POOR LEGIBILITY

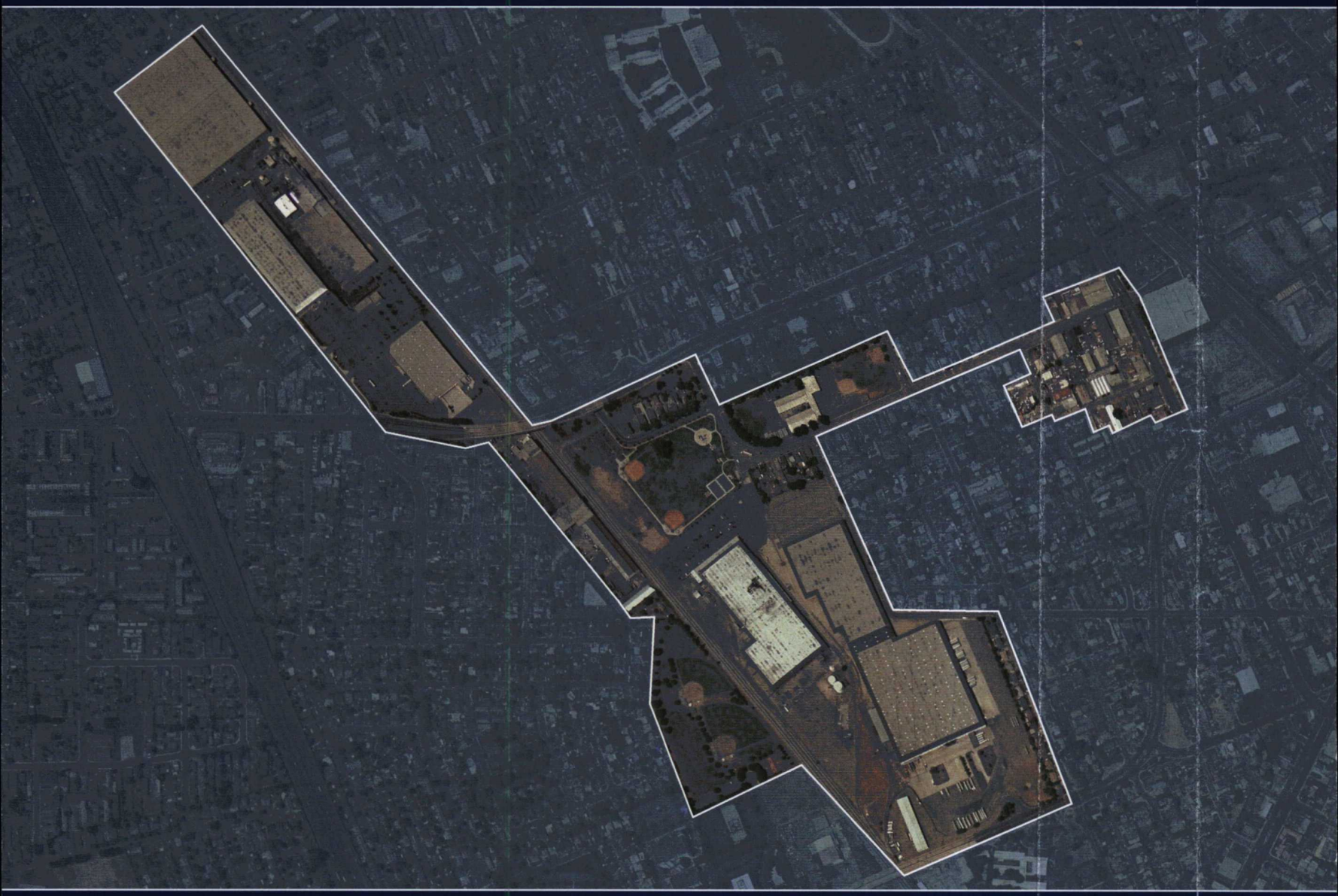
ONE OR MORE PAGES IN THIS DOCUMENT ARE DIFFICULT TO READ
DUE TO THE QUALITY OF THE ORIGINAL

908D
SFUND RECORDS CTR
2113697

Final Report

Limited Phase II Targeted Brownfields Assessment
Cannery Redevelopment Area
City of Hayward

September 2002



Prepared For:

EPA United States Environmental Protection Agency

U.S. Army Corps of Engineers

Prepared By:

ITSI Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, CA 94588
(925) 946-3100

TABLE OF CONTENTS

List of Tables/ List of Figures ii

List of Acronyms iii

1.0 Introduction 1

2.0 Background 3

3.0 Scope of Work 4

3.1 Underground Utility Clearance 4
3.2 Advancement of Borings using CPT 4
3.3 Groundwater Sample Collection and Analysis 5

4.0 Results of Investigation 7

4.1 CPT Logging and Groundwater Sampling Results 7
4.2 Data Validation 8

5.0 Evaluation of Results 10

5.1 Groundwater Contaminant Plumes 10
5.1.1 Comparison with Previous Studies 10
5.1.2 Contaminant Sources and Migration 12
5.2 Comparison to Risk-Based Screening Levels (RBSL's) 13
5.3 Conclusions 15

6.0 References 17

7.0 Glossary 18

LIST OF APPENDICES

Appendix A Encroachment Permit and CPT Log from GW-1
Appendix B Laboratory Analytical Data and Chain of Custody Forms
Appendix C Data Validation Report

LIST OF TABLES/ LIST OF FIGURES

LIST OF TABLES

Table No.	Title
1	Results of Groundwater Samples for Volatile Organic Compounds

LIST OF FIGURES

Figure No.	Title
1	Area 2 with Groundwater Contaminant Plumes Identified in Phase I
2	Phase II Groundwater Sampling Results

LIST OF ACRONYMS

CPT	Cone Penetration Test
DCE	Dichloroethene
ITSI	Innovative Technical Solutions, Inc.
LCS/LCSD	Laboratory Control Spike/ Laboratory Control Spike Duplicate
MS/MSD	Matrix Spike, Matrix Spike Difference
PCE	Tetrachloroethene or Perchloroethene
QA/QC	Quality Assurance and Quality Control
RBSLs	Risk-Based Screening Levels
RPD	Relative Percent Difference
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
TCA	Trichloroethane
TCE	Trichloroethene
USA	Underground Service Alert
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
VOCs	Volatile Organic Compounds

1.0 INTRODUCTION

A Limited Phase II Targeted Brownfields Assessment (Phase II) was performed for a portion of the Cannery Redevelopment Area located in Hayward, California. The Phase II activities were performed by Innovative Technical Solutions, Inc. (ITSI) under contract number DACW07-01-P-0014 for the U.S. Army Corps of Engineers (USACE). The Phase II was performed on behalf of the U.S. Environmental Protection Agency (USEPA), as part of a grant to the City of Hayward under the Brownfields Targeted Assessment Program.

The Phase II was conducted consistent with the following documents:

- *Draft Sampling and Analysis Plan, Limited Phase II Targeted Brownfields Assessment, Cannery Redevelopment Area*, dated June 14, 2001 by ITSI (ITSI, 2001a).
- *Memorandum, Sampling and Analysis Plan (SAP) for Limited Phase II Targeted Brownfields Assessment, Cannery Redevelopment Area*, dated June 21, 2001 by USEPA (USEPA, 2001).

The scope of work of the Phase II Assessment was limited to the evaluation of the presence and concentration of chlorinated solvents in groundwater in an area upgradient of the central and southern portions of Area 2 only. Groundwater samples were collected to assess the distribution and concentrations of chlorinated solvents in order to help evaluate potential impacts to current and potential future land use. Soil samples were not collected as part of the Phase II activities.

Specifically, the following activities were performed:

- A Cone Penetration Test (CPT) rig was employed to advance and log one subsurface boring. The data was used to define the subsurface stratigraphy and assist in determining the optimal depth for collecting groundwater samples.
- Eight additional borings were drilled using the CPT rig to collect groundwater samples from the shallow groundwater zone.
- Nine groundwater samples (one from each of the borings and one duplicate sample) were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B.

Figure 1 shows the approximate location of the site, and Figure 2 shows the specific Phase II groundwater sampling locations. Field activities were performed on June 25 and 26, 2001, and were performed as outlined in the above-cited documents. The groundwater sampling locations were on public rights-of-way.

2.0 BACKGROUND

The City of Hayward established the Hayward Redevelopment Plan, which was amended in 1998 to include the revitalization and redevelopment of some of the oldest industrial areas in Hayward. The Cannery Redevelopment Area is such an area. The Cannery Redevelopment Area has been geographically divided into three sub-areas designated Area 1, Area 2, and Area 3.

A Phase I Targeted Brownfields Site Assessment (Phase I) Report, dated May 25, 2001 (ITSI, 2001b), was prepared for the Cannery Redevelopment Area by ITSI. Portions of the Cannery Redevelopment Area were described as having a long history of industrial use, with some sites dating from at least the early 1890s. Although the more recent industrial activities have centered around cannery operations (Areas 1 and 2) and automotive-related services (Area 3), past uses have included battery manufacturing (Area 2), bus manufacturing and assembly (Area 2), furniture refinishing (Areas 2 and 3), and metal plating operations (Area 3). The groundwater beneath the southern portion of Area 2 was identified as being affected by chlorinated solvents, including tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA) (ITSI, 2001b).

3.0 SCOPE OF WORK

The scope of work of this Phase II was to conduct a limited groundwater investigation of an area upgradient of a portion of Area 2. Groundwater upgradient from the southern and central portions of Area 2 was sampled to evaluate current concentrations of chlorinated solvents relative to current and potential future land use.

As part of the limited investigation, the following activities were performed:

- Sampling locations were identified in the field, Underground Service Alert (USA) was notified, and an independent underground utility locator was contracted to perform subsurface utility clearance of the proposed locations.
- A CPT rig was employed to advance and log one subsurface boring. This data was used to help define the subsurface stratigraphy and assist in determining the optimal depth for collecting groundwater samples.
- Groundwater samples were collected and analyzed from six CPT borings in the areas southwest of Area 3 and east of Area 2 (GW-1 through GW-6, and GW-9; see Figure 2). Additionally, two groundwater samples (GW-7 and GW-8) were collected from CPT borings outside of the zone of interest to provide information on conditions outside the expected plume.
- Laboratory results for the groundwater samples were compared with risk-based screening levels (RBSLs) published August 2000 by the California Regional Water Quality Control Board (RWQCB), as shown in Table 1.

3.1 UNDERGROUND UTILITY CLEARANCE

Sampling locations were located in the field and USA was notified June 20, 2001 (ticket numbers 0190472, 0190518, and 0190539) of the upcoming activities. Additionally, an independent utility locating contractor, California Utility Surveys (CUS), was utilized to clear the locations of the proposed soil borings prior to intrusive activities.

3.2 ADVANCEMENT OF BORINGS USING CPT

On June 25–26, 2001, nine soil borings at eight locations were advanced using the CPT technique by Precision Sampling, Inc. of Richmond, California. Figure 2 shows the locations of the CPT borings, designated GW-1 through GW-8. The field work was performed under City of Hayward Encroachment Permit No. 01–237, obtained with the assistance of Tai Williams of the City of Hayward. A copy of the Encroachment Permit is provided in Appendix A.

The upper few feet of each of the borings was hand-augered to protect against the accidental breakage of unidentified underground utilities. The first boring, at sample location GW-1, was logged using standard CPT methods to determine the subsurface stratigraphy and to determine the depth of first-encountered groundwater for purposes of attempting sample collection. The formations encountered in the upper approximately 37 feet of boring GW-1 were identified as consisting predominantly of clay, with subordinate amounts of silty clay and clayey silt. Below approximately 37 feet, formations consisting of alternating layers of sand, silty sand, and sandy silt were identified to a depth of approximately 50 feet, where strata consisting of silty clays were identified to the total logging depth of 51 feet. A copy of the CPT log for boring GW-1 is provided in Appendix A.

The remaining borings (GW-2 through GW-8) were advanced without logging to an initial depth of approximately 45 to 60 feet prior to groundwater sampling, corresponding to the upper part of the saturated zone in the coarser (sandy) material identified in the CPT log for GW-1.

3.3 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Groundwater samples were collected with the CPT rig, using a discrete-point sampler with detachable tip driven to the desired sample depth. The drive rods were then retracted to expose the screen of the sampler and the screen was allowed to fill, if possible. A disposable bailer was lowered through the drive rod and a sample of the groundwater was retrieved. The groundwater sample was then transferred to clean sample containers provided by the laboratory. In some cases the borehole did not produce groundwater from the depth at which sampling was initially attempted. At these locations the drive rods were pushed to a greater depth and sampling was attempted again.

The first groundwater sample was collected from a boring located adjacent to the CPT-logged boring at location GW–1. Following collection of GW–1, a duplicate sample was collected and designated GW–9. The remaining groundwater samples were collected following advancement of borings to target depths at their respective locations. A field blank was generated at location GW–8, and was designated GW–10. Following collection of the groundwater samples, the

borings were grouted with neat cement to grade surface. The drive rods, sample tools and bailers used for advancing the borings and collecting the groundwater samples were decontaminated between borings by high-temperature pressure washing.

Groundwater samples were properly labeled, and placed into an iced cooler for transport to the laboratory. The samples were sent under chain-of-custody procedures to Chromalab, Inc. in Pleasanton, California and were analyzed for volatile organic compounds (VOCs) by EPA Method 8260B.

4.0 RESULTS OF INVESTIGATION

4.1 CPT LOGGING AND GROUNDWATER SAMPLING RESULTS

The use of a CPT rig enabled meeting the concurrent goals of evaluating the depth to groundwater and stratigraphy at one location (GW-1), and the collection of groundwater samples at multiple locations (GW-1 through GW-9). Groundwater was encountered at a depth of between approximately 45 and 60 feet below ground surface (bgs) at the eight sample locations. The CPT log at location GW-1 indicated the presence of clayey sediments in the upper 37 feet bgs.

Table 1 provides a summary of laboratory data for the groundwater samples. Copies of the laboratory data and chain-of-custody forms are included in Appendix B. VOCs were reported in samples from six of the eight sampling locations, as discussed below:

- PCE was reported in groundwater samples from three of the eight groundwater sampling locations (GW–1/GW-9, GW–5 and GW–8) at concentrations up to 14 μg/L.
- TCE was reported in samples from four locations (GW–1/GW-9, GW–2, GW–4, and GW–5) at concentrations up to 26 μg/L.
- 1,1-Dichloroethene (1,1–DCE) was reported in samples from four locations (GW–1/GW-9, GW–2, GW–3 and GW–4) at concentrations up to 61 μg/L.
- 1,1,1–TCA was reported in samples from three locations (GW–2, GW–3 and GW–4) at concentrations up to 37 μg/L.
- Chloroform was reported in three locations (GW–2, GW–3, and GW–8) at concentrations up to 26 μg/L.

The groundwater sampling results are also presented on Figure 2. The first four contaminants listed above were also detected in groundwater in previous investigations (sampling conducted from 1992 to 1994), and thus the reported presence of these compounds is consistent with what is known about groundwater contamination at the site and vicinity. Of these four compounds, PCE and TCE are commonly found together in zones of groundwater contamination, as TCE is the initial daughter product of the degradation of PCE. Similarly, 1,1-DCE and 1,1,1-TCA are commonly found together, as 1,1-DCE is a typical daughter product of the degradation of

1,1,1–TCA. Groundwater sampling results from this Phase II show that PCE and/or TCE were found in groundwater in a relatively contiguous area, having been reported from samples in the central and southern parts of the Phase II study area (GW–1, GW–2, GW–4, GW–5 and GW–8). This area is in turn upgradient from the central and southern portions of Area 2 of the Cannery Redevelopment Area. The PCE and TCE detections thus appear to define the general outlines of a groundwater contaminant plume, as illustrated in Figure 2.

The compounds 1,1-DCE and/or 1,1,1-TCA were also reported from a relatively contiguous area, having been reported from samples in the central and northern parts of the Phase II study area (GW–1, GW–2, GW–3, and GW–4). This area is upgradient from the central portion of Area 2. The 1,1-DCE and 1,1,1-TCA detections thus appear to define the general outlines of a second groundwater contaminant plume that overlaps the PCE/TCE plume (see Figure 2).

Chloroform was detected at three groundwater sampling locations, none of which exceeded RBSLs (see Table 1). The highest concentration of chloroform (26 μg/L) was noted at location GW-8, located approximately 1,000 feet east of Area 2. Locations closer to Area 2 had considerably lower or undetected concentrations of chloroform.

4.2 DATA VALIDATION

Laboratory quality assurance/quality control (QA/QC) information was compared to acceptance criteria as established in the SAP. One hundred percent of the laboratory-generated data was subjected to routine review, as follows:

- Laboratory reports and chain of custody documentation were checked for errors and omissions. All samples that were submitted were analyzed for the appropriate analyses and data were properly reported.
- Samples were received at 11 degrees Centigrade. Because the samples were brought directly from the field, insufficient time had elapsed to allow the samples to cool to the normal shipping temperature of 4 degrees Centigrade. There is no effect on the integrity of the sample results from this temperature difference due to the short holding time.
- Laboratory case narratives were checked for anomalies and exceedances of QA/QC requirements. Any anomalies or exceedances are discussed in the appropriate bulleted items below and all affected data are appropriately flagged in the summary tables.

- Laboratory reports were checked for correct reporting limits and units. Some reporting limits were higher than the specified reporting limits for the project because the samples had to be diluted due to high concentrations, which raises the reporting limit.
- Extraction and analysis holding times were compared to the acceptable, allowable times. All samples were extracted and analyzed within the appropriate time limits for all analyses.
- Method blank and trip blank data were reviewed. No analytes were detected above the reporting limits.
- Surrogate compounds, their spiking levels, the reported concentrations, and the percent recoveries were reviewed.
- MS/MSD samples, their spiking levels, reported concentrations, percent recoveries, and relative percent differences between the MS and MSD were reviewed. The correct target analytes were spiked. All laboratory-performed calculations were confirmed and no errors were found. All MS/MSD recoveries were within the acceptance limits listed in Table 3-1 of the SAP. The RPD values were within the limits listed in Table 3-2 of the SAP.
- Laboratory control samples, their spiking levels, determined concentrations, and percent recoveries were reviewed. A laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) pair was included in each analytical batch. The Workplan only requires an LCS, but since the data for an LCSD was included, the LCSD data was validated and used to assess overall laboratory precision. The correct target analytes were spiked and the recoveries were evaluated against the limits in Table 3-1 of the SAP. All laboratory-performed calculations were confirmed and no errors were found. All LCS/LCSD recoveries were within the acceptance limits listed in Table 3-2. The relative percent difference (RPD) values were within the field duplicate precision criteria of less than 50 RPD.
- The field duplicate sample (GW-9) was collected under this work order for the investigative sample number GW-1. Field duplicate results are within the criteria for field duplicate RPD as specified in Table 3-2 of the SAP.
- Instrument continuing calibrations, calibration levels, response factors for each level, and percent difference (%D) between the response factor and the response factor in the initial calibration were all checked and met acceptance criteria.

A copy of the data validation report is presented in Appendix C.

5.0 EVALUATION OF RESULTS

5.1 GROUNDWATER CONTAMINANT PLUMES

5.1.1 Comparison with Previous Studies

Groundwater sampling results from this Phase II are consistent with data summarized in the Phase I report (ITSI, 2001b). As discussed in the Phase I report, previous investigations in Area 2 (sampling conducted from 1992 to 1994) delineated an extensive area of groundwater contamination by chlorinated solvents in the central and southern portions of Area 2. These previous investigations also showed that there were possibly two partially overlapping groundwater plumes beneath Area 2. The northwestern plume was noted as being a narrow plume centered on the northwestern part of the 24 Cannery Court site, and containing 1,1-DCE and 1,1,1-TCA. The southeastern plume was noted as being located slightly to the south, centered on the southern part of the 24 Cannery Court site (though also including the northern part of that site address), and containing PCE and TCE. As shown in Figure 1 (based on Figure 3-5 of the Phase I report), the two plumes overlapped, and the northwestern plume was considerably narrower than the southeastern plume.

The Phase II results are consistent with what was found in the previous investigations. Though Phase II activities were conducted to the east of Area 2 in areas upgradient of the previous investigations, the Phase II groundwater sampling locations were close enough to the locations of the previous work to show that the concentrations and distribution patterns of contaminants are similar. As displayed in Figure 2, the Phase II sampling showed two areal groupings based on the compounds reported: 1) PCE and/or TCE were detected in samples GW-1, GW-2, GW-4, GW-5, and GW-8; and 2) 1,1-DCE and/or 1,1,1-TCA were detected in GW-1, GW-2, GW-3, and GW-4. The locations with detections of PCE and/or TCE are located upgradient (northeast) of the central and southern parts of Area 2. The locations with detections of 1,1-DCE and/or 1,1,1–TCA, on the other hand, are located upgradient (northeast) of the central part of Area 2. These patterns define portions of groundwater contaminant plumes upgradient of Area 2

generally consistent with the plumes of the same compounds defined previously within Area 2 (compare Figures 1 and 2).

The primary difference between the plume segments defined in Phase II and the previous studies is that the Phase II data yielded concentrations considerably lower than those found previously. For example, Phase II location GW-4 is located approximately 75 feet upgradient from former monitoring well L-8, and both are located in the overlap area of the two plumes. In the last sampling event at well L-8 in August 1994, TCE, 1,1,1-TCA, and 1,1-DCE were reported at concentrations of 94 μg/L, 230 μg/L, and 66 μg/L, respectively. The June 2001 groundwater results for the nearby Phase II location, GW-4, yielded concentrations of 2.5 μg/L, 37 μg/L, and 61 μg/L, respectively. The southern part of the PCE/TCE plume appears to have shown less attenuation over the same time period. For example, Phase II location GW-5 is located approximately 200 feet east and roughly upgradient of former monitoring wells L-9 and L-10. During the most-recent sampling event at these wells in August 1994, TCE was reported at L-9 and L-10 at 88 μg/L and 7.1 μg/L, respectively, and PCE was reported at 35 μg/L and 8.8 μg/L, respectively. In comparison, values reported for the nearby Phase II location, GW-5, were 23 μg/L for TCE and 14 μg/L for PCE.

A second difference between data from Phase II and the previous studies is in contaminant ratios in the 1,1-DCE/1,1,1-TCA (northwestern) plume. Groundwater samples collected during Phase II had concentrations of the degradation daughter product 1,1-DCE that were considerably higher than the parent compound 1,1,1-TCA (ratios of 1,1-DCE to 1,1,1-TCA were approximately 1.5 to 7). In contrast, in the previous investigations in Area 2, 1,1-DCE was present at concentrations similar to or less than those of 1,1,1-TCA (ratios of 1,1-DCE to 1,1,1–TCA were approximately 0.2 to 1 [Erler & Kalinowski Inc., 1995]). This temporal increase in the concentration of daughter product relative to parent compound may signify that degradation is more strongly affecting the contaminant plume now than was the case in 1992 to 1994. Combined with the overall decline in contaminant concentrations, it may indicate the northwestern contaminant plume is in its declining stages, characterized by extensive degradation of parent compounds and a lack of significant new contaminant input.

5.1.2 Contaminant Sources and Migration

As noted in the Phase I report, the contaminant source(s) for both the PCE/TCE plume and the 1,1-DCE/1,1,1-TCA plume appeared to be off-site. Based on the Phase II sampling results, this off-site source location(s) remains most likely. However, the location and nature of the contaminant sources remain unknown. For PCE and TCE, the detections of these compounds at the upgradient locations GW-1 and GW-8 mean that the contaminant source is located farther upgradient (to the northeast), perhaps by a considerable distance, based on the relatively uniform magnitude of detections reported (see Figure 2).

For the 1,1-DCE/1,1,1-TCA contaminant plume, the relatively higher concentrations reported for GW-4 compared to upgradient locations (see Figure 2) suggest that the contaminant source could be nearby. However, the detections upgradient of GW-4 also make contaminant source identification difficult. One possibility is that contaminants could have been introduced to the subsurface at multiple locations through leaks in sewer pipes, causing irregular distributions such as those exhibited by the 1,1-DCE/1,1,1-TCA contaminant plume. However, the relatively high proportion in this plume of the degradation daughter compound 1,1-DCE is consistent with the idea that the contaminant release may have happened some time ago. The idea of a relatively old contaminant release is credible due to lower overall contaminant concentrations in the Phase II samples than in samples collected in 1992 to 1994.

As discussed in section 5.1.1, groundwater contamination reported in Phase II samples collected near Area 2 is characterized by the same list of chlorinated VOCs as reported previously for samples collected within Area 2 from 1992 to 1994. Though the Phase II samples were collected outside Area 2, they were collected at distances of 75 to 1,100 feet directly upgradient from portions of Area 2. Thus the Phase II groundwater samples are likely to fairly accurately represent current contaminant concentrations within Area 2, located a short distance downgradient. Provided that the contaminant sources for both the PCE/TCE and 1,1–DCE/1,1,1–TCA plumes are located off-site and upgradient from Area 2, processes such as dispersion and degradation would decrease contaminant concentrations as groundwater migrates from the Phase II sampling locations onto Area 2. Thus the expected present concentrations within Area 2 are likely to be lower than the peak values for Phase II samples GW-1 through

GW-8 (listed in Table 1). These values are in turn lower than the peak concentrations found beneath Area 2 in previous investigations (see Table 1, "Historic High Concentration beneath Area 2"). The general consistency through time of the groundwater data in and near Area 2 suggests that the data can be used fairly reliably in evaluating potential risk posed by groundwater at the site under future use scenarios, as discussed in section 5.2.

5.2 COMPARISON TO RISK-BASED SCREENING LEVELS (RBSL'S)

The concentrations of VOCs reported in the groundwater samples collected during this Phase II were compared with published screening values by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB). These screening values are contained within *Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, Interim Final* (RWQCB, 2000). Volume 1 of the above guidelines consists of summary lookup tables used to perform an initial comparison with available laboratory results, and Volume 2 consists of backup tables identifying the screening values by specific category (e.g., human toxicity, indoor air impacts).

In the RWQCB's above-cited guidance document for RBSLs, a separate category called "Elevated Threat to Surface Water" is listed in the tables referenced below. However, this category was not used in the RBSL comparisons discussed below due to the existence of site-specific conditions, as discussed in the RBSL guidance document (section 2.8 of Volume 1 of RWQCB, 2000). The reason for not using the "Elevated Threat to Surface Water" category for Area 2 is the lack of connection of groundwater with nearby surface water bodies. As noted in section 2.1.2 of the Phase 1 report (ITSI, 2001b), the nearest surface water bodies to Area 1 are San Lorenzo Creek located approximately 0.8 miles to the north, and the San Francisco Bay located approximately 2.75 miles to the west. Neither of these surface water bodies is likely to receive groundwater influxes originating from beneath Area 2 at quantities that are of concern; thus it appears appropriate to not consider the "Elevated Threat to Surface Water" category in determining applicable RBSLs for Area 2.

The portion of Area 2 to which the current study applies is the central and southern portions; these are the areas underlain by groundwater downgradient from the Phase II investigative area.

The potential future land uses in these parts of Area 2 are medium- to high-density residential development for the United Can, Cannery Court, and associated warehouse sites. For the other relevant portion of Area 2 at Centennial Park, a small area of residential development is under consideration along the western portion of this property.

The reported concentrations of VOCs listed in Table 1 were initially compared against the following two sets of screening values from Volume 1 of the RWQCB (2000) guidelines:

- Table C: Subsurface Soil and Groundwater RBSLs (Groundwater IS a Current or Potential Source of Drinking Water).
- Table D: Subsurface Soil and Groundwater RBSLs (Groundwater IS NOT a Current or Potential Source of Drinking Water).

Of the five VOCs reported in the groundwater samples collected during Phase II activities, three (PCE, TCE, and 1,1–DCE) were reported above the screening values listed in Table C, at three or more sample locations. Only one VOC (1,1–DCE) was reported above screening values listed in Table D, at a single sample location. Based on this initial screening, groundwater beneath the central and southern portions of Area 2 appears unsuitable as a drinking water source. The RBSLs based on drinking water impacts could be addresses through restricting groundwater use in these portions of Area 2.

At the Cannery Court site, a primary concern for the residential development of the site is the possible accumulation of VOCs in indoor air, as a result of groundwater contamination. To further evaluate the one exceedance of Table D screening values, the site values were compared with the following set of screening values listed in Volume 2 of the RWQCB (2000) guidelines:

- Table F-2: Components for Groundwater Screening Levels (Groundwater IS NOT a Current or Potential Drinking Water Resource), Indoor Air Impacts (USEPA model)

As listed in Table 1, the RBSL for 1,1-DCE based on indoor air impacts is 9.6 μg/L for coarse-grained soils and 1,000 μg/L for fine-grained soils. The CPT logging results at the location of GW-1 indicate that the subsurface formations from the surface down to a depth of approximately 37 feet bgs consist predominantly of clay, with lesser amounts of silty clay and clayey silt. This

meets the criterion in the above-cited document for fine-grained soils of greater than 80% of the soil material being less than 0.075 mm in diameter (i.e., silt or clay) for a depth of at least 3 meters below ground surface (approximately 10 feet). As a result, the appropriate comparison of Phase II sample results is with standards for fine-grained soils, the values for which are listed in parentheses in Table 1.

Assuming that groundwater beneath Area 2 will not used for drinking water, groundwater contaminants characterized in this Phase II do not exceed applicable RBSLs. Before approval of any future use of part or all of Area 2, it would be necessary to clearly state that there is a prohibition on the use of groundwater originating from beneath the site.

5.3 CONCLUSIONS

This Phase II investigation, performed in an area upgradient of the central and southern portions of Area 2 of the Cannery Redevelopment Area, has yielded data from which the following conclusions have been drawn:

- CPT logging indicates that fine-grained soils are present in the upper part of the subsurface in the area upgradient of the central and southern parts of Area 2.
- The area upgradient of the central and southern portions of Area 2 is characterized by a similar list of groundwater contaminants (chlorinated VOCs) as were reported from previous investigations conducted within those parts of Area 2.
- The groundwater contaminants appear to be present in two contaminant plumes (one characterized by the PCE/TCE and the other by 1,1-DCE/1,1,1-TCA) that partially overlap. The locations and components of these plumes just upgradient from the central and southern parts of Area 2 are consistent with evidence from previous studies conducted within these parts of Area 2.
- The central and southern parts of Area 2 likely have current concentrations of groundwater contaminants that are lower in magnitude than were present during 1992 to 1994.
- Available evidence is consistent with the idea that sources for the observed groundwater contamination are located upgradient from the central and southern parts of Area 2, but specific locations of such sources cannot be determined with the available data.
- The current contaminant plumes upgradient from the central and southern parts of Area 2 appear to be mature plumes in which parent compounds have significantly degraded relative to daughter compounds, and total contaminant loads are lower than reported from previous studies.

- Based on present contaminant concentrations and stratigraphy in the area upgradient from the central and southern parts of Area 2, restrictions to the future use of the central and southern portions of Area 2 would be limited due to a possible prohibition on the use of groundwater from beneath the site.

6.0 REFERENCES

California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), 2000. *Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, Interim Final.* 2 volumes. August 2000.

Erler & Kalinowski, Inc., 1995. *Request for Site Closure with Respect to Chlorinated Volatile Organic Compounds in Groundwater, Lincoln Cannery Court Site, 21 and 24 Cannery Court, Hayward, California.* March 23, 1995.

Innovative Technical Solutions Inc. (ITSI), 2001a. *Draft Sampling and Analysis Plan, Limited Phase II Targeted Brownfields Assessment, Cannery Redevelopment Area.* June 14, 2001.

ITSI, 2001b. *Phase I Report, Targeted Brownfields Assessment, Cannery Redevelopment Area, City of Hayward.* May 25, 2001.

U.S. Environmental Protection Agency (USEPA), 2001. *Memorandum, Sampling and Analysis Plan (SAP) for Limited Phase II Targeted Brownfields Assessment, Cannery Redevelopment Area.* June 21, 2001.

7.0 GLOSSARY

Analyte
The analyte is the substance being analyzed. For instance, lead is a common analyte in soils during Brownfields investigations.

Brownfields
Brownfields are abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. Through its Brownfields Initiative, the EPA empowers states, communities, and other stakeholders in economic development to work together in a timely manner to prevent, assess, safely clean up, and sustainably reuse brownfields.

Cone Penetration Test
Cone penetration testing (CPT) is a process whereby subsurface soil characteristics are determined when a cone penetrometer, attached to a data acquisition system, is pushed into the subsurface using a hydraulic ram. The CPT provides a rapid, reliable and economical means of determining soil stratigraphy, relative density, strength and hydrogeologic information (hydraulic conductivity, static and dynamic pore pressure). Using direct-push methodology, CPT does not generate soil cuttings, thus eliminating special handling and costly disposal.

Cone Penetrometer
The cone penetrometer consists of a steel cone that is hydraulically pushed into the ground while field measurements are continuously collected and transported to the surface for data interpretation and visualization. Standard cone penetrometers collect stratigraphic information using sensors for cone tip pressure and sleeve friction. The ratio of the tip resistance to the sleeve friction provides information that can be used to classify soil type. Other sensors available include two-axis inclinometers, acoustic cone (for identification of soil type), temperature, pH, radioactivity (gamma), and geophones for measurement of P (pressure) and S (shear) waves.

Data Validation
Data validation, the first step in assessing data quality, is a standardized review process for judging the analytical quality and usefulness of a discrete set of chemical data. Data validation can be viewed as a decision making process during which established quality control criteria are applied to the data.

During this process, individual sample results are accepted, rejected or qualified. Data that meet all the validation criteria are accepted as unqualified and can be used as needed, assuming that no problems occurred during the sampling events. Data that are rejected (R) for not meeting one or more of the validation criteria cannot be used at all. Some data fall into the grey area between accepted and rejected. These data are qualified as "estimated" (J) if one or more of the validation criteria were not met. Estimated data may or may not be usable depending on the intended use of the data. In general, estimated (J) data can be used after examining the reasons for data qualification and its impact on the achievement of the project Data Quality Objectives (DQOs).

Matrix Spikes
A quality control technique used to measure the accuracy and precision of an analytical method. One sample is chosen as a representative of the sample group and is divided into two portions. Each portion of the sample is spiked (fortified) with a known concentration of analyte. One of the spiked portions is the matrix spike (MS), the other portion is the matrix spike duplicate (MSD). The MS and MSD samples are then analyzed in the same manner as the environmental samples in the analytical batch.

Risk-Based Screening Levels
Risk-Based Screening Levels (RBSLs) for soil and groundwater for over 100 chemicals commonly found at sites impacted by the release of hazardous substances. The RBSLs are considered conservative screening levels which, under most circumstances, concentrations of chemicals in soil and groundwater below these levels can be assumed to not pose a significant threat to human health and the environment.

The RBSLs were developed to help expedite the preparation of environmental risk assessments at sites where impacted soil and groundwater has been identified. As an alternative to preparing a formal risk assessment, soil and groundwater data collected at a site can be directly compared to the RBSLs and the need for additional work evaluated. This approach will be especially beneficial for use at small- to medium-size sites, where the preparation of a more formal risk assessment may not be warranted or feasible due to time and cost constraints.

Surrogate Compounds
Surrogate compounds are similar in chemical composition to the target analytes and are spiked into every sample prior to analysis. The surrogate compounds selected are not found in environmental samples. Surrogates are added to both environmental samples and quality control samples prior to preparation. The percent recoveries of the surrogates are calculated and are used to assess data quality.

Targeted Brownfields Assessment
EPA's Targeted Brownfields Assessment (TBA) program is designed to help States, Tribes, and municipalities minimize the uncertainties of contamination often associated with brownfields. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields.

Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. A Targeted Brownfields Assessment may encompass one or more of the following activities:

- A screening (Phase I) assessment, including a background and historical investigation and a preliminary site inspection;
- A full (Phase II) site assessment, including sampling activities to identify the types and concentrations of contaminants and the areas of contamination to be cleaned; and

- Establishment of cleanup options and cost estimates based on future uses and redevelopment plans.

Targeted Brownfields Assessment funding may only be used at sites as authorized by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. The site must be contaminated or suspected to be contaminated with hazardous substances. Sites contaminated only with petroleum products are not eligible for assistance.

Tables

Table 1

Results of Groundwater Samples for Volatile Organic Compounds (in μg/L)
Limited Phase II Groundwater Investigation
Cannery Redevelopment Area, City of Hayward

Sample ID	Date	Latitude	Longitude	PCE	TCE	1,1-DCE	1,1,1-TCA	Chloroform
GW-1	6/25/01	37°40'01.1"	-122°05'23.2"	10	23	1.2	ND	ND
GW-9 (Dupe)	6/25/01	37°40'01.1"	-122°05'23.2"	12	26	ND	ND	ND
GW-2	6/25/01	37°39'52.0"	-122°05'29.3"	ND	2.5	7.2	4.9	1.2
GW-3	6/25/01	37°39'58.4"	-122°05'30.3"	ND	ND	11	1.6	2.6
GW-4	6/26/01	37°39'50.3"	-122°05'30.2"	ND	2.5	61	37	ND
GW-5	6/26/01	37°39'46.0"	-122°05'24.0"	14	23	ND	ND	ND
GW-6	6/25/01	37°40'01.1"	-122°05'23.2"	ND	ND	ND	ND	ND
GW-7	6/26/01	37°40'07.9"	-122°05'37.3"	ND	ND	ND	ND	ND
GW-8	6/26/01	37°39'49.8"	-122°05'06.9"	5.4	ND	ND	ND	26
GW-10 (Blank)	6/26/01	NA	NA	ND	ND	ND	ND	ND
			Reporting Limit	1.0	1.0	1.0	1.0	1.0
Historic High Concentration beneath Area 2 (from Phase I Report)				35	150	66	230	–
RBSL[1] (Table C)			Exceeds Value	5.0	5.0	6.0	62	28
RBSL[1] (Table D)			Exceeds Value	120	360	9.6 (25)	62	28
RBSL[1] (Table F-2, Indoor Air Impacts)			Exceeds Value	170 [15,000]	750 [57,000]	9.6 [1,000]	77,000 [1,300,000]	590 [40,000]

[1] Results greater than the screening criteria, as discussed in Section 5.2 of the report. The RBSL concentrations presented are for coarse-grained soils, whereas the RBSL values enclosed in brackets are for fine-grained soils.
Table C. Subsurface soil (>3m bgs) and groundwater RBSLs. Groundwater IS a current source of drinking water.
Table D. Subsurface soil (>3m bgs) and groundwater RBSLs. Groundwater IS NOT a current source of drinking water.
Table F-1. Component for groundwater screening level, indoor air impacts only. Groundwater IS a current or potential drinking water resource.
Source for RBSLs: RWQCB (2000)

Figures

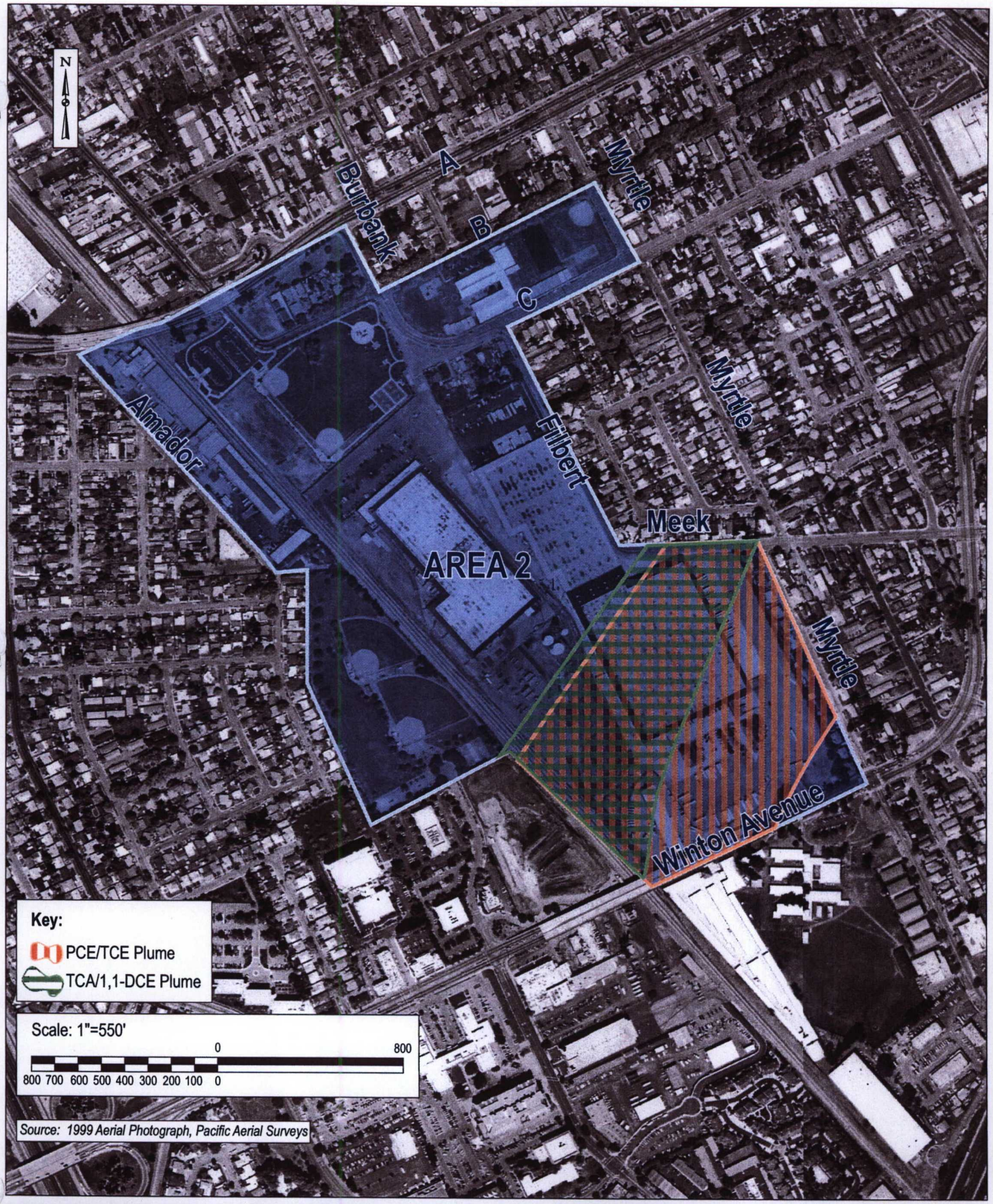


Figure 1. Area 2 with Groundwater Contaminant Plumes Identified in Phase I

Limited Phase II Targeted Brownfields Assessment
Cannery Redevelopment Area, City of Hayward

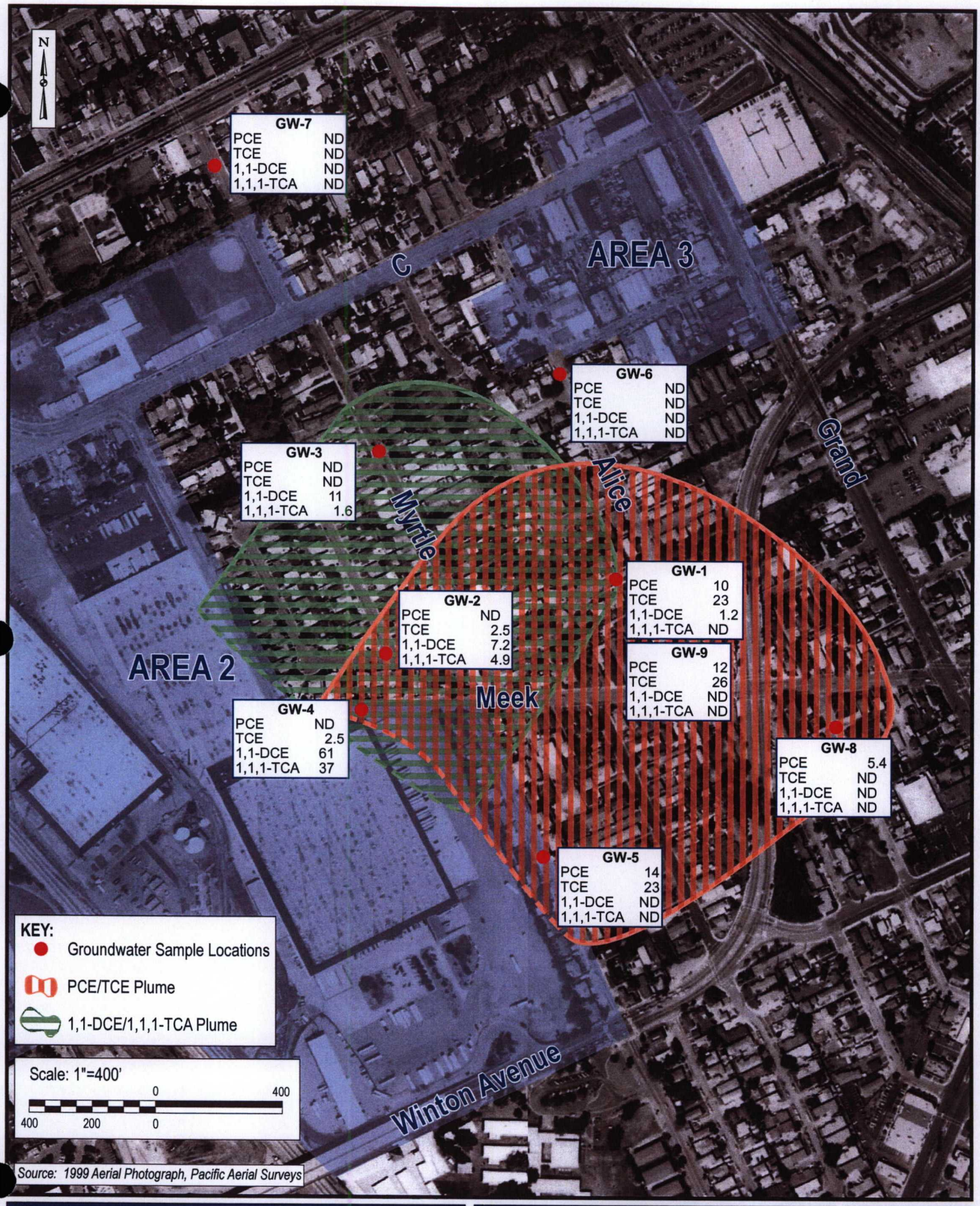
Prepared For:

EPA United States Environmental Protection Agency

U.S. Army Corps of Engineers

Prepared By:

ITSI Innovative Technical Solutions, Inc.



Source: 1999 Aerial Photograph, Pacific Aerial Surveys

Figure 2. Phase II Groundwater Sampling Results
Limited Phase II Targeted Brownfields Assessment
Cannery Redevelopment Area, City of Hayward

Prepared For:
EPA United States Environmental Protection Agency
U.S. Army Corps of Engineers

Prepared By:
ITSI Innovative Technical Solutions, Inc.

APPENDIX A

ENCROACHMENT PERMIT
CPT LOG FOR GW-1

ITSI

CITY OF HAYWARD

PERMIT

TAKEN BY: TRK DATE: 06/19/01
ISSUED BY: TRK DATE: 06/19/01
PERMIT NO. 01-237

Applicant: City of Hayward
777B St.
Hayward, CA 94541

CONTRACTOR: ITSI, Inc.
2855 Mitchell Dr., Suite 111
Walnut Creek, CA. 94598
Attn. Jeff Hess

PROJECT LOCATION:
ALICE, MYRTLE, MEEK, PAMELA, ROTARY

CONTACT NAME & TELEPHONE:
JEFF HESS
(925) 256-8898 EXT.104

THE APPLICANT HEREBY APPLIES FOR PERMISSION TO:

Drill 8 borings in different locations near the Hunts Cannery. (see attached map)

This Permit is subject to the following conditions:

1. Call USA toll free 1-800-642-2444 at least 48 hours prior to any excavation.
2. Monitoring wells shall be out of the street area and shall not cause street closure or lane closure during routine monitoring. Monitoring wells will be in the sidewalk area only.
3. All existing concrete to be removed shall be saw-cut 1" deep at the nearest score mark and removed or removed at expansion joints.
4. Any pavement damaged due to this construction shall be neatly edged, removed and replaced at the direction of the City Inspector.
5. The permittee assumes all responsibility for damage to existing underground utilities.
6. Call (510) 583-4140 twenty-four hours prior to start of work to schedule an inspection.
7. This permit subject to cancellation if work is not completed within 90 days.
8. Any damaged due to this activity shall be restored to previous condition at the direction of the City Inspector
9. Permittee must comply with "State of California Manual of Warning Signs, Lights and Devices for Use in Performance of Work upon Highways".

FEE: $ 0.00 ACCOUNT: -4815

APPROVED BY: Terri R. Konz 06/19/01
DATE

APPLICANT AGREES TO COMPLY WITH ALL OF THE APPLICABLE SECTIONS OF THE CITY OF HAYWARD MUNICIPAL CODE AND STANDARD SPECIFICATIONS.

x 06/19/01
Hal Williams DATE

In consideration of the granting of this permit and other good and valuable consideration therefore, the undersigned intending to be legally bound does hereby for the undersigned and the heirs, executors, administrators and assigns of the undersigned agree to indemnify and hold harmless the City of Hayward, the members of the City Council and their agents, servants and employees and each of them, from and against liability for injury to or death of persons and/or liability for damage to property arising from any and all work herein permitted or, incidental thereto or which may arise from failure of permitee to perform the obligations of permitee under this permit, with respect to maintenance.

FILE COPY APPLICANT ACCOUNTING INSPECTOR

City of Hayward 00.171.02

Sample location GW-1
alice & Arnold/chris

©SOUNDING DATA IN FILE ITSI01 06-25-01 08:17

OPERATOR : Tatum LOCATION : Hayward

CONE ID : 617 JOB No. : cpt-01

Precision Sampling Inc.
1400 South 50th St. Richmond, CA 94804

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
Baseline		-11	-0.1		13	
0.05	0.2	1	0.2	21.3	2	?
0.10	0.3	2	0.2	13.0	1	?
0.15	0.5	2	0.2	11.1	-0	?
0.20	0.7	2	0.2	9.8	0	?
0.25	0.8	1	0.1	12.5	-0	organic material
0.30	1.0	3	0.1	2.4	-0	clay
0.35	1.1	4	0.1	2.1	-0	sensitive fine grained
0.40	1.3	4	0.0	0.8	-1	sensitive fine grained
0.45	1.5	5	0.1	2.1	-1	silty clay to clay
0.50	1.6	6	0.2	2.5	-0	silty clay to clay
0.55	1.8	7	0.2	2.9	-0	clay
0.60	2.0	6	0.2	2.7	0	clay
0.65	2.1	6	0.2	3.3	-0	clay
0.70	2.3	6	0.2	3.4	-0	clay
0.75	2.5	7	0.2	3.1	-0	clay
0.80	2.6	7	0.2	2.5	-0	clay
0.85	2.8	5	0.1	2.5	0	silty clay to clay
0.90	3.0	6	0.1	2.5	-1	clay
0.95	3.1	6	0.1	2.4	-0	silty clay to clay
1.00	3.3	6	0.1	1.7	-0	silty clay to clay
1.05	3.4	7	0.1	1.7	-0	silty clay to clay
1.10	3.6	8	0.2	2.0	-0	silty clay to clay
1.15	3.8	8	0.2	2.1	-0	clayey silt to silty clay
1.20	3.9	8	0.1	1.3	-0	clayey silt to silty clay
1.25	4.1	8	0.1	1.9	-0	clayey silt to silty clay
1.30	4.3	8	0.1	1.8	-0	silty clay to clay
1.35	4.4	7	0.2	2.2	-0	silty clay to clay
1.40	4.6	8	0.3	3.8	-0	clay
1.45	4.8	8	0.4	4.9	-1	clay
1.50	4.9	11	0.4	3.8	-0	clay
1.55	5.1	13	0.7	5.3	-1	clay
1.60	5.2	13	0.8	6.2	-3	clay
1.65	5.4	15	0.9	6.4	-2	clay
1.70	5.6	16	1.0	6.4	-2	clay
1.75	5.7	17	1.0	5.9	-2	clay
1.80	5.9	16	1.0	6.2	-2	clay
1.85	6.1	17	1.0	5.8	-3	clay
1.90	6.2	17	0.9	5.4	-2	clay
1.95	6.4	16	0.9	5.5	-3	clay
2.00	6.6	16	0.8	5.2	-2	clay

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

City of Hayward

CPT-1 11.02/
Sample GW-1
Panda Court

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
2.05	6.7	16	0.8	5.3	-2	clay
2.10	6.9	15	0.9	5.9	-2	clay
2.15	7.1	14	0.9	6.2	-2	clay
2.20	7.2	15	0.9	5.8	-2	clay
2.25	7.4	14	0.8	5.6	-2	clay
2.30	7.5	12	0.7	5.4	-2	clay
2.35	7.7	12	0.6	5.2	-2	clay
2.40	7.9	11	0.6	5.5	-2	clay
2.45	8.0	10	0.6	5.6	-2	clay
2.50	8.2	10	0.5	5.6	-2	clay
2.55	8.4	10	0.5	5.5	-2	clay
2.60	8.5	10	0.5	5.1	-2	clay
2.65	8.7	11	0.6	5.3	-2	clay
2.70	8.9	11	0.6	5.1	-2	clay
2.75	9.0	11	0.6	5.3	-1	clay
2.80	9.2	10	0.5	5.0	-1	clay
2.85	9.4	8	0.5	5.9	-1	clay
2.90	9.5	8	0.5	6.4	-1	clay
2.95	9.7	8	0.5	6.1	-1	clay
3.00	9.8	8	0.5	6.1	-0	clay
3.05	10.0	8	0.5	6.3	-0	clay
3.10	10.2	8	0.5	6.2	-0	clay
3.15	10.3	8	0.5	6.1	-0	clay
3.20	10.5	8	0.5	6.5	0	clay
3.25	10.7	8	0.6	6.5	0	clay
3.30	10.8	9	0.6	6.4	1	clay
3.35	11.0	10	0.6	6.3	1	clay
3.40	11.2	10	0.6	6.2	1	clay
3.45	11.3	9	0.6	6.4	1	clay
3.50	11.5	8	0.5	6.0	1	clay
3.55	11.6	8	0.5	5.9	1	clay
3.60	11.8	8	0.5	5.6	1	clay
3.65	12.0	8	0.4	5.7	1	clay
3.70	12.1	8	0.5	5.9	1	clay
3.75	12.3	9	0.5	6.1	1	clay
3.80	12.5	10	0.6	5.7	1	clay
3.85	12.6	10	0.6	5.9	1	clay
3.90	12.8	11	0.6	5.9	2	clay
3.95	13.0	11	0.6	5.8	2	clay
4.00	13.1	13	0.7	5.6	2	clay
4.05	13.3	14	0.8	5.6	2	clay
4.10	13.5	14	0.8	5.6	2	clay
4.15	13.6	16	0.8	5.2	2	clay
4.20	13.8	17	0.9	5.2	2	clay
4.25	13.9	15	0.9	5.6	2	clay
4.30	14.1	15	0.9	6.0	2	clay
4.35	14.3	16	0.9	5.9	3	clay
4.40	14.4	17	1.0	5.8	2	clay
4.45	14.6	16	1.0	5.9	3	clay
4.50	14.8	16	0.9	6.0	3	clay

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

Sample GW-1
Pamela Court

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
4.55	14.9	15	0.9	5.9	3	clay
4.60	15.1	15	0.9	6.0	3	clay
4.65	15.3	16	1.0	6.1	3	clay
4.70	15.4	16	1.0	6.3	3	clay
4.75	15.6	16	1.0	6.1	3	clay
4.80	15.7	17	1.0	5.7	3	clay
4.85	15.9	17	1.0	5.9	3	clay
4.90	16.1	17	1.0	5.9	3	clay
4.95	16.2	18	1.0	5.6	3	clay
5.00	16.4	18	1.0	5.6	3	clay
5.05	16.6	17	0.9	5.4	4	clay
5.10	16.7	16	0.9	5.5	4	clay
5.15	16.9	15	0.9	5.8	4	clay
5.20	17.1	14	0.8	5.7	4	clay
5.25	17.2	16	0.8	5.2	4	clay
5.30	17.4	17	0.9	5.6	4	clay
5.35	17.6	17	1.0	5.7	4	clay
5.40	17.7	18	0.9	5.3	4	clay
5.45	17.9	19	1.0	5.4	4	clay
5.50	18.0	19	1.1	5.5	4	clay
5.55	18.2	21	1.1	5.4	4	clay
5.60	18.4	21	1.1	5.5	5	clay
5.65	18.5	21	1.2	5.6	5	clay
5.70	18.7	21	1.2	5.8	5	clay
5.75	18.9	21	1.2	5.7	5	clay
5.80	19.0	21	1.1	5.3	5	clay
5.85	19.2	22	1.2	5.3	5	clay
5.90	19.4	23	1.3	5.6	5	clay
5.95	19.5	24	1.3	5.4	6	clay
6.00	19.7	26	1.4	5.3	6	clay
6.05	19.8	27	1.4	5.3	6	clay
6.10	20.0	26	1.4	5.3	6	clay
6.15	20.2	25	1.3	5.2	7	clay
6.20	20.3	23	1.3	5.5	7	clay
6.25	20.5	23	1.3	5.4	7	clay
6.30	20.7	24	1.3	5.5	7	clay
6.35	20.8	23	1.4	5.8	7	clay
6.40	21.0	23	1.3	5.8	7	clay
6.45	21.2	24	1.3	5.5	7	clay
6.50	21.3	23	1.3	5.5	7	clay
6.55	21.5	23	1.3	5.6	7	clay
6.60	21.7	23	1.2	5.5	7	clay
6.65	21.8	23	1.2	5.2	7	clay
6.70	22.0	24	1.2	5.0	7	clay
6.75	22.1	23	1.2	5.4	7	clay
6.80	22.3	23	1.3	5.4	8	clay
6.85	22.5	22	1.3	5.7	8	clay
6.90	22.6	23	1.3	5.6	8	clay
6.95	22.8	24	1.2	5.2	8	clay
7.00	23.0	22	1.2	5.4	8	clay

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

Sample GW-1
Pamela Court

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
7.05	23.1	22	1.1	5.1	8	clay
7.10	23.3	25	1.1	4.6	9	clay
7.15	23.5	27	1.3	4.7	9	clay
7.20	23.6	28	1.4	4.8	9	clay
7.25	23.8	27	1.3	4.9	9	clay
7.30	23.9	25	1.3	5.2	9	clay
7.35	24.1	25	1.2	4.8	9	clay
7.40	24.3	23	1.1	4.8	9	clay
7.45	24.4	19	1.0	5.4	9	clay
7.50	24.6	18	0.9	5.1	9	clay
7.55	24.8	18	0.9	5.0	9	clay
7.60	24.9	17	0.9	5.0	9	clay
7.65	25.1	18	0.9	4.9	9	clay
7.70	25.3	21	0.9	4.2	10	clay
7.75	25.4	22	0.9	4.0	11	silty clay to clay
7.80	25.6	22	0.8	3.8	11	silty clay to clay
7.85	25.8	20	0.7	3.7	11	silty clay to clay
7.90	25.9	19	0.7	3.7	11	silty clay to clay
7.95	26.1	18	0.7	3.9	11	silty clay to clay
8.00	26.2	17	0.8	4.5	11	clay
8.05	26.4	17	0.8	4.7	12	clay
8.10	26.6	18	0.9	5.0	12	clay
8.15	26.7	20	0.9	4.6	12	clay
8.20	26.9	19	0.8	4.2	9	clay
8.25	27.1	17	0.7	4.1	10	clay
8.30	27.2	17	0.7	4.3	10	clay
8.35	27.4	17	0.8	4.6	10	clay
8.40	27.6	16	0.7	4.7	10	clay
8.45	27.7	14	0.7	4.8	10	clay
8.50	27.9	13	0.5	4.2	10	clay
8.55	28.1	12	0.4	3.5	10	clay
8.60	28.2	11	0.4	3.6	10	clay
8.65	28.4	11	0.5	4.2	11	clay
8.70	28.5	11	0.5	4.9	11	clay
8.75	28.7	13	0.5	4.2	12	clay
8.80	28.9	13	0.5	4.0	12	silty clay to clay
8.85	29.0	14	0.5	3.4	13	silty clay to clay
8.90	29.2	13	0.4	3.3	13	silty clay to clay
8.95	29.4	13	0.4	3.1	13	silty clay to clay
9.00	29.5	12	0.4	3.3	13	silty clay to clay
9.05	29.7	11	0.5	3.9	13	clay
9.10	29.9	12	0.5	3.9	14	clay
9.15	30.0	11	0.5	4.3	14	clay
9.20	30.2	13	0.5	4.0	14	clay
9.25	30.3	14	0.6	4.2	14	clay
9.30	30.5	14	0.7	4.7	14	clay
9.35	30.7	15	0.7	4.9	15	clay
9.40	30.8	19	0.8	4.3	15	clay
9.45	31.0	24	1.1	4.5	16	clay
9.50	31.2	25	1.1	4.5	16	clay

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

Sample GW-1
Panda Court

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
9.55	31.3	22	1.1	5.2	17	clay
9.60	31.5	26	1.2	4.6	18	clay
9.65	31.7	28	1.7	6.1	19	clay
9.70	31.8	27	1.8	6.6	19	clay
9.75	32.0	28	1.6	5.8	17	clay
9.80	32.2	27	1.5	5.5	17	clay
9.85	32.3	27	1.5	5.4	16	clay
9.90	32.5	26	1.4	5.5	16	clay
9.95	32.6	23	1.2	5.3	16	clay
10.00	32.8	17	1.1	6.4	15	clay
10.05	33.0	14	1.0	6.8	13	clay
10.10	33.1	14	0.9	6.2	14	clay
10.15	33.3	13	0.8	6.1	14	clay
10.20	33.5	14	0.7	5.3	14	clay
10.25	33.6	14	0.7	4.6	14	clay
10.30	33.8	14	0.6	4.5	14	clay
10.35	34.0	12	0.7	5.2	15	clay
10.40	34.1	12	0.7	5.4	15	clay
10.45	34.3	14	0.7	5.4	15	clay
10.50	34.4	14	0.7	5.4	15	clay
10.55	34.6	13	0.7	5.3	15	clay
10.60	34.8	12	0.6	4.7	15	clay
10.65	34.9	11	0.5	4.3	15	clay
10.70	35.1	10	0.5	4.9	15	clay
10.75	35.3	14	0.6	4.2	17	clay
10.80	35.4	13	0.5	4.0	16	clay
10.85	35.6	12	0.5	3.8	17	clay
10.90	35.8	12	0.5	4.2	17	clay
10.95	35.9	11	0.5	4.8	17	clay
11.00	36.1	11	0.5	4.6	17	clay
11.05	36.3	10	0.5	4.4	18	clay
11.10	36.4	10	0.5	4.4	18	clay
11.15	36.6	10	0.4	4.2	18	clay
11.20	36.7	10	0.4	4.2	18	clay
11.25	36.9	10	0.4	4.4	18	clay
11.30	37.1	11	0.5	4.3	19	clay
11.35	37.2	14	0.6	4.1	19	clay
QUIT for	Qc Rate					
11.50		171	0.4		1	
11.40	37.4	12	0.6	5.1	18	clay
11.45	37.6	10	1.9	18.3	18	clay
11.50	37.7	65	3.6	5.5	20	sandy silt to clayey silt
11.55	37.9	269	5.4	2.0	-0	sand to silty sand
11.60	38.1	383	4.0	1.0	-0	sand
11.65	38.2	326	2.5	0.8	-0	sand
11.70	38.4	242	2.2	0.9	-0	sand
11.75	38.5	156	2.2	1.4	-0	sand to silty sand
11.80	38.7	144	2.1	1.5	-0	sand to silty sand

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

Sample GW-1
Pamela Court

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
11.85	38.9	144	2.1	1.5	-0	sand to silty sand
11.90	39.0	143	2.1	1.5	-0	sand to silty sand
11.95	39.2	142	2.1	1.5	-0	sand to silty sand
12.00	39.4	142	2.1	1.5	-0	sand to silty sand
12.05	39.5	141	2.1	1.5	-0	sand to silty sand
12.10	39.7	141	2.8	2.0	-0	silty sand to sandy silt
12.15	39.9	141	3.0	2.1	-0	silty sand to sandy silt
12.20	40.0	189	4.6	2.4	-0	silty sand to sandy silt
12.25	40.2	209	4.1	1.9	-1	silty sand to sandy silt
12.30	40.4	112	3.6	3.3	-0	silty sand to sandy silt
12.35	40.5	88	2.3	2.6	-0	sandy silt to clayey silt
12.40	40.7	60	1.6	2.8	-0	sandy silt to clayey silt
12.45	40.8	98	2.6	2.6	0	silty sand to sandy silt
12.50	41.0	145	2.3	1.6	-1	sand to silty sand
12.55	41.2	189	1.5	0.8	-0	sand
12.60	41.3	190	1.6	0.8	-0	sand
12.65	41.5	192	1.5	0.8	-0	sand
12.70	41.7	190	1.6	0.8	-0	sand
12.75	41.8	188	1.5	0.8	-0	sand
12.80	42.0	165	1.6	1.0	-0	sand
12.85	42.2	143	1.3	0.9	-0	sand to silty sand
12.90	42.3	135	1.8	1.3	-0	sand to silty sand
12.95	42.5	183	2.4	1.3	-0	sand to silty sand
13.00	42.7	255	4.3	1.7	-0	sand to silty sand
13.05	42.8	291	3.3	1.1	-0	sand
13.10	43.0	245	2.4	1.0	-0	sand
13.15	43.1	218	1.8	0.8	-1	sand
13.20	43.3	145	1.5	1.1	-0	sand
13.25	43.5	162	1.5	0.9	-0	sand
13.30	43.6	235	2.0	0.8	-1	sand
13.35	43.8	367	4.3	1.2	-1	sand
13.40	44.0	337	5.7	1.7	-0	sand
13.45	44.1	287	4.0	1.4	-0	sand to silty sand
13.50	44.3	212	3.0	1.4	-1	sand to silty sand
13.55	44.5	79	1.8	2.2	-1	sand to silty sand
13.60	44.6	132	1.6	1.2	-0	sand to silty sand
13.65	44.8	205	1.5	0.7	-0	sand
13.70	44.9	205	1.6	0.8	-0	sand
13.75	45.1	178	1.5	0.8	-0	sand
13.80	45.3	147	1.1	0.7	-1	sand
13.85	45.4	163	0.9	0.6	-1	sand
13.90	45.6	205	1.5	0.7	-1	sand
13.95	45.8	246	1.6	0.7	-1	sand
14.00	45.9	244	1.5	0.6	-0	sand
14.05	46.1	276	2.5	0.9	-0	sand
14.10	46.3	253	2.8	1.1	-1	sand
14.15	46.4	236	2.4	1.0	-1	sand
14.20	46.6	209	2.0	0.9	-1	sand
14.25	46.8	156	1.9	1.2	-1	sand to silty sand
14.30	46.9	73	1.6	2.2	-1	silty sand to sandy silt

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

DEPTH meters	DEPTH feet	TIP Qc tsf	FRICTION Fs tsf	FR RATIO Fs/Qc %	PORE PR Pw psi	INTERPRETED SOIL TYPE
14.35	47.1	32	1.0	3.3	-1	sandy silt to clayey silt
14.40	47.2	19	0.3	1.8	1	clayey silt to silty clay
14.45	47.4	17	0.3	1.6	2	sandy silt to clayey silt
14.50	47.6	19	0.2	1.3	2	sandy silt to clayey silt
14.55	47.7	17	0.2	1.2	2	sandy silt to clayey silt
14.60	47.9	17	0.2	1.1	2	sandy silt to clayey silt
14.65	48.1	17	0.2	0.9	2	sandy silt to clayey silt
14.70	48.2	16	0.1	0.9	2	sandy silt to clayey silt
14.75	48.4	14	0.1	0.8	3	sandy silt to clayey silt
14.80	48.6	15	0.1	0.8	3	sandy silt to clayey silt
14.85	48.7	15	0.2	1.5	3	sandy silt to clayey silt
14.90	48.9	15	0.2	1.3	3	sandy silt to clayey silt
14.95	49.0	15	0.2	1.5	4	sandy silt to clayey silt
15.00	49.2	15	0.2	1.5	4	sandy silt to clayey silt
15.05	49.4	14	0.2	1.5	4	sandy silt to clayey silt
15.10	49.5	14	0.1	0.7	5	sandy silt to clayey silt
15.15	49.7	15	0.3	2.0	5	silty clay to clay
15.20	49.9	6	0.6	10.5	6	silty clay to clay
15.25	50.0	18	0.6	3.1	8	clay
15.30	50.2	12	0.4	3.7	11	silty clay to clay
15.35	50.4	10	0.4	3.6	11	silty clay to clay
15.40	50.5	12	0.4	3.0	12	?
15.45	50.7	11	?	?	13	?
15.50	50.9	12	?	?	13	

©WRITE NUMBER OF RODS USED __

Soil interpretation reference: Robertson & Campanella-1983, based on 60% hammer

APPENDIX B

LABORATORY ANALYTICAL DATA AND CHAIN OF CUSTODY FORMS

ITSI

Innovative Technical Solutions, Inc
2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn.: Mr. Jeff Hess

Project: City of Hayward

Dear Jeff.

Attached is our report for your samples received on Tuesday June 26, 2001
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after August 10, 2001 unless you have requested otherwise. We appreciate the opportunity to be of service to you.
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.
My email address is: ssidhu@chromalab.com

Sincerely,

Surinder Sidhu

Surinder Sidhu

To: Innovative Technical Solutions, Inc
Attn.: Jeff Hess

CASE NARRATIVE

General and Sample Comments

We (STL ChromaLab) received 5 Water samples, on Jun 26 2001 4:00PM.

Samples were received less than four hours from time of collection. Temperature on SRC is 11 degrees centigrade.

Batch 2001/07/03-01.60: The RPD from MS/MSD on sample 2001-06-0498-001 was outside QC limits. The sample, MS, & MSD were reanalyzed in batch 2001/07/05-01.60 and all QC passed. Results were reported from the 07/05 batch.

Surrogate recoveries, MS/MSD, and LCS/LCSD were within the QC limits of the project specific requirements. STL-CL QC limits are listed on the summary sheet. All samples, MB, MS/MSD, LCS/LCSD met the project specific requirements.

TABLE OF CONTENTS

STL CHROMALAB SUBMISSION NUMBER 2001-06-0498

ITEM	PAGE
General Project Information	1-7
Cover Letter/Case Narrative	
Table of Contents	
Summary of Methods	
Chain-of-Custody	
Volatile Organics by GC/MS- Method 8260B	8-96
Results/QC	
Internal Standard Summary	
Initial Calibration	
Continuing Calibration	
Supporting Data	
Run Sequence & Logbook Documentation	

88
07/19/01

GENERAL PROJECT INFORMATION

SUMMARY OF METHODS

Volatile Organic Compounds by GC/MS - Method 8260B

EPA method 8260B was used to quantitate the volatile organics by GC/MS. Volatile compounds in water were directly purged in the purge-and-trap (EPA Method 5030B). Low level solid samples were prepared by closed extraction (EPA Method 5035) or 5030B then directly purged by heated purge-and-trap. Samples were introduced directly to the GC/MS.

ITSI Innovative Technical Solutions, Inc.
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(925) 256-8898 – (925) 256-8998 (fax)

2001-06-0498

Chain-Of-Custody

000006

Project Name and Number: City of Hayward
Project Manager:
Site Location: City of Hayward

Laboratory Name: Chromalab
Address: 1220 Quarry Pleasanton
Contact Name: Surinder
Phone: (925) 484-1919

Date: 6/25/2001
Page: 1 of 1

Analysis: SW 8260B

Preservative: HCL

Container Type: VOA

11°C

Sample I.D.	Sample Depth	Date	Time	No. of Containers	Sample Matrix	SW 8260B	Special Instructions/Comments
GW-1	NA	6/25/01	1035	6	W	X	MS / MSD
GW-9	↓	↓	1040	3		X	
GW-6			1245	3		X	
GW-3			1445	3		X	
GW-2			1600	3		X	

Sampled By: Robert L. Nelson
Signature: Robert L. Nelson
Special Instructions:

Send Results to: (w/fax #)

Turnaround Time:

Sampler: Robert L. Nelson

Relinquished By/Affiliation:	Date:	Time:
Robert L. Nelson ITSI	6/26/01	1600

Courier/Airbill No.:

Received By/Affiliation:	Date:	Time:
SA McCallum STL, CL	062601	1600

Original – Laboratory Yellow – Field/Office

STL CHROMALAB

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: ITSI Date/Time Received: 062601 (Date) / 16:00 (Time)

Reference/Subm #: 60085/01-06-0498 Received by: SM

Checklist completed by: [signature] (Signature) / 07.18.01 (Date) Reviewed By: [initials] 7-17-01 (Initial/Date)

Matrix: ☐ Soil ☒ Water ☐ Other _____ Carrier name: Client - C/L - _____

Shipping container/cooler in good condition? Yes____ No____ Not Present ✓

Custody seals intact on shipping container/cooler? Yes____ No____ Not Present ✓

Custody seals intact on sample bottles? Yes____ No____ Not Present ✓

Chain of custody present? Yes ✓ No____

Chain of custody signed when relinquished and received? Yes ✓ No____

Chain of custody agrees with sample labels? Yes ✓ No____

Samples in proper container/bottle? Yes ✓ No____

Sample containers intact? Yes ✓ No____

Sufficient sample volume for indicated test? Yes ✓ No____

All samples received within holding time? Yes ✓ No____

Container/Temp Blank temperature in compliance? Temp: 11.0 °C Yes____ No X

Water - VOA vials have zero headspace? No VOA vials submitted____ Yes____ No____

Water - pH acceptable upon receipt? ☐ Yes ☐ No ☐ Checked by Voa chemist

☐ pH adjusted- Preservative used:
☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc Lot#(s) _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

==========

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: Client brought in Samples

Corrective Action: _____

forms\sample control\smprechk 2001.doc

VOLATILE ORGANICS
BY GC/MS

RESULTS/QC

STL ChromaLab
Environmental Services (CA 1094)

Submission #: 2001-06-0498

Volatile OrganicCompounds by 8260B

Innovative Technical Solutions, Inc

2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Phone: (925) 256-8898 Fax: (925) 256-8998

Attn: Jeff Hess

Project #:

Project: City of Hayward

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
GW-1	Water	06/25/2001 10:35	1
GW-9	Water	06/25/2001 10:40	2
GW-6	Water	06/25/2001 12:45	3
GW-3	Water	06/25/2001 14:45	4
GW-2	Water	06/25/2001 16:00	5

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-1**

Project: City of Hayward

Sampled: 06/25/2001 10:35

Matrix: Water

Lab Sample ID: **2001-06-0498-001**

Received: 06/26/2001 16:00

Extracted: 07/05/2001 15:00

QC-Batch: 2001/07/05-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/05/2001 15:00	
Acetone	ND	50	ug/L	1.00	07/05/2001 15:00	
Benzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Bromobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Bromochloromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Bromoform	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Bromomethane	ND	5.0	ug/L	1.00	07/05/2001 15:00	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/05/2001 15:00	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Carbon disulfide	ND	5.0	ug/L	1.00	07/05/2001 15:00	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Chlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Chloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/05/2001 15:00	
Chloroform	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Chloromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Dibromomethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1-Dichloroethene	1.2	1.0	ug/L	1.00	07/05/2001 15:00	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/05/2001 15:00	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-1**

Project: City of Hayward

Sampled: 06/25/2001 10:35

Matrix: Water

Lab Sample ID: **2001-06-0498-001**

Received: 06/26/2001 16:00

Extracted: 07/05/2001 15:00

QC-Batch: 2001/07/05-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Ethylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
2-Hexanone	ND	50	ug/L	1.00	07/05/2001 15:00	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Methylene chloride	ND	5.0	ug/L	1.00	07/05/2001 15:00	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/05/2001 15:00	
Naphthalene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Styrene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Tetrachloroethene	10	1.0	ug/L	1.00	07/05/2001 15:00	
Toluene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Trichloroethene	23	1.0	ug/L	1.00	07/05/2001 15:00	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/05/2001 15:00	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Vinyl acetate	ND	25	ug/L	1.00	07/05/2001 15:00	
Vinyl chloride	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Total xylenes	ND	1.0	ug/L	1.00	07/05/2001 15:00	
Surrogate(s)						
4-Bromofluorobenzene	100.7	86-115	%	1.00	07/05/2001 15:00	
1,2-Dichloroethane-d4	89.1	76-114	%	1.00	07/05/2001 15:00	
Toluene-d8	97.7	88-110	%	1.00	07/05/2001 15:00	

8270 Saturn 2000 VOA

Processed: 07/05/2001 03:30

Sample: SA-WA-1-06-0498-001 Acq Date : 07/05/01 03:00:00 Dilution: 1

Comment: 2001/07/05-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070501\sa-wa-1-06-0498-001 07-05-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.461	Pentafluorobenzene	IS 168	357228	250.000	250.000	ug/L	ISA Pass
2	14.622	1,4-Difluorobenzene	IS 114	736643	250.000	250.000	ug/L	ISA Pass
3	18.773	Chlorobenzene-d5	IS 117	662053	250.000	250.000	ug/L	ISA Pass
4	22.923	1,4-Dichlorobenzene-d4	IS 152	267962	250.000	250.000	ug/L	ISA Pass
26	12.950	Dibromofluoromethane(surr	SU 113	587779	483.136	483.14	ug/L	*******% Pass
30	13.573	D4-1,2-Dichloroethane (su	SU 102	50520	445.325	445.33	ug/L	89.1% Pass
38	16.910	Toluene-d8 (surr)	SU 98	2103651	488.704	488.70	ug/L	97.7% Pass
56	20.532	4-Bromofluorobenzene (sur	SU 95	937821	503.442	503.44	ug/L	100.7% Pass
5	06.015	Dichlorodifluoromethane	85	668	0.566	0.06	ug/L	
6	06.429	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.641	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.706	Bromomethane	94	535	0.504	0.05	ug/L	
9	07.875	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.060	Trichloromonofluoromethan	101	0	0.000	0.00 ✓	ug/L	
11	09.999	1,1-Dichloroethene	96	11070	11.683	1.17	ug/L	
12	10.644	Carbon disulfide	76	2605	1.508	0.15	ug/L	
13	10.316	Trichlorotrifluoroethane	101	247	0.416	0.04	ug/L	
14	10.226	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.313	Acetone	43	6068	27.277	2.73 <RL	ug/L	
16	11.288	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.446	MTBE	73	477	0.259	0.03	ug/L	
18	11.681	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.017	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.297	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.473	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.055	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.659	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.782	Chloroform	83	24660	9.212	0.92	ug/L	
25	14.312	Carbon tetrachloride	117	449	0.270	0.03	ug/L	
27	13.823	1,1,1-Trichloroethane	97	10357	4.500	0.45	ug/L	
28	14.129	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.356	Benzene	78	0	0.000	0.00	ug/L	
31	13.678	1,2-Dichloroethane	62	7260	2.766	0.28	ug/L	
32	15.170	Trichloroethene	95	320998	231.078	23.11 ✓	ug/L	
33	14.980	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.946	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.045	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.894	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.940	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.993	Toluene	92	0	0.000	0.00 ✓	ug/L	
40	17.924	Tetrachloroethene	164	57667	100.440	10.04	ug/L	
41	16.151	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.745	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.745	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.250	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.005	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.865	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.305	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.697	Chlorobenzene	112	74	0.028	0.00	ug/L	
49	19.053	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.574	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.296	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.902	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.824	Styrene	104	0	0.000	0.00	ug/L	
54	19.749	Bromoform	173	0	0.000	0.00	ug/L	
55	20.456	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.061	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.159	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.879	1,1,2,2-Tetrachloroethane	83+85	0	0.000	0.00	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.293	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.614	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.194	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.415	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.634	sec-Butylbenzene	105	814	0.168	0.02	ug/L	
67	23.078	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.863	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	23.101	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.870	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.759	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.870	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.006	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.396	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.949	Naphthalene	128	1898	1.330	0.13	ug/L	
76	28.373	1,2,3-Trichlorobenzene	182	810	1.041	0.10	ug/L	

rerun report 07/05/01 (M)

07/05/01

07-16-01

000013

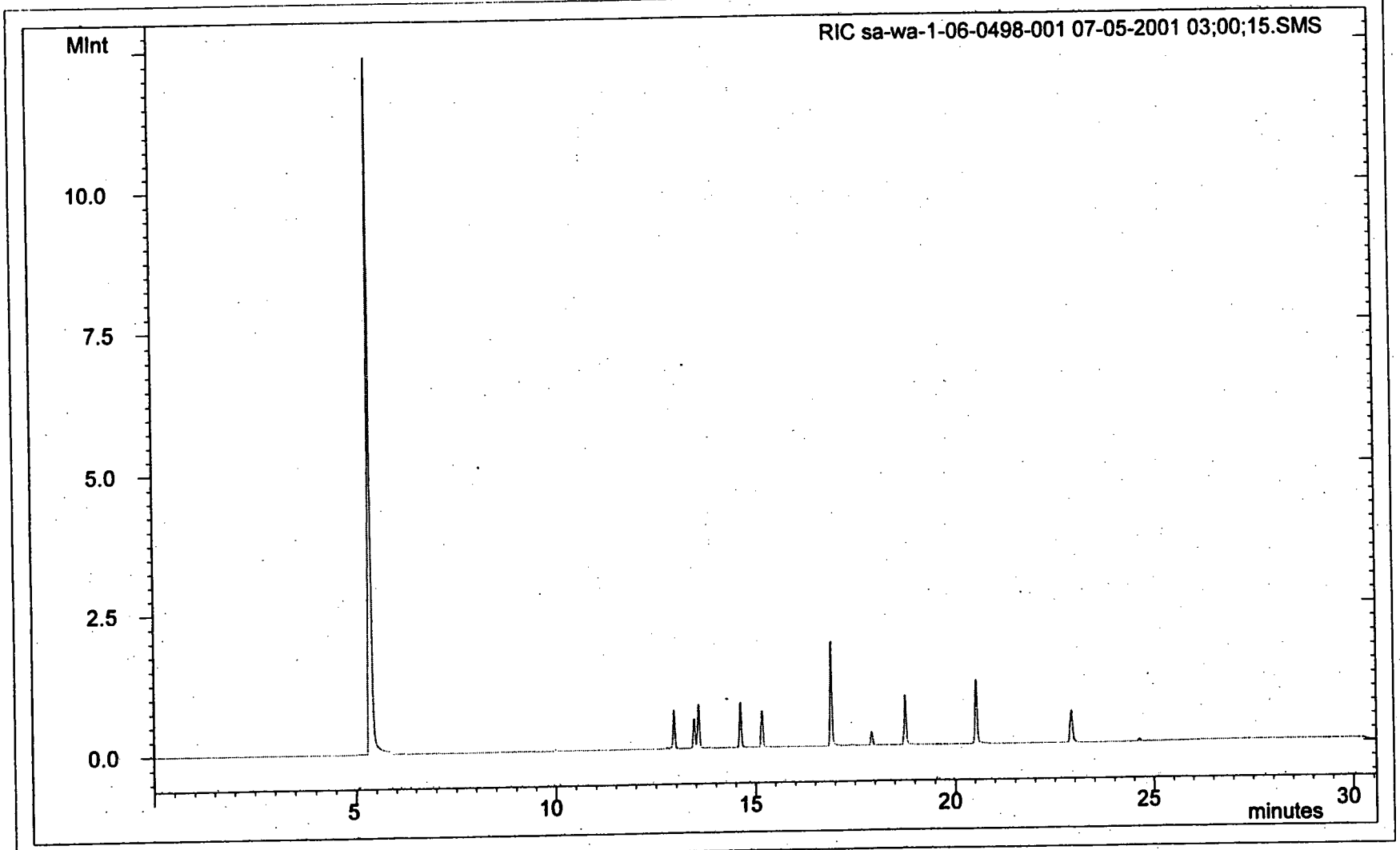
CCV run date: 2001/07/03 12:44:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\sa-wa-1-06-0498-001 07-05-2001 03;00;15.S
Acquisition Date: 07/05/2001 15:00
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0498-001

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000014

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-9**
Project: City of Hayward
Sampled: 06/25/2001 10:40
Matrix: Water

Lab Sample ID: **2001-06-0498-002**
Received: 06/26/2001 16:00
Extracted: 07/03/2001 17:19
QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 17:19	
Acetone	ND	50	ug/L	1.00	07/03/2001 17:19	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 17:19	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 17:19	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 17:19	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 17:19	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:19	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-9**	Lab Sample ID:	**2001-06-0498-002**
Project:	City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 17:19
Sampled:	06/25/2001 10:40	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 17:19	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 17:19	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 17:19	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Tetrachloroethene	12	1.0	ug/L	1.00	07/03/2001 17:19	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Trichloroethene	26	1.0	ug/L	1.00	07/03/2001 17:19	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 17:19	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 17:19	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 17:19	
Surrogate(s)						
4-Bromofluorobenzene	98.5	86-115	%	1.00	07/03/2001 17:19	
1,2-Dichloroethane-d4	97.5	76-114	%	1.00	07/03/2001 17:19	
Toluene-d8	97.5	88-110	%	1.00	07/03/2001 17:19	

8270 Saturn 2000 VOA

Processed: 07/03/2001 05:50

Sample: SA-WA-1-06-0498-002 Acq Date : 07/03/01 05:19:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0498-002 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.466	Pentafluorobenzene	IS 168	326718	250.000	250.000	ug/L	ISA Pass
2	14.626	1,4-Difluorobenzene	IS 114	684406	250.000	250.000	ug/L	ISA Pass
3	18.774	Chlorobenzene-d5	IS 117	620535	250.000	250.000	ug/L	ISA Pass
4	22.929	1,4-Dichlorobenzene-d4	IS 152	271329	250.000	250.000	ug/L	ISA Pass
26	12.955	Dibromofluoromethane(surr	SU 113	564387	507.230	507.23	ug/L	*******% Pass
30	13.581	D4-1,2-Dichloroethane (su	SU 102	50557	487.262	487.26	ug/L	97.5% Pass
38	16.912	Toluene-d8 (surr)	SU 98	1949689	487.507	487.51	ug/L	97.5% Pass
56	20.536	4-Bromofluorobenzene (sur	SU 95	928628	492.321	492.32	ug/L	98.5% Pass
5	06.013	Dichlorodifluoromethane	85	603	0.559	0.06	ug/L	
6	06.277	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.685	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.707	Bromomethane	94	376	0.387	0.04	ug/L	
9	08.021	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.058	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.006	1,1-Dichloroethene	96	7751	8.943	0.89 <RL	ug/L	
12	10.633	Carbon disulfide	76	235	0.149	0.01	ug/L	
13	10.319	Trichlorotrifluoroethane	101	317	0.583	0.06	ug/L	
14	10.234	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.322	Acetone	43	6486	31.884	3.19 <RL	ug/L	07/05/01
16	11.289	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.460	MTBE	73	0	0.000	0.00	ug/L	
18	11.687	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.010	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.290	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.504	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.084	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.650	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.788	Chloroform	83	19811	8.091	0.81 <RL	ug/L	07/05/01
25	14.311	Carbon tetrachloride	117	483	0.318	0.03	ug/L	
27	13.826	1,1,1-Trichloroethane	97	11329	5.382	0.54 <RL	ug/L	
28	13.946	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.367	Benzene	78	0	0.000	0.00	ug/L	
31	13.684	1,2-Dichloroethane	62	6551	2.686	0.27	ug/L	
32	15.175	Trichloroethene	95	336819	260.974	26.10 ✓	ug/L	
33	14.970	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.937	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.091	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.517	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.036	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.998	Toluene	92	0	0.000	0.00	ug/L	7-16-01
40	17.929	Tetrachloroethene	164	65289	121.324	12.13 ✓	ug/L	
41	16.159	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.639	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.761	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.565	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.931	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.555	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.388	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.898	Chlorobenzene	112	673	0.267	0.03	ug/L	
49	19.258	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.683	1,1,1,2-Tetrachloroethane	131	201	0.177	0.02	ug/L	
51	19.289	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.882	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.793	Styrene	104	0	0.000	0.00	ug/L	
54	19.477	Bromoform	173	0	0.000	0.00	ug/L	
55	20.450	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.063	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.172	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.824	1,1,2,2-Tetrachloroethane	83+85	182	0.120	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.232	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.643	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.212	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.454	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.632	sec-Butylbenzene	105	817	0.167	0.02	ug/L	
67	23.071	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.834	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.834	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.899	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.777	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.697	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.023	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.394	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.944	Naphthalene	128	3734	2.583	0.26	ug/L	
76	28.379	1,2,3-Trichlorobenzene	182	1358	1.723	0.17	ug/L	

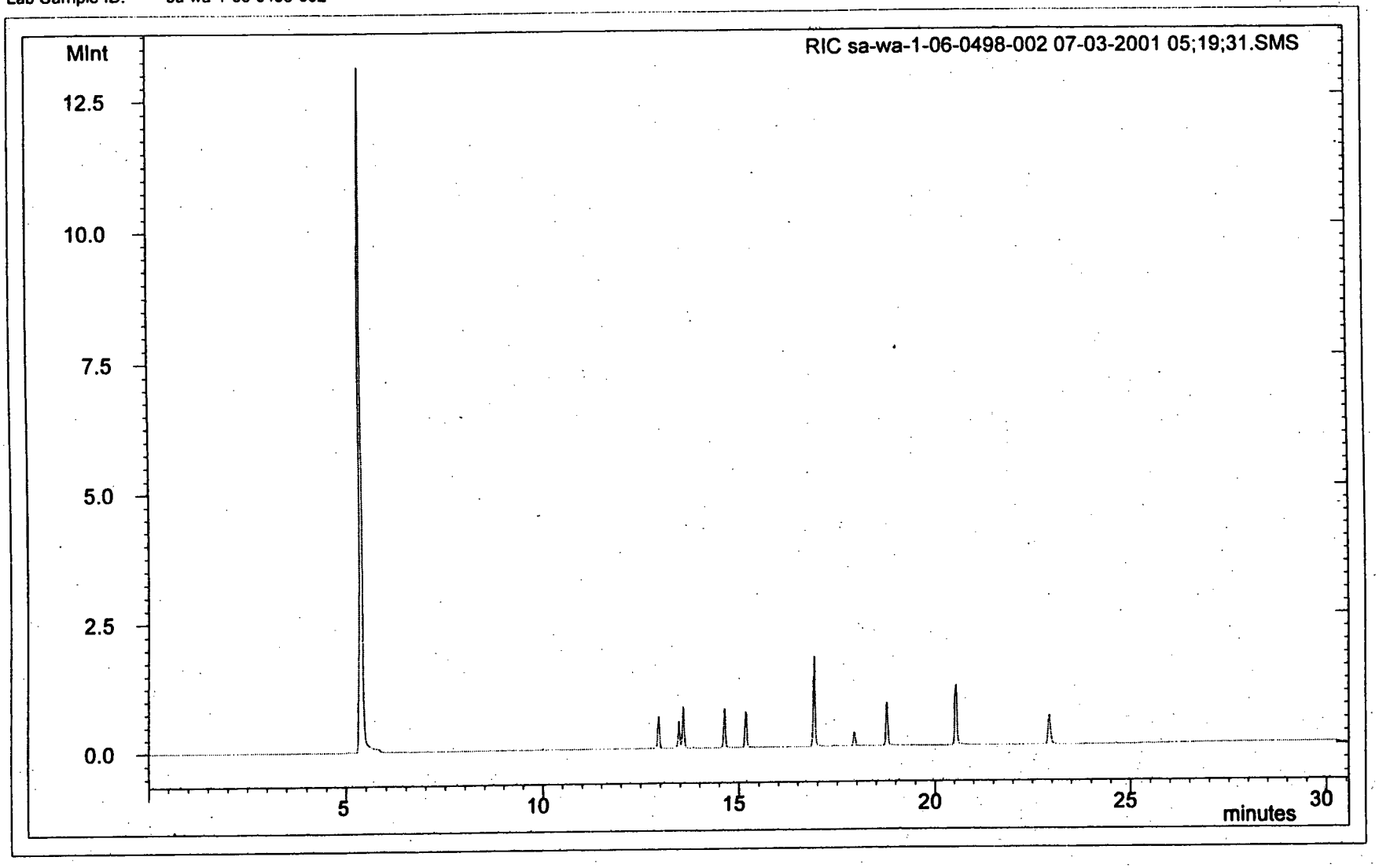
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0498-002 07-03-2001 05;19;31.S
Acquisition Date: 07/03/2001 17:19
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0498-002

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range: 04/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000018

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-6**

Project: City of Hayward

Sampled: 06/25/2001 12:45

Matrix: Water

Lab Sample ID: **2001-06-0498-003**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 17:53

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 17:53	
Acetone	ND	50	ug/L	1.00	07/03/2001 17:53	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 17:53	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 17:53	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 17:53	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 17:53	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:53	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-6**

Project: City of Hayward

Sampled: 06/25/2001 12:45

Matrix: Water

Lab Sample ID: **2001-06-0498-003**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 17:53

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 17:53	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 17:53	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 17:53	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Trichloroethene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 17:53	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 17:53	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 17:53	
Surrogate(s)						
4-Bromofluorobenzene	102.3	86-115	%	1.00	07/03/2001 17:53	
1,2-Dichloroethane-d4	103.5	76-114	%	1.00	07/03/2001 17:53	
Toluene-d8	99.7	88-110	%	1.00	07/03/2001 17:53	

827 Saturn 2000 VOA

Processed: 07/03/2001 06:24

Sample: SA-WA-1-06-0498-003 Acq Date : 07/03/01 05:53:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0498-003 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.467	Pentafluorobenzene	IS 168	318841	250.000	250.000	ug/L	ISA Pass
2	14.627	1,4-Difluorobenzene	IS 114	670299	250.000	250.000	ug/L	ISA Pass
3	18.777	Chlorobenzene-d5	IS 117	637096	250.000	250.000	ug/L	ISA Pass
4	22.929	1,4-Dichlorobenzene-d4	IS 152	268758	250.000	250.000	ug/L	ISA Pass
26	12.955	Dibromofluoromethane(surr	SU 113	581127	535.177	535.18	ug/L	*******% Pass
30	13.579	D4-1,2-Dichloroethane (su	SU 102	52424	517.739	517.74	ug/L	103.5% Pass
38	16.914	Toluene-d8 (surr)	SU 98	1952798	498.561	498.56	ug/L	99.7% Pass
56	20.537	4-Bromofluorobenzene (sur	SU 95	955440	511.380	511.38	ug/L	102.3% Pass
5	06.016	Dichlorodifluoromethane	85	446	0.424	0.04	ug/L	
6	06.443	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.929	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.705	Bromomethane	94	470	0.495	0.05	ug/L	
9	07.916	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.097	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.008	1,1-Dichloroethene	96	1486	1.757	0.18	ug/L	
12	10.657	Carbon disulfide	76	948	0.615	0.06	ug/L	
13	10.321	Trichlorotrifluoroethane	101	0	0.000	0.00	ug/L	
14	10.238	Methylene chloride	84	604	0.675	0.07	ug/L	
15	09.306	Acetone	43	13767	69.343	6.93 <RL	ug/L	
16	11.248	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.361	MTBE	73	0	0.000	0.00	ug/L	
18	11.676	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.989	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.286	2-Butanone	72	309	12.597	1.26 <RL	ug/L	
21	12.390	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.749	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.703	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.784	Chloroform	83	0	0.000	0.00	ug/L	
25	14.303	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.832	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.114	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.370	Benzene	78	0	0.000	0.00	ug/L	
31	13.685	1,2-Dichloroethane	62	7114	2.978	0.30	ug/L	
32	15.163	Trichloroethene	95	0	0.000	0.00	ug/L	
33	14.898	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.954	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.342	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.533	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.852	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.003	Toluene	92	0	0.000	0.00	ug/L	
40	17.931	Tetrachloroethene	164	3974	7.193	0.72 <RL	ug/L	
41	16.144	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.587	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.777	1,1,2-Trichloroethane	83	293	0.460	0.05	ug/L	
44	17.601	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.003	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.789	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.390	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.844	Chlorobenzene	112	410	0.159	0.02	ug/L	
49	19.045	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.653	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.309	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.902	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.804	Styrene	104	0	0.000	0.00	ug/L	
54	19.538	Bromoform	173	0	0.000	0.00	ug/L	
55	20.454	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.057	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.165	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.910	1,1,2,2-Tetrachloroethane	83+85	234	0.156	0.02	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.324	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.691	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.240	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.437	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.646	sec-Butylbenzene	105	874	0.180	0.02	ug/L	
67	23.135	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.875	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.830	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.882	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.802	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.722	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.018	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.393	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.973	Naphthalene	128	1042	0.728	0.07	ug/L	
76	28.369	1,2,3-Trichlorobenzene	182	2792	3.577	0.36	ug/L	

07/05/01

07/05/01

07/16/01

000021

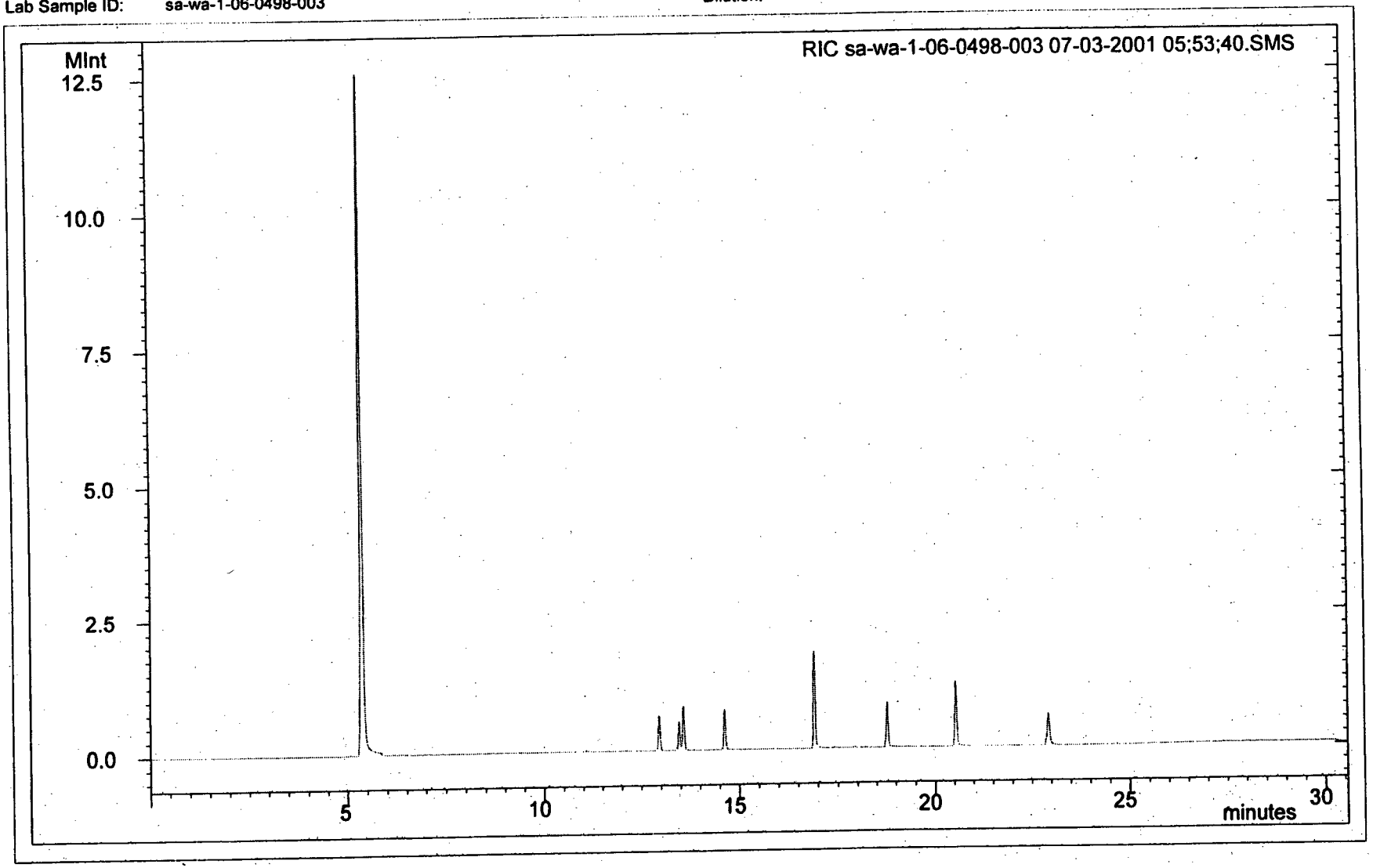
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0498-003 07-03-2001 05;53;40.S
Acquisition Date: 07/03/2001 17:53
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0498-003

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

0000021A 88

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-3**

Project: City of Hayward

Sampled: 06/25/2001 14:45

Matrix: Water

Lab Sample ID: **2001-06-0498-004**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 18:27

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 18:27	
Acetone	ND	50	ug/L	1.00	07/03/2001 18:27	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 18:27	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 18:27	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 18:27	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 18:27	
Chloroform	2.6	1.0	ug/L	1.00	07/03/2001 18:27	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1-Dichloroethene	11	1.0	ug/L	1.00	07/03/2001 18:27	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 18:27	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 07/05/2001 16:19

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-3**

Project: City of Hayward

Sampled: 06/25/2001 14:45

Matrix: Water

Lab Sample ID: **2001-06-0498-004**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 18:27

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 18:27	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 18:27	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 18:27	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,1,1-Trichloroethane	1.6	1.0	ug/L	1.00	07/03/2001 18:27	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Trichloroethene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 18:27	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 18:27	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 18:27	
Surrogate(s)						
4-Bromofluorobenzene	101.9	86-115	%	1.00	07/03/2001 18:27	
1,2-Dichloroethane-d4	95.0	76-114	%	1.00	07/03/2001 18:27	
Toluene-d8	101.4	88-110	%	1.00	07/03/2001 18:27	

8270 Saturn 2000 VOA

Processed: 07/03/2001 06:58

Sample: SA-WA-1-06-0498-004 Acq Date : 07/03/01 06:27:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0498-004 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.468	Pentafluorobenzene	IS 168	315873	250.000	250.000	ug/L	ISA Pass
2	14.629	1,4-Difluorobenzene	IS 114	656961	250.000	250.000	ug/L	ISA Pass
3	18.776	Chlorobenzene-d5	IS 117	603851	250.000	250.000	ug/L	ISA Pass
4	22.928	1,4-Dichlorobenzene-d4	IS 152	255228	250.000	250.000	ug/L	ISA Pass
26	12.957	Dibromofluoromethane(surr	SU 113	556020	516.866	516.87	ug/L	*******% Pass
30	13.580	D4-1,2-Dichloroethane (su	SU 102	47639	474.902	474.90	ug/L	95.0% Pass
38	16.914	Toluene-d8 (surr)	SU 98	1946976	507.167	507.17	ug/L	101.4% Pass
56	20.535	4-Bromofluorobenzene (sur	SU 95	904411	509.730	509.73	ug/L	101.9% Pass
5	06.018	Dichlorodifluoromethane	85	534	0.512	0.05	ug/L	
6	06.387	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.686	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.711	Bromomethane	94	587	0.624	0.06	ug/L	
9	07.837	Chloroethane	49	0	0.000	0.00	ug/L	
10	08.906	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.006	1,1-Dichloroethene	96	91051	108.669	10.87 ✓	ug/L	
12	10.651	Carbon disulfide	76	2518	1.649	0.16	ug/L	
13	10.370	Trichlorotrifluoroethane	101	0	0.000	0.00	ug/L	
14	10.234	Methylene chloride	84	0	0.000	0.00	ug/L	07/05/01
15	09.321	Acetone	43	18191	92.487	9.25 <RL	ug/L	
16	11.321	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.455	MTBE	73	0	0.000	0.00	ug/L	
18	11.672	1,1-Dichlorethane	63	10818	4.025	0.40	ug/L	
19	11.756	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.289	2-Butanone	72	243	9.998	1.00 <RL	ug/L	
21	12.629	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.719	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.608	Bromochloromethane	128	0	0.000	0.00	ug/L	07/05/01
24	12.789	Chloroform	83	61758	26.089	2.61 ✓	ug/L	
25	14.308	Carbon tetrachloride	117	118	0.081	0.01	ug/L	
27	13.828	1,1,1-Trichloroethane	97	32510	15.974	1.60 ✓	ug/L	
28	14.241	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.373	Benzene	78	0	0.000	0.00	ug/L	
31	13.686	1,2-Dichloroethane	62	8607	3.677	0.37	ug/L	?
32	15.176	Trichloroethene	95	4840	3.907	0.39 <RL	ug/L	
33	14.940	Dibromomethane	93	0	0.000	0.00	ug/L	07-18-01
34	14.963	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.242	Bromodichloromethane	83	1970	1.096	0.11	ug/L	
36	15.551	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.233	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.010	Toluene	92	0	0.000	0.00	ug/L	
40	17.934	Tetrachloroethene	164	4217	8.054	0.81 <RL	ug/L	
41	16.169	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.602	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.783	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.354	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.907	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.677	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.387	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.907	Chlorobenzene	112	152	0.062	0.01	ug/L	
49	19.050	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.604	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.302	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.895	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.774	Styrene	104	0	0.000	0.00	ug/L	
54	19.544	Bromoform	173	0	0.000	0.00	ug/L	
55	20.437	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.020	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.152	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.938	1,1,2,2-Tetrachloroethane	83+85	136	0.095	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	19.975	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.640	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.213	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.420	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.644	sec-Butylbenzene	105	748	0.163	0.02	ug/L	
67	23.014	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.877	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.809	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.883	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.817	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.580	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.009	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.406	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.933	Naphthalene	128	3338	2.455	0.25	ug/L	
76	28.385	1,2,3-Trichlorobenzene	182	950	1.282	0.13	ug/L	

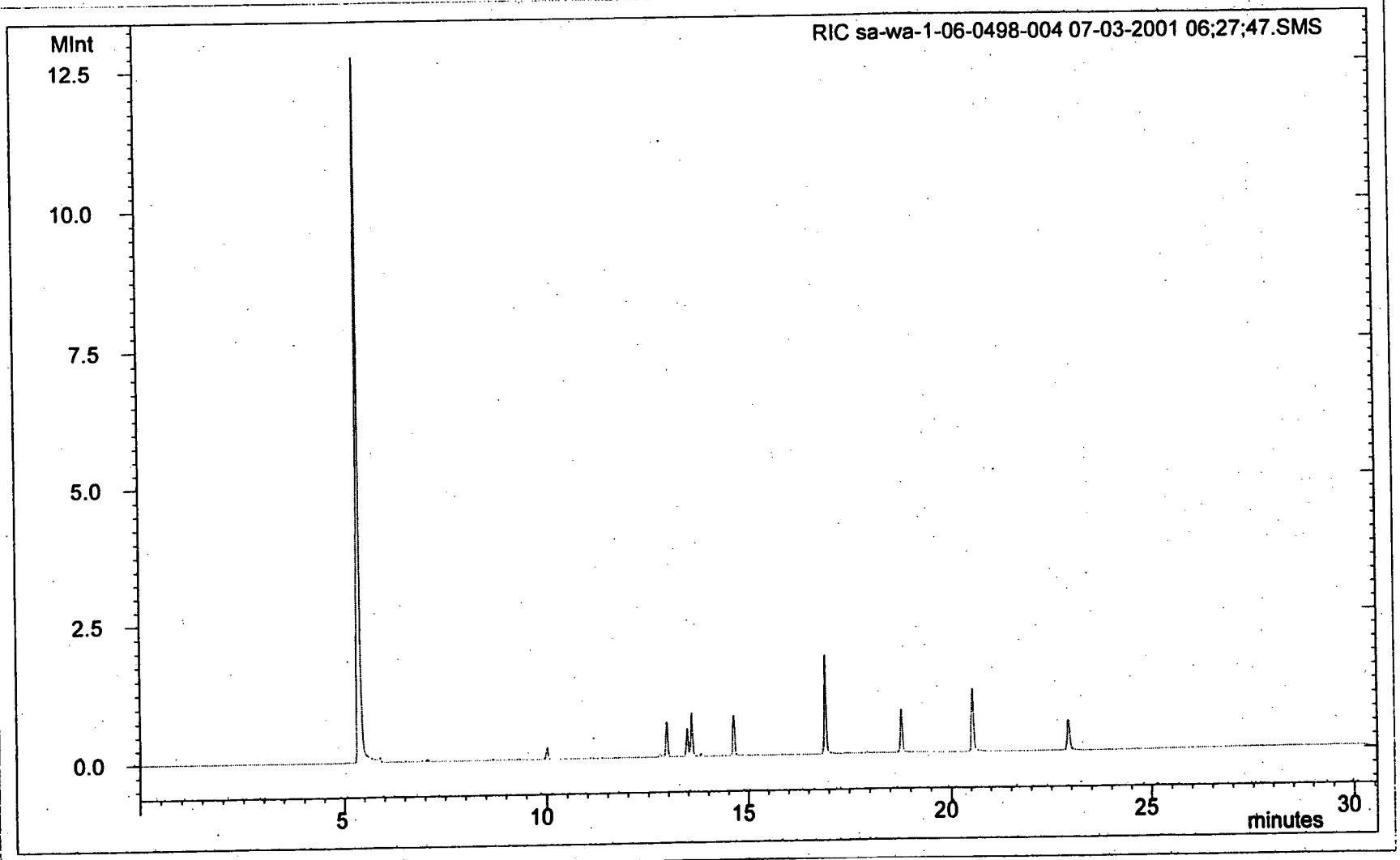
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0498-004 07-03-2001 06;27;47.S
Acquisition Date: 07/03/2001 18:27
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0498-004

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000025

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-2**
Project: City of Hayward
Sampled: 06/25/2001 16:00
Matrix: Water

Lab Sample ID: **2001-06-0498-005**
Received: 06/26/2001 16:00
Extracted: 07/03/2001 19:01
QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 19:01	
Acetone	ND	50	ug/L	1.00	07/03/2001 19:01	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 19:01	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 19:01	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 19:01	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 19:01	
Chloroform	1.2	1.0	ug/L	1.00	07/03/2001 19:01	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1-Dichloroethene	7.2	1.0	ug/L	1.00	07/03/2001 19:01	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:01	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-2**
Project: City of Hayward
Sampled: 06/25/2001 16:00
Matrix: Water

Lab Sample ID: **2001-06-0498-005**
Received: 06/26/2001 16:00
Extracted: 07/03/2001 19:01
QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 19:01	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 19:01	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 19:01	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,1,1-Trichloroethane	4.9	1.0	ug/L	1.00	07/03/2001 19:01	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Trichloroethene	2.5	1.0	ug/L	1.00	07/03/2001 19:01	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 19:01	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 19:01	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 19:01	
Surrogate(s)						
4-Bromofluorobenzene	103.1	86-115	%	1.00	07/03/2001 19:01	
1,2-Dichloroethane-d4	95.6	76-114	%	1.00	07/03/2001 19:01	
Toluene-d8	99.0	88-110	%	1.00	07/03/2001 19:01	

8270 Saturn 2000 VOA

Processed: 07/03/2001 07:32

Sample: SA-WA-1-06-0498-005
Comment: 2001/07/03-01.60

Acq Date : 07/03/01 07:01:00 Dilution: 1
Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0498-005 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.469	Pentafluorobenzene	IS 168	315388	250.000	250.000	ug/L	ISA Pass
2	14.630	1,4-Difluorobenzene	IS 114	680908	250.000	250.000	ug/L	ISA Pass
3	18.779	Chlorobenzene-d5	IS 117	607308	250.000	250.000	ug/L	ISA Pass
4	22.935	1,4-Dichlorobenzene-d4	IS 152	252947	250.000	250.000	ug/L	ISA Pass
26	12.960	Dibromofluoromethane(surr	SU 113	554976	516.690	516.69	ug/L	*******% Pass
30	13.582	D4-1,2-Dichloroethane (su	SU 102	47881	478.052	478.05	ug/L	95.6% Pass
38	16.917	Toluene-d8 (surr)	SU 98	1968557	494.754	494.75	ug/L	99.0% Pass
56	20.540	4-Bromofluorobenzene (sur	SU 95	906840	515.708	515.71	ug/L	103.1% Pass
5	06.006	Dichlorodifluoromethane	85	497	0.477	0.05	ug/L	
6	06.329	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.653	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.715	Bromomethane	94	368	0.392	0.04	ug/L	
9	07.910	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.063	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.005	1,1-Dichloroethene	96	60342	72.128	7.21 ✓	ug/L	
12	10.654	Carbon disulfide	76	1689	1.108	0.11	ug/L	
13	10.323	Trichlorotrifluoroethane	101	2271	4.327	0.43	ug/L	
14	10.235	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.302	Acetone	43	10976	55.890	5.59 <RL	ug/L	
16	11.301	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.458	MTBE	73	0	0.000	0.00	ug/L	
18	11.691	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.020	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.284	2-Butanone	72	189	7.788	0.78 <RL	ug/L	
21	12.466	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.712	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.624	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.792	Chloroform	83	28294	11.971	1.20 ✓	ug/L	
25	14.316	Carbon tetrachloride	117	193	0.132	0.01	ug/L	
27	13.831	1,1,1-Trichloroethane	97	99111	48.776	4.88 ✓	ug/L	
28	14.086	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.373	Benzene	78	0	0.000	0.00	ug/L	
31	13.688	1,2-Dichloroethane	62	6124	2.524	0.25	ug/L	
32	15.176	Trichloroethene	95	31652	24.651	2.47 ✓	ug/L	
33	14.907	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.940	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.241	Bromodichloromethane	83	1674	0.898	0.09	ug/L	
36	15.531	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.087	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.008	Toluene	92	0	0.000	0.00	ug/L	
40	17.931	Tetrachloroethene	164	4088	7.762	0.78 <RL	ug/L	
41	16.144	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.437	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.649	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.341	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.151	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.617	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.396	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.911	Chlorobenzene	112	147	0.060	0.01	ug/L	
49	19.043	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.597	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.296	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.901	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.768	Styrene	104	0	0.000	0.00	ug/L	
54	19.746	Bromoform	173	0	0.000	0.00	ug/L	
55	20.444	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.090	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.188	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.913	1,1,2,2-Tetrachloroethane	83+85	0	0.000	0.00	ug/L	
60	21.389	2-Chlorotoluene	126	41	0.046	0.00	ug/L	
61	20.036	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.673	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.191	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.465	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.710	sec-Butylbenzene	105	426	0.094	0.01	ug/L	
67	23.119	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.875	1,3-Dichlorobenzene	146	981	0.653	0.07	ug/L	
69	22.813	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.865	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.755	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.534	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.021	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.383	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.948	Naphthalene	128	2717	2.016	0.20	ug/L	
76	28.377	1,2,3-Trichlorobenzene	182	1314	1.789	0.18	ug/L	

97
07/05/01

07/05/01
(AN)

7
07-16-01

000028

CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0498-005 07-03-2001 07;01;53.S

Acquisition Date: 07/03/2001 19:01

EPA Sample No: sa-wa-1-06

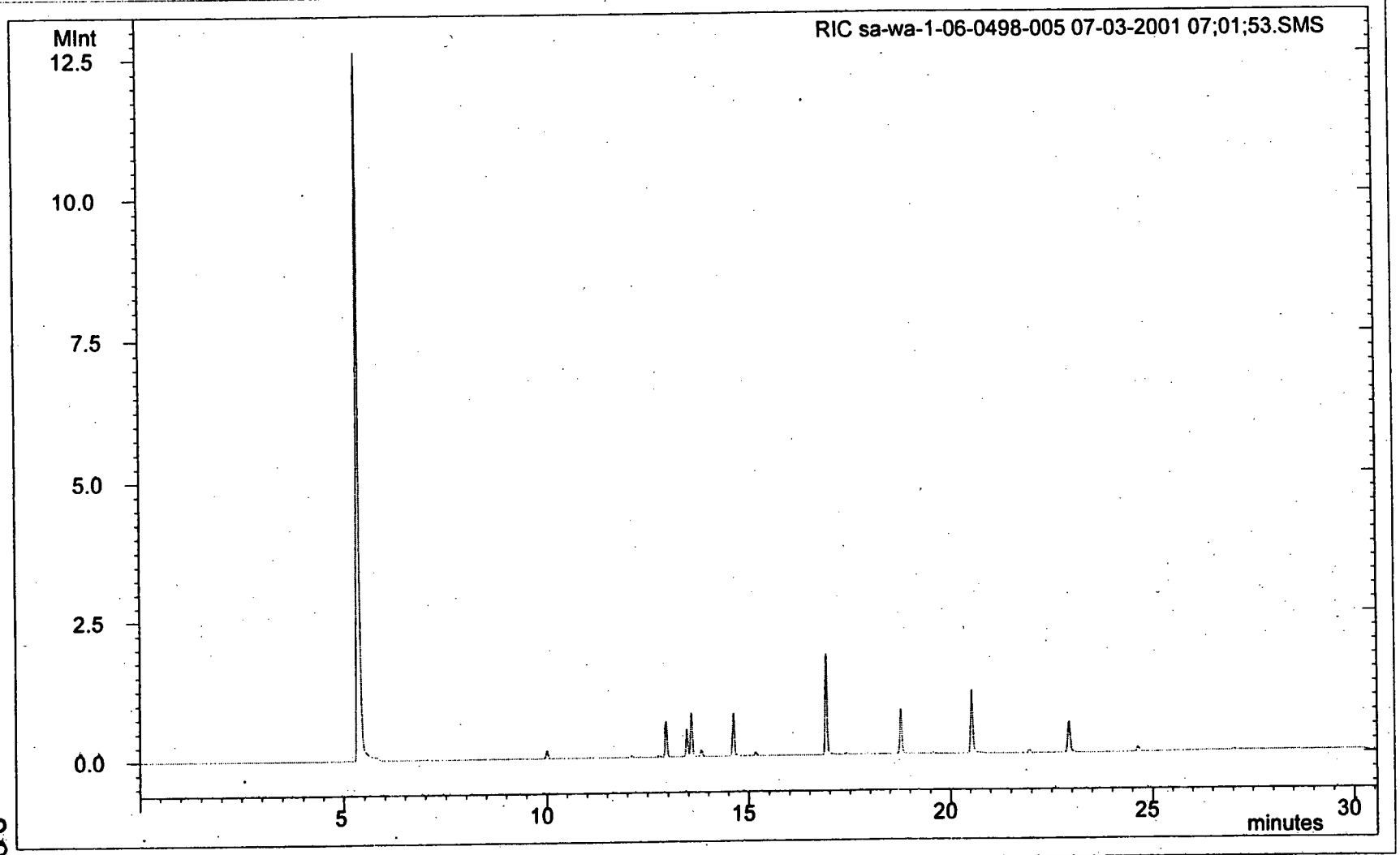
Lab Sample ID: sa-wa-1-06-0498-005

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved_____ Date_____

000029

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/03-01.60**

MB: 2001/07/03-01.60-003 | Date Extracted: 07/03/2001 14:38

Compound	Result	Rep.Limit	Units	Analyzed	Flag
MTBE	ND	5.0	ug/L	07/03/2001 14:38	
Acetone	ND	50	ug/L	07/03/2001 14:38	
Benzene	ND	1.0	ug/L	07/03/2001 14:38	
Bromodichloromethane	ND	1.0	ug/L	07/03/2001 14:38	
Bromobenzene	ND	1.0	ug/L	07/03/2001 14:38	
Bromochloromethane	ND	1.0	ug/L	07/03/2001 14:38	
Bromoform	ND	1.0	ug/L	07/03/2001 14:38	
Bromomethane	ND	5.0	ug/L	07/03/2001 14:38	
2-Butanone(MEK)	ND	50	ug/L	07/03/2001 14:38	
n-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
sec-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
tert-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Carbon disulfide	ND	5.0	ug/L	07/03/2001 14:38	
Carbon tetrachloride	ND	1.0	ug/L	07/03/2001 14:38	
Chlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
Chloroethane	ND	1.0	ug/L	07/03/2001 14:38	
2-Chloroethylvinyl ether	ND	5.0	ug/L	07/03/2001 14:38	
Chloroform	ND	1.0	ug/L	07/03/2001 14:38	
Chloromethane	ND	1.0	ug/L	07/03/2001 14:38	
2-Chlorotoluene	ND	1.0	ug/L	07/03/2001 14:38	
4-Chlorotoluene	ND	1.0	ug/L	07/03/2001 14:38	
Dibromochloromethane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,4-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
2,2-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dibromoethane	ND	1.0	ug/L	07/03/2001 14:38	
Dibromomethane	ND	1.0	ug/L	07/03/2001 14:38	
Dichlorodifluoromethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
cis-1,2-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
trans-1,2-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
cis-1,3-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
trans-1,3-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
Ethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Hexachlorobutadiene	ND	1.0	ug/L	07/03/2001 14:38	
2-Hexanone	ND	50	ug/L	07/03/2001 14:38	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/03-01.60**

MB: 2001/07/03-01.60-003 | Date Extracted: 07/03/2001 14:38

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Isopropylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
p-Isopropyltoluene	ND	1.0	ug/L	07/03/2001 14:38	
Methylene chloride	ND	5.0	ug/L	07/03/2001 14:38	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	07/03/2001 14:38	
Naphthalene	ND	1.0	ug/L	07/03/2001 14:38	
n-Propylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Styrene	ND	1.0	ug/L	07/03/2001 14:38	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	07/03/2001 14:38	
Tetrachloroethene	ND	1.0	ug/L	07/03/2001 14:38	
Toluene	ND	1.0	ug/L	07/03/2001 14:38	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,1,1-Trichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1,2-Trichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
Trichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
Trichlorofluoromethane	ND	1.0	ug/L	07/03/2001 14:38	
Trichlorotrifluoroethane	ND	5.0	ug/L	07/03/2001 14:38	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Vinyl acetate	ND	25	ug/L	07/03/2001 14:38	
Vinyl chloride	ND	1.0	ug/L	07/03/2001 14:38	
Total xylenes	ND	1.0	ug/L	07/03/2001 14:38	
Surrogate(s)					
4-Bromofluorobenzene	97.6	86-115	%	07/03/2001 14:38	
1,2-Dichloroethane-d4	88.2	76-114	%	07/03/2001 14:38	
Toluene-d8	99.8	88-110	%	07/03/2001 14:38	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/05-01.60**

MB: 2001/07/05-01.60-003 | Date Extracted: 07/05/2001 11:48

Compound	Result	Rep.Limit	Units	Analyzed	Flag
MTBE	ND	5.0	ug/L	07/05/2001 11:48	
Acetone	ND	50	ug/L	07/05/2001 11:48	
Benzene	ND	1.0	ug/L	07/05/2001 11:48	
Bromodichloromethane	ND	1.0	ug/L	07/05/2001 11:48	
Bromobenzene	ND	1.0	ug/L	07/05/2001 11:48	
Bromochloromethane	ND	1.0	ug/L	07/05/2001 11:48	
Bromoform	ND	1.0	ug/L	07/05/2001 11:48	
Bromomethane	ND	5.0	ug/L	07/05/2001 11:48	
2-Butanone(MEK)	ND	50	ug/L	07/05/2001 11:48	
n-Butylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
sec-Butylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
tert-Butylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
Carbon disulfide	ND	5.0	ug/L	07/05/2001 11:48	
Carbon tetrachloride	ND	1.0	ug/L	07/05/2001 11:48	
Chlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
Chloroethane	ND	1.0	ug/L	07/05/2001 11:48	
2-Chloroethylvinyl ether	ND	5.0	ug/L	07/05/2001 11:48	
Chloroform	ND	1.0	ug/L	07/05/2001 11:48	
Chloromethane	ND	1.0	ug/L	07/05/2001 11:48	
2-Chlorotoluene	ND	1.0	ug/L	07/05/2001 11:48	
4-Chlorotoluene	ND	1.0	ug/L	07/05/2001 11:48	
Dibromochloromethane	ND	1.0	ug/L	07/05/2001 11:48	
1,2-Dichlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,3-Dichlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,4-Dichlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,3-Dichloropropane	ND	1.0	ug/L	07/05/2001 11:48	
2,2-Dichloropropane	ND	1.0	ug/L	07/05/2001 11:48	
1,1-Dichloropropene	ND	1.0	ug/L	07/05/2001 11:48	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	07/05/2001 11:48	
1,2-Dibromoethane	ND	1.0	ug/L	07/05/2001 11:48	
Dibromomethane	ND	1.0	ug/L	07/05/2001 11:48	
Dichlorodifluoromethane	ND	1.0	ug/L	07/05/2001 11:48	
1,1-Dichloroethane	ND	1.0	ug/L	07/05/2001 11:48	
1,2-Dichloroethane	ND	1.0	ug/L	07/05/2001 11:48	
1,1-Dichloroethene	ND	1.0	ug/L	07/05/2001 11:48	
cis-1,2-Dichloroethene	ND	1.0	ug/L	07/05/2001 11:48	
trans-1,2-Dichloroethene	ND	1.0	ug/L	07/05/2001 11:48	
1,2-Dichloropropane	ND	1.0	ug/L	07/05/2001 11:48	
cis-1,3-Dichloropropene	ND	1.0	ug/L	07/05/2001 11:48	
trans-1,3-Dichloropropene	ND	1.0	ug/L	07/05/2001 11:48	
Ethylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
Hexachlorobutadiene	ND	1.0	ug/L	07/05/2001 11:48	
2-Hexanone	ND	50	ug/L	07/05/2001 11:48	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/05-01.60**

MB: 2001/07/05-01.60-003 | Date Extracted: 07/05/2001 11:48

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Isopropylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
p-Isopropyltoluene	ND	1.0	ug/L	07/05/2001 11:48	
Methylene chloride	ND	5.0	ug/L	07/05/2001 11:48	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	07/05/2001 11:48	
Naphthalene	ND	1.0	ug/L	07/05/2001 11:48	
n-Propylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
Styrene	ND	1.0	ug/L	07/05/2001 11:48	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	07/05/2001 11:48	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	07/05/2001 11:48	
Tetrachloroethene	ND	1.0	ug/L	07/05/2001 11:48	
Toluene	ND	1.0	ug/L	07/05/2001 11:48	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,1,1-Trichloroethane	ND	1.0	ug/L	07/05/2001 11:48	
1,1,2-Trichloroethane	ND	1.0	ug/L	07/05/2001 11:48	
Trichloroethene	ND	1.0	ug/L	07/05/2001 11:48	
Trichlorofluoromethane	ND	1.0	ug/L	07/05/2001 11:48	
Trichlorotrifluoroethane	ND	5.0	ug/L	07/05/2001 11:48	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	07/05/2001 11:48	
Vinyl acetate	ND	25	ug/L	07/05/2001 11:48	
Vinyl chloride	ND	1.0	ug/L	07/05/2001 11:48	
Total xylenes	ND	1.0	ug/L	07/05/2001 11:48	
Surrogate(s)					
4-Bromofluorobenzene	106.0	86-115	%	07/05/2001 11:48	
1,2-Dichloroethane-d4	83.6	76-114	%	07/05/2001 11:48	
Toluene-d8	101.2	88-110	%	07/05/2001 11:48	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/07/03-01.60**

LCS: 2001/07/03-01.60-001 Extracted: 07/03/2001 13:30 Analyzed 07/03/2001 13:30

LCSD: 2001/07/03-01.60-002 Extracted: 07/03/2001 14:04 Analyzed 07/03/2001 14:04

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	45.8	49.4	50.0	50.0	91.6	98.8	7.6	69-129	20		
Chlorobenzene	46.1	50.1	50.0	50.0	92.2	100.2	8.3	61-121	20		
1,1-Dichloroethene	46.1	51.5	50.0	50.0	92.2	103.0	11.1	65-125	20		
Toluene	45.5	47.8	50.0	50.0	91.0	95.6	4.9	70-130	20		
Trichloroethene	45.1	48.2	50.0	50.0	90.2	96.4	6.6	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	502	506	500	500	100.4	101.2		86-115			
1,2-Dichloroethane-d4	459	504	500	500	91.8	100.8		76-114			
Toluene-d8	494	491	500	500	98.8	98.2		88-110			

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/07/05-01.60**

LCS: 2001/07/05-01.60-001 Extracted: 07/05/2001 10:40 Analyzed 07/05/2001 10:40

LCSD: 2001/07/05-01.60-002 Extracted: 07/05/2001 11:14 Analyzed 07/05/2001 11:14

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	46.4	49.0	50.0	50.0	92.8	98.0	5.5	69-129	20		
Chlorobenzene	50.1	51.5	50.0	50.0	100.2	103.0	2.8	61-121	20		
1,1-Dichloroethene	46.9	47.0	50.0	50.0	93.8	94.0	0.2	65-125	20		
Toluene	47.6	48.1	50.0	50.0	95.2	96.2	1.0	70-130	20		
Trichloroethene	46.3	47.7	50.0	50.0	92.6	95.4	3.0	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	489	516	500	500	97.8	103.2		86-115			
1,2-Dichloroethane-d4	453	450	500	500	90.6	90.0		76-114			
Toluene-d8	494	515	500	500	98.8	103.0		88-110			

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0498

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2001/07/05-01.60**

Sample ID: **GW-1** Lab Sample ID: 2001-06-0498-001

MS: 2001/07/05-01.60-004 Extracted: 07/05/2001 12:44 Analyzed: 07/05/2001 12:44 Dilution: 1.0

MSD: 2001/07/05-01.60-005 Extracted: 07/05/2001 15:34 Analyzed: 07/05/2001 15:34 Dilution: 1.0

Compound	Conc. [ug/L]			Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Benzene	50.1	44.2	ND	50.0	50.0	100.2	88.4	12.5	69-129	20		
Chlorobenzene	54.2	47.0	ND	50.0	50.0	108.4	94.0	14.2	61-121	20		
1,1-Dichloroethene	49.3	47.8	1.17	50.0	50.0	96.3	93.3	3.2	65-125	20		
Toluene	49.6	43.6	ND	50.0	50.0	99.2	87.2	12.9	70-130	20		
Trichloroethene	72.1	68.9	23.1	50.0	50.0	98.0	91.6	6.8	74-134	20		
Surrogate(s)												
4-Bromofluorobenzene	503	500		500	500	100.6	100.0		86-115			
1,2-Dichloroethane-d4	409	438		500	500	81.8	87.6		76-114			
Toluene-d8	487	491		500	500	97.4	98.2		88-110			

INTERNAL STANDARD AREA

CCV Internal Standard Area Report

8270 Saturn 2000 VOA

Processed: 07/03/2001 01:14

Sample: CCV-500NG 8260#1 Acq Date : 07/03/01 12:44:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Area	Low Limit	High Limit
1	13.473	Pentafluorobenzene	324104	162052	648208
2	14.634	1,4-Difluorobenzene	688168	344084	1376336
3	18.782	Chlorobenzene-d5	682101	341051	1364202
4	22.935	1,4-Dichlorobenzene-d4	284602	142301	569204

CCV Internal Standard Area Report

8270 Saturn 2000 VOA

Processed: 07/05/2001 10:

Sample: CCV-500NG 8260#1

Acq Date : 07/05/01 09:52:00

Dilution: 1

Comment: 2001/07/05-01.60

Vial:

Sample VolWt: 10.0(

d:\data\200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.SMS

D:\SaturnWS\Methods\062801W

#	RT	Compound	Area	Low Limit	High Limit
1	13.459	Pentafluorobenzene	352869	176435	705738
2	14.618	1,4-Difluorobenzene	730665	365333	1461330
3	18.769	Chlorobenzene-d5	684043	342022	1368086
4	22.918	1,4-Dichlorobenzene-d4	270060	135030	540120

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A B

Lab File ID (CONTROL): 200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/03/2001 Time Analyzed: 12:44

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					
12 HOUR STD	324104	13.47	688168	14.63	682101	18.78	284602	22.93				
UPPER LIMIT	648208	13.97	1376336	15.13	1364202	19.28	569204	23.43				
LOWER LIMIT	162052	12.97	344084	14.13	341050	18.28	142301	22.43				
EPA SAMPLE NO												
Is-wa-1-070301.60	325601	13.47	669731	14.63	650641	18.78	255824	22.93				
Id-wa-1-070301.60	314454	13.47	669264	14.63	644545	18.78	255515	22.93				
mb-wa-1-070301.60	331902	13.47	672696	14.63	630406	18.78	259094	22.93				
sa-wa-1-06-0498-001	330637	13.47	671009	14.63	633610	18.78	260847	22.93				
sa-wa-1-06-0498-002	318432	13.47	651626	14.63	607006	18.78	260860	22.93				
sa-wa-1-06-0498-003	326718	13.47	684406	14.63	620535	18.77	271329	22.93				
sa-wa-1-06-0498-004	318841	13.47	670299	14.63	637096	18.78	268758	22.93				
sa-wa-1-06-0498-005	315873	13.47	656961	14.63	603851	18.78	255228	22.93				
sa-wa-1-06-0499-001	315388	13.47	680908	14.63	607308	18.78	252947	22.94				
sa-wa-1-06-0499-002	307780	13.47	661071	14.63	599500	18.78	250792	22.93				
sa-wa-1-06-0499-003	325722	13.47	678775	14.63	641957	18.78	257433	22.93				
sa-wa-1-06-0499-004	315389	13.47	670394	14.63	642199	18.78	258556	22.93				
sa-wa-1-06-0499-005	323149	13.46	696571	14.62	648282	18.77	273904	22.92				

Y 07-16-01

07/05/01

000040

AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
IS1		IS2		IS3		IS4					

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-d5
IS 4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

07-16-07

000041

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A

Lab File ID (CONTROL): 200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/03/2001 Time Analyzed: 12:44

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					
12 HOUR STD	324104	13.47	688168	14.63	682101	18.78	284602	22.93				
UPPER LIMIT	648208	13.97	1376336	15.13	1364202	19.28	569204	23.43				
LOWER LIMIT	162052	12.97	344084	14.13	341050	18.28	142301	22.43				
EPA SAMPLE NO												
ms-wa-1-06-0698-001	358599	13.47	735999	14.63	688195	18.78	292932	22.93				
md-wa-1-06-0698-001	318432	13.47	651626	14.63	607006	18.78	260860	22.93				

(P) 07/05/01

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

07-16-01

000042

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A

Lab File ID (CONTROL): 200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/05/2001 Time Analyzed: 09:52

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					
12 HOUR STD	352869	13.46	730665	14.62	684043	18.77	270060	22.92				
UPPER LIMIT	705738	13.96	1461330	15.12	1368086	19.27	540120	23.42				
LOWER LIMIT	176434	12.96	365332	14.12	342022	18.27	135030	22.42				
EPA SAMPLE NO												
ls-wa-1-070501.60	346862	13.46	721825	14.62	663681	18.77	273622	22.92				
ld-wa-1-070501.60	348200	13.45	711885	14.61	655804	18.76	268078	22.91				
mb-wa-1-070501.60	364624	13.45	745715	14.62	662253	18.77	265168	22.92				
ms-wa-1-06-0498-001	351256	13.46	709896	14.62	616830	18.78	251349	22.93				
sa-wa-1-06 -0498-001	357228	13.46	736643	14.62	662053	18.77	267962	22.92				
md-wa-1-06 -0498-001	351686	13.46	729169	14.62	683968	18.77	274259	22.92				

(Ma) 07/05/01

07-16-01

000043

AREA #	RT	#	AREA #	RT	#	AREA #	RT	#	AREA #	RT	#	AREA #	RT	#	AREA #	RT	#
IS1			IS2			IS3			IS4								

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

000044

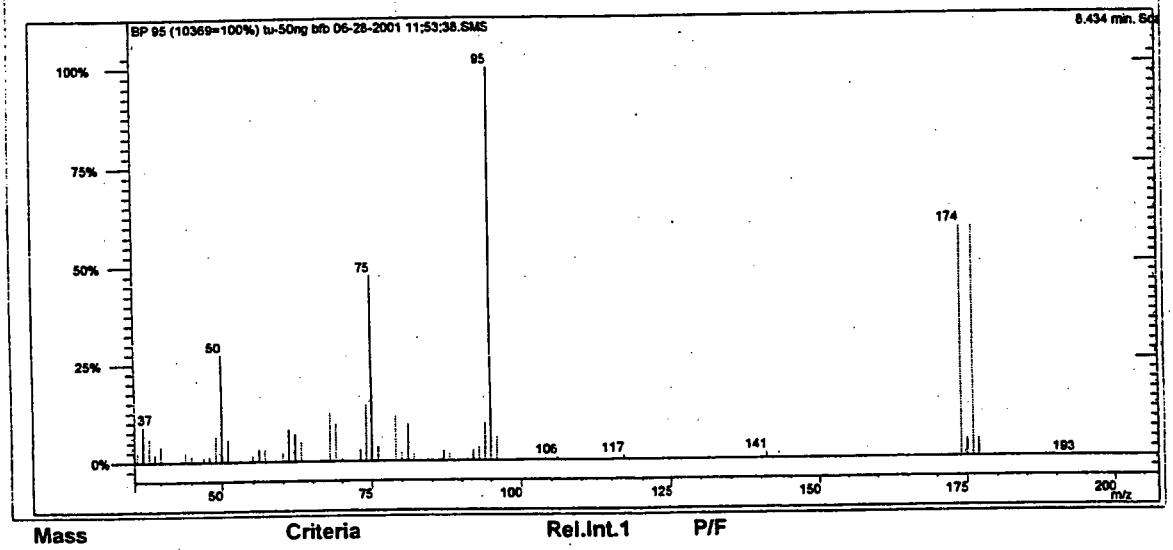
INITIAL CALIBRATION

Tune Report

Acquisition Date: 06/28/2001 11:53:39 AM

Data File Name: d:\data\200106\062801\tu-50ng bfb 06-28-2001 11;53;38.SMS

Tune Spectrum



Mass	Criteria	Rel.Int.1	P/F
50	15-40% of m/z 95	27.67	PASS
75	30-60% of m/z 95	47.70	PASS
95	base peak	100.00	PASS
96	5-9% of m/z 95	6.14	PASS
173	<2% of m/z 174	0.00	PASS
174	>50% of m/z 95	58.88	PASS
175	5-9% of m/z 174	7.60	PASS
176	>95% but <101% of m/z 174	99.62	PASS
177	5-9% of m/z 176	7.73	PASS

06/28/01

07-8-01

VOLATILE ORGANICS INITIAL CALIBRATION DATA

EPA Method 8260A

Instrument ID: S2K3

Heated Purge (Y/N): No

GC Column: DB-VRX ID: 0.25 (mm)

Calibration File: D:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

Calibration Date(s): 06/28/2001 06/28/2001

Calibration Time(s): 14:13 17:51

Index: 1	Level: 1	Replicate: 1	Acquired: 06/28/2001 14:13	File: d:\data\200106\062801\blk 06-28-2001 02;13;02.sms
Index: 2	Level: 2	Replicate: 1	Acquired: 06/28/2001 15:35	File: d:\data\200106\062801\ical-8260 20ng 06-28-2001 03;35;54.sms
Index: 3	Level: 3	Replicate: 1	Acquired: 06/28/2001 14:46	File: d:\data\200106\062801\blk 06-28-2001 02;46;51.sms
Index: 4	Level: 4	Replicate: 1	Acquired: 06/28/2001 16:09	File: d:\data\200106\062801\ical-8260 200ng 06-28-2001 04;09;47.sms
Index: 5	Level: 5	Replicate: 1	Acquired: 06/28/2001 16:43	File: d:\data\200106\062801\ical-8260 500ng 06-28-2001 04;43;39.sms
Index: 6	Level: 6	Replicate: 1	Acquired: 06/28/2001 17:17	File: d:\data\200106\062801\ical-8260 800ng 06-28-2001 05;17;29.sms
Index: 7	Level: 7	Replicate: 1	Acquired: 06/28/2001 17:51	File: d:\data\200106\062801\ical-8260 1000ng 06-28-2001 05;51;19.sms

RRF = (Area(sample)/(Amount(sample))/(Area(standard)/Amount(standard))

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
Dichlorodifluoromethane	0.525	0.738	0.804	0.957	0.949	0.920	0.884	0.825	18.7		
Chloromethane	0.170	0.184	0.189	0.204	0.261	0.270	0.282	0.223	20.9		PASS
Vinyl Chloride	0.414	0.723	0.653	0.742	0.789	0.647	0.641	0.658	18.4	PASS	
Bromomethane	0.742	0.810	0.739	0.681	0.748	0.735	0.752	0.744	5.1		
Chloroethane	0.196	0.241	0.227	0.213	0.215	0.198	0.200	0.213	7.8		
Trichloromonofluoromethane	0.879	1.197	1.236	1.274	1.312	1.288	1.300	1.212	12.5		
1,1-Dichloroethene	0.538	0.729	0.672	0.653	0.702	0.675	0.672	0.663	9.1	PASS	
Carbon disulfide	0.955	0.897	1.399	1.310	1.345	1.308	1.246	1.209	16.5		
Trichlorotrifluoroethane	0.270	0.303	0.475	0.471	0.482	0.469	0.442	0.416	21.6		
Methylene chloride	0.748	0.772	0.730	0.659	0.683	0.660	0.659	0.702	6.8		
Acetone	0.222	0.149	0.165	0.140	0.141	0.143	0.130	0.156	20.0		
trans-1,2-Dichloroethene	0.722	0.861	0.782	0.746	0.811	0.775	0.798	0.785	5.8		
MTBE	1.224	1.013	1.509	1.300	1.335	1.326	1.303	1.287	11.5		

000047

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
1,1-Dichlorethane	2.028	2.332	2.084	2.007	2.181	2.083	2.175	2.127	5.3		PASS
Vinyl Acetate	1.144	0.980	1.516	1.164	1.251	1.108	1.272	1.205	13.9		
2-Butanone	0.021	0.016	0.022	0.020	0.019	0.019	0.018	0.019	10.3		
cis-1,2-Dichloroethene	0.812	0.920	0.815	0.771	0.828	0.799	0.786	0.819	5.9		
2,2-Dichloropropane	0.958	1.180	1.136	1.061	1.136	1.070	1.106	1.092	6.6		
Bromochloromethane	0.478	0.494	0.456	0.399	0.425	0.417	0.427	0.442	7.8		
Chloroform	1.997	2.099	1.873	1.714	1.816	1.767	1.848	1.874	7.1	PASS	
Carbon tetrachloride	0.927	1.190	1.198	1.153	1.256	1.193	1.225	1.163	9.4		
Dibromofluoromethane(surr)	0.746	0.943	0.921	0.850	0.864	0.820	0.815	0.851	7.9		
1,1,1-Trichloroethane	1.334	1.674	1.621	1.632	1.711	1.636	1.666	1.611	7.8		
1,1-Dichloropropene	0.336	0.412	0.407	0.406	0.414	0.400	0.416	0.399	7.1		
Benzene	0.958	1.126	1.022	1.005	1.020	0.977	0.977	1.012	5.5		
D4-1,2-Dichloroethane (surr)	0.076	0.089	0.083	0.080	0.081	0.074	0.072	0.079	7.4		
1,2-Dichloroethane	0.956	1.007	0.904	0.838	0.864	0.834	0.833	0.891	7.7		
Trichloroethene	0.414	0.523	0.465	0.480	0.477	0.468	0.473	0.471	6.8		
Dibromomethane	0.292	0.301	0.277	0.258	0.259	0.258	0.253	0.271	7.0		
1,2-Dichloropropane	0.456	0.484	0.455	0.417	0.435	0.429	0.425	0.443	5.2	PASS	
Bromodichloromethane	0.690	0.725	0.696	0.643	0.664	0.679	0.693	0.684	3.8		
Chloroethylvinylether	0.167	0.140	0.202	0.174	0.171	0.172	0.167	0.170	10.6		
cis-1,3-Dichloropropene	0.570	0.607	0.528	0.516	0.509	0.505	0.516	0.536	7.2		
Toluene-d8 (surr)	1.345	1.629	1.586	1.459	1.423	1.413	1.371	1.461	7.3		
Toluene	0.729	0.824	0.791	0.787	0.809	0.783	0.799	0.789	3.8	PASS	
Tetrachloroethene	0.186	0.242	0.220	0.217	0.210	0.215	0.227	0.217	7.8		
4-Methyl-2-pentanone	0.022	0.019	0.024	0.021	0.021	0.021	0.019	0.021	7.7		
trans-1,3-Dichloropropene	0.479	0.504	0.467	0.431	0.452	0.438	0.465	0.462	5.4		
1,1,2-Trichloroethane	0.267	0.266	0.235	0.223	0.226	0.219	0.226	0.237	8.7		
Dibromochloromethane	0.400	0.418	0.379	0.371	0.386	0.376	0.381	0.387	4.2		
1,3-Dichloropropane	0.334	0.337	0.297	0.265	0.264	0.255	0.262	0.288	12.3		
1,2-Dibromoethane	0.371	0.367	0.343	0.314	0.323	0.327	0.337	0.340	6.4		
2-Hexanone	0.206	0.165	0.222	0.193	0.186	0.189	0.186	0.192	9.2		
Chlorobenzene	1.005	1.139	1.024	0.974	0.962	0.987	1.013	1.015	5.8		PASS
Ethylbenzene	1.553	1.959	1.833	1.751	1.731	1.793	1.892	1.788	7.3	PASS	
1,1,1,2-Tetrachloroethane	0.463	0.543	0.456	0.424	0.429	0.436	0.454	0.458	8.8		
m,p-Xylene	0.526	0.647	0.573	0.604	0.623	0.646	0.677	0.614	8.3		

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
o-Xylene	0.557	0.639	0.610	0.645	0.674	0.673	0.715	0.645	7.9		
Styrene	0.757	1.021	0.882	0.934	0.950	0.986	1.058	0.941	10.6		
Bromoform	0.182	0.193	0.165	0.157	0.160	0.171	0.177	0.172	7.5		PASS
Isopropyl benzene	3.420	4.333	4.304	4.258	4.421	4.206	4.435	4.197	8.4		
4-Bromofluorobenzene (surr)	1.624	2.017	1.940	1.688	1.665	1.621	1.611	1.738	9.7		
Bromobenzene	1.145	1.326	1.273	1.164	1.196	1.163	1.211	1.211	5.4		
n-Propylbenzene	3.935	5.347	5.105	5.073	5.262	4.866	5.048	4.948	9.6		
1,1,2,2-Tetrachloroethane	1.620	1.698	1.466	1.305	1.298	1.192	1.201	1.397	14.4		PASS
2-Chlorotoluene	0.576	0.938	0.885	0.870	0.943	0.968	1.014	0.885	16.3		
1,2,3-Trichloropropane	0.699	0.716	0.645	0.561	0.589	0.579	0.596	0.627	9.7		
1,3,5-Trimethylbenzene	3.087	4.120	3.973	3.745	3.988	3.793	4.017	3.818	9.1		
4-Chlorotoluene	0.828	0.958	0.976	0.879	0.959	1.068	0.935	0.943	8.1		
tert-Butylbenzene	2.791	4.024	3.966	3.739	3.961	3.741	3.959	3.740	11.6		
1,2,4-Trimethylbenzene	3.241	4.081	3.703	3.680	3.816	3.553	3.730	3.686	6.9		
sec-Butylbenzene	3.512	4.519	4.835	4.622	4.725	4.598	4.746	4.508	10.0		
Isopropyltoluene	2.853	3.960	3.834	3.611	3.768	3.622	3.843	3.641	10.1		
1,3-Dichlorobenzene	1.393	1.498	1.509	1.404	1.527	1.489	1.567	1.484	4.3		
1,4-Dichlorobenzene	1.797	1.513	1.430	1.316	1.209	1.008	0.980	1.322	21.9		
n-Butylbenzene	2.997	3.585	3.762	3.586	3.795	3.631	3.656	3.573	7.5		
1,2-Dichlorobenzene	1.441	1.863	1.768	1.648	1.734	1.689	1.711	1.693	7.7		
1,2-Dibromo-3-chloropropane	0.228	0.207	0.183	0.166	0.169	0.171	0.179	0.186	12.3		
Hexachlorobutadiene	0.565	0.842	0.795	0.722	0.734	0.709	0.760	0.732	11.9		
1,2,4-Trichlorobenzene	0.772	1.037	0.794	0.793	0.809	0.786	0.834	0.832	11.1		
Naphthalene	1.217	1.597	1.352	1.169	1.277	1.321	1.390	1.332	10.5		
1,2,3-Trichlorobenzene	0.710	0.831	0.727	0.669	0.716	0.693	0.736	0.726	7.1		

000049

8270 Saturn 2000 VOA

(10ng/25 ug mix std)

Processed: 06/28/2001 02:43

Sample: BLK

Acq Date : 06/28/01 02:13:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.0000

d:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.429	Pentafluorobenzene	IS 168	256421	256421.469		Counts
30	14.590	1,4-Difluorobenzene	IS 114	529112	529111.563		Counts
46	18.738	Chlorobenzene-d5	IS 117	509160	509160.063		Counts
68	22.882	1,4-Dichlorobenzene-d4	IS 152	197533	197533.203		Counts
22	12.916	Dibromofluoromethane(surr	SU 113	76564	76564.047		Counts
26	13.544	D4-1,2-Dichloroethane (su	SU 102	7785	7784.891		Counts
36	16.878	Toluene-d8 (surr)	SU 98	284726	284725.656		Counts
55	20.499	4-Bromofluorobenzene (sur	SU 95	128280	128280.039		Counts
1	05.992	Dichlorodifluoromethane	85	5381	5380.921		Counts
2	06.402	Chloromethane	47+49	1739	1739.304		Counts
3	06.822	Vinyl Chloride	62	4246	4246.165		Counts
4	07.668	Bromomethane	94	7612	7611.523		Counts
5	07.959	Chloroethane	49	2005	2005.313		Counts
6	09.045	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L
7	09.963	1,1-Dichloroethene	96	5523	5523.051		Counts
8	10.607	Carbon disulfide	76	0	0.000	0.00	ug/L
9	10.284	Trichlorotrifluoroethane	101	2773	2772.960		Counts
10	10.197	Methylene chloride	84	7670	7670.149		Counts
11	09.247	Acetone	43	5698	5698.047		Counts
12	11.260	trans-1,2-Dichloroethene	96	7400	7400.399		Counts
13	11.411	MTBE	73	12558	12558.197		Counts
14	11.634	1,1-Dichlorethane	63	20799	20799.352		Counts
15	11.792	Vinyl Acetate	43	29330	29330.006		Counts
16	12.237	2-Butanone	72	550	550.206		Counts
17	12.457	cis-1,2-Dichloroethene	96	8330	8329.674		Counts
18	12.869	2,2-Dichloropropane	77	0	0.000	0.00	ug/L
19	12.684	Bromochloromethane	128	4899	4898.539		Counts
20	12.749	Chloroform	83	20487	20486.881		Counts
21	14.284	Carbon tetrachloride	117	0	0.000	0.00	ug/L
23	13.788	1,1,1-Trichloroethane	97	13681	13680.580		Counts
24	14.026	1,1-Dichloropropene	75	7104	7104.363		Counts
25	14.329	Benzene	78	20272	20271.748		Counts
28	13.644	1,2-Dichloroethane	62	20235	20234.719		Counts
29	15.141	Trichloroethene	95	8765	8765.023		Counts
31	15.051	Dibromomethane	93	6180	6179.535		Counts
32	15.089	1,2-Dichloropropane	63	9644	9644.230		Counts
33	15.202	Bromodichloromethane	83	14613	14613.089		Counts
34	15.670	Chloroethylvinylether	63	3530	3530.315		Counts
35	15.989	cis-1,3-Dichloropropene	75	12066	12066.098		Counts
37	16.967	Toluene	92	15436	15436.497		Counts
38	17.890	Tetrachloroethene	164	3792	3792.165		Counts
39	16.099	4-Methyl-2-pentanone	100	1154	1154.012		Counts
40	16.507	trans-1,3-Dichloropropene	75	10145	10144.824		Counts
41	16.725	1,1,2-Trichloroethane	83	5661	5660.515		Counts
42	17.383	Dibromochloromethane	129	8457	8456.963		Counts
43	17.016	1,3-Dichloropropane	76	6798	6798.107		Counts
44	17.701	1,2-Dibromoethane	107	7851	7850.934		Counts
45	17.152	2-Hexanone	43	10488	10488.416		Counts
47	18.780	Chlorobenzene	112	0	0.000	0.00	ug/L
48	19.014	Ethylbenzene	91	31627	31626.908		Counts
49	18.670	1,1,1,2-Tetrachloroethane	131	9432	9431.656		Counts
50	19.265	m,p-Xylene	106	21418	21417.744		Counts
51	19.861	o-Xylene	106	11337	11336.966		Counts
52	19.750	Styrene	104	15422	15421.778		Counts
53	19.512	Bromoform	173	3704	3703.831		Counts
54	20.402	Isopropyl benzene	105	27026	27025.629		Counts
56	20.877	Bromobenzene	156	9050	9049.569		Counts
57	21.119	n-Propylbenzene	91	31094	31094.377		Counts
58	19.853	1,1,2,2-Tetrachloroethane	83+85	12797	12796.979		Counts
59	21.337	2-Chlorotoluene	126	4552	4552.235		Counts
60	20.070	1,2,3-Trichloropropane	75	5525	5525.253		Counts
61	21.593	1,3,5-Trimethylbenzene	105	24393	24392.914		Counts
62	21.461	4-Chlorotoluene	126	6543	6543.196		Counts
63	22.163	tert-Butylbenzene	119	22050	22050.494		Counts
64	22.362	1,2,4-Trimethylbenzene	105	25606	25606.143		Counts
65	22.362	sec-Butylbenzene	105	24167	24166.711		Counts
66	22.942	Isopropyltoluene	119	22539	22538.996		Counts
67	22.806	1,3-Dichlorobenzene	146	11003	11002.891		Counts
69	22.945	1,4-Dichlorobenzene	146	14197	14196.974		Counts
70	23.818	n-Butylbenzene	91	23682	23681.805		Counts
71	23.702	1,2-Dichlorobenzene	146	11386	11385.828		Counts
72	24.649	1,2-Dibromo-3-chloropropa	75	1801	1801.023		Counts
73	27.966	Hexachlorobutadiene	225	4466	4465.688		Counts
74	27.345	1,2,4-Trichlorobenzene	182	6096	6096.208		Counts
75	27.892	Naphthalene	128	9613	9612.942		Counts
76	28.317	1,2,3-Trichlorobenzene	182	5608	5608.030		Counts

$RCE = \frac{55238 \times 250}{256421 \times 10} = 0.538$

07-16-01

000050

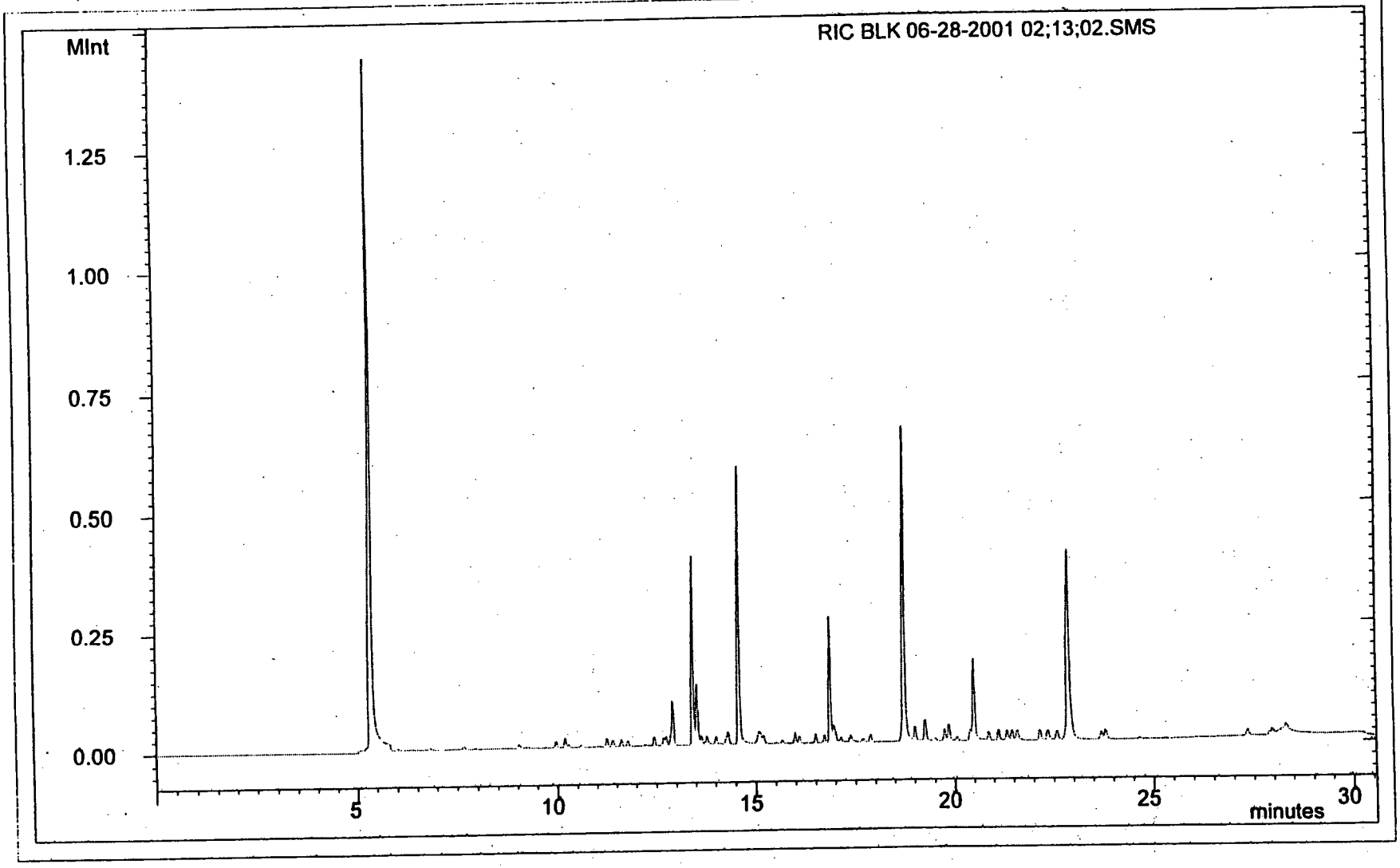
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS
Acquisition Date: 06/28/2001 14:13
EPA Sample No: blk 06-19-
Lab Sample ID: blk

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000051

8270 Saturn 2000 VOA

Processed: 06/28/2001 03:17

Sample: ~~BLK~~ 50 ng/ml

Acq Date : 06/28/01 02:46:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.0000

d:\data\200106\062801\BLK 06-28-2001 02;46;51.SMS

D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.432	Pentafluorobenzene	IS 168	243785	243784.766		Counts
30	14.595	1,4-Difluorobenzene	IS 114	506694	506694.125		Counts
46	18.743	Chlorobenzene-d5	IS 117	514442	514441.906		Counts
68	22.890	1,4-Dichlorobenzene-d4	IS 152	192935	192934.625		Counts
22	12.922	Dibromofluoromethane(surr	SU 113	269563	269562.875		Counts
26	13.542	D4-1,2-Dichloroethane (su	SU 102	24278	24278.090		Counts
36	16.883	Toluene-d8 (surr)	SU 98	964218	964218.125		Counts
55	20.500	4-Bromofluorobenzene (sur	SU 95	449125	449124.844		Counts
1	05.993	Dichlorodifluoromethane	85	39219	39219.328		Counts
2	06.403	Chloromethane	47+49	9232	9232.066		Counts
3	06.825	Vinyl Chloride	62	31849	31849.123		Counts
4	07.670	Bromomethane	94	36032	36032.066		Counts
5	07.961	Chloroethane	49	11057	11056.973		Counts
6	09.043	Trichloromonofluoromethan	101	60250	60249.965		Counts
7	09.967	1,1-Dichloroethene	96	32773	32773.406		Counts
8	10.609	Carbon disulfide	76	67965	67964.688		Counts
9	10.285	Trichlorotrifluoroethane	101	23168	23167.967		Counts
10	10.199	Methylene chloride	84	35605	35604.801		Counts
11	09.246	Acetone	43	20055	20055.449		Counts
12	11.264	trans-1,2-Dichloroethene	96	38140	38140.230		Counts
13	11.411	MTBE	73	73568	73568.016		Counts
14	11.636	1,1-Dichlorethane	63	101618	101617.891		Counts
15	11.796	Vinyl Acetate	43	184776	184776.125		Counts
16	12.233	2-Butanone	72	2660	2660.160		Counts
17	12.459	cis-1,2-Dichloroethene	96	39761	39760.641		Counts
18	12.873	2,2-Dichloropropane	77	54663	54663.234		Counts
19	12.688	Bromochloromethane	128	22222	22222.313		Counts
20	12.753	Chloroform	83	91300	91300.266		Counts
21	14.285	Carbon tetrachloride	117	57978	57978.156		Counts
23	13.792	1,1,1-Trichloroethane	97	79026	79026.141		Counts
24	14.029	1,1-Dichloropropene	75	41273	41273.438		Counts
25	14.332	Benzene	78	103519	103518.688		Counts
28	13.649	1,2-Dichloroethane	62	91591	91591.164		Counts
29	15.142	Trichloroethene	95	47110	47110.000		Counts
31	15.055	Dibromomethane	93	28062	28062.244		Counts
32	15.093	1,2-Dichloropropane	63	46150	46150.094		Counts
33	15.209	Bromodichloromethane	83	70568	70568.102		Counts
34	15.675	Chloroethylvinylether	63	20472	20471.797		Counts
35	15.993	cis-1,3-Dichloropropene	75	53460	53460.391		Counts
37	16.974	Toluene	92	80173	80172.609		Counts
38	17.899	Tetrachloroethene	164	22615	22614.598		Counts
39	16.103	4-Methyl-2-pentanone	100	6025	6024.917		Counts
40	16.512	trans-1,3-Dichloropropene	75	47370	47369.781		Counts
41	16.730	1,1,2-Trichloroethane	83	23798	23797.971		Counts
42	17.388	Dibromochloromethane	129	38369	38368.605		Counts
43	17.021	1,3-Dichloropropane	76	30569	30568.730		Counts
44	17.706	1,2-Dibromoethane	107	34770	34770.078		Counts
45	17.155	2-Hexanone	43	57052	57052.129		Counts
47	18.789	Chlorobenzene	112	105417	105417.492		Counts
48	19.019	Ethylbenzene	91	188598	188598.344		Counts
49	18.676	1,1,1,2-Tetrachloroethane	131	46907	46906.813		Counts
50	19.271	m,p-Xylene	106	117899	117898.633		Counts
51	19.868	o-Xylene	106	62804	62803.805		Counts
52	19.757	Styrene	104	90787	90786.555		Counts
53	19.516	Bromoform	173	16962	16961.922		Counts
54	20.406	Isopropyl benzene	105	166085	166085.031		Counts
56	20.880	Bromobenzene	156	49117	49117.426		Counts
57	21.125	n-Propylbenzene	91	196976	196976.078		Counts
58	19.859	1,1,2,2-Tetrachloroethane	83+85	56572	56572.195		Counts
59	21.337	2-Chlorotoluene	126	34148	34148.059		Counts
60	20.076	1,2,3-Trichloropropane	75	24884	24884.465		Counts
61	21.599	1,3,5-Trimethylbenzene	105	153301	153301.469		Counts
62	21.462	4-Chlorotoluene	126	37648	37648.211		Counts
63	22.169	tert-Butylbenzene	119	153038	153037.938		Counts
64	22.365	1,2,4-Trimethylbenzene	105	142870	142870.281		Counts
65	22.365	sec-Butylbenzene	105	142515	142515.234		Counts
66	22.949	Isopropyltoluene	119	147950	147949.953		Counts
67	22.808	1,3-Dichlorobenzene	146	58240	58239.664		Counts
69	22.945	1,4-Dichlorobenzene	146	55165	55164.629		Counts
70	23.822	n-Butylbenzene	91	145148	145148.234		Counts
71	23.709	1,2-Dichlorobenzene	146	68213	68213.484		Counts
72	24.657	1,2-Dibromo-3-chloropropa	75	7059	7059.043		Counts
73	27.973	Hexachlorobutadiene	225	30668	30667.777		Counts
74	27.350	1,2,4-Trichlorobenzene	182	30625	30624.807		Counts
75	27.891	Naphthalene	128	52175	52174.914		Counts
76	28.323	1,2,3-Trichlorobenzene	182	28064	28064.426		Counts

D 07-16-01

000052

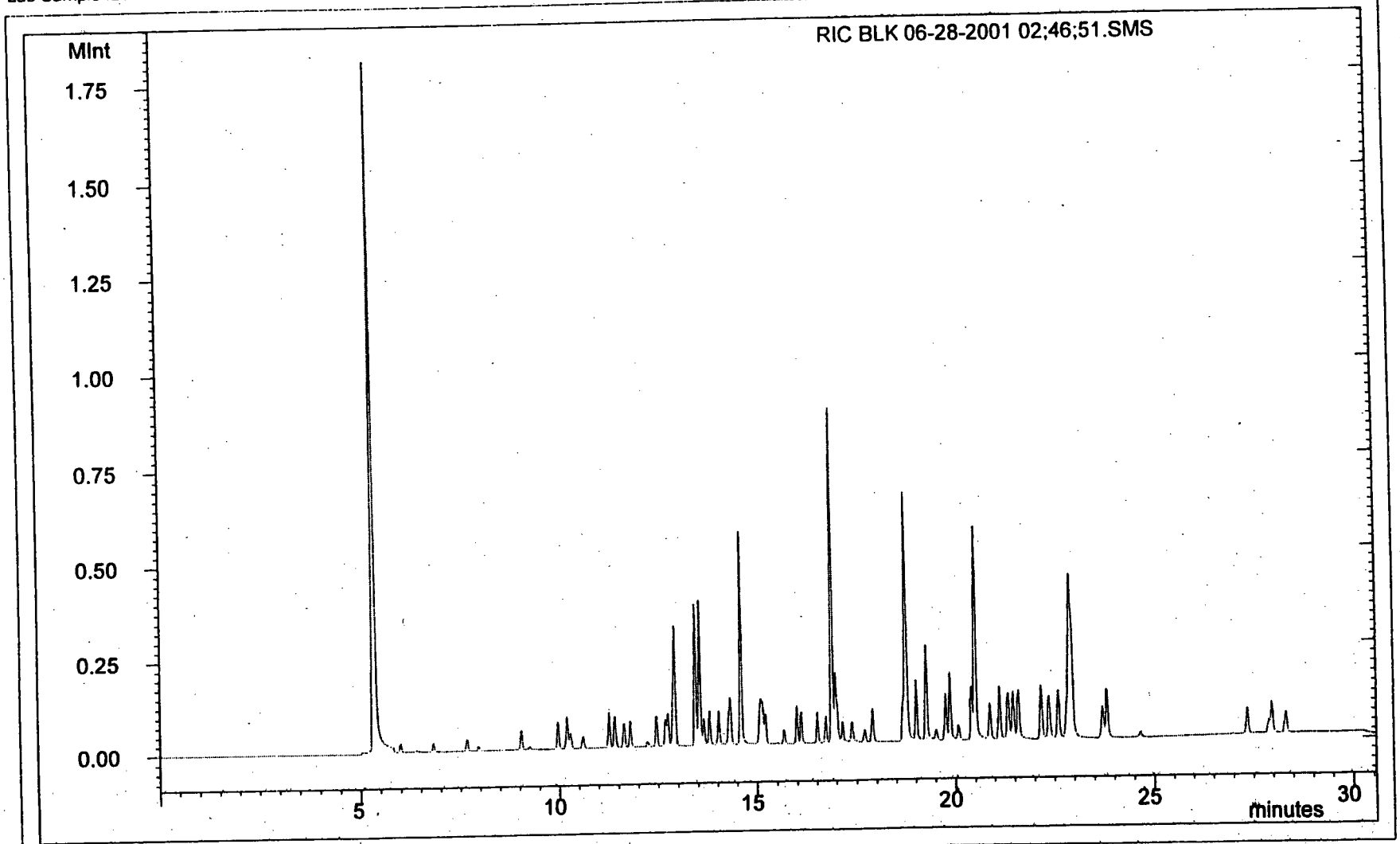
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\BLK 06-28-2001 02;46;51.SMS
Acquisition Date: 06/28/2001 14:46
EPA Sample No: blk 06-19-
Lab Sample ID: blk

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000053

8270 Saturn 2000 VOA Processed: 06/28/2001 04:06

Sample: ICAL-8260 20NG Acq Date : 06/28/01 03:35:00 Dilution: 1

Comment: 2001/06/28-01.60 Vial: Sample VolWt: 1.0000

d:\data\200106\062801\ICAL-8260 20NG 06-28-2001 03;35;54.SMS D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound		Ion	Area	Amount	Conc.	Unit
27	13.439	Pentafluorobenzene	IS	168	231583	231583.000		Counts
30	14.600	1,4-Difluorobenzene	IS	114	485383	485383.063		Counts
46	18.750	Chlorobenzene-d5	IS	117	462495	462494.656		Counts
68	22.895	1,4-Dichlorobenzene-d4	IS	152	177277	177276.516		Counts
22	12.927	Dibromofluoromethane(surr	SU	113	174713	174713.188		Counts
26	13.551	D4-1,2-Dichloroethane (su	SU	102	16568	16568.268		Counts
36	16.889	Toluene-d8 (surr)	SU	98	632457	632456.688		Counts
55	20.507	4-Bromofluorobenzene (sur	SU	95	286082	286082.406		Counts
1	06.007	Dichlorodifluoromethane		85	13674	13674.391		Counts
2	06.418	Chloromethane		47+49	3410	3410.237		Counts
3	06.839	Vinyl Chloride		62	13396	13396.233		Counts
4	07.681	Bromomethane		94	15011	15011.152		Counts
5	07.971	Chloroethane		49	4457	4457.079		Counts
6	09.053	Trichloromonofluoromethan		101	22161	22160.738		Counts
7	09.975	1,1-Dichloroethene		96	13514	13514.459		Counts
8	10.616	Carbon disulfide		76	16516	16515.713		Counts
9	10.296	Trichlorotrifluoroethane		101	5607	5607.018		Counts
10	10.208	Methylene chloride		84	14306	14305.650		Counts
11	09.260	Acetone		43	6917	6916.842		Counts
12	11.270	trans-1,2-Dichloroethene		96	15956	15956.429		Counts
13	11.420	MTBE		73	18765	18764.883		Counts
14	11.645	1,1-Dichlorethane		63	43201	43201.367		Counts
15	11.802	Vinyl Acetate		43	45395	45394.785		Counts
16	12.243	2-Butanone		72	748	748.050		Counts
17	12.466	cis-1,2-Dichloroethene		96	17051	17051.152		Counts
18	12.882	2,2-Dichloropropane		77	21686	21686.061		Counts
19	12.695	Bromochloromethane		128	9158	9157.707		Counts
20	12.758	Chloroform		83	38881	38880.625		Counts
21	14.290	Carbon tetrachloride		117	21769	21769.488		Counts
23	13.799	1,1,1-Trichloroethane		97	31023	31022.781		Counts
24	14.037	1,1-Dichloropropene		75	15999	15999.073		Counts
25	14.338	Benzene		78	43733	43732.711		Counts
28	13.656	1,2-Dichloroethane		62	39102	39101.625		Counts
29	15.147	Trichloroethene		95	20310	20309.682		Counts
31	15.060	Dibromomethane		93	11694	11693.626		Counts
32	15.098	1,2-Dichloropropane		63	18775	18775.314		Counts
33	15.213	Bromodichloromethane		83	28148	28148.004		Counts
34	15.680	Chloroethylvinylether		63	5450	5449.881		Counts
35	15.998	cis-1,3-Dichloropropene		75	23582	23582.428		Counts
37	16.980	Toluene		92	32013	32012.572		Counts
38	17.903	Tetrachloroethene		164	8945	8944.774		Counts
39	16.107	4-Methyl-2-pentanone		100	1832	1831.576		Counts
40	16.519	trans-1,3-Dichloropropene		75	19556	19556.141		Counts
41	16.735	1,1,2-Trichloroethane		83	10347	10346.560		Counts
42	17.394	Dibromochloromethane		129	16234	16233.841		Counts
43	17.028	1,3-Dichloropropane		76	12487	12486.720		Counts
44	17.711	1,2-Dibromoethane		107	14258	14258.480		Counts
45	17.161	2-Hexanone		43	15291	15291.227		Counts
47	18.796	Chlorobenzene		112	42414	42413.980		Counts
48	19.025	Ethylbenzene		91	72488	72487.633		Counts
49	18.683	1,1,1,2-Tetrachloroethane		131	20079	20079.473		Counts
50	19.278	m,p-Xylene		106	47852	47852.121		Counts
51	19.875	o-Xylene		106	23627	23627.387		Counts
52	19.763	Styrene		104	37790	37790.125		Counts
53	19.524	Bromoform		173	7143	7142.662		Counts
54	20.413	Isopropyl benzene		105	61455	61455.258		Counts
56	20.887	Bromobenzene		156	18798	18798.402		Counts
57	21.133	n-Propylbenzene		91	75828	75827.719		Counts
58	19.865	1,1,2,2-Tetrachloroethane		83+85	24083	24082.500		Counts
59	21.346	2-Chlorotoluene		126	13303	13303.353		Counts
60	20.083	1,2,3-Trichloropropane		75	10151	10151.432		Counts
61	21.606	1,3,5-Trimethylbenzene		105	58433	58432.656		Counts
62	21.478	4-Chlorotoluene		126	13588	13588.229		Counts
63	22.175	tert-Butylbenzene		119	57063	57062.621		Counts
64	22.374	1,2,4-Trimethylbenzene		105	57878	57878.277		Counts
65	22.374	sec-Butylbenzene		105	56139	56139.254		Counts
66	22.956	Isopropyltoluene		119	56154	56154.449		Counts
67	22.816	1,3-Dichlorobenzene		146	21241	21241.074		Counts
69	22.956	1,4-Dichlorobenzene		146	21463	21462.922		Counts
70	23.828	n-Butylbenzene		91	50845	50845.309		Counts
71	23.718	1,2-Dichlorobenzene		146	26425	26424.857		Counts
72	24.664	1,2-Dibromo-3-chloropropa		75	2935	2935.445		Counts
73	27.974	Hexachlorobutadiene		225	11941	11940.517		Counts
74	27.352	1,2,4-Trichlorobenzene		182	14714	14713.766		Counts
75	27.898	Naphthalene		128	22647	22647.133		Counts
76	28.330	1,2,3-Trichlorobenzene		182	11789	11789.491		Counts

07-16-01

000054

CCV run date: / / : :

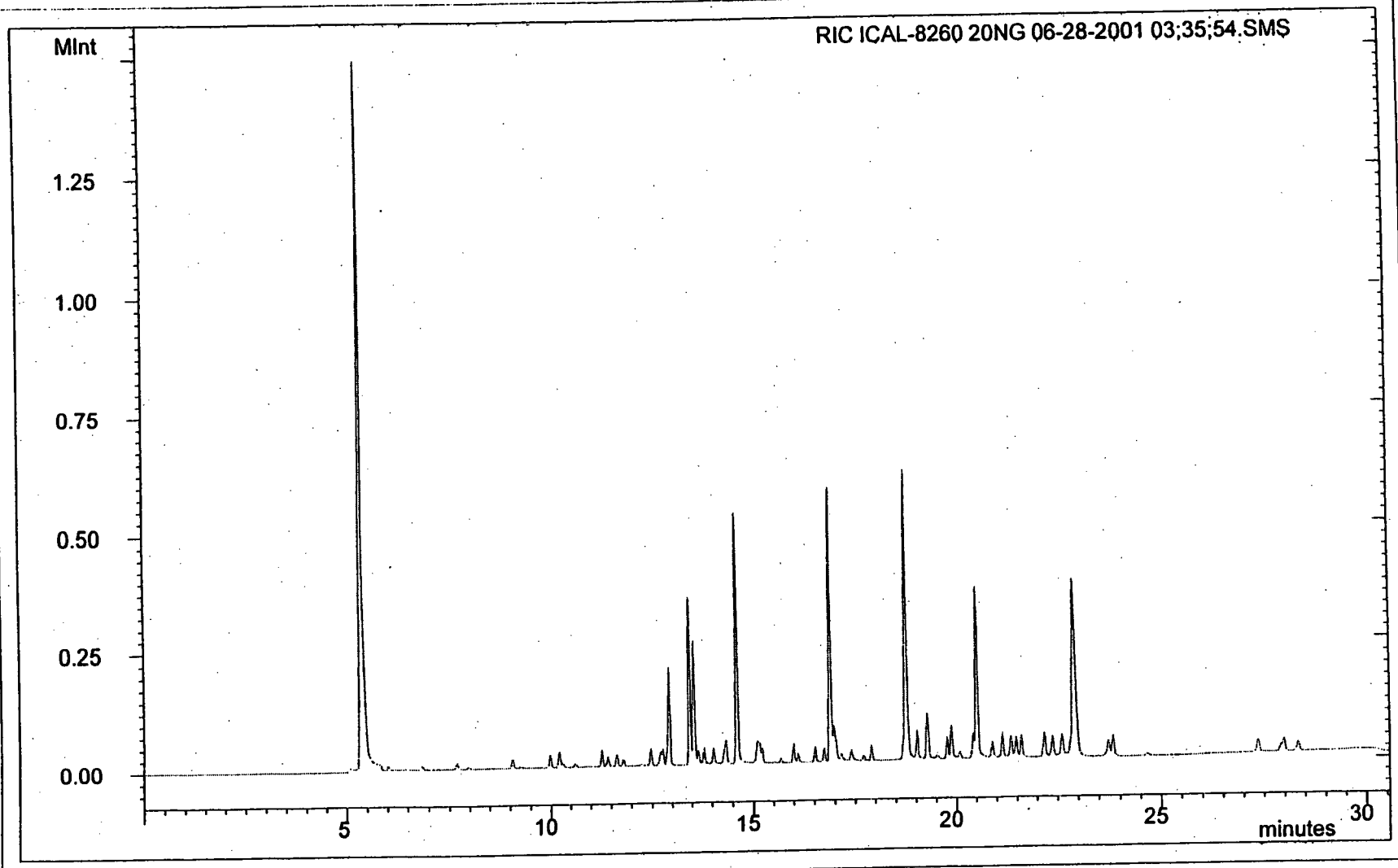
CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 20NG 06-28-2001 03;35;54.SMS
Acquisition Date: 06/28/2001 15:35
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 20NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range: 04/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1

000055



Approved_____ Date_____

8270 Saturn 2000 VOA

Processed: 06/28/2001 04:40

Sample: ICAL-8260 200NG

Acq Date : 06/28/01 04:09:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial:

Sample VolWt: 1.0000

d:\data\200106\062801\ICAL-8260 200NG 06-28-2001 04;09;47.SMS

D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.435	Pentafluorobenzene	IS 168	263853	263853.344		Counts
30	14.596	1,4-Difluorobenzene	IS 114	541211	541210.813		Counts
46	18.746	Chlorobenzene-d5	IS 117	575393	575392.500		Counts
68	22.892	1,4-Dichlorobenzene-d4	IS 152	224315	224314.766		Counts
22	12.923	Dibromofluoromethane(surr	SU 113	358734	358734.344		Counts
26	13.546	D4-1,2-Dichloroethane (su	SU 102	33626	33625.629		Counts
36	16.886	Toluene-d8 (surr)	SU 98	1263492	1263492.250		Counts
55	20.504	4-Bromofluorobenzene (sur	SU 95	605866	605865.750		Counts
1	05.995	Dichlorodifluoromethane	85	201912	201912.438		Counts
2	06.405	Chloromethane	47+49	43035	43034.840		Counts
3	06.826	Vinyl Chloride	62	156521	156520.891		Counts
4	07.672	Bromomethane	94	143821	143821.156		Counts
5	07.963	Chloroethane	49	44881	44880.777		Counts
6	09.046	Trichloromonofluoromethan	101	268946	268946.156		Counts
7	09.969	1,1-Dichloroethene	96	137870	137869.688		Counts
8	10.613	Carbon disulfide	76	276123	276123.469		Counts
9	10.287	Trichlorotrifluoroethane	101	99416	99416.492		Counts
10	10.199	Methylene chloride	84	139101	139100.563		Counts
11	09.243	Acetone	43	73691	73690.781		Counts
12	11.264	trans-1,2-Dichloroethene	96	157490	157489.844		Counts
13	11.414	MTBE	73	274457	274457.344		Counts
14	11.638	1,1-Dichlorethane	63	423633	423632.938		Counts
15	11.800	Vinyl Acetate	43	614396	614396.125		Counts
16	12.231	2-Butanone	72	10325	10325.410		Counts
17	12.461	cis-1,2-Dichloroethene	96	162833	162833.344		Counts
18	12.876	2,2-Dichloropropane	77	224318	224318.203		Counts
19	12.690	Bromochloromethane	128	84244	84243.727		Counts
20	12.755	Chloroform	83	361868	361868.156		Counts
21	14.286	Carbon tetrachloride	117	243051	243051.234		Counts
23	13.795	1,1,1-Trichloroethane	97	344411	344411.375		Counts
24	14.031	1,1-Dichloropropene	75	175799	175798.516		Counts
25	14.334	Benzene	78	435235	435234.781		Counts
28	13.651	1,2-Dichloroethane	62	362618	362617.594		Counts
29	15.144	Trichloroethene	95	207918	207917.906		Counts
31	15.057	Dibromomethane	93	111817	111817.227		Counts
32	15.095	1,2-Dichloropropane	63	180676	180676.453		Counts
33	15.209	Bromodichloromethane	83	278345	278344.781		Counts
34	15.676	Chloroethylvinylether	63	75305	75305.305		Counts
35	15.995	cis-1,3-Dichloropropene	75	223327	223326.938		Counts
37	16.976	Toluene	92	340695	340695.094		Counts
38	17.900	Tetrachloroethene	164	100033	100033.016		Counts
39	16.106	4-Methyl-2-pentanone	100	22932	22932.125		Counts
40	16.515	trans-1,3-Dichloropropene	75	186510	186509.922		Counts
41	16.733	1,1,2-Trichloroethane	83	96536	96535.945		Counts
42	17.390	Dibromochloromethane	129	160645	160645.109		Counts
43	17.023	1,3-Dichloropropane	76	122042	122041.563		Counts
44	17.707	1,2-Dibromoethane	107	136152	136152.375		Counts
45	17.158	2-Hexanone	43	221746	221746.453		Counts
47	18.792	Chlorobenzene	112	448164	448164.063		Counts
48	19.020	Ethylbenzene	91	805858	805857.688		Counts
49	18.677	1,1,1,2-Tetrachloroethane	131	194957	194957.219		Counts
50	19.274	m,p-Xylene	106	555775	555774.938		Counts
51	19.870	o-Xylene	106	296694	296694.219		Counts
52	19.756	Styrene	104	430076	430075.500		Counts
53	19.519	Bromoform	173	72054	72053.500		Counts
54	20.410	Isopropyl benzene	105	764135	764134.625		Counts
56	20.884	Bromobenzene	156	208950	208949.797		Counts
57	21.125	n-Propylbenzene	91	910269	910269.375		Counts
58	19.861	1,1,2,2-Tetrachloroethane	83+85	234231	234230.703		Counts
59	21.342	2-Chlorotoluene	126	156169	156168.750		Counts
60	20.077	1,2,3-Trichloropropane	75	100734	100733.945		Counts
61	21.599	1,3,5-Trimethylbenzene	105	671984	671984.063		Counts
62	21.466	4-Chlorotoluene	126	157649	157649.297		Counts
63	22.168	tert-Butylbenzene	119	670932	670931.938		Counts
64	22.369	1,2,4-Trimethylbenzene	105	660376	660376.313		Counts
65	22.369	sec-Butylbenzene	105	660376	660376.313		Counts
66	22.947	Isopropyltoluene	119	647966	647965.500		Counts
67	22.813	1,3-Dichlorobenzene	146	251970	251970.484		Counts
69	22.948	1,4-Dichlorobenzene	146	236149	236149.141		Counts
70	23.824	n-Butylbenzene	91	643511	643510.688		Counts
71	23.713	1,2-Dichlorobenzene	146	295734	295734.438		Counts
72	24.658	1,2-Dibromo-3-chloropropa	75	29868	29867.834		Counts
73	27.970	Hexachlorobutadiene	225	129507	129507.406		Counts
74	27.348	1,2,4-Trichlorobenzene	182	142356	142356.031		Counts
75	27.896	Naphthalene	128	209852	209852.172		Counts
76	28.322	1,2,3-Trichlorobenzene	182	120130	120129.836		Counts

07-16-01

CCV run date: / / : :

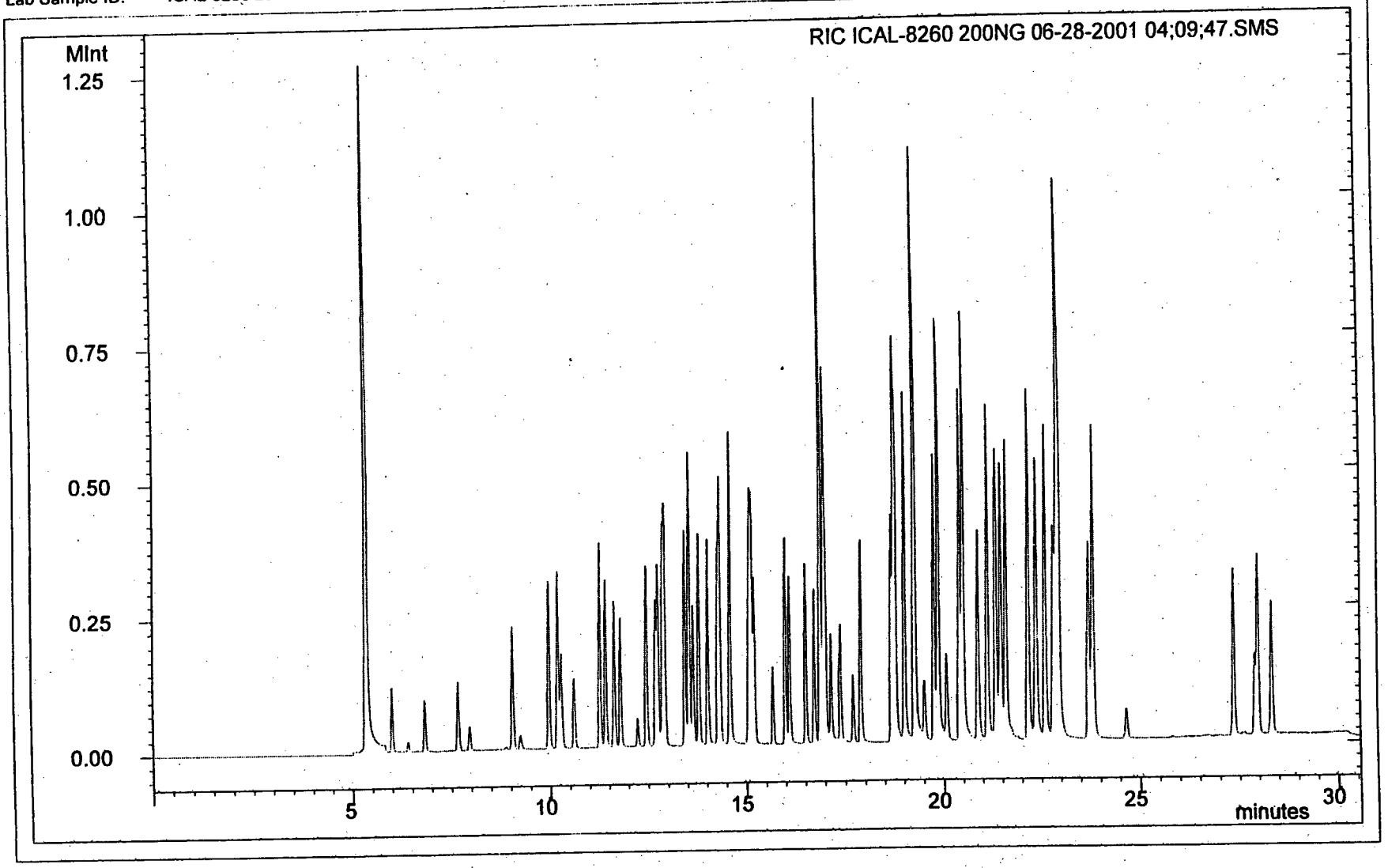
000056

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 200NG 06-28-2001 04;09;47.SMS
Acquisition Date: 06/28/2001 16:09
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 200NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000057

8270 Saturn 2000 VOA

Processed: 06/28/2001 05:14

Sample: ICAL-8260 500NG

Acq Date : 06/28/01 04:43:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial:

Sample VolWt: 1.0000

d:\data\200106\062801\ICAL-8260 500NG 06-28-2001 04;43;39.SMS

D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound		Ion	Area	Amount	Conc.	Unit
27	13.434	Pentafluorobenzene	IS	168	252758	252757.563		Counts
30	14.595	1,4-Difluorobenzene	IS	114	538896	538896.000		Counts
46	18.747	Chlorobenzene-d5	IS	117	583759	583758.813		Counts
68	22.890	1,4-Dichlorobenzene-d4	IS	152	219700	219700.109		Counts
22	12.923	Dibromofluoromethane(surr	SU	113	436978	436977.969		Counts
26	13.548	D4-1,2-Dichloroethane (su	SU	102	41081	41081.125		Counts
36	16.885	Toluene-d8 (surr)	SU	98	1533736	1533735.875		Counts
55	20.502	4-Bromofluorobenzene (sur	SU	95	731664	731663.688		Counts
1	05.996	Dichlorodifluoromethane		85	479828	479828.406		Counts
2	06.405	Chloromethane		47+49	131967	131966.984		Counts
3	06.828	Vinyl Chloride		62	398776	398775.719		Counts
4	07.672	Bromomethane		94	378238	378237.781		Counts
5	07.962	Chloroethane		49	108818	108818.063		Counts
6	09.046	Trichloromonofluoromethan		101	663069	663068.625		Counts
7	09.969	1,1-Dichloroethene		96	354926	354926.469		Counts
8	10.613	Carbon disulfide		76	679688	679688.438		Counts
9	10.288	Trichlorotrifluoroethane		101	243484	243483.906		Counts
10	10.202	Methylene chloride		84	345442	345442.031		Counts
11	09.239	Acetone		43	177867	177866.781		Counts
12	11.265	trans-1,2-Dichloroethene		96	409980	409980.281		Counts
13	11.412	MTBE		73	674834	674834.313		Counts
14	11.638	1,1-Dichlorethane		63	1102465	1102464.875		Counts
15	11.798	Vinyl Acetate		43	1580797	1580797.000		Counts
16	12.230	2-Butanone		72	23700	23700.330		Counts
17	12.460	cis-1,2-Dichloroethene		96	418460	418459.500		Counts
18	12.876	2,2-Dichloropropane		77	574103	574102.750		Counts
19	12.690	Bromochloromethane		128	215035	215035.313		Counts
20	12.755	Chloroform		83	918063	918063.375		Counts
21	14.285	Carbon tetrachloride		117	634976	634976.000		Counts
23	13.795	1,1,1-Trichloroethane		97	865089	865089.000		Counts
24	14.031	1,1-Dichloropropene		75	446686	446686.344		Counts
25	14.334	Benzene		78	1099633	1099633.250		Counts
28	13.652	1,2-Dichloroethane		62	931326	931326.125		Counts
29	15.143	Trichloroethene		95	514082	514082.406		Counts
31	15.055	Dibromomethane		93	279312	279311.594		Counts
32	15.094	1,2-Dichloropropane		63	469217	469217.344		Counts
33	15.210	Bromodichloromethane		83	715830	715829.625		Counts
34	15.676	Chloroethylvinylether		63	184730	184730.078		Counts
35	15.994	cis-1,3-Dichloropropene		75	549135	549134.563		Counts
37	16.975	Toluene		92	871395	871395.375		Counts
38	17.899	Tetrachloroethene		164	245266	245266.000		Counts
39	16.104	4-Methyl-2-pentanone		100	56074	56073.781		Counts
40	16.514	trans-1,3-Dichloropropene		75	486645	486644.563		Counts
41	16.731	1,1,2-Trichloroethane		83	243171	243171.047		Counts
42	17.388	Dibromochloromethane		129	415504	415504.094		Counts
43	17.023	1,3-Dichloropropane		76	308530	308530.000		Counts
44	17.706	1,2-Dibromoethane		107	348090	348089.938		Counts
45	17.154	2-Hexanone		43	542134	542134.375		Counts
47	18.792	Chlorobenzene		112	1123519	1123519.250		Counts
48	19.020	Ethylbenzene		91	2021102	2021102.375		Counts
49	18.677	1,1,1,2-Tetrachloroethane		131	500424	500423.875		Counts
50	19.273	m,p-Xylene		106	1454426	1454426.375		Counts
51	19.869	o-Xylene		106	787454	787453.688		Counts
52	19.759	Styrene		104	1109671	1109671.250		Counts
53	19.520	Bromoform		173	187200	187200.078		Counts
54	20.408	Isopropyl benzene		105	1942691	1942690.625		Counts
56	20.883	Bromobenzene		156	525680	525680.125		Counts
57	21.127	n-Propylbenzene		91	2312339	2312339.250		Counts
58	19.858	1,1,2,2-Tetrachloroethane		83+85	570369	570368.688		Counts
59	21.343	2-Chlorotoluene		126	414275	414275.313		Counts
60	20.077	1,2,3-Trichloropropane		75	259002	259002.406		Counts
61	21.597	1,3,5-Trimethylbenzene		105	1752486	1752485.625		Counts
62	21.468	4-Chlorotoluene		126	421337	421337.063		Counts
63	~~22.169~~	tert-Butylbenzene		119	1740276	1740275.750		Counts
64	22.366	1,2,4-Trimethylbenzene		105	1676843	1676843.250		Counts
65	22.600	sec-Butylbenzene		105	106326	106326.164		Counts
66	~~22.948~~	Isopropyltoluene		119	1655750	1655749.500		Counts
67	22.812	1,3-Dichlorobenzene		146	671057	671056.875		Counts
69	22.954	1,4-Dichlorobenzene		146	531113	531113.313		Counts
70	23.822	n-Butylbenzene		91	1667649	1667648.625		Counts
71	23.712	1,2-Dichlorobenzene		146	761773	761772.750		Counts
72	24.661	1,2-Dibromo-3-chloropropa		75	74129	74128.516		Counts
73	27.972	Hexachlorobutadiene		225	322541	322541.031		Counts
74	27.349	1,2,4-Trichlorobenzene		182	355277	355277.250		Counts
75	27.895	Naphthalene		128	561015	561015.313		Counts
76	28.320	1,2,3-Trichlorobenzene		182	314586	314586.344		Counts

7 07-16-01

000058

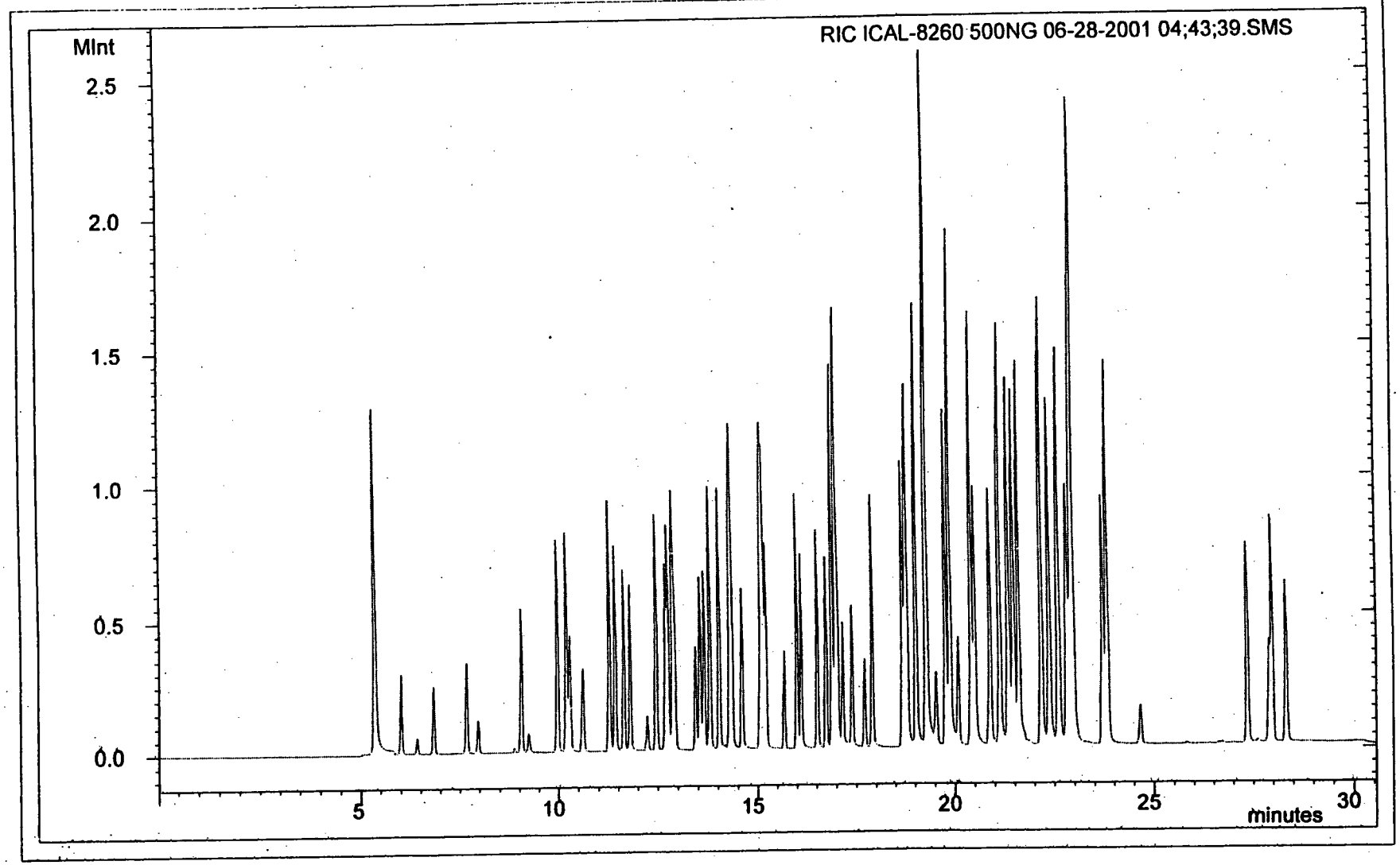
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 500NG 06-28-2001 04;43;39.SMS
Acquisition Date: 06/28/2001 16:43
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 500NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000059

8270 Saturn 2000 VOA

Processed: 06/28/2001 05:48

Sample: ICAL-8260 800NG

Acq Date : 06/28/01 05:17:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial:

Sample VolWt: 1.0000

d:\data\200106\062801\ICAL-8260 800NG 06-28-2001 05;17;29.SMS

D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.437	Pentafluorobenzene	IS 168	258901	258901.344		Counts
30	14.597	1,4-Difluorobenzene	IS 114	544303	544303.313		Counts
46	18.747	Chlorobenzene-d5	IS 117	566923	566922.875		Counts
68	22.887	1,4-Dichlorobenzene-d4	IS 152	225041	225040.750		Counts
22	12.923	Dibromofluoromethane(surr	SU 113	509253	509253.031		Counts
26	13.547	D4-1,2-Dichloroethane (su	SU 102	46281	46280.547		Counts
36	16.885	Toluene-d8 (surr)	SU 98	1846337	1846337.000		Counts
55	20.504	4-Bromofluorobenzene (sur	SU 95	875484	875484.375		Counts
1	05.996	Dichlorodifluoromethane	85	762000	762000.188		Counts
2	06.406	Chloromethane	47+49	224025	224025.219		Counts
3	06.828	Vinyl Chloride	62	536368	536368.000		Counts
4	07.672	Bromomethane	94	608591	608591.375		Counts
5	07.963	Chloroethane	49	164298	164298.375		Counts
6	09.046	Trichloromonofluoromethan	101	1067205	1067205.375		Counts
7	09.970	1,1-Dichloroethene	96	559187	559187.438		Counts
8	10.613	Carbon disulfide	76	1082766	1082766.250		Counts
9	10.288	Trichlorotrifluoroethane	101	388568	388568.344		Counts
10	10.200	Methylene chloride	84	546543	546542.813		Counts
11	09.238	Acetone	43	296130	296130.156		Counts
12	11.266	trans-1,2-Dichloroethene	96	641881	641881.313		Counts
13	11.411	MTBE	73	1098181	1098181.250		Counts
14	11.638	1,1-Dichlorethane	63	1725654	1725653.750		Counts
15	11.799	Vinyl Acetate	43	2294989	2294989.250		Counts
16	12.230	2-Butanone	72	38916	38916.180		Counts
17	12.461	cis-1,2-Dichloroethene	96	661629	661628.875		Counts
18	12.876	2,2-Dichloropropane	77	881446	881446.188		Counts
19	12.691	Bromochloromethane	128	345230	345229.719		Counts
20	12.754	Chloroform	83	1464311	1464311.125		Counts
21	14.285	Carbon tetrachloride	117	990092	990092.375		Counts
23	13.796	1,1,1-Trichloroethane	97	1355785	1355785.000		Counts
24	14.033	1,1-Dichloropropene	75	695910	695910.438		Counts
25	14.333	Benzene	78	1701948	1701948.375		Counts
28	13.652	1,2-Dichloroethane	62	1453127	1453127.250		Counts
29	15.143	Trichloroethene	95	814884	814884.000		Counts
31	15.056	Dibromomethane	93	448708	448708.031		Counts
32	15.093	1,2-Dichloropropane	63	748047	748047.250		Counts
33	15.211	Bromodichloromethane	83	1182154	1182154.000		Counts
34	15.676	Chloroethylvinylether	63	299777	299776.781		Counts
35	15.995	cis-1,3-Dichloropropene	75	878915	878914.938		Counts
37	16.977	Toluene	92	1363804	1363804.250		Counts
38	17.901	Tetrachloroethene	164	390151	390150.531		Counts
39	16.107	4-Methyl-2-pentanone	100	89559	89558.953		Counts
40	16.515	trans-1,3-Dichloropropene	75	763574	763573.813		Counts
41	16.732	1,1,2-Trichloroethane	83	380719	380719.469		Counts
42	17.390	Dibromochloromethane	129	654158	654157.875		Counts
43	17.026	1,3-Dichloropropane	76	463354	463354.125		Counts
44	17.707	1,2-Dibromoethane	107	569699	569699.375		Counts
45	17.158	2-Hexanone	43	857174	857174.250		Counts
47	18.792	Chlorobenzene	112	1791124	1791123.625		Counts
48	19.021	Ethylbenzene	91	3253371	3253371.000		Counts
49	16.679	1,1,1,2-Tetrachloroethane	131	791271	791270.688		Counts
50	19.279	m,p-Xylene	106	2343203	2343202.500		Counts
51	19.870	o-Xylene	106	1221614	1221614.000		Counts
52	19.758	Styrene	104	1788675	1788674.500		Counts
53	19.521	Bromoform	173	309380	309379.844		Counts
54	20.411	Isopropyl benzene	105	3029140	3029139.500		Counts
56	20.886	Bromobenzene	156	837170	837170.375		Counts
57	21.128	n-Propylbenzene	91	3504159	3504159.000		Counts
58	19.860	1,1,2,2-Tetrachloroethane	83+85	858549	858548.750		Counts
59	21.344	2-Chlorotoluene	126	696868	696867.688		Counts
60	20.079	1,2,3-Trichloropropane	75	417172	417172.031		Counts
61	21.600	1,3,5-Trimethylbenzene	105	2731598	2731597.500		Counts
62	21.468	4-Chlorotoluene	126	769214	769214.313		Counts
63	22.170	tert-Butylbenzene	119	2694181	2694181.250		Counts
64	22.370	1,2,4-Trimethylbenzene	105	2558624	2558624.250		Counts
65	22.370	sec-Butylbenzene	105	2558624	2558624.250		Counts
66	22.930	Isopropyltoluene	119	2608598	2608598.000		Counts
67	22.814	1,3-Dichlorobenzene	146	1072037	1072036.625		Counts
69	22.953	1,4-Dichlorobenzene	146	725671	725671.375		Counts
70	23.826	n-Butylbenzene	91	2614786	2614786.000		Counts
71	23.713	1,2-Dichlorobenzene	146	1216527	1216526.625		Counts
72	24.662	1,2-Dibromo-3-chloropropa	75	123126	123126.055		Counts
73	27.973	Hexachlorobutadiene	225	510758	510757.781		Counts
74	27.351	1,2,4-Trichlorobenzene	182	565988	565987.938		Counts
75	27.897	Naphthalene	128	951371	951370.500		Counts
76	28.324	1,2,3-Trichlorobenzene	182	498693	498693.375		Counts

07-16-01

000060

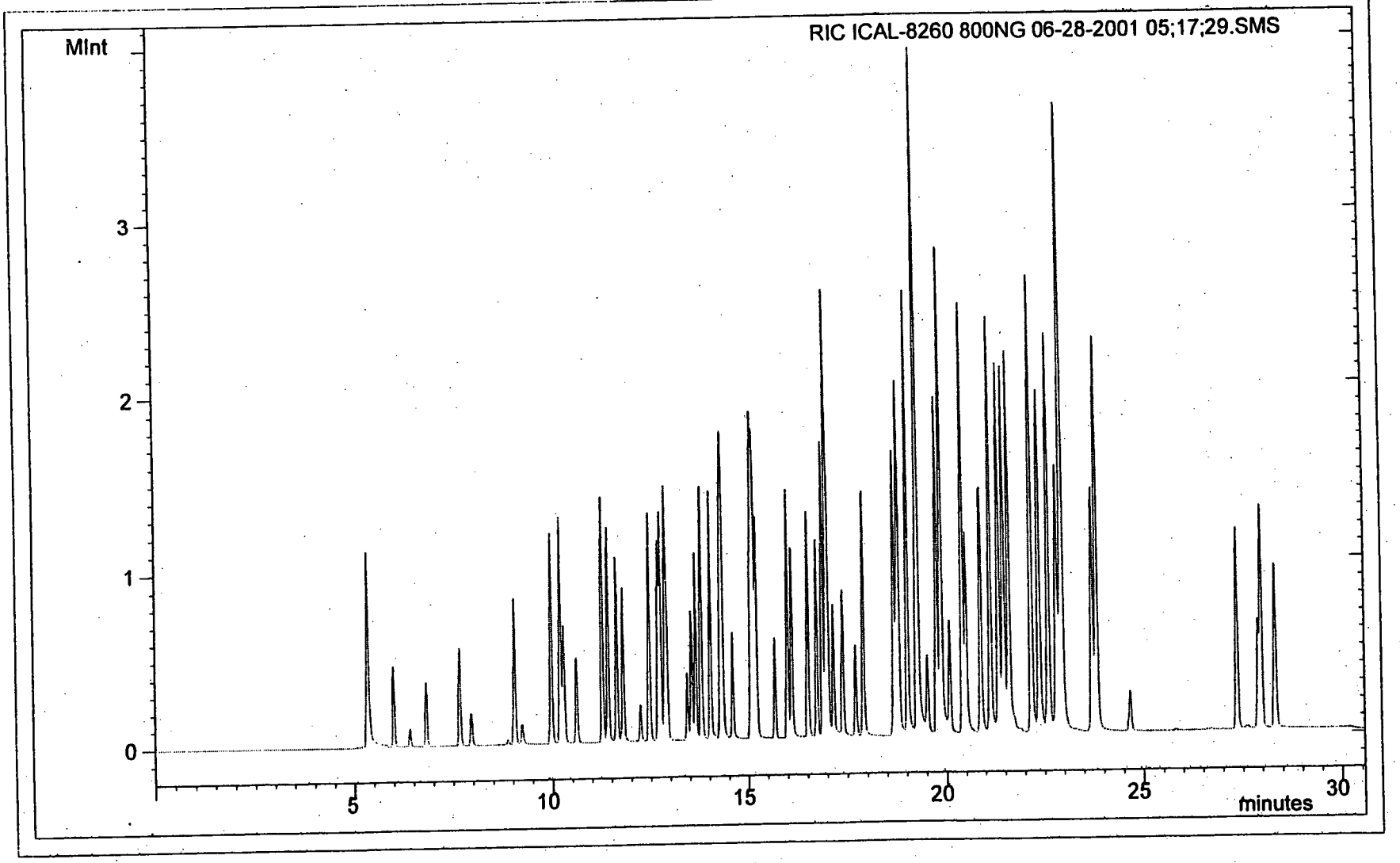
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 800NG 06-28-2001 05;17;29.SMS
Acquisition Date: 06/28/2001 17:17
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 800NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000061

8270 Saturn 2000 VOA

Processed: 06/28/2001 06:21

Sample: ICAL-8260 1000NG

Acq Date : 06/28/01 05:51:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.0000

d:\data\200106\062801\ICAL-8260 1000NG 06-28-2001 05;51;19.SMS D:\SaturnWS\Methods\062801WA.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.437	Pentafluorobenzene	IS 168	258925	258924.609		Counts
30	14.598	1,4-Difluorobenzene	IS 114	540561	540560.750		Counts
46	18.747	Chlorobenzene-d5	IS 117	551426	551425.500		Counts
68	22.889	1,4-Dichlorobenzene-d4	IS 152	218449	218449.313		Counts
22	12.926	Dibromofluoromethane(surr	SU 113	590998	590997.938		Counts
26	13.546	D4-1,2-Dichloroethane (su	SU 102	52225	52225.410		Counts
36	16.887	Toluene-d8 (surr)	SU 98	2074629	2074628.875		Counts
55	20.508	4-Bromofluorobenzene (sur	SU 95	985277	985276.813		Counts
1	05.996	Dichlorodifluoromethane	85	915499	915498.563		Counts
2	06.406	Chloromethane	47+49	292290	292290.094		Counts
3	06.828	Vinyl Chloride	62	664136	664135.563		Counts
4	07.672	Bromomethane	94	779061	779060.563		Counts
5	07.964	Chloroethane	49	207405	207404.734		Counts
6	09.047	Trichloromonofluoromethan	101	1345913	1345913.000		Counts
7	09.971	1,1-Dichloroethene	96	695640	695639.875		Counts
8	10.614	Carbon disulfide	76	1290931	1290931.375		Counts
9	10.289	Trichlorotrifluoroethane	101	457501	457501.250		Counts
10	10.202	Methylene chloride	84	682698	682698.375		Counts
11	09.240	Acetone	43	337218	337217.500		Counts
12	11.267	trans-1,2-Dichloroethene	96	826447	826447.000		Counts
13	11.415	MTBE	73	1349987	1349987.250		Counts
14	11.639	1,1-Dichlorethane	63	2252234	2252233.500		Counts
15	11.799	Vinyl Acetate	43	3294098	3294098.000		Counts
16	12.231	2-Butanone	72	46461	46461.191		Counts
17	12.464	cis-1,2-Dichloroethene	96	814328	814327.875		Counts
18	12.876	2,2-Dichloropropane	77	1145367	1145367.125		Counts
19	12.693	Bromochloromethane	128	442048	442048.281		Counts
20	12.757	Chloroform	83	1914108	1914108.250		Counts
21	14.288	Carbon tetrachloride	117	1268907	1268907.125		Counts
23	13.796	1,1,1-Trichloroethane	97	1725789	1725788.625		Counts
24	14.034	1,1-Dichloropropene	75	899471	899470.500		Counts
25	14.336	Benzene	78	2113295	2113294.750		Counts
28	13.653	1,2-Dichloroethane	62	1802191	1802190.875		Counts
29	15.147	Trichloroethene	95	1022715	1022714.625		Counts
31	15.057	Dibromomethane	93	548128	548128.063		Counts
32	15.096	1,2-Dichloropropane	63	918528	918528.375		Counts
33	15.213	Bromodichloromethane	83	1497930	1497930.000		Counts
34	15.678	Chloroethylvinylether	63	360085	360084.906		Counts
35	15.997	cis-1,3-Dichloropropene	75	1115831	1115830.875		Counts
37	16.978	Toluene	92	1727273	1727272.500		Counts
38	17.900	Tetrachloroethene	164	501636	501636.125		Counts
39	16.107	4-Methyl-2-pentanone	100	105112	105112.406		Counts
40	16.517	trans-1,3-Dichloropropene	75	1004667	1004667.000		Counts
41	16.734	1,1,2-Trichloroethane	83	489378	489377.844		Counts
42	17.391	Dibromochloromethane	129	823424	823424.438		Counts
43	17.027	1,3-Dichloropropane	76	577374	577374.188		Counts
44	17.709	1,2-Dibromoethane	107	727743	727742.875		Counts
45	17.158	2-Hexanone	43	1028231	1028230.688		Counts
47	18.794	Chlorobenzene	112	2234651	2234651.250		Counts
48	19.023	Ethylbenzene	91	4173953	4173952.500		Counts
49	18.680	1,1,1,2-Tetrachloroethane	131	1000447	1000447.313		Counts
50	19.277	m,p-Xylene	106	2986921	2986920.500		Counts
51	19.871	o-Xylene	106	1576414	1576414.250		Counts
52	19.760	Styrene	104	2333585	2333585.250		Counts
53	19.523	Bromoform	173	391007	391006.625		Counts
54	20.413	Isopropyl benzene	105	3875354	3875353.750		Counts
56	20.884	Bromobenzene	156	1058543	1058543.250		Counts
57	21.130	n-Propylbenzene	91	4410687	4410687.000		Counts
58	19.862	1,1,2,2-Tetrachloroethane	83+85	1049569	1049569.250		Counts
59	21.344	2-Chlorotoluene	126	886265	886264.625		Counts
60	20.080	1,2,3-Trichloropropane	75	520870	520870.125		Counts
61	21.602	1,3,5-Trimethylbenzene	105	3509901	3509900.500		Counts
62	21.470	4-Chlorotoluene	126	817327	817326.500		Counts
63	22.172	tert-Butylbenzene	119	3459708	3459707.750		Counts
64	22.370	1,2,4-Trimethylbenzene	105	3259303	3259302.500		Counts
65	22.370	sec-Butylbenzene	105	3259309	3259309.000		Counts
66	22.949	Isopropyltoluene	119	3357573	3357572.750		Counts
67	22.816	1,3-Dichlorobenzene	146	1368929	1368929.250		Counts
69	22.951	1,4-Dichlorobenzene	146	856384	856384.063		Counts
70	23.827	n-Butylbenzene	91	3194557	3194556.750		Counts
71	23.716	1,2-Dichlorobenzene	146	1494797	1494796.625		Counts
72	24.663	1,2-Dibromo-3-chloropropa	75	156288	156288.391		Counts
73	27.973	Hexachlorobutadiene	225	664470	664470.375		Counts
74	27.350	1,2,4-Trichlorobenzene	182	728320	728320.438		Counts
75	27.897	Naphthalene	128	1215009	1215009.000		Counts
76	28.327	1,2,3-Trichlorobenzene	182	642978	642977.500		Counts

D
07-16-01

000062

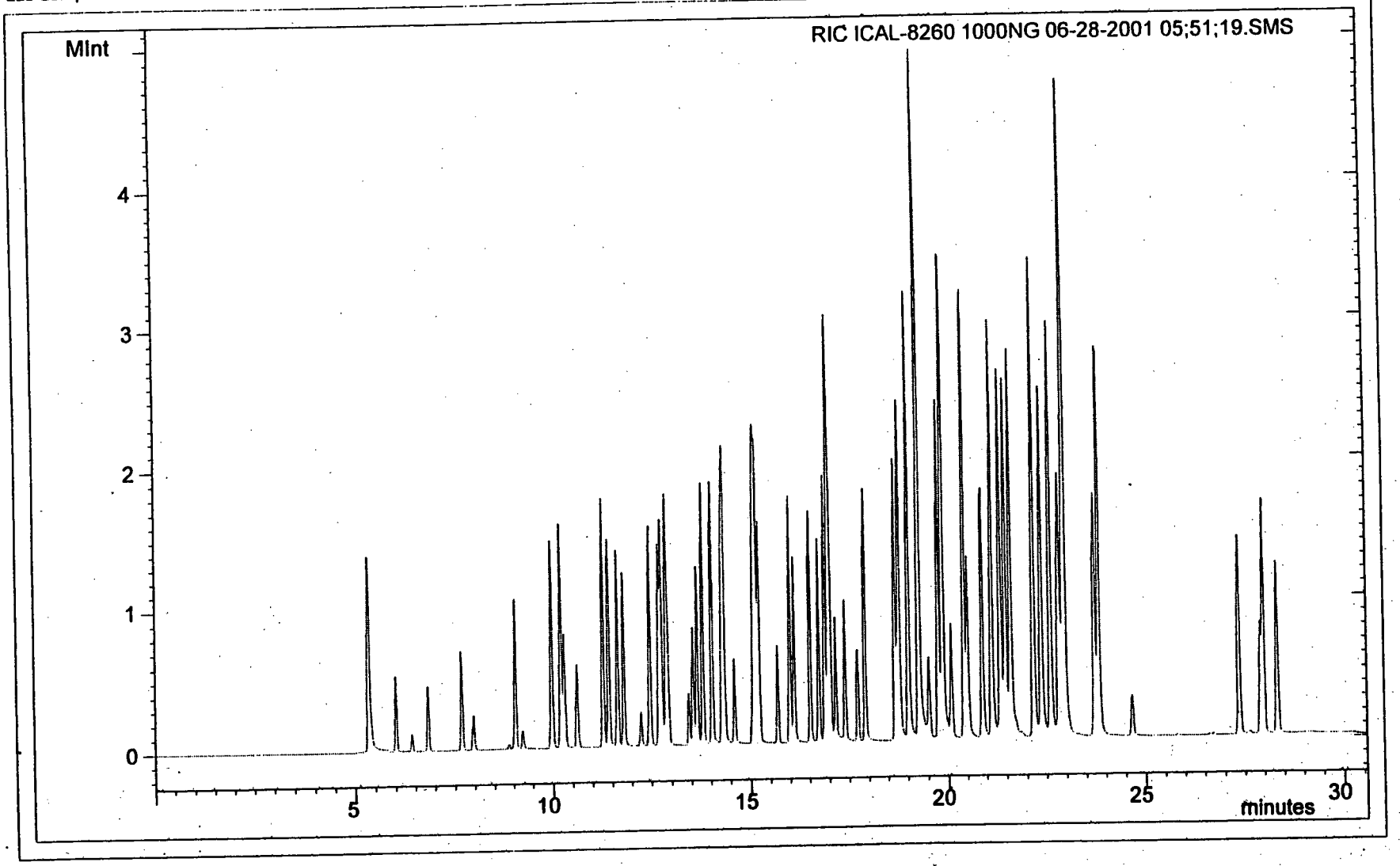
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 1000NG 06-28-2001 05;51;19.SM
Acquisition Date: 06/28/2001 17:51
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 1000NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000063

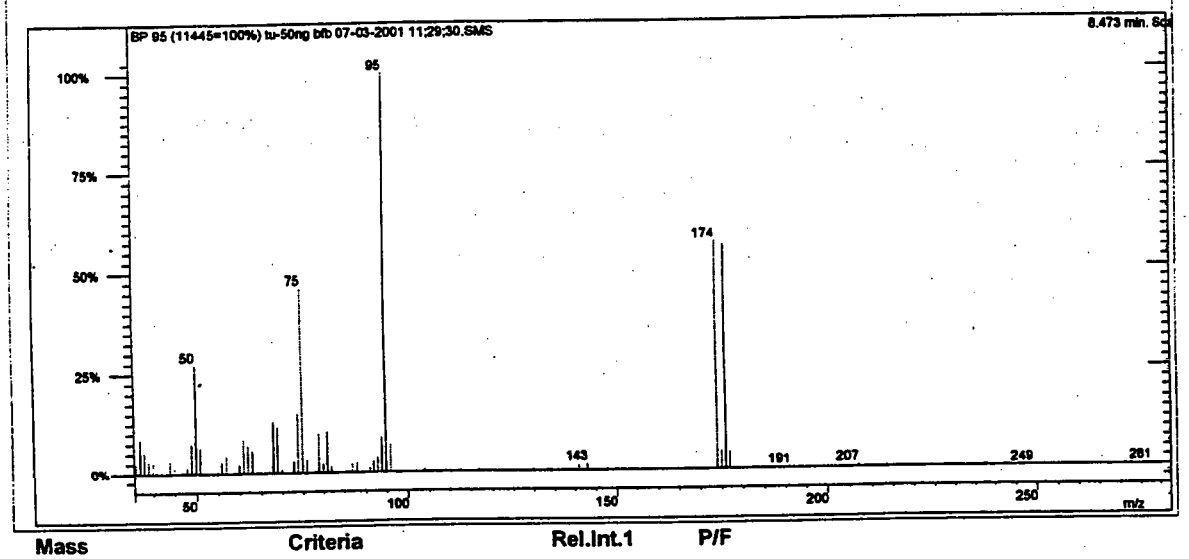
CCV & TUNE

Tune Report

Acquisition Date: 07/03/2001 11:29:31 AM

Data File Name: d:\data\200107\070301\tu-50ng bfb 07-03-2001 11;29;30.SMS

Tune Spectrum



Mass	Criteria	Rel.Int.1	P/F
50	15-40% of m/z 95	27.30	PASS
75	30-60% of m/z 95	46.20	PASS
95	base peak	100.00	PASS
96	5-9% of m/z 95	6.98	PASS
173	<2% of m/z 174	0.00	PASS
174	>50% of m/z 95	56.92	PASS
175	5-9% of m/z 174	7.88	PASS
176	>95% but <101% of m/z 174	98.62	PASS
177	5-9% of m/z 176	7.64	PASS

07/03/01

07-16

VOLATILE CONTINUING CALIBRATION CHECK

EPA Method 8260A

Instrument ID: S2K3 Continuing Calibration Date: 07/03/2001 Time: 12:44

Heated Purge (Y/N): No Initial Calibration Date: 06/28/2001 06/28/2001

GC Column: DB-VRX ID: 0.25 (mm) Initial Calibration Time: 14:13 17:51

Initial Calibration File: D:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

Lab File ID: d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS

RRF = (Area(sample)/Amount(sample))/(Area(standard)/Amount(standard))

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
Dichlorodifluoromethane	0.825	0.635	0.000				
Chloromethane	0.223	0.182	0.100				PASS
Vinyl Chloride	0.658	0.594	0.000	9.7	20.0	PASS	
Bromomethane	0.744	0.461	0.000				
Chloroethane	0.213	0.177	0.000				
Trichloromonofluoromethane	1.212	1.142	0.000				
1,1-Dichloroethene	0.663	0.596	0.000	10.1	20.0	PASS	
Carbon disulfide	1.209	1.211	0.000				
Trichlorotrifluoroethane	0.416	0.445	0.000				
Methylene chloride	0.702	0.563	0.000				
Acetone	0.156	0.392	0.000				
trans-1,2-Dichloroethene	0.785	0.675	0.000				
MTBE	1.287	1.262	0.000				
1,1-Dichlorethane	2.127	1.861	0.100				PASS
Vinyl Acetate	1.205	3.174	0.000				
2-Butanone	0.019	0.048	0.000				
cis-1,2-Dichloroethene	0.819	0.685	0.000				
2,2-Dichloropropane	1.092	1.057	0.000				
Bromochloromethane	0.442	0.350	0.000				
Chloroform	1.874	1.579	0.000	15.7	20.0	PASS	
Carbon tetrachloride	1.163	1.082	0.000				
Dibromofluoromethane(surr)	0.851	0.854	0.000				
1,1,1-Trichloroethane	1.611	1.386	0.000				
1,1-Dichloropropene	0.399	0.348	0.000				
Benzene	1.012	0.960	0.000				
D4-1,2-Dichloroethane (surr)	0.079	0.072	0.000				
1,2-Dichloroethane	0.891	0.716	0.000				
Trichloroethene	0.471	0.430	0.000				
Dibromomethane	0.271	0.226	0.000				
1,2-Dichloropropane	0.443	0.364	0.000	17.7	20.0	PASS	
Bromodichloromethane	0.684	0.582	0.000				
Chloroethylvinylether	0.170	0.159	0.000				
cis-1,3-Dichloropropene	0.536	0.453	0.000				
Toluene-d8 (surr)	1.461	1.438	0.000				
Toluene	0.789	0.759	0.000	3.7	20.0	PASS	
Tetrachloroethene	0.217	0.207	0.000				

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
4-Methyl-2-pentanone	0.021	0.051	0.000				
trans-1,3-Dichloropropene	0.462	0.400	0.000				
1,1,2-Trichloroethane	0.237	0.205	0.000				
Dibromochloromethane	0.387	0.332	0.000				
1,3-Dichloropropane	0.288	0.262	0.000				
1,2-Dibromoethane	0.340	0.285	0.000				
2-Hexanone	0.192	0.517	0.000				
Chlorobenzene	1.015	0.947	0.300				PASS
Ethylbenzene	1.788	1.738	0.000	2.8	20.0	PASS	
1,1,1,2-Tetrachloroethane	0.458	0.398	0.000				
m,p-Xylene	0.614	1.277	0.000				
o-Xylene	0.645	0.639	0.000				
Styrene	0.941	0.934	0.000				
Bromoform	0.172	0.159	0.100				PASS
Isopropyl benzene	4.197	3.931	0.000				
4-Bromofluorobenzene (surr)	1.738	1.650	0.000				
Bromobenzene	1.211	1.067	0.000				
n-Propylbenzene	4.948	4.730	0.000				
1,1,2,2-Tetrachloroethane	1.397	1.180	0.300				PASS
2-Chlorotoluene	0.885	0.926	0.000				
1,2,3-Trichloropropane	0.627	0.518	0.000				
1,3,5-Trimethylbenzene	3.818	3.668	0.000				
4-Chlorotoluene	0.943	1.101	0.000				
tert-Butylbenzene	3.740	3.573	0.000				
1,2,4-Trimethylbenzene	3.686	3.528	0.000				
sec-Butylbenzene	4.508	4.224	0.000				
Isopropyltoluene	3.641	3.533	0.000				
1,3-Dichlorobenzene	1.484	1.408	0.000				
1,4-Dichlorobenzene	1.322	0.669	0.000				
n-Butylbenzene	3.573	3.508	0.000				
1,2-Dichlorobenzene	1.693	1.537	0.000				
1,2-Dibromo-3-chloropropane	0.186	0.159	0.000				
Hexachlorobutadiene	0.732	0.689	0.000				
1,2,4-Trichlorobenzene	0.832	0.812	0.000				
Naphthalene	1.332	1.351	0.000				
1,2,3-Trichlorobenzene	0.726	0.729	0.000				

8270 Saturn 2000 VOA

Processed: 07/03/2001 01:14

Sample: CCV-500NG 8260#1 Acq Date : 07/03/01 12:44:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
1	13.473	Pentafluorobenzene	IS 168	324104	250.000	250.000	ug/L
2	14.634	1,4-Difluorobenzene	IS 114	688168	250.000	250.000	ug/L
3	18.782	Chlorobenzene-d5	IS 117	682101	250.000	250.000	ug/L
4	22.935	1,4-Dichlorobenzene-d4	IS 152	284602	250.000	250.000	ug/L
26	12.964	Dibromofluoromethane(surr	SU 113	553800	501.729	501.73	ug/L
30	13.586	D4-1,2-Dichloroethane (su	SU 102	46729	454.001	454.00	ug/L
38	16.920	Toluene-d8 (surr)	SU 98	1979289	492.203	492.20	ug/L
56	20.544	4-Bromofluorobenzene (sur	SU 95	939294	474.752	474.75	ug/L
5	06.030	Dichlorodifluoromethane	85	411662	384.793	38.48	ug/L
6	06.445	Chloromethane	47+49	117966	408.162	40.82	ug/L
7	06.870	Vinyl Chloride	62	385218	451.258	45.13	ug/L
8	07.717	Bromomethane	94	298644	309.643	30.96	ug/L
9	08.008	Chloroethane	49	114439	414.898	41.49	ug/L
10	09.090	Trichloromonofluoromethan	101	740522	471.237	47.12	ug/L
11	10.014	1,1-Dichloroethene	96	386253	449.284	44.93	ug/L
12	10.657	Carbon disulfide	76	785100	501.069	50.11	ug/L
13	10.331	Trichlorotrifluoroethane	101	288763	535.514	53.55	ug/L
14	10.244	Methylene chloride	84	365087	401.369	40.14	ug/L
15	09.289	Acetone	43	254339	1260.279	126.03	ug/L
16	11.308	trans-1,2-Dichloroethene	96	437361	429.769	42.98	ug/L
17	11.456	MTBE	73	817874	490.120	49.01	ug/L
18	11.682	1,1-Dichlorethane	63	1206312	437.463	43.75	ug/L
19	11.840	Vinyl Acetate	43	2057388	1316.967	131.70	ug/L
20	12.273	2-Butanone	72	31369	1259.451	125.95	ug/L
21	12.501	cis-1,2-Dichloroethene	96	443727	417.986	41.80	ug/L
22	12.915	2,2-Dichloropropane	77	685213	483.826	48.38	ug/L
23	12.731	Bromochloromethane	128	226926	395.809	39.58	ug/L
24	12.796	Chloroform	83	1023451	421.372	42.14	ug/L
25	14.323	Carbon tetrachloride	117	701502	465.104	46.51	ug/L
27	13.834	1,1,1-Trichloroethane	97	898177	430.136	43.01	ug/L
28	14.069	1,1-Dichloropropene	75	478962	436.403	43.64	ug/L
29	14.372	Benzene	78	1321904	474.426	47.44	ug/L
31	13.691	1,2-Dichloroethane	62	984793	401.574	40.16	ug/L
32	15.180	Trichloroethene	95	591425	455.742	45.57	ug/L
33	15.093	Dibromomethane	93	311181	416.805	41.68	ug/L
34	15.131	1,2-Dichloropropane	63	501625	411.289	41.13	ug/L
35	15.249	Bromodichloromethane	83	800765	425.102	42.51	ug/L
36	15.712	Chloroethylvinylether	63	218441	465.572	46.56	ug/L
37	16.030	cis-1,3-Dichloropropene	75	623744	422.874	42.29	ug/L
39	17.009	Toluene	92	1045115	481.284	48.13	ug/L
40	17.936	Tetrachloroethene	164	282441	477.478	47.75	ug/L
41	16.139	4-Methyl-2-pentanone	100	70003	1215.401	121.54	ug/L
42	16.551	trans-1,3-Dichloropropene	75	550470	432.619	43.26	ug/L
43	16.767	1,1,2-Trichloroethane	83	281798	431.111	43.11	ug/L
44	17.425	Dibromochloromethane	129	457008	428.968	42.90	ug/L
45	17.061	1,3-Dichloropropane	76	356783	454.288	45.43	ug/L
46	17.742	1,2-Dibromoethane	107	391607	418.015	41.80	ug/L
47	17.190	2-Hexanone	43	705414	1343.563	134.36	ug/L
48	18.828	Chlorobenzene	112	1291702	466.460	46.65	ug/L
49	19.057	Ethylbenzene	91	2370557	486.065	48.61	ug/L
50	18.713	1,1,1,2-Tetrachloroethane	131	542619	434.558	43.46	ug/L
51	19.308	m,p-Xylene	106	1742258	1040.761	104.08	ug/L
52	19.907	o-Xylene	106	871063	495.221	49.52	ug/L
53	19.797	Styrene	104	1273942	495.994	49.60	ug/L
54	19.559	Bromoform	173	216441	461.043	46.10	ug/L
55	20.448	Isopropyl benzene	105	2237374	468.281	46.83	ug/L
57	20.926	Bromobenzene	156	607492	440.581	44.06	ug/L
58	21.168	n-Propylbenzene	91	2692581	478.022	47.80	ug/L
59	19.899	1,1,2,2-Tetrachloroethane	83+85	671783	422.347	42.23	ug/L
60	21.384	2-Chlorotoluene	126	527156	523.306	52.33	ug/L
61	20.117	1,2,3-Trichloropropane	75	294741	413.197	41.32	ug/L
62	21.641	1,3,5-Trimethylbenzene	105	2087934	480.427	48.04	ug/L
63	21.505	4-Chlorotoluene	126	626803	583.714	58.37	ug/L
64	22.211	tert-Butylbenzene	119	2033532	477.613	47.76	ug/L
65	22.411	1,2,4-Trimethylbenzene	105	2008084	478.522	47.85	ug/L
66	22.646	sec-Butylbenzene	105	2404083	468.460	46.85	ug/L
67	22.993	Isopropyltoluene	119	2011113	485.136	48.51	ug/L
68	22.858	1,3-Dichlorobenzene	146	801685	474.621	47.46	ug/L
69	22.860	1,4-Dichlorobenzene	146	380647	252.975	25.30	ug/L
70	23.865	n-Butylbenzene	91	1997019	490.943	49.09	ug/L
71	23.757	1,2-Dichlorobenzene	146	874899	453.842	45.38	ug/L
72	24.703	1,2-Dibromo-3-chloropropa	75	90238	425.892	42.59	ug/L
73	28.016	Hexachlorobutadiene	225	392149	470.284	47.03	ug/L
74	27.389	1,2,4-Trichlorobenzene	182	462285	488.079	48.81	ug/L
75	27.935	Naphthalene	128	769020	507.180	50.72	ug/L
76	28.363	1,2,3-Trichlorobenzene	182	415128	502.275	50.23	ug/L

11 DCE = 382,353 / 324104 × .113 = 149

7-16-01

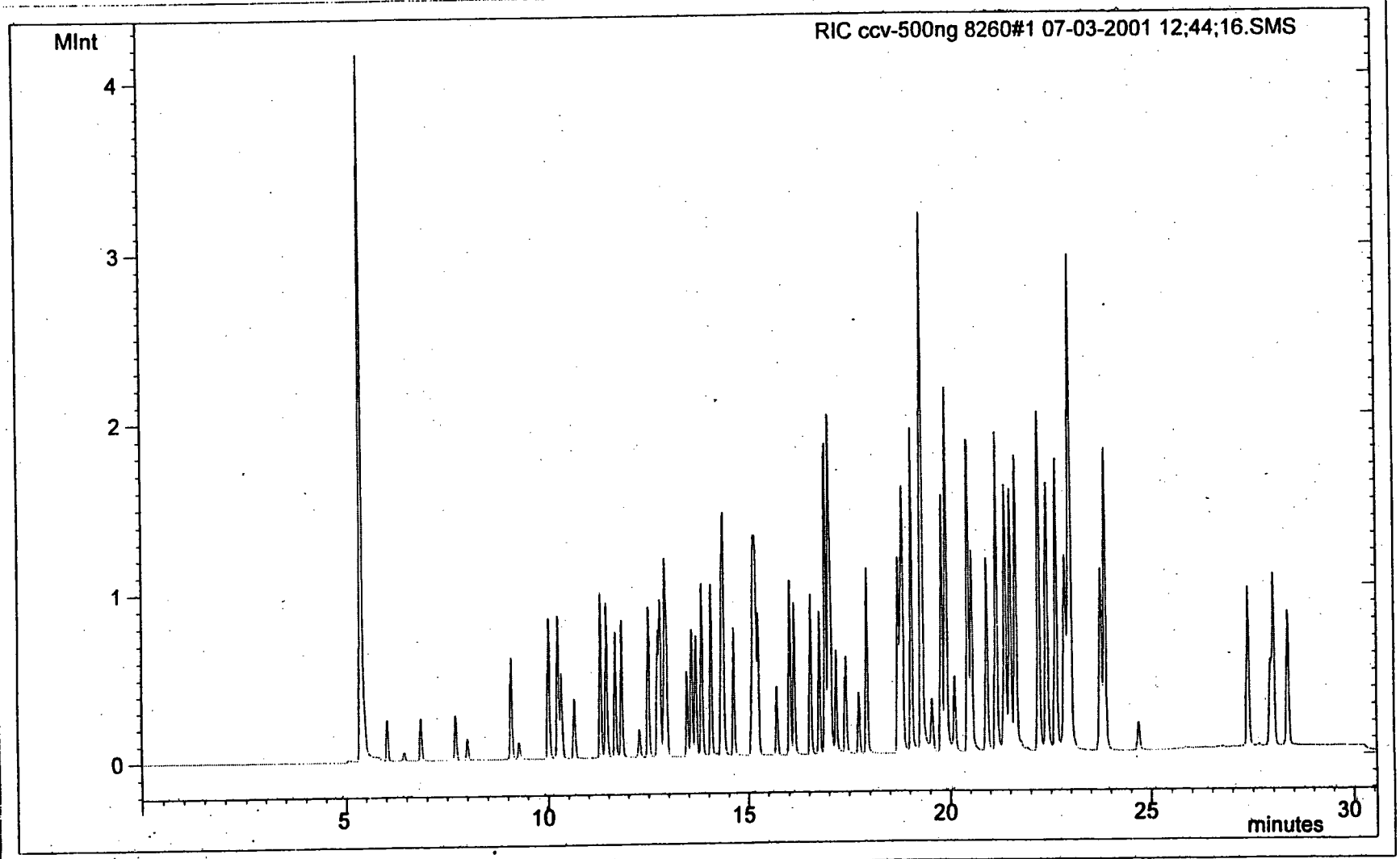
000068

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS
Acquisition Date: 07/03/2001 12:44
EPA Sample No: ccv-500ng
Lab Sample ID: ccv-500ng 8260#1

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

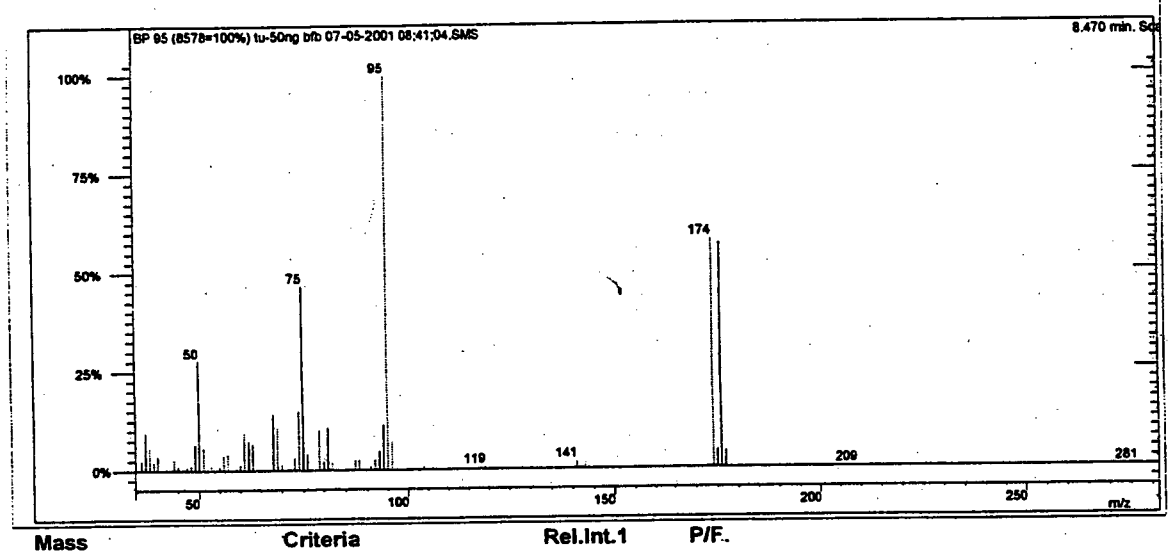
000069

Tune Report

Acquisition Date: 07/05/2001 08:41:07 AM

Data File Name: d:\data\200107\070501\tu-50ng bfb 07-05-2001 08;41;04.SMS

Tune Spectrum



Mass	Criteria	Rel.Int.1	P/F.
50	15-40% of m/z 95	27.77	PASS
75	30-60% of m/z 95	46.76	PASS
95	base peak	100.00	PASS
96	5-9% of m/z 95	7.02	PASS
173	<2% of m/z 174	0.00	PASS
174	>50% of m/z 95	58.08	PASS
175	5-9% of m/z 174	7.85	PASS
176	>95% but <101% of m/z 174	98.03	PASS
177	5-9% of m/z 176	7.39	PASS

07/05/01

07-15-01

VOLATILE CONTINUING CALIBRATION CHECK

EPA Method 8260A

07/05/01

Instrument ID: S2K3 Continuing Calibration Date: 07/05/2001 Time: 09:52

Heated Purge (Y/N): No Initial Calibration Date: 06/28/2001 06/28/2001

GC Column: DB-VRX ID: 0.25 (mm) Initial Calibration Time: 14:13 17:51

Initial Calibration File: D:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

Lab File ID: d:\data\200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.SMS

RRF = (Area(sample)/Amount(sample))/(Area(standard)/Amount(standard))

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
Dichlorodifluoromethane	0.825	0.409	0.000				
Chloromethane	0.223	0.148	0.100				PASS
Vinyl Chloride	0.658	0.543	0.000	17.5	20.0	PASS	
Bromomethane	0.744	0.455	0.000				
Chloroethane	0.213	0.160	0.000				
Trichloromonofluoromethane	1.212	1.109	0.000				
1,1-Dichloroethene	0.663	0.560	0.000	15.5	20.0	PASS	
Carbon disulfide	1.209	1.102	0.000				
Trichlorotrifluoroethane	0.416	0.420	0.000				
Methylene chloride	0.702	0.546	0.000				
Acetone	0.156	0.271	0.000				
trans-1,2-Dichloroethene	0.785	0.657	0.000				
MTBE	1.287	0.971	0.000				
1,1-Dichlorethane	2.127	1.785	0.100				PASS
Vinyl Acetate	1.205	2.433	0.000				
2-Butanone	0.019	0.036	0.000				
cis-1,2-Dichloroethene	0.819	0.677	0.000				
2,2-Dichloropropane	1.092	1.027	0.000				
Bromochloromethane	0.442	0.336	0.000				
Chloroform	1.874	1.551	0.000	17.2	20.0	PASS	
Carbon tetrachloride	1.163	1.062	0.000				
Dibromofluoromethane(surr)	0.851	0.793	0.000				
1,1,1-Trichloroethane	1.611	1.425	0.000				
1,1-Dichloropropene	0.399	0.359	0.000				
Benzene	1.012	0.932	0.000				
D4-1,2-Dichloroethane (surr)	0.079	0.066	0.000				
1,2-Dichloroethane	0.891	0.680	0.000				
Trichloroethene	0.471	0.425	0.000				
Dibromomethane	0.271	0.220	0.000				
1,2-Dichloropropane	0.443	0.360	0.000	18.8	20.0	PASS	
Bromodichloromethane	0.684	0.588	0.000				
Chloroethylvinylether	0.170	0.126	0.000				
cis-1,3-Dichloropropene	0.536	0.443	0.000				
Toluene-d8 (surr)	1.461	1.421	0.000				
Toluene	0.789	0.782	0.000	0.8	20.0	PASS	
Tetrachloroethene	0.217	0.228	0.000				

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
4-Methyl-2-pentanone	0.021	0.038	0.000				
trans-1,3-Dichloropropene	0.462	0.384	0.000				
1,1,2-Trichloroethane	0.237	0.189	0.000				
Dibromochloromethane	0.387	0.316	0.000				
1,3-Dichloropropane	0.288	0.264	0.000				
1,2-Dibromoethane	0.340	0.265	0.000				
2-Hexanone	0.192	0.410	0.000				
Chlorobenzene	1.015	0.998	0.300				PASS
Ethylbenzene	1.788	1.913	0.000	-7.0	20.0	PASS	
1,1,1,2-Tetrachloroethane	0.458	0.430	0.000				
m,p-Xylene	0.614	1.381	0.000				
o-Xylene	0.645	0.708	0.000				
Styrene	0.941	1.046	0.000				
Bromoform	0.172	0.164	0.100				PASS
Isopropyl benzene	4.197	4.579	0.000				
4-Bromofluorobenzene (surr)	1.738	1.714	0.000				
Bromobenzene	1.211	1.190	0.000				
n-Propylbenzene	4.948	5.467	0.000				
1,1,2,2-Tetrachloroethane	1.397	1.182	0.300				PASS
2-Chlorotoluene	0.885	1.100	0.000				
1,2,3-Trichloropropane	0.627	0.524	0.000				
1,3,5-Trimethylbenzene	3.818	4.223	0.000				
4-Chlorotoluene	0.943	1.076	0.000				
tert-Butylbenzene	3.740	4.296	0.000				
1,2,4-Trimethylbenzene	3.686	4.044	0.000				
sec-Butylbenzene	4.508	5.004	0.000				
Isopropyltoluene	3.641	4.029	0.000				
1,3-Dichlorobenzene	1.484	1.612	0.000				
1,4-Dichlorobenzene	1.322	1.170	0.000				
n-Butylbenzene	3.573	4.049	0.000				
1,2-Dichlorobenzene	1.693	1.689	0.000				
1,2-Dibromo-3-chloropropane	0.186	0.161	0.000				
Hexachlorobutadiene	0.732	0.816	0.000				
1,2,4-Trichlorobenzene	0.832	0.886	0.000				
Naphthalene	1.332	1.365	0.000				
1,2,3-Trichlorobenzene	0.726	0.746	0.000				

8270 Saturn 2000 VOA Processed: 07/05/2001 10:

Sample: CCV-500NG 8260#1 Acq Date : 07/05/01 09:52:00 Dilution: 1

Comment: 2001/07/05-01.60 Vial: Sample VolWt: 10.00

d:\data\200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.SMS D:\SaturnWS\Methods\062801W.

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
1	13.459	Pentafluorobenzene	IS 168	352869	250.000	250.000	ug/L
2	14.618	1,4-Difluorobenzene	IS 114	730665	250.000	250.000	ug/L
3	18.769	Chlorobenzene-d5	IS 117	684043	250.000	250.000	ug/L
4	22.918	1,4-Dichlorobenzene-d4	IS 152	270060	250.000	250.000	ug/L
26	12.949	Dibromofluoromethane(surr	SU 113	559589	465.645	465.65	ug/L
30	13.570	D4-1,2-Dichloroethane (su	SU 102	46395	414.010	414.01	ug/L
38	16.906	Toluene-d8 (surr)	SU 98	2075839	486.189	486.19	ug/L
56	20.527	4-Bromofluorobenzene (sur	SU 95	925870	493.164	493.16	ug/L
5	06.026	Dichlorodifluoromethane	85	288909	248.038	24.80	ug/L
6	06.437	Chloromethane	47+49	104413	331.820	33.18	ug/L
7	06.861	Vinyl Chloride	62	383163	412.261	41.23 ✓	ug/L
8	07.706	Bromomethane	94	321305	305.981	30.60	ug/L
9	07.997	Chloroethane	49	113260	377.150	37.72	ug/L
10	09.078	Trichloromonofluoromethan	101	782546	457.384	45.74	ug/L
11	10.001	1,1-Dichloroethene	96	395435	422.468	42.25 ✓	ug/L
12	10.644	Carbon disulfide	76	777424	455.723	45.57	ug/L
13	10.318	Trichlorotrifluoroethane	101	296758	505.478	50.55	ug/L
14	10.231	Methylene chloride	84	385083	388.841	38.88	ug/L
15	09.276	Acetone	43	190976	869.167	86.92	ug/L
16	11.295	trans-1,2-Dichloroethene	96	463858	418.650	41.87	ug/L
17	11.442	MTBE	73	685462	377.285	37.73	ug/L
18	11.666	1,1-Dichlorethane	63	1260049	419.701	41.97	ug/L
19	11.825	Vinyl Acetate	43	1716928	1009.441	100.94	ug/L
20	12.259	2-Butanone	72	25401	936.709	93.67	ug/L
21	12.489	cis-1,2-Dichloroethene	96	477836	413.423	41.34	ug/L
22	12.902	2,2-Dichloropropane	77	724703	469.995	47.00	ug/L
23	12.717	Bromochloromethane	128	236854	379.447	37.94	ug/L
24	12.781	Chloroform	83	1094721	413.973	41.40 ✓	ug/L
25	14.305	Carbon tetrachloride	117	749551	456.449	45.64	ug/L
27	13.819	1,1,1-Trichloroethane	97	1005795	442.409	44.24	ug/L
28	14.056	1,1-Dichloropropene	75	524712	450.280	45.03	ug/L
29	14.356	Benzene	78	1362632	460.600	46.06	ug/L
31	13.678	1,2-Dichloroethane	62	994088	381.787	38.18	ug/L
32	15.167	Trichloroethene	95	621110	450.780	45.08	ug/L
33	15.086	Dibromomethane	93	~~0~~ 320903	~~0.000~~	~~0.00~~ 40.48	ug/L
34	15.117	1,2-Dichloropropane	63	525485	405.793	40.58 ✓	ug/L
35	15.234	Bromodichloromethane	83	859623	429.806	42.98	ug/L
36	15.698	Chloroethylvinylether	63	184618	370.599	37.06	ug/L
37	16.018	cis-1,3-Dichloropropene	75	647135	413.214	41.32	ug/L
39	16.997	Toluene	92	1143428	495.933	49.59 ✓	ug/L
40	17.921	Tetrachloroethene	164	311944	525.857	52.59	ug/L
41	16.126	4-Methyl-2-pentanone	100	54899	897.725	89.77	ug/L
42	16.537	trans-1,3-Dichloropropene	75	560975	415.234	41.52	ug/L
43	16.753	1,1,2-Trichloroethane	83	276842	398.896	39.89	ug/L
44	17.410	Dibromochloromethane	129	461509	407.998	40.80	ug/L
45	17.046	1,3-Dichloropropane	76	361248	458.668	45.87	ug/L
46	17.728	1,2-Dibromoethane	107	386938	389.009	38.90	ug/L
47	17.178	2-Hexanone	43	560434	1064.413	106.44	ug/L
48	18.815	Chlorobenzene	112	1365314	491.643	49.16	ug/L
49	19.042	Ethylbenzene	91	2617275	535.129	53.51 ✓	ug/L
50	18.699	1,1,1,2-Tetrachloroethane	131	588655	470.088	47.01	ug/L
51	19.296	m,p-Xylene	106	1888997	1125.215	112.52	ug/L
52	19.891	o-Xylene	106	968345	548.965	54.90	ug/L
53	19.778	Styrene	104	1431476	555.746	55.57	ug/L
54	19.543	Bromoform	173	224555	476.970	47.70	ug/L
55	20.434	Isopropyl benzene	105	2473064	545.481	54.55	ug/L
57	20.910	Bromobenzene	156	642608	491.143	49.11	ug/L
58	21.153	n-Propylbenzene	91	2952803	552.446	55.24	ug/L
59	19.884	1,1,2,2-Tetrachloroethane	83+85	638638	423.128	42.31	ug/L
60	21.367	2-Chlorotoluene	126	593960	621.370	62.14	ug/L
61	20.101	1,2,3-Trichloropropane	75	283093	418.237	41.82	ug/L
62	21.626	1,3,5-Trimethylbenzene	105	2280838	553.072	55.31	ug/L
63	21.492	4-Chlorotoluene	126	580947	570.141	57.01	ug/L
64	22.193	tert-Butylbenzene	119	2320219	574.289	57.43	ug/L
65	22.392	1,2,4-Trimethylbenzene	105	2184304	548.542	54.85	ug/L
66	22.626	sec-Butylbenzene	105	2702663	554.998	55.50	ug/L
67	22.974	Isopropyltoluene	119	2175953	553.163	55.32	ug/L
68	22.841	1,3-Dichlorobenzene	146	870611	543.180	54.32	ug/L
69	22.978	1,4-Dichlorobenzene	146	~~0~~ 632163	~~0.000~~	~~0.00~~ 44.78	ug/L
70	23.848	n-Butylbenzene	91	2186995	566.596	56.66	ug/L
71	23.737	1,2-Dichlorobenzene	146	912412	498.786	49.88	ug/L
72	24.686	1,2-Dibromo-3-chloropropa	75	87177	433.599	43.36	ug/L
73	27.999	Hexachlorobutadiene	225	440558	556.788	55.68	ug/L
74	27.373	1,2,4-Trichlorobenzene	182	478566	532.475	53.25	ug/L
75	27.920	Naphthalene	128	737420	512.527	51.25	ug/L
76	28.348	1,2,3-Trichlorobenzene	182	403140	514.035	51.40	ug/L

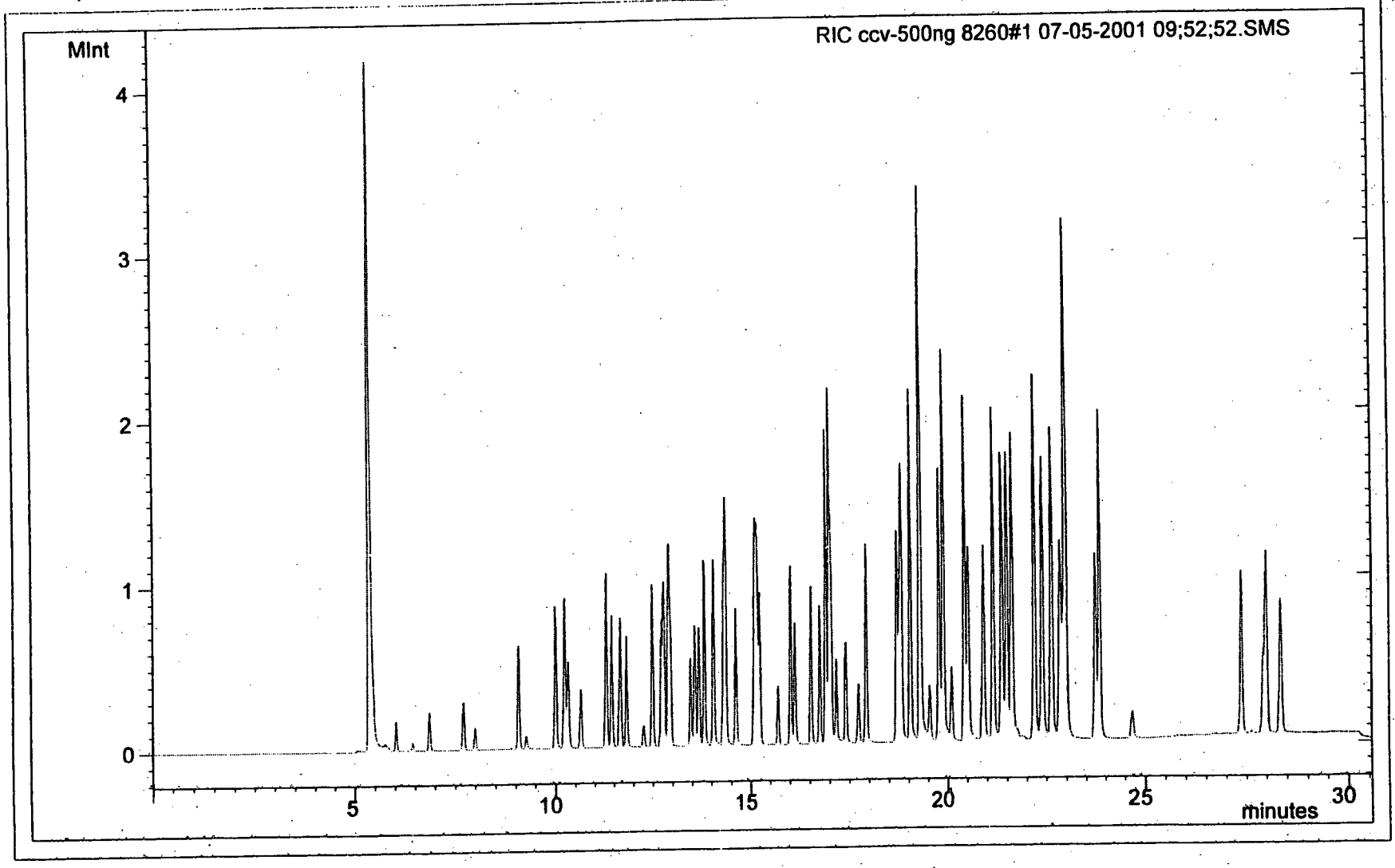
07-14

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.SMS
Acquisition Date: 07/05/2001 09:52
EPA Sample No: ccv-500ng
Lab Sample ID: ccv-500ng 8260#1

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000074

SUPPORTING DATA

8270 Saturn 2000 VOA

Processed: 07/03/2001 02:00

Sample: LS-WA-1-070301.60 Acq Date : 07/03/01 01:30:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

\data\200107\070301\ls-wa-1-070301.60 07-03-2001 01;30;09.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.472	Pentafluorobenzene	IS 168	325601	250.000	250.000	ug/L	ISA Pass
2	14.634	1,4-Difluorobenzene	IS 114	669731	250.000	250.000	ug/L	ISA Pass
3	18.783	Chlorobenzene-d5	IS 117	650641	250.000	250.000	ug/L	ISA Pass
4	22.935	1,4-Dichlorobenzene-d4	IS 152	255824	250.000	250.000	ug/L	ISA Pass
26	12.962	Dibromofluoromethane(surr	SU 113	537883	485.068	485.07	ug/L	*******% Pass
30	13.586	D4-1,2-Dichloroethane (su	SU 102	47512	459.487	459.49	ug/L	91.9% Pass
38	16.919	Toluene-d8 (surr)	SU 98	1932842	493.885	493.89	ug/L	98.8% Pass
56	20.544	4-Bromofluorobenzene (sur	SU 95	891965	501.543	501.54	ug/L	100.3% Pass
5	06.031	Dichlorodifluoromethane	85	930	0.866	0.09	ug/L	
6	06.527	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.858	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.719	Bromomethane	94	979	1.010	0.10	ug/L	
9	08.009	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.092	Trichloromonofluoromethan	101	695	0.441	0.04	ug/L	
11	10.014	1,1-Dichloroethene	96	398509	461.409	46.14	ug/L	
12	10.659	Carbon disulfide	76	1250	0.794	0.08	ug/L	
13	10.331	Trichlorotrifluoroethane	101	418	0.772	0.08	ug/L	
14	10.239	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.302	Acetone	43	12717	62.725	6.27	ug/L	
16	11.305	trans-1,2-Dichloroethene	96	589	0.576	0.06	ug/L	
17	11.453	MTBE	73	1063	0.634	0.06	ug/L	
18	11.682	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.836	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.277	2-Butanone	72	231	9.248	0.92	ug/L	
21	12.507	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.883	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.731	Bromochloromethane	128	245	0.425	0.04	ug/L	
24	12.795	Chloroform	83	0	0.000	0.00	ug/L	
25	14.323	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.835	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.071	1,1-Dichloropropene	75	435	0.407	0.04	ug/L	
29	14.373	Benzene	78	1241005	457.653	45.77	ug/L	
31	13.690	1,2-Dichloroethane	62	7319	3.067	0.31	ug/L	
32	15.180	Trichloroethene	95	569886	451.234	45.12	ug/L	
33	15.111	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.313	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.057	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.587	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.012	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.009	Toluene	92	960690	454.585	45.46	ug/L	
40	17.936	Tetrachloroethene	164	6655	11.794	1.18	ug/L	
41	16.133	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.552	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.763	1,1,2-Trichloroethane	83	168	0.264	0.03	ug/L	
44	17.404	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.124	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.737	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.203	2-Hexanone	43	1752	3.498	0.35	ug/L	
48	18.830	Chlorobenzene	112	1217230	460.820	46.08	ug/L	
49	19.042	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.714	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.312	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.901	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.804	Styrene	104	0	0.000	0.00	ug/L	
54	19.560	Bromoform	173	0	0.000	0.00	ug/L	
55	20.448	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.923	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.182	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.913	1,1,2,2-Tetrachloroethane	83+85	649	0.454	0.05	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.125	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.655	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.212	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.426	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.483	sec-Butylbenzene	105	309	0.067	0.01	ug/L	
67	22.980	Isopropyltoluene	119	10890	2.922	0.29	ug/L	
68	22.738	1,3-Dichlorobenzene	146	409	0.269	0.03	ug/L	
69	22.863	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.866	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.757	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.597	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.002	Hexachlorobutadiene	225	8283	11.051	1.11	ug/L	
74	27.375	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.933	Naphthalene	128	15122	11.095	1.11	ug/L	
76	28.346	1,2,3-Trichlorobenzene	182	14261	19.195	1.92	ug/L	

in LMS 07/03/01

07-16-01

000076

CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ls-wa-1-070301.60 07-03-2001 01;30;09.SMS

Acquisition Date: 07/03/2001 13:30

EPA Sample No: ls-wa-1-07

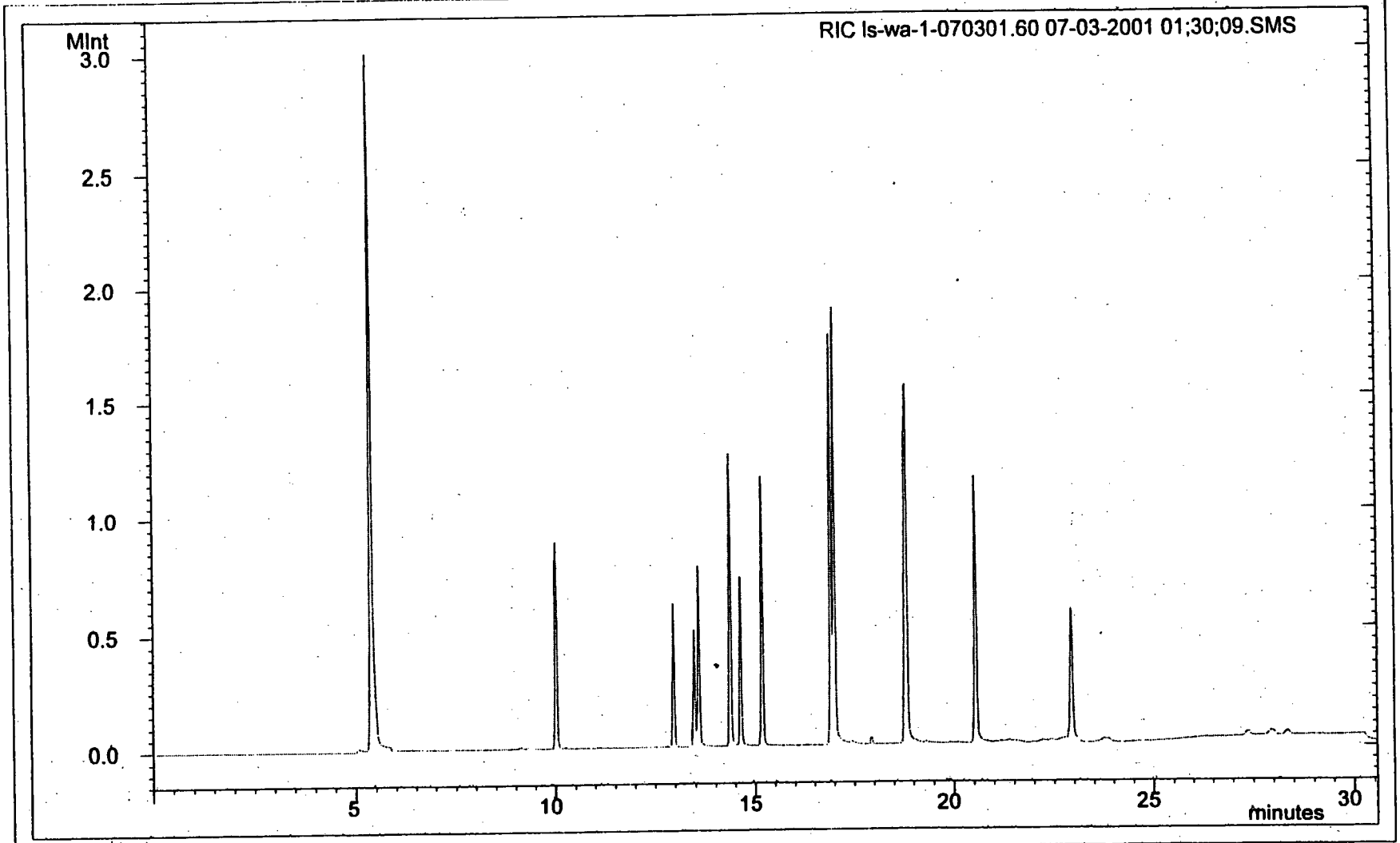
Lab Sample ID: ls-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved_____ Date_____

000077

8270 Saturn 2000 VOA

Processed: 07/03/2001 02:34

Sample: LD-WA-1-070301.60
Comment: 2001/07/03-01.60

Acq Date : 07/03/01 02:04:00 Dilution: 1
Vial: Sample VolWt: 10.0000

d:\data\200107\070301\ld-wa-1-070301.60 07-03-2001 02;04;13.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.470	Pentafluorobenzene	IS 168	314454	250.000	250.000	ug/L	ISA Pass
2	14.629	1,4-Difluorobenzene	IS 114	669264	250.000	250.000	ug/L	ISA Pass
3	18.779	Chlorobenzene-d5	IS 117	644545	250.000	250.000	ug/L	ISA Pass
4	22.933	1,4-Dichlorobenzene-d4	IS 152	255515	250.000	250.000	ug/L	ISA Pass
26	12.959	Dibromofluoromethane(surr	SU 113	557986	521.035	521.04	ug/L	*******% Pass
30	13.579	D4-1,2-Dichloroethane (su	SU 102	50303	503.728	503.73	ug/L	100.7% Pass
38	16.916	Toluene-dB (surr)	SU 98	1920106	490.972	490.97	ug/L	98.2% Pass
56	20.540	4-Bromofluorobenzene (sur	SU 95	898495	505.826	505.83	ug/L	101.2% Pass
5	06.018	Dichlorodifluoromethane	85	481	0.464	0.05	ug/L	
6	06.621	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.881	Vinyl Chloride	62	131	0.158	0.02	ug/L	
8	07.700	Bromomethane	94	721	0.770	0.08	ug/L	
9	07.921	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.076	Trichloromonofluoromethan	101	149	0.098	0.01	ug/L	
11	10.005	1,1-Dichloroethene	96	429884	515.380	51.54	ug/L	
12	10.646	Carbon disulfide	76	787	0.518	0.05	ug/L	
13	10.332	Trichlorotrifluoroethane	101	152	0.291	0.03	ug/L	
14	10.241	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.295	Acetone	43	13431	68.595	6.86	ug/L	
16	11.285	trans-1,2-Dichloroethene	96	112	0.113	0.01	ug/L	
17	11.448	MTBE	73	896	0.553	0.06	ug/L	
18	11.690	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.835	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.271	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.512	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.856	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.718	Bromochloromethane	128	133	0.240	0.02	ug/L	
24	12.789	Chloroform	83	0	0.000	0.00	ug/L	
25	14.303	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.818	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.076	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.368	Benzene	78	1339340	494.261	49.43	ug/L	
31	13.686	1,2-Dichloroethane	62	6969	2.922	0.29	ug/L	
32	15.178	Trichloroethene	95	608324	482.005	48.20	ug/L	
33	14.961	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.071	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.440	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.539	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.037	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.007	Toluene	92	1008906	477.733	47.77	ug/L	
40	17.931	Tetrachloroethene	164	3651	6.531	0.65	ug/L	
41	16.148	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.417	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.753	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.339	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.050	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.731	1,2-Dibromoethane	107	256	0.281	0.03	ug/L	
47	17.204	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.828	Chlorobenzene	112	1310715	500.906	50.09	ug/L	
49	19.055	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.715	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.312	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.909	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.800	Styrene	104	0	0.000	0.00	ug/L	
54	19.567	Bromoform	173	0	0.000	0.00	ug/L	
55	20.448	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.918	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.161	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.907	1,1,2,2-Tetrachloroethane	83+85	285	0.199	0.02	ug/L	
60	21.392	2-Chlorotoluene	126	122	0.135	0.01	ug/L	
61	20.161	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.634	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.232	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.418	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.651	sec-Butylbenzene	105	1572	0.341	0.03	ug/L	
67	23.085	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.873	1,3-Dichlorobenzene	146	3628	2.393	0.24	ug/L	
69	22.883	1,4-Dichlorobenzene	146	1479	1.095	0.11	ug/L	
70	23.884	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.771	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.725	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.995	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.393	1,2,4-Trichlorobenzene	182	3774	4.438	0.44	ug/L	
75	27.937	Naphthalene	128	0	0.000	0.00	ug/L	
76	28.366	1,2,3-Trichlorobenzene	182	5018	6.762	0.68	ug/L	

in LIMS 07/03/01 (A)

07-16-01

000078

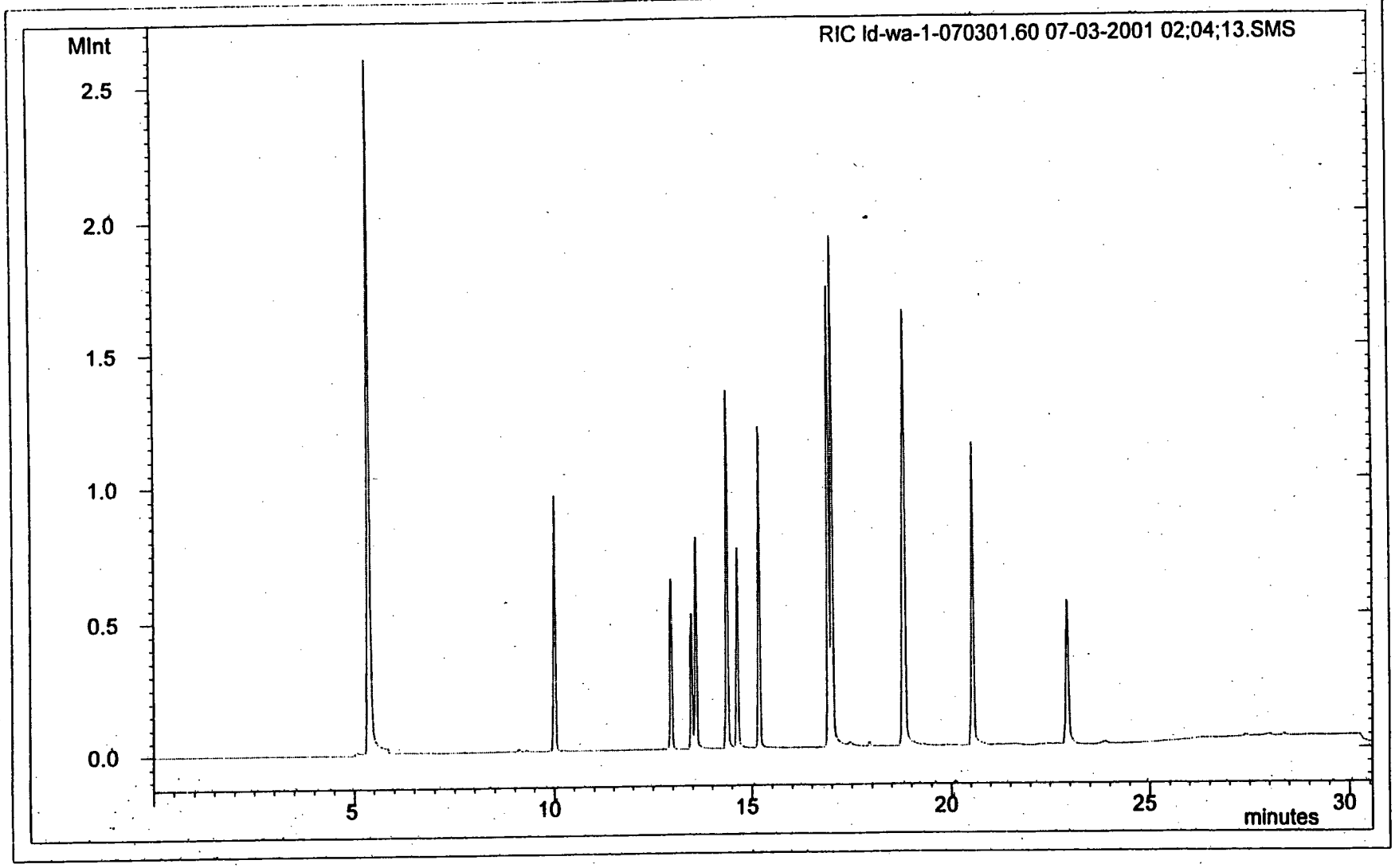
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ld-wa-1-070301.60 07-03-2001 02;04;13.SMS
Acquisition Date: 07/03/2001 14:04
EPA Sample No: ld-wa-1-07
Lab Sample ID: ld-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000079

8270 Saturn 2000 VOA

Processed: 07/03/2001 03:08

Sample: MB-WA-1-070301.60

Acq Date : 07/03/01 02:38:00 Dilution: 1

Comment: 2001/07/03-01.60

Vial:

Sample VolWt: 10.0000

d:\data\200107\070301\mb-wa-1-070301.60 07-03-2001 02;38;22.SMS

D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.467	Pentafluorobenzene	IS 168	331902	250.000	250.000	ug/L	ISA Pass
2	14.629	1,4-Difluorobenzene	IS 114	672696	250.000	250.000	ug/L	ISA Pass
3	18.778	Chlorobenzene-d5	IS 117	630406	250.000	250.000	ug/L	ISA Pass
4	22.935	1,4-Dichlorobenzene-d4	IS 152	259094	250.000	250.000	ug/L	ISA Pass
26	12.958	Dibromofluoromethane(surr	SU 113	545318	482.437	482.44	ug/L	*******% Pass
30	13.577	D4-1,2-Dichloroethane (su	SU 102	46498	441.139	441.14	ug/L	88.2% Pass
38	16.916	Toluene-d8 (surr)	SU 98	1960882	498.841	498.84	ug/L	99.8% Pass
56	20.538	4-Bromofluorobenzene (sur	SU 95	879695	488.401	488.40	ug/L	97.7% Pass
5	06.014	Dichlorodifluoromethane	85	567	0.517	0.05	ug/L	
6	06.346	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.904	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.714	Bromomethane	94	435	0.440	0.04	ug/L	
9	08.152	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.066	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.007	1,1-Dichloroethene	96	259	0.294	0.03	ug/L	
12	10.592	Carbon disulfide	76	0	0.000	0.00	ug/L	
13	10.329	Trichlorotrifluoroethane	101	192	0.347	0.03	ug/L	
14	10.236	Methylene chloride	84	2535	2.721	0.27	ug/L	
15	09.298	Acetone	43	13616	65.883	6.59 <PQL	ug/L	
16	11.463	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.440	MTBE	73	0	0.000	0.00	ug/L	
18	11.615	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.907	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.282	2-Butanone	72	286	11.205	1.12 <PQL	ug/L	
21	12.665	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.745	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.717	Bromochloromethane	128	115	0.195	0.02	ug/L	
24	12.791	Chloroform	83	0	0.000	0.00	ug/L	
25	14.505	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.823	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.237	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.358	Benzene	78	0	0.000	0.00	ug/L	
31	13.684	1,2-Dichloroethane	62	6361	2.654	0.27	ug/L	
32	15.172	Trichloroethene	95	0	0.000	0.00	ug/L	
33	15.050	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.970	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.217	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.576	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.914	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.011	Toluene	92	0	0.000	0.00	ug/L	
40	17.952	Tetrachloroethene	164	0	0.000	0.00	ug/L	
41	16.158	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.739	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.772	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.324	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.943	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.666	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.197	2-Hexanone	43	711	1.465	0.15	ug/L	
48	18.948	Chlorobenzene	112	252	0.098	0.01	ug/L	
49	19.266	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.696	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.310	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.896	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.764	Styrene	104	0	0.000	0.00	ug/L	
54	19.529	Bromoform	173	0	0.000	0.00	ug/L	
55	20.444	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.972	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.209	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.883	1,1,2,2-Tetrachloroethane	83+85	208	0.144	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.203	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.621	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.274	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.451	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.726	sec-Butylbenzene	105	256	0.055	0.01	ug/L	
67	23.080	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.822	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.880	1,4-Dichlorobenzene	146	810	0.591	0.06	ug/L	
70	23.875	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.778	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.700	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.029	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.388	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.942	Naphthalene	128	6606	4.785	0.48	ug/L	
76	28.360	1,2,3-Trichlorobenzene	182	2199	2.922	0.29	ug/L	

in LIMS 07/05/01

07/6-01

000080

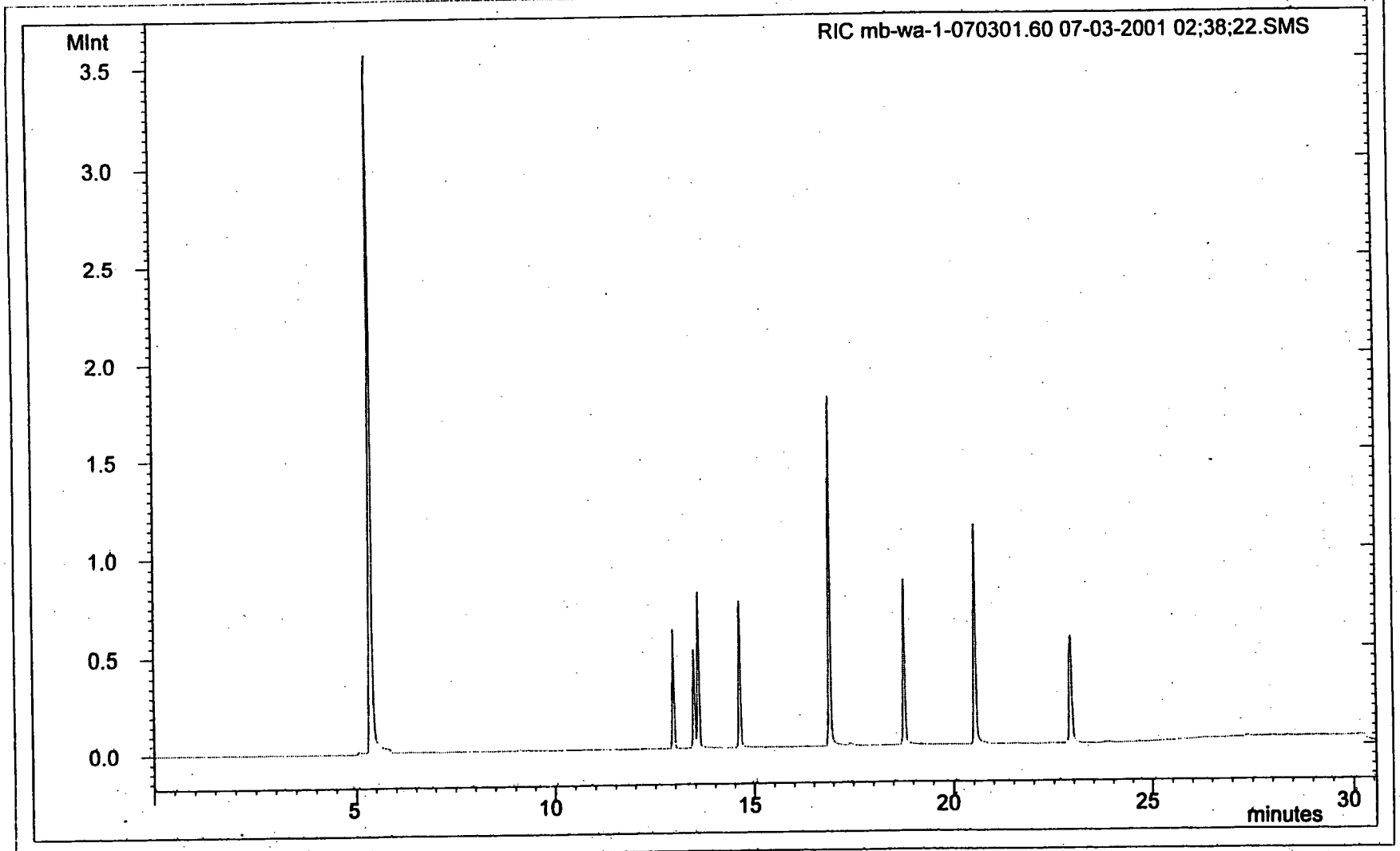
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\mb-wa-1-070301.60 07-03-2001 02;38;22.SM
Acquisition Date: 07/03/2001 14:38
EPA Sample No: mb-wa-1-07
Lab Sample ID: mb-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000081

8270 Saturn 2000 VOA

Processed: 07/05/2001 11:11

Sample: LS-WA-1-070501.60 Acq Date : 07/05/01 10:40:00 Dilution: 1

Comment: 2001/07/05-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070501\ls-wa-1-070501.60 07-05-2001 10;40;47.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.460	Pentafluorobenzene	IS 168	346862	250.000	250.000	ug/L	ISA Pass
2	14.621	1,4-Difluorobenzene	IS 114	721825	250.000	250.000	ug/L	ISA Pass
3	18.769	Chlorobenzene-d5	IS 117	663681	250.000	250.000	ug/L	ISA Pass
4	22.919	1,4-Dichlorobenzene-d4	IS 152	273622	250.000	250.000	ug/L	ISA Pass
26	12.951	Dibromofluoromethane(surr	SU 113	588926	498.545	498.55	ug/L	*******% Pass
30	13.570	D4-1,2-Dichloroethane (su	SU 102	49932	453.291	453.29	ug/L	90.7% Pass
38	16.908	Toluene-d8 (surr)	SU 98	2085186	494.359	494.36	ug/L	98.9% Pass
56	20.529	4-Bromofluorobenzene (sur	SU 95	929402	488.601	488.60	ug/L	97.7% Pass
5	06.022	Dichlorodifluoromethane	85	684	0.597	0.06	ug/L	
6	06.552	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.969	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.709	Bromomethane	94	884	0.856	0.09	ug/L	
9	07.867	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.078	Trichloromonofluoromethan	101	561	0.334	0.03	ug/L	
11	10.002	1,1-Dichloroethene	96	431358	468.830	46.88	ug/L	
12	10.638	Carbon disulfide	76	1325	0.790	0.08	ug/L	
13	10.320	Trichlorotrifluoroethane	101	438	0.759	0.08	ug/L	
14	10.234	Methylene chloride	84	1435	1.474	0.15	ug/L	
15	09.298	Acetone	43	8959	41.480	4.15	ug/L	
16	11.297	trans-1,2-Dichloroethene	96	365	0.336	0.03	ug/L	
17	11.454	MTBE	73	910	0.510	0.05	ug/L	
18	11.675	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.831	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.274	2-Butanone	72	259	9.705	0.97	ug/L	
21	12.490	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.058	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.717	Bromochloromethane	128	119	0.195	0.02	ug/L	
24	12.780	Chloroform	83	0	0.000	0.00	ug/L	
25	14.117	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.820	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.059	1,1-Dichloropropene	75	340	0.295	0.03	ug/L	
29	14.358	Benzene	78	1354680	463.519	46.35	ug/L	
31	13.677	1,2-Dichloroethane	62	6962	2.707	0.27	ug/L	
32	15.169	Trichloroethene	95	630182	462.965	46.30	ug/L	
33	15.104	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.931	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.040	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.527	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.013	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.998	Toluene	92	1084575	476.167	47.62	ug/L	
40	17.921	Tetrachloroethene	164	4781	8.306	0.83	ug/L	
41	16.148	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.606	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.747	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.592	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.064	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.751	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.177	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.816	Chlorobenzene	112	1348961	500.657	50.07	ug/L	
49	19.060	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	16.575	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.296	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.890	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.788	Styrene	104	0	0.000	0.00	ug/L	
54	19.566	Bromoform	173	0	0.000	0.00	ug/L	
55	20.445	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.908	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.272	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.896	1,1,2,2-Tetrachloroethane	83+85	335	0.219	0.02	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.120	1,2,3-Trichloropropane	75	330	0.481	0.05	ug/L	
62	21.634	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.296	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.419	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.639	sec-Butylbenzene	105	2688	0.545	0.05	ug/L	
67	22.987	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.866	1,3-Dichlorobenzene	146	1265	0.779	0.08	ug/L	
69	22.815	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.855	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.767	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.704	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.958	Hexachlorobutadiene	225	11060	13.796	1.38	ug/L	
74	27.330	1,2,4-Trichlorobenzene	182	9271	10.181	1.02	ug/L	
75	27.900	Naphthalene	128	15394	10.560	1.06	ug/L	
76	28.322	1,2,3-Trichlorobenzene	182	8631	11.113	1.11	ug/L	

TU UMS 07/05/01

07-6-01

000082

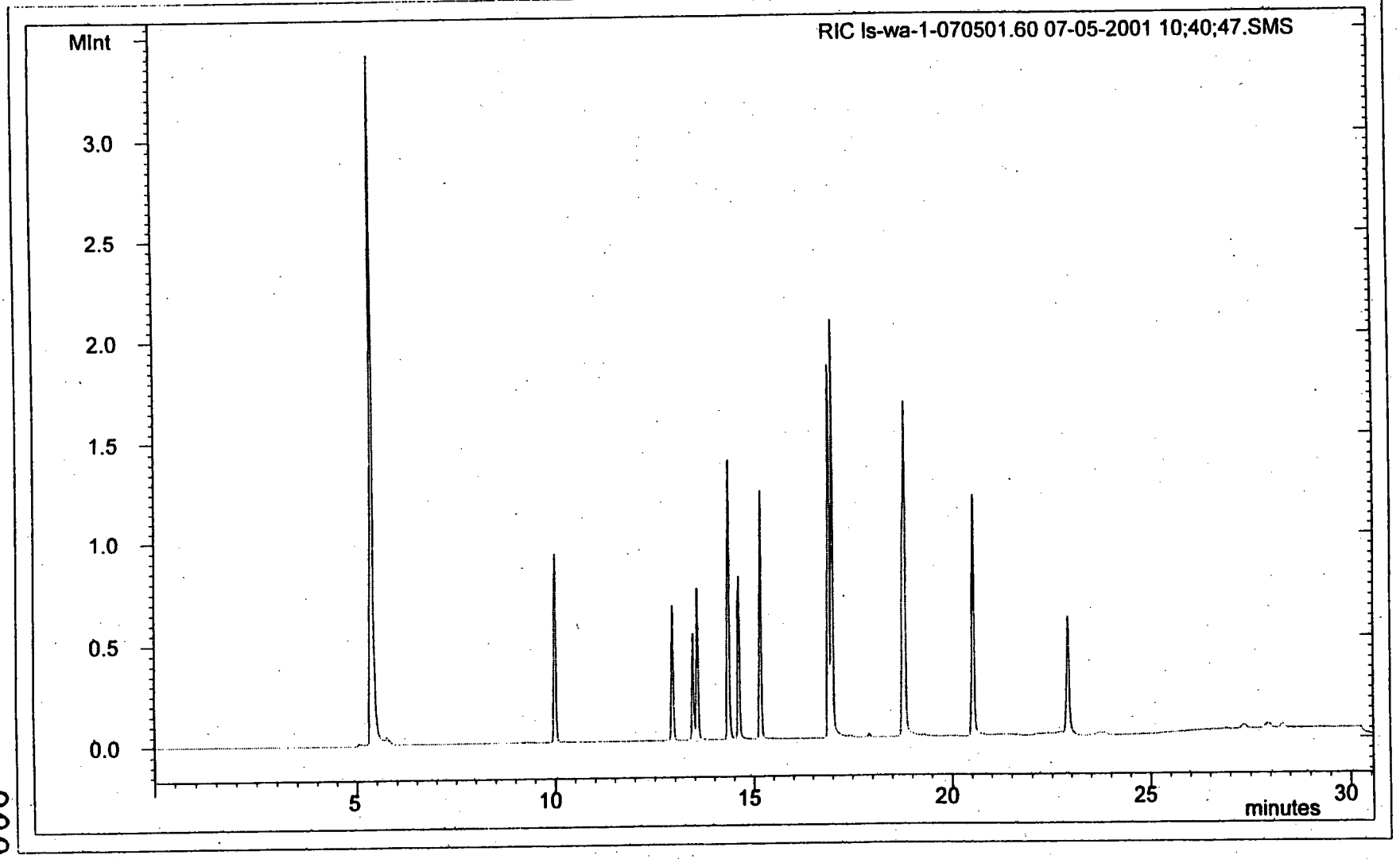
CCV run date: 2001/07/05 09:52:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\ls-wa-1-070501.60 07-05-2001 10;40;47.SMS
Acquisition Date: 07/05/2001 10:40
EPA Sample No: ls-wa-1-07
Lab Sample ID: ls-wa-1-070501.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000083

8270 Saturn 2000 VOA Processed: 07/05/2001 11:45

Sample: LD-WA-1-070501.60 Acq Date : 07/05/01 11:14:00 Dilution: 1

Comment: 2001/07/05-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070501\ld-wa-1-070501.60 07-05-2001 11:14:33.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.451	Pentafluorobenzene	IS 168	348200	250.000	250.000	ug/L	ISA Pass
2	14.611	1,4-Difluorobenzene	IS 114	711885	250.000	250.000	ug/L	ISA Pass
3	18.763	Chlorobenzene-d5	IS 117	655804	250.000	250.000	ug/L	ISA Pass
4	22.909	1,4-Dichlorobenzene-d4	IS 152	268079	250.000	250.000	ug/L	ISA Pass
26	12.940	Dibromofluoromethane(surr	SU 113	590738	498.158	498.16	ug/L	*******% Pass
30	13.563	D4-1,2-Dichloroethane (su	SU 102	49713	449.575	449.58	ug/L	89.9% Pass
38	16.899	Toluene-d8 (surr)	SU 98	2140704	514.608	514.61	ug/L	102.9% Pass
56	20.521	4-Bromofluorobenzene (sur	SU 95	961472	515.914	515.91	ug/L	103.2% Pass
5	06.002	Dichlorodifluoromethane	85	439	0.382	0.04	ug/L	
6	06.618	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.652	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.698	Bromomethane	94	585	0.565	0.06	ug/L	
9	07.948	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.082	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	09.989	1,1-Dichloroethene	96	434439	470.364	47.04	ug/L	
12	10.628	Carbon disulfide	76	871	0.518	0.05	ug/L	
13	10.312	Trichlorotrifluoroethane	101	131	0.226	0.02	ug/L	
14	10.213	Methylene chloride	84	1454	1.488	0.15	ug/L	
15	09.284	Acetone	43	9743	44.937	4.49	ug/L	
16	11.288	trans-1,2-Dichloroethene	96	103	0.094	0.01	ug/L	
17	11.443	MTBE	73	868	0.484	0.05	ug/L	
18	11.655	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.812	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.263	2-Butanone	72	323	12.084	1.21	ug/L	
21	12.480	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.858	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.690	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.768	Chloroform	83	0	0.000	0.00	ug/L	
25	14.111	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.798	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.191	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.350	Benzene	78	1412009	489.881	48.99	ug/L	
31	13.668	1,2-Dichloroethane	62	6702	2.642	0.26	ug/L	
32	15.160	Trichloroethene	95	640358	477.010	47.70	ug/L	
33	15.090	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.047	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.404	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.696	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.149	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.987	Toluene	92	1079304	480.469	48.05	ug/L	
40	17.912	Tetrachloroethene	164	2601	4.574	0.46	ug/L	
41	16.126	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.541	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.742	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.409	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.016	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.732	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.162	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.809	Chlorobenzene	112	1372170	515.388	51.54	ug/L	
49	19.041	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.571	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.290	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.881	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.761	Styrene	104	0	0.000	0.00	ug/L	
54	19.543	Bromoform	173	0	0.000	0.00	ug/L	
55	20.432	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.937	Bromobenzene	156	181	0.139	0.01	ug/L	
58	21.136	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.865	1,1,2,2-Tetrachloroethane	83+85	263	0.176	0.02	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.311	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.634	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.205	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.404	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.630	sec-Butylbenzene	105	2695	0.558	0.06	ug/L	
67	23.047	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.874	1,3-Dichlorobenzene	146	4311	2.709	0.27	ug/L	
69	22.811	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.856	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.740	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.712	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.994	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.384	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.912	Naphthalene	128	9341	6.541	0.65	ug/L	
76	28.345	1,2,3-Trichlorobenzene	182	4897	6.290	0.63	ug/L	

TH UMS 07/05/01 (M)

07-16-01

000084

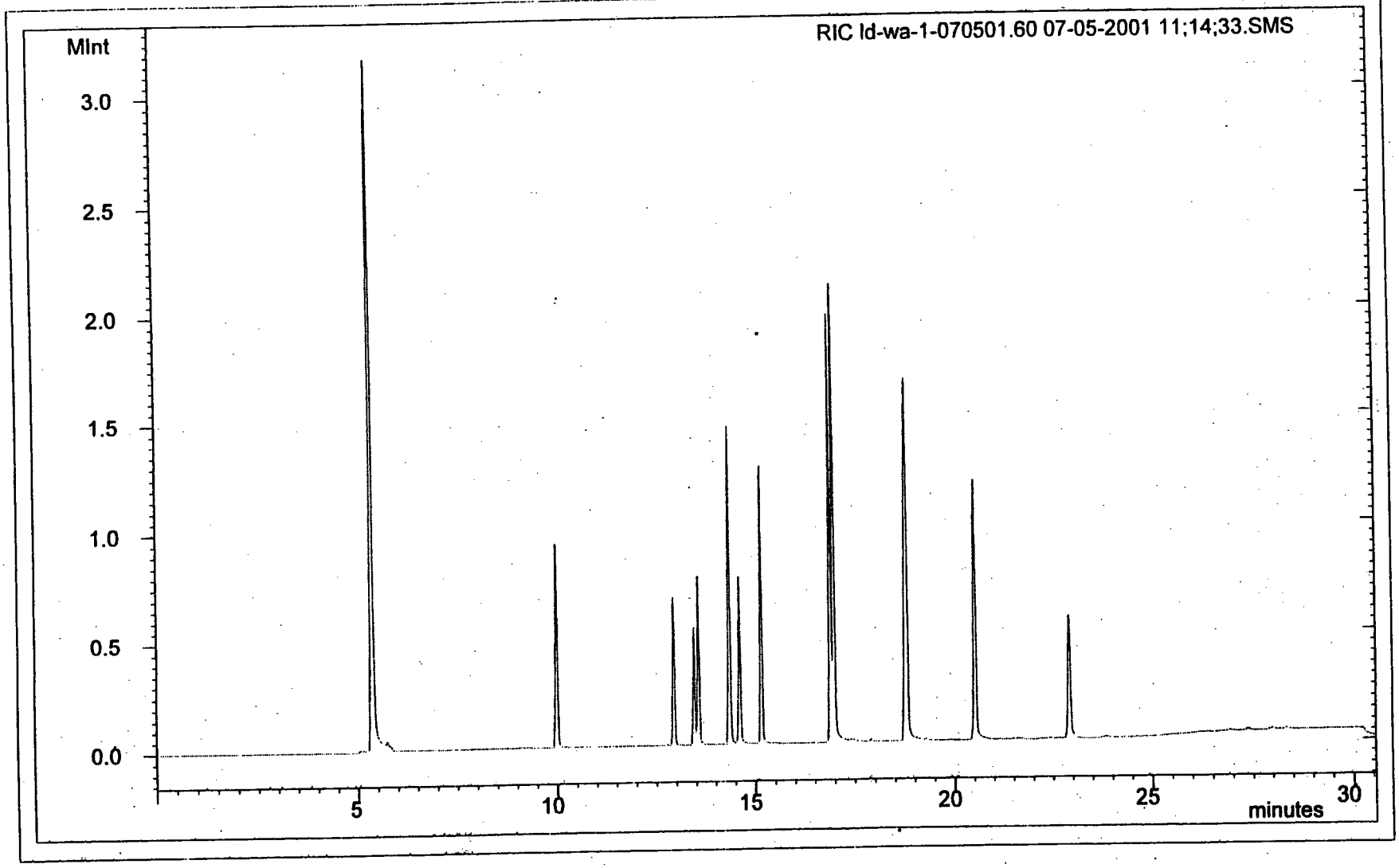
CCV run date: 2001/07/05 09:52:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\ld-wa-1-070501.60 07-05-2001 11;14;33.SMS
Acquisition Date: 07/05/2001 11:14
EPA Sample No: ld-wa-1-07
Lab Sample ID: ld-wa-1-070501.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000085

8270 Saturn 2000 VOA

Processed: 07/05/2001 12:19

Sample: MB-WA-1-070501.60
Comment: 2001/07/05-01.60

Acq Date : 07/05/01 11:48:00
Vial:

Dilution: 1
Sample VolWt: 10.0000

d:\data\200107\070501\mb-wa-1-070501.60 07-05-2001 11;48;24.SMS

D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.454	Pentafluorobenzene	IS 168	364624	250.000	250.000	ug/L	ISA Pass
2	14.616	1,4-Difluorobenzene	IS 114	745715	250.000	250.000	ug/L	ISA Pass
3	18.766	Chlorobenzene-d5	IS 117	662253	250.000	250.000	ug/L	ISA Pass
4	22.915	1,4-Dichlorobenzene-d4	IS 152	265168	250.000	250.000	ug/L	ISA Pass
26	12.942	Dibromofluoromethane(surr	SU 113	614019	494.468	494.47	ug/L	*******% Pass
30	13.569	D4-1,2-Dichloroethane (su	SU 102	48344	417.497	417.50	ug/L	83.5% Pass
38	16.903	Toluene-d8 (surr)	SU 98	2206933	506.461	506.46	ug/L	101.3% Pass
56	20.524	4-Bromofluorobenzene (sur	SU 95	976159	529.543	529.54	ug/L	105.9% Pass
5	06.008	Dichlorodifluoromethane	85	498	0.414	0.04	ug/L	
6	06.224	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.745	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.708	Bromomethane	94	558	0.515	0.05	ug/L	
9	07.897	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.053	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.002	1,1-Dichloroethene	96	276	0.285	0.03	ug/L	
12	10.448	Carbon disulfide	76	0	0.000	0.00	ug/L	
13	10.281	Trichlorotrifluoroethane	101	0	0.000	0.00	ug/L	
14	10.223	Methylene chloride	84	1275	1.246	0.12	ug/L	
15	09.287	Acetone	43	9752	42.953	4.30	ug/L	
16	11.285	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.450	MTBE	73	0	0.000	0.00	ug/L	
18	11.737	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.994	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.263	2-Butanone	72	345	12.307	1.23	ug/L	
21	12.648	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.804	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.692	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.781	Chloroform	83	0	0.000	0.00	ug/L	
25	14.271	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.756	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.037	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.358	Benzene	78	0	0.000	0.00	ug/L	
31	13.669	1,2-Dichloroethane	62	6821	2.567	0.26	ug/L	
32	15.166	Trichloroethene	95	0	0.000	0.00	ug/L	
33	15.300	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.935	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.233	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.524	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.039	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.001	Toluene	92	0	0.000	0.00	ug/L	
40	17.921	Tetrachloroethene	164	2580	4.492	0.45	ug/L	
41	16.215	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.461	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.787	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.301	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.001	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.689	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.174	2-Hexanone	43	883	1.733	0.17	ug/L	
48	18.696	Chlorobenzene	112	146	0.054	0.01	ug/L	
49	19.261	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.594	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.284	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.899	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.799	Styrene	104	0	0.000	0.00	ug/L	
54	19.513	Bromoform	173	0	0.000	0.00	ug/L	
55	20.437	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.998	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.150	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.899	1,1,2,2-Tetrachloroethane	83+85	0	0.000	0.00	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.327	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.657	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.229	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.413	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.622	sec-Butylbenzene	105	1318	0.276	0.03	ug/L	
67	23.091	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.831	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	23.091	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.874	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.775	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.712	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.989	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.366	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.924	Naphthalene	128	6635	4.696	0.47	ug/L	
76	28.352	1,2,3-Trichlorobenzene	182	4517	5.865	0.59	ug/L	

JWMS
07/05/01

T
07-16-01

000086

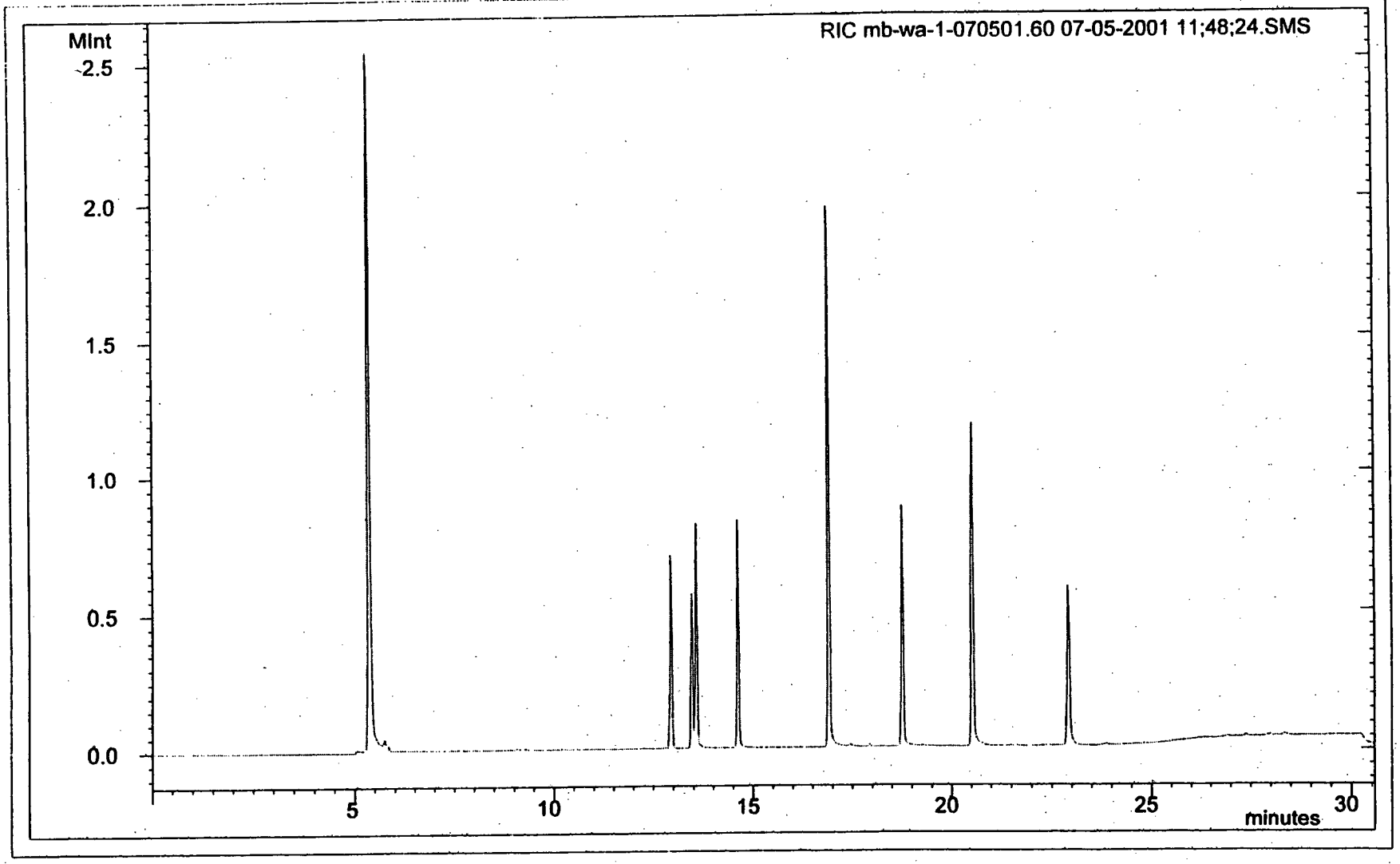
CCV run date: 2001/07/05 09:52:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\mb-wa-1-070501.60 07-05-2001 11;48;24.SM
Acquisition Date: 07/05/2001 11:48
EPA Sample No: mb-wa-1-07
Lab Sample ID: mb-wa-1-070501.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000087

8270 Saturn 2000 VOA

Processed: 07/05/2001 01:15

Sample: MS-WA-1-06-0498-001 Acq Date : 07/05/01 12:44:00 Dilution: 1

Comment: 2001/07/05-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070501\ms-wa-1-06-0498-001 07-05-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound		Ion	Area	Amount	Conc.	Unit	
1	13.464	Pentafluorobenzene	IS	168	351256	250.000	250.000	ug/L	ISA Pass
2	14.625	1,4-Difluorobenzene	IS	114	709896	250.000	250.000	ug/L	ISA Pass
3	18.776	Chlorobenzene-d5	IS	117	616830	250.000	250.000	ug/L	ISA Pass
4	22.926	1,4-Dichlorobenzene-d4	IS	152	251349	250.000	250.000	ug/L	ISA Pass
26	12.955	Dibromofluoromethane(surr	SU	113	547305	457.515	457.52	ug/L	*******% Pass
30	13.579	D4-1,2-Dichloroethane (su	SU	102	45664	409.357	409.36	ug/L	81.9% Pass
38	16.912	Toluene-d8 (surr)	SU	98	2019596	486.854	486.85	ug/L	97.4% Pass
56	20.535	4-Bromofluorobenzene (sur	SU	95	878272	502.637	502.64	ug/L	100.5% Pass
5	06.024	Dichlorodifluoromethane		85	618	0.533	0.05	ug/L	
6	06.295	Chloromethane		47+49	0	0.000	0.00	ug/L	
7	07.003	Vinyl Chloride		62	0	0.000	0.00	ug/L	
8	07.710	Bromomethane		94	809	0.774	0.08	ug/L	
9	07.871	Chloroethane		49	0	0.000	0.00	ug/L	
10	09.084	Trichloromonofluoromethan		101	240	0.141	0.01	ug/L	
11	10.004	1,1-Dichloroethene		96	459631	493.309	49.33	ug/L	
12	10.647	Carbon disulfide		76	1229	0.724	0.07	ug/L	
13	10.322	Trichlorotrifluoroethane		101	365	0.625	0.06	ug/L	
14	10.239	Methylene chloride		84	0	0.000	0.00	ug/L	
15	09.326	Acetone		43	6076	27.780	2.78	ug/L	
16	11.305	trans-1,2-Dichloroethene		96	274	0.249	0.02	ug/L	
17	11.461	MTBE		73	517	0.286	0.03	ug/L	
18	11.672	1,1-Dichlorethane		63	0	0.000	0.00	ug/L	
19	11.842	Vinyl Acetate		43	0	0.000	0.00	ug/L	
20	12.299	2-Butanone		72	0	0.000	0.00	ug/L	
21	12.488	cis-1,2-Dichloroethene		96	0	0.000	0.00	ug/L	
22	12.889	2,2-Dichloropropane		77	0	0.000	0.00	ug/L	
23	12.732	Bromochloromethane		128	0	0.000	0.00	ug/L	
24	12.787	Chloroform		83	19629	7.457	0.75	ug/L	
25	14.315	Carbon tetrachloride		117	0	0.000	0.00	ug/L	
27	13.824	1,1,1-Trichloroethane		97	10249	4.529	0.45	ug/L	
28	14.070	1,1-Dichloropropene		75	0	0.000	0.00	ug/L	
29	14.366	Benzene		78	1440230	501.072	50.11	ug/L	
31	13.683	1,2-Dichloroethane		62	5805	2.295	0.23	ug/L	
32	15.172	Trichloroethene		95	965428	721.172	72.12	ug/L	
33	15.086	Dibromomethane		93	0	0.000	0.00	ug/L	
34	14.942	1,2-Dichloropropane		63	0	0.000	0.00	ug/L	
35	15.177	Bromodichloromethane		83	0	0.000	0.00	ug/L	
36	15.512	Chloroethylvinylether		63	0	0.000	0.00	ug/L	
37	16.017	cis-1,3-Dichloropropene		75	0	0.000	0.00	ug/L	
39	17.003	Toluene		92	1110760	495.858	49.59	ug/L	
40	17.927	Tetrachloroethene		164	66443	124.211	12.42	ug/L	
41	16.150	4-Methyl-2-pentanone		100	0	0.000	0.00	ug/L	
42	16.560	trans-1,3-Dichloropropene		75	0	0.000	0.00	ug/L	
43	16.762	1,1,2-Trichloroethane		83	0	0.000	0.00	ug/L	
44	17.396	Dibromochloromethane		129	0	0.000	0.00	ug/L	
45	17.036	1,3-Dichloropropane		76	0	0.000	0.00	ug/L	
46	17.736	1,2-Dibromoethane		107	232	0.240	0.02	ug/L	
47	17.384	2-Hexanone		43	0	0.000	0.00	ug/L	
48	18.822	Chlorobenzene		112	1357404	542.056	54.21	ug/L	
49	19.056	Ethylbenzene		91	0	0.000	0.00	ug/L	
50	18.631	1,1,1,2-Tetrachloroethane		131	0	0.000	0.00	ug/L	
51	19.305	m,p-Xylene		106	0	0.000	0.00	ug/L	
52	19.893	o-Xylene		106	0	0.000	0.00	ug/L	
53	19.780	Styrene		104	0	0.000	0.00	ug/L	
54	19.561	Bromoform		173	0	0.000	0.00	ug/L	
55	20.444	Isopropyl benzene		105	0	0.000	0.00	ug/L	
57	20.928	Bromobenzene		156	0	0.000	0.00	ug/L	
58	21.170	n-Propylbenzene		91	0	0.000	0.00	ug/L	
59	19.893	1,1,2,2-Tetrachloroethane		83+85	190	0.136	0.01	ug/L	
60	21.389	2-Chlorotoluene		126			0.00	ug/L	
61	20.102	1,2,3-Trichloropropane		75	0	0.000	0.00	ug/L	
62	21.623	1,3,5-Trimethylbenzene		105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene		126			0.00	ug/L	
64	22.242	tert-Butylbenzene		119	0	0.000	0.00	ug/L	
65	22.401	1,2,4-Trimethylbenzene		105	0	0.000	0.00	ug/L	
66	22.655	sec-Butylbenzene		105	455	0.100	0.01	ug/L	
67	23.212	Isopropyltoluene		119	0	0.000	0.00	ug/L	
68	22.864	1,3-Dichlorobenzene		146	0	0.000	0.00	ug/L	
69	22.864	1,4-Dichlorobenzene		146	0	0.000	0.00	ug/L	
70	23.857	n-Butylbenzene		91	0	0.000	0.00	ug/L	
71	23.810	1,2-Dichlorobenzene		146	0	0.000	0.00	ug/L	
72	24.711	1,2-Dibromo-3-chloropropa		75	0	0.000	0.00	ug/L	
73	27.957	Hexachlorobutadiene		225	0	0.000	0.00	ug/L	
74	27.391	1,2,4-Trichlorobenzene		182	0	0.000	0.00	ug/L	
75	27.934	Naphthalene		128	0	0.000	0.00	ug/L	
76	28.338	1,2,3-Trichlorobenzene		182	3463	4.744	0.47	ug/L	

rerun
TKUMS
07/05/01
07-06-01

000088

CCV run date: 2001/07/05 09:52:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\ms-wa-1-06-0498-001 07-05-2001 12;44;28.S

Acquisition Date: 07/05/2001 12:44

EPA Sample No: ms-wa-1-06

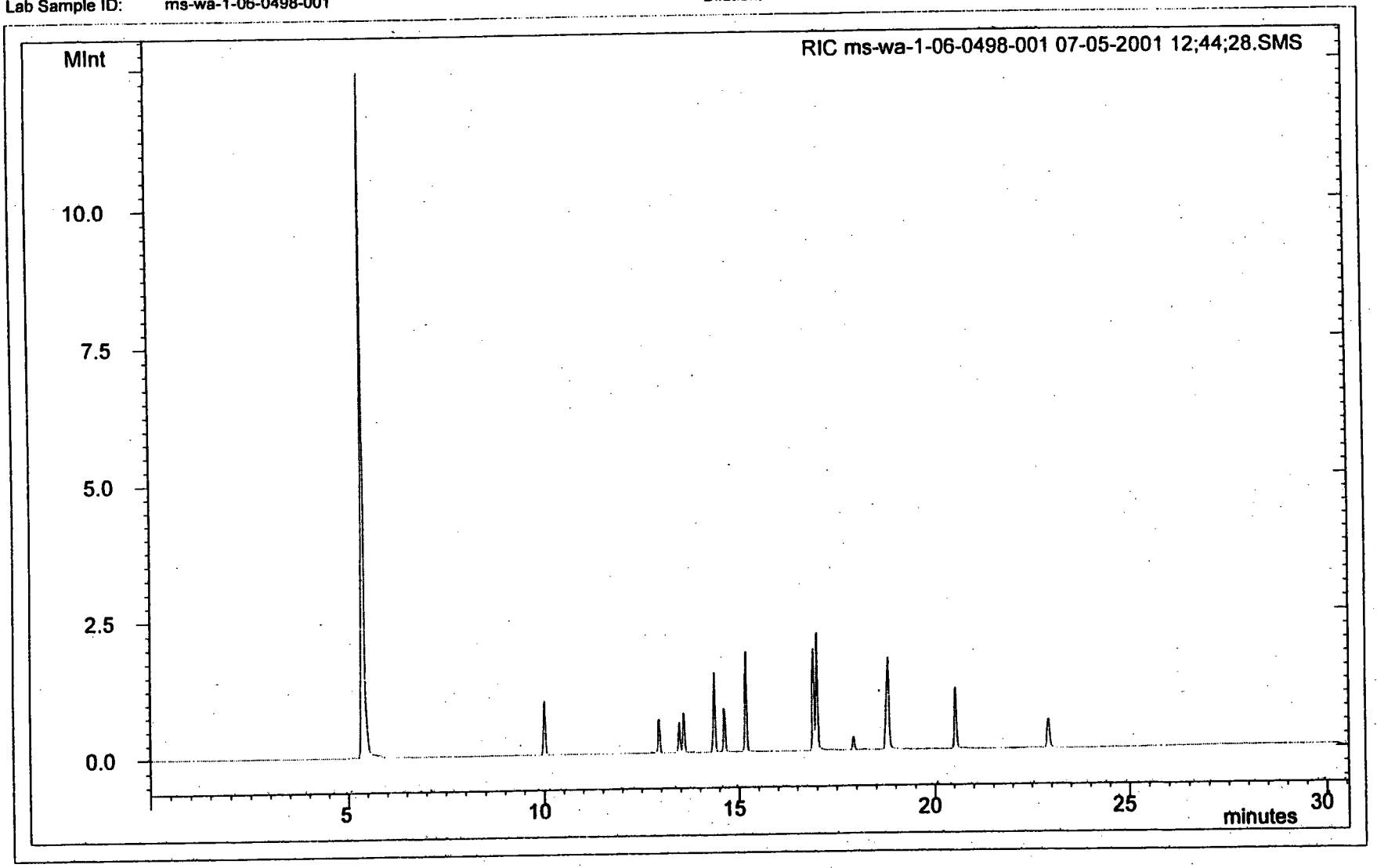
Lab Sample ID: ms-wa-1-06-0498-001

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved_____ Date_____

000099

3270 Saturn 2000 VOA

Processed: 07/05/2001 04:04

Sample: MD-WA-1-06-0498-001
Comment: 2001/07/05-01.60
\data\20C107\070501\md-wa-1-06-0498-001 07-05-2001

Acq Date : 07/05/01 03:34:00
Vial:

Dilution: 1
Sample VolWt: 10.0000
D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.461	Pentafluorobenzene	IS 168	351686	250.000	250.000	ug/L	ISA Pass
2	14.621	1,4-Difluorobenzene	IS 114	729169	250.000	250.000	ug/L	ISA Pass
3	18.772	Chlorobenzene-d5	IS 117	683968	250.000	250.000	ug/L	ISA Pass
4	22.918	1,4-Dichlorobenzene-d4	IS 152	274259	250.000	250.000	ug/L	ISA Pass
26	12.951	Dibromofluoromethane(surr	SU 113	595494	497.190	497.19	ug/L	*******% Pass
30	13.570	D4-1,2-Dichloroethane (su	SU 102	48899	437.826	437.83	ug/L	87.6% Pass
38	16.907	Toluene-d8 (surr)	SU 98	2092436	491.081	491.08	ug/L	98.2% Pass
56	20.530	4-Bromofluorobenzene (sur	SU 95	954020	500.378	500.38	ug/L	100.1% Pass
5	06.007	Dichlorodifluoromethane	85	490	0.422	0.04	ug/L	
6	06.286	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.915	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.700	Bromomethane	94	587	0.561	0.06	ug/L	
9	08.042	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.064	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	09.999	1,1-Dichloroethene	96	446311	478.428	47.84	ug/L	
12	10.645	Carbon disulfide	76	1056	0.621	0.06	ug/L	
13	10.313	Trichlorotrifluoroethane	101	332	0.567	0.06	ug/L	
14	10.239	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.325	Acetone	43	5940	27.125	2.71	ug/L	
16	11.315	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.450	MTBE	73	1355	0.748	0.07	ug/L	
18	11.666	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.655	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.278	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.505	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.837	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.738	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.783	Chloroform	83	21007	7.971	0.80	ug/L	
25	14.293	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.821	1,1,1-Trichloroethane	97	11597	5.118	0.51	ug/L	
28	14.216	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.361	Benzene	78	1306171	442.420	44.24	ug/L	
31	13.678	1,2-Dichloroethane	62	7202	2.771	0.28	ug/L	
32	15.167	Trichloroethene	95	947205	688.856	68.89	ug/L	
33	15.065	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.955	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.421	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.553	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.007	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.998	Toluene	92	1003086	435.955	43.60	ug/L	
40	17.924	Tetrachloroethene	164	66882	112.759	11.28	ug/L	
41	16.155	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.682	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.740	1,1,2-Trichloroethane	83	187	0.270	0.03	ug/L	
44	17.382	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.022	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.738	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.382	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.817	Chlorobenzene	112	1304802	469.905	46.99	ug/L	
49	19.041	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	16.670	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.296	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.885	o-Xylene	106	973	0.552	0.06	ug/L	
53	19.789	Styrene	104	0	0.000	0.00	ug/L	
54	19.734	Bromoform	173	0	0.000	0.00	ug/L	
55	20.431	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.901	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.164	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.628	1,1,2,2-Tetrachloroethane	83+85	163	0.106	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.287	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.624	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.217	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.403	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.669	sec-Butylbenzene	105	840	0.170	0.02	ug/L	
67	23.059	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.862	1,3-Dichlorobenzene	146	1058	0.650	0.07	ug/L	
69	22.878	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.851	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.754	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.920	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.998	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.389	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.928	Naphthalene	128	3851	2.635	0.26	ug/L	
76	28.350	1,2,3-Trichlorobenzene	182	981	1.232	0.12	ug/L	

Rerun in cims 07/05/01 (AW)

07-16-01

000090

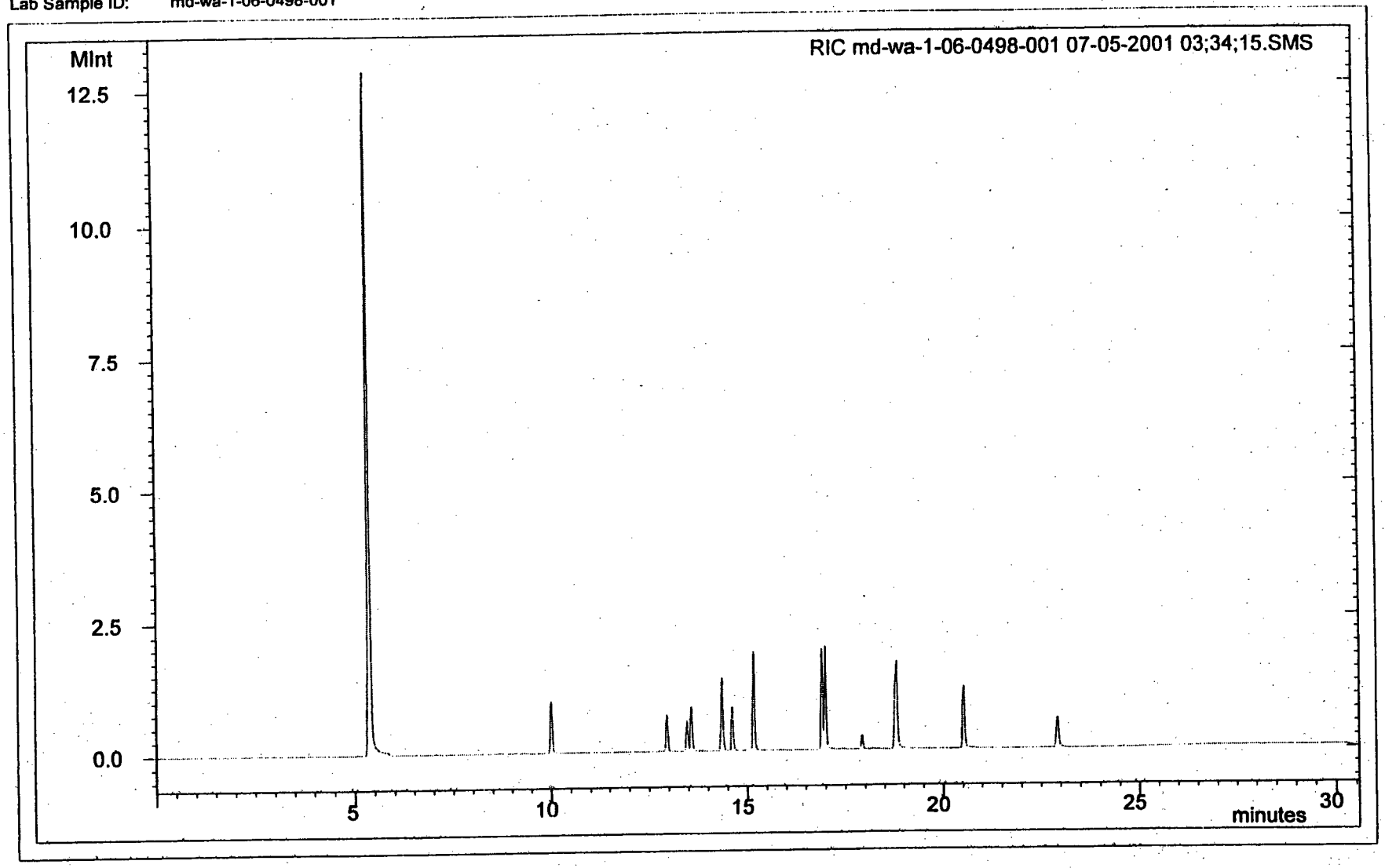
CCV run date: 2001/07/03 12:44:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070501\md-wa-1-06-0498-001 07-05-2001 03;34;15.S
Acquisition Date: 07/05/2001 15:34
EPA Sample No: md-wa-1-06
Lab Sample ID: md-wa-1-06-0498-001

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range: 04/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000091

RUN SEQUENCE & LOGBOOK DOCUMENTATION

TRENT SERVICES

STL ChromaLab

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.06
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	Wt/Vol	DF	pH	Run OK	Analyst	Std. ID	Comments
06/28/01	11:53	tune	50ng BFB								Y	AL		
	12:31	BLK					W	10ml	1x					
	13:05	BLK												
	13:39	IDAL-8260	10/25 ng										M1,2469 2474	
	14:13		10/25ng											
	14:46		50/50ng											OK
	15:35		20/125											
	16:09		200/500											
	16:43		500/1250											
	17:17		800/2000											
	17:51		1000/2500 ng											
	18:25	BLK												
	18:58	BLK									N			need prepare new soln.
	19:32	ICV									N			
	20:06	ICV #1												
														AL 07/03/01

Instrument ID: Saturn 2K GC/MS

forms\vol\mlg msvoasaturn2k 2001.doc

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 0.00
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	Wt/Vol	DF	pH	Run OK	Analyst	Std. ID	Comments
07/03/01		~~tune~~ BLK					W	10ml			N	Ac	PCE=2.285 ppb	
		BLK					↓	↓			N		PCE=0.791 ppb	
		tune									N			area=(199-73) EM=1700
		BLK					W	10ml			N		PCE= 1.2 ppb	EM=1850
		~~BLK~~									N			
	11:29	tune	50ng BFB								Y			
	11:57	CCV-8260 500/250 ng					W	10ml	1X		N		MS2469 Q478	
	12:44	CCV-500ng 8260 #1									Y			
	13:30	LCS									Y		PCE=1.18 ppb.	
	14:04	LCSD									Y		PCE=0.65 ppb	
	14:38	MB									Y		PCE=0.60 ppb	
	15:12	2001-06-0498-001									Y			
	16:11		-001 MS											%RPD out see rerun (W)
	16:45		-001 MSD											
	17:19		-002											
	17:53		-003											
	18:27	↓	-004				↓	↓	↓		↓	↓		

Instrument ID: Saturn 2K GC/MS
forms\vol\mlg msvoasaturn2k 2001.doc

000094

SEVERN TRENT SERVICES

STL ChromaLab

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.06
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	Wt/Vol	DF	pH	Run OK	Analyst	Std. ID	Comments
07/05/01	19:01	2001-06-04	98-005				W	10ml	1X		Y	AL		
	19:35		-0699-001											
	20:10		-002											
	20:44		-003											
	21:18		-004											
	21:52		-005											

AL 07/05/01

000095

Instrument ID: Saturn 2K GC/MS

forms\vol\mlg msvoasaturn2k 2001.doc

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.06 SuperChromaLab
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	Wt/ Vol.	DF	pH	Run OK	Analyst	Std. ID	Comments
07/06/01	08:41	tune	50ng BFB								Y	AL		
	09:05	CCV-500ng 8260					W	10	~~10~~ 1x		N	AL	MS2469 2478	
	09:52	CCV-500ng 8260#1									Y	AL		
	10:40	LCS									Y			
	11:14	LCSD									Y			
	11:48	MB									Y			
	12:44	2001-06-0498-001 MS									Y			rerun
	13:18	-07-0042-002									Y			
	13:52	-07-0060-002									Y			
	14:26	-003									Y			
	15:00	-06-0498-001									Y			rerun
	15:34	-001MSD									Y			rerun
		-07-0041-001												
		07-0027-001												
		-003												
		07-0067-001						1ml	10X					
		-002						10ml	1X					

Instrument ID: Saturn 2K GC/MS

forms\vol\rnlg msvoasaturn2k 2001.doc

STL ChromaLab
Environmental Services (CA 1094)

Submission #: 2001-06-0499
Date: July 17, 2001

Innovative Technical Solutions, Inc
2855 Mitchell Drive, Suite 111
Walnut Creek, CA 94598-1627

Attn.: Mr. Jeff Hess

Project: 00.171.02
City of Hayward

Dear Jeff.

Attached is our report for your samples received on Tuesday June 26, 2001
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after August 10, 2001 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919. You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,

Surinder Sidhu

Surinder Sidhu

To: Innovative Technical Solutions, Inc
Attn.: Jeff Hess

CASE NARRATIVE

General and Sample Comments

We (STL ChromaLab) received 5 Water samples, on Jun 26 2001 4:00PM.

Samples were received less than four hours from time of collection. Temperature on SRC is 11 degrees centigrade.

MS/MSD were analyzed on a sample from another submission.

Surrogate recoveries and LCS/LCSD were within the QC limits of the project specific requirements. STL-CL QC limits are listed on the summary sheet. All samples, MB, LCS/LCSD met the project specific requirements.

TABLE OF CONTENTS

STL CHROMALAB SUBMISSION NUMBER 2001-06-0499

ITEM	PAGE
General Project Information	1-7
Cover Letter/Case Narrative	
Table of Contents	
Summary of Methods	
Chain-of-Custody	
Volatile Organics by GC/MS- Method 8260B	8-76
Results/QC	
Internal Standard Summary	
Initial Calibration	
Continuing Calibration	
Supporting Data	
Run Sequence & Logbook Documentation	

GENERAL PROJECT INFORMATION

SUMMARY OF METHODS

Volatile Organic Compounds by GC/MS - Method 8260B

EPA method 8260B was used to quantitate the volatile organics by GC/MS. Volatile compounds in water were directly purged in the purge-and-trap (EPA Method 5030B). Low level solid samples were prepared by closed extraction (EPA Method 5035) or 5030B then directly purged by heated purge-and-trap. Samples were introduced directly to the GC/MS.

60084

ITSI Innovative Technical Solutions, Inc.
2855 Mitchell Drive, Suite 111
Walnut Creek, California 94598
(925) 256-8898 – (925) 256-8998 (fax)

2001-06-0499

Chain-Of-Custody

Project Name and Number: City of Hayward 00.171.02
Project Manager: Jeff Ross
Site Location: City of Hayward

Laboratory Name: Chromalab
Address: 1220 Quarry Pleasanton
Contact Name: Surinder
Phone: (925) 484-1919

Date: 6/26/2001
Page: 1 of 1

Analysis: 8260B
Preservative: HCL
Container Type: VOA

Sample I.D.	Sample Depth	Date	Time	No. of Containers	Sample Matrix														Special Instructions/Comments
GW-4	NA	6/26/01	0845	3	W	X													11°C
GW-5	↓	↓	0945	3	W	X													
GW-8			1110	3	W	X													
GW-10			1130	3	W	X													
GW-7			1445	3	W	X													

Sampled By: Robert L. Nelson
Signature: Robert L. Nelson
Special Instructions:
Send Results to: (w/fax #)

Sampler: Robert L. Nelson

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Robert L. Nelson ITSI	6/26/01	1600	Jim McCallum STL CL	06/26/01	1600

Courier/Airbill No.:

STL CHROMALAB

Environmental Service (SDB)

Sample Receipt Checklist

Client Name: ITSI Date/Time Received: 06.26.01 / 16:00 (Date / Time)

Reference/Subm #: 60084/01-06-0499 Received by: AM

Checklist completed by: SCMcCallum (Signature) / 07.18.01 (Date) Reviewed By: 7-17-01 (Initial/Date)

Matrix: ☐ Soil ☒ Water ☐ Other _____ Carrier name: Client - C/L - _____

Shipping container/cooler in good condition?	Yes____	No____	Not Present ✓
Custody seals intact on shipping container/cooler?	Yes____	No____	Not Present ✓
Custody seals intact on sample bottles?	Yes____	No____	Not Present ✓
Chain of custody present?	Yes ✓	No____	
Chain of custody signed when relinquished and received?	Yes ✓	No____	
Chain of custody agrees with sample labels?	Yes ✓	No____	
Samples in proper container/bottle?	Yes ✓	No____	
Sample containers intact?	Yes ✓	No____	
Sufficient sample volume for indicated test?	Yes ✓	No____	
All samples received within holding time?	Yes ✓	No____	
Container/Temp Blank temperature in compliance?	Temp: 11.0 °C Yes____	No X	
Water - VOA vials have zero headspace?	No VOA vials submitted____	Yes____	No____

Water - pH acceptable upon receipt? ☐ Yes ☐ No ☐ Checked by Voa chemist

☐ pH adjusted- Preservative used:
☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc Lot#(s) _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

==========

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: Client brought in samples

Corrective Action: _____

000007

forms\sample control\smprechk 2001.doc

VOLATILE ORGANICS
BY GC/MS

RESULTS/QC

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

Volatile OrganicCompounds by 8260B

Innovative Technical Solutions, Inc	2855 Mitchell Drive, Suite 111 Walnut Creek, CA 94598-1627
Attn: Jeff Hess	Phone: (925) 256-8898 Fax: (925) 256-8998
Project #: 00.171.02	Project: City of Hayward

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
GW-4	Water	06/26/2001 08:45	1
GW-5	Water	06/26/2001 09:45	2
GW-8	Water	06/26/2001 11:10	3
GW-10	Water	06/26/2001 11:30	4
GW-7	Water	06/26/2001 14:45	5

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-4**	Lab Sample ID:	**2001-06-0499-001**
Project:	00.171.02 City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 19:35
Sampled:	06/26/2001 08:45	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 19:35	
Acetone	ND	50	ug/L	1.00	07/03/2001 19:35	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 19:35	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 19:35	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 19:35	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 19:35	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1-Dichloroethene	61	1.0	ug/L	1.00	07/03/2001 19:35	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:35	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-4**

Project: 00.171.02
City of Hayward

Sampled: 06/26/2001 08:45

Matrix: Water

Lab Sample ID: **2001-06-0499-001**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 19:35

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 19:35	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 19:35	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 19:35	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,1,1-Trichloroethane	37	1.0	ug/L	1.00	07/03/2001 19:35	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Trichloroethene	2.5	1.0	ug/L	1.00	07/03/2001 19:35	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 19:35	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 19:35	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 19:35	
Surrogate(s)						
4-Bromofluorobenzene	100.9	86-115	%	1.00	07/03/2001 19:35	
1,2-Dichloroethane-d4	98.1	76-114	%	1.00	07/03/2001 19:35	
Toluene-d8	95.7	88-110	%	1.00	07/03/2001 19:35	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 07/05/2001 16:09

270 Saturn 2000 VOA

Processed: 07/03/2001 08:06

Sample: SA-WA-1-06-0499-001
Comment: 2001/07/03-01.60
\\data\200107\070301\sa-wa-1-06-0499-001 07-03-2001

Acq Date : 07/03/01 07:35:00 Dilution: 1
Vial: Sample VolWt: 10.0000
D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.466	Pentafluorobenzene	IS 168	307780	250.000	250.000	ug/L	ISA Pass
2	14.626	1,4-Difluorobenzene	IS 114	661071	250.000	250.000	ug/L	ISA Pass
3	18.778	Chlorobenzene-d5	IS 117	599500	250.000	250.000	ug/L	ISA Pass
4	22.930	1,4-Dichlorobenzene-d4	IS 152	250792	250.000	250.000	ug/L	ISA Pass
26	12.954	Dibromofluoromethane(surr	SU 113	530374	505.991	505.99	ug/L	*******% Pass
30	13.578	D4-1,2-Dichloroethane (su	SU 102	47927	490.334	490.33	ug/L	98.1% Pass
38	16.914	Toluene-d8 (surr)	SU 98	1848485	478.517	478.52	ug/L	95.7% Pass
56	20.537	4-Bromofluorobenzene (sur	SU 95	879432	504.417	504.42	ug/L	100.9% Pass
5	06.012	Dichlorodifluoromethane	85	411	0.404	0.04	ug/L	
6	06.425	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.648	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.701	Bromomethane	94	280	0.306	0.03	ug/L	
9	08.136	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.077	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.003	1,1-Dichloroethene	96	499415	611.722	61.17 ✓	ug/L	
12	10.649	Carbon disulfide	76	1966	1.321	0.13	ug/L	
13	10.321	Trichlorotrifluoroethane	101	5384	10.514	1.05 ✓	ug/L	<RL (5ppb) ?
14	10.238	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.297	Acetone	43	8120	42.370	4.24 <RL	ug/L	
16	11.289	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.447	MTBE	73	7194	4.539	0.45 <RL	ug/L	
18	11.677	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.913	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.271	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.505	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.075	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.630	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.788	Chloroform	83	18428	7.989	0.80 <RL	ug/L	
25	14.311	Carbon tetrachloride	117	498	0.348	0.03	ug/L	
27	13.826	1,1,1-Trichloroethane	97	730469	368.375	36.84 ✓	ug/L	
28	14.063	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.363	Benzene	78	0	0.000	0.00	ug/L	
31	13.685	1,2-Dichloroethane	62	6177	2.622	0.26	ug/L	
32	15.171	Trichloroethene	95	31648	25.387	2.54 ✓	ug/L	
33	15.277	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.254	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.243	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.568	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.138	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.015	Toluene	92	0	0.000	0.00	ug/L	
40	17.926	Tetrachloroethene	164	3546	6.821	0.68 <RL	ug/L	
41	16.138	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.418	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.606	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.280	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.924	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.879	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.392	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.901	Chlorobenzene	112	47	0.019	0.00	ug/L	
49	19.262	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.521	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.305	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.898	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.776	Styrene	104	0	0.000	0.00	ug/L	
54	19.688	Bromoform	173	0	0.000	0.00	ug/L	
55	20.426	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.097	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.162	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.909	1,1,2,2-Tetrachloroethane	83+85	0	0.000	0.00	ug/L	
60	21.383	2-Chlorotoluene	126	50	0.056	0.01	ug/L	
61	19.921	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.664	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.256	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.441	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.652	sec-Butylbenzene	105	715	0.158	0.02	ug/L	
67	23.082	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.832	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.832	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.855	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.743	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.708	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.024	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.396	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.935	Naphthalene	128	2557	1.914	0.19	ug/L	
76	28.359	1,2,3-Trichlorobenzene	182	968	1.329	0.13	ug/L	

07/05/01
(A)
8260B

07/05/01
07-16-07

000013

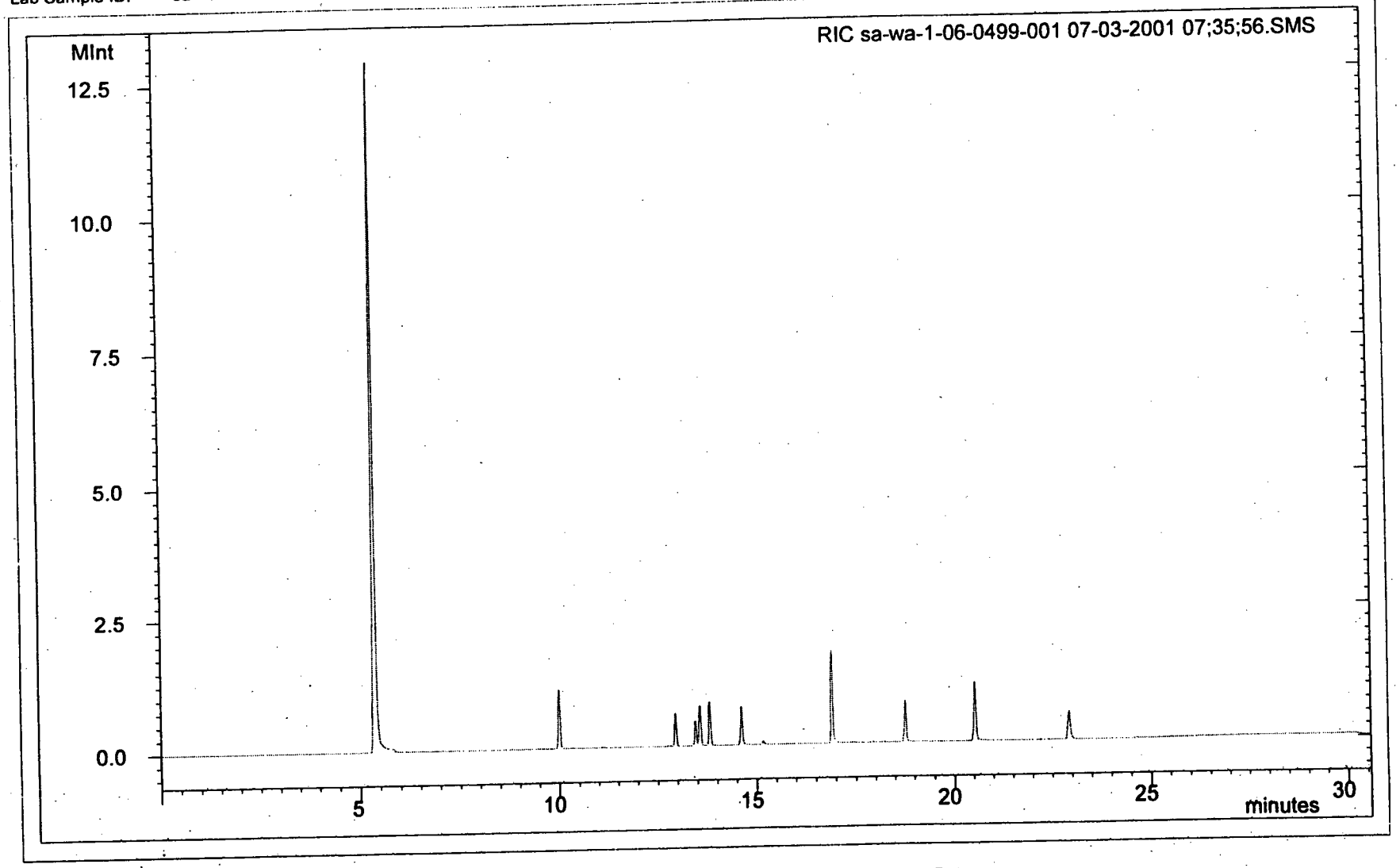
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0499-001 07-03-2001 07;35;56.S
Acquisition Date: 07/03/2001 19:35
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0499-001

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000014

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-5**

Project: 00.171.02
City of Hayward

Sampled: 06/26/2001 09:45

Matrix: Water

Lab Sample ID: **2001-06-0499-002**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 20:10

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 20:10	
Acetone	ND	50	ug/L	1.00	07/03/2001 20:10	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 20:10	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 20:10	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 20:10	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 20:10	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:10	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-5**	Lab Sample ID:	**2001-06-0499-002**
Project:	00.171.02 City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 20:10
Sampled:	06/26/2001 09:45	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 20:10	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 20:10	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 20:10	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Tetrachloroethene	14	1.0	ug/L	1.00	07/03/2001 20:10	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Trichloroethene	23	1.0	ug/L	1.00	07/03/2001 20:10	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 20:10	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 20:10	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 20:10	
Surrogate(s)						
4-Bromofluorobenzene	97.2	86-115	%	1.00	07/03/2001 20:10	
1,2-Dichloroethane-d4	95.1	76-114	%	1.00	07/03/2001 20:10	
Toluene-d8	97.6	88-110	%	1.00	07/03/2001 20:10	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

8270 Saturn 2000 VOA

Processed: 07/03/2001 08:40

Sample: SA-WA-1-06-0499-002 Acq Date : 07/03/01 08:10:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0499-002 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.469	Pentafluorobenzene	IS 168	325722	250.000	250.000	ug/L	ISA Pass
2	14.631	1,4-Difluorobenzene	IS 114	678775	250.000	250.000	ug/L	ISA Pass
3	18.780	Chlorobenzene-d5	IS 117	641957	250.000	250.000	ug/L	ISA Pass
4	22.931	1,4-Dichlorobenzene-d4	IS 152	257433	250.000	250.000	ug/L	ISA Pass
26	12.959	Dibromofluoromethane(surr	SU 113	554236	499.630	499.63	ug/L	******* Pass
30	13.583	D4-1,2-Dichloroethane (su	SU 102	49183	475.471	475.47	ug/L	95.1% Pass
38	16.917	Toluene-d8 (surr)	SU 98	1936137	488.135	488.14	ug/L	97.6% Pass
56	20.540	4-Bromofluorobenzene (sur	SU 95	869847	486.050	486.05	ug/L	97.2% Pass
5	06.016	Dichlorodifluoromethane	85	1173	1.091	0.11	ug/L	
6	06.441	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.774	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.718	Bromomethane	94	441	0.455	0.05	ug/L	
9	08.024	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.079	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.005	1,1-Dichloroethene	96	1886	2.182	0.22	ug/L	
12	10.645	Carbon disulfide	76	845	0.537	0.05	ug/L	
13	10.322	Trichlorotrifluoroethane	101	311	0.573	0.06	ug/L	
14	10.237	Methylene chloride	84	368	0.402	0.04	ug/L	
15	09.311	Acetone	43	6842	33.735	3.37 <RL	ug/L	
16	11.286	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.447	MTBE	73	1685	1.004	0.10	ug/L	
18	11.690	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.008	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.308	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.499	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.082	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.689	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.791	Chloroform	83	21963	8.998	0.90 <RL	ug/L	
25	14.320	Carbon tetrachloride	117	4969	3.278	0.33	ug/L	
27	13.833	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	13.930	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.374	Benzene	78	0	0.000	0.00	ug/L	
31	13.686	1,2-Dichloroethane	62	6263	2.589	0.26	ug/L	
32	15.177	Trichloroethene	95	298791	233.429	23.34 ✓	ug/L	
33	14.942	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.985	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.064	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.523	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.847	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.001	Toluene	92	0	0.000	0.00	ug/L	
40	17.932	Tetrachloroethene	164	77992	140.094	14.01 ✓	ug/L	
41	16.151	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.574	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.764	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.256	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.921	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.829	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.386	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.960	Chlorobenzene	112	67	0.026	0.00	ug/L	
49	19.057	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.578	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.305	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.908	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.898	Styrene	104	0	0.000	0.00	ug/L	
54	19.755	Bromoform	173	0	0.000	0.00	ug/L	
55	20.271	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.104	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.180	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.906	1,1,2,2-Tetrachloroethane	83+85	117	0.082	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.193	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.662	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.188	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.406	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.639	sec-Butylbenzene	105	531	0.114	0.01	ug/L	
67	23.146	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.844	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.844	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.860	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.782	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.736	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.030	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.401	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.963	Naphthalene	128	1010	0.737	0.07	ug/L	
76	28.390	1,2,3-Trichlorobenzene	182	1819	2.433	0.24	ug/L	

D 7-16-01

07/05/01

07/05/01

000017

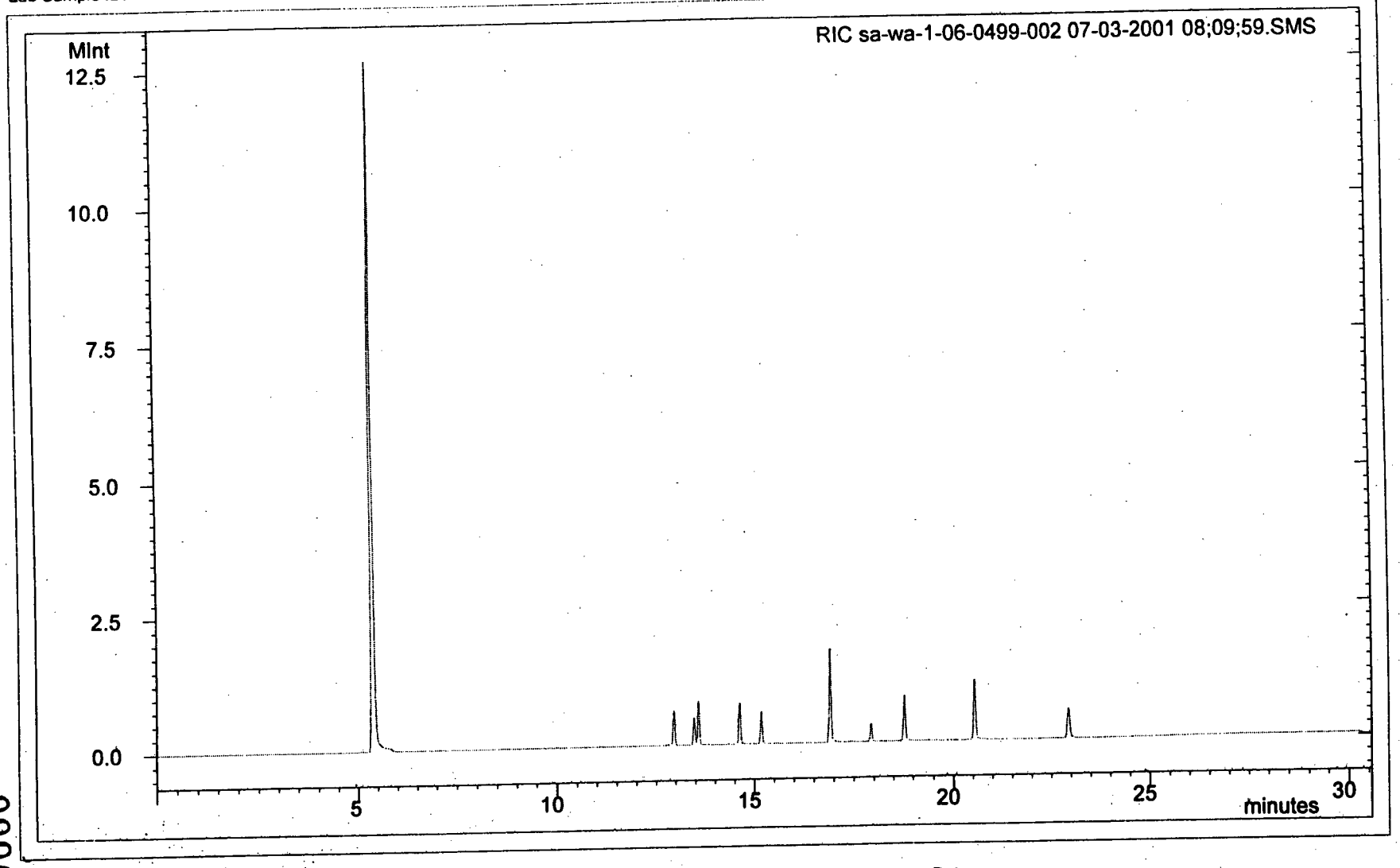
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0499-002 07-03-2001 08;09;59.S
Acquisition Date: 07/03/2001 20:10
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0499-002

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000018

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-8**	Lab Sample ID:	**2001-06-0499-003**
Project:	00.171.02 City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 20:44
Sampled:	06/26/2001 11:10	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 20:44	
Acetone	ND	50	ug/L	1.00	07/03/2001 20:44	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 20:44	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 20:44	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 20:44	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 20:44	
Chloroform	26	1.0	ug/L	1.00	07/03/2001 20:44	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:44	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-8**

Project: 00.171.02
City of Hayward

Sampled: 06/26/2001 11:10

Matrix: Water

Lab Sample ID: **2001-06-0499-003**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 20:44

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 20:44	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 20:44	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 20:44	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Tetrachloroethene	5.4	1.0	ug/L	1.00	07/03/2001 20:44	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Trichloroethene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 20:44	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 20:44	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 20:44	
Surrogate(s)						
4-Bromofluorobenzene	101.1	86-115	%	1.00	07/03/2001 20:44	
1,2-Dichloroethane-d4	95.7	76-114	%	1.00	07/03/2001 20:44	
Toluene-d8	98.1	88-110	%	1.00	07/03/2001 20:44	

827 Saturn 2000 VOA

Processed: 07/03/2001 09:14

Sample: SA-WA-1-06-0499-003 Acq Date : 07/03/01 08:44:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0499-003 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.466	Pentafluorobenzene	IS 168	315389	250.000	250.000	ug/L	ISA Pass
2	14.626	1,4-Difluorobenzene	IS 114	670395	250.000	250.000	ug/L	ISA Pass
3	18.777	Chlorobenzene-d5	IS 117	642199	250.000	250.000	ug/L	ISA Pass
4	22.926	1,4-Dichlorobenzene-d4	IS 152	258556	250.000	250.000	ug/L	ISA Pass
26	12.955	Dibromofluoromethane(surr	SU 113	550423	512.449	512.45	ug/L	*******% Pass
30	13.578	D4-1,2-Dichloroethane (su	SU 102	47942	478.654	478.65	ug/L	95.7% Pass
38	16.914	Toluene-d8 (surr)	SU 98	1920734	490.305	490.31	ug/L	98.1% Pass
56	20.536	4-Bromofluorobenzene (sur	SU 95	908167	505.258	505.26	ug/L	101.1% Pass
5	05.897	Dichlorodifluoromethane	85	0	0.000	0.00	ug/L	
6	06.496	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.955	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.701	Bromomethane	94	336	0.358	0.04	ug/L	
9	08.063	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.059	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.011	1,1-Dichloroethene	96	0	0.000	0.00	ug/L	
12	10.648	Carbon disulfide	76	369	0.242	0.02	ug/L	
13	10.334	Trichlorotrifluoroethane	101	0	0.000	0.00	ug/L	
14	10.228	Methylene chloride	84	962	1.087	0.11	ug/L	
15	09.302	Acetone	43	3984	20.284	2.03 <RL	ug/L	
16	11.294	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.463	MTBE	73	0	0.000	0.00	ug/L	
18	11.649	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.011	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.267	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.503	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.065	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.710	Bromochloromethane	128	149	0.267	0.03	ug/L	
24	12.788	Chloroform	83	615718	260.507	26.05	ug/L	
25	14.320	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.827	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.026	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.365	Benzene	78	0	0.000	0.00	ug/L	
31	13.682	1,2-Dichloroethane	62	6582	2.755	0.28	ug/L	
32	15.169	Trichloroethene	95	0	0.000	0.00	ug/L	
33	15.078	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.022	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.243	Bromodichloromethane	83	15642	8.524	0.85 <RL	ug/L	
36	15.545	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.019	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.198	Toluene	92	0	0.000	0.00	ug/L	
40	17.931	Tetrachloroethene	164	30258	54.331	5.43	ug/L	
41	16.177	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.550	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.770	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.420	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.008	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.864	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.384	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.867	Chlorobenzene	112	76	0.029	0.00	ug/L	
49	19.260	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.562	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.295	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.896	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.721	Styrene	104	0	0.000	0.00	ug/L	
54	19.644	Bromoform	173	0	0.000	0.00	ug/L	
55	20.457	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.928	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.158	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.871	1,1,2,2-Tetrachloroethane	83+85	117	0.081	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.038	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.663	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.212	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.474	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.675	sec-Butylbenzene	105	909	0.195	0.02	ug/L	
67	23.097	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.859	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.859	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.866	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.745	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.753	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.004	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.388	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.948	Naphthalene	128	1204	0.874	0.09	ug/L	
76	28.361	1,2,3-Trichlorobenzene	182	2030	2.704	0.27	ug/L	

07/05/01

07/05/01

7-16-01

000021

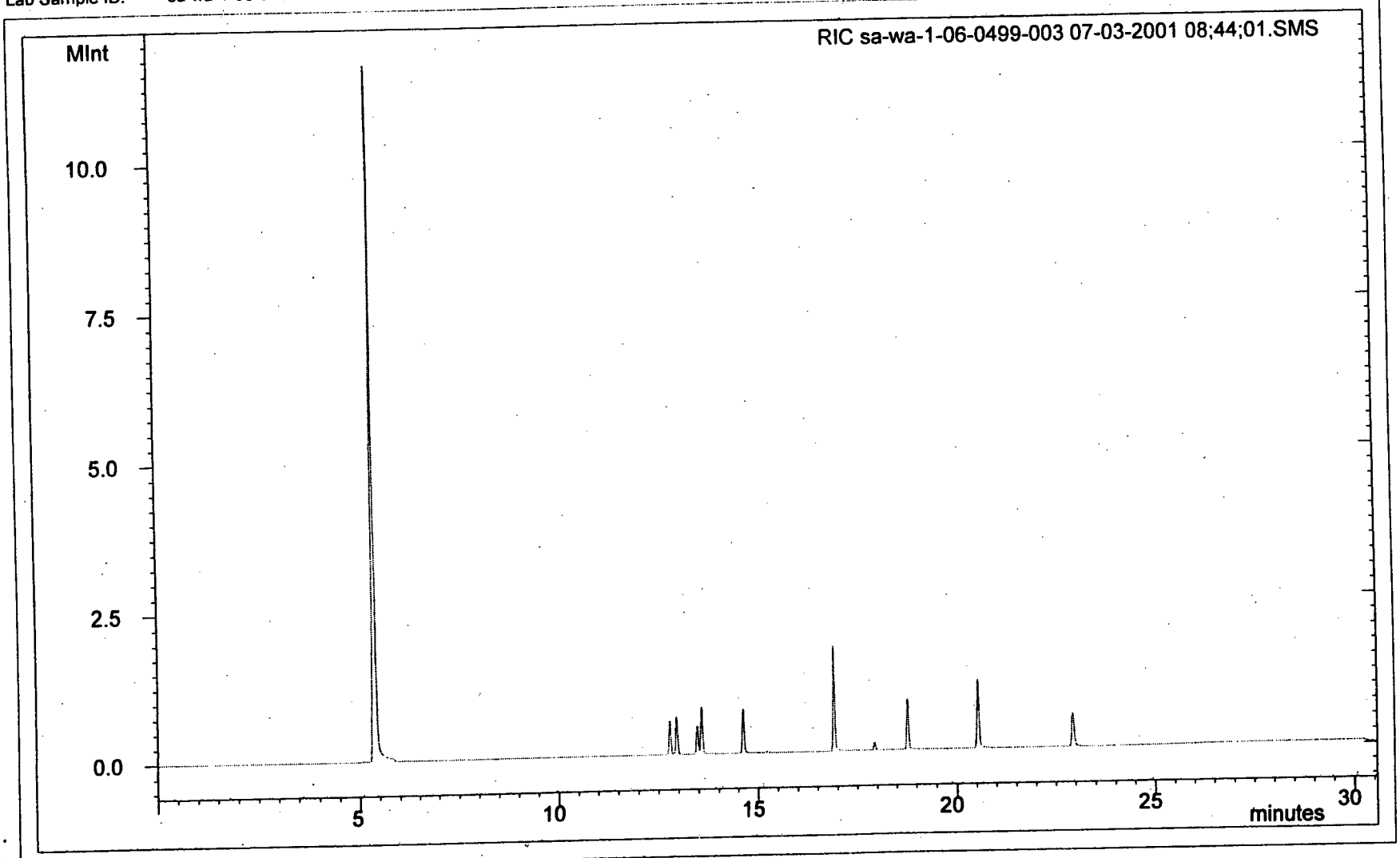
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0499-003 07-03-2001 08;44;01.S
Acquisition Date: 07/03/2001 20:44
EPA Sample No: sa-wa-1-06
Lab Sample ID: sa-wa-1-06-0499-003

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000021

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-10**
Project: 00.171.02
City of Hayward
Sampled: 06/26/2001 11:30
Matrix: Water

Lab Sample ID: **2001-06-0499-004**
Received: 06/26/2001 16:00
Extracted: 07/03/2001 21:18
QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 21:18	
Acetone	ND	50	ug/L	1.00	07/03/2001 21:18	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 21:18	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 21:18	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 21:18	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 21:18	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:18	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-10**	Lab Sample ID:	**2001-06-0499-004**
Project:	00.171.02 City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 21:18
Sampled:	06/26/2001 11:30	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 21:18	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 21:18	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 21:18	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Trichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 21:18	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 21:18	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 21:18	
Surrogate(s)						
4-Bromofluorobenzene	97.9	86-115	%	1.00	07/03/2001 21:18	
1,2-Dichloroethane-d4	93.3	76-114	%	1.00	07/03/2001 21:18	
Toluene-d8	97.1	88-110	%	1.00	07/03/2001 21:18	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

3270 Saturn 2000 VOA

Processed: 07/03/2001 09:48

Sample: SA-WA-1-06-0499-004 Acq Date : 07/03/01 09:18:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0499-004 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.463	Pentafluorobenzene	IS 168	323149	250.000	250.000	ug/L	ISA Pass
2	14.623	1,4-Difluorobenzene	IS 114	696571	250.000	250.000	ug/L	ISA Pass
3	18.773	Chlorobenzene-d5	IS 117	648282	250.000	250.000	ug/L	ISA Pass
4	22.923	1,4-Dichlorobenzene-d4	IS 152	273904	250.000	250.000	ug/L	ISA Pass
26	12.953	Dibromofluoromethane(surr	SU 113	566834	515.055	515.06	ug/L	*******% Pass
30	13.576	D4-1,2-Dichloroethane (su	SU 102	47897	466.722	466.72	ug/L	93.3% Pass
38	16.910	Toluene-d8 (surr)	SU 98	1976167	485.499	485.50	ug/L	97.1% Pass
56	20.533	4-Bromofluorobenzene (sur	SU 95	931903	489.413	489.41	ug/L	97.9% Pass
5	06.034	Dichlorodifluoromethane	85	0	0.000	0.00	ug/L	
6	06.300	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.944	Vinyl Chloride	62	110	0.129	0.01	ug/L	
8	07.717	Bromomethane	94	354	0.369	0.04	ug/L	
9	07.768	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.070	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.028	1,1-Dichloroethene	96	0	0.000	0.00	ug/L	
12	10.642	Carbon disulfide	76	703	0.450	0.05	ug/L	
13	10.309	Trichlorotrifluoroethane	101	0	0.000	0.00	ug/L	
14	10.240	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.306	Acetone	43	5965	29.646	2.96 <RL	ug/L	
16	11.302	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.358	MTBE	73	0	0.000	0.00	ug/L	
18	11.528	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.019	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.211	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.550	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	13.074	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.527	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.785	Chloroform	83	0	0.000	0.00	ug/L	
25	14.141	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.824	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.198	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.377	Benzene	78	0	0.000	0.00	ug/L	
31	13.682	1,2-Dichloroethane	62	6402	2.579	0.26 <RL	ug/L	
32	15.177	Trichloroethene	95	0	0.000	0.00	ug/L	
33	14.987	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.199	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.432	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.522	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.845	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.996	Toluene	92	0	0.000	0.00	ug/L	
40	17.924	Tetrachloroethene	164	2660	4.731	0.47 <RL	ug/L	
41	16.180	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.580	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.635	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.330	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.906	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.849	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.142	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.841	Chlorobenzene	112	197	0.075	0.01	ug/L	
49	19.040	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.893	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.291	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.894	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.818	Styrene	104	0	0.000	0.00	ug/L	
54	19.380	Bromoform	173	0	0.000	0.00	ug/L	
55	20.409	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.921	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.164	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.916	1,1,2,2-Tetrachloroethane	83+85	0	0.000	0.00	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.037	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.643	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.248	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.412	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.647	sec-Butylbenzene	105	199	0.040	0.00	ug/L	
67	23.098	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.872	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	23.087	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.877	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.736	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.710	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.027	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.409	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.933	Naphthalene	128	2328	1.595	0.16	ug/L	
76	28.361	1,2,3-Trichlorobenzene	182	1279	1.608	0.16	ug/L	

07/05/01

07/05/01

000025

CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0499-004 07-03-2001 09;18;02.S

Acquisition Date: 07/03/2001 21:18

EPA Sample No: sa-wa-1-06

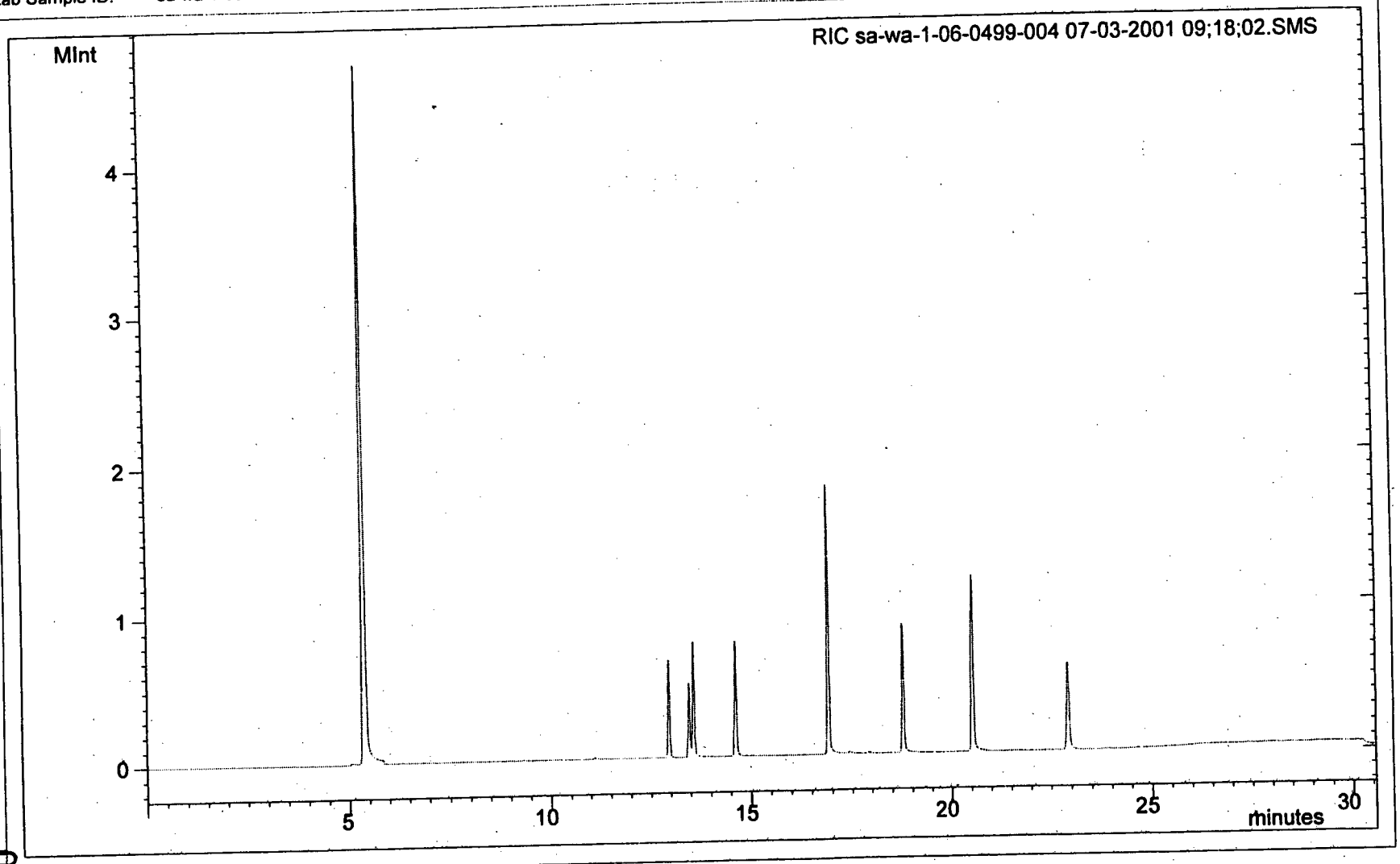
Lab Sample ID: sa-wa-1-06-0499-004

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved_____ Date_____

000002

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID:	**GW-7**	Lab Sample ID:	**2001-06-0499-005**
Project:	00.171.02 City of Hayward	Received:	06/26/2001 16:00
		Extracted:	07/03/2001 21:52
Sampled:	06/26/2001 14:45	QC-Batch:	2001/07/03-01.60
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/L	1.00	07/03/2001 21:52	
Acetone	ND	50	ug/L	1.00	07/03/2001 21:52	
Benzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Bromodichloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Bromobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Bromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Bromoform	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Bromomethane	ND	5.0	ug/L	1.00	07/03/2001 21:52	
2-Butanone(MEK)	ND	50	ug/L	1.00	07/03/2001 21:52	
n-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
sec-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
tert-Butylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Carbon disulfide	ND	5.0	ug/L	1.00	07/03/2001 21:52	
Carbon tetrachloride	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Chlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Chloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
2-Chloroethylvinyl ether	ND	5.0	ug/L	1.00	07/03/2001 21:52	
Chloroform	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Chloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
2-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
4-Chlorotoluene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Dibromochloromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,3-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,4-Dichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,3-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
2,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2-Dibromoethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Dibromomethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2-Dichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
cis-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:52	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Volatile OrganicCompounds by 8260B

Sample ID: **GW-7**

Project: 00.171.02
City of Hayward

Sampled: 06/26/2001 14:45

Matrix: Water

Lab Sample ID: **2001-06-0499-005**

Received: 06/26/2001 16:00

Extracted: 07/03/2001 21:52

QC-Batch: 2001/07/03-01.60

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
trans-1,2-Dichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2-Dichloropropane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
cis-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
trans-1,3-Dichloropropene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Ethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Hexachlorobutadiene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
2-Hexanone	ND	50	ug/L	1.00	07/03/2001 21:52	
Isopropylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
p-Isopropyltoluene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Methylene chloride	ND	5.0	ug/L	1.00	07/03/2001 21:52	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	1.00	07/03/2001 21:52	
Naphthalene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
n-Propylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Styrene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Tetrachloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Toluene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1,1-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,1,2-Trichloroethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Trichloroethene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Trichlorotrifluoroethane	ND	5.0	ug/L	1.00	07/03/2001 21:52	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Vinyl acetate	ND	25	ug/L	1.00	07/03/2001 21:52	
Vinyl chloride	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Total xylenes	ND	1.0	ug/L	1.00	07/03/2001 21:52	
Surrogate(s)						
4-Bromofluorobenzene	101.6	86-115	%	1.00	07/03/2001 21:52	
1,2-Dichloroethane-d4	99.9	76-114	%	1.00	07/03/2001 21:52	
Toluene-d8	97.5	88-110	%	1.00	07/03/2001 21:52	

3270 Saturn 2000 VOA

Processed: 07/03/2001 10:22

Sample: SA-WA-1-06-0499-005 Acq Date : 07/03/01 09:52:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\sa-wa-1-06-0499-005 07-03-2001 D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.464	Pentafluorobenzene	IS 168	314839	250.000	250.000	ug/L	ISA Pass
2	14.625	1,4-Difluorobenzene	IS 114	688205	250.000	250.000	ug/L	ISA Pass
3	18.774	Chlorobenzene-d5	IS 117	626470	250.000	250.000	ug/L	ISA Pass
4	22.929	1,4-Dichlorobenzene-d4	IS 152	263911	250.000	250.000	ug/L	ISA Pass
26	12.954	Dibromofluoromethane(surr	SU 113	577327	538.436	538.44	ug/L	*******% Pass
30	13.576	D4-1,2-Dichloroethane (su	SU 102	49925	499.330	499.33	ug/L	99.9% Pass
38	16.913	Toluene-d8 (surr)	SU 98	1959656	487.294	487.29	ug/L	97.5% Pass
56	20.533	4-Bromofluorobenzene (sur	SU 95	931970	507.979	507.98	ug/L	101.6% Pass
5	06.014	Dichlorodifluoromethane	85	557	0.536	0.05	ug/L	
6	06.239	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.909	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.707	Bromomethane	94	445	0.475	0.05	ug/L	
9	07.784	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.064	Trichloromonofluoromethan	101	138	0.090	0.01	ug/L	
11	10.008	1,1-Dichloroethene	96	0	0.000	0.00	ug/L	
12	10.648	Carbon disulfide	76	553	0.364	0.04	ug/L	
13	10.323	Trichlorotrifluoroethane	101	171	0.326	0.03	ug/L	
14	10.240	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.316	Acetone	43	6772	34.543	3.45 <RL	ug/L	
16	11.287	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.331	MTBE	73	0	0.000	0.00	ug/L	
18	11.645	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	12.026	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.282	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.493	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.834	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.655	Bromochloromethane	128	0	0.000	0.00	ug/L	
24	12.787	Chloroform	83	14673	6.219	0.62 <RL	ug/L	
25	14.216	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.822	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	13.865	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.373	Benzene	78	0	0.000	0.00	ug/L	
31	13.684	1,2-Dichloroethane	62	6569	2.678	0.27	ug/L	
32	15.178	Trichloroethene	95	0	0.000	0.00	ug/L	
33	15.189	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.953	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.245	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.556	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.859	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	16.999	Toluene	92	0	0.000	0.00	ug/L	
40	17.929	Tetrachloroethene	164	2783	5.123	0.51 <RL	ug/L	
41	16.129	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.686	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.806	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.358	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.908	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.821	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.391	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.831	Chlorobenzene	112	210	0.082	0.01	ug/L	
49	19.053	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.907	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.303	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.906	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.787	Styrene	104	0	0.000	0.00	ug/L	
54	19.511	Bromoform	173	0	0.000	0.00	ug/L	
55	20.448	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	21.020	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.161	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.932	1,1,2,2-Tetrachloroethane	83+85	222	0.151	0.02	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.105	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.631	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.182	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.480	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.663	sec-Butylbenzene	105	302	0.063	0.01	ug/L	
67	23.089	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.852	1,3-Dichlorobenzene	146	844	0.539	0.05	ug/L	
69	22.818	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.873	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.772	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.704	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.022	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.384	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	28.022	Naphthalene	128	0	0.000	0.00	ug/L	
76	28.350	1,2,3-Trichlorobenzene	182	772	1.008	0.10	ug/L	

07/05/01

97

07/05/01

000029

CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\sa-wa-1-06-0499-005 07-03-2001 09;52;00.S

Acquisition Date: 07/03/2001 21:52

EPA Sample No: sa-wa-1-06

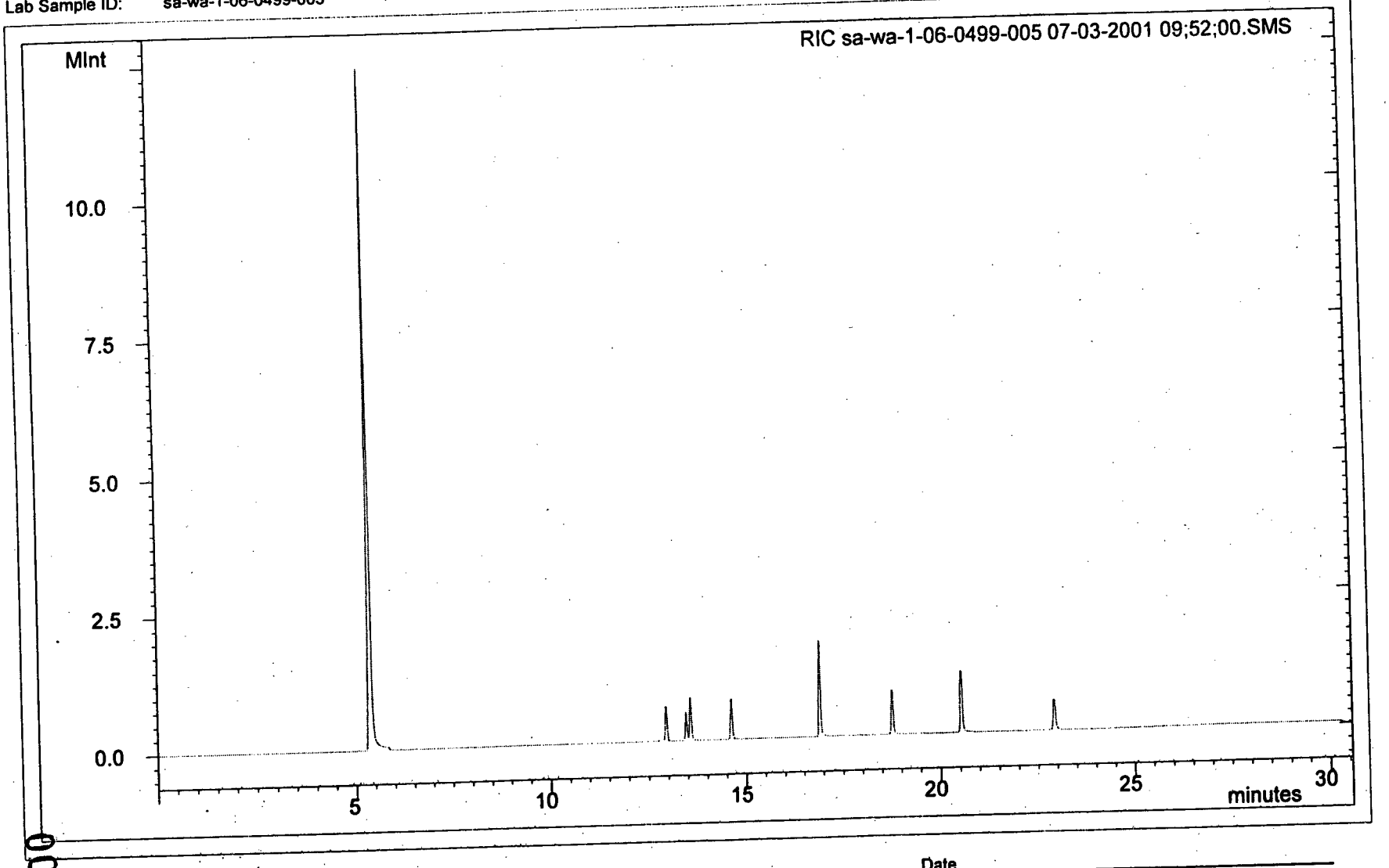
Lab Sample ID: sa-wa-1-06-0499-005

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved _____ Date _____

000030

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**
Attn.: Jeff Hess

Test Method: 8260B
Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/03-01.60**

MB: 2001/07/03-01.60-003 | Date Extracted: 07/03/2001 14:38

Compound	Result	Rep.Limit	Units	Analyzed	Flag
MTBE	ND	5.0	ug/L	07/03/2001 14:38	
Acetone	ND	50	ug/L	07/03/2001 14:38	
Benzene	ND	1.0	ug/L	07/03/2001 14:38	
Bromodichloromethane	ND	1.0	ug/L	07/03/2001 14:38	
Bromobenzene	ND	1.0	ug/L	07/03/2001 14:38	
Bromochloromethane	ND	1.0	ug/L	07/03/2001 14:38	
Bromoform	ND	1.0	ug/L	07/03/2001 14:38	
Bromomethane	ND	5.0	ug/L	07/03/2001 14:38	
2-Butanone(MEK)	ND	50	ug/L	07/03/2001 14:38	
n-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
sec-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
tert-Butylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Carbon disulfide	ND	5.0	ug/L	07/03/2001 14:38	
Carbon tetrachloride	ND	1.0	ug/L	07/03/2001 14:38	
Chlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
Chloroethane	ND	1.0	ug/L	07/03/2001 14:38	
2-Chloroethylvinyl ether	ND	5.0	ug/L	07/03/2001 14:38	
Chloroform	ND	1.0	ug/L	07/03/2001 14:38	
Chloromethane	ND	1.0	ug/L	07/03/2001 14:38	
2-Chlorotoluene	ND	1.0	ug/L	07/03/2001 14:38	
4-Chlorotoluene	ND	1.0	ug/L	07/03/2001 14:38	
Dibromochloromethane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,4-Dichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
2,2-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dibromoethane	ND	1.0	ug/L	07/03/2001 14:38	
Dibromomethane	ND	1.0	ug/L	07/03/2001 14:38	
Dichlorodifluoromethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
cis-1,2-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
trans-1,2-Dichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
1,2-Dichloropropane	ND	1.0	ug/L	07/03/2001 14:38	
cis-1,3-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
trans-1,3-Dichloropropene	ND	1.0	ug/L	07/03/2001 14:38	
Ethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Hexachlorobutadiene	ND	1.0	ug/L	07/03/2001 14:38	
2-Hexanone	ND	50	ug/L	07/03/2001 14:38	

1220 Quarry Lane * Pleasanton, CA 94566-4756
Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: Innovative Technical Solutions, Inc

Attn.: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Method Blank | **Water** | **QC Batch # 2001/07/03-01.60**

MB: 2001/07/03-01.60-003

Date Extracted: 07/03/2001 14:38

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Isopropylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
p-Isopropyltoluene	ND	1.0	ug/L	07/03/2001 14:38	
Methylene chloride	ND	5.0	ug/L	07/03/2001 14:38	
4-Methyl-2-pentanone (MIBK)	ND	50	ug/L	07/03/2001 14:38	
Naphthalene	ND	1.0	ug/L	07/03/2001 14:38	
n-Propylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Styrene	ND	1.0	ug/L	07/03/2001 14:38	
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	07/03/2001 14:38	
Tetrachloroethene	ND	1.0	ug/L	07/03/2001 14:38	
Toluene	ND	1.0	ug/L	07/03/2001 14:38	
1,2,3-Trichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,2,4-Trichlorobenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,1,1-Trichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
1,1,2-Trichloroethane	ND	1.0	ug/L	07/03/2001 14:38	
Trichloroethene	ND	1.0	ug/L	07/03/2001 14:38	
Trichlorofluoromethane	ND	1.0	ug/L	07/03/2001 14:38	
Trichlorotrifluoroethane	ND	5.0	ug/L	07/03/2001 14:38	
1,2,4-Trimethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
1,3,5-Trimethylbenzene	ND	1.0	ug/L	07/03/2001 14:38	
Vinyl acetate	ND	25	ug/L	07/03/2001 14:38	
Vinyl chloride	ND	1.0	ug/L	07/03/2001 14:38	
Total xylenes	ND	1.0	ug/L	07/03/2001 14:38	
Surrogate(s)					
4-Bromofluorobenzene	97.6	86-115	%	07/03/2001 14:38	
1,2-Dichloroethane-d4	88.2	76-114	%	07/03/2001 14:38	
Toluene-d8	99.8	88-110	%	07/03/2001 14:38	

1220 Quarry Lane * Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 * Facsimile: (925) 484-1096

Printed on: 07/05/2001 16:09

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0499

To: **Innovative Technical Solutions, Inc**

Attn: Jeff Hess

Test Method: 8260B

Prep Method: 5030B

Batch QC Report

Volatile OrganicCompounds by 8260B

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/07/03-01.60**

LCS: 2001/07/03-01.60-001 Extracted: 07/03/2001 13:30 Analyzed 07/03/2001 13:30

LCSD: 2001/07/03-01.60-002 Extracted: 07/03/2001 14:04 Analyzed 07/03/2001 14:04

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	45.8	49.4	50.0	50.0	91.6	98.8	7.6	69-129	20		
Chlorobenzene	46.1	50.1	50.0	50.0	92.2	100.2	8.3	61-121	20		
1,1-Dichloroethene	46.1	51.5	50.0	50.0	92.2	103.0	11.1	65-125	20		
Toluene	45.5	47.8	50.0	50.0	91.0	95.6	4.9	70-130	20		
Trichloroethene	45.1	48.2	50.0	50.0	90.2	96.4	6.6	74-134	20		
Surrogate(s)											
4-Bromofluorobenzene	502	506	500	500	100.4	101.2		86-115			
1,2-Dichloroethane-d4	459	504	500	500	91.8	100.8		76-114			
Toluene-d8	494	491	500	500	98.8	98.2		88-110			

INTERNAL STANDARD AREA

CCV Internal Standard Area Report

8270 Saturn 2000 VOA

Processed: 07/03/2001 01:14

Sample: CCV-500NG 8260#1 Acq Date : 07/03/01 12:44:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Area	Low Limit	High Limit
1	13.473	Pentafluorobenzene	324104	162052	648208
2	14.634	1,4-Difluorobenzene	688168	344084	1376336
3	18.782	Chlorobenzene-d5	682101	341051	1364202
4	22.935	1,4-Dichlorobenzene-d4	284602	142301	569204

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A,B (N)

Lab File ID (CONTROL): !00107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/03/2001 Time Analyzed: 12:44

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					
12 HOUR STD	324104	13.47	688168	14.63	682101	18.78	284602	22.93				
UPPER LIMIT	648208	13.97	1376336	15.13	1364202	19.28	569204	23.43				
LOWER LIMIT	162052	12.97	344084	14.13	341050	18.28	142301	22.43				
EPA SAMPLE NO												
ls-wa-1-070301.60	325601	13.47	669731	14.63	650641	18.78	255824	22.93				
ld-wa-1-070301.60	314454	13.47	669264	14.63	644545	18.78	255515	22.93				
mb-wa-1-070301.60	331902	13.47	672696	14.63	630406	18.78	259094	22.93				
sa-wa-1-06-0498-001	330637	13.47	671009	14.63	633610	18.78	260847	22.93				
sa-wa-1-06-0498-002	318432	13.47	651626	14.63	607006	18.78	260860	22.93				
sa-wa-1-06-0498-003	326718	13.47	684406	14.63	620535	18.77	271329	22.93				
sa-wa-1-06-0498-004	318841	13.47	670299	14.63	637096	18.78	268758	22.93				
sa-wa-1-06-0498-005	315873	13.47	656961	14.63	603851	18.78	255228	22.93				
sa-wa-1-06-0499-001	315388	13.47	680908	14.63	607308	18.78	252947	22.94				
sa-wa-1-06-0499-002	307780	13.47	661071	14.63	599500	18.78	250792	22.93				
sa-wa-1-06-0499-003	325722	13.47	678775	14.63	641957	18.78	257433	22.93				
sa-wa-1-06-0499-004	315389	13.47	670394	14.63	642199	18.78	258556	22.93				
sa-wa-1-06-0499-005	323149	13.46	696571	14.62	648282	18.77	273904	22.92				

T 07-16-01

(N) 07/05/01

000036

AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
IS1		IS2		IS3		IS4					

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-d5
IS 4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

8
07-16-9

000037

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A

Lab File ID (CONTROL): :00107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/03/2001 Time Analyzed: 12:44

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA # IS1	RT #	AREA # IS2	RT #	AREA # IS3	RT #	AREA # IS4	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	324104	13.47	688168	14.63	682101	18.78	284602	22.93				
UPPER LIMIT	648208	13.97	1376336	15.13	1364202	19.28	569204	23.43				
LOWER LIMIT	162052	12.97	344084	14.13	341050	18.28	142301	22.43				
EPA SAMPLE NO												
ms-wa-1-06-0698-001	358599	13.47	735999	14.63	688195	18.78	292932	22.93				
md-wa-1-06-0698-001	318432	13.47	651626	14.63	607006	18.78	260860	22.93				

07/05/01

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5
IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

07-16-01

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

EPA Method 8260A

Lab File ID (CONTROL): 200107\070501\ccv-500ng 8260#1 07-05-2001 09;52;52.sms Lab Sample ID: ccv-500ng 8260#1

Instrument ID: S2K3 Date Analyzed: 07/05/2001 Time Analyzed: 09:52

GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) No

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					
12 HOUR STD	352869	13.46	730665	14.62	684043	18.77	270060	22.92				
UPPER LIMIT	705738	13.96	1461330	15.12	1368086	19.27	540120	23.42				
LOWER LIMIT	176434	12.96	365332	14.12	342022	18.27	135030	22.42				
EPA SAMPLE NO												
ls-wa-1-070501.60	346862	13.46	721825	14.62	663681	18.77	273622	22.92				
ld-wa-1-070501.60	348200	13.45	711885	14.61	655804	18.76	268078	22.91				
mb-wa-1-070501.60	364624	13.45	745715	14.62	662253	18.77	265168	22.92				
ms-wa-1-06-0498-001	351256	13.46	709896	14.62	616830	18.78	251349	22.93				
sa-wa-1-06-0498-001	357228	13.46	736643	14.62	662053	18.77	267962	22.92				
md-wa-1-06-0498-001	351686	13.46	729169	14.62	683968	18.77	274259	22.92				

(MV) 07/05/01

8
07-16-01

000030

	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	IS1		IS2		IS3		IS4					

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-d5
IS 4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT
Column used to flag internal standard area values with an asterisk.
* Values outside QC limits.
D Indicates the peak is not "Identified".

000040

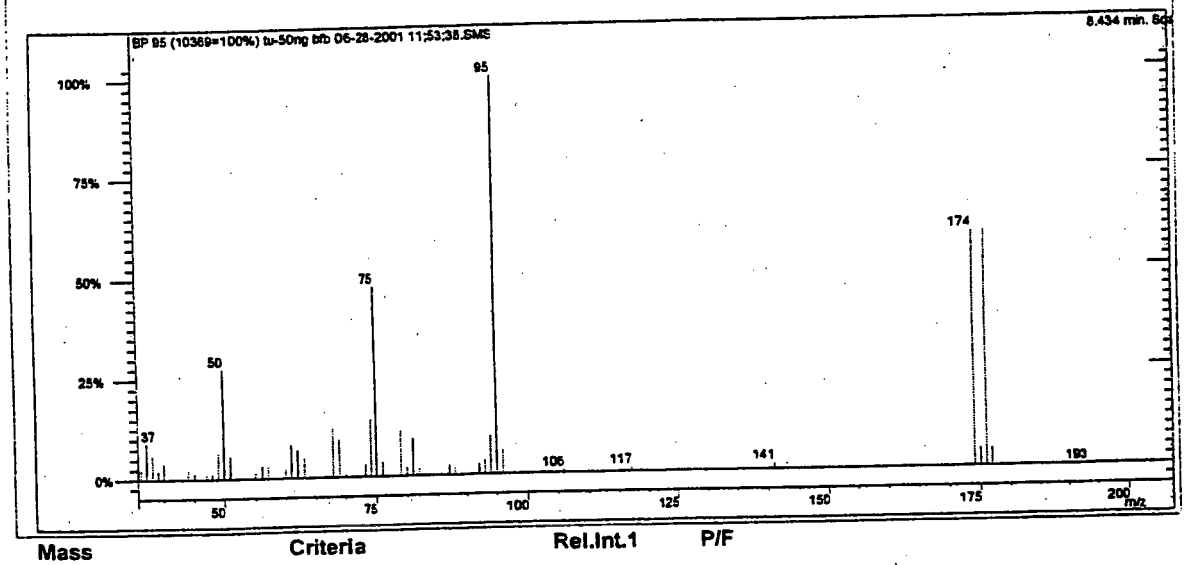
INITIAL CALIBRATION

Tune Report

Acquisition Date: 06/28/2001 11:53:39 AM

Data File Name: d:\data\200106\062801\tu-50ng bfb 06-28-2001 11;53;38.SMS

Tune Spectrum



Mass	Criteria	Rel.Int.1	P/F
50	15-40% of m/z 95	27.67	PASS
75	30-60% of m/z 95	47.70	PASS
95	base peak	100.00	PASS
96	5-9% of m/z 95	6.14	PASS
173	<2% of m/z 174	0.00	PASS
174	>50% of m/z 95	58.88	PASS
175	5-9% of m/z 174	7.60	PASS
176	>95% but <101% of m/z 174	99.62	PASS
177	5-9% of m/z 176	7.73	PASS

06/28/01

VOLATILE ORGANICS INITIAL CALIBRATION DATA

EPA Method 8260A

Instrument ID: S2K3 | Calibration Date(s): 06/28/2001 | 06/28/2001

Heated Purge (Y/N): No | Calibration Time(s): 14:13 | 17:51

GC Column: DB-VRX | ID: 0.25 (mm)

Calibration File: D:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

Index: 1	Level: 1	Replicate: 1	Acquired: 06/28/2001 14:13	File: d:\data\200106\062801\blk 06-28-2001 02;13;02.sms
Index: 2	Level: 2	Replicate: 1	Acquired: 06/28/2001 15:35	File: d:\data\200106\062801\ical-8260 20ng 06-28-2001 03;35;54.sms
Index: 3	Level: 3	Replicate: 1	Acquired: 06/28/2001 14:46	File: d:\data\200106\062801\blk 06-28-2001 02;46;51.sms
Index: 4	Level: 4	Replicate: 1	Acquired: 06/28/2001 16:09	File: d:\data\200106\062801\ical-8260 200ng 06-28-2001 04;09;47.sms
Index: 5	Level: 5	Replicate: 1	Acquired: 06/28/2001 16:43	File: d:\data\200106\062801\ical-8260 500ng 06-28-2001 04;43;39.sms
Index: 6	Level: 6	Replicate: 1	Acquired: 06/28/2001 17:17	File: d:\data\200106\062801\ical-8260 800ng 06-28-2001 05;17;29.sms
Index: 7	Level: 7	Replicate: 1	Acquired: 06/28/2001 17:51	File: d:\data\200106\062801\ical-8260 1000ng 06-28-2001 05;51;19.sms

RRF = (Area(sample)/(Amount(sample))/(Area(standard)/Amount(standard))

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
Dichlorodifluoromethane	0.525	0.738	0.804	0.957	0.949	0.920	0.884	0.825	18.7		
Chloromethane	0.170	0.184	0.189	0.204	0.261	0.270	0.282	0.223	20.9		PASS
Vinyl Chloride	0.414	0.723	0.653	0.742	0.789	0.647	0.641	0.658	18.4	PASS	
Bromomethane	0.742	0.810	0.739	0.681	0.748	0.735	0.752	0.744	5.1		
Chloroethane	0.196	0.241	0.227	0.213	0.215	0.198	0.200	0.213	7.8		
Trichloromonofluoromethane	0.879	1.197	1.236	1.274	1.312	1.288	1.300	1.212	12.5		
1,1-Dichloroethene	0.538	0.729	0.672	0.653	0.702	0.675	0.672	0.663	9.1	PASS	
Carbon disulfide	0.955	0.897	1.399	1.310	1.345	1.308	1.246	1.209	16.5		
Trichlorotrifluoroethane	0.270	0.303	0.475	0.471	0.482	0.469	0.442	0.416	21.6		
Methylene chloride	0.748	0.772	0.730	0.659	0.683	0.660	0.659	0.702	6.8		
Acetone	0.222	0.149	0.165	0.140	0.141	0.143	0.130	0.156	20.0		
trans-1,2-Dichloroethene	0.722	0.861	0.782	0.746	0.811	0.775	0.798	0.785	5.8		
MTBE	1.224	1.013	1.509	1.300	1.335	1.326	1.303	1.287	11.5		

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
1,1-Dichlorethane	2.028	2.332	2.084	2.007	2.181	2.083	2.175	2.127	5.3		PASS
Vinyl Acetate	1.144	0.980	1.516	1.164	1.251	1.108	1.272	1.205	13.9		
2-Butanone	0.021	0.016	0.022	0.020	0.019	0.019	0.018	0.019	10.3		
cis-1,2-Dichloroethene	0.812	0.920	0.815	0.771	0.828	0.799	0.786	0.819	5.9		
2,2-Dichloropropane	0.958	1.180	1.136	1.061	1.136	1.070	1.106	1.092	6.6		
Bromochloromethane	0.478	0.494	0.456	0.399	0.425	0.417	0.427	0.442	7.8		
Chloroform	1.997	2.099	1.873	1.714	1.816	1.767	1.848	1.874	7.1	PASS	
Carbon tetrachloride	0.927	1.190	1.198	1.153	1.256	1.193	1.225	1.163	9.4		
Dibromofluoromethane(surr)	0.746	0.943	0.921	0.850	0.864	0.820	0.815	0.851	7.9		
1,1,1-Trichloroethane	1.334	1.674	1.621	1.632	1.711	1.636	1.666	1.611	7.8		
1,1-Dichloropropene	0.336	0.412	0.407	0.406	0.414	0.400	0.416	0.399	7.1		
Benzene	0.958	1.126	1.022	1.005	1.020	0.977	0.977	1.012	5.5		
D4-1,2-Dichloroethane (surr)	0.076	0.089	0.083	0.080	0.081	0.074	0.072	0.079	7.4		
1,2-Dichloroethane	0.956	1.007	0.904	0.838	0.864	0.834	0.833	0.891	7.7		
Trichloroethene	0.414	0.523	0.465	0.480	0.477	0.468	0.473	0.471	6.8		
Dibromomethane	0.292	0.301	0.277	0.258	0.259	0.258	0.253	0.271	7.0		
1,2-Dichloropropane	0.456	0.484	0.455	0.417	0.435	0.429	0.425	0.443	5.2	PASS	
Bromodichloromethane	0.690	0.725	0.696	0.643	0.664	0.679	0.693	0.684	3.8		
Chloroethylvinylether	0.167	0.140	0.202	0.174	0.171	0.172	0.167	0.170	10.6		
cis-1,3-Dichloropropene	0.570	0.607	0.528	0.516	0.509	0.505	0.516	0.536	7.2		
Toluene-d8 (surr)	1.345	1.629	1.586	1.459	1.423	1.413	1.371	1.461	7.3		
Toluene	0.729	0.824	0.791	0.787	0.809	0.783	0.799	0.789	3.8	PASS	
Tetrachloroethene	0.186	0.242	0.220	0.217	0.210	0.215	0.227	0.217	7.8		
4-Methyl-2-pentanone	0.022	0.019	0.024	0.021	0.021	0.021	0.019	0.021	7.7		
trans-1,3-Dichloropropene	0.479	0.504	0.467	0.431	0.452	0.438	0.465	0.462	5.4		
1,1,2-Trichloroethane	0.267	0.266	0.235	0.223	0.226	0.219	0.226	0.237	8.7		
Dibromochloromethane	0.400	0.418	0.379	0.371	0.386	0.376	0.381	0.387	4.2		
1,3-Dichloropropane	0.334	0.337	0.297	0.265	0.264	0.255	0.262	0.288	12.3		
1,2-Dibromoethane	0.371	0.367	0.343	0.314	0.323	0.327	0.337	0.340	6.4		
2-Hexanone	0.206	0.165	0.222	0.193	0.186	0.189	0.186	0.192	9.2		
Chlorobenzene	1.005	1.139	1.024	0.974	0.962	0.987	1.013	1.015	5.8		PASS
Ethylbenzene	1.553	1.959	1.833	1.751	1.731	1.793	1.892	1.788	7.3	PASS	
1,1,1,2-Tetrachloroethane	0.463	0.543	0.456	0.424	0.429	0.436	0.454	0.458	8.8		
m,p-Xylene	0.526	0.647	0.573	0.604	0.623	0.646	0.677	0.614	8.3		

Compound	RRF1	RRF2	RRF3	RRF4	RRF5	RRF6	RRF7	Avg RRF	% RSD	CCC	SPCC
o-Xylene	0.557	0.639	0.610	0.645	0.674	0.673	0.715	0.645	7.9		
Styrene	0.757	1.021	0.882	0.934	0.950	0.986	1.058	0.941	10.6		
Bromoform	0.182	0.193	0.165	0.157	0.160	0.171	0.177	0.172	7.5		PASS
Isopropyl benzene	3.420	4.333	4.304	4.258	4.421	4.206	4.435	4.197	8.4		
4-Bromofluorobenzene (surr)	1.624	2.017	1.940	1.688	1.665	1.621	1.611	1.738	9.7		
Bromobenzene	1.145	1.326	1.273	1.164	1.196	1.163	1.211	1.211	5.4		
n-Propylbenzene	3.935	5.347	5.105	5.073	5.262	4.866	5.048	4.948	9.6		
1,1,2,2-Tetrachloroethane	1.620	1.698	1.466	1.305	1.298	1.192	1.201	1.397	14.4		PASS
2-Chlorotoluene	0.576	0.938	0.885	0.870	0.943	0.968	1.014	0.885	16.3		
1,2,3-Trichloropropane	0.699	0.716	0.645	0.561	0.589	0.579	0.596	0.627	9.7		
1,3,5-Trimethylbenzene	3.087	4.120	3.973	3.745	3.988	3.793	4.017	3.818	9.1		
4-Chlorotoluene	0.828	0.958	0.976	0.879	0.959	1.068	0.935	0.943	8.1		
tert-Butylbenzene	2.791	4.024	3.966	3.739	3.961	3.741	3.959	3.740	11.6		
1,2,4-Trimethylbenzene	3.241	4.081	3.703	3.680	3.816	3.553	3.730	3.686	6.9		
sec-Butylbenzene	3.512	4.519	4.835	4.622	4.725	4.598	4.746	4.508	10.0		
Isopropyltoluene	2.853	3.960	3.834	3.611	3.768	3.622	3.843	3.641	10.1		
1,3-Dichlorobenzene	1.393	1.498	1.509	1.404	1.527	1.489	1.567	1.484	4.3		
1,4-Dichlorobenzene	1.797	1.513	1.430	1.316	1.209	1.008	0.980	1.322	21.9		
n-Butylbenzene	2.997	3.585	3.762	3.586	3.795	3.631	3.656	3.573	7.5		
1,2-Dichlorobenzene	1.441	1.863	1.768	1.648	1.734	1.689	1.711	1.693	7.7		
1,2-Dibromo-3-chloropropane	0.228	0.207	0.183	0.166	0.169	0.171	0.179	0.186	12.3		
Hexachlorobutadiene	0.565	0.842	0.795	0.722	0.734	0.709	0.760	0.732	11.9		
1,2,4-Trichlorobenzene	0.772	1.037	0.794	0.793	0.809	0.786	0.834	0.832	11.1		
Naphthalene	1.217	1.597	1.352	1.169	1.277	1.321	1.390	1.332	10.5		
1,2,3-Trichlorobenzene	0.710	0.831	0.727	0.669	0.716	0.693	0.736	0.726	7.1		

8270 Saturn 2000 VOA

Processed: 06/28/2001 02:

Sample: BLK (10ng/25 ug mix std)

Acq Date : 06/28/01 02:13:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.00

d:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

D:\SaturnWS\Methods\062801WA

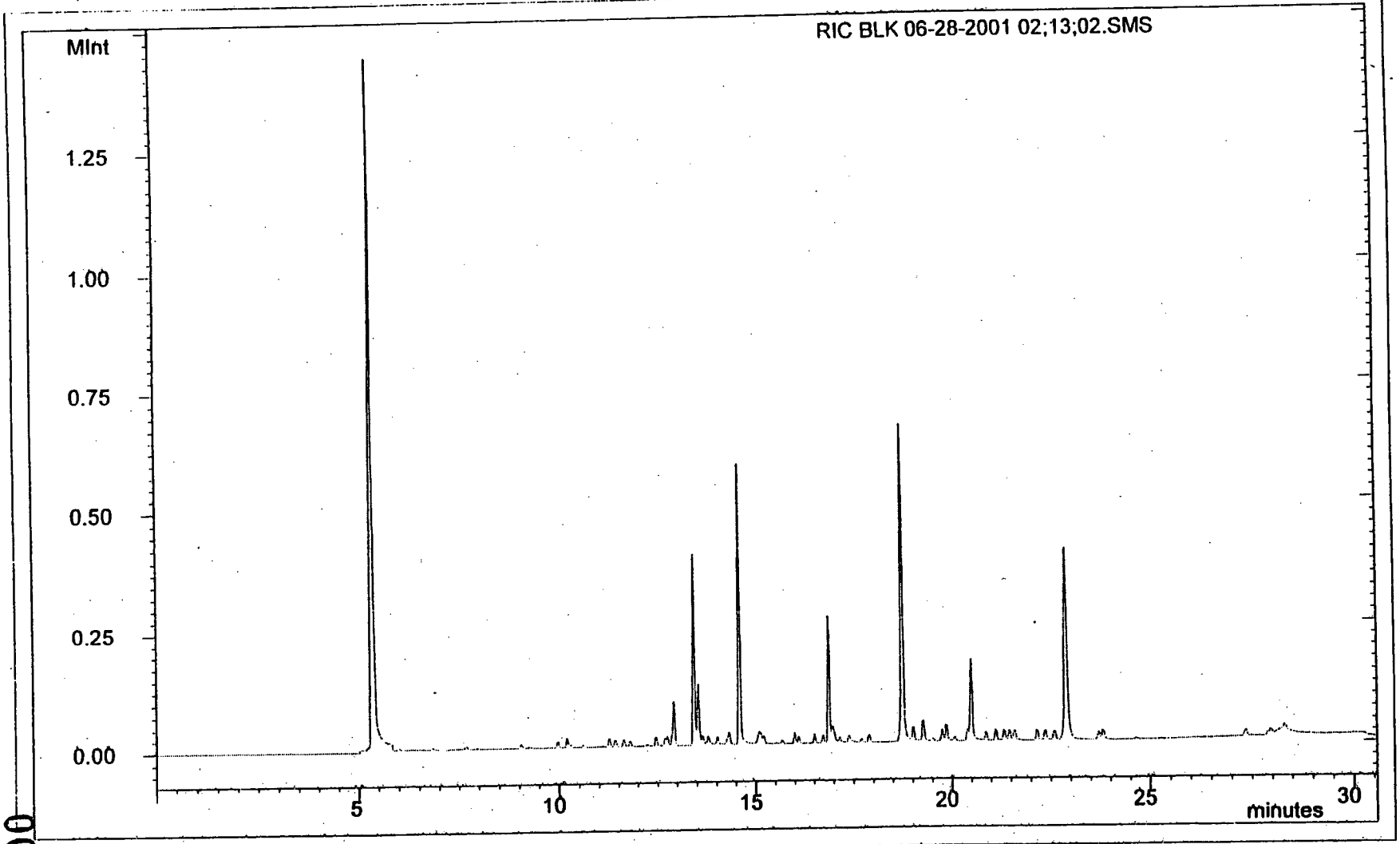
#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.429	Pentafluorobenzene	IS 168	256421	256421.469		Counts
30	14.590	1,4-Difluorobenzene	IS 114	529112	529111.563		Counts
46	18.738	Chlorobenzene-d5	IS 117	509160	509160.063		Counts
68	22.882	1,4-Dichlorobenzene-d4	IS 152	197533	197533.203		Counts
22	12.916	Dibromofluoromethane (surr	SU 113	76564	76564.047		Counts
26	13.544	D4-1,2-Dichloroethane (su	SU 102	7785	7784.891		Counts
36	16.878	Toluene-d8 (surr)	SU 98	284726	284725.656		Counts
55	20.499	4-Bromofluorobenzene (sur	SU 95	128280	128280.039		Counts
1	05.992	Dichlorodifluoromethane	85	5361	5380.921		Counts
2	06.402	Chloromethane	47+49	1739	1739.304		Counts
3	06.822	Vinyl Chloride	62	4246	4246.165		Counts
4	07.668	Bromomethane	94	7612	7611.523		Counts
5	07.959	Chloroethane	49	2005	2005.313		Counts
6	09.045	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L
7	09.963	1,1-Dichloroethene	96	5523	5523.051		Counts
8	10.607	Carbon disulfide	76	0	0.000	0.00	ug/L
9	10.284	Trichlorotrifluoroethane	101	2773	2772.960		Counts
10	10.197	Methylene chloride	84	7670	7670.149		Counts
11	09.247	Acetone	43	5698	5698.047		Counts
12	11.260	trans-1,2-Dichloroethene	96	7400	7400.399		Counts
13	11.411	MTBE	73	12558	12558.197		Counts
14	11.634	1,1-Dichlorethane	63	20799	20799.352		Counts
15	11.792	Vinyl Acetate	43	29330	29330.006		Counts
16	12.237	2-Butanone	72	550	550.206		Counts
17	12.457	cis-1,2-Dichloroethene	96	8330	8329.674		Counts
18	12.869	2,2-Dichloropropane	77	0	0.000	0.00	ug/L
19	12.684	Bromochloromethane	128	4899	4898.539		Counts
20	12.749	Chloroform	83	20487	20486.881		Counts
21	14.284	Carbon tetrachloride	117	0	0.000	0.00	ug/L
23	13.788	1,1,1-Trichloroethane	97	13681	13680.580		Counts
24	14.026	1,1-Dichloropropene	75	7104	7104.363		Counts
25	14.329	Benzene	78	20272	20271.748		Counts
28	13.644	1,2-Dichloroethane	62	20235	20234.719		Counts
29	15.141	Trichloroethene	95	8765	8765.023		Counts
31	15.051	Dibromomethane	93	6180	6179.535		Counts
32	15.089	1,2-Dichloropropane	63	9644	9644.230		Counts
33	15.202	Bromodichloromethane	83	14613	14613.089		Counts
34	15.670	Chloroethylvinylether	63	3530	3530.315		Counts
35	15.989	cis-1,3-Dichloropropene	75	12066	12066.098		Counts
37	16.967	Toluene	92	15436	15436.497		Counts
38	17.890	Tetrachloroethene	164	3792	3792.165		Counts
39	16.099	4-Methyl-2-pentanone	100	1154	1154.012		Counts
40	16.507	trans-1,3-Dichloropropene	75	10145	10144.824		Counts
41	16.725	1,1,2-Trichloroethane	83	5661	5660.515		Counts
42	17.383	Dibromochloromethane	129	8457	8456.963		Counts
43	17.016	1,3-Dichloropropane	76	6798	6798.107		Counts
44	17.701	1,2-Dibromoethane	107	7851	7850.934		Counts
45	17.152	2-Hexanone	43	10488	10488.416		Counts
47	18.780	Chlorobenzene	112	0	0.000	0.00	ug/L
48	19.014	Ethylbenzene	91	31627	31626.908		Counts
49	18.670	1,1,1,2-Tetrachloroethane	131	9432	9431.656		Counts
50	19.265	m,p-Xylene	106	21418	21417.744		Counts
51	19.861	o-Xylene	106	11337	11336.966		Counts
52	19.750	Styrene	104	15422	15421.778		Counts
53	19.512	Bromoform	173	3704	3703.831		Counts
54	20.402	Isopropyl benzene	105	27026	27025.629		Counts
56	20.877	Bromobenzene	156	9050	9049.569		Counts
57	21.119	n-Propylbenzene	91	31094	31094.377		Counts
58	19.853	1,1,2,2-Tetrachloroethane	83+85	12797	12796.979		Counts
59	21.337	2-Chlorotoluene	126	4552	4552.235		Counts
60	20.070	1,2,3-Trichloropropane	75	5525	5525.253		Counts
61	21.593	1,3,5-Trimethylbenzene	105	24393	24392.914		Counts
62	21.461	4-Chlorotoluene	126	6543	6543.196		Counts
63	22.163	tert-Butylbenzene	119	22050	22050.494		Counts
64	22.362	1,2,4-Trimethylbenzene	105	25606	25606.143		Counts
65	22.362	sec-Butylbenzene	105	24167	24166.711		Counts
66	22.942	Isopropyltoluene	119	22539	22538.996		Counts
67	22.806	1,3-Dichlorobenzene	146	11003	11002.891		Counts
69	22.945	1,4-Dichlorobenzene	146	14197	14196.974		Counts
70	23.618	n-Butylbenzene	91	23682	23681.805		Counts
71	23.702	1,2-Dichlorobenzene	146	11386	11385.828		Counts
72	24.649	1,2-Dibromo-3-chloropropa	75	1801	1801.023		Counts
73	27.966	Hexachlorobutadiene	225	4466	4465.688		Counts
74	27.345	1,2,4-Trichlorobenzene	182	6096	6096.208		Counts
75	27.892	Naphthalene	128	9613	9612.942		Counts
76	28.317	1,2,3-Trichlorobenzene	182	5608	5608.030		Counts

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS
Acquisition Date: 06/28/2001 14:13
EPA Sample No: blk 06-19-
Lab Sample ID: blk

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000047

8270 Saturn 2000 VOA

Processed: 06/28/2001 03:

Sample: ~~BLK~~ 50 ug/ml

Acq Date : 06/28/01 02:46:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.00

d:\data\200106\062801\BLK 06-28-2001 02;46;51.SMS D:\SaturnWS\Methods\062801WA.

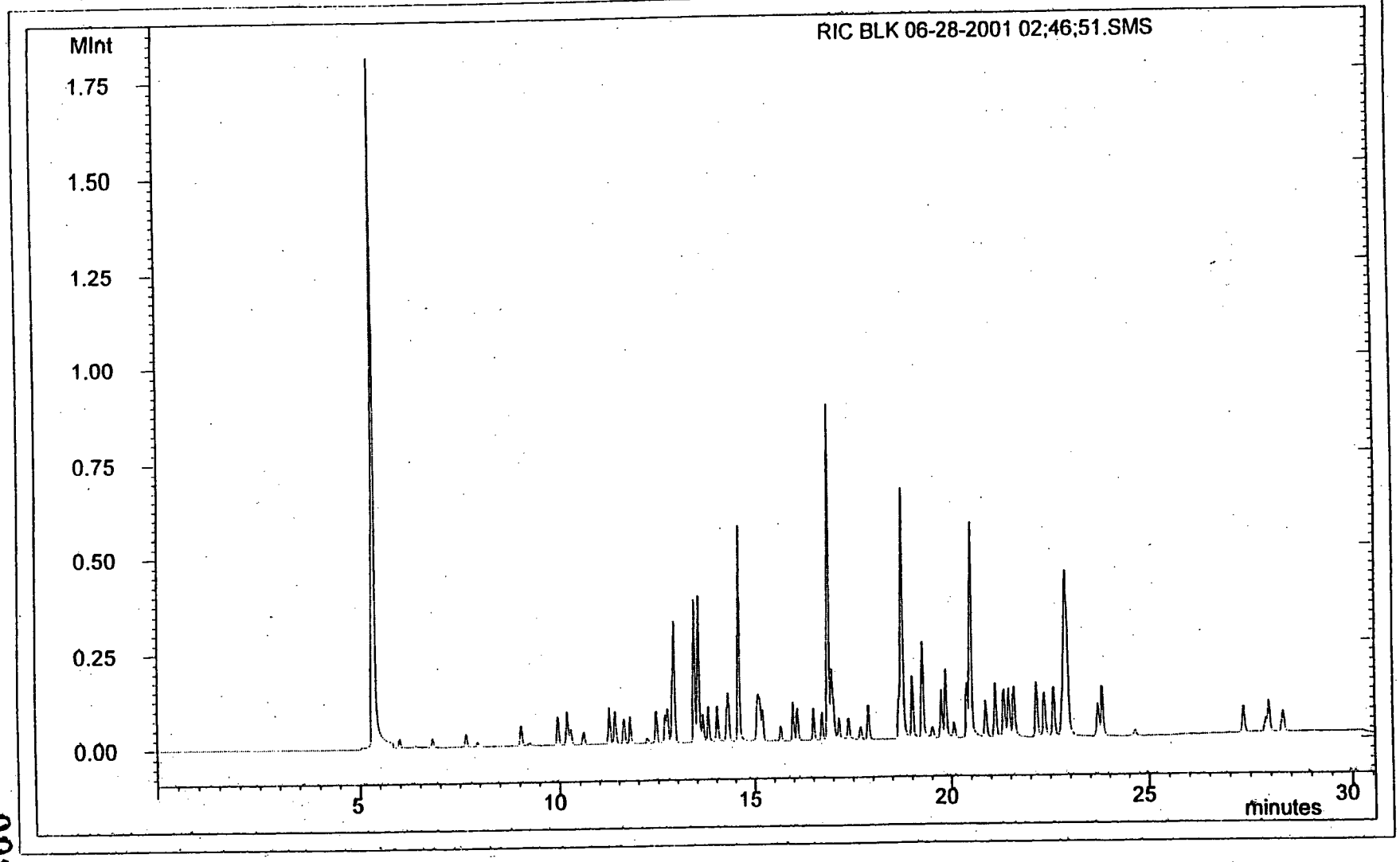
#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.432	Pentafluorobenzene	IS 168	243785	243784.766		Counts
30	14.595	1,4-Difluorobenzene	IS 114	506694	506694.125		Counts
46	18.743	Chlorobenzene-d5	IS 117	514442	514441.906		Counts
68	22.890	1,4-Dichlorobenzene-d4	IS 152	192935	192934.625		Counts
22	12.922	Dibromofluoromethane(surr	SU 113	269563	269562.875		Counts
26	13.542	D4-1,2-Dichloroethane (su	SU 102	24278	24278.090		Counts
36	16.883	Toluene-d8 (surr)	SU 98	964218	964218.125		Counts
55	20.500	4-Bromofluorobenzene (sur	SU 95	449125	449124.844		Counts
1	05.993	Dichlorodifluoromethane	85	39219	39219.328		Counts
2	06.403	Chloromethane	47+49	9232	9232.066		Counts
3	06.825	Vinyl Chloride	62	31849	31849.123		Counts
4	07.670	Bromomethane	94	36032	36032.066		Counts
5	07.961	Chloroethane	49	11057	11056.973		Counts
6	08.043	Trichloromonofluoromethan	101	60250	60249.965		Counts
7	08.967	1,1-Dichloroethene	96	32773	32773.406		Counts
8	10.609	Carbon disulfide	76	67965	67964.688		Counts
9	10.285	Trichlorotrifluoroethane	101	23168	23167.967		Counts
10	10.199	Methylene chloride	84	35605	35604.801		Counts
11	09.246	Acetone	43	20055	20055.449		Counts
12	11.264	trans-1,2-Dichloroethene	96	38140	38140.230		Counts
13	11.411	MTBE	73	73568	73568.016		Counts
14	11.636	1,1-Dichlorethane	63	101618	101617.891		Counts
15	11.796	Vinyl Acetate	43	184776	184776.125		Counts
16	12.233	2-Butanone	72	2660	2660.160		Counts
17	12.459	cis-1,2-Dichloroethene	96	39761	39760.641		Counts
18	12.873	2,2-Dichloropropane	77	54663	54663.234		Counts
19	12.686	Bromochloromethane	128	22222	22222.313		Counts
20	12.753	Chloroform	83	91300	91300.266		Counts
21	14.285	Carbon tetrachloride	117	57978	57978.156		Counts
23	13.792	1,1,1-Trichloroethane	97	79026	79026.141		Counts
24	14.029	1,1-Dichloropropene	75	41273	41273.438		Counts
25	14.332	Benzene	78	103519	103518.688		Counts
28	13.649	1,2-Dichloroethane	62	91591	91591.164		Counts
29	15.142	Trichloroethene	95	47110	47110.000		Counts
31	15.055	Dibromomethane	93	28062	28062.244		Counts
32	15.093	1,2-Dichloropropane	63	46150	46150.094		Counts
33	15.209	Bromodichloromethane	83	70568	70568.102		Counts
34	15.675	Chloroethylvinylether	63	20472	20471.797		Counts
35	15.993	cis-1,3-Dichloropropene	75	53460	53460.391		Counts
37	16.974	Toluene	92	80173	80172.609		Counts
38	17.899	Tetrachloroethene	164	22615	22614.598		Counts
39	16.103	4-Methyl-2-pentanone	100	6025	6024.917		Counts
40	16.512	trans-1,3-Dichloropropene	75	47370	47369.781		Counts
41	16.730	1,1,2-Trichloroethane	83	23798	23797.971		Counts
42	17.388	Dibromochloromethane	129	38369	38368.605		Counts
43	17.021	1,3-Dichloropropane	76	30569	30568.730		Counts
44	17.706	1,2-Dibromoethane	107	34770	34770.078		Counts
45	17.155	2-Hexanone	43	57052	57052.129		Counts
47	18.789	Chlorobenzene	112	105417	105417.492		Counts
48	19.019	Ethylbenzene	91	188598	188598.344		Counts
49	18.676	1,1,1,2-Tetrachloroethane	131	46907	46906.813		Counts
50	19.271	m,p-Xylene	106	117899	117898.633		Counts
51	19.868	o-Xylene	106	62804	62803.805		Counts
52	19.757	Styrene	104	90787	90786.555		Counts
53	19.516	Bromoform	173	16962	16961.922		Counts
54	20.406	Isopropyl benzene	105	166085	166085.031		Counts
56	20.880	Bromobenzene	156	49117	49117.426		Counts
57	21.125	n-Propylbenzene	91	196976	196976.078		Counts
58	19.859	1,1,2,2-Tetrachloroethane	83+85	56572	56572.195		Counts
59	21.337	2-Chlorotoluene	126	34148	34148.059		Counts
60	20.076	1,2,3-Trichloropropane	75	24884	24884.465		Counts
61	21.599	1,3,5-Trimethylbenzene	105	153301	153301.469		Counts
62	21.462	4-Chlorotoluene	126	37648	37648.211		Counts
63	22.169	tert-Butylbenzene	119	153038	153037.938		Counts
64	22.365	1,2,4-Trimethylbenzene	105	142870	142870.281		Counts
65	22.365	sec-Butylbenzene	105	142515	142515.234		Counts
66	22.949	Isopropyltoluene	119	147950	147949.953		Counts
67	22.806	1,3-Dichlorobenzene	146	58240	58239.664		Counts
69	22.945	1,4-Dichlorobenzene	146	55165	55164.629		Counts
70	23.822	n-Butylbenzene	91	145148	145148.234		Counts
71	23.709	1,2-Dichlorobenzene	146	68213	68213.484		Counts
72	24.657	1,2-Dibromo-3-chloropropa	75	7059	7059.043		Counts
73	27.973	Hexachlorobutadiene	225	30668	30667.777		Counts
74	27.350	1,2,4-Trichlorobenzene	182	30625	30624.807		Counts
75	27.891	Naphthalene	128	52175	52174.914		Counts
76	28.323	1,2,3-Trichlorobenzene	182	28064	28064.426		Counts

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\BLK 06-28-2001 02;46;51.SMS
Acquisition Date: 06/28/2001 14:46
EPA Sample No: blk 06-19-
Lab Sample ID: blk

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

0000049

8270 Saturn 2000 VOA

Processed: 06/28/2001 04:

Sample: ICAL-8260 20NG

Acq Date : 06/28/01 03:35:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial:

Sample VolWt: 1.0C

d:\data\200106\062801\ICAL-8260 20NG 06-28-2001 03;35;54.SMS

D:\SaturnWS\Methods\062801WA

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.439	Pentafluorobenzene	IS 168	231583	231583.000		Counts
30	14.600	1,4-Difluorobenzene	IS 114	485383	485383.063		Counts
46	18.750	Chlorobenzene-d5	IS 117	462495	462494.656		Counts
68	22.895	1,4-Dichlorobenzene-d4	IS 152	177277	177276.516		Counts
22	12.927	Dibromofluoromethane(surr	SU 113	174713	174713.188		Counts
26	13.551	D4-1,2-Dichloroethane (su	SU 102	16568	16568.268		Counts
36	16.889	Toluene-d8 (surr)	SU 98	632457	632456.688		Counts
55	20.507	4-Bromofluorobenzene (sur	SU 95	286082	286082.406		Counts
1	06.007	Dichlorodifluoromethane	85	13674	13674.391		Counts
2	06.418	Chloromethane	47+49	3410	3410.237		Counts
3	06.839	Vinyl Chloride	62	13396	13396.233		Counts
4	07.681	Bromomethane	94	15011	15011.152		Counts
5	07.971	Chloroethane	49	4457	4457.079		Counts
6	09.053	Trichloromonofluoromethan	101	22161	22160.738		Counts
7	09.975	1,1-Dichloroethene	96	13514	13514.459		Counts
8	10.616	Carbon disulfide	76	16516	16515.713		Counts
9	10.296	Trichlorotrifluoroethane	101	5607	5607.018		Counts
10	10.206	Methylene chloride	84	14306	14305.650		Counts
11	09.260	Acetone	43	6917	6916.842		Counts
12	11.270	trans-1,2-Dichloroethene	96	15956	15956.429		Counts
13	11.420	MTBE	73	18765	18764.883		Counts
14	11.645	1,1-Dichlorethane	63	43201	43201.367		Counts
15	11.802	Vinyl Acetate	43	45395	45394.785		Counts
16	12.243	2-Butanone	72	748	748.050		Counts
17	12.466	cis-1,2-Dichloroethene	96	17051	17051.152		Counts
18	12.882	2,2-Dichloropropane	77	21686	21686.061		Counts
19	12.695	Bromochloromethane	128	9158	9157.707		Counts
20	12.758	Chloroform	83	38881	38880.625		Counts
21	14.290	Carbon tetrachloride	117	21769	21769.488		Counts
23	13.799	1,1,1-Trichloroethane	97	31023	31022.781		Counts
24	14.037	1,1-Dichloropropene	75	15999	15999.073		Counts
25	14.338	Benzene	78	43733	43732.711		Counts
28	13.656	1,2-Dichloroethane	62	39102	39101.625		Counts
29	15.147	Trichloroethene	95	20310	20309.682		Counts
31	15.060	Dibromomethane	93	11694	11693.626		Counts
32	15.098	1,2-Dichloropropane	63	18775	18775.314		Counts
33	15.213	Bromodichloromethane	83	28148	28148.004		Counts
34	15.680	Chloroethylvinylether	63	5450	5449.881		Counts
35	15.998	cis-1,3-Dichloropropene	75	23582	23582.428		Counts
37	16.980	Toluene	92	32013	32012.572		Counts
38	17.903	Tetrachloroethene	164	8945	8944.774		Counts
39	16.107	4-Methyl-2-pentanone	100	1832	1831.576		Counts
40	16.519	trans-1,3-Dichloropropene	75	19556	19556.141		Counts
41	16.735	1,1,2-Trichloroethane	83	10347	10346.560		Counts
42	17.394	Dibromochloromethane	129	16234	16233.841		Counts
43	17.028	1,3-Dichloropropane	76	12487	12486.720		Counts
44	17.711	1,2-Dibromoethane	107	14258	14258.480		Counts
45	17.161	2-Hexanone	43	15291	15291.227		Counts
47	18.796	Chlorobenzene	112	42414	42413.980		Counts
48	19.025	Ethylbenzene	91	72488	72487.633		Counts
49	18.683	1,1,1,2-Tetrachloroethane	131	20079	20079.473		Counts
50	19.278	m,p-Xylene	106	47852	47852.121		Counts
51	19.875	o-Xylene	106	23627	23627.387		Counts
52	19.763	Styrene	104	37790	37790.125		Counts
53	19.524	Bromoform	173	7143	7142.662		Counts
54	20.413	Isopropyl benzene	105	61455	61455.258		Counts
56	20.887	Bromobenzene	156	18798	18798.402		Counts
57	21.133	n-Propylbenzene	91	75826	75827.719		Counts
58	19.865	1,1,2,2-Tetrachloroethane	83+85	24083	24082.500		Counts
59	21.346	2-Chlorotoluene	126	13303	13303.353		Counts
60	20.083	1,2,3-Trichloropropane	75	10151	10151.432		Counts
61	21.606	1,3,5-Trimethylbenzene	105	58433	58432.656		Counts
62	21.478	4-Chlorotoluene	126	13588	13588.229		Counts
63	22.175	tert-Butylbenzene	119	57063	57062.621		Counts
64	22.374	1,2,4-Trimethylbenzene	105	57878	57878.277		Counts
65	22.374	sec-Butylbenzene	105	56139	56139.254		Counts
66	22.956	Isopropyltoluene	119	56154	56154.449		Counts
67	22.816	1,3-Dichlorobenzene	146	21241	21241.074		Counts
69	22.956	1,4-Dichlorobenzene	146	21463	21462.922		Counts
70	23.828	n-Butylbenzene	91	50845	50845.309		Counts
71	23.718	1,2-Dichlorobenzene	146	26425	26424.857		Counts
72	24.664	1,2-Dibromo-3-chloropropa	75	2935	2935.445		Counts
73	27.974	Hexachlorobutadiene	225	11941	11940.517		Counts
74	27.352	1,2,4-Trichlorobenzene	182	14714	14713.766		Counts
75	27.898	Naphthalene	128	22647	22647.133		Counts
76	28.330	1,2,3-Trichlorobenzene	182	11789	11789.491		Counts

000050

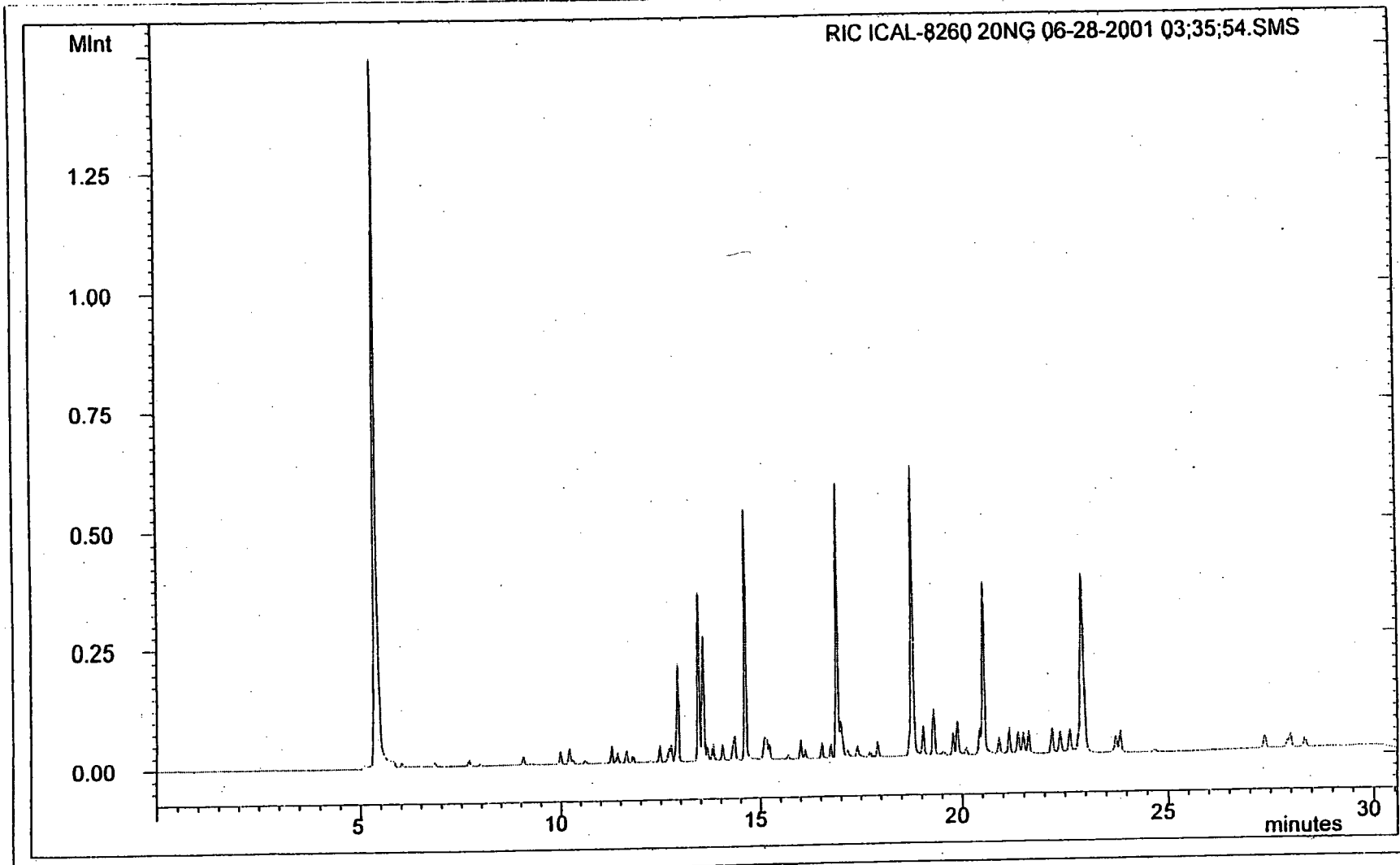
CCV run date: / / . .

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 20NG 06-28-2001 03;35;54.SMS
Acquisition Date: 06/28/2001 15:35
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 20NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range: 04/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000051

8270 Saturn 2000 VOA

Processed: 06/28/2001 04:

Sample: ICAL-8260 200NG

Acq Date : 06/28/01 04:09:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.00

d:\data\200106\062801\ICAL-8260 200NG 06-28-2001 04;09;47.SMS D:\SaturnWS\Methods\062801WA

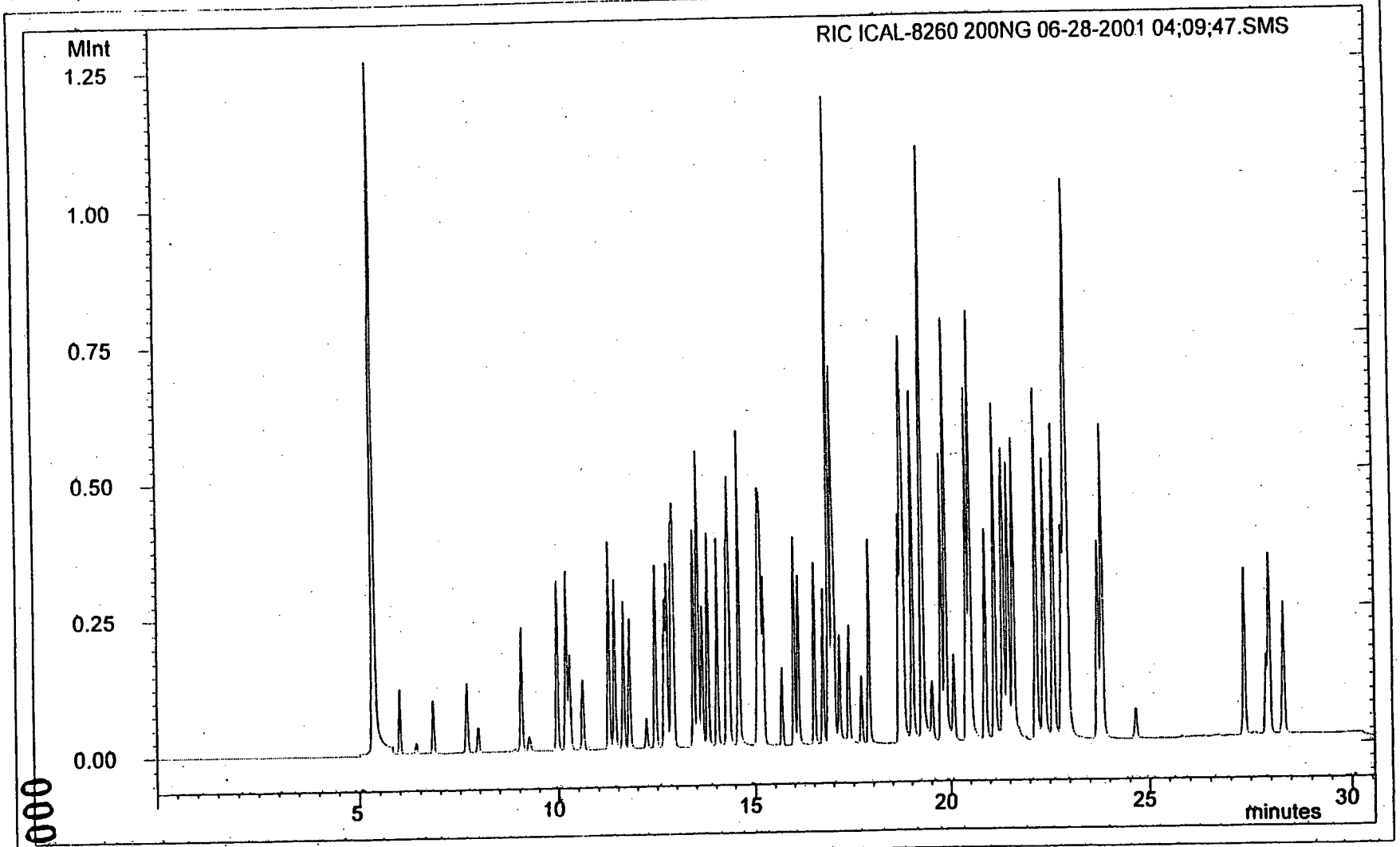
#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.435	Pentafluorobenzene	IS 168	263853	263853.344		Counts
30	14.596	1,4-Difluorobenzene	IS 114	541211	541210.813		Counts
46	18.746	Chlorobenzene-d5	IS 117	575393	575392.500		Counts
68	22.892	1,4-Dichlorobenzene-d4	IS 152	224315	224314.766		Counts
22	12.923	Dibromofluoromethane(surr	SU 113	358734	358734.344		Counts
26	13.546	D4-1,2-Dichloroethane (su	SU 102	33626	33625.629		Counts
36	16.886	Toluene-d8 (surr)	SU 98	1263492	1263492.250		Counts
55	20.504	4-Bromofluorobenzene (sur	SU 95	605866	605865.750		Counts
1	05.995	Dichlorodifluoromethane	85	201912	201912.438		Counts
2	06.405	Chloromethane	47+49	43035	43034.840		Counts
3	06.826	Vinyl Chloride	62	156521	156520.891		Counts
4	07.672	Bromomethane	94	143821	143821.156		Counts
5	07.963	Chloroethane	49	44881	44880.777		Counts
6	09.046	Trichloromonofluoromethan	101	268946	268946.156		Counts
7	09.969	1,1-Dichloroethene	96	137870	137869.688		Counts
8	10.613	Carbon disulfide	76	276123	276123.469		Counts
9	10.287	Trichlorotrifluoroethane	101	99416	99416.492		Counts
10	10.199	Methylene chloride	84	139101	139100.563		Counts
11	09.243	Acetone	43	73691	73690.781		Counts
12	11.264	trans-1,2-Dichloroethene	96	157490	157489.844		Counts
13	11.414	MTBE	73	274457	274457.344		Counts
14	11.638	1,1-Dichlorethane	63	423633	423632.938		Counts
15	11.800	Vinyl Acetate	43	614396	614396.125		Counts
16	12.231	2-Butanone	72	10325	10325.410		Counts
17	12.461	cis-1,2-Dichloroethene	96	162833	162833.344		Counts
18	12.876	2,2-Dichloropropane	77	224318	224318.203		Counts
19	12.690	Bromochloromethane	128	84244	84243.727		Counts
20	12.755	Chloroform	83	361868	361868.156		Counts
21	14.286	Carbon tetrachloride	117	243051	243051.234		Counts
23	13.795	1,1,1-Trichloroethane	97	344411	344411.375		Counts
24	14.031	1,1-Dichloropropene	75	175799	175798.516		Counts
25	14.334	Benzene	78	435235	435234.781		Counts
28	13.651	1,2-Dichloroethane	62	362618	362617.594		Counts
29	15.144	Trichloroethene	95	207918	207917.906		Counts
31	15.057	Dibromomethane	93	111817	111817.227		Counts
32	15.095	1,2-Dichloropropane	63	180676	180676.453		Counts
33	15.209	Bromodichloromethane	83	278345	278344.781		Counts
34	15.676	Chloroethylvinylether	63	75305	75305.305		Counts
35	15.995	cis-1,3-Dichloropropene	75	223327	223326.938		Counts
37	16.976	Toluene	92	340695	340695.094		Counts
38	17.900	Tetrachloroethene	164	100033	100033.016		Counts
39	16.106	4-Methyl-2-pentanone	100	22932	22932.125		Counts
40	16.515	trans-1,3-Dichloropropene	75	186510	186509.922		Counts
41	16.733	1,1,2-Trichloroethane	83	96536	96535.945		Counts
42	17.390	Dibromochloromethane	129	160645	160645.109		Counts
43	17.023	1,3-Dichloropropane	76	122042	122041.563		Counts
44	17.707	1,2-Dibromoethane	107	136152	136152.375		Counts
45	17.158	2-Hexanone	43	221746	221746.453		Counts
47	18.792	Chlorobenzene	112	448164	448164.063		Counts
48	19.020	Ethylbenzene	91	805858	805857.688		Counts
49	18.677	1,1,1,2-Tetrachloroethane	131	194957	194957.219		Counts
50	19.274	m,p-Xylene	106	555775	555774.938		Counts
51	19.870	o-Xylene	106	296694	296694.219		Counts
52	19.756	Styrene	104	430076	430075.500		Counts
53	19.519	Bromoform	173	72054	72053.500		Counts
54	20.410	Isopropyl benzene	105	764135	764134.625		Counts
56	20.884	Bromobenzene	156	208950	208949.797		Counts
57	21.125	n-Propylbenzene	91	910269	910269.375		Counts
58	19.861	1,1,2,2-Tetrachloroethane	83+85	234231	234230.703		Counts
59	21.342	2-Chlorotoluene	126	156169	156168.750		Counts
60	20.077	1,2,3-Trichloropropane	75	100734	100733.945		Counts
61	21.599	1,3,5-Trimethylbenzene	105	671984	671984.063		Counts
62	21.466	4-Chlorotoluene	126	157649	157649.297		Counts
63	22.168	tert-Butylbenzene	119	670932	670931.938		Counts
64	22.369	1,2,4-Trimethylbenzene	105	660376	660376.313		Counts
65	22.369	sec-Butylbenzene	105	660376	660376.313		Counts
66	22.947	Isopropyltoluene	119	647966	647965.500		Counts
67	22.813	1,3-Dichlorobenzene	146	251970	251970.484		Counts
69	22.948	1,4-Dichlorobenzene	146	236149	236149.141		Counts
70	23.824	n-Butylbenzene	91	643511	643510.688		Counts
71	23.713	1,2-Dichlorobenzene	146	295734	295734.438		Counts
72	24.658	1,2-Dibromo-3-chloropropa	75	29868	29867.834		Counts
73	27.970	Hexachlorobutadiene	225	129507	129507.406		Counts
74	27.348	1,2,4-Trichlorobenzene	182	142356	142356.031		Counts
75	27.896	Naphthalene	128	209852	209852.172		Counts
76	28.322	1,2,3-Trichlorobenzene	182	120130	120129.836		Counts

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 200NG 06-28-2001 04;09;47.SMS
Acquisition Date: 06/28/2001 16:09
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 200NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000053

8270 Saturn 2000 VOA

Processed: 06/28/2001 05:

Sample: ICAL-8260 500NG

Acq Date : 06/28/01 04:43:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.00

d:\data\200106\062801\ICAL-8260 500NG 06-28-2001 04;43;39.SMS D:\SaturnWS\Methods\062801WA.

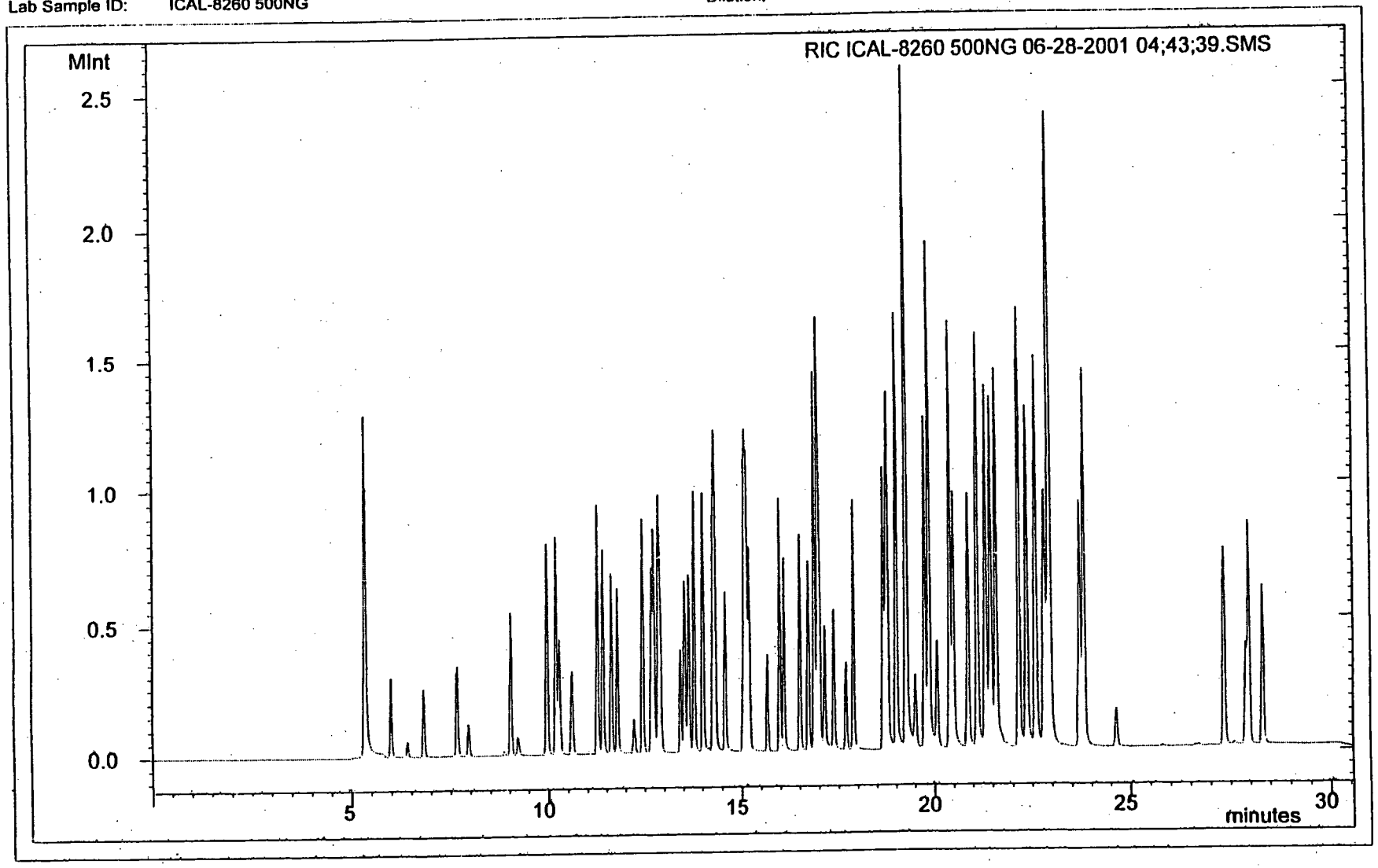
#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.434	Pentafluorobenzene	IS 168	252758	252757.563		Counts
30	14.595	1,4-Difluorobenzene	IS 114	538896	538896.000		Counts
46	18.747	Chlorobenzene-d5	IS 117	583759	583758.813		Counts
68	22.890	1,4-Dichlorobenzene-d4	IS 152	219700	219700.109		Counts
22	12.923	Dibromofluoromethane(surr	SU 113	436978	436977.969		Counts
26	13.548	D4-1,2-Dichloroethane (su	SU 102	41081	41081.125		Counts
36	16.885	Toluene-d8 (surr)	SU 98	1533736	1533735.875		Counts
55	20.502	4-Bromofluorobenzene (sur	SU 95	731664	731663.688		Counts
1	05.996	Dichlorodifluoromethane	85	479828	479828.406		Counts
2	06.405	Chloromethane	47+49	131967	131966.984		Counts
3	06.828	Vinyl Chloride	62	398776	398775.719		Counts
4	07.672	Bromomethane	94	378238	378237.781		Counts
5	07.962	Chloroethane	49	108818	108818.063		Counts
6	09.046	Trichloromonofluoromethan	101	663069	663068.625		Counts
7	09.969	1,1-Dichloroethene	96	354926	354926.469		Counts
8	10.613	Carbon disulfide	76	679688	679688.438		Counts
9	10.288	Trichlorotrifluoroethane	101	243484	243483.906		Counts
10	10.202	Methylene chloride	84	345442	345442.031		Counts
11	09.239	Acetone	43	177867	177866.781		Counts
12	11.265	trans-1,2-Dichloroethene	96	409980	409980.281		Counts
13	11.412	MTBE	73	674834	674834.313		Counts
14	11.638	1,1-Dichlorethane	63	1102465	1102464.875		Counts
15	11.798	Vinyl Acetate	43	1580797	1580797.000		Counts
16	12.230	2-Butanone	72	23700	23700.330		Counts
17	12.460	cis-1,2-Dichloroethene	96	418460	418459.500		Counts
18	12.876	2,2-Dichloropropane	77	574103	574102.750		Counts
19	12.690	Bromochloromethane	128	215035	215035.313		Counts
20	12.755	Chloroform	83	918063	918063.375		Counts
21	14.285	Carbon tetrachloride	117	634976	634976.000		Counts
23	13.795	1,1,1-Trichloroethane	97	865089	865089.000		Counts
24	14.031	1,1-Dichloropropene	75	446686	446686.344		Counts
25	14.334	Benzene	78	1099633	1099633.250		Counts
28	13.652	1,2-Dichloroethane	62	931326	931326.125		Counts
29	15.143	Trichloroethene	95	514082	514082.406		Counts
31	15.055	Dibromomethane	93	279312	279311.594		Counts
32	15.094	1,2-Dichloropropane	63	469217	469217.344		Counts
33	15.210	Bromodichloromethane	83	715830	715829.625		Counts
34	15.676	Chloroethylvinylether	63	184730	184730.078		Counts
35	15.994	cis-1,3-Dichloropropene	75	549135	549134.563		Counts
37	16.975	Toluene	92	871395	871395.375		Counts
38	17.899	Tetrachloroethene	164	245266	245266.000		Counts
39	16.104	4-Methyl-2-pentanone	100	56074	56073.781		Counts
40	16.514	trans-1,3-Dichloropropene	75	486645	486644.563		Counts
41	16.731	1,1,2-Trichloroethane	83	243171	243171.047		Counts
42	17.388	Dibromochloromethane	129	415504	415504.094		Counts
43	17.023	1,3-Dichloropropane	76	308530	308530.000		Counts
44	17.706	1,2-Dibromoethane	107	348090	348089.938		Counts
45	17.154	2-Hexanone	43	542134	542134.375		Counts
47	18.792	Chlorobenzene	112	1123519	1123519.250		Counts
48	19.020	Ethylbenzene	91	2021102	2021102.375		Counts
49	18.677	1,1,1,2-Tetrachloroethane	131	500424	500423.875		Counts
50	19.273	m,p-Xylene	106	1454426	1454426.375		Counts
51	19.869	o-Xylene	106	787454	787453.688		Counts
52	19.759	Styrene	104	1109671	1109671.250		Counts
53	19.520	Bromoform	173	187200	187200.078		Counts
54	20.408	Isopropyl benzene	105	1942691	1942690.625		Counts
56	20.883	Bromobenzene	156	525680	525680.125		Counts
57	21.127	n-Propylbenzene	91	2312339	2312339.250		Counts
58	19.858	1,1,2,2-Tetrachloroethane	83+85	570369	570368.688		Counts
59	21.343	2-Chlorotoluene	126	414275	414275.313		Counts
60	20.077	1,2,3-Trichloropropane	75	259002	259002.406		Counts
61	21.597	1,3,5-Trimethylbenzene	105	1752486	1752485.625		Counts
62	21.468	4-Chlorotoluene	126	421337	421337.063		Counts
63	22.169	tert-Butylbenzene	119	1740276	1740275.750		Counts
64	22.366	1,2,4-Trimethylbenzene	105	1676843	1676843.250		Counts
65	22.600	sec-Butylbenzene	105	106326	106326.164		Counts
66	22.948	Isopropyltoluene	119	1655750	1655749.500		Counts
67	22.812	1,3-Dichlorobenzene	146	671057	671056.875		Counts
69	22.954	1,4-Dichlorobenzene	146	531113	531113.313		Counts
70	23.822	n-Butylbenzene	91	1667649	1667648.625		Counts
71	23.712	1,2-Dichlorobenzene	146	761773	761772.750		Counts
72	24.661	1,2-Dibromo-3-chloroprope	75	74129	74128.516		Counts
73	27.972	Hexachlorobutadiene	225	322541	322541.031		Counts
74	27.349	1,2,4-Trichlorobenzene	182	355277	355277.250		Counts
75	27.895	Naphthalene	128	561015	561015.313		Counts
76	28.320	1,2,3-Trichlorobenzene	182	314586	314586.344		Counts

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 500NG 06-28-2001 04;43;39.SMS
Acquisition Date: 06/28/2001 16:43
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 500NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000055

8270 Saturn 2000 VOA

Processed: 06/28/2001 05:

Sample: ICAL-8260 800NG

Acq Date : 06/28/01 05:17:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial: Sample VolWt: 1.00

d:\data\200106\062801\ICAL-8260 800NG 06-28-2001 05;17;29.SMS D:\SaturnWS\Methods\062801WA.

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.437	Pentafluorobenzene	IS 168	258901	258901.344		Counts
30	14.597	1,4-Difluorobenzene	IS 114	544303	544303.313		Counts
46	18.747	Chlorobenzene-d5	IS 117	566923	566922.875		Counts
66	22.887	1,4-Dichlorobenzene-d4	IS 152	225041	225040.750		Counts
22	12.923	Dibromofluoromethane(surr	SU 113	509253	509253.031		Counts
26	13.547	D4-1,2-Dichloroethane (su	SU 102	46281	46280.547		Counts
36	16.885	Toluene-d8 (surr)	SU 98	1846337	1846337.000		Counts
55	20.504	4-Bromofluorobenzene (sur	SU 95	875484	875484.375		Counts
1	05.996	Dichlorodifluoromethane	85	762000	762000.188		Counts
2	06.406	Chloromethane	47+49	224025	224025.219		Counts
3	06.828	Vinyl Chloride	62	536368	536368.000		Counts
4	07.672	Bromomethane	94	608591	608591.375		Counts
5	07.963	Chloroethane	49	164298	164298.375		Counts
6	09.046	Trichloromonofluoromethan	101	1067205	1067205.375		Counts
7	09.970	1,1-Dichloroethene	96	559187	559187.438		Counts
8	10.613	Carbon disulfide	76	1082766	1082766.250		Counts
9	10.288	Trichlorotrifluoroethane	101	388568	388568.344		Counts
10	10.200	Methylene chloride	84	546543	546542.813		Counts
11	09.238	Acetone	43	296130	296130.156		Counts
12	11.266	trans-1,2-Dichloroethene	96	641881	641881.313		Counts
13	11.411	MTBE	73	1098181	1098181.250		Counts
14	11.638	1,1-Dichlorethane	63	1725654	1725653.750		Counts
15	11.799	Vinyl Acetate	43	2294989	2294989.250		Counts
16	12.230	2-Butanone	72	38916	38916.180		Counts
17	12.461	cis-1,2-Dichloroethene	96	661629	661628.875		Counts
18	12.876	2,2-Dichloropropane	77	881446	881446.188		Counts
19	12.691	Bromochloromethane	128	345230	345229.719		Counts
20	12.754	Chloroform	83	1464311	1464311.125		Counts
21	14.285	Carbon tetrachloride	117	990092	990092.375		Counts
23	13.796	1,1,1-Trichloroethane	97	1355785	1355785.000		Counts
24	14.033	1,1-Dichloropropene	75	695910	695910.438		Counts
25	14.333	Benzene	78	1701948	1701948.375		Counts
28	13.652	1,2-Dichloroethane	62	1453127	1453127.250		Counts
29	15.143	Trichloroethene	95	814884	814884.000		Counts
31	15.056	Dibromomethane	93	448708	448708.031		Counts
32	15.093	1,2-Dichloropropane	63	748047	748047.250		Counts
33	15.211	Bromodichloromethane	83	1182154	1182154.000		Counts
34	15.676	Chloroethylvinylether	63	299777	299776.781		Counts
35	15.995	cis-1,3-Dichloropropene	75	878915	878914.938		Counts
37	16.977	Toluene	92	1363804	1363804.250		Counts
38	17.901	Tetrachloroethene	164	390151	390150.531		Counts
39	16.107	4-Methyl-2-pentanone	100	89559	89558.953		Counts
40	16.515	trans-1,3-Dichloropropene	75	763574	763573.813		Counts
41	16.732	1,1,2-Trichloroethane	83	380719	380719.469		Counts
42	17.390	Dibromochloromethane	129	654158	654157.875		Counts
43	17.026	1,3-Dichloropropane	76	463354	463354.125		Counts
44	17.707	1,2-Dibromoethane	107	569699	569699.375		Counts
45	17.158	2-Hexanone	43	857174	857174.250		Counts
47	18.792	Chlorobenzene	112	1791124	1791123.625		Counts
48	19.021	Ethylbenzene	91	3253371	3253371.000		Counts
49	18.679	1,1,1,2-Tetrachloroethane	131	791271	791270.688		Counts
50	19.279	m,p-Xylene	106	2343203	2343202.500		Counts
51	19.870	o-Xylene	106	1221614	1221614.000		Counts
52	19.758	Styrene	104	1788675	1788674.500		Counts
53	19.521	Bromoform	173	309380	309379.844		Counts
54	20.411	Isopropyl benzene	105	3029140	3029139.500		Counts
56	20.886	Bromobenzene	156	837170	837170.375		Counts
57	21.128	n-Propylbenzene	91	3504159	3504159.000		Counts
58	19.860	1,1,2,2-Tetrachloroethane	83+85	858549	858548.750		Counts
59	21.344	2-Chlorotoluene	126	696868	696867.688		Counts
60	20.079	1,2,3-Trichloropropane	75	417172	417172.031		Counts
61	21.600	1,3,5-Trimethylbenzene	105	2731598	2731597.500		Counts
62	21.468	4-Chlorotoluene	126	769214	769214.313		Counts
63	22.170	tert-Butylbenzene	119	2694181	2694181.250		Counts
64	22.370	1,2,4-Trimethylbenzene	105	2558624	2558624.250		Counts
65	22.370	sec-Butylbenzene	105	2558624	2558624.250		Counts
66	22.950	Isopropyltoluene	119	2608598	2608598.000		Counts
67	22.814	1,3-Dichlorobenzene	146	1072037	1072036.625		Counts
69	22.953	1,4-Dichlorobenzene	146	725671	725671.375		Counts
70	23.826	n-Butylbenzene	91	2614786	2614786.000		Counts
71	23.713	1,2-Dichlorobenzene	146	1216527	1216526.625		Counts
72	24.662	1,2-Dibromo-3-chloropropa	75	123126	123126.055		Counts
73	27.973	Hexachlorobutadiene	225	510758	510757.781		Counts
74	27.351	1,2,4-Trichlorobenzene	182	565988	565987.938		Counts
75	27.897	Naphthalene	128	951371	951370.500		Counts
76	28.324	1,2,3-Trichlorobenzene	182	498693	498693.375		Counts

000056

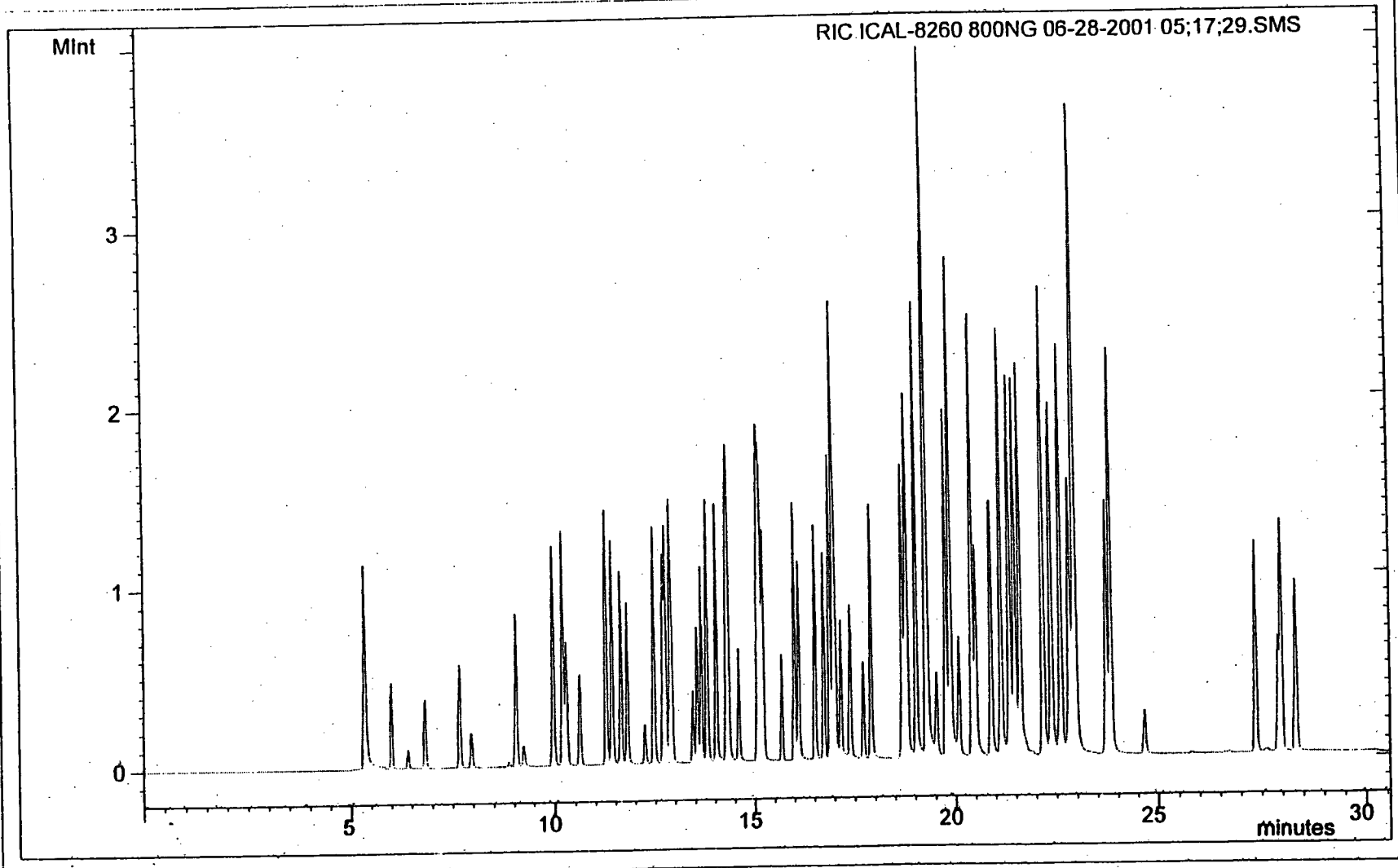
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 800NG 06-28-2001 05;17;29.SMS
Acquisition Date: 06/28/2001 17:17
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 800NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved _____ Date _____

000057

8270 Saturn 2000 VOA

Processed: 06/28/2001 06:2

Sample: ICAL-8260 1000NG

Acq Date : 06/28/01 05:51:00 Dilution: 1

Comment: 2001/06/28-01.60

Vial:

Sample VolWt: 1.00(

d:\data\200106\062801\ICAL-8260 1000NG 06-28-2001 05;51;19.SMS

D:\SaturnWS\Methods\062801WA.

#	RT	Compound	Ion	Area	Amount	Conc.	Unit
27	13.437	Pentafluorobenzene	IS 168	258925	258924.609		Counts
30	14.598	1,4-Difluorobenzene	IS 114	540561	540560.750		Counts
46	18.747	Chlorobenzene-d5	IS 117	551426	551425.500		Counts
68	22.869	1,4-Dichlorobenzene-d4	IS 152	218449	218449.313		Counts
22	12.926	Dibromofluoromethane(surr	SU 113	590998	590997.938		Counts
26	13.546	D4-1,2-Dichloroethane (su	SU 102	52225	52225.410		Counts
36	16.887	Toluene-d8 (surr)	SU 98	2074629	2074628.875		Counts
55	20.508	4-Bromofluorobenzene (sur	SU 95	985277	985276.813		Counts
1	05.996	Dichlorodifluoromethane	85	915499	915498.563		Counts
2	06.406	Chloromethane	47+49	292290	292290.094		Counts
3	06.828	Vinyl Chloride	62	664136	664135.563		Counts
4	07.672	Bromomethane	94	779061	779060.563		Counts
5	07.964	Chloroethane	49	207405	207404.734		Counts
6	09.047	Trichloromonofluoromethan	101	1345913	1345913.000		Counts
7	09.971	1,1-Dichloroethene	96	695640	695639.875		Counts
8	10.614	Carbon disulfide	76	1290931	1290931.375		Counts
9	10.289	Trichlorotrifluoroethane	101	457501	457501.250		Counts
10	10.202	Methylene chloride	84	682698	682698.375		Counts
11	09.240	Acetone	43	337218	337217.500		Counts
12	11.267	trans-1,2-Dichloroethene	96	826447	826447.000		Counts
13	11.415	MTBE	73	1349987	1349987.250		Counts
14	11.639	1,1-Dichlorethane	63	2252234	2252233.500		Counts
15	11.799	Vinyl Acetate	43	3294098	3294098.000		Counts
16	12.231	2-Butanone	72	46461	46461.191		Counts
17	12.464	cis-1,2-Dichloroethene	96	814328	814327.875		Counts
18	12.876	2,2-Dichloropropane	77	1145367	1145367.125		Counts
19	12.693	Bromochloromethane	128	442048	442048.281		Counts
20	12.757	Chloroform	83	1914108	1914108.250		Counts
21	14.288	Carbon tetrachloride	117	1268907	1268907.125		Counts
23	13.796	1,1,1-Trichloroethane	97	1725789	1725788.625		Counts
24	14.034	1,1-Dichloropropene	75	899471	899470.500		Counts
25	14.336	Benzene	78	2113295	2113294.750		Counts
26	13.653	1,2-Dichloroethane	62	1802191	1802190.875		Counts
29	15.147	Trichloroethene	95	1022715	1022714.625		Counts
31	15.057	Dibromomethane	93	548128	548128.063		Counts
32	15.096	1,2-Dichloropropane	63	918528	918528.375		Counts
33	15.213	Bromodichloromethane	83	1497930	1497930.000		Counts
34	15.678	Chloroethylvinylether	63	360085	360084.906		Counts
35	15.997	cis-1,3-Dichloropropene	75	1115831	1115830.875		Counts
37	16.978	Toluene	92	1727273	1727272.500		Counts
38	17.900	Tetrachloroethene	164	501636	501636.125		Counts
39	16.107	4-Methyl-2-pentanone	100	105112	105112.406		Counts
40	16.517	trans-1,3-Dichloropropene	75	1004667	1004667.000		Counts
41	16.734	1,1,2-Trichloroethane	83	489378	489377.844		Counts
42	17.391	Dibromochloromethane	129	823424	823424.438		Counts
43	17.027	1,3-Dichloropropane	76	577374	577374.188		Counts
44	17.709	1,2-Dibromoethane	107	727743	727742.875		Counts
45	17.158	2-Hexanone	43	1028231	1028230.688		Counts
47	16.794	Chlorobenzene	112	2234651	2234651.250		Counts
48	19.023	Ethylbenzene	91	4173953	4173952.500		Counts
49	18.680	1,1,1,2-Tetrachloroethane	131	1000447	1000447.313		Counts
50	19.277	m,p-Xylene	106	2986921	2986920.500		Counts
51	19.871	o-Xylene	106	1576414	1576414.250		Counts
52	19.760	Styrene	104	2333585	2333585.250		Counts
53	19.523	Bromoform	173	391007	391006.625		Counts
54	20.413	Isopropyl benzene	105	3875354	3875353.750		Counts
56	20.884	Bromobenzene	156	1058543	1058543.250		Counts
57	21.130	n-Propylbenzene	91	4410687	4410687.000		Counts
58	19.862	1,1,2,2-Tetrachloroethane	83+85	1049569	1049569.250		Counts
59	21.344	2-Chlorotoluene	126	886265	886264.625		Counts
60	20.080	1,2,3-Trichloropropane	75	520870	520870.125		Counts
61	21.602	1,3,5-Trimethylbenzene	105	3509901	3509900.500		Counts
62	21.470	4-Chlorotoluene	126	817327	817326.500		Counts
63	22.172	tert-Butylbenzene	119	3459708	3459707.750		Counts
64	22.370	1,2,4-Trimethylbenzene	105	3259303	3259302.500		Counts
65	22.370	sec-Butylbenzene	105	3259309	3259309.000		Counts
66	22.949	Isopropyltoluene	119	3357573	3357572.750		Counts
67	22.816	1,3-Dichlorobenzene	146	1368929	1368929.250		Counts
69	22.951	1,4-Dichlorobenzene	146	856384	856384.063		Counts
70	23.827	n-Butylbenzene	91	3194557	3194556.750		Counts
71	23.716	1,2-Dichlorobenzene	146	1494797	1494796.625		Counts
72	24.663	1,2-Dibromo-3-chloropropa	75	156288	156288.391		Counts
73	27.973	Hexachlorobutadiene	225	664470	664470.375		Counts
74	27.350	1,2,4-Trichlorobenzene	182	728320	728320.438		Counts
75	27.897	Naphthalene	128	1215009	1215009.000		Counts
76	28.327	1,2,3-Trichlorobenzene	182	642978	642977.500		Counts

000058

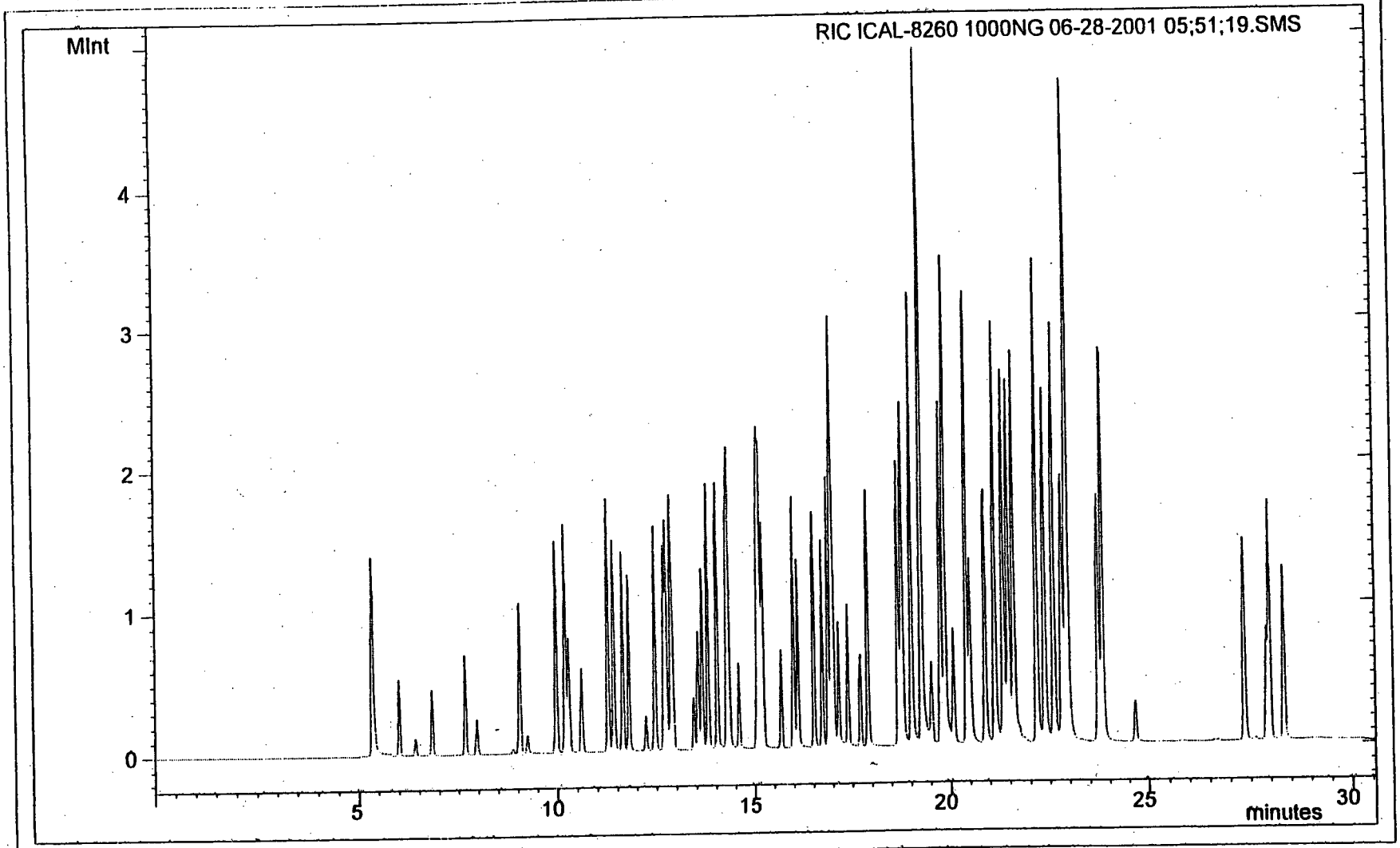
CCV run date: / / : :

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200106\062801\ICAL-8260 1000NG 06-28-2001 05;51;19.SM
Acquisition Date: 06/28/2001 17:51
EPA Sample No: ICAL-8260
Lab Sample ID: ICAL-8260 1000NG

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000059

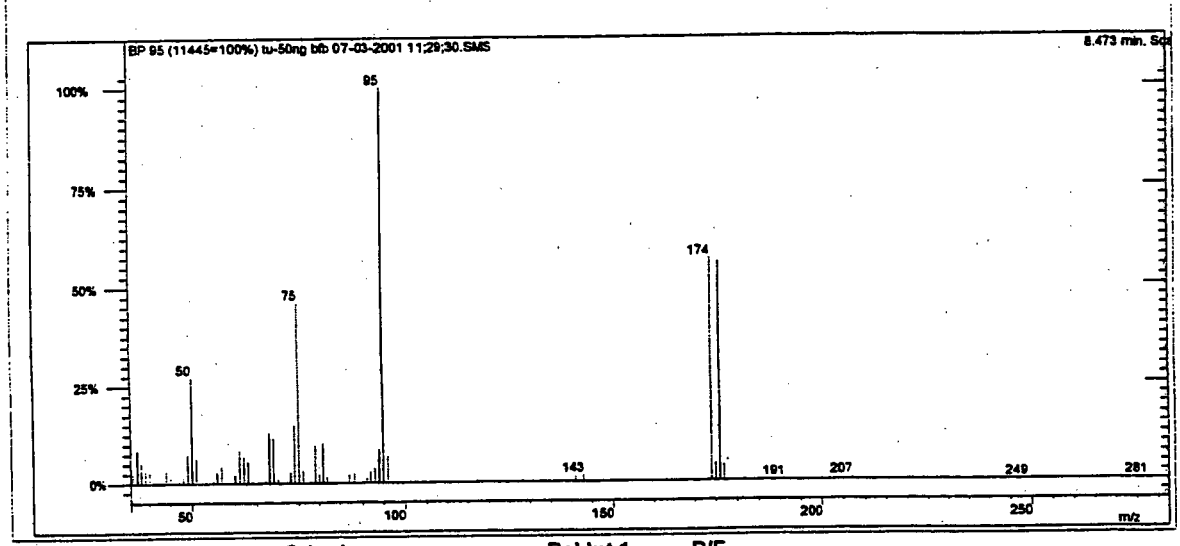
CCV & TUNE

Tune Report

Acquisition Date: 07/03/2001 11:29:31 AM

Data File Name: d:\data\200107\070301\tu-50ng bfb 07-03-2001 11;29;30.SMS

Tune Spectrum



Mass	Criteria	Rel.Int.1	P/F
50	15-40% of m/z 95	27.30	PASS
75	30-60% of m/z 95	46.20	PASS
95	base peak	100.00	PASS
96	5-9% of m/z 95	6.98	PASS
173	<2% of m/z 174	0.00	PASS
174	>50% of m/z 95	56.92	PASS
175	5-9% of m/z 174	7.86	PASS
176	>95% but <101% of m/z 174	98.62	PASS
177	5-9% of m/z 176	7.64	PASS

y
07/03/01
(AU)

Rev'd
rev'd
07-16-01

VOLATILE CONTINUING CALIBRATION CHECK

EPA Method 8260A

07/03/01

Instrument ID: S2K3 Continuing Calibration Date: 07/03/2001 Time: 12:44

Heated Purge (Y/N): No Initial Calibration Date: 06/28/2001 06/28/2001

GC Column: DB-VRX ID: 0.25 (mm) Initial Calibration Time: 14:13 17:51

Initial Calibration File: D:\data\200106\062801\BLK 06-28-2001 02;13;02.SMS

Lab File ID: d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS

RRF = (Area(sample)/Amount(sample))/(Area(standard)/Amount(standard))

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
Dichlorodifluoromethane	0.825	0.635	0.000				
Chloromethane	0.223	0.182	0.100				PASS
Vinyl Chloride	0.658	0.594	0.000	9.7	20.0	PASS	
Bromomethane	0.744	0.461	0.000				
Chloroethane	0.213	0.177	0.000				
Trichloromonofluoromethane	1.212	1.142	0.000				
1,1-Dichloroethene	0.663	0.596	0.000	10.1	20.0	PASS	
Carbon disulfide	1.209	1.211	0.000				
Trichlorotrifluoroethane	0.416	0.445	0.000				
Methylene chloride	0.702	0.563	0.000				
Acetone	0.156	0.392	0.000				
trans-1,2-Dichloroethene	0.785	0.675	0.000				
MTBE	1.287	1.262	0.000				
1,1-Dichlorethane	2.127	1.861	0.100				PASS
Vinyl Acetate	1.205	3.174	0.000				
2-Butanone	0.019	0.048	0.000				
cis-1,2-Dichloroethene	0.819	0.685	0.000				
2,2-Dichloropropane	1.092	1.057	0.000				
Bromochloromethane	0.442	0.350	0.000				
Chloroform	1.874	1.579	0.000	15.7	20.0	PASS	
Carbon tetrachloride	1.163	1.082	0.000				
Dibromofluoromethane(surr)	0.851	0.854	0.000				
1,1,1-Trichloroethane	1.611	1.386	0.000				
1,1-Dichloropropene	0.399	0.348	0.000				
Benzene	1.012	0.960	0.000				
D4-1,2-Dichloroethane (surr)	0.079	0.072	0.000				
1,2-Dichloroethane	0.891	0.716	0.000				
Trichloroethene	0.471	0.430	0.000				
Dibromomethane	0.271	0.226	0.000				
1,2-Dichloropropane	0.443	0.364	0.000	17.7	20.0	PASS	
Bromodichloromethane	0.684	0.582	0.000				
Chloroethylvinylether	0.170	0.159	0.000				
cis-1,3-Dichloropropene	0.536	0.453	0.000				
Toluene-d8 (surr)	1.461	1.438	0.000				
Toluene	0.789	0.759	0.000	3.7	20.0	PASS	
Tetrachloroethene	0.217	0.207	0.000				

Compound	AvgRRF	RRF	MinRRF	% D	Max %D	CCC	SPCC
4-Methyl-2-pentanone	0.021	0.051	0.000				
trans-1,3-Dichloropropene	0.462	0.400	0.000				
1,1,2-Trichloroethane	0.237	0.205	0.000				
Dibromochloromethane	0.387	0.332	0.000				
1,3-Dichloropropane	0.288	0.262	0.000				
1,2-Dibromoethane	0.340	0.285	0.000				
2-Hexanone	0.192	0.517	0.000				
Chlorobenzene	1.015	0.947	0.300				PASS
Ethylbenzene	1.788	1.738	0.000	2.8	20.0	PASS	
1,1,1,2-Tetrachloroethane	0.458	0.398	0.000				
m,p-Xylene	0.614	1.277	0.000				
o-Xylene	0.645	0.639	0.000				
Styrene	0.941	0.934	0.000				
Bromoform	0.172	0.159	0.100				PASS
Isopropyl benzene	4.197	3.931	0.000				
4-Bromofluorobenzene (surr)	1.738	1.650	0.000				
Bromobenzene	1.211	1.067	0.000				
n-Propylbenzene	4.948	4.730	0.000				
1,1,2,2-Tetrachloroethane	1.397	1.180	0.300				PASS
2-Chlorotoluene	0.885	0.926	0.000				
1,2,3-Trichloropropane	0.627	0.518	0.000				
1,3,5-Trimethylbenzene	3.818	3.668	0.000				
4-Chlorotoluene	0.943	1.101	0.000				
tert-Butylbenzene	3.740	3.573	0.000				
1,2,4-Trimethylbenzene	3.686	3.528	0.000				
sec-Butylbenzene	4.508	4.224	0.000				
Isopropyltoluene	3.641	3.533	0.000				
1,3-Dichlorobenzene	1.484	1.408	0.000				
1,4-Dichlorobenzene	1.322	0.669	0.000				
n-Butylbenzene	3.573	3.508	0.000				
1,2-Dichlorobenzene	1.693	1.537	0.000				
1,2-Dibromo-3-chloropropane	0.186	0.159	0.000				
Hexachlorobutadiene	0.732	0.689	0.000				
1,2,4-Trichlorobenzene	0.832	0.812	0.000				
Naphthalene	1.332	1.351	0.000				
1,2,3-Trichlorobenzene	0.726	0.729	0.000				

8270 Saturn 2000 VOA

Processed: 07/03/2001 01:

Sample: CCV-500NG 8260#1 Acq Date : 07/03/01 12:44:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.00

d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS D:\SaturnWS\Methods\062801W

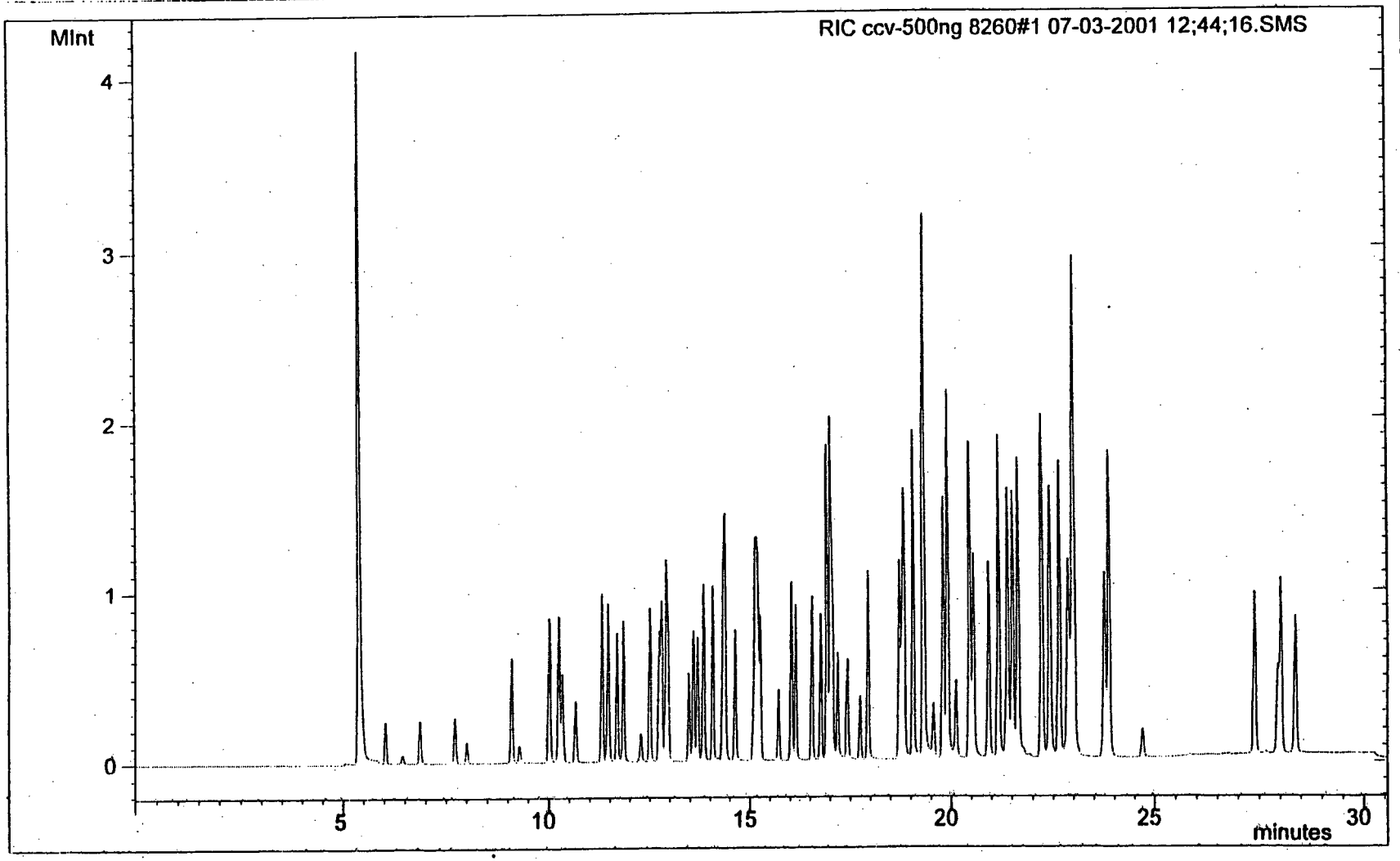
#	RT	Compound	Ion	Area	Amount	Conc.	Unit
1	13.473	Pentafluorobenzene	IS 168	324104	250.000	250.000	ug/L
2	14.634	1,4-Difluorobenzene	IS 114	688168	250.000	250.000	ug/L
3	18.782	Chlorobenzene-d5	IS 117	682101	250.000	250.000	ug/L
4	22.935	1,4-Dichlorobenzene-d4	IS 152	284602	250.000	250.000	ug/L
26	12.964	Dibromofluoromethane(surr	SU 113	553800	501.729	501.73	ug/L
30	13.586	D4-1,2-Dichloroethane (su	SU 102	46729	454.001	454.00	ug/L
38	16.920	Toluene-d8 (surr)	SU 98	1979289	492.203	492.20	ug/L
56	20.544	4-Bromofluorobenzene (sur	SU 95	939294	474.752	474.75	ug/L
5	06.030	Dichlorodifluoromethane	85	411662	384.793	38.48	ug/L
6	06.445	Chloromethane	47+49	117966	408.162	40.82	ug/L
7	06.870	Vinyl Chloride	62	385218	451.258	45.13 ✓	ug/L
8	07.717	Bromomethane	94	298644	309.643	30.96	ug/L
9	08.008	Chloroethane	49	114439	414.898	41.49	ug/L
10	09.090	Trichloromonofluoromethan	101	740522	471.237	47.12	ug/L
11	10.014	1,1-Dichloroethene	96	386253	449.284	44.93 ✓	ug/L
12	10.657	Carbon disulfide	76	785100	501.069	50.11	ug/L
13	10.331	Trichlorotrifluoroethane	101	288763	535.514	53.55	ug/L
14	10.244	Methylene chloride	84	365087	401.369	40.14	ug/L
15	09.289	Acetone	43	254339	1260.279	126.03	ug/L
16	11.308	trans-1,2-Dichloroethene	96	437361	429.769	42.98	ug/L
17	11.456	MTBE	73	817874	490.120	49.01	ug/L
18	11.682	1,1-Dichlorethane	63	1206312	437.463	43.75	ug/L
19	11.840	Vinyl Acetate	43	2057388	1316.967	131.70	ug/L
20	12.273	2-Butanone	72	31369	1259.451	125.95	ug/L
21	12.501	cis-1,2-Dichloroethene	96	443727	417.986	41.80	ug/L
22	12.915	2,2-Dichloropropane	77	685213	483.826	48.38	ug/L
23	12.731	Bromochloromethane	128	226926	395.809	39.58	ug/L
24	12.796	Chloroform	83	1023451	421.372	42.14 ✓	ug/L
25	14.323	Carbon tetrachloride	117	701502	465.104	46.51	ug/L
27	13.834	1,1,1-Trichloroethane	97	898177	430.136	43.01	ug/L
28	14.069	1,1-Dichloropropene	75	478962	436.403	43.64	ug/L
29	14.372	Benzene	78	1321904	474.426	47.44	ug/L
31	13.691	1,2-Dichloroethane	62	984793	401.574	40.16	ug/L
32	15.180	Trichloroethene	95	591425	455.742	45.57	ug/L
33	15.093	Dibromomethane	93	311181	416.805	41.68	ug/L
34	15.131	1,2-Dichloropropane	63	501625	411.289	41.13 ✓	ug/L
35	15.249	Bromodichloromethane	83	800765	425.102	42.51	ug/L
36	15.712	Chloroethylvinylether	63	218441	465.572	46.56	ug/L
37	16.030	cis-1,3-Dichloropropene	75	623744	422.874	42.29	ug/L
39	17.009	Toluene	92	1045115	481.284	48.13 ✓	ug/L
40	17.936	Tetrachloroethene	164	282441	477.478	47.75	ug/L
41	16.139	4-Methyl-2-pentanone	100	70003	1215.401	121.54	ug/L
42	16.551	trans-1,3-Dichloropropene	75	550470	432.619	43.26	ug/L
43	16.767	1,1,2-Trichloroethane	83	281798	431.111	43.11	ug/L
44	17.425	Dibromochloromethane	129	457008	428.968	42.90	ug/L
45	17.061	1,3-Dichloropropane	76	356783	454.288	45.43	ug/L
46	17.742	1,2-Dibromoethane	107	391607	418.015	41.80	ug/L
47	17.190	2-Hexanone	43	705414	1343.583	134.36	ug/L
48	18.828	Chlorobenzene	112	1291702	466.460	46.65	ug/L
49	19.057	Ethylbenzene	91	2370557	486.065	48.61 ✓	ug/L
50	18.713	1,1,1,2-Tetrachloroethane	131	542619	434.558	43.46	ug/L
51	19.308	m,p-Xylene	106	1742258	1040.761	104.08	ug/L
52	19.907	o-Xylene	106	871063	495.221	49.52	ug/L
53	19.797	Styrene	104	1273942	495.994	49.60	ug/L
54	19.559	Bromoform	173	216441	461.043	46.10	ug/L
55	20.448	Isopropyl benzene	105	2237374	468.281	46.83	ug/L
57	20.926	Bromobenzene	156	607492	440.581	44.06	ug/L
58	21.168	n-Propylbenzene	91	2692581	478.022	47.80	ug/L
59	19.899	1,1,2,2-Tetrachloroethane	83+85	671783	422.347	42.23	ug/L
60	21.384	2-Chlorotoluene	126	527156	523.306	52.33	ug/L
61	20.117	1,2,3-Trichloropropane	75	294741	413.197	41.32	ug/L
62	21.641	1,3,5-Trimethylbenzene	105	2087934	480.427	48.04	ug/L
63	21.505	4-Chlorotoluene	126	626803	583.714	58.37	ug/L
64	22.211	tert-Butylbenzene	119	2033532	477.613	47.76	ug/L
65	22.411	1,2,4-Trimethylbenzene	105	2008084	478.522	47.85	ug/L
66	22.646	sec-Butylbenzene	105	2404063	468.460	46.85	ug/L
67	22.993	Isopropyltoluene	119	2011113	485.136	48.51	ug/L
68	22.858	1,3-Dichlorobenzene	146	801685	474.621	47.46	ug/L
69	22.860	1,4-Dichlorobenzene	146	380647	252.975	25.30	ug/L
70	23.865	n-Butylbenzene	91	1997019	490.943	49.09	ug/L
71	23.757	1,2-Dichlorobenzene	146	874899	453.842	45.38	ug/L
72	24.703	1,2-Dibromo-3-chloropropa	75	90238	425.892	42.59	ug/L
73	28.016	Hexachlorobutadiene	225	392149	470.284	47.03	ug/L
74	27.389	1,2,4-Trichlorobenzene	182	462285	488.079	48.81	ug/L
75	27.935	Naphthalene	128	769020	507.180	50.72	ug/L
76	28.363	1,2,3-Trichlorobenzene	182	415128	502.275	50.23	ug/L

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ccv-500ng 8260#1 07-03-2001 12;44;16.SMS
Acquisition Date: 07/03/2001 12:44
EPA Sample No: ccv-500ng
Lab Sample ID: ccv-500ng 8260#1

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000065

SUPPORTING DATA

8270 Saturn 2000 VOA

Processed: 07/03/2001 02:00

Sample: LS-WA-1-070301.60 Acq Date : 07/03/01 01:30:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

\data\200107\070301\ls-wa-1-070301.60 07-03-2001 01;30;09.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.472	Pentafluorobenzene	IS 168	325601	250.000	250.000	ug/L	ISA Pass
2	14.634	1,4-Difluorobenzene	IS 114	669731	250.000	250.000	ug/L	ISA Pass
3	18.783	Chlorobenzene-d5	IS 117	650641	250.000	250.000	ug/L	ISA Pass
4	22.935	1,4-Dichlorobenzene-d4	IS 152	255824	250.000	250.000	ug/L	ISA Pass
26	12.962	Dibromofluoromethane(surr	SU 113	537883	485.068	485.07	ug/L	*******% Pass
30	13.586	D4-1,2-Dichloroethane (su	SU 102	47512	459.487	459.49	ug/L	91.9% Pass
38	16.919	Toluene-d8 (surr)	SU 98	1932842	493.885	493.89	ug/L	98.8% Pass
56	20.544	4-Bromofluorobenzene (sur	SU 95	891965	501.543	501.54	ug/L	100.3% Pass
5	06.031	Dichlorodifluoromethane	85	930	0.866	0.09	ug/L	
6	06.527	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.858	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.719	Bromomethane	94	979	1.010	0.10	ug/L	
9	08.009	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.092	Trichloromonofluoromethan	101	695	0.441	0.04	ug/L	
11	10.014	1,1-Dichloroethene	96	398509	461.409	46.14	ug/L	
12	10.659	Carbon disulfide	76	1250	0.794	0.08	ug/L	
13	10.331	Trichlorotrifluoroethane	101	418	0.772	0.08	ug/L	
14	10.239	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.302	Acetone	43	12717	62.725	6.27	ug/L	
16	11.305	trans-1,2-Dichloroethene	96	589	0.576	0.06	ug/L	
17	11.453	MTBE	73	1063	0.634	0.06	ug/L	
18	11.682	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.636	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.277	2-Butanone	72	231	9.248	0.92	ug/L	
21	12.507	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.863	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.731	Bromochloromethane	128	245	0.425	0.04	ug/L	
24	12.795	Chloroform	63	0	0.000	0.00	ug/L	
25	14.323	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.835	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.071	1,1-Dichloropropene	75	435	0.407	0.04	ug/L	
29	14.373	Benzene	78	1241005	457.653	45.77	ug/L	
31	13.690	1,2-Dichloroethane	62	7319	3.067	0.31	ug/L	
32	15.180	Trichloroethene	95	569886	451.234	45.12	ug/L	
33	15.111	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.313	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.057	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.587	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.012	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.009	Toluene	92	960690	454.585	45.46	ug/L	
40	17.936	Tetrachloroethene	164	6655	11.794	1.18	ug/L	
41	16.133	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.552	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.763	1,1,2-Trichloroethane	83	168	0.264	0.03	ug/L	
44	17.404	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.124	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.737	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.203	2-Hexanone	43	1752	3.498	0.35	ug/L	
48	18.830	Chlorobenzene	112	1217230	460.820	46.08	ug/L	
49	19.042	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.714	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.312	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.901	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.804	Styrene	104	0	0.000	0.00	ug/L	
54	19.560	Bromoform	173	0	0.000	0.00	ug/L	
55	20.448	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.923	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.182	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.913	1,1,2,2-Tetrachloroethane	83+85	649	0.454	0.05	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.125	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.655	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.212	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.426	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.483	sec-Butylbenzene	105	309	0.067	0.01	ug/L	
67	22.980	Isopropyltoluene	119	10890	2.922	0.29	ug/L	
68	22.738	1,3-Dichlorobenzene	146	409	0.269	0.03	ug/L	
69	22.863	1,4-Dichlorobenzene	146	0	0.000	0.00	ug/L	
70	23.866	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.757	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.597	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.002	Hexachlorobutadiene	225	8283	11.051	1.11	ug/L	
74	27.375	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.933	Naphthalene	128	15122	11.095	1.11	ug/L	
76	28.346	1,2,3-Trichlorobenzene	182	14261	19.195	1.92	ug/L	

In LMS 07/03/01

7.16.01

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ls-wa-1-070301.60 07-03-2001 01;30;09.SMS

Acquisition Date: 07/03/2001 13:30

EPA Sample No: ls-wa-1-07

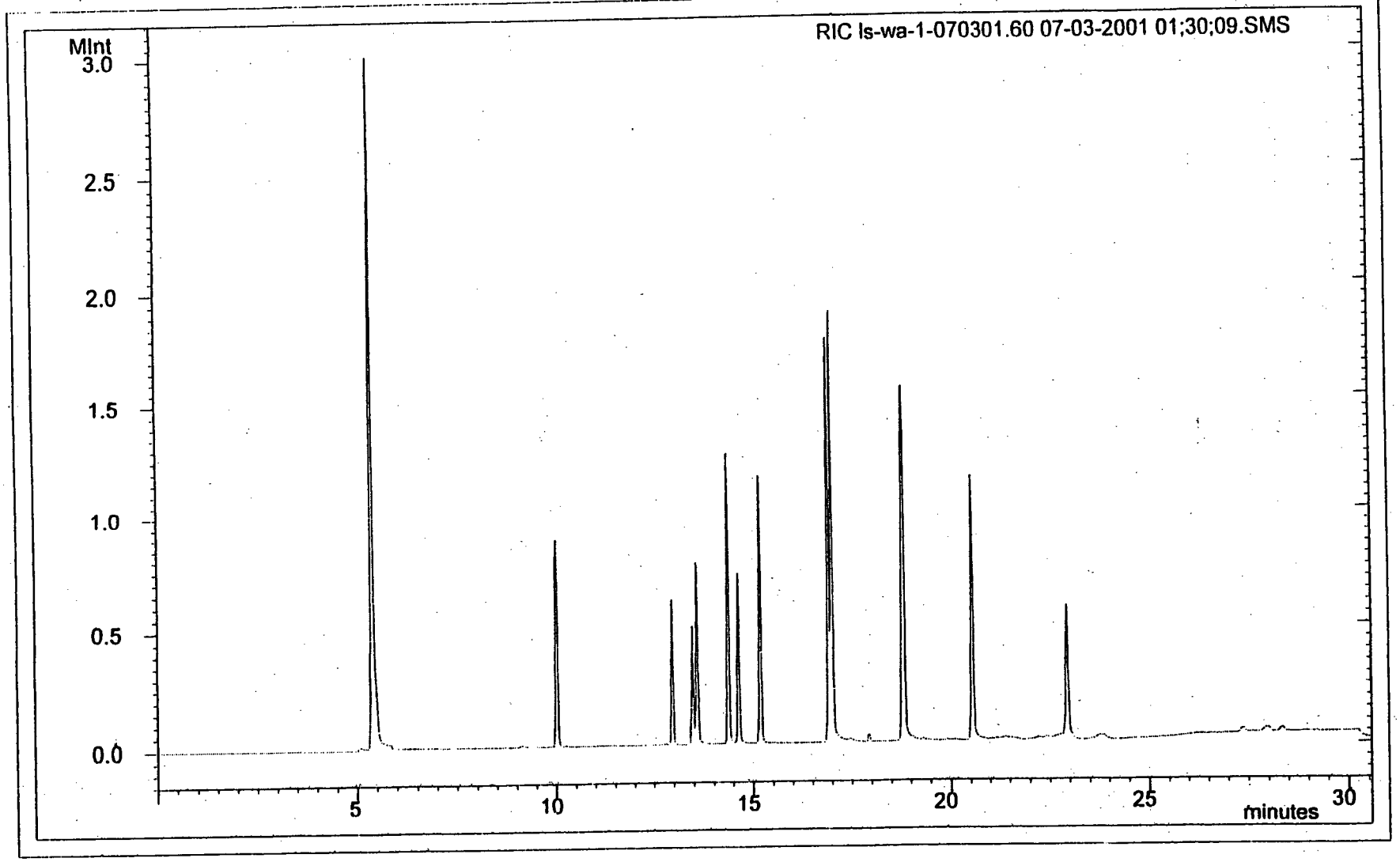
Lab Sample ID: ls-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS

Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29

Operator: AT

Dilution: 1



Approved_____ Date_____

000068

8270 Saturn 2000 VOA

Processed: 07/03/2001 02:34

Sample: LD-WA-1-070301.60 Acq Date : 07/03/01 02:04:00 Dilution: 1

Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000

\data\200107\070301\ld-wa-1-070301.60 07-03-2001 02;04;13.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.470	Pentafluorobenzene	IS 168	314454	250.000	250.000	ug/L	ISA Pass
2	14.629	1,4-Difluorobenzene	IS 114	669264	250.000	250.000	ug/L	ISA Pass
3	18.779	Chlorobenzene-d5	IS 117	644545	250.000	250.000	ug/L	ISA Pass
4	22.933	1,4-Dichlorobenzene-d4	IS 152	255515	250.000	250.000	ug/L	ISA Pass
26	12.959	Dibromofluoromethane(surr	SU 113	557986	521.035	521.04	ug/L	*******% Pass
30	13.579	D4-1,2-Dichloroethane (su	SU 102	50303	503.728	503.73	ug/L	100.7% Pass
38	16.916	Toluene-d8 (surr)	SU 98	1920106	490.972	490.97	ug/L	98.2% Pass
56	20.540	4-Bromofluorobenzene (sur	SU 95	898495	505.826	505.83	ug/L	101.2% Pass
5	06.018	Dichlorodifluoromethane	85	481	0.464	0.05	ug/L	
6	06.621	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.881	Vinyl Chloride	62	131	0.158	0.02	ug/L	
8	07.700	Bromomethane	94	721	0.770	0.08	ug/L	
9	07.921	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.076	Trichloromonofluoromethan	101	149	0.098	0.01	ug/L	
11	10.005	1,1-Dichloroethene	96	429864	515.380	51.54	ug/L	
12	10.646	Carbon disulfide	76	787	0.518	0.05	ug/L	
13	10.332	Trichlorotrifluoroethane	101	152	0.291	0.03	ug/L	
14	10.241	Methylene chloride	84	0	0.000	0.00	ug/L	
15	09.295	Acetone	43	13431	68.595	6.86	ug/L	
16	11.285	trans-1,2-Dichloroethene	96	112	0.113	0.01	ug/L	
17	11.448	MTBE	73	896	0.553	0.06	ug/L	
18	11.690	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.835	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.271	2-Butanone	72	0	0.000	0.00	ug/L	
21	12.512	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.856	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.718	Bromochloromethane	128	133	0.240	0.02	ug/L	
24	12.789	Chloroform	83	0	0.000	0.00	ug/L	
25	14.303	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.818	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.076	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.368	Benzene	78	1339340	494.261	49.43	ug/L	
31	13.686	1,2-Dichloroethane	62	6969	2.922	0.29	ug/L	
32	15.178	Trichloroethene	95	608324	482.005	48.20	ug/L	
33	14.961	Dibromomethane	93	0	0.000	0.00	ug/L	
34	15.071	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.440	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.539	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	16.037	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.007	Toluene	92	1008906	477.733	47.77	ug/L	
40	17.931	Tetrachloroethene	164	3651	6.531	0.65	ug/L	
41	16.148	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.417	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.753	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.339	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	17.050	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.731	1,2-Dibromoethane	107	256	0.281	0.03	ug/L	
47	17.204	2-Hexanone	43	0	0.000	0.00	ug/L	
48	18.828	Chlorobenzene	112	1310715	500.906	50.09	ug/L	
49	19.055	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.715	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.312	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.909	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.800	Styrene	104	0	0.000	0.00	ug/L	
54	19.567	Bromoform	173	0	0.000	0.00	ug/L	
55	20.448	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.918	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.161	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.907	1,1,2,2-Tetrachloroethane	83+85	285	0.199	0.02	ug/L	
60	21.392	2-Chlorotoluene	126	122	0.135	0.01	ug/L	
61	20.161	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.634	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.232	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.418	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.651	sec-Butylbenzene	105	1572	0.341	0.03	ug/L	
67	23.085	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.873	1,3-Dichlorobenzene	146	3626	2.393	0.24	ug/L	
69	22.883	1,4-Dichlorobenzene	146	1479	1.095	0.11	ug/L	
70	23.884	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.771	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.725	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	27.995	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.393	1,2,4-Trichlorobenzene	182	3774	4.438	0.44	ug/L	
75	27.937	Naphthalene	128	0	0.000	0.00	ug/L	
76	28.366	1,2,3-Trichlorobenzene	182	5018	6.762	0.68	ug/L	

in LMS 07/03/01 (N)

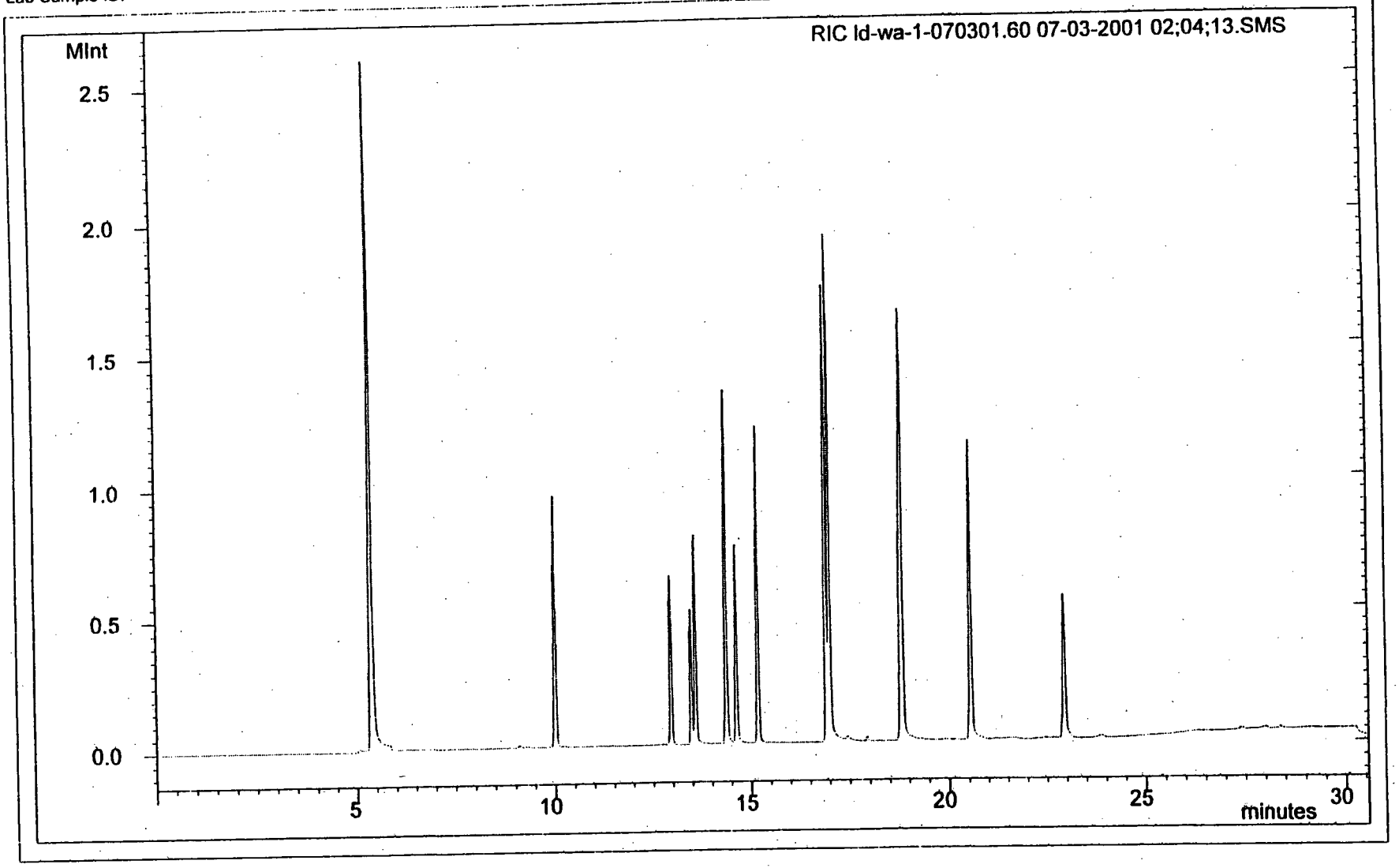
9 7-18-01

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\ld-wa-1-070301.60 07-03-2001 02;04;13.SMS
Acquisition Date: 07/03/2001 14:04
EPA Sample No: ld-wa-1-07
Lab Sample ID: ld-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1.SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000070

8270 Saturn 2000 VOA Processed: 07/03/2001 03:08

Sample: MB-WA-1-070301.60 Acq Date : 07/03/01 02:38:00 Dilution: 1
Comment: 2001/07/03-01.60 Vial: Sample VolWt: 10.0000
d:\data\200107\070301\mb-wa-1-070301.60 07-03-2001 02;38;22.SMS D:\SaturnWS\Methods\062801W.mth

#	RT	Compound	Ion	Area	Amount	Conc.	Unit	
1	13.467	Pentafluorobenzene	IS 168	331902	250.000	250.000	ug/L	ISA Pass
2	14.629	1,4-Difluorobenzene	IS 114	672696	250.000	250.000	ug/L	ISA Pass
3	16.778	Chlorobenzene-d5	IS 117	630406	250.000	250.000	ug/L	ISA Pass
4	22.935	1,4-Dichlorobenzene-d4	IS 152	259094	250.000	250.000	ug/L	ISA Pass
26	12.958	Dibromofluoromethane(surr	SU 113	545318	482.437	482.44	ug/L	*******% Pass
30	13.577	D4-1,2-Dichloroethane (su	SU 102	46498	441.139	441.14	ug/L	88.2% Pass
38	16.916	Toluene-d8 (surr)	SU 98	1960882	498.841	498.84	ug/L	99.8% Pass
56	20.536	4-Bromofluorobenzene (sur	SU 95	879695	488.401	488.40	ug/L	97.7% Pass
5	06.014	Dichlorodifluoromethane	85	567	0.517	0.05	ug/L	
6	06.346	Chloromethane	47+49	0	0.000	0.00	ug/L	
7	06.904	Vinyl Chloride	62	0	0.000	0.00	ug/L	
8	07.714	Bromomethane	94	435	0.440	0.04	ug/L	
9	08.152	Chloroethane	49	0	0.000	0.00	ug/L	
10	09.066	Trichloromonofluoromethan	101	0	0.000	0.00	ug/L	
11	10.007	1,1-Dichloroethene	96	259	0.294	0.03	ug/L	
12	10.592	Carbon disulfide	76	0	0.000	0.00	ug/L	
13	10.329	Trichlorotrifluoroethane	101	192	0.347	0.03	ug/L	
14	10.236	Methylene chloride	84	2535	2.721	0.27	ug/L	
15	09.298	Acetone	43	13616	65.883	6.59 <RL	ug/L	
16	11.463	trans-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
17	11.440	MTBE	73	0	0.000	0.00	ug/L	
18	11.615	1,1-Dichlorethane	63	0	0.000	0.00	ug/L	
19	11.907	Vinyl Acetate	43	0	0.000	0.00	ug/L	
20	12.282	2-Butanone	72	286	11.205	1.12 <RL	ug/L	
21	12.665	cis-1,2-Dichloroethene	96	0	0.000	0.00	ug/L	
22	12.745	2,2-Dichloropropane	77	0	0.000	0.00	ug/L	
23	12.717	Bromochloromethane	128	115	0.195	0.02	ug/L	
24	12.791	Chloroform	83	0	0.000	0.00	ug/L	
25	14.505	Carbon tetrachloride	117	0	0.000	0.00	ug/L	
27	13.623	1,1,1-Trichloroethane	97	0	0.000	0.00	ug/L	
28	14.237	1,1-Dichloropropene	75	0	0.000	0.00	ug/L	
29	14.358	Benzene	78	0	0.000	0.00	ug/L	
31	13.684	1,2-Dichloroethane	62	6361	2.654	0.27	ug/L	
32	15.172	Trichloroethene	95	0	0.000	0.00	ug/L	
33	15.050	Dibromomethane	93	0	0.000	0.00	ug/L	
34	14.970	1,2-Dichloropropane	63	0	0.000	0.00	ug/L	
35	15.217	Bromodichloromethane	83	0	0.000	0.00	ug/L	
36	15.576	Chloroethylvinylether	63	0	0.000	0.00	ug/L	
37	15.914	cis-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
39	17.011	Toluene	92	0	0.000	0.00	ug/L	
40	17.952	Tetrachloroethene	164	0	0.000	0.00	ug/L	
41	16.158	4-Methyl-2-pentanone	100	0	0.000	0.00	ug/L	
42	16.739	trans-1,3-Dichloropropene	75	0	0.000	0.00	ug/L	
43	16.772	1,1,2-Trichloroethane	83	0	0.000	0.00	ug/L	
44	17.324	Dibromochloromethane	129	0	0.000	0.00	ug/L	
45	16.943	1,3-Dichloropropane	76	0	0.000	0.00	ug/L	
46	17.666	1,2-Dibromoethane	107	0	0.000	0.00	ug/L	
47	17.197	2-Hexanone	43	711	1.465	0.15	ug/L	
48	18.946	Chlorobenzene	112	252	0.098	0.01	ug/L	
49	19.266	Ethylbenzene	91	0	0.000	0.00	ug/L	
50	18.696	1,1,1,2-Tetrachloroethane	131	0	0.000	0.00	ug/L	
51	19.310	m,p-Xylene	106	0	0.000	0.00	ug/L	
52	19.896	o-Xylene	106	0	0.000	0.00	ug/L	
53	19.764	Styrene	104	0	0.000	0.00	ug/L	
54	19.529	Bromoform	173	0	0.000	0.00	ug/L	
55	20.444	Isopropyl benzene	105	0	0.000	0.00	ug/L	
57	20.972	Bromobenzene	156	0	0.000	0.00	ug/L	
58	21.209	n-Propylbenzene	91	0	0.000	0.00	ug/L	
59	19.883	1,1,2,2-Tetrachloroethane	83+85	208	0.144	0.01	ug/L	
60	21.389	2-Chlorotoluene	126			0.00	ug/L	
61	20.203	1,2,3-Trichloropropane	75	0	0.000	0.00	ug/L	
62	21.621	1,3,5-Trimethylbenzene	105	0	0.000	0.00	ug/L	
63	21.514	4-Chlorotoluene	126			0.00	ug/L	
64	22.274	tert-Butylbenzene	119	0	0.000	0.00	ug/L	
65	22.451	1,2,4-Trimethylbenzene	105	0	0.000	0.00	ug/L	
66	22.726	sec-Butylbenzene	105	256	0.055	0.01	ug/L	
67	23.080	Isopropyltoluene	119	0	0.000	0.00	ug/L	
68	22.822	1,3-Dichlorobenzene	146	0	0.000	0.00	ug/L	
69	22.880	1,4-Dichlorobenzene	146	810	0.591	0.06	ug/L	
70	23.875	n-Butylbenzene	91	0	0.000	0.00	ug/L	
71	23.778	1,2-Dichlorobenzene	146	0	0.000	0.00	ug/L	
72	24.700	1,2-Dibromo-3-chloropropa	75	0	0.000	0.00	ug/L	
73	28.029	Hexachlorobutadiene	225	0	0.000	0.00	ug/L	
74	27.388	1,2,4-Trichlorobenzene	182	0	0.000	0.00	ug/L	
75	27.942	Naphthalene	128	6606	4.785	0.48	ug/L	
76	28.360	1,2,3-Trichlorobenzene	182	2199	2.922	0.29	ug/L	

in LIMS 07/05/01

7-16-01

000071

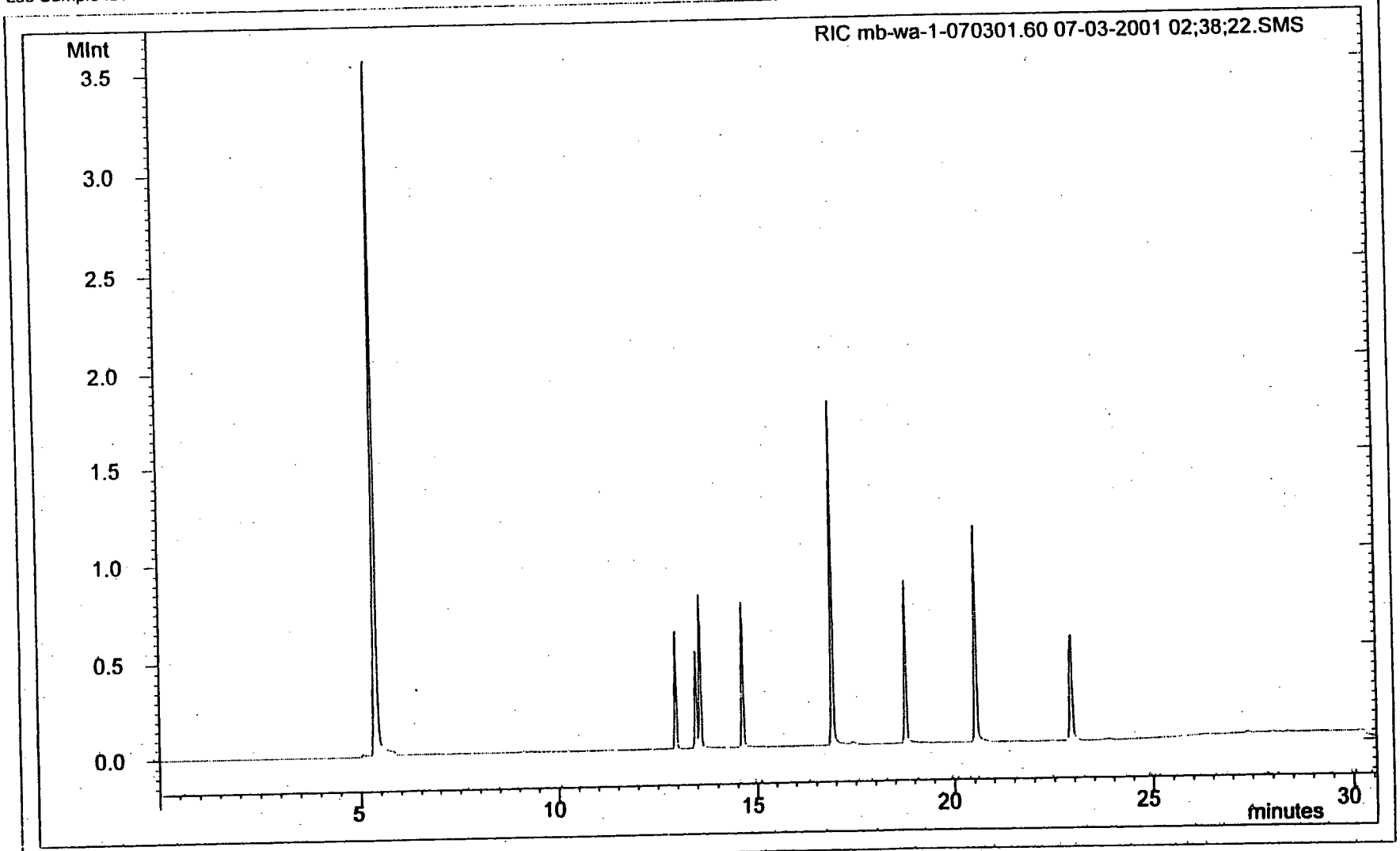
CCV run date: 2001/07/02 09:38:00

CHROMATOGRAM REPORT

EPA Method 8260B

Lab File ID: d:\data\200107\070301\mb-wa-1-070301.60 07-03-2001 02;38;22.SM
Acquisition Date: 07/03/2001 14:38
EPA Sample No: mb-wa-1-07
Lab Sample ID: mb-wa-1-070301.60

Calibration File: D:\data\200104\ccv-500ng 8260 4-19-01 1:SMS
Calibration Date Range:)4/06/200 16:34 04/06/2001 20:29
Operator: AT
Dilution: 1



Approved_____ Date_____

000072

RUN SEQUENCE & LOGBOOK DOCUMENTATION

TRENT SERVICES

STL ChromaLab

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.06
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	Wt/Vol	DF	pH	Run OK	Analyst	Std. ID	Comments
06/28/01	11:53	tune	50ng BFB								Y	AL		
	12:31	BLK					W	10ml	1x					
	13:05	BLK												
	13:39	IDAL-8260	10/25 ng										MS2469 2474	
	14:13		10/25ng											
	14:46		50/50ng											OK
	15:35		20/125											
	16:09		200/500											
	16:43		500/1250											
	17:17		800/2000											
	17:51		1000/2500 ng											
	18:25	BLK												
	18:58	BLK												
	19:32	ICV									N			need prepare new soln.
	20:06	ICV #1									N			
														AL 07/03/01

0000

Instrument ID: Saturn 2K GC/MS

forms\vol\mlg msvoasaturn2k 2001.doc

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.00
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035 **Prep batch #**

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat.	W/ Vol	DF	pH	Run OK	Analyst	Std. ID	Comments
07/03/01		~~tune~~ BLK					W	10ml			N	Ar	PCE=2.285 ppb	
		BLK					↓	↓			N		PCE=0.791 ppb	
											N			area=(199-73) EM=1700
		tune					W	10ml			N		PCE= 1.2 ppb	EM=1850
		BLK									N			
		~~tune~~									Y			
	11:29	tune	50ng BFB											
	11:57	CCV-8260 500/1250 ng					W	10ml	1X		N		M52469 9478	
	12:44	CCV-500 ng 8260 #1									Y			
	13:30	LCS									Y		PCE=1.18 ppb.	
	14:04	LCSD									Y		PCE=0.65 ppb	
	14:38	MB									Y		PCE=0.00 ppb	
	15:12	2001-06-0428-001									Y			
	16:11		-001 MS											% RPD out see rerun
	16:45		-001 MSD											
	17:19		-002											
	17:53		-003											
	18:27		-004											

Instrument ID: Saturn 2K GC/MS
forms\vol\rnlg msvoasaturn2k 2001.doc

SEVERN TRENT SERVICES

STL ChromaLab

RUN LOG FOR VOLATILE ORGANICS ANALYSIS BY GC/MS Ref.: SOP 6.06
SATURN 2K

METHOD: ☐ 8260A ☐ 8260B / ☐ 5035

Prep batch #

Date	Time	File ID	Sub. #	Lims ID	Client ID	SP #	Mat	W/A Vol	DF	pH	Run OK	Analyst	Std ID	Comments
07/05/01	19:01	2001-06-04	98-005				W	10ml	1X		Y	AC		
	19:35		-0499-001											
	20:10		-002											
	20:44		-003											
	21:18		-004											
	21:52		-005											

AC 07/05/01

Instrument ID: Saturn 2K GC/MS

forms\working msvoasaturn2k 2001.doc

APPENDIX C
DATA VALIDATION REPORT

ITSI

Data Validation Report

Project / Project #: City of Hayward Phase II Limited Groundwater Investigation / 00.171.05

Laboratory: STL ChromaLab

Work Order: 2001-06-0498 and 2001-06-0499

Analytical Methods: Volatile Organic Compounds by Method SW8260B

Data Validated By: Paul West

Date: August 20, 2001

1. Introduction

This report summarizes the data validation findings associated with the 10 water samples received by STL ChromaLab, Pleasanton, CA on June 26, 2001. The samples were collected on June 25 and June 26, 2001 by Innovative Technical Solutions, Inc. (ITSI) under project number 00-171.02.

The following table lists the analyses and corresponding samples validated in this work order.

Sample ID	Matrix	Total Analyses	Sample Type	SW8260B
GW-4	Water	1	Normal	X
GW-5	Water	1	Normal	X
GW-8	Water	1	Normal	X
GW-10	Water	1	Field Blank	X
GW-7	Water	1	Normal	X
GW-1	Water	1	Normal	X
GW-9	Water	1	Duplicate	X
GW-6	Water	1	Normal	X
GW-3	Water	1	Normal	X
GW-2	Water	1	Normal	X

The assessment of data quality was evaluated based on the quality control requirements provided in the following guidance documents:

(1) *Draft Sampling and Analysis Plan, Limited Phase II Targeted Brownfields Assessment, Cannery Redevelopment Area, City of Hayward, Hayward, CA,* (ITSI, 2001);

(2) *Test Methods for Evaluation Solids and Solid Waste, SW-846, 3rd Edition, US Environmental Protection Agency (1986), including update I (7/92), update II (9/94), update IIA (8/93), and update IIB (1/95).*

The data validation report includes the following attached documents:

Section 2: Data Validation Report for Volatile Organic Compounds by Method SW8260B

Attachment A: Data Validation Checklist and Worksheets

The overall data is of acceptable quality and considered usable. There were no rejected data.

2. Volatile Organics by Method SW8260B

2.1 Cross Reference of Samples Validated

The analytical data presented in laboratory **Submission numbers 2001-06-0498 and 2001-06-0499** for volatile organics compounds (VOCs) by Method SW8260B were validated. The table below provides a cross-reference for the ten (10) water samples validated.

Field Sample ID	Lab Sample ID	Sample Type
GW-4	2001-06-0499-1	Normal
GW-5	2001-06-0499-2	Normal
GW-8	2001-06-0499-3	Normal
GW-10	2001-06-0499-4	Field Blank
GW-7	2001-06-0499-5	Normal
GW-1	2001-06-0498-1	Normal
GW-9 (blind duplicate of GW-1)	2001-06-0498-2	Normal
GW-6	2001-06-0498-3	Normal
GW-3	2001-06-0498-4	Normal
GW-2	2001-06-0498-5	Normal

2.2 Sample Integrity

All samples were received intact and in good condition as noted on the chains of custody. Samples were received at 11 degrees Centigrade. Because samples were directly transferred to the laboratory by the field crew, insufficient time had lapsed to cool the samples do a normal shipping temperature of 4 degrees Centigrade. There is no effect on the integrity of the samples due to this temperature difference.

2.3 Holding Times

The holding time requirement for this method is 14 days from sample collection if samples are preserved, and 7 days if samples are unpreserved. The laboratory did not record the pH of the samples after analysis, but all samples were collected in VOA vials that contained preservative by experienced personnel. It is presumed that preservation was successful.

2.4 Instrument Tunes and Initial Calibration Curves

BFB instrument tunes were performed prior to instrument calibration and sample analysis. All BFB tunes met the tuning criteria defined in the method.

One initial calibration curve (ICAL) was generated for sample identification and quantitation for both analytical batches. The calibration curve included all target analytes listed in the table in Section 3.2 of the Workplan. All initial calibration criteria were met.

2.5 Second Source and Daily Continuing Calibration Standards

A daily continuing calibration standards was analyzed at the proper frequency and all acceptance criteria were met prior to sample analysis. A second source verification standard was not required.

2.6 Analyte Identification

Sample analyte spectra were reviewed against the reference standard spectra and all analytes were properly identified.

2.7 Analyte Quantitation

Retention time windows and control limits were properly established for each internal standard. The correct internal standards were properly added to all samples and standards. For all internal standards, the area counts and retention times were within acceptance criteria.

A method detection limit (MDL) study was performed within 12 months from sample analyses dates and all MDL values were below the PQLs listed in the Workplan.

All positive sample results and spike sample results were accurately quantitated using the response factors from the applicable ICAL curve.

2.8 Blank Evaluation

A field blank was created and labeled GW-10. The field blank was poured in the field from laboratory provided trip blank water into a laboratory provided set of preserved VOA vials. The field blank was collected, prepared and analyzed in the same manner and along with the field samples to assess contamination from the sampling and preparation processes. No target analytes were detected above one-half the PQL in the field blank.

A method blank was analyzed with each analytical batch to assess laboratory contamination. No target analytes were detected above one-half the PQL in the method blanks.

2.9 Laboratory Control Samples (Blank Spikes)

A laboratory control spike (LCS) and laboratory control spike duplicate (LCSD) pair was included in each analytical batch. The Workplan only requires an LCS, but since the data for an LCSD was included, the LCSD data was validated and used to assess overall laboratory precision.

The correct target analytes were spiked and the recoveries were evaluated against the limits in Table 3-1 of the Workplan. All laboratory-performed calculations were confirmed and no errors were found. All LCS/LCSD recoveries were within the acceptance limits listed in Table 3-2. The relative percent difference (RPD) values were within the field duplicate precision criteria of 50 RPD.

2.10 Matrix Spikes

A matrix spike (MS) and matrix spike duplicate (MSD) pair was included in each analytical batch. The correct target analytes were spiked. All laboratory-performed calculations were confirmed and no errors were found. All MS/MSD recoveries were within the acceptance limits listed in Table 3-1 of the Workplan. The RPD values were within the limits listed in Table3-2 of the Workplan.

2.11 Field Duplicate

Field duplicate sample, GW-9, was collected under this work order for the original sample number GW-1. Field duplicates are within the criteria for field duplicate RPD as stated in Table 3-2 of the Workplan.

2.12 Surrogate Spikes

The proper surrogates were added to all normal samples, quality control samples, and standards. All surrogate recoveries were within acceptance criteria.

2.13 Overall Assessment

The SW8260B analytical data evaluated in this validation report has met the data quality and usability requirements as defined in the data quality objectives. There were no rejected analytical data and the overall data is of acceptable quality and considered usable for its intended purposes.

ATTACHMENT A
DATA VALIDATION CHECKLIST
AND WORKSHEETS

ITSI

DATA VALIDATION CHECKLIST FOR VOCs BY METHOD SW8260B

PROJECT NAME:__City of Hayward___ PROJECT NUMBER:__00.171.05 _____

LAB:__STL ChromaLab____ WORK ORDER#:__2001-06-0498/0499___ VALIDATOR:__Paul West__ DATE:__08/20/01

1.0	**Sample Integrity and Hold Times**				
1.1	Were all samples received intact?	X			
1.2	Were all samples analyzed within the prescribed hold time?	X			14 day hold time: Samples taken 6/26/01 and analyzed 7/5/01
1.3	Were all sample re-analyses performed within the prescribed holding time?			X	
General Comments					
2.0	**Tuning Evaluation**				
2.1	Were all BFB tuning criteria meet?	X			
2.2	Was a BFB tune performed every 12 hours and before each analytical sequence?	X			
2.3	Were mass assignments on raw data correct and was the mass listing normalized to the correct m/z?	X			
General Comments					
3.0	**Initial Calibration**				
3.1	Was the initial calibration performed after tuning criteria were met, and before blanks and samples were analyzed?	X			
3.2	Were at least five initial standard concentrations run?	X			
3.3	Was the %RSD ≤30 for all compounds?	X			
3.4	Are the RFs>0.1 for chloromethane, 1,1-DCA and bromoform? Are the RF's > 0.30 for chlorobenzene and 1,1,2,2-PCA?	X			
3.5	Was the low standard at the appropriate concentration as defined in the project specific QAPP?	X			
3.6	Does recalculation of the RRF and average RRF for one or more compounds verify the reported value?	X			

DATA VALIDATION CHECKLIST FOR VOCs BY METHOD SW8260B

PROJECT NAME:__City of Hayward___ PROJECT NUMBER:__00.171.05 _____

LAB:__STL ChromaLab____ WORK ORDER#:__2001-06-0498/0499___ VALIDATOR:__Paul West__ DATE:__08/20/01

		Yes	No	N/A	Samples Affected/Comments
3.7	Does recalculation of the initial calibration % RSD for one or more compounds verify the reported value?	X			
3.8	If required in the project specific QAPP, were secondary source calibration verification standards performed at the proper frequency?			X	Not specificed in QAPP
3.9	If secondary source standards were analyzed, were all recoveries within the QAPP defined control limits?			X	Analyzed, but not evaluated
General Comments					
4.0	**Continuing Calibration**				
4.1	Were continuing calibration standards analyzed after tuning criteria were met, and before blanks and samples were analyzed?	X			
4.2	Is the %D≤20% for all CCC's?	X			
4.3	Does recalculation of the %D verify the reported value?	X			
4.4	Are the RFs>0.1 for chloromethane, 1,1-DCA and bromoform? Are the RF's > 0.30 for chlorobenzene and 1,1,2,2-PCA?	X			
4.5	Does recalculation of the RRF for one or more compounds verify the reported value?	X			
General Comments					
5.0	**Target Compound Verification**				
5.1	Was the relative retention time (RRT) within 0.06 RRT units of the daily CCV?	X			
5.2	Does the sample spectra match the standard spectra for each identified compound?	X			Attachment II of faxed sheets
General Comments					
6.0	**Compound Quantitation, Dilution, and Reporting limits**				

DATA VALIDATION CHECKLIST FOR VOCs BY METHOD SW8260B

PROJECT NAME:__City of Hayward___ PROJECT NUMBER:__00.171.05 _____

LAB:__STL ChromaLab____ WORK ORDER#:__2001-06-0498/0499___ VALIDATOR:__Paul West__ DATE:__08/20/01

		Yes	No	N/A	Sample Affected/Comments
6.1	Were dilutions properly performed so that the largest analyte peak response for a target compound was in the upper half of the calibration range?			X	No Dilutions performed
6.2	Were the sample RRFs calculated based on the correct internal standard for that compound?	X			
6.3	Does recalculation of the compound quantitations verify the reported results?	X			
6.4	Are the reported sample results, and quant reports free of transcription errors from the quant sheets, chromatograms, and sample prep logs?	X			
6.5	Are the QAPP defined target compounds reported?	X			QAPP Lists PCE, TCE, TCA, 1,1-DCE as target compounds
6.6	Are the QAPP defined PQL's met?	X			
6.7	Were the MDL and PQL values adjusted for sample dilution, splits, clean-up activities and dry weight factors?	X			
General Comments					
7.0	**Blank Evaluation**				
7.1	Was a method blank analyzed at the proper frequency?	X			
7.2	Were all method blanks clean, meaning that no target compounds were detected above the QAPP defined limit?	X			
7.3	If required, were field blanks collected at the proper frequency?	X			
7.4	Were all field blanks clean, meaning that no target compounds were detected above the QAPP defined limit?	X			
7.5	Were trip blanks collected at the proper frequency?	X			
7.6	Were all trip blanks clean, meaning that no target compounds were detected above the QAPP defined limit?	X			

DATA VALIDATION CHECKLIST FOR VOCs BY METHOD SW8260B

PROJECT NAME:__City of Hayward___ PROJECT NUMBER:__00.171.05 _____

LAB:__STL ChromaLab____ WORK ORDER#:__2001-06-0498/0499___ VALIDATOR:__Paul West__ DATE:__08/20/01

7.7	If required, were equipment blanks collected at the proper frequency?			X	Not specified
7.8	Were all equipment blanks clean, meaning that no target compounds were detected above the PQL?			X	
General Comments					
8.0	**Internal Standard Performance**				
8.1	Were internal standards added to all standards, samples and blanks?	X			
8.2	Are sample internal standard RT's within 30 sec of the CCAL internal standard RT's?	X			
8.3	Are sample internal standard area counts within -50% to +100% from the associated 12 hour standard?	X			
General Comments					
9.0	**Surrogate Evaluation**				
9.1	Were the QAPP defined surrogate compounds used?			X	Not defined in QAPP, default list in Method
9.2	Were surrogates added to all standards, samples, and blanks?	X			
9.3	Are all surrogate recoveries within the QAPP limits?	X			
General Comments					
10.0	**Laboratory Control Samples**				
10.1	Were laboratory control samples prepared with each analytical batch? Refer to the QAPP to see if an LCSD is required.	X			
10.2	Were all LCS/LCSD %R values within the QAPP defined limits?	X			
10.3	Were all RPD values below the QAPP maximum limit?	X			
10.4	Does recalculation of the LCS/LCSD % R and RPD values verify the reported values?	X			
10.5	Were the QAPP defined target compounds spiked?	X			

DATA VALIDATION CHECKLIST FOR VOCs BY METHOD SW8260B

PROJECT NAME:__City of Hayward___ PROJECT NUMBER:__00.171.05 _____

LAB:__STL ChromaLab____ WORK ORDER#:__2001-06-0498/0499___ VALIDATOR:__Paul West__ DATE:__08/20/01

		Yes	No	N/A	Samples Affected/Comments
General Comments					
11.0	**Matrix Spikes**				
11.1	Were matrix spikes analyzed at the QAPP defined frequency?	X			Submission 2001-06-0498
11.2	Were all MS/MSD %R within the QAPP defined limits?	X			
11.3	Were all RPD values below the QAPP maximum RPD limit?	X			
11.4	Does recalculation of the % R and RPD values verify the reported values?	X			
11.5	Were the QAPP defined target compounds spiked?	X			
General Comments					
12.0	**Field Duplicates**				
12.1	Were field duplicates collected at the QAPP defined frequency?	X			GW-9 is the field duplicate of GW-1
12.2	Were all field duplicate results within the QAPP defined maximum %RPD value?	X			
12.3	Does recalculation of the RPD values verify the reported values?	X			
General Comments					
13.0	**Method Detection Limits**				
13.1	Was an MDL study performed in the past 12 months?	X			
13.2	Do the MDL values meet the QAPP requirements? Refer to the project specific QAPP for acceptance criteria.	X			MDL is less than all stated reporting limits. All reporting limits below the decision criteria.
General Comments					

SW8260B RECALCULATION WORKSHEET
Project Name: City of Hayward Lab No.: 2001-06-0498 and -0499
Project Chemist: Paul West Date: 08/20/01

A. Initial Calibration Response Factor (RF) recalculation:

RF = (Ax) (Cis) / (Ais) (Cx)

Where:
Ax = analyte area counts
Cis = concentration of internal standard, ng/ml
Ais = internal standard area counts
Cx = concentration of analyte, ng/ml

MATRIX	DATE	INSTR	REF IS	ANALYTE NAME	Ax	Cis	Ais	Cx	RF	RF-Lab
WATER 40 mL	6-26-01	S2K3		tetrachloroethene (PCE)	100033	250	575393	200	0.217315	0.21700

B. Initial Calibration Mean and %RSD Recalculation:

$$RFavg = \frac{RF1 + RF2 + RF3 \ldots + RFn}{n}$$

Where:
RFavg = average response factor
RFn = response factor for n calibration std of initial calibration
n = number of standards used for initial calibration

$$\%RSD = \frac{SD}{RFavg} \times 100\%$$

Where:
%RSD = percent relative std deviation
RFavg = average response factor
SD = Std deviation of the RF's for a compound

MATRTIX	DATE	INSTR	ANALYTE NAME	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	MEAN	%RSD
WATER	6-28-01	S2K3	tetrachloroethene (PCE	0.186	0.242	0.22	0.217	0.21	0.215	0.227			0.216714	7.87

C. Continuing Calibration % Difference Recalculation:

$$\%D = \frac{RFavg - RFc}{RF\ avg} \times 100\%$$

Where:
%D = percent difference
RFavg = avg response factor from initial calib
RFc = continuing calibration response factor

MATRIX	DATE	INSTR	ANALYTE NAME	RFavg	RFc	%DIFF	%D Lab
WATER	6-26-01	S2K3	tetrachloroethene (PCE)	0.217	0.207	4.61	Not calculated (toluene calculated as substitute)
			toluene	0.789	0.759	3.80	3.7

D. Laboratory Control Spike Recalculation:

LAB ID	DATE	ANALYTE NAME	Blk Rslt	Spiked	LCS [C]	% Recov.	Spiked	LCDS [C]	% Recov.	RPD
2001/07/03	6-26-01	trichloroethane (TCE)	0	50	45.10	90%	50	48.2	96%	7%

E. Matrix Spike Recalculation:

LAB ID		ANALYTE NAME	Sam Rslt	Spiked	MS [C]	% Recov.	Spiked	MDS [C]	% Recov.	RPD
GW-01	6-25-01	trichloroethene (TCE)	23	50	72.00	98%	50	68.9	92%	4%

F. Water Sample Recalculation:

$$\text{Analyte conc, ug/L} = \frac{(Ax)\ (Is)\ (DF)}{(Ais)\ (RF)}$$

Where:
Ax = area of identified analyte
Ais = area of internal standard
Is = amount of internal standard injected, ng (conc of IS X purge vol)
RF = response factor for identified analyte
DF = dilution factor

Sample ID	LAB ID	ANALYTE NAME	CONC	Ax	Is	DF	Ais	RF
GW-05	2001-06-0499-002	trichloroethene (TCE)	23.4	298791	250	0.1	678775	0.471
GW-1	2001-06-0498-001	trichloroethene (TCE)	23.1	320998	250	0.1	736643	0.471
GW-9	2001-06-0498-002	trichloroethene (TCE)	26.1	336819	250	0.1	684406	0.471

G. % Surrogate Recovery Recalculation:

$$\text{\% Surrogate Recovery} = \frac{\text{amount found in sample}}{\text{amount spiked in sample}} \times 100$$

MATRIX	DATE	LAB ID	SURROGATE NAME	FOUND	SPIKED	% REC
WATER	06-25-01	GW-01	1,2-Dichloroethane-D4	89.1	100	89
			Toluene-D8	97.7	100	98
			Bromofluorobenzene	100.7	100	101
WATER	06/26/01	GW-06	1,2-Dichloroethane-D4	103.5	100	104
			Toluene-D8	99.7	100	100
			Bromofluorobenzene	102.3	100	102