCBF	1	Sample		

a 3/9/05

Rear

PDF

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50311
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP5PCBF	1	Sample		
2	2	1660,,2 pass F/R	HP5PCBF	1	Sample		
3	3	G5JM31AA	HP5PCBF	1	Sample		
4	4	G5JM51AA,5	HP5PCBF	1	Sample		
5	5	G5JM71AA	HP5PCBF	1	Sample		
6	6	G5JM91AA,50	HP5PCBF	1	Sample		
7	7	G5JNC1AA,50	HP5PCBF	1	Sample		
8	8	G5JND1AA	HP5PCBF	1	Sample		
9	9	G5JNJ1AA	HP5PCBF	1	Sample		
10	10	G5JNK1AA	HP5PCBF	1	Sample		
11	11	G5JNM1AA	HP5PCBF	1	Sample		
12	12	G5JNM1AC	HP5PCBF	1	Sample		
13	13	G5JNM1AD	HP5PCBF	1	Sample		
14	14	G5JNW1AA	HP5PCBF	1	Sample		
15	15	G5JNR1AA	HP5PCBF	1	Sample		
16	16	G5JNR1AC	HP5PCBF	1	Sample		
17	17	G5C751AA,50	HP5PCBF	1	Sample		
18	18	G5C761AA,50	HP5PCBF	1	Sample		
19	19	G5C771AA,500	HP5PCBF	1	Sample		
20	20	G5C781AA,50	HP5PCBF	1	Sample		
21	21	G5C791AA,100	HP5PCBF	1	Sample		
22	22	G5C8A1AA,50	HP5PCBF	1	Sample		
23	23	1660,,2 pass F/R	HP5PCBF	1	Sample		
24	24	G5C8C1AA	HP5PCBF	1	Sample		
25	25	G5C8D1AA,2	HP5PCBF	1	Sample		
26	26	G5C8E1AA,50	HP5PCBF	1	Sample		
27	27	G5C8F1AA,50	HP5PCBF	1	Sample		
28	28	G5C8G1AA,200	HP5PCBF	1	Sample		
29	29	G5C8K1AA,200	HP5PCBF	1	Sample		

Rear

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
30	30	G5C8L1AA,100	HP5PCBF	1	Sample		
31	31	G5C8M1AA,100	HP5PCBF	1	Sample		
32	32	G5C8N1AA,50	HP5PCBF	1	Sample		
33	33	G5C8R1AA	HP5PCBF	1	Sample		
34	34	G5C8T1AA	HP5PCBF	1	Sample		
35	35	G5C8V1AA	HP5PCBF	1	Sample		
36	36	G5C8V1AF	HP5PCBF	1	Sample		
37	37	G5C8V1AG	HP5PCBF	1	Sample		
38	38	G5C8W1AA,20	HP5PCBF	1	Sample		
39	39	G5C821AA	HP5PCBF	1	Sample		
40	40	G5D6R1AA	HP5PCBF	1	Sample		
41	41	G5D6R1AC	HP5PCBF	1	Sample		
42	42	1660,,2 passF/R	HP5PCBF	1	Sample		
43	43	G5JMP1AA	HP5PCBF	1	Sample		
44	44	G5JMR1AA	HP5PCBF	1	Sample		
45	45	G5JMT1AA	HP5PCBF	1	Sample		
46	46	G5JMV1AA	HP5PCBF	1	Sample		
47	47	G5JMW1AA	HP5PCBF	1	Sample		
48	48	G5JM01AA	HP5PCBF	1	Sample		
49	49	G5JM21AA	HP5PCBF	1	Sample		
50	50	G5F751AA,200	HP5PCBF	1	Sample		
51	51	G5F781AA,50	HP5PCBF	1	Sample		
52	52	G5F791AA,100	HP5PCBF	1	Sample		
53	53	G5F8C1AA,50	HP5PCBF	1	Sample		
54	54	G5F801AA	HP5PCBF	1	Sample		
55	55	G5F841AA,10	HP5PCBF	1	Sample		
56	56	G5F851AA,20	HP5PCBF	1	Sample		
57	57	G5F861AA,20	HP5PCBF	1	Sample		
58	58	G5F881AA,5	HP5PCBF	1	Sample		
59	59	G5F891AA,20	HP5PCBF	1	Sample		
60	60	G5F8D1AA,20	HP5PCBF	1	Sample		
61	61	G5F8E1AA,500	HP5PCBF	1	Sample		
62	62	G5F8F1AA,1000	HP5PCBF	1	Sample		
63	63	1660,,2 passF/R	HP5PCBF	1	Sample		
64	64	G5F8F1AF,1000	HP5PCBF	1	Sample		
65	65	G5F8F1AG,1000	HP5PCBF	1	Sample		
66	66	G5F8G1AA,500	HP5PCBF	1	Sample		
67	67	G5F8H1AA,50	HP5PCBF	1	Sample		
68	68	G5F8J1AA,200	HP5PCBF	1	Sample		
69	69	G5F8K1AA,500	HP5PCBF	1	Sample		
70	70	G5F8L1AA,200	HP5PCBF	1	Sample		
71	71	G5F8M1AA	HP5PCBF	1	Sample		
72	72	G5F8N1AA,50	HP5PCBF	1	Sample		
73	73	G5F8P1AA,50	HP5PCBF	1	Sample		
74	74	G5F8Q1AA,200	HP5PCBF	1	Sample		
75	75	G5F8R1AA	HP5PCBF	1	Sample		
76	76	G5F8T1AA,2	HP5PCBF	1	Sample		
77	77	G5F8V1AA	HP5PCBF	1	Sample		
78	78	G5F8W1AA	HP5PCBF	1	Sample		
79	79	G5F8X1AA	HP5PCBF	1	Sample		
80	80	G5F831AA	HP5PCBF	1	Sample		
81	81	G5F9C1AA,50	HP5PCBF	1	Sample		
82	82	G5G141AA	HP5PCBF	1	Sample		
83	83	G5G141AC	HP5PCBF	1	Sample		
84	84	1660,,2 passF/R	HP5PCBF	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

PDF

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50314
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP5PCBF	1	Sample		
2	2	1660,,2 passF/R	HP5PCBF	1	Sample		
3	3	G5QK51AN,2	HP5PCBF	1	Sample		
4	4	1660,,2 passF/R	HP5PCBF	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No

Sequence: C:\HPCHEM\3\SEQUENCE\50314A.S

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50314
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	5	G5Q9V1AC	HP5PCBF	1	Sample		
2	6	G5Q961AC	HP5PCBF	1	Sample		
3	7	G5VGA1AA	HP5PCBF	1	Sample		
4	8	G5WPT1AA	HP5PCBF	1	Sample		
5	9	G5WPT1AC,2	HP5PCBF	1	Sample		
6	10	G5WPT1AD,2	HP5PCBF	1	Sample		
7	11	G5TNK1AL	HP5PCBF	1	Sample		
8	12	G5TNW1AA	HP5PCBF	1	Sample		
9	13	G5TNX1AL	HP5PCBF	1	Sample		
10	14	G5WPV1AA	HP5PCBF	1	Sample		
11	15	G5WPV1AC,2	HP5PCBF	1	Sample		
12	16	G5TKT1AC	HP5PCBF	1	Sample		
13	17	G5TKT1AW	HP5PCBF	1	Sample		
14	18	G5TKT1AX	HP5PCBF	1	Sample		
15	19	G5TK01AC,10	HP5PCBF	1	Sample		
16	20	G5TK21AC	HP5PCBF	1	Sample		
17	21	G5TK31AC,10	HP5PCBF	1	Sample		
18	22	G5WPR1AA	HP5PCBF	1	Sample		
19	23	G5WPR1AC	HP5PCBF	1	Sample		
20	24	PCB SOLID MDL #1	HP5PCBF	1	Sample		
21	25	1660,,2 pass F/R	HP5PCBF	1	Sample		
22	26	G5C831AA	HP5PCBF	1	Sample		
23	27	G5C851AA,100	HP5PCBF	1	Sample		
24	28	G5C861AA	HP5PCBF	1	Sample		
25	29	G5C871AA,500	HP5PCBF	1	Sample		
26	30	G5C881AA	HP5PCBF	1	Sample		
27	31	G5C891AA	HP5PCBF	1	Sample		
28	32	G5C9A1AA,20	HP5PCBF	1	Sample		
29	33	G5C9C1AA,5	HP5PCBF	1	Sample		

Sequence: C:\HPCHEM\3\SEQUENCE\50314A.S

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
30	34	G5C9D1AA	HP5PCBF	1	Sample		
31	35	G5C9E1AA,2	HP5PCBF	1	Sample		
32	36	G5C9F1AA,500	HP5PCBF	1	Sample		
33	37	G5C9G1AA,200	HP5PCBF	1	Sample		
34	38	G5D5F1AA	HP5PCBF	1	Sample		
35	39	G5D5F1AC	HP5PCBF	1	Sample		
36	40	G5D5F1AD	HP5PCBF	1	Sample		
37	41	1660,,2 pass F/R	HP5PCBF	1	Sample		
38	42	G564E1AA	HP5PCBF	1	Sample		
39	43	G564E1AC,5	HP5PCBF	1	Sample		
40	44	G564E1AD,5	HP5PCBF	1	Sample		
41	45	G564M1AA	HP5PCBF	1	Sample		
42	46	G564N1AA	HP5PCBF	1	Sample		
43	47	G564P1AA	HP5PCBF	1	Sample		
44	48	G564Q1AA	HP5PCBF	1	Sample		
45	49	G56791AA	HP5PCBF	1	Sample		
46	50	G56631AA	HP5PCBF	1	Sample		
47	51	G56631AC,5	HP5PCBF	1	Sample		
48	52	1660,,2 pass F/R	HP5PCBF	1	Sample		
49	53	G50VN1AA	HP5PCBF	1	Sample		
50	54	G50V21AA	HP5PCBF	1	Sample		
51	55	HEX	HP5PCBF	2	Sample		
52	56	G51N31AA	HP5PCBF	1	Sample		
53	57	G51N31AC,5	HP5PCBF	1	Sample		
54	58	1660,,2 pass F/R	HP5PCBF	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Summary Parameters:

One page header:	No
Print Configuration:	No
Print Sequence:	No
Print Logbook:	No
Print Method(s):	No
Print Analysis reports:	No
Print Statistics for Calib. runs:	No
Print Statistics for Sample runs:	No
Summary style:	Sample Summary

PDF

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50315
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP5PCBF	1	Sample		
2	2	1660,,2 P955F/R	HP5PCBF	1	Sample		
3	3	G5F8G1AA,5000	HP5PCBF	1	Sample		
4	4	G56791AA	HP5PCBF	1	Sample	2.0	
5	5	G56631AA	HP5PCBF	1	Sample	2.0	
6	6	G5F8G1AA,2000	HP5PCBF	1	Sample		
7	7	1660,,2 P955F/R	HP5PCBF	1	Sample		
8	8	G50VW1AA	HP5PCBF	1	Sample	2.0	
9	9	G50V21AA	HP5PCBF	1	Sample	2.0	
10	10	HEX	HP5PCBF	1	Sample		
11	11	G51N31AA	HP5PCBF	1	Sample	2.0	
12	12	G51N31AC,5	HP5PCBF	1	Sample	2.0	
13	13	1660,,2 P955F/R	HP5PCBF	1	Sample		

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Dest of individual reports for each run:	as specified in Method

Sequence Parameters:

Operator:	9237
Data File Naming:	Auto
Data Directory:	C:\HPCHEM\3\DATA\
Data Subdirectory:	50321
Part of Methods to run:	According to Runtime Checklist
Barcode Reader:	not used
Shutdown Cmd/Macro:	none

Sequence Comment:
1232 D084
1242 D089
1248 D079
2154 D094
1660 D099

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Vial	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	1	HEX	HP5PCBF	1	Sample		
2	2	1660,,2 pass F/R	HP5PCBF	1	Sample		
3	3	G5F9Q1AA,50	HP5PCBF	1	Sample		
4	4	G5F9R1AA,2	HP5PCBF	1	Sample		
5	5	G5P7C1AA	HP5PCBF	1	Sample		
6	6	G5P7F1AA,5	HP5PCBF	1	Sample		
7	7	G5P7H1AA	HP5PCBF	1	Sample		
8	8	G5P7J1AA	HP5PCBF	1	Sample		
9	9	G5P7M1AA	HP5PCBF	1	Sample		
10	10	G5P7Q1AA	HP5PCBF	1	Sample		
11	11	G5P7T1AA,50	HP5PCBF	1	Sample		
12	12	G5P771AA	HP5PCBF	1	Sample		
13	13	G5P781AA	HP5PCBF	1	Sample		
14	14	G5P791AA	HP5PCBF	1	Sample		
15	15	1660,,2 pass F/R	HP5PCBF	1	Sample		

Front

Sequence Table (Back Injector):

No entries - empty table!

Sequence Output Parameters:

Print Sequence Summary Report (SSR):	No
Print Method and Individual reports for each run:	as specified in Method

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2005
Time: 14:11:53

V	LEV 2		LEV 1	LEV 2	
	Y	Blank	Y	Y	Weights/Volumes
	Y	Check	Y	Y	Spike & Surrogate Worksheet
	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			-	-	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

tractionist: 402129 David Benson

ncentrationist: 006088 Steve Earle
402129 David Benson

viewer/Date: BENSOND / 3/03/05

****
* QC BATCH: 5061334 *
****

PREP DATE: 3/03/05
COMP DATE: 3/04/05

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

CTR CPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
15/05	3/18/05	A5C020000-334 **G5D6R-1-AA B**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020000-334 **G5D6R-1-AC C**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 10PPM #4174B 1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-001 **G5C75-1-AA**	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-010 **G5C8F-1-AA**	D	63	QH	SOLID	30.12g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-011 **G5C8G-1-AA**	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-012 **G5C8K-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

****
* *
*QC BATCH: **5061334** *
* *
****

PREP DATE: 3/03/05
COMP DATE: 3/04/05

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/18/05	A5C020144-013 **G5C8L-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-014 **G5C8M-1-AA**	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-015 **G5C8N-1-AA**	D	63	QH	SOLID	30.11g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-016 **G5C8R-1-AA**	D	63	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-017 **G5C8T-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-018 **G5C8V-1-AA**	D	63	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-018 **G5C8V-1-AF S**	D	63	QH	SOLID	30.02g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 10PPM #4174B 1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-018 **G5C8V-1-AG D**	D	63	QH	SOLID	30.01g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 10PPM #4174B 1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-019 **G5C8W-1-AA**	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5061334

PREP DATE: 3/03/05
COMP DATE: 3/04/05

ETR EPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/18/05	A5C020144-002 **G5C76-1-AA**	D	63	QH	SOLID	30.19g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-020 **G5C82-1-AA**	D	63	QH	SOLID	30.14g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
.5/05	3/18/05	A5C020144-003 **G5C77-1-AA**	D	63	QH	SOLID	30.17g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-004 **G5C78-1-AA**	D	63	QH	SOLID	30.16g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-005 **G5C79-1-AA**	D	63	QH	SOLID	30.09g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-006 **G5C8A-1-AA**	D	63	QH	SOLID	30.1g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-007 **G5C8C-1-AA**	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-008 **G5C8D-1-AA**	D	63	QH	SOLID	30.05g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172
15/05	3/18/05	A5C020144-009 **G5C8E-1-AA**	D	63	QH	SOLID	30.1g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1.0 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5061334

PREP DATE: 3/03/05
COMP DATE: 3/04/05

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
/S BY DB															
CM/ACE	#A50E65	NA2SO4	#A39585		HEXANE	#A25E53									

NUMBER OF WORK ORDERS IN BATCH: 24

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2005
Time: 14:11:53

V	LEV 2		LEV 1	LEV 2	
	Y	Blank	Y	Y	Weights/Volumes
	Y	Check	Y	Y	Spike & Surrogate Worksheet
	_	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets computer batch: correct &
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup Bench Sheet Copied per COC

:tractionist: 402129 David Benson

:ncentrationist: 006088 Steve Earle
402129 David Benson

viewer/Date: BENSOND / 3/03/05

QC BATCH: 5061335

PREP DATE: 3/02/05
COMP DATE: 3/03/05

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/18/05	A5C020000-335 **G5D5F-1-AA B**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020000-335 **G5D5F-1-AC C**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 10PPM #4174B 1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020000-335 **G5D5F-1-AD L**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 10PPM #4174B 1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-021 **G5C83-1-AA**	D	63	QH	SOLID	30.11g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-022 **G5C85-1-AA**	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-023 **G5C86-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5061335

PREP DATE: 3/02/05
COMP DATE: 3/03/05

XTR XPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/18/05	A5C020144-024 G5C87-1-AA	D	63	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-025 G5C88-1-AA	D	63	QH	SOLID	30.01g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-026 G5C89-1-AA	D	63	QH	SOLID	30.05g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-027 G5C9A-1-AA	D	63	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-028 G5C9C-1-AA	D	63	QH	SOLID	30.07g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-029 G5C9D-1-AA	D	63	QH	SOLID	30.11g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
15/05	3/18/05	A5C020144-030 G5C9E-1-AA	D	63	QH	SOLID	30.17g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-031 G5C9F-1-AA	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															
.5/05	3/18/05	A5C020144-032 G5C9G-1-AA	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1.0 ML 2/.2 SURR #4172
MENTS:															

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5061335

PREP DATE: 3/02/05
COMP DATE: 3/03/05

(TR (PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
/S BY DB															
CM/ACE #A50E65		NA2SO4 #A39585				HEXANE #A25E53									

NUMBER OF WORK ORDERS IN BATCH: 15

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2005
Time: 14:11:53

V	LEV 2		LEV 1	LEV 2	
.	Y	Blank	Y	Y	Weights/Volumes
:	Y	Check	Y	Y	Spike & Surrogate Worksheet
:	Y	MS/MSD	Y	Y	Vial contains correct volume
.			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			-	-	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

:ractionist: 401088 Renee McGrath

:centrationist: 402129 David Benson
402199 Bonnie Reitz

viewer/Date: MCCOYS / 3/03/05

QC BATCH: 5062344

PREP DATE: 3/03/05
COMP DATE: 3/03/05

PCBs (8082)
SONICATION w/ACID STRIP (PCB)

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/16/05	A5C020213-001 **G5DN3-1-A6**	D	71	QH	SOLID	30.14g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.5/05	3/16/05	A5C020213-002 **G5DPL-1-AH**	D	71	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.5/05	3/21/05	A5C030000-344 **G5G1L-1-AA B**		71	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.5/05	3/21/05	A5C030000-344 **G5G1L-1-AC C**		71	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/10/05	A5C030101-014 **G5FJE-1-AD**	D	71	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/10/05	A5C030101-015 **G5FJJ-1-AN**	D	71	QH	SOLID	30.13g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5062344

PREP DATE: 3/03/05
COMP DATE: 3/03/05

TR PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.5/05	3/10/05	A5C030101-019 **G5FJ2-1-AC**	D	71	QH	SOLID	30.18g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.5/05	3/10/05	A5C030101-019 **G5FJ2-1-AF S**	D	71	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.5/05	3/10/05	A5C030101-019 **G5FJ2-1-AG D**	D	71	QH	SOLID	30.17g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.5/05	3/10/05	A5C030101-020 **G5FJ4-1-AC**	D	71	QH	SOLID	30.05g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/14/05	A5C030172-001 **G5F44-1-AC**	B	71	QH	SOLID	30.09g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-001 **G5F75-1-AA**	D	71	QH	SOLID	30.1g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-002 **G5F78-1-AA**	D	71	QH	SOLID	30.14g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-022 **G5F80-1-AA**	D	71	QH	SOLID	30.19g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-025 **G5F84-1-AA**	D	71	QH	SOLID	30.16g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5062344

PREP DATE: 3/03/05
COMP DATE: 3/03/05

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.6/05	3/21/05	A5C030182-026 **G5F85-1-AA**	D	71	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-027 **G5F86-1-AA**	D	71	QH	SOLID	30.05g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-028 **G5F88-1-AA**	D	71	QH	SOLID	30.11g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-029 **G5F89-1-AA**	D	71	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-003 **G5F79-1-AA**	D	71	QH	SOLID	30.14g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-004 **G5F8C-1-AA**	D	71	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/10/05	A5C030216-001 **G5GG6-1-AE**	D	71	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	300.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

/S BY RM

CM/ACE #A50E65 HEX #A25E53

SSOC TWO SAMPLES AND BLK W/ 5062342

NUMBER OF WORK ORDERS IN BATCH: 22

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2005
Time: 14:11:53

V	LEV 2		LEV 1	LEV 2	
	Y	Blank	Y	Y	Weights/Volumes
	Y	Check	Y	Y	Spike & Surrogate Worksheet
	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			-	-	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

:tractionist: 001756 Stephen Jackson

:ncentrationist: 006088 Steve Earle
001756 Stephen Jackson

viewer/Date: ARTENOM / 3/05/05

QC BATCH: 5062354

PREP DATE: 3/04/05
COMP DATE: 3/05/05

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
6/05	3/21/05	A5C030000-354 **G5G14-1-AA B**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
6/05	3/21/05	A5C030000-354 **G5G14-1-AC C**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
6/05	3/21/05	A5C030182-010 **G5F8J-1-AA**	D	63	QH	SOLID	30.07g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
6/05	3/21/05	A5C030182-011 **G5F8K-1-AA**	D	63	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
6/05	3/21/05	A5C030182-012 **G5F8L-1-AA**	D	63	QH	SOLID	30.1g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
6/05	3/21/05	A5C030182-013 **G5F8M-1-AA**	D	63	QH	SOLID	30.1g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

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* *
*QC BATCH: **5062354** *
* *
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PREP DATE: 3/04/05
COMP DATE: 3/05/05

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.6/05	3/21/05	A5C030182-014 **G5F8N-1-AA**	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-015 **G5F8P-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-016 **G5F8Q-1-AA**	D	63	QH	SOLID	30.01g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-017 **G5F8R-1-AA**	D	63	QH	SOLID	30.15g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-018 **G5F8T-1-AA**	D	63	QH	SOLID	29.95g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-019 **G5F8V-1-AA**	D	63	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-020 **G5F8W-1-AA**	D	63	QH	SOLID	30.14g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-021 **G5F8X-1-AA**	D	63	QH	SOLID	30.05g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															
.6/05	3/21/05	A5C030182-024 **G5F83-1-AA**	D	63	QH	SOLID	30.06g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	1 ML 2/.2 SURR #4172
MENTS:															

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5062354

PREP DATE: 3/04/05
COMP DATE: 3/05/05

XTR XPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.6/05	3/21/05	A5C030182-030 **G5F9C-1-AA**	D	63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-005 **G5F8D-1-AA**	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-006 **G5F8E-1-AA**	D	63	QH	SOLID	30.12g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-007 **G5F8F-1-AA**	D	63	QH	SOLID	30.2g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-007 **G5F8F-1-AF S**	D	63	QH	SOLID	30.09g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-007 **G5F8F-1-AG D**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-008 **G5F8G-1-AA**	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-009 **G5F8H-1-AA**	D	63	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5062354

PREP DATE: 3/04/05
COMP DATE: 3/05/05

ITR IPR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
/S SJ															
CM/ACE #A50E65 NA2SO4 #A39585 HEXANE #A25E53															

NUMBER OF WORK ORDERS IN BATCH: 23

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

Run Date: 3/22/2005
Time: 14:11:53

V	LEV 2		LEV 1	LEV 2	
.	Y	Blank	Y	Y	Weights/Volumes
.	Y	Check	Y	Y	Spike & Surrogate Worksheet
.	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct &
			-	-	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
Bench Sheet Copied per COC

:ractionist: 001756 Stephen Jackson

ıcentrationist: 001756 Stephen Jackson
006088 Steve Earle

viewer/Date: ARTENOM / 3/05/05

QC BATCH: 5062356

PREP DATE: 3/04/05
COMP DATE: 3/05/05

PCBs (8082)
SOXHLET (Na2SO4) w/ACID STRIP (PCB)

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.6/05	3/21/05	A5C030000-356 **G5G2A-1-AA B**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030000-356 **G5G2A-1-AC C**		63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-023 **G5F81-1-AA**	D	63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-023 **G5F81-1-AF S**	D	63	QH	SOLID	30.11g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-023 **G5F81-1-AG D**	D	63	QH	SOLID	30.18g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-031 **G5F9D-1-AA**	D	63	QH	SOLID	30.17g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

QC BATCH: 5062356

PREP DATE: 3/04/05
COMP DATE: 3/05/05

:TR :PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
.6/05	3/21/05	A5C030182-032 G5F9E-1-AA	D	63	QH	SOLID	30.09g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-033 G5F9F-1-AA	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-034 G5F9G-1-AA	D	63	QH	SOLID	30.08g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-035 G5F9H-1-AA	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-036 G5F9J-1-AA	D	63	QH	SOLID	30.04g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-036 G5F9J-1-AF S	D	63	QH	SOLID	29.96g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-036 G5F9J-1-AG D	D	63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 10PPM SPIKE #4174B 1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-037 G5F9K-1-AA	D	63	QH	SOLID	30.15g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172
.6/05	3/21/05	A5C030182-038 G5F9L-1-AA	D	63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:															1 ML 2/.2 SURR #4172

Severn Trent Laboratories, Inc.
EXTRACTION BENCH SHEET

****
QC BATCH: 5062356
****

PREP DATE: 3/04/05
COMP DATE: 3/05/05

TR PR	ANL DUE	LOT#, MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
6/05	3/21/05	A5C030182-039 **G5F9M-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:													1 ML	2/.2	SURR #4172
6/05	3/21/05	A5C030182-040 **G5F9N-1-AA**	D	63	QH	SOLID	30.13g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:													1 ML	2/.2	SURR #4172
6/05	3/21/05	A5C030182-041 **G5F9P-1-AA**	D	63	QH	SOLID	30.03g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:													1 ML	2/.2	SURR #4172
6/05	3/21/05	A5C030182-042 **G5F9Q-1-AA**	D	63	QH	SOLID	30.09g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:													1 ML	2/.2	SURR #4172
6/05	3/21/05	A5C030182-043 **G5F9R-1-AA**	D	63	QH	SOLID	30.00g 10.00mL	0.0	NA	NA	DCM/ACE	200.0	HEXANE	36.0	
MENTS:													1 ML	2/.2	SURR #4172

/S SJ

CM/ACE #A50E65 NA2SO4 #A39585 HEXANE #A25E53

NUMBER OF WORK ORDERS IN BATCH: 20

Lot Number: 5C02144

Sample Control Chain of Custody - STL North Canton
GC Semivolatiles

Sample	Sample Suffix	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date & Time	Analyst
001		G5C751AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
001		G5F751AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
002		G5F781AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
002		G5C761AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
003		G5C771AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
003		G5F791AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
004		G5F8C1AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
004		G5C781AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
005		G5C791AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
005		G5F8D1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
006		G5F8E1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
006		G5C8A1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
007		G5C8C1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
007		G5F8F1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
007	MSD	G5F8F1AG	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
007	MS	G5F8F1AF	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
008		G5F8G1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/15/05	Marcel Mol
008		G5C8D1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
009		G5C8E1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
009		G5F8H1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
010		G5F8J1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
010		G5C8F1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
011		G5C8G1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
011		G5F8K1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
012		G5F8L1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
012		G5C8K1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
013		G5C8L1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
013		G5F8M1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
014		G5F8N1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
014		G5C8M1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
015		G5C8N1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
015		G5F8P1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
016		G5F8Q1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
016		G5C8R1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol

Lot Number: 5C02144

Sample Control Chain of Custody - STL North Canton
GC Semivolatiles

Sample	Sample Suffix	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date & Time	Analyst
017		G5C8T1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
017		G5F8R1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
018		G5F8T1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
018		G5C8V1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
018	MSD	G5C8V1AG	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/12/05	Marcel Mol
018	MS	G5C8V1AF	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/11/05	Marcel Mol
019		G5C8W1AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/12/05	Marcel Mol
019		G5F8V1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
020		G5F8W1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
020		G5C821AA	PCBs (8082)	03/03/05	Dave Benson	03/03/05	Dave Benson	03/12/05	Marcel Mol
021		G5F8X1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
021		G5C831AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
022		G5C851AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
022		G5F801AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
023		G5C861AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
023		G5F811AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
023	MSD	G5F811AG	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
023	MS	G5F811AF	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
024		G5C871AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
024		G5F831AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
025		G5F841AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
025		G5C881AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
026		G5C891AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
026		G5F851AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
027		G5F861AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
027		G5C9A1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
028		G5C9C1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
028		G5F881AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
029		G5C9D1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
029		G5F891AA	PCBs (8082)	03/03/05	Steffani McCoy	03/03/05	Steffani McCoy	03/12/05	Marcel Mol
030		G5F9C1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/12/05	Marcel Mol
030		G5C9E1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
031		G5C9F1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
031		G5F9D1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol

Lot Number: 5C02144

Sample Control Chain of Custody - STL North Canton
GC Semivolatiles

Sample	Sample Suffix	Work Order	Analysis Type	Prep Date	Prep Analyst	Date of Transfer	Transferred By	Analysis Date & Time	Analyst
032		G5F9E1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
032		G5C9G1AA	PCBs (8082)	03/02/05	Dave Benson	03/03/05	Dave Benson	03/14/05	Marcel Mol
033		G5F9F1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
034		G5F9G1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
035		G5F9H1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
036		G5F9J1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
036	MSD	G5F9J1AG	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
036	MS	G5F9J1AF	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
037		G5F9K1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
038		G5F9L1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
039		G5F9M1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
040		G5F9N1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
041		G5F9P1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/18/05	Marcel Mol
042		G5F9Q1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/21/05	Marcel Mol
043		G5F9R1AA	PCBs (8082)	03/04/05	Michele Arteno	03/05/05	Michele Arteno	03/21/05	Marcel Mol

GENERAL CHEMISTRY DATA

QC SUMMARY

METHOD BLANK REPORT

General Chemistry

Client Lot #...: 5C02144 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: G5P1P1AA		MB Lot-Sample #:	A5C080000-139	
	ND	10.0	%	MCAWW 160.3 MOD	03/08-03/09/05	5067139
		Dilution Factor: 1				
Percent Solids		Work Order #: G5P1Q1AA		MB Lot-Sample #:	A5C080000-141	
	ND	10.0	%	MCAWW 160.3 MOD	03/08-03/09/05	5067141
		Dilution Factor: 1				
Percent Solids		Work Order #: G56QL1AA		MB Lot-Sample #:	A5C110000-524	
	ND	10.0	%	MCAWW 160.3 MOD	03/11-03/14/05	5070524
		Dilution Factor: 1				
Percent Solids		Work Order #: G56FV1AA		MB Lot-Sample #:	A5C110000-526	
	ND	10.0	%	MCAWW 160.3 MOD	03/11-03/14/05	5070526
		Dilution Factor: 1				
Percent Solids		Work Order #: G56FP1AA		MB Lot-Sample #:	A5C110000-527	
	ND	10.0	%	MCAWW 160.3 MOD	03/11-03/14/05	5070527
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5C75-SMP **Matrix.....:** SO
G5C75-DUP
Date Sampled...: 03/01/05 11:00 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A5C020144-001	
	88.7	85.4	%	3.8	(0-20)	MCAWW 160.3 MOD	03/08-03/09/05	5067139

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5C8V-SMP G5C8V-DUP **Matrix.....:** SO

Date Sampled...: 03/01/05 13:40 **Date Received..:** 03/02/05

% Moisture.....: 3.6

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C020144-018		
	96.4	96.4	%	0.075	(0-20)	MCAWW 160.3 MOD	03/08-03/09/05	5067139

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5C83-SMP G5C83-DUP **Matrix.....:** SO

Date Sampled...: 03/01/05 13:55 **Date Received..:** 03/02/05

% Moisture.....: 5.1

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C020144-021		
	94.9	95.0	%	0.094	(0-20)	MCAWW 160.3 MOD	03/08-03/09/05	5067141

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5C9G-SMP G5C9G-DUP **Matrix.....:** SO
Date Sampled...: 03/01/05 15:05 **Date Received..:** 03/02/05
% Moisture.....: 14

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C020144-032		
	86.4	87.2	%	0.99	(0-20)	MCAWW 160.3 MOD	03/08-03/09/05	5067141

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5F8F-SMP G5F8F-DUP **Matrix.....:** SO
Date Sampled...: 03/02/05 08:35 **Date Received..:** 03/03/05
% Moisture.....: 8.9

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C030182-007		
	91.1	91.5	%	0.42	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070524

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5TR3-SMP G5TR3-DUP **Matrix.....:** SOLID
Date Sampled...: 03/07/05 12:45 **Date Received..:** 03/09/05
% Moisture.....: 11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C090137-013		
	89.2	86.6	%	3.0	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070524

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5F81-SMP **Matrix.....:** SO
G5F81-DUP
Date Sampled...: 03/02/05 10:20 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C030182-023		
	87.8	86.7	%	1.3	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070526

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5F9F-SMP **Matrix.....:** SO
G5F9F-DUP
Date Sampled...: 03/02/05 13:05 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A5C030182-033	
	87.7	87.7	%	0.0	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070526

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5F9J-SMP G5F9J-DUP **Matrix.....:** SO
Date Sampled...: 03/02/05 13:20 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A5C030182-036		
	89.4	90.8	%	1.6	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070527

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5C020144 **Work Order #...:** G5F9R-SMP **Matrix.....:** SO
G5F9R-DUP
Date Sampled...: 03/02/05 13:55 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A5C030182-043	
	86.8	87.8	%	1.1	(0-20)	MCAWW 160.3 MOD	03/11-03/14/05	5070527

Dilution Factor: 1

SAMPLE DATA

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-001

General Chemistry

Lot-Sample #...: A5C020144-001 **Work Order #...:** G5C75 **Matrix.....:** SO
Date Sampled...: 03/01/05 11:00 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-002

General Chemistry

Lot-Sample #...: A5C020144-002 **Work Order #...:** G5C76 **Matrix.....:** SO
Date Sampled...: 03/01/05 11:05 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.0**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-003

General Chemistry

Lot-Sample #...: A5C020144-003 **Work Order #...:** G5C77 **Matrix.....:** SO
Date Sampled...: 03/01/05 11:10 **Date Received..:** 03/02/05
% Moisture.....: 9.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-004

General Chemistry

Lot-Sample #...: A5C020144-004 **Work Order #...:** G5C78 **Matrix.....:** SO
Date Sampled...: 03/01/05 11:15 **Date Received..:** 03/02/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-005

General Chemistry

Lot-Sample #...: A5C020144-005 **Work Order #...:** G5C79 **Matrix.....:** SO
Date Sampled...: 03/01/05 11:20 **Date Received..:** 03/02/05
% Moisture.....: 9.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-006

General Chemistry

Lot-Sample #...: A5C020144-006 **Work Order #...:** G5C8A **Matrix.....:** SO
Date Sampled...: 03/01/05 11:25 **Date Received..:** 03/02/05
% Moisture.....: 9.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-007

General Chemistry

Lot-Sample #...: A5C020144-007 **Work Order #...:** G5C8C **Matrix.....:** SO
Date Sampled...: 03/01/05 11:30 **Date Received..:** 03/02/05
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**85.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-008

General Chemistry

Lot-Sample #...: A5C020144-008 **Work Order #...:** G5C8D **Matrix.....:** SO
Date Sampled...: 03/01/05 11:35 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.2**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-009

General Chemistry

Lot-Sample #...: A5C020144-009 **Work Order #...:** G5C8E **Matrix.....:** SO
Date Sampled...: 03/01/05 11:45 **Date Received..:** 03/02/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-010

General Chemistry

Lot-Sample #...: A5C020144-010 **Work Order #...:** G5C8F **Matrix.....:** SO
Date Sampled...: 03/01/05 13:00 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.2**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-011

General Chemistry

Lot-Sample #...: A5C020144-011 **Work Order #...:** G5C8G **Matrix.....:** SO
Date Sampled...: 03/01/05 13:05 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-012

General Chemistry

Lot-Sample #...: A5C020144-012 **Work Order #...:** G5C8K **Matrix.....:** SO
Date Sampled...: 03/01/05 13:10 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-013

General Chemistry

Lot-Sample #...: A5C020144-013 **Work Order #...:** G5C8L **Matrix.....:** SO
Date Sampled...: 03/01/05 13:15 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.0**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-014

General Chemistry

Lot-Sample #...: A5C020144-014 **Work Order #...:** G5C8M **Matrix.....:** SO
Date Sampled...: 03/01/05 13:20 **Date Received..:** 03/02/05
% Moisture.....: 8.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**91.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-015

General Chemistry

Lot-Sample #...: A5C020144-015 **Work Order #...:** G5C8N **Matrix.....:** SO
Date Sampled...: 03/01/05 13:25 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-016

General Chemistry

Lot-Sample #...: A5C020144-016 **Work Order #...:** G5C8R **Matrix.....:** SO
Date Sampled...: 03/01/05 13:30 **Date Received..:** 03/02/05
% Moisture.....: 4.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**95.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-017

General Chemistry

Lot-Sample #...: A5C020144-017 **Work Order #...:** G5C8T **Matrix.....:** SO
Date Sampled...: 03/01/05 13:35 **Date Received..:** 03/02/05
% Moisture.....: 3.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**96.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-018

General Chemistry

Lot-Sample #...: A5C020144-018 **Work Order #...:** G5C8V **Matrix.....:** SO
Date Sampled...: 03/01/05 13:40 **Date Received..:** 03/02/05
% Moisture.....: 3.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**96.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-019

General Chemistry

Lot-Sample #...: A5C020144-019 **Work Order #...:** G5C8W **Matrix.....:** SO
Date Sampled...: 03/01/05 13:45 **Date Received..:** 03/02/05
% Moisture.....: 8.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**91.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-020

General Chemistry

Lot-Sample #...: A5C020144-020 **Work Order #...:** G5C82 **Matrix.....:** SO
Date Sampled...: 03/01/05 13:50 **Date Received..:** 03/02/05
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**95.0**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067139**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-021

General Chemistry

Lot-Sample #...: A5C020144-021 **Work Order #...:** G5C83 **Matrix.....:** SO
Date Sampled...: 03/01/05 13:55 **Date Received..:** 03/02/05
% Moisture.....: 5.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**94.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-022

General Chemistry

Lot-Sample #...: A5C020144-022 **Work Order #...:** G5C85 **Matrix.....:** SO
Date Sampled...: 03/01/05 14:00 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-023

General Chemistry

Lot-Sample #...: A5C020144-023 **Work Order #...:** G5C86 **Matrix.....:** SO
Date Sampled...: 03/01/05 14:05 **Date Received..:** 03/02/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-024

General Chemistry

Lot-Sample #...: A5C020144-024 **Work Order #...:** G5C87 **Matrix.....:** SO
Date Sampled...: 03/01/05 14:10 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-025

General Chemistry

Lot-Sample #...: A5C020144-025 **Work Order #...:** G5C88 **Matrix.....:** SO
Date Sampled...: 03/01/05 14:15 **Date Received..:** 03/02/05
% Moisture.....: 30

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**70.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-026

General Chemistry

Lot-Sample #...: A5C020144-026 **Work Order #...:** G5C89 **Matrix.....:** SO
Date Sampled...: 03/01/05 14:20 **Date Received..:** 03/02/05
% Moisture.....: 9.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-027

General Chemistry

Lot-Sample #...: A5C020144-027 **Work Order #...:** G5C9A **Matrix.....:** SO
Date Sampled...: 03/01/05 14:25 **Date Received..:** 03/02/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-028

General Chemistry

Lot-Sample #...: A5C020144-028 **Work Order #...:** G5C9C **Matrix.....:** SO
Date Sampled...: 03/01/05 14:30 **Date Received..:** 03/02/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-029

General Chemistry

Lot-Sample #...: A5C020144-029 **Work Order #...:** G5C9D **Matrix.....:** SO
Date Sampled...: 03/01/05 14:35 **Date Received..:** 03/02/05
% Moisture.....: 5.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**94.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-030

General Chemistry

Lot-Sample #...: A5C020144-030 **Work Order #...:** G5C9E **Matrix.....:** SO
Date Sampled...: 03/01/05 14:45 **Date Received..:** 03/02/05
% Moisture.....: 4.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**95.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-031

General Chemistry

Lot-Sample #...: A5C020144-031 **Work Order #...:** G5C9F **Matrix.....:** SO
Date Sampled...: 03/01/05 15:00 **Date Received..:** 03/02/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.0**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030105-JH-032

General Chemistry

Lot-Sample #...: A5C020144-032 **Work Order #...:** G5C9G **Matrix.....:** SO
Date Sampled...: 03/01/05 15:05 **Date Received..:** 03/02/05
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/08-03/09/05**	**5067141**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-033

General Chemistry

Lot-Sample #...: A5C030182-001 **Work Order #...:** G5F75 **Matrix.....:** SO
Date Sampled...: 03/02/05 08:05 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.1**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-034

General Chemistry

Lot-Sample #...: A5C030182-002 **Work Order #...:** G5F78 **Matrix.....:** SO
Date Sampled...: 03/02/05 08:10 **Date Received..:** 03/03/05
% Moisture.....: 9.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.1**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-035

General Chemistry

Lot-Sample #...: A5C030182-003 **Work Order #...:** G5F79 **Matrix.....:** SO
Date Sampled...: 03/02/05 08:15 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-036

General Chemistry

Lot-Sample #...: A5C030182-004 **Work Order #...:** G5F8C **Matrix.....:** SO
Date Sampled...: 03/02/05 08:20 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-037

General Chemistry

Lot-Sample #...: A5C030182-005 **Work Order #...:** G5F8D **Matrix.....:** SO
Date Sampled...: 03/02/05 08:25 **Date Received..:** 03/03/05
% Moisture.....: 6.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**93.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-038

General Chemistry

Lot-Sample #...: A5C030182-006 **Work Order #...:** G5F8E **Matrix.....:** SO
Date Sampled...: 03/02/05 08:30 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.1**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-039

General Chemistry

Lot-Sample #...: A5C030182-007 **Work Order #...:** G5F8F **Matrix.....:** SO
Date Sampled...: 03/02/05 08:35 **Date Received..:** 03/03/05
% Moisture.....: 8.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**91.1**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-040

General Chemistry

Lot-Sample #...: A5C030182-008 **Work Order #...:** G5F8G **Matrix.....:** SO
Date Sampled...: 03/02/05 08:40 **Date Received..:** 03/03/05
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-041

General Chemistry

Lot-Sample #...: A5C030182-009 **Work Order #...:** G5F8H **Matrix.....:** SO
Date Sampled...: 03/02/05 08:45 **Date Received..:** 03/03/05
% Moisture.....: 9.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-042

General Chemistry

Lot-Sample #...: A5C030182-010 **Work Order #...:** G5F8J **Matrix.....:** SO
Date Sampled...: 03/02/05 08:50 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-043

General Chemistry

Lot-Sample #...: A5C030182-011 **Work Order #...:** G5F8K **Matrix.....:** SO
Date Sampled...: 03/02/05 08:55 **Date Received..:** 03/03/05
% Moisture.....: 6.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**93.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-044

General Chemistry

Lot-Sample #...: A5C030182-012 **Work Order #...:** G5F8L **Matrix.....:** SO
Date Sampled...: 03/02/05 09:00 **Date Received..:** 03/03/05
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-045

General Chemistry

Lot-Sample #...: A5C030182-013 **Work Order #...:** G5F8M **Matrix.....:** SO
Date Sampled...: 03/02/05 09:05 **Date Received..:** 03/03/05
% Moisture.....: 17

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**83.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070524**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-046

General Chemistry

Lot-Sample #...: A5C030182-014 **Work Order #...:** G5F8N **Matrix.....:** SO
Date Sampled...: 03/02/05 09:10 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-047

General Chemistry

Lot-Sample #...: A5C030182-015 **Work Order #...:** G5F8P **Matrix.....:** SO
Date Sampled...: 03/02/05 09:15 **Date Received..:** 03/03/05
% Moisture.....: 9.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.2**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-048

General Chemistry

Lot-Sample #...: A5C030182-016 **Work Order #...:** G5F8Q **Matrix.....:** SO
Date Sampled...: 03/02/05 09:20 **Date Received..:** 03/03/05
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-049

General Chemistry

Lot-Sample #...: A5C030182-017 **Work Order #...:** G5F8R **Matrix.....:** SO
Date Sampled...: 03/02/05 09:25 **Date Received..:** 03/03/05
% Moisture.....: 17

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**83.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-050

General Chemistry

Lot-Sample #...: A5C030182-018 **Work Order #...:** G5F8T **Matrix.....:** SO
Date Sampled...: 03/02/05 09:30 **Date Received..:** 03/03/05
% Moisture.....: 3.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**96.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-051

General Chemistry

Lot-Sample #...: A5C030182-019 **Work Order #...:** G5F8V **Matrix.....:** SO
Date Sampled...: 03/02/05 09:35 **Date Received..:** 03/03/05
% Moisture.....: 5.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**94.1**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-052

General Chemistry

Lot-Sample #...: A5C030182-020 **Work Order #...:** G5F8W **Matrix.....:** SO
Date Sampled...: 03/02/05 09:40 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-053

General Chemistry

Lot-Sample #...: A5C030182-021 **Work Order #...:** G5F8X **Matrix.....:** SO
Date Sampled...: 03/02/05 09:45 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-054

General Chemistry

Lot-Sample #...: A5C030182-022 **Work Order #...:** G5F80 **Matrix.....:** SO
Date Sampled...: 03/02/05 09:50 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-055

General Chemistry

Lot-Sample #...: A5C030182-023 **Work Order #...:** G5F81 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:20 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-056

General Chemistry

Lot-Sample #...: A5C030182-024 **Work Order #...:** G5F83 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:25 **Date Received..:** 03/03/05
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**81.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-057

General Chemistry

Lot-Sample #...: A5C030182-025 **Work Order #...:** G5F84 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:30 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-058

General Chemistry

Lot-Sample #...: A5C030182-026 **Work Order #...:** G5F85 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:35 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-059

General Chemistry

Lot-Sample #...: A5C030182-027 **Work Order #...:** G5F86 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:40 **Date Received..:** 03/03/05
% Moisture.....: 10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-060

General Chemistry

Lot-Sample #...: A5C030182-028 **Work Order #...:** G5F88 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:45 **Date Received..:** 03/03/05
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**84.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-061

General Chemistry

Lot-Sample #...: A5C030182-029 **Work Order #...:** G5F89 **Matrix.....:** SO
Date Sampled...: 03/02/05 10:50 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-062

General Chemistry

Lot-Sample #...: A5C030182-030 **Work Order #...:** G5F9C **Matrix.....:** SO
Date Sampled...: 03/02/05 11:00 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-063

General Chemistry

Lot-Sample #...: A5C030182-031 **Work Order #...:** G5F9D **Matrix.....:** SO
Date Sampled...: 03/02/05 11:10 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**88.2**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-064

General Chemistry

Lot-Sample #...: A5C030182-032 **Work Order #...:** G5F9E **Matrix.....:** SO
Date Sampled...: 03/02/05 13:00 **Date Received..:** 03/03/05
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**83.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-065

General Chemistry

Lot-Sample #...: A5C030182-033 **Work Order #...:** G5F9F **Matrix.....:** SO
Date Sampled...: 03/02/05 13:05 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.7**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070526**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-066

General Chemistry

Lot-Sample #...: A5C030182-034 **Work Order #...:** G5F9G **Matrix.....:** SO
Date Sampled...: 03/02/05 13:10 **Date Received..:** 03/03/05
% Moisture.....: 12

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.5**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-067

General Chemistry

Lot-Sample #...: A5C030182-035 **Work Order #...:** G5F9H **Matrix.....:** SO
Date Sampled...: 03/02/05 13:15 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-068

General Chemistry

Lot-Sample #...: A5C030182-036 **Work Order #...:** G5F9J **Matrix.....:** SO
Date Sampled...: 03/02/05 13:20 **Date Received..:** 03/03/05
% Moisture.....: 11

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**89.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-069

General Chemistry

Lot-Sample #...: A5C030182-037 **Work Order #...:** G5F9K **Matrix.....:** SO
Date Sampled...: 03/02/05 13:25 **Date Received..:** 03/03/05
% Moisture.....: 9.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**90.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-070

General Chemistry

Lot-Sample #...: A5C030182-038 **Work Order #...:** G5F9L **Matrix.....:** SO
Date Sampled...: 03/02/05 13:30 **Date Received..:** 03/03/05
% Moisture.....: 6.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**93.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-071

General Chemistry

Lot-Sample #...: A5C030182-039 **Work Order #...:** G5F9M **Matrix.....:** SO
Date Sampled...: 03/02/05 13:35 **Date Received..:** 03/03/05
% Moisture.....: 6.7

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**93.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-072

General Chemistry

Lot-Sample #...: A5C030182-040 **Work Order #...:** G5F9N **Matrix.....:** SO
Date Sampled...: 03/02/05 13:40 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-073

General Chemistry

Lot-Sample #...: A5C030182-041 **Work Order #...:** G5F9P **Matrix.....:** SO
Date Sampled...: 03/02/05 13:45 **Date Received..:** 03/03/05
% Moisture.....: 14

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.3**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-074

General Chemistry

Lot-Sample #...: A5C030182-042 **Work Order #...:** G5F9Q **Matrix.....:** SO
Date Sampled...: 03/02/05 13:50 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**87.0**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

Conestoga-Rovers & Associates, Inc.

Client Sample ID: S-030205-JH-075

General Chemistry

Lot-Sample #...: A5C030182-043 **Work Order #...:** G5F9R **Matrix.....:** SO
Date Sampled...: 03/02/05 13:55 **Date Received..:** 03/03/05
% Moisture.....: 13

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**86.8**	**10.0**	**%**	**MCAWW 160.3 MOD**	**03/11-03/14/05**	**5070527**

Dilution Factor: 1

SUPPORTIVE RAW DATA

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 5067139

Method #/SOP#: 160.3

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient > 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			✓
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?			✓			✓
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			✓
10. All reagent and standard numbers recorded in logbook?			✓			✓
11. Edits dated and initialed			✓			✓

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 3/9/05

Level II Reviewer: Angela Dura Date: 3/9/05

Level I review:

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Corporate Policy, QA-012
Revision date: 08/25/00

			STL North Canton		
		Percent Total Solid/Percent Moisture Logsh			
Analysis	TS			Batch 5067139	
Prep Date	3/8/05	Time In	11:15	Analyst	BW
Anal date	3/9/05	Time Out	8:15	RL	10
Sample	Tare	Wet	Dry	Result TS	Result MS
Id	wt	wt	wt	%	%
BLK D	4.3767	4.3977	4.3803	0.70	ND
G5C75	4.3767	10.564	9.8629	88.669	11.331
G5C75X	4.3767	9.5271	8.7729	85.356	14.644
G5C76	4.3767	17.6433	16.1857	89.013	10.987
G5C77	4.3767	17.6961	16.4343	90.527	9.473
G5C78	4.3767	20.2195	18.2241	87.405	12.595
G5C79	4.3767	17.7337	16.464	90.494	9.506
G5C8A	4.3767	17.734	16.459	90.455	9.545
G5C8C	4.3767	23.6116	20.8084	85.426	14.574
G5C8D	4.3767	26.1047	23.7606	89.212	10.788
G5C8E	4.3767	20.0956	17.9887	86.596	13.404
G5C8F	4.3767	15.6331	14.4213	89.235	10.765
G5C8G	4.3767	22.3529	20.3034	88.599	11.401
G5C8K	4.3767	16.6554	15.2897	88.877	11.123
G5C8L	4.3767	18.9594	17.3603	89.034	10.966
G5C8M	4.3767	20.3711	19.0094	91.486	8.514
G5C8N	4.3767	17.9946	16.5636	89.492	10.508
G5C8R	4.3767	18.0593	17.4496	95.544	4.456
G5C8T	4.3767	18.4902	18.0439	96.838	3.162
G5C8V	4.3767	17.7401	17.2545	96.366	3.634
G5C8VX	4.3767	20.0807	19.5214	96.438	3.562
G5C8W	4.3767	18.8568	17.6882	91.930	8.070
G5C82	4.3767	18.0416	17.3587	95.003	4.997
TS0308D	4.3767			100.000	0.000

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 5067141

Method #/SOP#: 160.3

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	NA	YES	NO	NA
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			✓
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?			✓			✓
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓		✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			✓
10. All reagent and standard numbers recorded in logbook?			✓			✓
11. Edits dated and initialed			✓			✓

Comment on any "NO" response(s):

Level I reviewer: Bruce Woodward Date: 3/9/05

Level II Reviewer: Angela Dixon Date: 3/9/05

Level I review:

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Corporate Policy, QA-012
Revision date: 08/25/00

			STL North Canton		
		Percent Total Solid/Percent Moisture Logsh			
Analysis	TS			Batch	506741
Prep Date	3/8/05	Time In	11:30	Analyst	BW
Anal date	3/9/05	Time Out	8:15	RL	10
Sample	Tare	Wet	Dry	Result TS	Result MS
Id	wt	wt	wt	%	%
BLK E	4.3767	4.3922	4.3719	0.68	ND
G5C83	4.3767	13.5845	13.1118	94.866	5.134
G5C83X	4.3767	8.3745	8.1728	94.955	5.045
G5C85	4.3767	15.986	14.7496	89.350	10.650
G5C86	4.3767	21.3216	19.2303	87.658	12.342
G5C87	4.3767	19.5313	17.798	88.563	11.437
G5C88	4.3767	15.2846	12.0576	70.416	29.584
G5C89	4.3767	23.9965	22.1487	90.582	9.418
G5C9A	4.3767	16.5514	15.128	88.309	11.691
G5C9C	4.3767	18.4683	16.8971	88.850	11.150
G5C9D	4.3767	18.3997	17.6591	94.719	5.281
G5C9E	4.3767	18.1685	17.5353	95.409	4.591
G5C9F	4.3767	16.8982	15.3987	88.025	11.975
G5C9G	4.3767	16.019	14.434	86.386	13.614
G5C9GX	4.3767	9.2433	8.6225	87.244	12.756

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 507524

Method #/SOP#: 160.3

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			
2. Calibration curve consist of the minimum number of calibration standards?			✓			
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			
2. All reported results bracketed by in control QC ?	✓					
3. Sample analyses done within holding time ?	✓					
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓					
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓					
E. Titrant						
1. Titrant standardized?			✓			
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			
2. Calculations checked for error ?			✓			
3. Transcriptions checked for error ?	✓					
4. All client/project specific requirements met ?	✓					
5. Date/time of preparation and analysis verified as correct ?	✓					
6. Units verified as correct?	✓					
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			
8. SOP followed?	✓					
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			
10. All reagent and standard numbers recorded in logbook?			✓			
11. Edits dated and initialed			✓			

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 3/14/05

Level II Reviewer: Angela Dina Date: 3/14/05

Level I review:

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Corporate Policy, QA-012
Revision date: 08/25/00

			STL North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	TS			Batch 5070524		
Prep Date	3/11/05	Time In	8:45PM	Analyst	TA	
Anal date	3/14/05	Time Out	8:00	RL	RN	
Sample Id	Tare wt	Wet wt	Dry wt	Result TS %	Result MS %	comments
BLANK C	4.3767	4.2743	4.2549	3.41	ND	
G5TR3	4.3767	8.7177	8.2492	89.208	10.792	
G5TR3-X	4.3767	8.7276	8.1448	86.605	13.395	
G5TR4	4.3767	9.8716	9.0405	84.875	15.125	
G51W7	4.3767	18.3514	16.2673	85.087	14.913	
G51XA	4.3767	18.4952	16.7045	87.317	12.683	
G51XD	4.3767	16.1833	15.5492	94.629	5.371	
G526X	4.3767	20.7512	18.3077	85.077	14.923	
G52ND	4.3767	14.4136	11.7579	73.541	26.459	
G5F75	4.3767	18.2696	16.6103	88.056	11.944	
G5F78	4.3767	17.8074	16.4805	90.120	9.880	
G5F79	4.3767	17.7996	16.0459	86.935	13.065	
G5F8C	4.3767	19.3899	17.5237	87.570	12.430	
G5F8D	4.3767	16.6103	15.8158	93.506	6.494	
G5F8E	4.3767	19.7421	17.9142	88.104	11.896	
G5F8F	4.3767	17.8822	16.6762	91.070	8.930	
G5F8F-X	4.3767	17.4914	16.3703	91.452	8.548	
G5F8G	4.3767	17.9183	16.5032	89.550	10.450	
G5F8H	4.3767	19.4301	17.9721	90.314	9.686	
G5F8J	4.3767	19.6803	17.9858	88.927	11.073	
G5F8K	4.3767	20.1427	19.1512	93.711	6.289	
G5F8L	4.3767	17.5331	16.2097	89.941	10.059	
G5F8M	4.3767	23.781	20.5532	83.366	16.634	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 5070526

Method #/SOP#: 160.3

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient > 0.995?			✓			
2. Calibration curve consist of the minimum number of calibration standards?			✓			
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			
2. All reported results bracketed by in control QC ?	✓					
3. Sample analyses done within holding time ?	✓					
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓					
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓					
E. Titrant						
1. Titrant standardized?			✓			
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			
2. Calculations checked for error ?			✓			
3. Transcriptions checked for error ?	✓					
4. All client/project specific requirements met ?	✓					
5. Date/time of preparation and analysis verified as correct ?	✓					
6. Units verified as correct?	✓					
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			
8. SOP followed?	✓					
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			
10. All reagent and standard numbers recorded in logbook?			✓			
11. Edits dated and initialed			✓			

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 3/14/05

Level II Reviewer: Angela Dura Date: 3/14/05

Level I review:

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Corporate Policy, QA-012
Revision date: 08/25/00

			STL North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	TS			Batch 5070526		
Prep Date	3/11/05	Time In	8:52PM	Analyst	TA	
Anal date	3/14/05	Time Out	8:00	RL	RN	
Sample	Tare	Wet	Dry	Result TS	Result MS	comments
Id	wt	wt	wt	%	%	
BLANK D	4.3767	4.2816	4.2624	3.17	ND	
G5F8N	4.3767	16.7803	15.4624	89.375	10.625	
G5F8P	4.3767	15.7478	14.6376	90.237	9.763	
G5F8Q	4.3767	16.6579	15.3956	89.722	10.278	
G5F8R	4.3767	18.6365	16.2788	83.466	16.534	
G5F8T	4.3767	14.8346	14.504	96.839	3.161	
G5F8V	4.3767	17.066	16.3228	94.143	5.857	
G5F8W	4.3767	22.6711	20.2382	86.701	13.299	
G5F8X	4.3767	19.6524	17.9055	88.564	11.436	
G5F80	4.3767	22.4406	20.4995	89.254	10.746	
G5F81	4.3767	13.3059	12.2152	87.785	12.215	
G5F81-X	4.3767	16.4449	14.8387	86.691	13.309	
G5F83	4.3767	23.2378	19.7589	81.555	18.445	
G5F84	4.3767	18.4593	16.8073	88.269	11.731	
G5F85	4.3767	18.4502	16.8713	88.781	11.219	
G5F86	4.3767	14.4931	13.4344	89.535	10.465	
G5F88	4.3767	22.444	19.649	84.530	15.470	
G5F89	4.3767	18.8629	17.2304	88.731	11.269	
G5F9C	4.3767	17.9323	16.4128	88.791	11.209	
G5F9D	4.3767	20.5049	18.5943	88.154	11.846	
G5F9E	4.3767	20.5511	17.8826	83.502	16.498	
G5F9F	4.3767	10.8961	10.0972	87.746	12.254	
G5F9F-X	4.3767	10.9421	10.1376	87.746	12.254	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TS

Batch(es): 507052 7

Method #/SOP#: 160.3

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	NA	YES	NO	NA
1. Initial calibration correlation coefficient ≥ 0.995?			✓			
2. Calibration curve consist of the minimum number of calibration standards?			✓			
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			
2. All reported results bracketed by in control QC ?	✓					
3. Sample analyses done within holding time ?	✓					
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*			✓			
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓					
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓					
E. Titrant						
1. Titrant standardized?			✓			
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			
2. Calculations checked for error ?			✓			
3. Transcriptions checked for error ?	✓					
4. All client/project specific requirements met ?	✓					
5. Date/time of preparation and analysis verified as correct ?	✓					
6. Units verified as correct?	✓					
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			
8. SOP followed?	✓					
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			
10. All reagent and standard numbers recorded in logbook?			✓			
11. Edits dated and initialed			✓			

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 3/14/05

Level II Reviewer: Angela Dusa Date: 3/14/05

Level I review:

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Corporate Policy, QA-012
Revision date: 08/25/00

			STL North Canton			
		Percent Total Solid/Percent Moisture Logsheet				
Analysis	TS			Batch 5070527		
Prep Date	3/11/05	Time In	9:00PM	Analyst	TA	
Anal date	3/14/05	Time Out	8:00	RL	RN	
Sample Id	Tare wt	Wet wt	Dry wt	Result TS %	Result MS %	comments
BLANK E	4.3767	4.3173	4.2967	1.98	ND	
G5F9G	4.3767	16.2262	14.7503	87.545	12.455	
G5F9H	4.3767	19.3623	17.4748	87.405	12.595	
G5F9J	4.3767	18.9752	17.429	89.409	10.591	
G5F9J-X	4.3767	18.7064	17.3922	90.829	9.171	
G5F9K	4.3767	21.5454	19.9326	90.606	9.394	
G5F9L	4.3767	19.7219	18.7426	93.618	6.382	
G5F9M	4.3767	19.3531	18.3561	93.343	6.657	
G5F9N	4.3767	24.0738	21.5773	87.326	12.674	
G5F9P	4.3767	26.6346	23.5905	86.324	13.676	
G5F9Q	4.3767	23.6148	21.1097	86.978	13.022	
G5F9R	4.3767	13.5889	12.3744	86.816	13.184	
G5F9R-X	4.3767	13.5652	12.4437	87.795	12.205	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	
	4.3767			100.000	0.000	

STL North Canton

Sample Control Chain of Custody for General Chemistry

Lot Number	Sample	Suffix	Lab ID	Test	Prep Date	Prepared by	Analysis Date	Analyzed by
A5C020144	1		G5C751AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	1	X	G5C751AD	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	2		G5C761AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	3		G5C771AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	4		G5C781AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	5		G5C791AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	6		G5C8A1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	7		G5C8C1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	8		G5C8D1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	9		G5C8E1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	10		G5C8F1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	11		G5C8G1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	12		G5C8K1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	13		G5C8L1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	14		G5C8M1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	15		G5C8N1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	16		G5C8R1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	17		G5C8T1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	18		G5C8V1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	18	X	G5C8V1AH	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	19		G5C8W1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	20		G5C821AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	21		G5C831AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	21	X	G5C831AD	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Rebecca Nolan
A5C020144	23		G5C861AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	24		G5C871AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	25		G5C881AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward

STL North Canton

Sample Control Chain of Custody for General Chemistry

Lot Number	Sample	Suffix	Lab ID	Test	Prep Date	Prepared by	Analysis Date	Analyzed by
A5C020144	26		G5C891AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	27		G5C9A1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	28		G5C9C1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	29		G5C9D1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	30		G5C9E1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	31		G5C9F1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	32		G5C9G1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward
A5C020144	32	X	G5C9G1AD	Solids, Percent (as TS - 160.3 MOD) - Solids	03/08/05	Bruce Woodward	03/09/05	Bruce Woodward

STL North Canton

Sample Control Chain of Custody for General Chemistry

Lot Number	Sample	Suffix	Lab ID	Test	Prep Date	Prepared by	Analysis Date	Analyzed by
A5C030182	1		G5F751AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	2		G5F781AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	3		G5F791AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	4		G5F8C1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	5		G5F8D1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	6		G5F8E1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	7		G5F8F1AE	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	7	X	G5F8F1AH	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	8		G5F8G1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	9		G5F8H1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	10		G5F8J1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	11		G5F8K1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	12		G5F8L1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	13		G5F8M1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	14		G5F8N1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	15		G5F8P1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	16		G5F8Q1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	17		G5F8R1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	18		G5F8T1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	19		G5F8V1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	20		G5F8W1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	21		G5F8X1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	22		G5F801AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	23		G5F811AE	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	23	X	G5F811AH	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	24		G5F831AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	25		G5F841AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan

STL North Canton

Sample Control Chain of Custody for General Chemistry

Lot Number	Sample	Suffix	Lab ID	Test	Prep Date	Prepared by	Analysis Date	Analyzed by
A5C030182	26		G5F851AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	27		G5F861AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	28		G5F881AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	29		G5F891AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	30		G5F9C1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	31		G5F9D1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	32		G5F9E1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	33		G5F9F1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	33	X	G5F9F1AD	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	34		G5F9G1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	35		G5F9H1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	36		G5F9J1AE	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	36	X	G5F9J1AH	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	37		G5F9K1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	38		G5F9L1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	39		G5F9M1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	40		G5F9N1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	41		G5F9P1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	42		G5F9Q1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	43		G5F9R1AC	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan
A5C030182	43	X	G5F9R1AD	Solids, Percent (as TS - 160.3 MOD) - Solids	03/11/05	Tia Anderson	03/14/05	Rebecca Nolan

END OF REPORT

APPENDIX I

RISK CALCULATIONS FOR SWALE AREA

TABLE 1.0

SELECTION OF EXPOSURE PATHWAYS
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe	*Medium*	*Exposure Medium*	*Exposure Point*	*Receptor Population*	*Receptor Age*	*Exposure Route*	*On-Site/ Off-Site*	*Type of Analysis*	*Rationale for Selection or Exclusion of Exposure Pathway*
Current/Future	Surface Soils (0 to 2 ft bgs)	Surface Soils	Direct Contact	Industrial Workers	Adult	Dermal/ Ingestion	on-Site (West Swale Area/ East Swale Area)	Quant	Potential high occupancy exposure by Site workers in West Swale Area and low occupancy exposures by Site workers in East Swale Area.
				Trespassers	Adolescent	Dermal/ Ingestion	on-Site (West Swale Area/ East Swale Area)	Quant	Unauthorized access onto Site property and subsequent direct contact to soils.
		Ambient Air	Particulates	Industrial Workers	Adult	Inhalation	on-Site (West Swale Area/ East Swale Area)	Quant	Inhalation of suspended particulates from surface soils on Site while working.
				Trespassers	Adolescent	Inhalation	on-Site (West Swale Area/ East Swale Area)	Quant	Unauthorized access onto Site property and subsequent inhalation of suspended particulates.
		Soil to Groundwater	Direct Contact	Residential	Child & Adult	Dermal/ Ingestion	Off-Site	None	Not quantified based on low leaching potential of PCBs.
Future	Soils (0 to 12 ft bgs)	Soils	Direct Contact	Construction Workers	Adult	Dermal/ Ingestion	on-Site (West Swale Area/ East Swale Area)	Quant	Construction workers involved in excavation activities could potentially be exposed to Site soil.
		Ambient Air	Particulates	Construction Workers	Adult	Inhalation	on-Site (West Swale Area/ East Swale Area)	Quant	Inhalation of suspended particulates from soils during excavation activates.
		Soil to Groundwater	Direct Contact	Residential	Child & Adult	Dermal/ Ingestion	Off-Site	None	Not quantified based on low leaching potential of PCBs.

TABLE 2.1

OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN FOR SURFACE SOIL
WEST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

CAS Number	*Chemical*	*Minimum Detected Concentration* (1,2)	*Minimum Qualifier*	*Maximum Detected Concentration* (1,2)	*Maximum Qualifier*	*Units*	*Location of Maximum Concentration*	*Detection Frequency* (2)	*Range of Detection Limits* (2)	*Concentration Used for Screening*	*Screening Criteria*		*COPC Flag*	*Rationale for Contaminant Deletion or Selection* (3)
	PCBs													
12674-11-2	Aroclor-1016	--		--		mg/kg	--	0/18	0.034-19	NA	NA	B2		ND
11104-28-2	Aroclor-1221	--		--		mg/kg	--	0/18	0.034-19	NA	NA	B2		ND
11141-16-5	Aroclor-1232	--		--		mg/kg	--	0/18	0.034-19	NA	NA	B2		ND
53469-21-9	Aroclor-1242	0.07		17		mg/kg	B-15 (0-2 ftbgs; 02/23/99)	3/18	0.034-19	NA	NA	B2	X	PAD
12672-29-6	Aroclor-1248	0.046		85		mg/kg	B-63 (0-2 ftbgs; 03/01/05)	14/18	0.038-3.7	NA	NA	B2	X	PAD
11097-69-1	Aroclor-1254	--		--		mg/kg	--	0/18	0.034-19	NA	NA	B2		ND
11096-82-5	Aroclor-1260	--		--		mg/kg	--	0/18	0.034-19	NA	NA	B2		ND
--	Total PCBs	0.046		85		mg/kg	B-63 (0-2 ftbgs; 03/01/05)	17/18	0.038	NA	NA	B2	X	PAD

Notes:

(1) Minimum/maximum detected concentration.

(2) Based on data collected from sampling locations : B-15, B-16, B-17, B-26, B-53, B-54, B-55, B-56, B-57, B-58, B-59, B-60, B-61, B-62, B-63, B-64, B-65, and B-66.

(3) Rationale Codes Selection Reason: Positive Analyte Detection (PAD)
Deletion Reason: Analyte Not Detected (ND)

A = Known Human Carcinogen
B1 = Probable Human Carcinogen with limited evidence in humans
B2 = Probable Human Carcinogen with sufficient evidence in animals
C = Possible Human Carcinogen with limited evidence in animals
D = Not Classified as to Human Carcinogenicity
NA = Not Applicable

TABLE 2.2

OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN FOR SOIL
WEST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

CAS Number	*Chemical*	*Minimum Detected Concentration (1,2)*	*Minimum Qualifier*	*Maximum Detected Concentration (1,2)*	*Maximum Qualifier*	*Units*	*Location of Maximum Concentration*	*Detection Frequency (2)*	*Range of Detection Limits (2)*	*Concentration Used for Screening*	*Screening Criteria*		*COPC Flag*	*Rationale for Contaminant Deletion or Selection (3)*
	PCBs													
12674-11-2	Aroclor-1016	--		--		mg/kg	--	0/68	0.033-74	NA	NA	B2		ND
11104-28-2	Aroclor-1221	--		--		mg/kg	--	0/68	0.033-74	NA	NA	B2		ND
11141-16-5	Aroclor-1232	0.14		0.14		mg/kg	B-62 (4-6 ftbgs; 03/01/05)	1/68	0.033-74	NA	NA	B2	X	PAD
53469-21-9	Aroclor-1242	0.037		1200		mg/kg	B-56 (6-7 ftbgs; 03/02/05)	29/68	0.033-19	NA	NA	B2	X	PAD
12672-29-6	Aroclor-1248	0.046		85		mg/kg	B-63 (0-2 ftbgs; 03/01/05)	28/68	0.033-74	NA	NA	B2	X	PAD
11097-69-1	Aroclor-1254	--		--		mg/kg	--	0/68	0.033-74	NA	NA	B2		ND
11096-82-5	Aroclor-1260	0.056		0.056		mg/kg	B-53 (4-6 ftbgs; 03/02/05)	1/68	0.033-74	NA	NA	B2	X	PAD
--	Total PCBs	0.037		1200		mg/kg	B-56 (6-7 ftbgs; 03/02/05)	58/68	0.033-0.039	NA	NA	B2	X	PAD

Notes:

(1) Minimum/maximum detected concentration.

(2) Based on data collected from sampling locations : B-15, B-16, B-17, B-26, B-53, B-54, B-55, B-56, B-57, B-58, B-59, B-60, B-61, B-62, B-63, B-64, B-65, and B-66.

(3) Rationale Codes Selection Reason: Positive Analyte Detection (PAD)
Deletion Reason: Analyte Not Detected (ND)

A = Known Human Carcinogen
B1 = Probable Human Carcinogen with limited evidence in humans
B2 = Probable Human Carcinogen with sufficient evidence in animals
C = Possible Human Carcinogen with limited evidence in animals
D = Not Classified as to Human Carcinogenicity
NA = Not Applicable

TABLE 2.3

OCCURRENCE, DISTRIBUTION, AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN FOR SURFACE SOIL
EAST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

CAS Number	*Chemical*	*Minimum Detected Concentration* (1,2)	*Minimum Qualifier*	*Maximum Detected Concentration* (1,2)	*Maximum Qualifier*	*Units*	*Location of Maximum Concentration*	*Detection Frequency* (2)	*Range of Detection Limits* (2)	*Concentration Used for Screening*	*Screening Criteria*		*COPC Flag*	*Rationale for Contaminant Deletion or Selection* (3)
	PCBs													
12674-11-2	Aroclor-1016	0.43		0.43		mg/kg	B-10 (0-2 ftbgs; 12/02/98)	1/18	0.034-18	NA	NA	B2	X	PAD
11104-28-2	Aroclor-1221	--		--		mg/kg	--	0/18	0.034-18	NA	NA	B2		ND
11141-16-5	Aroclor-1232	--		--		mg/kg	--	0/18	0.034-18	NA	NA	B2		ND
53469-21-9	Aroclor-1242	0.55		14		mg/kg	B-7 (0-2 ftbgs; 12/01/98)	6/18	0.034-18	NA	NA	B2	X	PAD
12672-29-6	Aroclor-1248	0.068		96		mg/kg	B-12 (0-2 ftbgs; 12/02/98)	9/18	0.035-3.7	NA	NA	B2	X	PAD
11097-69-1	Aroclor-1254	--		--		mg/kg	--	0/18	0.034-18	NA	NA	B2		ND
11096-82-5	Aroclor-1260	--		--		mg/kg	--	0/18	0.034-18	NA	NA	B2		ND
--	Total PCBs	0.068		96		mg/kg	B-12 (0-2 ftbgs; 12/02/98)	16/18	0.035-0.038	NA	NA	B2	X	PAD

Notes:

(1) Minimum/maximum detected concentration.

(2) Based on data collected from sampling locations : B-1, B-2, B-3, B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, B-18, B-19, B-20, and B-21.

(3) Rationale Codes Selection Reason: Positive Analyte Detection (PAD)
Deletion Reason: Analyte Not Detected (ND)

A = Known Human Carcinogen
B1 = Probable Human Carcinogen with limited evidence in humans
B2 = Probable Human Carcinogen with sufficient evidence in animals
C = Possible Human Carcinogen with limited evidence in animals
D = Not Classified as to Human Carcinogenicity
NA = Not Applicable

TABLE 2.4

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN FOR SOIL
EAST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

CAS Number	*Chemical*	*Minimum Detected Concentration* (1,2)	*Minimum Qualifier*	*Maximum Detected Concentration* (1,2)	*Maximum Qualifier*	*Units*	*Location of Maximum Concentration*	*Detection Frequency* (2)	*Range of Detection Limits* (2)	*Concentration Used for Screening*	*Screening Criteria*		*COPC Flag*	*Rationale for Contaminant Deletion or Selection* (3)
	PCBs													
12674-11-2	Aroclor-1016	0.43		700		mg/kg	B-9 (6-8 ftbgs; 12/02/98)	7/77	0.034-75	NA	NA	B2	X	PAD
11104-28-2	Aroclor-1221	--		--		mg/kg	--	0/77	0.034-180	NA	NA	B2		ND
11141-16-5	Aroclor-1232	--		--		mg/kg	--	0/77	0.034-180	NA	NA	B2		ND
53469-21-9	Aroclor-1242	0.24		570		mg/kg	B-2 (4-6 ftbgs; 12/01/98)	31/77	0.034-180	NA	NA	B2	X	PAD
12672-29-6	Aroclor-1248	0.068		96		mg/kg	B-12 (0-2 ftbgs; 12/02/98)	22/77	0.034-180	NA	NA	B2	X	PAD
11097-69-1	Aroclor-1254	--		--		mg/kg	--	0/77	0.034-180	NA	NA	B2		ND
11096-82-5	Aroclor-1260	--		--		mg/kg	--	0/77	0.034-180	NA	NA	B2		ND
--	Total PCBs	0.068		700		mg/kg	B-9 (6-8 ftbgs; 12/02/98)	60/77	0.034-0.2	NA	NA	B2	X	PAD

Notes:

(1) Minimum/maximum detected concentration.

(2) Based on data collected from sampling locations : B-1, B-2, B-3, B-4, B-5, B-6, B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, B-18, B-19, B-20, and B-21.

(3) Rationale Codes Selection Reason: Positive Analyte Detection (PAD)
Deletion Reason: Analyte Not Detected (ND)

A = Known Human Carcinogen
B1 = Probable Human Carcinogen with limited evidence in humans
B2 = Probable Human Carcinogen with sufficient evidence in animals
C = Possible Human Carcinogen with limited evidence in animals
D = Not Classified as to Human Carcinogenicity
NA = Not Applicable

TABLE 2.5

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN FOR GROUNDWATER
EAST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

CAS Number	*Chemical*	*Minimum Detected Concentration* (1,2)	*Minimum Qualifier*	*Maximum Detected Concentration* (1,2)	*Maximum Qualifier*	*Units*	*Location of Maximum Concentration*	*Detection Frequency* (2)	*Range of Detection Limits* (2)	*Concentration Used for Screening*	*Screening Criteria*		*COPC Flag*	*Rationale for Contaminant Deletion or Selection* (3)
	PCBs													
12674-11-2	Aroclor-1016	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
11104-28-2	Aroclor-1221	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
11141-16-5	Aroclor-1232	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
53469-21-9	Aroclor-1242	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
12672-29-6	Aroclor-1248	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
11097-69-1	Aroclor-1254	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
11096-82-5	Aroclor-1260	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND
--	Total PCBs	--		--		mg/kg	--	0/3	1.0	NA	NA	B2		ND

Notes:
(1) Minimum/maximum detected concentration.
(2) Based on data collected from sampling locations : MW-99A, MW-99B, MW-99C.
(3) Rationale Codes Selection Reason: Positive Analyte Detection (PAD)
Deletion Reason: Analyte Not Detected (ND)

A = Known Human Carcinogen
B1 = Probable Human Carcinogen with limited evidence in humans
B2 = Probable Human Carcinogen with sufficient evidence in animals
C = Possible Human Carcinogen with limited evidence in animals
D = Not Classified as to Human Carcinogenicity
NA = Not Applicable

TABLE 3.1

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SURFACE SOIL
WEST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1242	mg/kg	2.84E+00	(2)	1.70E+01	mg/kg	1.17E+01	95% UCL-NP	W-Test (4)	1.17E+01	95% UCL-NP	W-Test (4)
Aroclor-1248	mg/kg	1.52E+01	(2)	8.50E+01	mg/kg	7.80E+01	95% UCL-NP	W-Test (4)	7.80E+01	95% UCL-NP	W-Test (4)
Total PCBs	mg/kg	1.62E+01	(2)	8.50E+01	mg/kg	7.76E+01	95% UCL-NP	W-Test (4)	7.76E+01	95% UCL-NP	W-Test (4)

Notes:
For data sets with non-detects, the Kaplan-Meier method was used (per USEPA 2009).
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Refer to USEPA Supplemental Guidance to RAGS: Calculating the Concentration Term (RAGS, 1992), OSWER Directive 9285.7-081, May 1992.
Statistics: Maximum Detected Value (Max); One-half Maximum Detection Limit (1/2 Max DL); 95% UCL of Normal Data (95% UCL-N);
95% UCL of Log-transformed Data (95% UCL-L); 95% UCL of Gamma distributed data (95% UCL-G);
Non-parametric method used to Determine 95% UCL (95% UCL-NP).
(1) Data set is neither normally, gamma or lognormally distributed. A non-parametric UCL is required.
(2) Data set is lognormally distributed.
(3) Data set is gamma distributed.
(4) Shapiro-Wilk W Test was used for data sets where n<=50.

TABLE 3.2

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL
WEST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1232	mg/kg	2.70E+00	(1)	1.40E-01	mg/kg	1.40E-01	95% UCL-N	W-Test (4)	1.40E-01	95% UCL-N	W-Test (4)
Aroclor-1242	mg/kg	3.45E+01	(1)	1.20E+03	mg/kg	1.48E+02	95% UCL-NP	W-Test (4)	1.48E+02	95% UCL-NP	W-Test (4)
Aroclor-1248	mg/kg	7.87E+00	(1)	8.50E+01	mg/kg	1.83E+01	95% UCL-NP	W-Test (4)	1.83E+01	95% UCL-NP	W-Test (4)
Aroclor-1260	mg/kg	2.69E+00	(1)	5.60E-02	mg/kg	5.60E-02	95% UCL-N	W-Test (4)	5.60E-02	95% UCL-N	W-Test (4)
Total PCBs	mg/kg	3.97E+01	(3)	1.20E+03	mg/kg	1.18E+02	95% UCL-NP	W-Test (4)	1.18E+02	95% UCL-NP	W-Test (4)

Notes:
For data sets with non-detects, the Kaplan-Meier method was used (per USEPA 2009).
W-Test : Developed by Shapiro and Francia for data sets with over 50 samples but under 100 samples.
Refer to USEPA Supplemental Guidance to RAGS: Calculating the Concentration Term (RAGS, 1992), OSWER Directive 9285.7-081, May 1992.
Statistics: Maximum Detected Value (Max); One-half Maximum Detection Limit (1/2 Max DL); 95% UCL of Normal Data (95% UCL-N);
95% UCL of Log-transformed Data (95% UCL-L); 95% UCL of Gamma distributed data (95% UCL-G);
Non-parametric method used to Determine 95% UCL (95% UCL-NP).
(1) Data set is neither normally, gamma or lognormally distributed. A non-parametric UCL is required.
(2) Data set is lognormally distributed.
(3) Data set is gamma distributed.
(4) Shapiro-Francia W Test was used for data sets where 50<n>100.

TABLE 3.3

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SURFACE SOIL
EAST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1016	mg/kg	7.92E-01	(1)	4.30E-01	mg/kg	4.30E-01	95% UCL-N	W-Test (4)	4.30E-01	95% UCL-N	W-Test (4)
Aroclor-1242	mg/kg	2.20E+00	1.2E+01	1.40E+01	mg/kg	1.18E+01	95% UCL-N	W-Test (4)	1.18E+01	95% UCL-N	W-Test (4)
Aroclor-1248	mg/kg	6.24E+00	(2)	9.60E+01	mg/kg	6.05E+01	95% UCL-NP	W-Test (4)	6.05E+01	95% UCL-NP	W-Test (4)
Total PCBs	mg/kg	7.69E+00	(2)	9.60E+01	mg/kg	6.02E+01	95% UCL-NP	W-Test (4)	6.02E+01	95% UCL-NP	W-Test (4)

Notes:
For data sets with non-detects, the Kaplan-Meier method was used (per USEPA 2009).
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Refer to USEPA Supplemental Guidance to RAGS: Calculating the Concentration Term (RAGS, 1992), OSWER Directive 9285.7-081, May 1992.
Statistics: Maximum Detected Value (Max); One-half Maximum Detection Limit (1/2 Max DL); 95% UCL of Normal Data (95% UCL-N);
95% UCL of Log-transformed Data (95% UCL-L); 95% UCL of Gamma distributed data (95% UCL-G);
Non-parametric method used to Determine 95% UCL (95% UCL-NP).
(1) Data set is neither normally, gamma or lognormally distributed. A non-parametric UCL is required.
(2) Data set is lognormally distributed.
(3) Data set is gamma distributed.
(4) Shapiro-Wilk W Test was used for data sets where n<=50.

TABLE 3.4

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL
EAST SWALE AREA
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1016	mg/kg	1.48E+01	(2)	7.00E+02	mg/kg	5.65E+01	95% UCL-NP	W-Test (4)	5.65E+01	95% UCL-NP	W-Test (4)
Aroclor-1242	mg/kg	2.31E+01	(2)	5.70E+02	mg/kg	7.44E+01	95% UCL-NP	W-Test (4)	7.44E+01	95% UCL-NP	W-Test (4)
Aroclor-1248	mg/kg	6.10E+00	(1)	9.60E+01	mg/kg	1.26E+01	95% UCL-NP	W-Test (4)	1.26E+01	95% UCL-NP	W-Test (4)
Total PCBs	mg/kg	3.64E+01	(2)	7.00E+02	mg/kg	1.13E+02	95% UCL-NP	W-Test (4)	1.13E+02	95% UCL-NP	W-Test (4)

Notes:
For data sets with non-detects, the Kaplan-Meier method was used (per USEPA 2009).
W-Test : Developed by Shapiro and Francia for data sets with over 50 samples but under 100 samples.
Refer to USEPA Supplemental Guidance to RAGS: Calculating the Concentration Term (RAGS, 1992), OSWER Directive 9285.7-081, May 1992.
Statistics: Maximum Detected Value (Max); One-half Maximum Detection Limit (1/2 Max DL); 95% UCL of Normal Data (95% UCL-N);
95% UCL of Log-transformed Data (95% UCL-L); 95% UCL of Gamma distributed data (95% UCL-G);
Non-parametric method used to Determine 95% UCL (95% UCL-NP).
(1) Data set is neither normally, gamma or lognormally distributed. A non-parametric UCL is required.
(2) Data set is lognormally distributed.
(3) Data set is gamma distributed.
(4) Shapiro-Francia W Test was used for data sets where 50<n>100.

TABLE 4.1

VALUES USED FOR DAILY INTAKE CALCULATIONS - CURRENT/FUTURE TRESPASSER SCENARIO
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil/Ambient Air
Receptor Population: Trespasser
Receptor Age: Adolescent (8 to 17 years old)

Exposure Route	*Parameter Code*	*Parameter Definition*	*Units*	*RME Value*	*RME Rationale/ Reference*	*CT Value*	*CT Rationale/ Reference*	*Intake Equation/ Model Name*
Ingestion	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	Chronic Daily Intake (CDI) (mg/kg-day) =
	IR	Ingestion Rate of Soil	mg soil/ day	100	USEPA, 1991	100	USEPA, 1991	CS x IR x CF x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	16	Professional Judgment (2)	8	Professional Judgment (2)	
	ED	Exposure Duration	years	10	USEPA, 2000a	10	USEPA, 2000a	
	BW	Body Weight	kg	45	USEPA, 1997	45	USEPA, 1997	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000b	27,375	USEPA, 2000b	
	AT-N	Averaging Time (non-cancer)	days	3,650	USEPA, 1989	3,650	USEPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/kg-day) =
	SA	Skin Surface Area Available for Contact	cm^2	3,500	USEPA, 1997	3,500	USEPA, 1997	CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	16	Professional Judgment (2)	8	Professional Judgment (2)	
	ED	Exposure Duration	years	10	USEPA, 2000a	10	USEPA, 2000a	
	BW	Body Weight	kg	45	USEPA, 1997	45	USEPA, 1997	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000b	27,375	USEPA, 2000b	
	AT-N	Averaging Time (non-cancer)	days	3,650	USEPA, 1989	3,650	USEPA, 1989	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.2	USEPA, 2004	0.04	USEPA, 2004	
	ABS	Absorption Factor (PCBs)	%/100	0.14	USEPA, 2004	0.14	USEPA, 2004	
Inhalation	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/m^3) =
	FT	Fraction Time Exposed	unitless	2/24	Professional Judgment	0.5/24	Professional Judgment	CS x FT x EF x ED x 1/PEF x 1/AT
	EF	Exposure Frequency	days/year	16	Professional Judgment (2)	8	Professional Judgment (2)	
	ED	Exposure Duration	years	10	USEPA, 2000a	10	USEPA, 2000a	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000b	27,375	USEPA, 2000b	
	AT-N	Averaging Time (non-cancer)	days	3,650	USEPA, 1989	3,650	USEPA, 1989	
	PEF	Particulate Emissional Factor	m^3/kg	site-specific	Refer to Table 4.2	site-specific	Refer to Table 4.2	

Notes:
(1) For West Swale Area surface soil concentrations, refer to Table 3.1. For East Swale Area surface soil concentrations, refer to Table 3.3.
(2) Professional Judgment; assumes trespassing occurs twice a month (RME), and once a month (CT) during an eighth month period that includes the spring, summer, and fall months.

References:
USEPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A OERR. USEPA/540-1-89-002.
USEPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
USEPA, 1997: Exposure Factors Handbook, USEPA/600/P-95/002Fa.
USEPA, 2000a: Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health Risk Assessment Bulletins EPA Region 4, originally published November 1995, Website version last updated May 2000 (http://www.epa.gov/region4/waste/oftecser/healthbul.htm).
USEPA, 2000b: PCB Risk Assessment Review Guidance Document, Interim Draft, January 2000.
USEPA, 2004: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER Directive 9285.7-02EP, July 2004.

TABLE 4.2

DERIVATION OF PARTICULATE EMISSION FACTOR (PEF) FOR SOIL -
TRESPASSER AND INDUSTRIAL/COMMERCIAL WORKER INHALATION EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Parameters (1)	Reference	
"A"	Exhibit D-2, USEPA, 2002	16.8653
West Swale Area	Site-Specific, acres	3.6
East Swale Area	Site-Specific, acres	9.3
"B"	Exhibit D-2, USEPA, 2002	18.7848
"C"	Exhibit D-2, USEPA, 2002	215.0624

Q/C_{wind} - West Swale Area	Exhibit D-2, USEPA, 2002	70.10
Q/C_{wind} - East Swale Area	Exhibit D-2, USEPA, 2002	60.32

PEF - West Swale Area	Equation 4-5, USEPA, 2002	1.02E+09
PEF - East Swale Area	Equation 4-5, USEPA, 2002	8.74E+08

Notes:

(1) The A, B, and C based on Zone 7 - Chicago, IL

Reference:

USEPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Office of Emergency and Remedial Response. OSWER 9355.4-24, December 2002.

TABLE 4.3

VALUES USED FOR DAILY INTAKE CALCULATIONS - CURRENT/FUTURE HIGH OCCUPANCY INDUSTRIAL WORKER SCENARIO
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Soil/Ambient Air
Receptor Population: Industrial Worker
Receptor Age: Adult

Exposure Route	*Parameter Code*	*Parameter Definition*	*Units*	*RME Value*	*RME Rationale/ Reference*	*CT Value*	*CT Rationale/ Reference*	*Intake Equation/ Model Name*
Ingestion	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA,1989	Chronic Daily Intake (CDI) (mg/kg-day) =
	IR	Ingestion Rate of Soil	mg soil/ day	50	USEPA, 1991	50	USEPA, 1991	CS x IR x CF x ET x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	250	USEPA, 1991	250	USEPA, 1991	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA,1989	CDI (mg/kg-day) =
	SA	Skin Surface Area Available for Contact	cm^2	3,300	USEPA, 2002	3,300	USEPA, 2002	CS x CF x SA x AF x ABS x ET x EF x ECF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	250	USEPA, 1991	250	USEPA, 1991	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.2	USEPA, 2004	0.02	USEPA, 2004	
	ABS	Absorption Factor (PCBs)	%/100	0.14	USEPA, 2004	0.14	USEPA, 2004	
Inhalation	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/m^3) =
	FT	Fraction Time Exposed	unitless	8/24	USEPA, 2002	8/24	USEPA, 2002	CS x FT x EF x ED x 1/PEF x 1/AT
	EF	Exposure Frequency	days/year	250	USEPA, 1991	250	USEPA, 1991	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
	PEF	Particulate Emissional Factor	m^3/kg	site-specific	Refer to Table 4.2	site-specific	Refer to Table 4.2	

Notes:
(1) For West Swale Area surface soil concentrations, refer to Table 3.1.

References:
USEPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A OERR. USEPA/540-1-89-002.
USEPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
USEPA, 2000: PCB Risk Assessment Review Guidance Document, Interim Draft, January 2000.
USEPA, 2002: Supplement Guidance for Developing Soil Screening Levels for Superfund Site. OSWER Directive 9355.4-24, December 2002.
USEPA, 2004: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER Directive 9285.7-02EP, July 2004.

TABLE 4.4

VALUES USED FOR DAILY INTAKE CALCULATIONS - CURRENT/FUTURE LOW OCCUPANCY INDUSTRIAL WORKER SCENARIO
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil/Ambient Air
Receptor Population: Industrial Worker
Receptor Age: Adult

Exposure Route	*Parameter Code*	*Parameter Definition*	*Units*	*RME Value*	*RME Rationale/ Reference*	*CT Value*	*CT Rationale/ Reference*	*Intake Equation/ Model Name*
Ingestion	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA,1989	Chronic Daily Intake (CDI) (mg/kg-day) =
	IR	Ingestion Rate of Soil	mg soil/ hour	6.25	USEPA, 1991	6.25	USEPA, 1991	CS x IR x CF x ET x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	ET	Exposure Time	hours/week	6.7	(2)	6.7	(2)	
	EF	Exposure Frequency	weeks/year	50	USEPA, 1991	50	USEPA, 1991	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA,1989	CDI (mg/kg-day) =
	SA	Skin Surface Area Available for Contact	cm^2	3,300	USEPA, 2002	3,300	USEPA, 2002	CS x CF x SA x AF x ABS x ET x EF x ECF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	ET	Exposure Time	hours/week	6.7	(2)	6.7	(2)	
	EF	Exposure Frequency	weeks/year	50	USEPA, 1991	50	USEPA, 1991	
	ECF	Exposure Conversion Factor	work day/hour	0.125	--	0.125	--	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.2	USEPA, 2004	0.02	USEPA, 2004	
	ABS	Absorption Factor (PCBs)	%/100	0.14	USEPA, 2004	0.14	USEPA, 2004	
Inhalation	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/m^3) =
	FT	Fraction Time Exposed	unitless	6.7/120	(3)	6.7/120	(3)	CS x FT x EF x ED x 1/PEF x 1/AT
	EF	Exposure Frequency	weeks/year	50	USEPA, 1991	50	USEPA, 1991	
	ED	Exposure Duration	years	25	USEPA, 2002	9	USEPA, 1991	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	9,125	USEPA, 1989	3,285	USEPA, 1989	
	PEF	Particulate Emissional Factor	m^3/kg	site-specific	Refer to Table 4.2	site-specific	Refer to Table 4.2	

Notes:
(1) For East Swale Area surface soil concentrations, refer to Table 3.3.
(2) EPA PCB Rules and Regulations, 40 CFR Part 761, Federal Register Vol. 63, No. 124, Monday June 29, 1998.
(3) As per Note (2), exposure time for the low occupancy is only 6.7 hours per week therefore the fraction time exposure for the inhalation of particulates is 6.7 hours over 5 days times 24 hours.

References:
USEPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A OERR. USEPA/540-1-89-002.
USEPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
USEPA, 2000: PCB Risk Assessment Review Guidance Document, Interim Draft, January 2000.
USEPA, 2002: Supplement Guidance for Developing Soil Screening Levels for Superfund Site. OSWER Directive 9355.4-24, December 2002.
USEPA, 2004: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER Directive 9285.7-02EP, July 2004.

TABLE 4.5

VALUES USED FOR DAILY INTAKE CALCULATIONS - FUTURE CONSTRUCTION WORKER SCENARIO
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil/Ambient Air
Receptor Population: Construction Worker
Receptor Age: Adult

Exposure Route	*Parameter Code*	*Parameter Definition*	*Units*	*RME Value*	*RME Rationale/ Reference*	*CT Value*	*CT Rationale/ Reference*	*Intake Equation/ Model Name*
Ingestion	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	Chronic Daily Intake (CDI) (mg/kg-day) =
	IR	Ingestion Rate of Soil	mg soil/ day	330	USEPA, 2002	330	USEPA, 2002	CS x IR x CF x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	20	(2)	5	(2)	
	ED	Exposure Duration	years	1	USEPA, 2002	1	USEPA, 2002	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	365	USEPA, 1989	365	USEPA, 1989	
Dermal	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/kg-day) =
	SA	Skin Surface Area Available for Contact	cm^2	3,300	USEPA, 2002	3,300	USEPA, 2002	CS x CF x SA x AF x ABS x EF x ED x 1/BW x 1/AT
	CF	Conversion Factor	kg/mg	1.00E-06	USEPA, 1991	1.00E-06	USEPA, 1991	
	EF	Exposure Frequency	days/year	20	(2)	5	(2)	
	ED	Exposure Duration	years	1	USEPA, 2002	1	USEPA, 2002	
	BW	Body Weight	kg	70	USEPA, 2002	70	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	365	USEPA, 1989	365	USEPA, 1989	
	AF	Soil to Skin Adherence Factor	mg/cm^2	0.3	USEPA, 2004	0.1	USEPA, 2004	
	ABS	Absorption Factor (PCBs)	%/100	0.14	USEPA, 2004	0.14	USEPA, 2004	
Inhalation	CS	Chemical Concentration in Soil	mg/kg	(1)	USEPA, 1989	(1)	USEPA, 1989	CDI (mg/m^3) =
	FT	Fraction Time Exposed	unitless	8/24	USEPA, 2002	8/24	USEPA, 2002	CS x FT x EF x ED x 1/PEF x 1/AT
	EF	Exposure Frequency	days/year	20	(2)	5	(2)	
	ED	Exposure Duration	years	1	USEPA, 2002	1	USEPA, 2002	
	AT-C	Averaging Time (cancer)	days	27,375	USEPA, 2000	27,375	USEPA, 2000	
	AT-N	Averaging Time (non-cancer)	days	365	USEPA, 1989	365	USEPA, 1989	
	PEF	Particulate Emissional Factor	m^3/kg	site-specific	(3)	site-specific	(3)	

Notes:
(1) For West Swale Area soil concentrations, refer to Table 3.2. For East Swale Area soil concentrations, refer to Table 3.4.
(2) Professional Judgment; assumes excavation activities on Site would be a short term event occurring during the year for 1 week (5 days) and 4 weeks (20 days).
(3) For West Swale Area PEF, refer to Table 4.6. For East Swale Area PEF, refer to Table 4.7.

References:
USEPA, 1989: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part A OERR. USEPA/540-1-89-002, December 1989.
USEPA, 1991: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03, March 1991.
USEPA, 2000: PCB Risk Assessment Review Guidance Document, Interim Draft, January 2000.
USEPA, 2002: Supplement Guidance for Developing Soil Screening Levels for Superfund Site. OSWER Directive 9355.4-24, December 2002.
USEPA, 2004: Risk Assessment Guidance for Superfund. Vol. 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment. Final. OSWER Directive 9285.7-02EP, July 2004.

TABLE 4.6

DERIVATION OF PARTICULATE EMISSION FACTOR (PEF) FOR WEST SWALE AREA SOIL - CONSTRUCTION/UTILITY WORKER INHALATION EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

$$PEF_{SC} = Q/C_{sr} \times 1/F_D \times [(T \times A_R) / (556 \times ((W/3)^{0.4} \times ((365\ d/y - p) / 365\ d/y) \times VKT)]$$

$$Q/C_{sr} = A \times EXP [(\ln A_s - B)^2 / C]$$

INPUT PARAMETERS		*REFERENCE*
PEF_{sc}/ subchronic road particulate emission factor (m^3/kg) =	**1.08E+08**	Equation 5-5, USEPA, 2002
Q/C_{sr}/ inverse of ratio of the 1-h geometric mean air concentration =	70.10	Equation 5-6, USEPA, 2002
A/ constant (unitless) =	16.8653	USEPA, 2002 (1)
B/ constant (unitless) =	18.7848	USEPA, 2002 (1)
C/ constant (unitless) =	215.0624	USEPA, 2002 (1)
A_s/ areal extent of site surface soil contamination (acres) =	3.6	West Swale Area
F_D/ dispersion correction factor (unitless) =	0.185	USEPA, 2002
T/ total time over which construction occurs (s) =	3.15E+07	USEPA, 2002 (site-specific, within a 1 year construction campaign)
A_R/ surface area of contaminated road segment (m^2) =	274	USEPA, 2002 (A_R = LR*WR*0.092903 m^2/ft^2)
LR - length of road segment (ft) =	148	USEPA, 2002
WR - width of road segment (ft) =	20	USEPA, 2002
W/ mean vehicle weight (tons) =	8	USEPA, 2002, Assumes 20 two-ton cars and 10 twenty-ton trucks (W = (20*2+10*20)/30)
p/ number of days with at least 0.01 inches of precipitation (days/yr) =	180	USEPA, 2002
VKT/ sum of fleet vehicle kilometers traveled during the exposure duration (km) =	73	Assuming that the area is configured as a square with the unpaved construction access road segment dividing the square evenly, the road length would be equal to the square root of 14757.6 m^2, also equal to 121 m or 0.121 km. Assuming that each vehicle travels the length of the road once per day, 5 days per week for a total of 20 days, (30*0.121*20).

Notes:

(1) The A, B, and C based on Zone 7 - Chicago, IL

Reference:

USEPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Office of Emergency and Remedial Response, OSWER 9355.4-24, December 2002.

TABLE 4.7

DERIVATION OF PARTICULATE EMISSION FACTOR (PEF) FOR EAST SWALE AREA SOIL - CONSTRUCTION/UTILITY WORKER INHALATION EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

$$PEF_{SC} = Q/C_{sr} \times 1/F_D \times [(T \times A_R) / (556 \times ((W/3)^{0.4} \times ((365\ d/y - p) / 365\ d/y) \times VKT)]$$

$$Q/C_{sr} = A \times EXP [(\ln A_s - B)^2 / C]$$

INPUT PARAMETERS		*REFERENCE*
PEF_{sc}/ subchronic road particulate emission factor (m^3/kg) =	**5.81E+07**	Equation 5-5, USEPA, 2002
Q/C_{sr}/ inverse of ratio of the 1-h geometric mean air concentration =	60.32	Equation 5-6, USEPA, 2002
A/ constant (unitless) =	16.8653	USEPA, 2002 (1)
B/ constant (unitless) =	18.7848	USEPA, 2002 (1)
C/ constant (unitless) =	215.0624	USEPA, 2002 (1)
A_s/ areal extent of site surface soil contamination (acres) =	9.3	East Swale Area
F_D/ dispersion correction factor (unitless) =	0.185	USEPA, 2002
T/ total time over which construction occurs (s) =	3.15E+07	USEPA, 2002 (site-specific, within a 1 year construction campaign)
A_R/ surface area of contaminated road segment (m^2) =	274	USEPA, 2002 (A_R = LR*WR*0.092903 m^2/ft^2)
LR - length of road segment (ft) =	148	USEPA, 2002
WR - width of road segment (ft) =	20	USEPA, 2002
W/ mean vehicle weight (tons) =	8	USEPA, 2002, Assumes 20 two-ton cars and 10 twenty-ton trucks (W = (20*2+10*20)/30)
p/ number of days with at least 0.01 inches of precipitation (days/yr) =	180	USEPA, 2002
VKT/ sum of fleet vehicle kilometers traveled during the exposure duration (km) =	116	Assuming that the area is configured as a square with the unpaved construction access road segment dividing the square evenly, the road length would be equal to the square root of 37576.7 m^2, also equal to 194 m or 0.194 km. Assuming that each vehicle travels the length of the road once per day, 5 days per week for a total of 20 days, (30*0.194*20).

Notes:

(1) The A, B, and C based on Zone 7 - Chicago, IL

Reference:

USEPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites, Office of Emergency and Remedial Response, OSWER 9355.4-24, December 2002.

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL ROUTE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Chemical of Potential Concern (COPC)	*Chronic/ Subchronic*	*Oral RfD Value*	*Oral RfD Units*	*Oral to Dermal Adjustment Factor (1)*	*Adjusted Dermal RfD (2)*	*Units*	*Primary Target Organ*	*Combined Uncertainty/Modifying Factors*	*Source*	*Date (3) (MM/DD/YY)*
PCBs										
Aroclor-1016	chronic	7.00E-05	mg/kg-d	100%	7.00E-05	mg/kg-d	reduced birth weights	100	IRIS	11/01/96
Aroclor-1232	--	--	mg/kg-d	100%	--	mg/kg-d	--	--	--	--
Aroclor-1242	--	--	mg/kg-d	100%	--	mg/kg-d	--	--	--	--
Aroclor-1248	--	--	mg/kg-d	100%	--	mg/kg-d	--	--	--	--
Aroclor-1260	--	--	mg/kg-d	100%	--	mg/kg-d	--	--	--	--
Total PCBs	--	--	mg/kg-d	100%	--	mg/kg-d	--	--	--	--

Notes:

-- = Not Available

(1) USEPA, Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual, Part E Supplemental Guidance for Dermal Risk Assessment, EPA/540/R/99/005, July 2004.

(2) Adjusted Dermal RfD = Oral RfD x Oral to Dermal Adjustment Factor

(3) USEPA: Integrated Risk Information System (IRIS) Database, March 2010 (http://cfpub.epa.gov/ncea/iris/index.cfm). Note: date provided is the last revision date of the IRIS toxicity data provided.

TABLE 5.2

NON-CANCER TOXICITY DATA -- INHALATION
CATERPILLAR INC.
MAPLETON, ILLINOIS

Chemical of Potential Concern (COPC)	*Chronic/ Subchronic*	*Value Inhalation RfC*	*Units*	*Primary Target Organ*	*Combined Uncertainty/Modifying Factors*	*Source (1)*	*Date (2) (MM/DD/YY)*
PCBs							
Aroclor-1016	chronic	2.45E-04	mg/m^3	reduced birth weights	--	IRIS	11/01/96
Aroclor-1232	--	--	mg/m^3	--	--	--	--
Aroclor-1242	--	--	mg/m^3	--	--	--	--
Aroclor-1248	--	--	mg/m^3	--	--	--	--
Aroclor-1260	--	--	mg/m^3	--	--	--	--
Total PCBs	--	--	mg/m^3	--	--	--	--

Notes:

-- = Not Available

(1) Non-cancer inhalation toxicity data for PCBs is not available, therefore route to route extrapolation was assumed. Therefore, oral RfD toxicity data was substituted.

(2) USEPA: Integrated Risk Information System (IRIS) Database, March 2010 (http://cfpub.epa.gov/ncea/iris/index.cfm).

Note: date provided is the last revision date of the IRIS toxicity data provided.

TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL ROUTE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Chemical of Potential Concern (COPC)	*Oral Cancer Slope Factor*	*Oral to Dermal Adjustment Factor (1)*	*Adjusted Dermal Cancer Slope Factor (2)*	*Units*	*Weight of Evidence/ Cancer Guideline Description*	*Source*	*Date (3) (MM/DD/YY)*
PCBs							
Aroclor-1016	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97
Aroclor-1232	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97
Aroclor-1242	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97
Aroclor-1248	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97
Aroclor-1260	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97
Total PCBs	2.00E+00	100%	2.00E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	06/01/97

Notes:

(1) USEPA, Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual, Part E Supplemental Guidance for Dermal Risk Assessment, EPA/540/R/99/005, July 2004.

(2) Adjusted Dermal CSF = Oral CSF / Oral to Dermal Adjustment Factor

(3) USEPA: Integrated Risk Information System (IRIS) Database, March 2010 (http://cfpub.epa.gov/ncea/iris/index.cfm). Note: date provided is the last revision date of the IRIS toxicity data provided.

EPA Weight of Evidence Classification :

A - Known Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

TABLE 6.2

CANCER TOXICITY DATA -- INHALATION
CATERPILLAR INC.
MAPLETON, ILLINOIS

Chemical of Potential Concern (COPC)	*Unit Risk*	*Units*	*Weight of Evidence/ Cancer Guideline Description*	*Source*	*Date (1) (MM/DD/YY)*
PCBs					
Aroclor-1016	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006
Aroclor-1232	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006
Aroclor-1242	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006
Aroclor-1248	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006
Aroclor-1260	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006
Total PCBs	5.70E-02	mg/m^3 -1	B2	IRIS	1/31/2006

Notes:

(1) USEPA: Integrated Risk Information System (IRIS) Database, March 2010 (http://cfpub.epa.gov/ncea/iris/index.cfm). Note: date provided is the last revision date of the IRIS toxicity data provided.

EPA Weight of Evidence Classification :

A - Known Human carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans
C - Possible human carcinogen
D - Not classifiable as a human carcinogen
E - Evidence of noncarcinogenicity

TABLE 7.1.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - CURRENT/FUTURE TRESPASSER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	7.62E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.52E-07	5.71E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	5.06E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.01E-06	3.80E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.17E-06					NC
			Dermal	Aroclor-1242	1.17E+01	mg/kg	1.49E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.99E-08	1.12E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	9.92E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.98E-07	7.44E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.28E-07					NC
		Exposure Point Total									1.39E-06					NC
	Exposure Medium Total										1.39E-06					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	7.03E-13	mg/m^3	5.70E-02	(mg/m^3)-1	4.01E-14	5.27E-12	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	7.80E+01	mg/kg	4.67E-12	mg/m^3	5.70E-02	(mg/m^3)-1	2.66E-13	3.50E-11	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.06E-13					NC
		Exposure Point Total									3.06E-13					NC
	Exposure Medium Total										3.06E-13					NC
Medium Total											1.39E-06					NC
							Total of Receptor Risks Across All Media for Aroclors				**1.4E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	5.04E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.01E-06	3.78E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.01E-06					NC
			Dermal	Total PCBs	7.76E+01	mg/kg	9.88E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.98E-07	7.41E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.98E-07					NC
		Exposure Point Total									1.21E-06					NC
	Exposure Medium Total										1.21E-06					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	4.65E-12	mg/m^3	5.70E-02	(mg/m^3)-1	2.65E-13	3.49E-11	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.65E-13					NC
		Exposure Point Total									2.65E-13					NC
	Exposure Medium Total										2.65E-13					NC
Medium Total											1.21E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**1.2E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - CURRENT/FUTURE TRESPASSER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	1.52E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.05E-07	1.14E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	1.01E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.03E-06	7.60E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.33E-06					NC
			Dermal	Aroclor-1242	1.17E+01	mg/kg	1.49E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.99E-07	1.12E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	9.92E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.98E-06	7.44E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.28E-06					NC
		Exposure Point Total									4.61E-06					NC
	Exposure Medium Total										4.61E-06					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	5.62E-12	mg/m^3	5.70E-02	(mg/m^3)-1	3.21E-13	4.22E-11	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	7.80E+01	mg/kg	3.74E-11	mg/m^3	5.70E-02	(mg/m^3)-1	2.13E-12	2.80E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.45E-12					NC
		Exposure Point Total									2.45E-12					NC
	Exposure Medium Total										2.45E-12					NC
Medium Total											4.61E-06					NC
							Total of Receptor Risks Across All Media for Aroclors				**4.6E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	1.01E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.02E-06	7.56E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.02E-06					NC
			Dermal	Total PCBs	7.76E+01	mg/kg	9.88E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.98E-06	7.41E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.98E-06					NC
		Exposure Point Total									3.99E-06					NC
	Exposure Medium Total										3.99E-06					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	3.72E-11	mg/m^3	5.70E-02	(mg/m^3)-1	2.12E-12	2.79E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.12E-12					NC
		Exposure Point Total									2.12E-12					NC
	Exposure Medium Total										2.12E-12					NC
Medium Total											3.99E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**4.0E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.2.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - CURRENT/FUTURE HIGH OCCUPANCY INDUSTRIAL WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: High Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	6.89E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.38E-06	5.74E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	4.58E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	9.16E-06	3.81E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.05E-05					NC
			Dermal	Aroclor-1242	1.17E+01	mg/kg	1.27E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.55E-07	1.06E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	8.46E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.69E-06	7.05E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.95E-06					NC
		Exposure Point Total									1.25E-05					NC
	Exposure Medium Total										1.25E-05					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	3.16E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.80E-11	2.64E-09	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	7.80E+01	mg/kg	2.10E-09	mg/m^3	5.70E-02	(mg/m^3)-1	1.20E-10	1.75E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.38E-10					NC
		Exposure Point Total									1.38E-10					NC
	Exposure Medium Total										1.38E-10					NC
Medium Total											1.25E-05					NC
							Total of Receptor Risks Across All Media for Aroclors				**1.2E-05**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	4.55E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	9.11E-06	3.80E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								9.11E-06					NC
			Dermal	Total PCBs	7.76E+01	mg/kg	8.42E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.68E-06	7.01E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.68E-06					NC
		Exposure Point Total									1.08E-05					NC
	Exposure Medium Total										1.08E-05					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	2.09E-09	mg/m^3	5.70E-02	(mg/m^3)-1	1.19E-10	1.74E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.19E-10					NC
		Exposure Point Total									1.19E-10					NC
	Exposure Medium Total										1.19E-10					NC
Medium Total											1.08E-05					NC
							Total of Receptor Risks Across All Media for Total PCBs				**1.1E-05**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - CURRENT/FUTURE HIGH OCCUPANCY INDUSTRIAL WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: High Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	1.91E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.83E-06	5.74E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	1.27E-05	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.54E-05	3.81E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.93E-05					NC
			Dermal	Aroclor-1242	1.17E+01	mg/kg	3.54E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	7.07E-06	1.06E-05	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	7.80E+01	mg/kg	2.35E-05	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.70E-05	7.05E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								5.41E-05					NC
		Exposure Point Total									8.33E-05					NC
	Exposure Medium Total										8.33E-05					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1242	1.17E+01	mg/kg	8.79E-10	mg/m^3	5.70E-02	(mg/m^3)-1	5.01E-11	2.64E-09	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	7.80E+01	mg/kg	5.84E-09	mg/m^3	5.70E-02	(mg/m^3)-1	3.33E-10	1.75E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.83E-10					NC
		Exposure Point Total									3.83E-10					NC
	Exposure Medium Total										3.83E-10					NC
Medium Total											8.33E-05					NC
							Total of Receptor Risks Across All Media for Aroclors				**8.3E-05**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	1.27E-05	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.53E-05	3.80E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.53E-05					NC
			Dermal	Total PCBs	7.76E+01	mg/kg	2.34E-05	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.68E-05	7.01E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								4.68E-05					NC
		Exposure Point Total									7.21E-05					NC
	Exposure Medium Total										7.21E-05					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	7.76E+01	mg/kg	5.81E-09	mg/m^3	5.70E-02	(mg/m^3)-1	3.31E-10	1.74E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.31E-10					NC
		Exposure Point Total									3.31E-10					NC
	Exposure Medium Total										3.31E-10					NC
Medium Total											7.21E-05					NC
							Total of Receptor Risks Across All Media for Total PCBs				**7.2E-05**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.3.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - FUTURE CONSTRUCTION WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	West Swale Area	Ingestion	Aroclor-1232	1.40E-01	mg/kg	1.21E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.41E-10	9.04E-09	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1242	1.48E+02	mg/kg	1.28E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.55E-07	9.57E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.83E+01	mg/kg	1.58E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.16E-08	1.18E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1260	5.60E-02	mg/kg	4.82E-11	mg/kg-d	2.00E+00	(mg/kg-d)-1	9.64E-11	3.62E-09	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.87E-07					NC
			Dermal	Aroclor-1232	1.40E-01	mg/kg	1.69E-11	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.38E-11	1.27E-09	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1242	1.48E+02	mg/kg	1.79E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.57E-08	1.34E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.83E+01	mg/kg	2.21E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.42E-09	1.66E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1260	5.60E-02	mg/kg	6.75E-12	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.35E-11	5.06E-10	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								4.02E-08					NC
		Exposure Point Total									3.27E-07					NC
	Exposure Medium Total										3.27E-07					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1232	1.40E-01	mg/kg	7.88E-14	mg/m^3	5.70E-02	(mg/m^3)-1	4.49E-15	5.91E-12	mg/m^3	--	mg/m^3	NC
				Aroclor-1242	1.48E+02	mg/kg	8.33E-11	mg/m^3	5.70E-02	(mg/m^3)-1	4.75E-12	6.25E-09	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	1.83E+01	mg/kg	1.03E-11	mg/m^3	5.70E-02	(mg/m^3)-1	5.88E-13	7.74E-10	mg/m^3	--	mg/m^3	NC
				Aroclor-1260	5.60E-02	mg/kg	3.15E-14	mg/m^3	5.70E-02	(mg/m^3)-1	1.80E-15	2.36E-12	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								5.34E-12					NC
		Exposure Point Total									5.34E-12					NC
	Exposure Medium Total										5.34E-12					NC
Medium Total											3.27E-07					NC
							Total of Receptor Risks Across All Media for Aroclors				**3.3E-07**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	West Swale Area	Ingestion	Total PCBs	1.18E+02	mg/kg	1.02E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.04E-07	7.65E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.04E-07					NC
			Dermal	Total PCBs	1.18E+02	mg/kg	1.43E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.86E-08	1.07E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.86E-08					NC
		Exposure Point Total									2.33E-07					NC
	Exposure Medium Total										2.33E-07					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	1.18E+02	mg/kg	6.67E-11	mg/m^3	5.70E-02	(mg/m^3)-1	3.80E-12	5.00E-09	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.80E-12					NC
		Exposure Point Total									3.80E-12					NC
	Exposure Medium Total										3.80E-12					NC
Medium Total											2.33E-07					NC
							Total of Receptor Risks Across All Media for Total PCBs				**2.3E-07**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
WEST SWALE AREA - FUTURE CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Aroclor-1232	1.40E-01	mg/kg	4.82E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	9.64E-10	3.62E-08	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1242	1.48E+02	mg/kg	5.10E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.02E-06	3.83E-05	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.83E+01	mg/kg	6.32E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.26E-07	4.74E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1260	5.60E-02	mg/kg	1.93E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.86E-10	1.45E-08	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.15E-06					NC
			Dermal	Aroclor-1232	1.40E-01	mg/kg	2.03E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.05E-10	1.52E-08	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1242	1.48E+02	mg/kg	2.14E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.29E-07	1.61E-05	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.83E+01	mg/kg	2.65E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	5.31E-08	1.99E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1260	5.60E-02	mg/kg	8.10E-11	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.62E-10	6.08E-09	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								4.82E-07					NC
		Exposure Point Total									1.63E-06					NC
	Exposure Medium Total										1.63E-06					NC
	Ambient Air	West Swale Area	Ingestion	Aroclor-1232	1.40E-01	mg/kg	3.15E-13	mg/m^3	5.70E-02	(mg/m^3)-1	1.80E-14	2.36E-11	mg/m^3	--	mg/m^3	NC
				Aroclor-1242	1.48E+02	mg/kg	3.33E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.90E-11	2.50E-08	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	1.83E+01	mg/kg	4.13E-11	mg/m^3	5.70E-02	(mg/m^3)-1	2.35E-12	3.10E-09	mg/m^3	--	mg/m^3	NC
				Aroclor-1260	5.60E-02	mg/kg	1.26E-13	mg/m^3	5.70E-02	(mg/m^3)-1	7.18E-15	9.45E-12	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.14E-11					NC
		Exposure Point Total									2.14E-11					NC
	Exposure Medium Total										2.14E-11					NC
Medium Total											1.63E-06					NC
							Total of Receptor Risks Across All Media for Aroclors				**1.6E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**NC**

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	West Swale Area	Ingestion	Total PCBs	1.18E+02	mg/kg	4.08E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	8.16E-07	3.06E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								8.16E-07					NC
			Dermal	Total PCBs	1.18E+02	mg/kg	1.71E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.43E-07	1.29E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								3.43E-07					NC
		Exposure Point Total									1.16E-06					NC
	Exposure Medium Total										1.16E-06					NC
	Ambient Air	West Swale Area	Ingestion	Total PCBs	1.18E+02	mg/kg	2.67E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.52E-11	2.00E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.52E-11					NC
		Exposure Point Total									1.52E-11					NC
	Exposure Medium Total										1.52E-11					NC
Medium Total											1.16E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**1.2E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.4.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - CURRENT/FUTURE TRESPASSER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	2.79E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	5.58E-09	2.09E-08	mg/kg-d	7.00E-05	mg/kg-d	2.99E-04
				Aroclor-1242	1.18E+01	mg/kg	7.67E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.53E-07	5.76E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	3.93E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	7.85E-07	2.94E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								9.44E-07					2.99E-04
			Dermal	Aroclor-1016	4.30E-01	mg/kg	5.47E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.09E-09	4.10E-09	mg/kg-d	7.00E-05	mg/kg-d	5.86E-05
				Aroclor-1242	1.18E+01	mg/kg	1.50E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.01E-08	1.13E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	7.69E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.54E-07	5.77E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.85E-07					5.86E-05
		Exposure Point Total									1.13E-06					3.58E-04
	Exposure Medium Total										1.13E-06					3.58E-04
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	2.99E-14	mg/m^3	5.70E-02	(mg/m^3)-1	1.71E-15	2.25E-13	mg/m^3	2.45E-04	mg/m^3	9.17E-10
				Aroclor-1242	1.18E+01	mg/kg	8.23E-13	mg/m^3	5.70E-02	(mg/m^3)-1	4.69E-14	6.17E-12	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	6.05E+01	mg/kg	4.21E-12	mg/m^3	5.70E-02	(mg/m^3)-1	2.40E-13	3.16E-11	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.89E-13					9.17E-10
		Exposure Point Total									2.89E-13					9.17E-10
	Exposure Medium Total										2.89E-13					9.17E-10
Medium Total											1.13E-06					3.58E-04
							Total of Receptor Risks Across All Media for Aroclors				**1.1E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**3.6E-04**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	3.91E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	7.82E-07	2.93E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								7.82E-07					NC
			Dermal	Total PCBs	6.02E+01	mg/kg	7.66E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.53E-07	5.75E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.53E-07					NC
		Exposure Point Total									9.35E-07					NC
	Exposure Medium Total										9.35E-07					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	4.19E-12	mg/m^3	5.70E-02	(mg/m^3)-1	2.39E-13	3.14E-11	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.39E-13					NC
		Exposure Point Total									2.39E-13					NC
	Exposure Medium Total										2.39E-13					NC
Medium Total											9.35E-07					NC
							Total of Receptor Risks Across All Media for Total PCBs				**9.4E-07**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - CURRENT/FUTURE TRESPASSER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	5.58E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.12E-08	4.19E-08	mg/kg-d	7.00E-05	mg/kg-d	5.98E-04
				Aroclor-1242	1.18E+01	mg/kg	1.53E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.07E-07	1.15E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	7.85E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.57E-06	5.89E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.89E-06					5.98E-04
			Dermal	Aroclor-1016	4.30E-01	mg/kg	5.47E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.09E-08	4.10E-08	mg/kg-d	7.00E-05	mg/kg-d	5.86E-04
				Aroclor-1242	1.18E+01	mg/kg	1.50E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.01E-07	1.13E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	7.69E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.54E-06	5.77E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.85E-06					5.86E-04
		Exposure Point Total									3.74E-06					1.18E-03
	Exposure Medium Total										3.74E-06					1.18E-03
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	2.40E-13	mg/m^3	5.70E-02	(mg/m^3)-1	1.37E-14	1.80E-12	mg/m^3	2.45E-04	mg/m^3	7.33E-09
				Aroclor-1242	1.18E+01	mg/kg	6.58E-12	mg/m^3	5.70E-02	(mg/m^3)-1	3.75E-13	4.94E-11	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	6.05E+01	mg/kg	3.37E-11	mg/m^3	5.70E-02	(mg/m^3)-1	1.92E-12	2.53E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.31E-12					7.33E-09
		Exposure Point Total									2.31E-12					7.33E-09
	Exposure Medium Total										2.31E-12					7.33E-09
Medium Total											3.74E-06					1.18E-03
							Total of Receptor Risks Across All Media for Aroclors				**3.7E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**1.2E-03**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	7.82E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.56E-06	5.87E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.56E-06					NC
			Dermal	Total PCBs	6.02E+01	mg/kg	7.66E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.53E-06	5.75E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.53E-06					NC
		Exposure Point Total									3.10E-06					NC
	Exposure Medium Total										3.10E-06					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	3.35E-11	mg/m^3	5.70E-02	(mg/m^3)-1	1.91E-12	2.52E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.91E-12					NC
		Exposure Point Total									1.91E-12					NC
	Exposure Medium Total										1.91E-12					NC
Medium Total											3.10E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**3.1E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.5.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - CURRENT/FUTURE LOW OCCUPANCY INDUSTRIAL WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Low Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	4.23E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	8.46E-09	3.52E-08	mg/kg-d	7.00E-05	mg/kg-d	5.03E-04
				Aroclor-1242	1.18E+01	mg/kg	1.16E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.32E-07	9.68E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	5.94E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.19E-06	4.95E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.43E-06					5.03E-04
			Dermal	Aroclor-1016	4.30E-01	mg/kg	7.81E-10	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.56E-09	6.51E-09	mg/kg-d	7.00E-05	mg/kg-d	9.30E-05
				Aroclor-1242	1.18E+01	mg/kg	2.15E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.29E-08	1.79E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	1.10E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.20E-07	9.16E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.64E-07					9.30E-05
		Exposure Point Total									1.69E-06					5.96E-04
	Exposure Medium Total										1.69E-06					5.96E-04
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	4.51E-13	mg/m^3	5.70E-02	(mg/m^3)-1	2.57E-14	3.76E-12	mg/m^3	2.45E-04	mg/m^3	1.54E-08
				Aroclor-1242	1.18E+01	mg/kg	1.24E-11	mg/m^3	5.70E-02	(mg/m^3)-1	7.07E-13	1.03E-10	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	6.05E+01	mg/kg	6.35E-11	mg/m^3	5.70E-02	(mg/m^3)-1	3.62E-12	5.29E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								4.35E-12					1.54E-08
		Exposure Point Total									4.35E-12					1.54E-08
	Exposure Medium Total										4.35E-12					1.54E-08
Medium Total											1.69E-06					5.96E-04
							Total of Receptor Risks Across All Media for Aroclors				**1.7E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**6.0E-04**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	5.92E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.18E-06	4.93E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.18E-06					NC
			Dermal	Total PCBs	6.02E+01	mg/kg	1.09E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.19E-07	9.12E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.19E-07					NC
		Exposure Point Total									1.40E-06					NC
	Exposure Medium Total										1.40E-06					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	6.32E-11	mg/m^3	5.70E-02	(mg/m^3)-1	3.60E-12	5.27E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.60E-12					NC
		Exposure Point Total									3.60E-12					NC
	Exposure Medium Total										3.60E-12					NC
Medium Total											1.40E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**1.4E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - CURRENT/FUTURE LOW OCCUPANCY INDUSTRIAL WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Low Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	1.17E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.35E-08	3.52E-08	mg/kg-d	7.00E-05	mg/kg-d	5.03E-04
				Aroclor-1242	1.18E+01	mg/kg	3.23E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	6.46E-07	9.68E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	1.65E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.30E-06	4.95E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								3.97E-06					5.03E-04
			Dermal	Aroclor-1016	4.30E-01	mg/kg	2.17E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	4.34E-08	6.51E-08	mg/kg-d	7.00E-05	mg/kg-d	9.30E-04
				Aroclor-1242	1.18E+01	mg/kg	5.96E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.19E-06	1.79E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	6.05E+01	mg/kg	3.05E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	6.10E-06	9.16E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								7.34E-06					9.30E-04
		Exposure Point Total									1.13E-05					1.43E-03
	Exposure Medium Total										1.13E-05					1.43E-03
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	4.30E-01	mg/kg	1.25E-12	mg/m^3	5.70E-02	(mg/m^3)-1	7.15E-14	3.76E-12	mg/m^3	2.45E-04	mg/m^3	1.54E-08
				Aroclor-1242	1.18E+01	mg/kg	3.45E-11	mg/m^3	5.70E-02	(mg/m^3)-1	1.96E-12	1.03E-10	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	6.05E+01	mg/kg	1.76E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.00E-11	5.29E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.21E-11					1.54E-08
		Exposure Point Total									1.21E-11					1.54E-08
	Exposure Medium Total										1.21E-11					1.54E-08
Medium Total											1.13E-05					1.43E-03
							Total of Receptor Risks Across All Media for Aroclors				**1.1E-05**	**Total of Receptor Hazards Across All Media for Aroclors**				**1.4E-03**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Surface Soil	Surface Soil	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	1.64E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.29E-06	4.93E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								3.29E-06					NC
			Dermal	Total PCBs	6.02E+01	mg/kg	3.04E-06	mg/kg-d	2.00E+00	(mg/kg-d)-1	6.08E-06	9.12E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								6.08E-06					NC
		Exposure Point Total									9.37E-06					NC
	Exposure Medium Total										9.37E-06					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	6.02E+01	mg/kg	1.76E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.00E-11	5.27E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								1.00E-11					NC
		Exposure Point Total									1.00E-11					NC
	Exposure Medium Total										1.00E-11					NC
Medium Total											9.37E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**9.4E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.6.CT

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - FUTURE CONSTRUCTION WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	East Swale Area	Ingestion	Aroclor-1016	5.65E+01	mg/kg	4.86E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	9.73E-08	3.65E-06	mg/kg-d	7.00E-05	mg/kg-d	5.21E-02
				Aroclor-1242	7.44E+01	mg/kg	6.41E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.28E-07	4.80E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.26E+01	mg/kg	1.08E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.16E-08	8.12E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.47E-07					5.21E-02
			Dermal	Aroclor-1016	5.65E+01	mg/kg	6.81E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.36E-08	5.11E-07	mg/kg-d	7.00E-05	mg/kg-d	7.30E-03
				Aroclor-1242	7.44E+01	mg/kg	8.97E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.79E-08	6.73E-07	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.26E+01	mg/kg	1.52E-09	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.03E-09	1.14E-07	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								3.46E-08					7.30E-03
		Exposure Point Total									2.82E-07					5.94E-02
	Exposure Medium Total										2.82E-07					5.94E-02
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	5.65E+01	mg/kg	5.92E-11	mg/m^3	5.70E-02	(mg/m^3)-1	3.37E-12	4.44E-09	mg/m^3	2.45E-04	mg/m^3	1.81E-05
				Aroclor-1242	7.44E+01	mg/kg	7.80E-11	mg/m^3	5.70E-02	(mg/m^3)-1	4.45E-12	5.85E-09	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	1.26E+01	mg/kg	1.32E-11	mg/m^3	5.70E-02	(mg/m^3)-1	7.51E-13	9.88E-10	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								8.57E-12					1.81E-05
		Exposure Point Total									8.57E-12					1.81E-05
	Exposure Medium Total										8.57E-12					1.81E-05
Medium Total											2.82E-07					5.94E-02
							Total of Receptor Risks Across All Media for Aroclors				**2.8E-07**	**Total of Receptor Hazards Across All Media for Aroclors**				**5.9E-02**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	East Swale Area	Ingestion	Total PCBs	1.13E+02	mg/kg	9.71E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.94E-07	7.29E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								1.94E-07					NC
			Dermal	Total PCBs	1.13E+02	mg/kg	1.36E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.72E-08	1.02E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								2.72E-08					NC
		Exposure Point Total									2.21E-07					NC
	Exposure Medium Total										2.21E-07					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	1.13E+02	mg/kg	1.18E-10	mg/m^3	5.70E-02	(mg/m^3)-1	6.74E-12	8.87E-09	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								6.74E-12					NC
		Exposure Point Total									6.74E-12					NC
	Exposure Medium Total										6.74E-12					NC
Medium Total											2.21E-07					NC
							Total of Receptor Risks Across All Media for Total PCBs				**2.2E-07**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS
EAST SWALE AREA - FUTURE CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	East Swale Area	Ingestion	Aroclor-1016	5.65E+01	mg/kg	1.95E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.89E-07	1.46E-05	mg/kg-d	7.00E-05	mg/kg-d	2.08E-01
				Aroclor-1242	7.44E+01	mg/kg	2.56E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	5.12E-07	1.92E-05	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.26E+01	mg/kg	4.33E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	8.66E-08	3.25E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								9.88E-07					2.08E-01
			Dermal	Aroclor-1016	5.65E+01	mg/kg	8.17E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	1.63E-07	6.13E-06	mg/kg-d	7.00E-05	mg/kg-d	8.75E-02
				Aroclor-1242	7.44E+01	mg/kg	1.08E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	2.15E-07	8.07E-06	mg/kg-d	--	mg/kg-d	NC
				Aroclor-1248	1.26E+01	mg/kg	1.82E-08	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.64E-08	1.36E-06	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								4.15E-07					8.75E-02
		Exposure Point Total									1.40E-06					2.96E-01
	Exposure Medium Total										1.40E-06					2.96E-01
	Ambient Air	East Swale Area	Ingestion	Aroclor-1016	5.65E+01	mg/kg	2.37E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.35E-11	1.78E-08	mg/m^3	2.45E-04	mg/m^3	7.25E-05
				Aroclor-1242	7.44E+01	mg/kg	3.12E-10	mg/m^3	5.70E-02	(mg/m^3)-1	1.78E-11	2.34E-08	mg/m^3	--	mg/m^3	NC
				Aroclor-1248	1.26E+01	mg/kg	5.27E-11	mg/m^3	5.70E-02	(mg/m^3)-1	3.00E-12	3.95E-09	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								3.43E-11					7.25E-05
		Exposure Point Total									3.43E-11					7.25E-05
	Exposure Medium Total										3.43E-11					7.25E-05
Medium Total											1.40E-06					2.96E-01
							Total of Receptor Risks Across All Media for Aroclors				**1.4E-06**	**Total of Receptor Hazards Across All Media for Aroclors**				**3.0E-01**

Medium	*Exposure Medium*	*Exposure Point*	*Exposure Route*	*Chemical of Potential Concern*	*EPC*		*Cancer Risk Calculations*					*Non-Cancer Hazard Calculations*				
					Value	*Units*	*Intake/Exposure Concentration*		*CSF/Unit Risk*		*Cancer Risk*	*Intake/Exposure Concentration*		*RfD/RfC*		*Hazard Quotient*
							Value	*Units*	*Value*	*Units*		*Value*	*Units*	*Value*	*Units*	
Soil	Soil	East Swale Area	Ingestion	Total PCBs	1.13E+02	mg/kg	3.89E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	7.77E-07	2.91E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								7.77E-07					NC
			Dermal	Total PCBs	1.13E+02	mg/kg	1.63E-07	mg/kg-d	2.00E+00	(mg/kg-d)-1	3.26E-07	1.22E-05	mg/kg-d	--	mg/kg-d	NC
			Exp. Route Total								3.26E-07					NC
		Exposure Point Total									1.10E-06					NC
	Exposure Medium Total										1.10E-06					NC
	Ambient Air	East Swale Area	Ingestion	Total PCBs	1.13E+02	mg/kg	4.73E-10	mg/m^3	5.70E-02	(mg/m^3)-1	2.70E-11	3.55E-08	mg/m^3	--	mg/m^3	NC
			Exp. Route Total								2.70E-11					NC
		Exposure Point Total									2.70E-11					NC
	Exposure Medium Total										2.70E-11					NC
Medium Total											1.10E-06					NC
							Total of Receptor Risks Across All Media for Total PCBs				**1.1E-06**	**Total of Receptor Hazards Across All Media for Total PCBs**				**NC**

Notes:
NC = Not Calculated

TABLE 9.1.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - CURRENT/FUTURE TRESPASSER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Aroclor-1242	1.52E-07	4.01E-14	2.99E-08	1.82E-07	--	NC	NC	NC	NC
			Aroclor-1248	1.01E-06	2.66E-13	1.98E-07	1.21E-06	--	NC	NC	NC	NC
			Chemical Total	1.17E-06	3.06E-13	2.28E-07	1.39E-06		NC	NC	NC	NC
		Exposure Point Total					1.39E-06					NC
	Exposure Medium Total						1.39E-06					NC
Medium Total							1.39E-06					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.4E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	1.01E-06	2.65E-13	1.98E-07	1.21E-06	--	NC	NC	NC	NC
			Chemical Total	1.01E-06	2.65E-13	1.98E-07	1.21E-06		NC	NC	NC	NC
		Exposure Point Total					1.21E-06					NC
	Exposure Medium Total						1.21E-06					NC
Medium Total							1.21E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**1.2E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.1.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - CURRENT/FUTURE TRESPASSER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Aroclor-1242	3.05E-07	3.21E-13	2.99E-07	6.03E-07	--	NC	NC	NC	NC
			Aroclor-1248	2.03E-06	2.13E-12	1.98E-06	4.01E-06	--	NC	NC	NC	NC
			Chemical Total	2.33E-06	2.45E-12	2.28E-06	4.61E-06		NC	NC	NC	NC
		Exposure Point Total					4.61E-06					NC
	Exposure Medium Total						4.61E-06					NC
Medium Total							4.61E-06					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**4.6E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	2.02E-06	2.12E-12	1.98E-06	3.99E-06	--	NC	NC	NC	NC
			Chemical Total	2.02E-06	2.12E-12	1.98E-06	3.99E-06		NC	NC	NC	NC
		Exposure Point Total					3.99E-06					NC
	Exposure Medium Total						3.99E-06					NC
Medium Total							3.99E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**4.0E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.2.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - CURRENT/FUTURE HIGH OCCUPANCY INDUSTRIAL WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: High Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Aroclor-1242	1.38E-06	1.80E-11	2.55E-07	1.63E-06	--	NC	NC	NC	NC
			Aroclor-1248	9.16E-06	1.20E-10	1.69E-06	1.08E-05	--	NC	NC	NC	NC
			Chemical Total	1.05E-05	1.38E-10	1.95E-06	1.25E-05		NC	NC	NC	NC
		Exposure Point Total					1.25E-05					NC
	Exposure Medium Total						1.25E-05					NC
Medium Total							1.25E-05					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.2E-05**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	9.11E-06	1.19E-10	1.68E-06	1.08E-05	--	NC	NC	NC	NC
			Chemical Total	9.11E-06	1.19E-10	1.68E-06	1.08E-05		NC	NC	NC	NC
		Exposure Point Total					1.08E-05					NC
	Exposure Medium Total						1.08E-05					NC
Medium Total							1.08E-05					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**1.1E-05**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.2.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - CURRENT/FUTURE HIGH OCCUPANCY INDUSTRIAL WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: High Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Aroclor-1242	3.83E-06	5.01E-11	7.07E-06	1.09E-05	--	NC	NC	NC	NC
			Aroclor-1248	2.54E-05	3.33E-10	4.70E-05	7.24E-05	--	NC	NC	NC	NC
			Chemical Total	2.93E-05	3.83E-10	5.41E-05	8.33E-05		NC	NC	NC	NC
		Exposure Point Total					8.33E-05					NC
	Exposure Medium Total						8.33E-05					NC
Medium Total							8.33E-05					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**8.3E-05**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	2.53E-05	3.31E-10	4.68E-05	7.21E-05	--	NC	NC	NC	NC
			Chemical Total	2.53E-05	3.31E-10	4.68E-05	7.21E-05		NC	NC	NC	NC
		Exposure Point Total					7.21E-05					NC
	Exposure Medium Total						7.21E-05					NC
Medium Total							7.21E-05					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**7.2E-05**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.3.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - FUTURE CONSTRUCTION WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Soil	Soil	West Swale Area	Aroclor-1232	2.41E-10	4.49E-15	3.38E-11	2.75E-10	--	NC	NC	NC	NC
			Aroclor-1242	2.55E-07	4.75E-12	3.57E-08	2.91E-07	--	NC	NC	NC	NC
			Aroclor-1248	3.16E-08	5.88E-13	4.42E-09	3.60E-08	--	NC	NC	NC	NC
			Aroclor-1260	9.64E-11	1.80E-15	1.35E-11	1.10E-10	--	NC	NC	NC	NC
			Chemical Total	2.87E-07	5.34E-12	4.02E-08	3.27E-07		NC	NC	NC	NC
		Exposure Point Total					3.27E-07					NC
	Exposure Medium Total						3.27E-07					NC
Medium Total							3.27E-07					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**3.3E-07**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	2.04E-07	3.80E-12	2.86E-08	2.33E-07	--	NC	NC	NC	NC
			Chemical Total	2.04E-07	3.80E-12	2.86E-08	2.33E-07		NC	NC	NC	NC
		Exposure Point Total					2.33E-07					NC
	Exposure Medium Total						2.33E-07					NC
Medium Total							2.33E-07					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**2.3E-07**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.3.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
WEST SWALE AREA - FUTURE CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Soil	Soil	West Swale Area	Aroclor-1232	9.64E-10	1.80E-14	4.05E-10	1.37E-09	--	NC	NC	NC	NC
			Aroclor-1242	1.02E-06	1.90E-11	4.29E-07	1.45E-06	--	NC	NC	NC	NC
			Aroclor-1248	1.26E-07	2.35E-12	5.31E-08	1.79E-07	--	NC	NC	NC	NC
			Aroclor-1260	3.86E-10	7.18E-15	1.62E-10	5.48E-10	--	NC	NC	NC	NC
			Chemical Total	1.15E-06	2.14E-11	4.82E-07	1.63E-06		NC	NC	NC	NC
		Exposure Point Total					1.63E-06					NC
	Exposure Medium Total						1.63E-06					NC
Medium Total							1.63E-06					NC
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.6E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**NC**

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	West Swale Area	Total PCBs	8.16E-07	1.52E-11	3.43E-07	1.16E-06	--	NC	NC	NC	NC
			Chemical Total	8.16E-07	1.52E-11	3.43E-07	1.16E-06		NC	NC	NC	NC
		Exposure Point Total					1.16E-06					NC
	Exposure Medium Total						1.16E-06					NC
Medium Total							1.16E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**1.2E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.4.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - CURRENT/FUTURE TRESPASSER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	5.58E-09	1.71E-15	1.09E-09	6.68E-09	reduced birth weights	2.99E-04	9.17E-10	5.86E-05	3.58E-04
			Aroclor-1242	1.53E-07	4.69E-14	3.01E-08	1.84E-07	--	NC	NC	NC	NC
			Aroclor-1248	7.85E-07	2.40E-13	1.54E-07	9.39E-07	--	NC	NC	NC	NC
			Chemical Total	9.44E-07	2.89E-13	1.85E-07	1.13E-06		2.99E-04	9.17E-10	5.86E-05	3.58E-04
		Exposure Point Total					1.13E-06					3.58E-04
	Exposure Medium Total						1.13E-06					3.58E-04
Medium Total							1.13E-06					3.58E-04
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.1E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**3.6E-04**

Total [reduced birth weights] HI = 3.6E-04

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	7.82E-07	2.39E-13	1.53E-07	9.35E-07	--	NC	NC	NC	NC
			Chemical Total	7.82E-07	2.39E-13	1.53E-07	9.35E-07		NC	NC	NC	NC
		Exposure Point Total					9.35E-07					NC
	Exposure Medium Total						9.35E-07					NC
Medium Total							9.35E-07					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**9.4E-07**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.4.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - CURRENT/FUTURE TRESPASSER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Trespassers
Receptor Age: Adolescents

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	1.12E-08	1.37E-14	1.09E-08	2.21E-08	reduced birth weights	5.98E-04	7.33E-09	5.86E-04	1.18E-03
			Aroclor-1242	3.07E-07	3.75E-13	3.01E-07	6.08E-07	--	NC	NC	NC	NC
			Aroclor-1248	1.57E-06	1.92E-12	1.54E-06	3.11E-06	--	NC	NC	NC	NC
			Chemical Total	1.89E-06	2.31E-12	1.85E-06	3.74E-06		5.98E-04	7.33E-09	5.86E-04	1.18E-03
		Exposure Point Total					3.74E-06					1.18E-03
	Exposure Medium Total						3.74E-06					1.18E-03
Medium Total							3.74E-06					1.18E-03
				Total Risk Across All Media and All Exposure Routes for Aroclors			**3.7E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**1.2E-03**

Total [reduced birth weights] HI = 1.2E-03

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	1.56E-06	1.91E-12	1.53E-06	3.10E-06	--	NC	NC	NC	NC
			Chemical Total	1.56E-06	1.91E-12	1.53E-06	3.10E-06		NC	NC	NC	NC
		Exposure Point Total					3.10E-06					NC
	Exposure Medium Total						3.10E-06					NC
Medium Total							3.10E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**3.1E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.5.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - CURRENT/FUTURE LOW OCCUPANCY INDUSTRIAL WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Low Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	8.46E-09	2.57E-14	1.56E-09	1.00E-08	reduced birth weights	5.03E-04	1.54E-08	9.30E-05	5.96E-04
			Aroclor-1242	2.32E-07	7.07E-13	4.29E-08	2.75E-07	--	NC	NC	NC	NC
			Aroclor-1248	1.19E-06	3.62E-12	2.20E-07	1.41E-06	--	NC	NC	NC	NC
			Chemical Total	1.43E-06	4.35E-12	2.64E-07	1.69E-06		5.03E-04	1.54E-08	9.30E-05	5.96E-04
		Exposure Point Total					1.69E-06					5.96E-04
	Exposure Medium Total						1.69E-06					5.96E-04
Medium Total							1.69E-06					5.96E-04
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.7E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**6.0E-04**

Total [reduced birth weights] HI = 6.0E-04

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	1.18E-06	3.60E-12	2.19E-07	1.40E-06	--	NC	NC	NC	NC
			Chemical Total	1.18E-06	3.60E-12	2.19E-07	1.40E-06		NC	NC	NC	NC
		Exposure Point Total					1.40E-06					NC
	Exposure Medium Total						1.40E-06					NC
Medium Total							1.40E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**1.4E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.5.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - CURRENT/FUTURE LOW OCCUPANCY INDUSTRIAL WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Receptor Population: Low Occupancy Industrial Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	2.35E-08	7.15E-14	4.34E-08	6.69E-08	reduced birth weights	5.03E-04	1.54E-08	9.30E-04	1.43E-03
			Aroclor-1242	6.46E-07	1.96E-12	1.19E-06	1.84E-06	--	NC	NC	NC	NC
			Aroclor-1248	3.30E-06	1.00E-11	6.10E-06	9.41E-06	--	NC	NC	NC	NC
			Chemical Total	3.97E-06	1.21E-11	7.34E-06	1.13E-05		5.03E-04	1.54E-08	9.30E-04	1.43E-03
		Exposure Point Total					1.13E-05					1.43E-03
	Exposure Medium Total						1.13E-05					1.43E-03
Medium Total							1.13E-05					1.43E-03
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.1E-05**		**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**			**1.4E-03**

Total [reduced birth weights] HI = 1.4E-03

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	3.29E-06	1.00E-11	6.08E-06	9.37E-06	--	NC	NC	NC	NC
			Chemical Total	3.29E-06	1.00E-11	6.08E-06	9.37E-06		NC	NC	NC	NC
		Exposure Point Total					9.37E-06					NC
	Exposure Medium Total						9.37E-06					NC
Medium Total							9.37E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**9.4E-06**		**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**			**NC**

Note:
NC = Not Calculated

TABLE 9.6.CT

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - FUTURE CONSTRUCTION WORKER
CENTRAL TENDENCY
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	9.73E-08	3.37E-12	1.36E-08	1.11E-07	reduced birth weights	5.21E-02	1.81E-05	7.30E-03	5.94E-02
			Aroclor-1242	1.28E-07	4.45E-12	1.79E-08	1.46E-07	--	NC	NC	NC	NC
			Aroclor-1248	2.16E-08	7.51E-13	3.03E-09	2.47E-08	--	NC	NC	NC	NC
			Chemical Total	2.47E-07	8.57E-12	3.46E-08	2.82E-07		5.21E-02	1.81E-05	7.30E-03	5.94E-02
		Exposure Point Total					2.82E-07					5.94E-02
	Exposure Medium Total						2.82E-07					5.94E-02
Medium Total							2.82E-07					5.94E-02
				Total Risk Across All Media and All Exposure Routes for Aroclors			**2.8E-07**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**5.9E-02**

Total [reduced birth weights] HI = 5.9E-02

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	1.94E-07	6.74E-12	2.72E-08	2.21E-07	--	NC	NC	NC	NC
			Chemical Total	1.94E-07	6.74E-12	2.72E-08	2.21E-07		NC	NC	NC	NC
		Exposure Point Total					2.21E-07					NC
	Exposure Medium Total						2.21E-07					NC
Medium Total							2.21E-07					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**2.2E-07**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 9.6.RME

SUMMARY OF RISKS AND HAZARDS FOR CHEMICALS OF POTENTIAL CONCERN
EAST SWALE AREA - FUTURE CONSTRUCTION WORKER
REASONABLE MAXIMUM EXPOSURE
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Aroclor-1016	3.89E-07	1.35E-11	1.63E-07	5.53E-07	reduced birth weights	2.08E-01	7.25E-05	8.75E-02	2.96E-01
			Aroclor-1242	5.12E-07	1.78E-11	2.15E-07	7.28E-07	--	NC	NC	NC	NC
			Aroclor-1248	8.66E-08	3.00E-12	3.64E-08	1.23E-07	--	NC	NC	NC	NC
			Chemical Total	9.88E-07	3.43E-11	4.15E-07	1.40E-06		2.08E-01	7.25E-05	8.75E-02	2.96E-01
		Exposure Point Total					1.40E-06					2.96E-01
	Exposure Medium Total						1.40E-06					2.96E-01
Medium Total							1.40E-06					2.96E-01
				Total Risk Across All Media and All Exposure Routes for Aroclors			**1.4E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Aroclors**				**3.0E-01**

Total [reduced birth weights] HI = 3.0E-01

Medium	*Exposure Medium*	*Exposure Point*	*Chemical of Potential Concern*	*Carcinogenic Risk*				*Non-Carcinogenic Hazard Quotient*				
				Ingestion	*Inhalation*	*Dermal*	*Exposure Routes Total*	*Primary Target Organ*	*Ingestion*	*Inhalation*	*Dermal*	*Exposure Routes Total*
Surface Soil	Surface Soil	East Swale Area	Total PCBs	7.77E-07	2.70E-11	3.26E-07	1.10E-06	--	NC	NC	NC	NC
			Chemical Total	7.77E-07	2.70E-11	3.26E-07	1.10E-06		NC	NC	NC	NC
		Exposure Point Total					1.10E-06					NC
	Exposure Medium Total						1.10E-06					NC
Medium Total							1.10E-06					NC
				Total Risk Across All Media and All Exposure Routes for Total PCBs			**1.1E-06**	**Total Hazard Index Across All Media and All Exposure Routes for Total PCBs**				**NC**

Note:
NC = Not Calculated

TABLE 10.0

SUMMARY OF ADDITIONAL LIFETIME CANCER RISKS AND HAZARD INDICES
CATERPILLAR INC.
MAPLETON, ILLINOIS

			Addition Lifetime			
			Cancer Risks		*Hazard Indices*	
Scenario	*Area of Concern*		*CT*	*RME*	*CT*	*RME*
Trespasser:						
Current/Future	West Swale Area					
		Aroclors :	1.4E-06	4.6E-06	NC	NC
		Total PCBs :	1.2E-06	4.0E-06	NC	NC
Current/Future	East Swale Area					
		Aroclors :	1.1E-06	3.7E-06	3.6E-04	1.2E-03
		Total PCBs :	9.4E-07	3.1E-06	NC	NC
Industrial Worker:						
Current/Future	West Swale Area					
		Aroclors :	1.2E-05	8.3E-05	NC	NC
		Total PCBs :	1.1E-05	7.2E-05	NC	NC
Current/Future	East Swale Area					
		Aroclors :	1.7E-06	1.1E-05	6.0E-04	1.4E-03
		Total PCBs :	1.4E-06	9.4E-06	NC	NC
Construction Worker						
Future	West Swale Area					
		Aroclors :	3.3E-07	1.6E-06	NC	NC
		Total PCBs :	2.3E-07	1.2E-06	NC	NC
Future	East Swale Area					
		Aroclors :	2.8E-07	1.4E-06	5.9E-02	3.0E-01
		Total PCBs :	2.2E-07	1.1E-06	NC	NC

Notes:

NC = Not Calculated

APPENDIX J

STATISTICAL METHODOLOGY

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MEMORANDUM

TO:	April Gowing	REF. NO.:	13307
FROM:	John Ferguson/Sarah Tebbutt/ca/2	DATE:	April 6, 2006
RE:	**Air Emissions and Dispersion Modeling Caterpiller Inc. Facility, Mapleton, Illinois**		

1.0 INTRODUCTION

The following memo outlines the air emissions and dispersion modeling conducted for respirable particulate emissions from impacted soils at the Caterpillar Facility (Facility) in Mapleton, Illinois. Air emissions and dispersion modeling was conducted for the following scenarios:

1. the emissions from exposed undisturbed surface soils for Areas 2 and 3; and
2. the emissions from excavation activities for Areas 2 and 3.

The air emissions and dispersion modeling was conducted using reasonable maximum exposure (RME) concentrations. The characteristic soil concentrations for Area 2 are summarized in Tables 1 and 2 for exposed undisturbed surface soils and soils excavation, respectively. The characteristic soil concentrations for Area 3 are summarized in Tables 3 and 4 for exposed undisturbed surface soils and soils excavation, respectively.

2.0 PCB PARTICULATE EMISSIONS FROM UNDISTURBED SURFACE SOILS DUE TO WIND EROSION SCENARIO 1

The principal source of potential atmospheric contaminants from Areas 2 and 3 is expected to be respirable particulate matter potentially containing PCBs.

The particulate emission factor (PEF) equation, found in USEPA Soil Screening User's Guide (USEPA, 1996) relates the concentration of contaminant in soil with the concentration of dust particles in the air. This guidance addresses dust generated from open sources, which is termed "fugitive" because it is not discharged into the atmosphere in a confined flow stream. Other sources of fugitive dusts that may lead to higher emissions due to mechanical disturbances include unpaved roads, tilled agricultural soils, and heavy construction operations. The emissions of the PEF equation is based on the "unlimited reservoir" model developed to estimate particulate emissions due to wind erosion. The unlimited reservoir model is most sensitive to the threshold friction velocity, which is a function of the mode of the size distribution of surface soil aggregates. This parameter has the greatest effect on the emissions and resulting concentration.

Both areas targeted for surface soil modeling were subdivided into exposure areas (EA). An EA is defined as that geographical area in which an individual may be exposed to contamination over time. Because the

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soil screening levels were developed for a residential scenario, the EPA assumes the EA is a suburban residential lot corresponding to 0.5 acre.

All areas of the contaminated surface soil sources were modeled as a square shaped 0.5-acre area source. The actual areas are larger than 0.5 acre, however, the 0.5-acre source area represents the areas with the highest contaminant soil concentration.

Q/C (inverse mean concentration at center of square source) values are needed to calculate the PEF. Q/C values should be used that best represents a site's size and meteorological conditions. For this situation, Chicago, Illinois was chosen as the area, which best represents this site's conditions, due to its proximity to the Site. The Site was modeled as having 50 percent vegetative cover. The following equation was taken from the USEPA Soil Screening User's Guide (USEPA, 1996).

Derivation of the Particulate Emission Factor

$$PEF(m^3/kg) = \frac{Q}{C} \times \frac{3{,}600 s/h}{0.036 \times (1-V) \times (U_m/U_t)^3 \times F(x)}$$

Parameter/Definition (units)	*Parameters*	*Source*
PEF - particulate emission factor (m^3/kg)	1.55×10^9	calculated
Q/C - inverse of mean conc. at center of square source (g/m^2-s per kg/m^3)	97.78	Table 3 (0.5-acre source in Chicago, IL) USEPA, 2005
V - fraction of vegetative cover (unitless)	0.5 (50%)	USEPA, 2005
U_m - mean annual windspeed (m/s)	4.65	Dependant on Location
U_t - equivalent threshold value of windspeed at 7 m (m/s)	11.32	USEPA, 2005
F(x) - function dependent on U_m/U_t derived using Cowherd et al. (1985) (unitless)	0.182	USEPA, 2005

The above equation yields an annual average concentration of 0.645 µg/m^3 (inverse of PEF). A time average conversion factor of 12.5 was used to convert the estimated annual average concentrations to 1 hour and 0.7 to convert the 1-hour average concentration to an 8-hour average. Maximum 1- and 8-hour ground level concentrations due to PCB emissions from undisturbed soils were calculated by multiplying the bulk soil contaminant concentration by the inverse PEF. The results for Area 2 and Area 3 are detailed in Tables 5 and 6, respectively.

3.0 SCENARIO 2 – PCB PARTICULATE EMISSIONS FROM EXCAVATION ACTIVITIES

The principal source of atmospheric contaminants, during excavation activities, is expected to be respirable particulate matter potentially containing PCBs. The modeling assessed the potential particulate matter emissions, which could occur at the Site if excavation of contaminated materials was conducted.

Particulate matter emissions from the excavation of contaminated soils from the area sources were calculated using the document "Estimation of Air Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites" (USEPA, 1993). The particulate matter excavation emissions model is detailed below.

$$EF = \frac{k \times (0.0016) \times M \times \left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{X_{H2O}}{2}\right)^{1.4}}$$

Where:

EF	=	PM emissions (g/s);
k	=	particle size multiplier for PM10 = 0.35;
0.0016	=	empirical constant (g/kg);
M	=	mass of waste handled (kg/s) = 63;
U	=	mean wind speed (m/s) = 4.65;
2.2	=	empirical constant (m/s); and
X_{H2O}	=	percent moisture content (%) = 10.

The PCB emission rates were calculated as follows:

$$ER = \frac{Z \times C \times EF}{10^6}$$

Where:

ER	=	emission rate of contaminant (g/s);
C	=	concentration of PCB in the bulk soil (mg/kg); and
Z	=	enrichment factor (unitless).

The PCB emission rates from Area 2 and Area 3 during excavation activities are detailed in Tables 7 and 8, respectively. The emission rates of PCBs were calculated using the source area characteristic bulk concentrations.

4.0 SCREENING AIR DISPERSION MODELING

Air dispersion modeling was completed to estimate the maximum ground level concentrations of the contaminants potentially emitted from the source areas for Scenario 3 (excavation activities).

A conservative air dispersion model, SCREEN3, recommended by USEPA for screening purposes was used. SCREEN3 uses Gaussian dispersion equations and worst-case meteorological conditions to estimate maximum downwind concentrations due to emissions from a source. The SCREEN3 model will provide

more conservative modeling results than a detailed dispersion model such as the Industrial Source Complex (ISC3) model.

The SCREEN3 model utilizes rectangular source areas and only one source may be modeled at a time. The following area source was modeled for Scenario 2:

- a 400-square-foot (ft^2) area, 20 feet x 20 feet was used for the excavated soil area source.

The exposure scenario for all area sources is an 8-hour average exposure. During any 8-hour period, it is possible that worst-case atmospheric dispersion conditions could occur for the entire period. The SCREEN3 model was therefore used to determine the worst-case atmospheric conditions that would produce the maximum ground level concentrations. The modeling showed that maximum concentrations occurred for stability class 6 (stable) and a wind speed of 1 meter per second (m/s). The maximum concentration occurs at the corners of the area source. Source and receptor heights were both set at 0 m and urban dispersion coefficients were used. The SCREEN3 model output for a normalized 1-gram per second emission rate over each surface area is presented in Attachment A. The dispersion factor resulting from the SCREEN3 modeling was calculated to be 5.75×10^5 $\mu g \cdot s/m^3 g$.

It is noted that the SCREEN3 model calculates 1-hour concentrations. The 1-hour concentrations were multiplied by a time averaging conversion factor of 0.7 to obtain 8-hour concentrations for use in industrial worker exposure assessment calculations. The time averaging is recommended in the EPA publication Screening Procedures for Estimating the Air Quality Impact of Stationary Sources (USEPA, 1988).

Maximum 8-hour ground level concentrations due to particulate PCB emissions from both undisturbed soils and during soil excavation were calculated and are detailed in Tables 3 to 8.

5.0 REFERENCES

USEPA, 1988. "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources". EPA-450/4-88-010, Office of Air Quality Planning and Standards, Research Triangle Park, NC, April.

USEPA, 1993. Air/Superfund National Technical Guidance Study Series, Estimation of Air Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites. EPA-451/R-93-004. Office of Air Quality Planning and Standards, Research Triangle Park, NC, April.

USEPA, 1996. USEPA Soil Screening Guidance: User's Guide, Second Edition. Office of Solid Waste and Emergency Response, Washington, DC, July.

USEPA, 2005. Soil Screening Guidance for Chemicals. http://risk.lsd.ornl.gov/cgi-bin/epa/ssl1.cgi. last updated August 18, 2005.

TABLE 1

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SURFACE SOIL
AREA 2
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Ingestion, Dermal, and Inhalation

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1242	mg/kg	2.72E+00	(1)	1.70E+01	mg/kg	1.70E+01	Max.	W-Test (2,3)	1.70E+01	Max.	W-Test (2,3)
Aroclor-1248	mg/kg	1.53E+01	(1)	8.50E+01	mg/kg	2.74E+01	95% UCL-NP	W-Test (3)	2.74E+01	95% UCL-NP	W-Test (3)
Total PCBs	mg/kg	1.62E+01	(1)	8.50E+01	mg/kg	8.50E+01	Max.	W-Test (2,3)	8.50E+01	Max.	W-Test (2,3)

Notes:
For non-detects, 1/2 laboratory detection limit was used as a proxy concentration.
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Statistics: Maximum Detected Value (Max); Maximum Detection Limit (Max DL); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T);
Non-parametric Method used to Determine 95% UCL (95% UCL-NP), Mean of Log-transformed Data (Mean-T);
Mean of Normal Data (Mean-N); Non-parametric Method used to Determine Mean (Mean-NP).

(1) Data set is lognormally distributed.
(2) Shapiro-Wilks W Test was used since n<=50.
(3) EPC calculated is greater than the maximum detected concentration, therefore the maximum detected concentration is the EPC.

TABLE 2

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL
AREA 2
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil
Exposure Point: Ingestion, Dermal, and Inhalation

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1232	mg/kg	2.70E+00	(1)	1.40E-01	mg/kg	1.40E-01	Max.	W-Test (2,3)	1.40E-01	Max.	W-Test (2,3)
Aroclor-1242	mg/kg	3.45E+01	(1)	1.20E+03	mg/kg	6.31E+01	95% UCL-NP	W-Test (2)	6.31E+01	95% UCL-NP	W-Test (2)
Aroclor-1248	mg/kg	7.87E+00	(1)	8.50E+01	mg/kg	1.34E+01	95% UCL-NP	W-Test (2)	1.34E+01	95% UCL-NP	W-Test (2)
Aroclor-1260	mg/kg	2.69E+00	(1)	5.60E-02	mg/kg	5.60E-02	Max.	W-Test (2,3)	5.60E-02	Max.	W-Test (2,3)
Total PCBs	mg/kg	3.97E+01	(1)	1.20E+03	mg/kg	1.65E+02	95% UCL-NP	W-Test (2)	1.65E+02	95% UCL-NP	W-Test (2)

Notes:
For non-detects, 1/2 laboratory detection limit was used as a proxy concentration.
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Statistics: Maximum Detected Value (Max); Maximum Detection Limit (Max DL); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T);
Non-parametric Method used to Determine 95% UCL (95% UCL-NP), Mean of Log-transformed Data (Mean-T);
Mean of Normal Data (Mean-N); Non-parametric Method used to Determine Mean (Mean-NP).

(1) Data set is neither normally or lognormally distributed.
(2) Shapiro-Wilks W Test was used since n<=50.

TABLE 3

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SURFACE SOIL
AREA 3
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil
Exposure Point: Ingestion, Dermal, and Inhalation

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1016	mg/kg	7.92E-01	(1)	4.30E-01	mg/kg	4.30E-01	Max	(4)	4.30E-01	Max	(4)
Aroclor-1242	mg/kg	2.20E+00	(2)	1.40E+01	mg/kg	4.77E+00	95% UCL-NP	W-Test (3)	4.77E+00	95% UCL-NP	W-Test (3)
Aroclor-1248	mg/kg	6.24E+00	(2)	9.60E+01	mg/kg	8.84E+01	95% UCL-NP	W-Test (3)	8.84E+01	95% UCL-NP	W-Test (3)
Total PCBs	mg/kg	7.69E+00	(2)	9.60E+01	mg/kg	5.92E+01	95% UCL-T	W-Test (3)	5.92E+01	95% UCL-T	W-Test (3)

Notes:
For non-detects, 1/2 laboratory detection limit was used as a proxy concentration.
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Statistics: Maximum Detected Value (Max); Maximum Detection Limit (Max DL); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T);
Non-parametric Method used to Determine 95% UCL (95% UCL-NP), Mean of Log-transformed Data (Mean-T);
Mean of Normal Data (Mean-N); Non-parametric Method used to Determine Mean (Mean-NP).

(1) Data set is neither normally or lognormally distributed.
(2) Data set is lognormally distributed.
(3) Shapiro-Wilks W Test was used since n<=50.
(4) EPC calculated is greater than the maximum detected concentration, therefore the maximum detected concentration is the EPC.

TABLE 4

EXPOSURE POINT CONCENTRATION (EPC) SUMMARY FOR CHEMICALS OF POTENTIAL CONCERN IN SOIL
AREA 3
CATERPILLAR INC.
MAPLETON, ILLINOIS

Scenario Timeframe: Future
Medium: Soil
Exposure Medium: Soil
Exposure Point: Ingestion, Dermal, and Inhalation

Chemical of Potential Concern	*Units*	*Arithmetic Mean*	*95% UCL of Normal Data*	*Maximum Detected Concentration*	*EPC Units*	*Reasonable Maximum Exposure*			*Central Tendency*		
						Medium EPC Value	*Medium EPC Statistic*	*Medium EPC Rationale*	*Medium EPC Value*	*Medium EPC Statistic*	*Medium EPC Rationale*
PCBs											
Aroclor-1016	mg/kg	1.48E+01	(1)	7.00E+02	mg/kg	3.16E+01	95% UCL-NP	W-Test (2)	3.16E+01	95% UCL-NP	W-Test (2)
Aroclor-1242	mg/kg	2.31E+01	(1)	5.70E+02	mg/kg	3.85E+01	95% UCL-NP	W-Test (2)	3.85E+01	95% UCL-NP	W-Test (2)
Aroclor-1248	mg/kg	6.10E+00	(1)	9.60E+01	mg/kg	1.43E+01	95% UCL-NP	W-Test (2)	1.43E+01	95% UCL-NP	W-Test (2)
Total PCBs	mg/kg	3.64E+01	(1)	7.00E+02	mg/kg	1.42E+02	95% UCL-NP	W-Test (2)	1.42E+02	95% UCL-NP	W-Test (2)

Notes:
For non-detects, 1/2 laboratory detection limit was used as a proxy concentration.
W-Test : Developed by Shapiro and Wilk for data sets with under 50 samples.
Statistics: Maximum Detected Value (Max); Maximum Detection Limit (Max DL); 95% UCL of Normal Data (95% UCL-N); 95% UCL of Log-transformed Data (95% UCL-T);
Non-parametric Method used to Determine 95% UCL (95% UCL-NP), Mean of Log-transformed Data (Mean-T);
Mean of Normal Data (Mean-N); Non-parametric Method used to Determine Mean (Mean-NP).

(1) Data set is neither normally or lognormally distributed.
(2) Shapiro-Wilks W Test was used since n<=50.

TABLE 5

ESTIMATED ANNUAL AVERAGE EMISSION RATES AND GROUND LEVEL CONCENTRATIONS OF PCB EMISSIONS FROM EXPOSED CONTAMINATED SURFACE SOILS
AREA 2
CATERPILLAR INC.
MAPLETON, ILLINOIS

	Bulk Conc.	*Average Annual Concentration*	*Estimated Maximum Ground Level Concentration*	
		(2) (3)	*1-Hour*	*8-Hour*
	(mg/kg) (1)	*(µg/m³)*	*(µg/m³)*	*(µg/m³)*
PCBs				
Aroclor-1242	1.70E+01	1.10E-05	1.37E-04	9.60E-05
Aroclor-1248	2.74E+01	1.77E-05	2.21E-04	1.55E-04
Total PCBs	8.50E+01	5.47E-05	6.85E-04	4.80E-04

Notes:

(1) From Table 3.
(2) The average annual concentration is based on the compound concentration in the bulk soil, divided by the PEF for the 0.5 acre average annual concentration.
(3) The particulate emission factor (PEF) calculations are attached.

Emission Rate (3)

$$PEF(m^3/kg) = \frac{Q}{C} \times \frac{3{,}600 s/h}{0.036 \times (1-V) \times (U_m/U_t)^3 \times F(x)}$$

Based on Chicago meteorological conditions, 0.5-acre area, and vegetative cover of 50%

PEF - particulate emission factor (m^3/kg) =	1.55E+09
Q/C - inverse of mean conc. at center of square source (g/m^2 -s per kg/m^3) =	97.78
V - fraction of vegetative cover (unitless) =	0.5
U_m - mean annual windspeed (m/s) =	4.65
U_t - equivalent threshold value of windspeed at 7 m (m/s) =	11.32
F(x) - function dependent on U_m /U_t derived using Cowherd et al. (1985) (unitless) =	0.182
Area (m^2) (0.5-acre) =	2021.74
0.5 Acre Annual Average Conc. (µg/m^3) =	6.45E-01

TABLE 6

ESTIMATED ANNUAL AVERAGE EMISSION RATES AND GROUND LEVEL CONCENTRATIONS OF PCB EMISSIONS FROM EXPOSED CONTAMINATED SURFACE SOILS
AREA 3
CATERPILLAR INC.
MAPLETON, ILLINOIS

	Bulk Conc.	*Average Annual Concentration*	*Estimated Maximum Ground Level Concentration*	
		(2) (3)	*1-Hour*	*8-Hour*
	(mg/kg) (1)	*(µg/m³)*	*(µg/m³)*	*(µg/m³)*
PCBs				
Aroclor-1016	4.30E-01	2.77E-07	3.47E-06	2.43E-06
Aroclor-1242	4.77E+00	3.08E-06	3.85E-05	2.70E-05
Aroclor-1248	8.84E+01	5.70E-05	7.13E-04	4.99E-04
Total PCBs	5.92E+01	3.82E-05	4.77E-04	3.34E-04

Notes:

(1) From Table 5.
(2) The average annual concentration is based on the compound concentration in the bulk soil, divided by the PEF for the 0.5 acre average annual concentration.
(3) The particulate emission factor (PEF) calculations are attached.

Emission Rate (3)

$$PEF(m^3/kg) = \frac{Q}{C} \times \frac{3{,}600 s/h}{0.036 \times (1-V) \times (U_m/U_t)^3 \times F(x)}$$

Based on Chicago meteorological conditions, 0.5-acre area, and vegetative cover of 50%

PEF - particulate emission factor (m^3/kg) =	1.55E+09
Q/C - inverse of mean conc. at center of square source (g/m^2 -s per kg/m^3) =	97.78
V - fraction of vegetative cover (unitless) =	0.5
U_m - mean annual windspeed (m/s) =	4.65
U_t - equivalent threshold value of windspeed at 7 m (m/s) =	11.32
F(x) - function dependent on U_m /U_t derived using Cowherd et al. (1985) (unitless) =	0.182
Area (m^2) (0.5-acre) =	2021.74
0.5 Acre Annual Average Conc. (µg/m^3) =	6.45E-01

TABLE 7

PCB EMISSIONS DURING EXCAVATION
AND ESTIMATED MAXIMUM GROUND LEVEL CONCENTRATIONS
AREA 2
CATERPILLAR INC.
MAPLETON, ILLINOIS

	Bulk Conc. (mg/kg) (1)	*Emission Rate (2) (3) (g/s)*	*Estimated Maximum Ground Level Concentration*	
			1-Hour ($\mu g/m^3$)	*8-Hour ($\mu g/m^3$)*
PCBs				
Aroclor-1232	1.40E-01	1.37E-09	7.89E-04	5.53E-04
Aroclor-1242	6.31E+01	6.19E-07	3.56E-01	2.49E-01
Aroclor-1248	1.34E+01	1.32E-07	7.58E-02	5.31E-02
Aroclor-1260	5.60E-02	5.49E-10	3.16E-04	2.21E-04
Total PCBs	1.65E+02	1.61E-06	9.28E-01	6.50E-01

Notes:

(1) From Table 4.
(2) The PM-10 emission factor (EF) calculations are attached.
(3) The emission rate for PCBs is based on the PCB concentration in the bulk soil, an enrichment factor, and the calculated PM-10 emission factor.

The PM-10 emission factor calculated using the USEPA document "Estimation of Air Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites (1993)."

EF = (k (0.0016) M (U/2.2)^(1.3))/((XH2O/2)^(1.4))

Where: EF = PM emissions (g/s)
k = particle size multiplier for PM10 = 0.35
0.0016 = empirical constant (g/Kg) 0.0016
M = mass of waste handled (Kg/s) = 63
U = mean wind speed (m/s) = 4.65
2.2 = empirical constant (m/s) = 2.2
XH2O = percent moisture content (%) = 10

EF = 9.81E-03

The SVOC/pesticide/metal/PCB emission rates were calculated as follows:

ER = C*EF/10^6

Where: ER = emission rate of contaminant (g/s)
C = concentration of PCB in the bulk soil (mg/kg)

TABLE 8

PCB EMISSIONS DURING EXCAVATION
AND ESTIMATED MAXIMUM GROUND LEVEL CONCENTRATIONS
AREA 3
CATERPILLAR INC.
MAPLETON, ILLINOIS

	Bulk Conc. (mg/kg) (1)	*Emission Rate (2) (3) (g/s)*	*Estimated Maximum Ground Level Concentration*	
			1-Hour ($\mu g/m^3$)	*8-Hour ($\mu g/m^3$)*
PCBs				
Aroclor-1016	3.16E+01	3.10E-07	1.78E-01	1.25E-01
Aroclor-1242	3.85E+01	3.78E-07	2.17E-01	1.52E-01
Aroclor-1248	1.43E+01	1.41E-07	8.09E-02	5.66E-02
Total PCBs	1.42E+02	1.40E-06	8.03E-01	5.62E-01

Notes:

(1) From Table 6.
(2) The PM-10 emission factor (EF) calculations are attached.
(3) The emission rate for PCBs is based on the PCB concentration in the bulk soil, an enrichment factor, and the calculated PM-10 emission factor.

The PM-10 emission factor calculated using the USEPA document "Estimation of Air Impacts from Area Sources of Particulate Matter Emissions at Superfund Sites (1993)."

EF = (k (0.0016) M (U/2.2)^(1.3))/((XH2O/2)^(1.4))

Where: EF = PM emissions (g/s)
k = particle size multiplier for PM10 = 0.35
0.0016 = empirical constant (g/Kg) 0.0016
M = mass of waste handled (Kg/s) = 63
U = mean wind speed (m/s) = 4.65
2.2 = empirical constant (m/s) = 2.2
XH2O = percent moisture content (%) = 10

EF = 9.81E-03

The SVOC/pesticide/metal/PCB emission rates were calculated as follows:

ER = C*EF/10^6

Where: ER = emission rate of contaminant (g/s)
C = concentration of PCB in the bulk soil (mg/kg)

ATTACHMENT A

SCREEN3 MODEL OUTPUT

08/18/05
15:55:45

```
 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

 Caterpillar Inc

 SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =        AREA
   EMISSION RATE (G/(S-M**2))  =      .268745E-01
   SOURCE HEIGHT (M)          =       .0000
   LENGTH OF LARGER SIDE (M)   =       6.1000
   LENGTH OF SMALLER SIDE (M)  =       6.1000
   RECEPTOR HEIGHT (M)        =       .0000
   URBAN/RURAL OPTION         =       URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX =     .000 M**4/S**3;  MOM. FLUX =     .000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

 *** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES
***

  DIST     CONC            U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   (DEG)
-------  ----------  ----  -----  -----  ------  ------  -------
     1.   .4237E+06    6     1.0    1.0 10000.0     .00     45.
   100.   3905.        6     1.0    1.0 10000.0     .00     32.
   200.   1067.        6     1.0    1.0 10000.0     .00     33.
   300.   511.0        6     1.0    1.0 10000.0     .00      1.
   400.   307.3        6     1.0    1.0 10000.0     .00     12.
   500.   209.2        6     1.0    1.0 10000.0     .00     28.
   600.   153.9        6     1.0    1.0 10000.0     .00     27.
   700.   119.3        6     1.0    1.0 10000.0     .00     39.
   800.   96.09        6     1.0    1.0 10000.0     .00     10.
   900.   79.65        6     1.0    1.0 10000.0     .00     27.
  1000.   67.51        6     1.0    1.0 10000.0     .00     28.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
     5.   .5750E+06    6     1.0    1.0 10000.0     .00     45.
```

```
    ***************************************
    *** SUMMARY OF SCREEN MODEL RESULTS ***
    ***************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   -------   -------
SIMPLE TERRAIN      .5750E+06        5.        0.

****************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
****************************************************
```