EPA Region 5 Records Ctr.
244321

SITE ASSESSMENT REPORT
FOR
L.H.INC.
CAMBRIDGE, OHIO
TDD: T05-9104-001
PAN: EOH0368SBA

AUGUST 9, 1991

Prepared for:

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Emergency Support Section

EPA - REGION V

Contract Number: 68-WO-0037

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Reviewed by: Sandra L. Bachan Date: 9 August 1991
Approved by: Sandra L. Bachan Date: 9 August 1991

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International Specialists in the Environment

recycled paper

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1.0 INTRODUCTION:

The Ecology and Environment, Inc. (E & E) Technical Assistance Team (TAT) was tasked by the U. S. Environmental Protection Agency (U.S EPA) to respond to the L.H. INC. (LHI) site, Cambridge, Ohio, under Technical Directive Document (TDD) T05-9104-001 issued on June 5, 1990. Upon request of U.S. EPA On-Scene Coordinator (OSC) Verneta Simon, a site assessment and sampling of the LHI facility was performed by TAT on June 17, 1991.

2.0 SITE BACKGROUND:

2.1 SITE DESCRIPTION:

The LHI site is an inactive spent pickle liquor treatment facility located at 1502 Beckett Avenue, Guernsey County, 1000 feet south of the City of Cambridge, Ohio (USGS, Cambridge, OH Quad. SW1/4NW1/4SW1/4 sec. 4, T.2N., R.3W.) (Figure 1). The site is located on 1/3 of an acre and is surrounded by residential, recreational, and commercial areas. Railroad tracks for the Baltimore and Ohio Railroad (Chessie System) border the eastern and northern edges of the LHI facility.

2.2 SITE HISTORY:

From June 10, 1980, to September 25, 1980, LHI treated and disposed of approximately 1.5 million gallons of spent pickle liquor at the LHI facility in Cambridge, Ohio. All the pickle liquor treated by LHI was generated at Republic Steel Company, presently known as LTV Steel Company, located in Canton and Massillon, Ohio. No waste was accepted at the LHI site after September 25, 1980.

The waste was reportedly neutralized with lime. During January 1985, the treatment procedure was conducted in three lined 25 foot diameter surface impoundments (lagoons) approximately 5-8 feet deep.

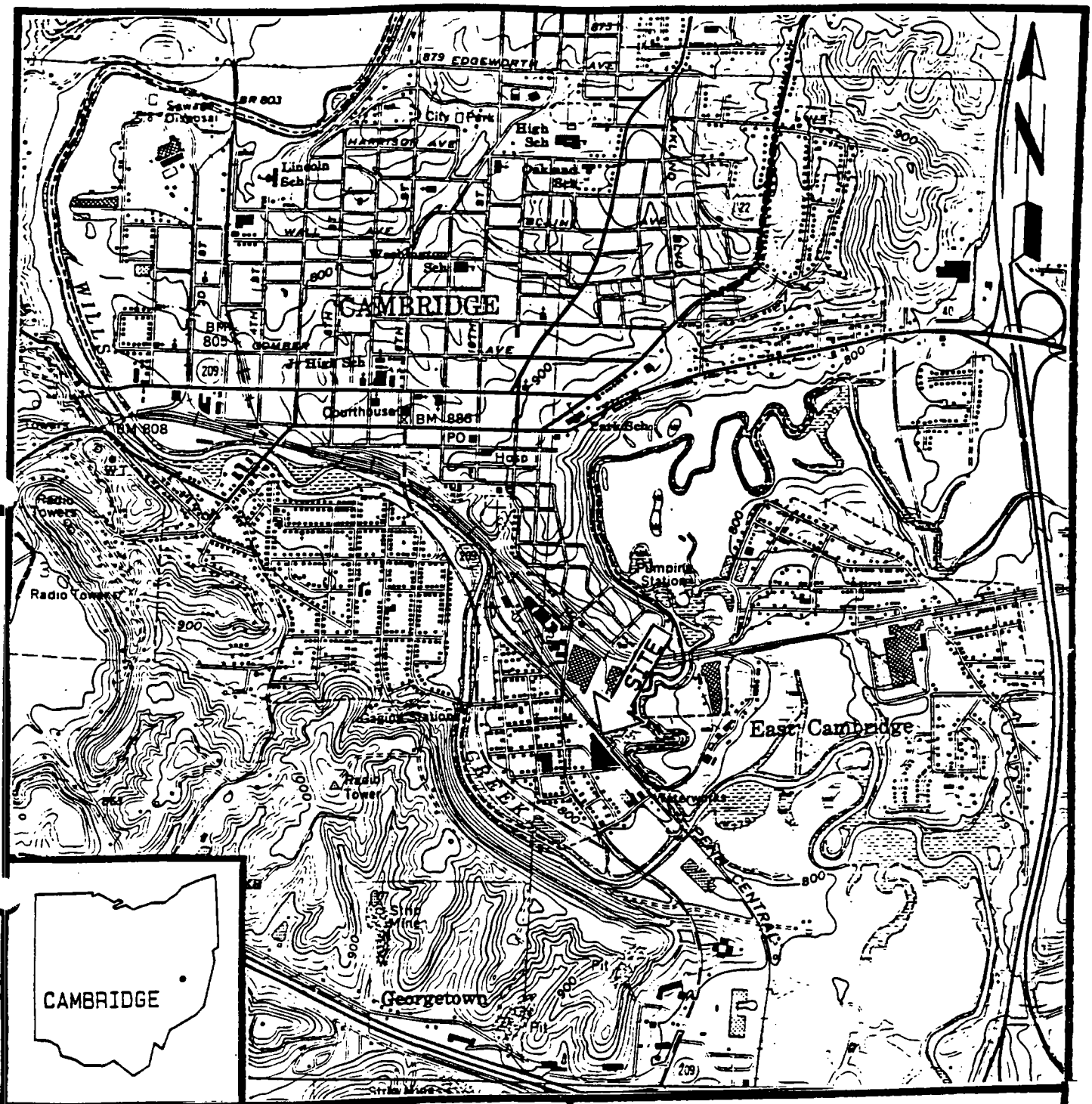

FIGURE 1

SITE LOCATION MAP

L.H., INC.

CAMBRIDGE, OHIO

SCALE 1: 24000

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N.UDDIN	07/10/91	E0H0368SBA
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Lagoon # 1 was used for initial treatment while Lagoons # 2 and # 3 were used as settling basins. The liquid from Lagoons #2 and #3 was discharged into the City of Cambridge sewer system with the permission of the City of Cambridge and the Ohio Environmental Protection Agency (OEPA). The liquid in Lagoon # 1 was to be disposed of at an approved treatment or disposal facility. However sludge in all three lagoons was allowed to remain when the facility ceased treatment of pickle liquors. LHI failed to remove the sludge from all three lagoons for an unknown reason.

Spent pickle liquor was added to the list of hazardous wastes (40 CFR Part 261.32, EPA Hazardous Waste no. K062) on May 19, 1980, by the U.S. EPA. LHI had 90 days after this listing date to notify the OEPA of its hazardous waste activities at the Cambridge site. LHI failed to apply for an operating permit and did not file a notification of hazardous waste activity such as treatment, storage, and disposal at its facility until November 2, 1980. On December 5, 1980, LHI was enjoined by the Guernsey County Court of Common Pleas from accepting waste at its Cambridge facility. On November 19, 1981, LHI filed an application with the OEPA for a part A Hazardous Waste permit. This application apparently was the first notification of the existence of the site to the U.S. EPA. On May 14, 1982, the State of Ohio and LHI entered into a consent decree whereby LHI was required to cease operating the facility for the treatment or disposal of waste and ordered to submit a closure plan to the OEPA within 30 days. LHI failed to submit the closure plan to the OEPA within the time frame allowed by the consent decree and was charged with violations of the Resource Conservation and Recovery Act (RCRA).

On January 30, 1984, and May 11, 1984, LHI submitted a closure plan for review by the OEPA and the U.S. EPA. The plan was approved with conditions by the U.S. EPA on July 30, 1984, and by the OEPA on September 24, 1984.

In April of 1985, LHI filed a petition for Chapter 7 bankruptcy. In the summer of 1985, the property leased by LHI was sold at an auction to Mr. J. Phillip Rich and Ms. Sharlie Rich. Following the bankruptcy petition by LHI, the U.S. EPA Office of Regional Counsel contacted the LTV Steel Company and informally requested that they clean up the LHI site.

LTV Steel did not agree to a site cleanup; however, it did agree to perform preliminary testing and to develop an engineering assessment of the LHI site. Burgess and Niple, Limited, of Columbus, Ohio, was retained to sample and analyze the material in the lagoons. No final report or recommendation was submitted by Burgess and Niple to the OEPA or the U.S. EPA.

On July 17, 1986, LTV Steel Company filed a petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code. On September 18, 1987, the OEPA performed an annual RCRA Interim Status (IS) Inspection at the LHI site. This inspection noted that the site was abandoned, the operator was bankrupt, and the generator of the treated pickle liquor was under Chapter 11 bankruptcy protection.

In order to properly close the facility, the OEPA contacted the U.S. EPA and requested emergency removal of the material in the lagoons. Following this contact, the U.S. EPA tasked the previous TAT contractor, Roy F. Weston, Inc. to conduct a site assessment at LHI under TDD #5-8803-17.

On April 21, 1988, TAT (Roy F. Weston) inspected LHI and observed three treatment lagoons, two brick buildings, and seven fuel tanks ranging in capacity from 300 to 20,000 gallons (Figure 2). During this inspection, two composite samples were collected from Lagoon #1- one liquid composite and one sludge composite. Analytical results indicated

the presence of chromium (1,300.00 mg/kg), lead (13.00 mg/kg), nickel (640.00 mg/kg) and vanadium (14.00 mg/kg) in the sediment samples.

3.0 SITE ACTIVITIES:

On June 17, 1991, U.S. EPA (OSC) Verneta Simon met TATs Nazeer Uddin and Dan O'Neill at the LHI site to conduct a site assessment, air monitoring, perform sampling and photodocument site conditions (see Appendix A).

The reconnaissance inspection of the LHI site and surrounding area began at 12:00 p.m. and included a walk-through of the site to determine appropriate health and safety requirements for conducting on-site activities, to make observations to aid in characterizing the site, and to determine sampling locations. TAT was accompanied during the site assessment by U.S. EPA OSC Verneta Simon and LHI representative Mr. Phillip Rich.

3.1 RECONNAISSANCE INSPECTION:

The area immediately surrouding the site is covered primarily with bushes and trees. The topography of the 1/3-acre site is generally flat (Figure 2). The area surrounding the lagoons is heavily vegetated with tree, shrubs and grasses. Most of the LHI site was covered by dirt, sand and gravel.

The site property has two access gates located on the northwest and south sides of the site. The gate on the northwest side of the site was unlocked and provided unrestricted access to the site. A fence surrounded the entire boundary of the property, with the exception of a small portion to the northwest of LHI site.

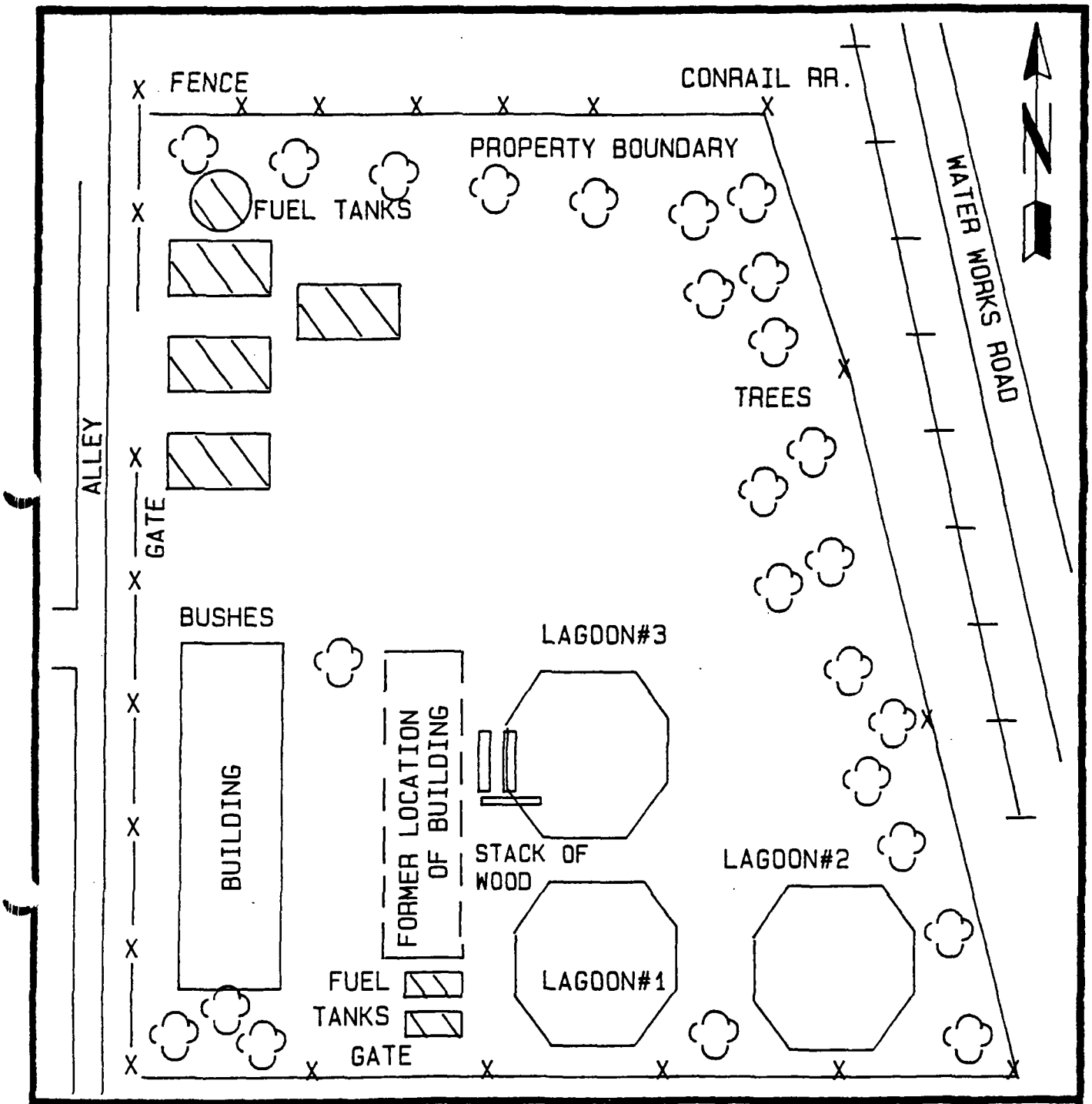

FIGURE 2

SITE FEATURES

L.H., INC.

CAMBRIDGE, OHIO

NOT TO SCALE

LEGEND

FORMER LOCATION OF FUEL TANKS

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The site consisted of three treatment lagoons and one brick building. Each of the three lagoons covered an area of approximately 1,120 square feet and was 5-8 feet deep. A deteriorating wooden-plank fence 3 feet in height surrounded each lagoon. The lagoons were lined with thick, rubber liners. All three lagoons contained liquid and registered between 8 and 9 on PH indicator strips. A brick building was located on the western portion of the site. A stack of wood was observed east of Lagoon # 3. According to Mr. Phillip Rich, in April, 1991, the five fuel tanks located on the northwest side of the site and the two tanks located west of Lagoon # 1 were removed and the building located west of Lagoon # 3 was demolished. It is not known where the tanks were taken for disposal.

TAT performed air monitoring during the reconnaissance inspection utilizing a photoionization detector (HNu), a combustible gas indicator (CGI), and colorimetric tubes. No readings above background were detected in the breathing zone.

3.2 SAMPLING ACTIVITIES:

Samples were collected from each of the lagoons by TAT in order to determine whether contaminants were present at the site. Three sample locations were selected by OSC Simon during the reconnaissance inspection. A background soil sample location was also selected by OSC Simon.

TAT collected three surface water samples, three sediment samples, and one background soil sample. Split samples of the soil/sediment and surface water samples were collected by TAT and given to Mr. Phillip Rich, the site representative.

3.2.1 SURFACE WATER SAMPLING ACTIVITIES:

Water sample SW1 was collected from surface water in Lagoon #1 in the same sample location as sediment sample SD1 (Figure 3). Surface

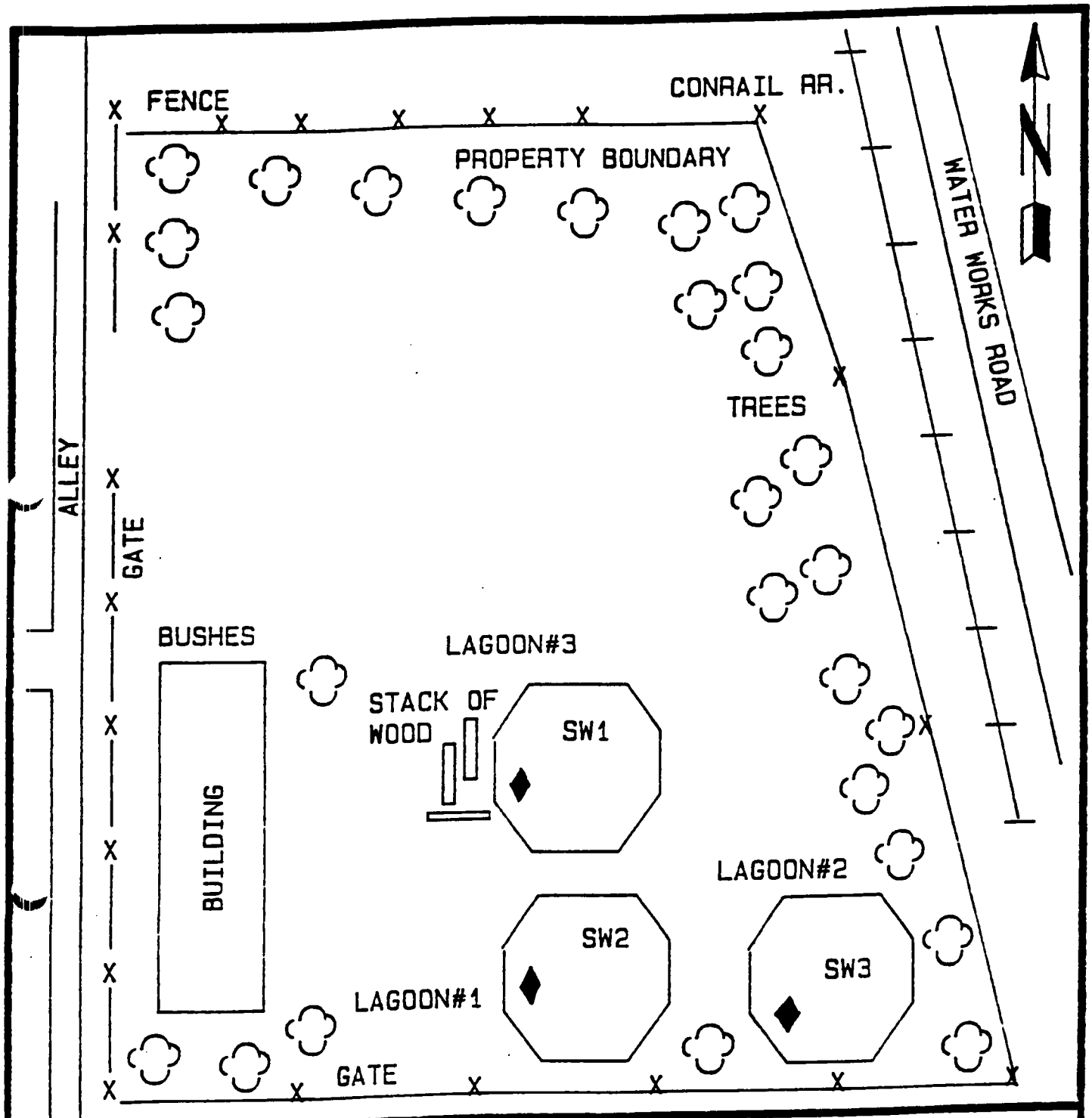

FIGURE 3

ON-SITE SURFACE WATER LOCATION

L.H., INC.

CAMBRIDGE, OHIO

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APPROVED BY	DATE	TDD #
A. BUSHER	07/10/91	T05-9104-001

water sample SW2 was collected from surface water in Lagoon #2 in the same location as sediment sample SD2 from Lagoon #2 had been collected. Surface water sample SW3 was collected from surface water at the same location as sediment sample SD3 from Lagoon #3 had been collected. Surface water samples SW1, SW2 and SW3 were collected at these locations to determine whether contaminants are present in the water column.

3.2.2 SOIL/SEDIMENT SAMPLING ACTIVITIES:

Sediment sample SD1 was a grab sample. Sediment samples SD2 and SD3 were composite samples collected from the on-site lagoons, which are located at the southern portion of the LHI site (Figure 4).

Sediment sample SD1 was collected adjacent to the west bank of Lagoon #1 where surface drainage from the 1/3-acre property empties into the lagoons. Sample SD1 was collected at this location to determine whether contaminants were present in Lagoon #1 sediments.

Sediment sample SD2 was a composite sample collected from two different locations (northeast and southwest) in Lagoon #2. Sediment samples SD2 and SD3 were collected to determine whether contaminants were present in Lagoons #2 and #3. Sediment sample SD3 was also a composite sample collected from two different locations (west and northeast) in Lagoon #3.

Surface soil sample S4 was collected as a background soil sample from a location in a grassy area approximately 1000 feet southwest of the site to determine the representative chemical content of the soil in the area surrounding the site (Figure 5). This sampling location was selected because the soil appeared to be undisturbed and because it was in an area adjacent to the site.

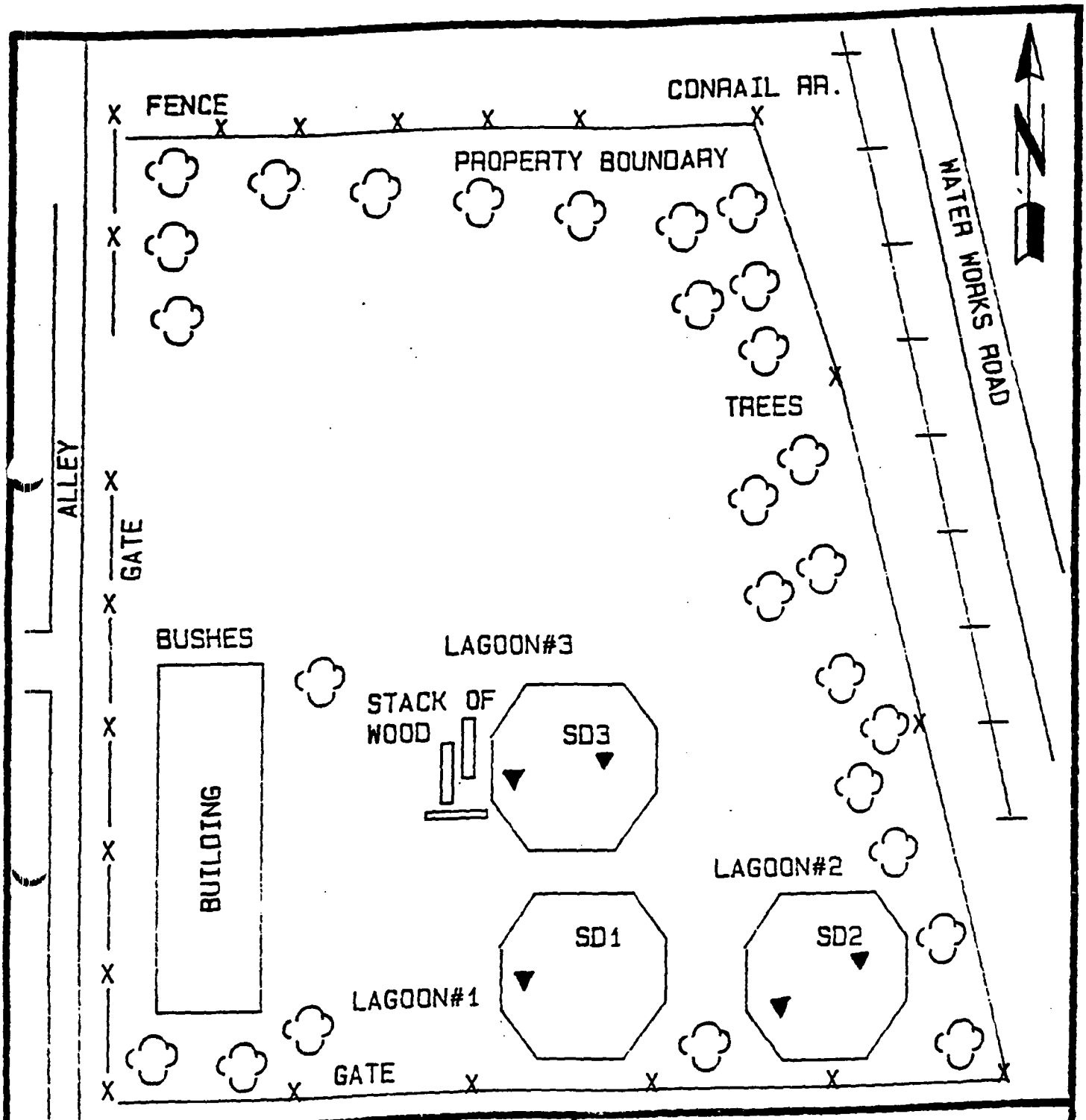

FIGURE 4

ON-SITE SEDIMENT SAMPLING LOCATION

L.H., INC.

CAMBRIDGE, OHIO

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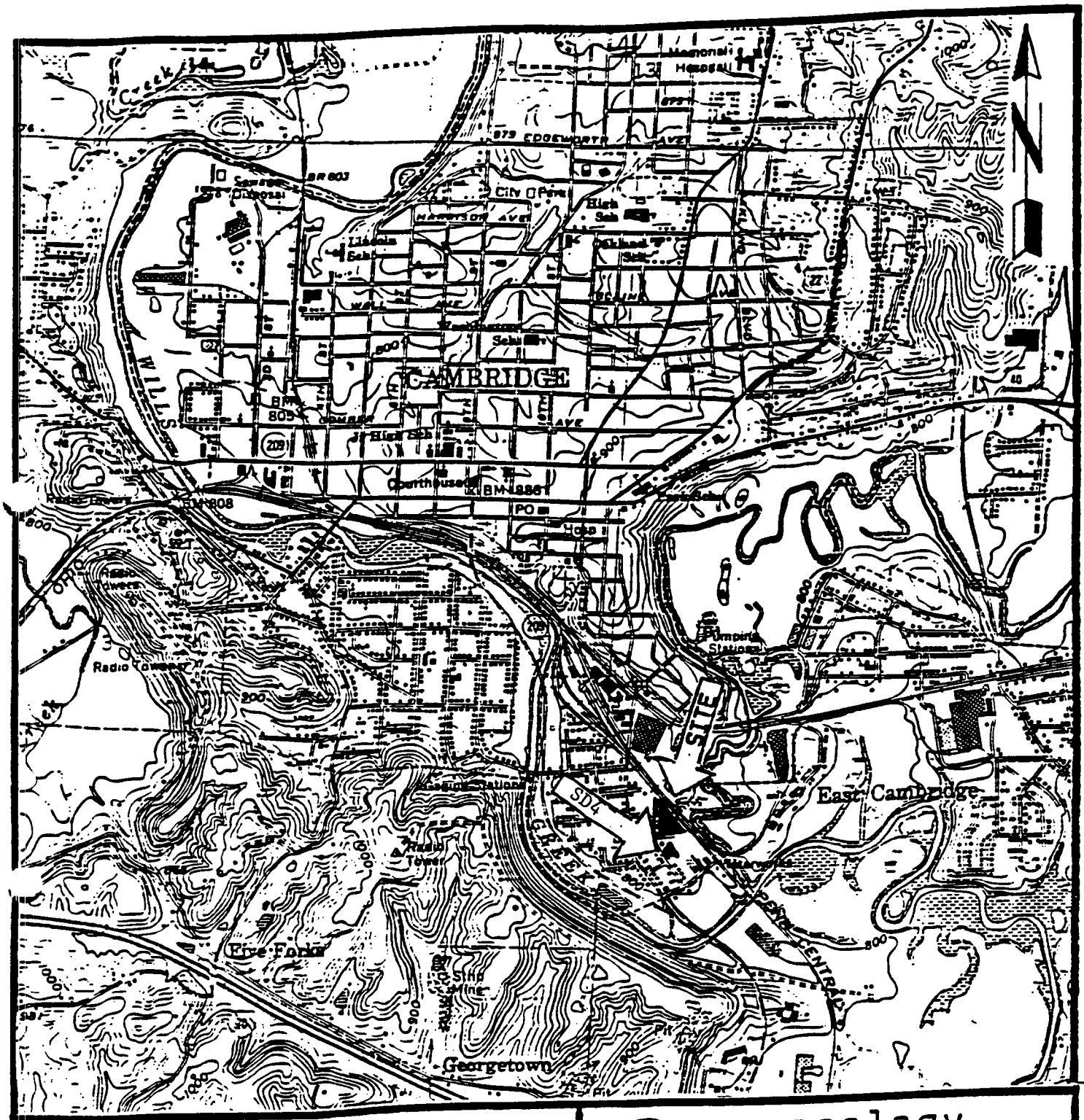

FIGURE 5

OFF-SITE SOIL SAMPLE LOCATION

L.H., INC.

CAMBRIDGE, OHIO

SCALE 1: 24000

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N.UDDIN	07/10/91	EOH036BSBA
APPROVED BY	DATE	TDD #
A. BUSHER	07/10/91	T05-9104-001

3.2.3 SAMPLING PROCEDURES

Sediment sample SD1 was collected using a shovel. The collected material was then emptied into a stainless steel bowl and transferred into sample bottles using stainless steel spoons and trowels.

Sediment sample SD2 and SD3 were collected using a sediment sampler (15 feet long and attached with a scoop). The collected material was then emptied into a stainless steel bowl and transferred into sample bottles using stainless steel spoons and trowels.

Surface soil sample S4 was collected with a trowel at a depth of approximately 6 inches. Sample material was placed into a stainless steel bowl, where the sample material was mixed, and then transferred into sample bottles using a stainless steel spoon. Volatile organic compounds (VOCs) were transferred directly into the appropriate sample bottles using a trowel or a spoon.

Standard E & E decontamination procedures were adhered to during the collection of all soil/sediment samples. The procedures included the scrubbing of all equipment (e.g., trowel, bowl, shovel and sediment sampler) with a decontamination solution of detergent (Alconox) and distilled water and triple rinsing the equipment with distilled water before the collection of each sample.

All soil/sediment and surface water samples were packaged in accordance with department of transportion required procedures and shipped to Kemron Environmental Services located in Marietta, Ohio.

4.0 ANALYTICAL RESULTS:

All samples were analyzed for volatile organics (VOA), base neutral acid extractibles (BNA), pesticides, herbicides and total priority

pollutant metals. Sediment sample SD2 indicated the presence of chromium at 47.00 mg/L and cadmium at 0.01 mg/L. Sediment sample SD1 revealed the presence of chromium at 12.00 mg/L. (See Table 1-1 provided in Appendix B

5.0 DISCUSSION OF POTENTIAL THREATS:

The conditions present at the facility that may constitute a threat to public health and welfare or the environment based upon the considerations as set forth in the National Contingency Plan (NPC), 40 CFR Section 300.415 (b) (2) and may therefore justify that a removal action be conducted at this site, include but are not limited to the following:

Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby populations, animals, or food chain.

Analytical results of the sediment samples collected by TAT indicate the presence of chromium, cadmium, and lead at the LHI site. The site is located in a residential and commercial area and is unsecured.

A potential exists for the public to come in contact with hazardous substances in the lagoons. The public access to the site is not restricted because the northwest portion of the site is not fenced. Sediment sample SD2 in the on-site Lagoon #2 contained chromium (47.00 mg/L), and cadmium (0.01 mg/L). Sediment sample SD1 indicated the presence of chromium (12.00 mg/L) and were detected in on-site sediment samples at levels above those detected in the background soil sample.

Hazardous substances or pollutants and contaminants in soils at near the surface that may migrate.

The following is a list of chemical contaminants of potential concern at the LHI site. These contaminants were present in varying concentrations at the LHI facility. All are known hazards at the documented levels of detection.

Chemical hazards of contaminants documented at the site.

Heavy metals such as chromium, cadmium and lead have been detected at the LHI site. Heavy metals have been shown, in low doses, to impair nervous system functions in humans (especially children) and are toxic in high doses.

Chromium - a potential carcinogen via inhalation, ingestion, eye and dermal routes of exposure. Acute exposures to dust or mist may cause coughing and irritation to the skin and mucous membranes of the upper respiratory tract. NIOSH recommends that exposure to chromium metal be limited to a PEL of 0.47 ppm. Chromium is regulated under RCRA and non-specific source, chromium-containing solid wastes may be hazardous wastes if the concentration of chromium in the TCLP (Toxicity Characteristic Leaching Procedure) extract exceeds established values. The highest concentration of chromium detected on site was 47.00 mg/L in sediment at the bottom of Lagoon # 2. This chromium could potentially pose a threat to human health if the lagoons should become dewatered and resuspension of contaminated sediments would occur. There is also the potential for ingestion of contaminated sediments.

Cadmium - a potential carcinogen via inhalation and ingestion routes of exposure. It is an irritant to the respiratory tract.

Lead - a toxic non-carcinogen via inhalation, ingestion, eye and dermal routes of exposure. There are no local effects or symptoms for lead poisoning. The early systemic effects of lead poisoning are nonspecific. When large amounts are inhaled or ingested, the central nervous system is affected. Lead is also a hazardous waste constituent.

6.0 CONTAMINATION OF THE DRINKING WATER

There is a potential threat of contamination of the ground water at the LHI site. Contamination from the lagoons may have migrated into the aquifer by following zones of weakness in the geologic formation.

6.1 REGIONAL GEOLOGY:

Guernsey County is located in the unglaciated Allegheny Plateau physiographic province. The geology of Guernsey County consists of silt loam soil derived from the parent bedrock and recent alluvium. These overlie approximately 650 feet of Pennsylvanian Age rock that outcrops in the county. The Pennsylvanian Age outcrops range stratigraphically from the Allegheny Group, exposed only in the valleys of Wills Creek and its tributaries, to the Monongahela Group, predominantly confined to the higher hills in the eastern most part of the county. The soils above the bedrock have been reported to be as much as 90 feet thick .

The present valley of Wills Creek is reported to be filled with at least 50 feet of alluvial material consisting largely of clays and silt with a few sand lenses.

6.2 LOCAL HYDROGEOLOGY:

LHI is located less than one half mile north of the confluence of Wills Creek and Leatherwood Creek. According to the Ohio Department of Natural Resources (ODNR), underground water resource maps of the area indicate that the local area surrounding LHI borders on two generalized ground water resource formations. The first formation is a sandstone and

shale bedrock formation which has the potential to yield small amounts for domestic supplies; usually less than three gallons per minute. Cistern and spring supplies are common. Shallow fill in stream valleys may supply limited quantities of water to large-diameter dug wells. The second formation is a valley fill which generally follows the existing stream beds. The deposit is capable of yielding 5 to 10 gallons per minute, and in rare instances, 10 gallons per minute or more. The domestic supplies are available from thin, permeable sand layers in the shallow valley fill deposits. Valley fill is generally not a water source utilized for drilled wells.

7.0 SURFACE WATER CONTAMINATION

There is some potential for contamination to migrate from the site to Leatherwood and Wills Creeks based on the following information:

- Contaminants were detected in sediment samples from lagoons at high concentrations comparable to the concentrations detected in the background soil sample. However, chromium (47.00 mg/L) was detected in sediment sample SD2 at levels above the detection limits.

- There is no surface water run-off diversion system present at the site. Leatherwood Creek is approximately 200 feet east of the LHI site.

The population potentially affected by the migration of contamination to surface water includes those persons fishing in Leatherwood Creek.

8.0 RECOMMENDATION

The following recommendation are to be considered based on the on-site sampling results, TAT on-site observations, and the record of past on-site operations.

* A potential does exist for the public to come in contact with

contaminants at the site. Therefore access to the site should be restricted by completely fencing and repairing the fence.

* Water and sediments in Lagoon #1 and Lagoon #2 should be removed and properly disposed of at an approved disposal/treatment facility. This is due to the fact that:

° RCRA listed waste pickle liquors (K062) were documented to have been disposed of in the LHI site Lagoons.

° Previous clean-up efforts removed the contaminated water in the lagoons but the contaminated sediments in the lagoon were never removed.

° Sediment samples collected by TAT indicated high concentrations of chromium and lead. Therefore the LHI site presents a threat to the and the environment and the public.

Appendix A

SITE PHOTOGRAPHS

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 1 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1315

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny,clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD1

DESCRIPTION: Close-up photograph showing sediment SD1 sampling location taken from lagoon number 1, located at southern portion of the LHI facility.

DATE: 06/17/91

TIME: 1315

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny,Clear,85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD1

DESCRIPTION: Perspective photograph showing sediment SD1 sampling location taken from lagoon number 1.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 2 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: E0H0368SBA

DATE: 06/17/91

TIME: 1445

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD2

DESCRIPTION: Close-up photogragh showing sediment SD2 sampling location taken from lagoon number 2, located at southern portion of the LHI site.

DATE: 06/17/91

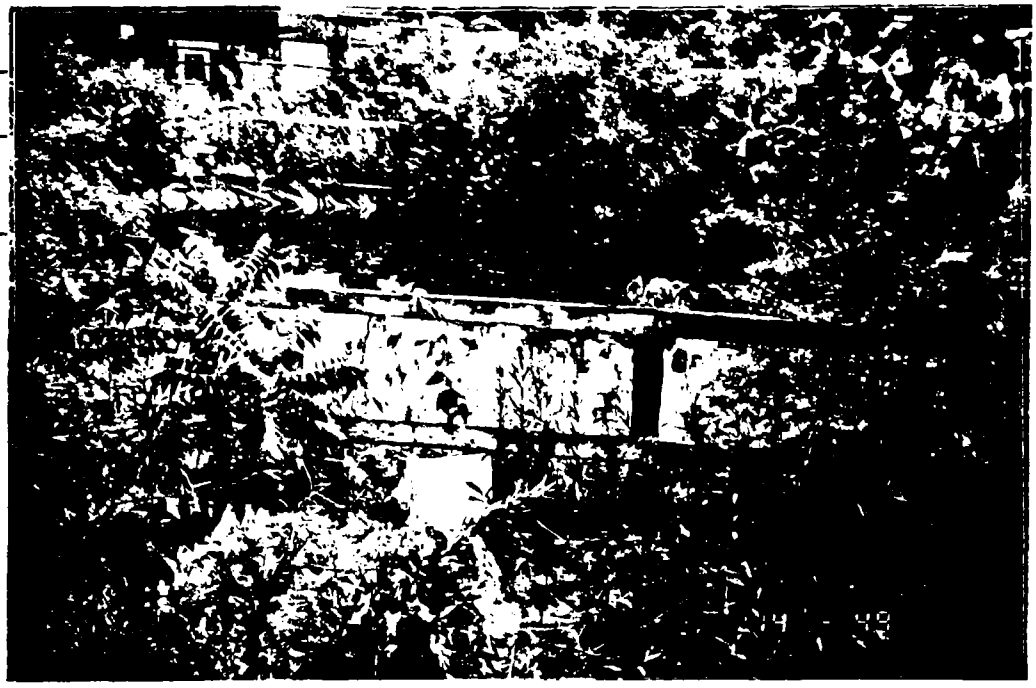
TIME: 1445

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD2



DESCRIPTION: Perspective photograph showing sediment SD3 sampling location taken from lagoon number 2.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 3 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1440

DIRECTION OF PHOTOGRAPH: Southwest

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD3

DESCRIPTION: Close-up photograph showing sediment SD3 sampling location taken lagoon number 3, location at southern portion of the LHI facility.

DATE: 06/17/91

TIME: 1510

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SD4

DESCRIPTION: Close-up photograph showing surface soil sampling SD4 collected as a potential background soil sample from a location in a grassy area approximatly 1000 feet southwest of the site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 4 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1246

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SW1

DESCRIPTION: Close-up photograph showing surface water SW1 sampling location taken from lagoon number 1.

DATE: 06/17/91

TIME: 1246

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SW1

DESCRIPTION: Perspective photograph showing surface water SW1 sampling location taken from lagoon number 1.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1300

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SW2

DESCRIPTION: Close-up photograph showing surface water SW2 sampling location taken from lagoon number 2.

DATE: 06/17/91

TIME: 1300

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer uddin

SAMPLE ID (if applicable): SW2

DESCRIPTION: Perspective photograph showing surface water SW2 sampling location taken from lagoon number 2, located southern side of the LHI facility.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 6 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

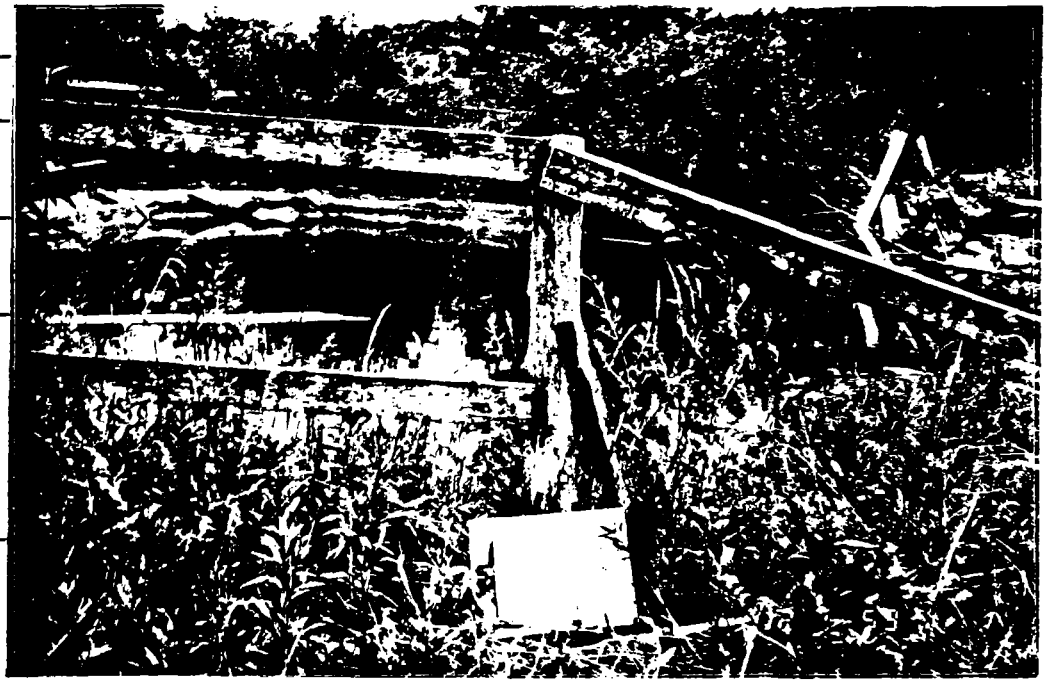
TIME: 1259

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SW3



DESCRIPTION: Close-up view showing surface water SW3 sampling location taken from lagoon number 3, located southern side of the LHI facility.

DATE: 06/17/91

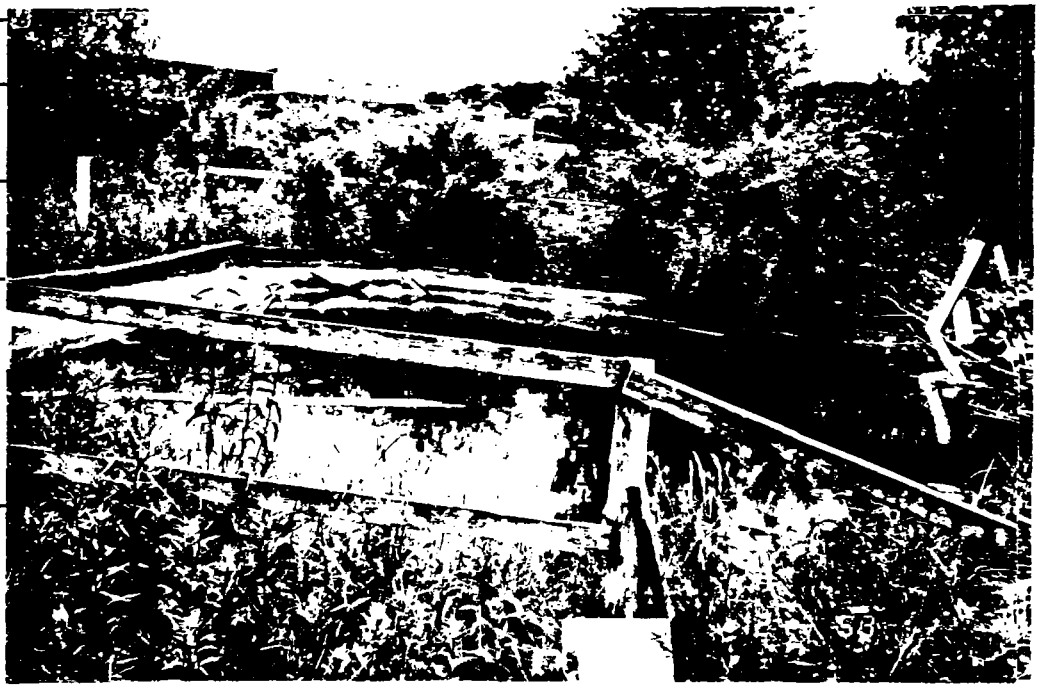
TIME: 1259

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): SW3



DESCRIPTION: Perspective photograph showing surface water SW3 sampling location taken from lagoon number 3.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 7 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1451

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable): N/A

DESCRIPTION: Picture shows stack of wood observed east of lagoon number 3.

DATE: 06/17/91

TIME: 1225

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable):

DESCRIPTION: Picture shows the eastern side of lagoon number 1.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 8 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1239

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable):

DESCRIPTION: Picture shows the southern side of lagoon number 2.

DATE: 06/17/91

TIME: 1239

DIRECTION OF PHOTOGRAPH: East

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable):

DESCRIPTION: Picture shows the eastern side of lagoon number 2.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC. PAGE 9 OF 17

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91

TIME: 1223

DIRECTION OF PHOTOGRAPH: Northeast

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable):

DESCRIPTION: Picture shows the northeast side of lagoon number 3.

DATE: 06/17/91

TIME: 1226

DIRECTION OF PHOTOGRAPH: South

WEATHER CONDITIONS: Sunny, Clear, 85°F

PHOTOGRAPHED BY: Nazeer Uddin

SAMPLE ID (if applicable):

DESCRIPTION: View showing the south side of lagoon number 3.

FIELD PHOTOGRAPHY LOG SHEET

ITE NAME: L.H.INC. PAGE 10 OF 17

..S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

ATE: 06/17/91

TIME: 1512

IRECTION OF
HOTOGRAPH: South

EATHER
ONDITIONS:
unny, Clear, 85°F

PHOTOGRAPHED BY:
azeer Uddin

AMPLE ID
(if plicable):

ESCRIPTION: View showing the south entrance gate located on the south side
f the LHI site.

ATE: 06/17/91

IME: 1227

IRECTION OF
HOTOGRAPH: South

EATHER
ONDITIONS:
Sunr Clear, 85°F

HOTOGRAPHED BY:
azeer Uddin

AMPLE ID
if applicable):

ESCRIPTION: Photograph showing the southern portion of the LHI facility.
he picture also shows the residential area which is located adjacent to
he site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1226 DIRECTION OF PHOTOGRAPH: West PHOTOGRAPHED BY: Nazeer Uddin

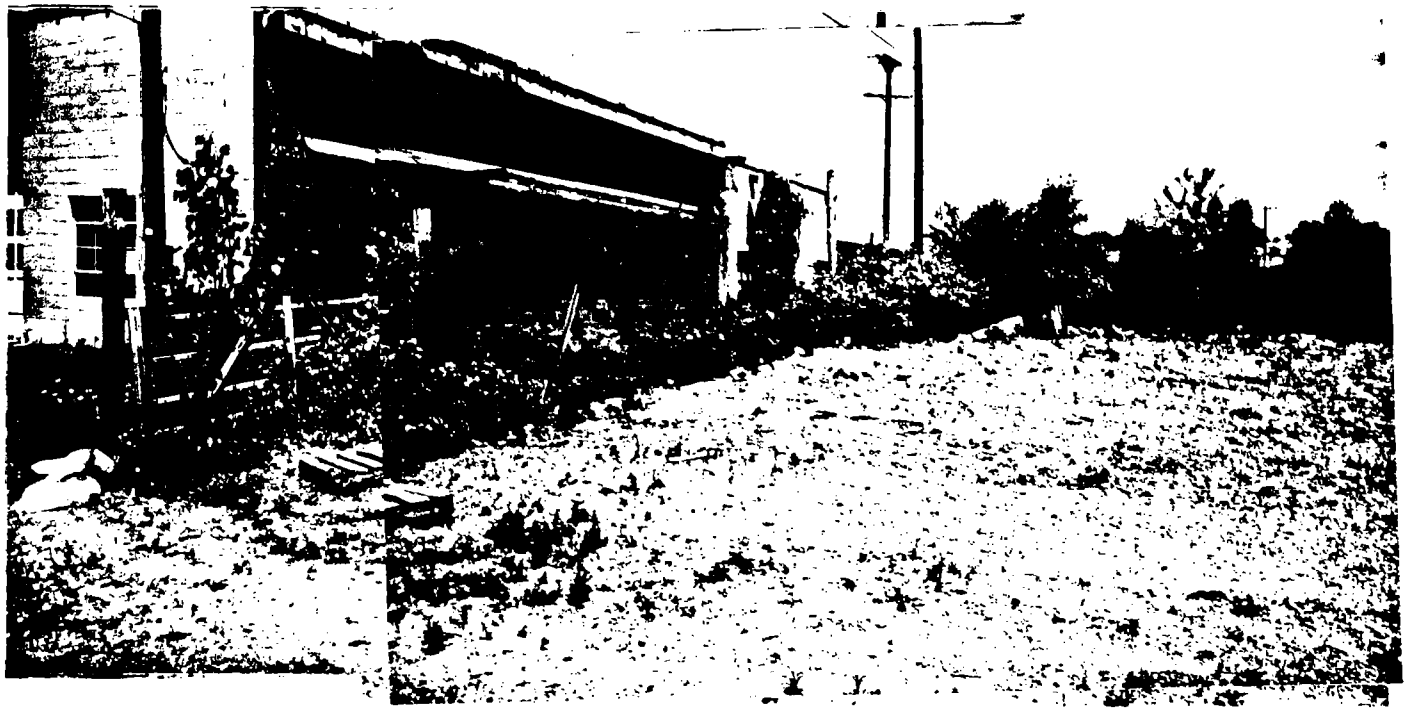
WEATHER CONDITIONS: Sunny, Clear,85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view facing west toward on-site building.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA



DATE: 06/17/91 TIME: 1219 DIRECTION OF PHOTOGRAPH: Northwest PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, Clear,85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view facing northwest of the LHI facility. The picture also shows the location of fuel tanks which have been removed.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1516 DIRECTION OF PHOTOGRAPH: East PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, clear, 85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view facing east of the LHI shows the open access to site property.

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1534 DIRECTION OF PHOTOGRAPH: Southeast PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, Clear, 85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view showing west side of the on-site building.

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1534 DIRECTION OF PHOTOGRAPH: Northeast PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, Clear, 85°F SAMPLE ID (if applicable): _____

DESCRIPTION: Panoramic view facing northeast toward gate located on the northwest side of the site.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1240 DIRECTION OF PHOTOGRAPH: South PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, Clear, 85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view facing southern side of the site. The picture also shows on-site lagoons.

>

>

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: L.H.INC.

U.S. EPA ID: NONE TDD: T05-9104-001 PAN: EOH0368SBA

DATE: 06/17/91 TIME: 1240 DIRECTION OF PHOTOGRAPH: East PHOTOGRAPHED BY: Nazeer Uddin

WEATHER CONDITIONS: Sunny, Clear, 85°F SAMPLE ID (if applicable):

DESCRIPTION: Panoramic view facing east toward eastern boundary of the LHI site.

>

Appendix B

SAMPLE RESULTS

TABLE 1-1
RESULTS OF CHEMICAL ANALYSIS OF TAT COLLECTED SOIL/SEDIMENT SAMPLES

SAMPLE COLLECTION INFORMATION	SD1	SD2	SD3	SD4	OHIO PUBLIC WATER SUPPLY CRITERIA *
DATE	06/17/91	06/17/91	06/17/91	06/17/91	-
TIME	1315	1445	1330	1510	-
COMPOUND DETECTED					
ARSENIC	<0.004	<0.04	<0.04	0.017	0.05
BARIUM	<1.00	<1.0	<1.00	<1.00	1.00
CADMIUM	<0.01	0.01	<0.10	<0.01	0.01
CHROMIUM	12.00	47.00	<0.20	<0.02	0.05
LEAD	<0.20	<2.00	<2.00	<0.20	0.05
MERCURY	0.0008	<0.005	<0.005	0.0008	-
SELENIUM	<0.004	<0.04	<0.04	<0.004	0.01
SILVER	<0.04	<O.O4	<0.40	<0.04	0.01

LEGEND:
SD - SEDIMENT SAMPLE (VALUES IN MG/L)
* - OHIO PUBLIC WATER SUPPLY CRITERIA
OHIO EPA; APRIL 5, 1990

TABLE 1-2
RESULTS OF CHEMICAL ANALYSIS OF TAT COLLECTED SURFACE WATER SAMPLES

sample collection information	SW1	SW2	SW3	REGULATOR LIMIT *
DATE	06/17/91	06/17/91	06/17/91	-
TIME	1235	1300	1250	-
COMPOUND DETECTED				
ARSENIC	<0.004	<0.04	<0.04	5.00
BARIUM	<1.00	<1.00	<1.00	100.00
CADMIUM	<0.01	<0.10	<0.10	1.00
CHROMIUM	<0.02	<0.20	<0.02	5.00
LEAD	<0.20	<2.00	<2.00	5.00
MERCURY	0.0007	<0.005	<0.005	0.20
SELENIUM	<0.004	<0.04	<0.04	1.00
SILVER	<0.04	<0.04	<0.40	5.00

LEGEND:
SW - SURFACE WATER SAMPLE (VALUES IN MG/L)
* - 40 CFR 261.24

Attachment 1

ANALYTICAL DATA

Received: 06/17/91

KEMRON REPORT
07/08/91 16:38:14

Work Order # N1-06-235

REPORT TO
Ecology and Environment, Inc.
6777 Engle Road
Cleveland Ohio 44130

ATTEN Dan O'Neill

CLIENT ECO_ENV52491 SAMPLES 7
COMPANY Ecology and Environment, Inc.
FACILITY Cleveland Ohio
George Albertson/Dan O'Neill

WORK ID EOH 0368 SBA/L.H. Inc.
TAKEN Dan O'Neill
TRANS Client
TYPE
P.O. #
INVOICE under separate cover

PREPARED BY
KEMRON ENVIRONMENTAL SERVICES
109 STARLITE PARK
MARIETTA, OHIO 45750

CERTIFIED BY

ATTEN
PHONE (614) 373-4071

CONTACT M_WELCH

ANALYTICAL METHODS AND DOCUMENTATION ARE FOUND AT THE END OF THIS REPORT. ALL RESULTS ON SOILS/SLUDGES ARE REPORTED "AS RECEIVED" UNLESS OTHERWISE SPECIFIED.

SAMPLE IDENTIFICATION

01	SW-1/Lagoon #1
02	SW-2/Lagoon #2
03	SW-3/Lagoon #3
04	SD-1/Lagoon #1
05	SD-2/Lagoon #2
06	SD-3/Lagoon #3
07	SD-4/Soil

TEST CODES and NAMES used on this workorder

TC_EX	TCLP Extraction - Regular
TC_FIL	TCLP Filtration
TC_ME	TCLP Metals
TC_MEQ	TCLP Metals
TC_PH	TCLP Pesticides/Herbicides
TC_PHQ	TCLP Pesticides/Herbicides
TC_SV	TCLP Semivolatiles
TC_SVQ	TCLP Semivolatiles
TC_VOA	TCLP Volatile Compounds
TC_VOQ	TCLP Volatile Compounds
TC_ZHE	TCLP Zero Headspace Extr.

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KEMRON ENVIRONMENTAL SERVICES

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-1/Lagoon #1

FRACTION 01D TEST CODE TC_MEQ NAME TCLP Metals
Date & Time Collected 06/17/91 12:35:00 Category WATER

TCLP EXTRACTION DATE: **
UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	REG LIMIT
D004	7440-38-2	Arsenic	<0.004	112	<0.004	5.0
D005	7440-39-3	Barium	<1	75	<1	100.0
D006	7440-43-9	Cadmium	<0.01	91	<0.01	1.0
D007	7440-47-3	Chromium	<0.02	96	<0.02	5.0
D008	7439-92-1	Lead	<0.2	94	<0.2	5.0
D009	7439-97-6	Mercury	0.0007	91	0.0008	0.2
D010	7782-49-2	Selenium	<0.004	110	<0.004	1.0
D011	7440-22-4	Silver	<0.04	100	<0.04	5.0

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

** Filtered Only

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-1/Lagoon #1 FRACTION 01C TEST CODE TC_PHQ NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 12:35:00 Category WATER

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3087 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 4 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D012	72-20-8	Endrin	BDL	97	BDL	0.4	20
D013	58-89-9	Lindane	BDL	97	BDL	0.2	400
D014	72-43-5	Methoxychlor	BDL	80	BDL	2	10000
D015	8001-35-2	Toxaphene	BDL	NA	BDL	4	500
D020	57-74-9	Chlordane	BDL	NA	BDL	2	30
D031	76-44-8	Heptachlor	BDL	76	BDL	0.2	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3113 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 40 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D016	94-75-7	2,4-D	BDL	180	BDL	40	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	130	BDL	8	1000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-1/Lagoon #1 FRACTION 01B TEST CODE TC_SVQ NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 12:35:00 Category WATER

ANALYST: EDG EXTRACTED: 06/21/91 FILE #: 1EC15897 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN3 INJECTED: 07/03/91 FACTOR: 8 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D023	95-48-7	o-Cresol	BDL	80	BDL	40	200000
D024	108-39-4	m-Cresol	BDL **	80	BDL	40	200000
D025	106-44-5	p-Cresol	BDL **	**	BDL	40	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	71	BDL	40	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	90	BDL	40	130
D032	118-74-1	Hexachlorobenzene	BDL	94	BDL	40	130
D033	87-68-3	Hexachlorobutadiene	BDL	71	BDL	40	500
D034	67-72-1	Hexachloroethane	BDL	69	BDL	40	3000
D036	98-95-3	Nitrobenzene	BDL	79	BDL	40	2000
D037	87-86-5	Pentachlorophenol	BDL	103	BDL	200	100000
D038	110-86-1	Pyridine	BDL	59	BDL	200	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	89	BDL	40	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	87	BDL	40	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY
** = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-1/Lagoon #1 FRACTION 01A TEST CODE TC_VOQ NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 12:35:00 Category WATER

ANALYST: TLD FILE #: 3EC13551 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN3 INJECTED: 06/25/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D018	71-43-2	Benzene	BDL	110	BDL	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	104	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	98	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	113	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	118	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	103	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	86	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	96	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	99	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	94	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-2/Lagoon #2

FRACTION 02D TEST CODE TC_ME NAME TCLP Metals
Date & Time Collected 06/17/91 13:00:00 Category WATER

TCLP EXTRACTION DATE: *

UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	REGULATORY LIMIT
D004	7440-38-2	Arsenic	<0.04	5.0
D005	7440-39-3	Barium	<1	100.0
D006	7440-43-9	Cadmium	<0.1	1.0
D007	7440-47-3	Chromium	<0.2	5.0
D008	7439-92-1	Lead	<2	5.0
D009	7439-97-6	Mercury	<0.005	0.2
D010	7782-49-2	Selenium	<0.04	1.0
D011	7440-22-4	Silver	<0.4	5.0

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED
* Filtered Only

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-2/Lagoon #2 FRACTION 02C TEST CODE TC_PH NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 13:00:00 Category WATER

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3089 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 2 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D012	72-20-8	Endrin	BDL	0.2	20
D013	58-89-9	Lindane	BDL	0.1	400
D014	72-43-5	Methoxychlor	BDL	1	10000
D015	8001-35-2	Toxaphene	BDL	2	500
D020	57-74-9	Chlordane	BDL	1	30
D031	76-44-8	Heptachlor	BDL	0.1	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3118 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 20 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D016	94-75-7	2,4-D	BDL	20	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	4	1000

NOTES AND DEFINITIONS FOR THIS REPORT.
DET LIMIT = DETECTION LIMIT
BDL=BELOW DETECTION LIMIT
NA =NOT ANALYZED

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-2/Lagoon #2 FRACTION 02B TEST CODE TC_SV NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 13:00:00 Category WATER

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15902 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 4 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D023	95-48-7	o-Cresol	BDL	20	200000
D024	108-39-4	m-Cresol*	BDL	20	200000
D025	106-44-5	p-Cresol*	BDL	20	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	20	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	20	130
D032	118-74-1	Hexachlorobenzene	BDL	20	130
D033	87-68-3	Hexachlorobutadiene	BDL	20	500
D034	67-72-1	Hexachloroethane	BDL	20	3000
D036	98-95-3	Nitrobenzene	BDL	20	2000
D037	87-86-5	Pentachlorophenol	BDL	100	100000
D038	110-86-1	Pyridine	BDL	100	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	20	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	20	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-2/Lagoon #2 FRACTION 02A TEST CODE TC_VOA NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 13:00:00 Category WATER

ANALYST: TLD FILE #: 3EC13552 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN3 INJECTED: 06/25/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D018	71-43-2	Benzene	BDL	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-3/Lagoon #3

FRACTION 03D TEST CODE TC_ME NAME TCLP Metals
Date & Time Collected 06/17/91 12:50:00 Category WATER

TCLP EXTRACTION DATE: *

UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	REGULATORY LIMIT
D004	7440-38-2	Arsenic	<0.04	5.0
D005	7440-39-3	Barium	<1	100.0
D006	7440-43-9	Cadmium	<0.1	1.0
D007	7440-47-3	Chromium	<0.2	5.0
D008	7439-92-1	Lead	<2	5.0
D009	7439-97-6	Mercury	<0.005	0.2
D010	7782-49-2	Selenium	<0.04	1.0
D011	7440-22-4	Silver	<0.4	5.0

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED
* Filtered Only

Received: 06/17/91

Results by Sample

SAMPLE ID SW-3/Lagoon #3 FRACTION 03C TEST CODE TC_PH NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 12:50:00 Category WATER

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3090 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 2 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D012	72-20-8	Endrin	BDL	0.2	20
D013	58-89-9	Lindane	BDL	0.1	400
D014	72-43-5	Methoxychlor	BDL	1	10000
D015	8001-35-2	Toxaphene	BDL	2	500
D020	57-74-9	Chlordane	BDL	1	30
D031	76-44-8	Heptachlor	BDL	0.1	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3119 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 20 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D016	94-75-7	2,4-D	BDL	20	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	4	1000

NOTES AND DEFINITIONS FOR THIS REPORT.
DET LIMIT = DETECTION LIMIT
BDL=BELOW DETECTION LIMIT
NA =NOT ANALYZED

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-3/Lagoon #3 FRACTION 03B TEST CODE TC_SV NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 12:50:00 Category WATER

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15904 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 4 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D023	95-48-7	o-Cresol	BDL	20	200000
D024	108-39-4	m-Cresol*	BDL	20	200000
D025	106-44-5	p-Cresol*	BDL	20	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	20	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	20	130
D032	118-74-1	Hexachlorobenzene	BDL	20	130
D033	87-68-3	Hexachlorobutadiene	BDL	20	500
D034	67-72-1	Hexachloroethane	BDL	20	3000
D036	98-95-3	Nitrobenzene	BDL	20	2000
D037	87-86-5	Pentachlorophenol	BDL	100	100000
D038	110-86-1	Pyridine	BDL	100	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	20	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	20	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SW-3/Lagoon #3

FRACTION 03A TEST CODE TC_VOA NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 12:50:00 Category WATER

ANALYST: TLD
INSTRMT: FINN3 INJECTED: 06/25/91

FILE #: 3EC13553
FACTOR: 1

TCLP EXTRACTION DATE: 06/19/91
UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D018	71-43-2	Benzene	BDL	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-1/Lagoon #1

FRACTION 04D TEST CODE TC_MEQ NAME TCLP Metals
Date & Time Collected 06/17/91 13:15:00 Category SLUDGE

TCLP EXTRACTION DATE: **
UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	REG LIMIT
D004	7440-38-2	Arsenic	<0.004	101	<0.004	5.0
D005	7440-39-3	Barium	<1	84	<1	100.0
D006	7440-43-9	Cadmium	<0.01	80	<0.01	1.0
D007	7440-47-3	Chromium	12	110	12	5.0
D008	7439-92-1	Lead	<0.2	81	<0.2	5.0
D009	7439-97-6	Mercury	0.0008	90	0.0009	0.2
D010	7782-49-2	Selenium	<0.004	108	<0.004	1.0
D011	7440-22-4	Silver	<0.04	86	<0.05	5.0

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

** Filtered Only

Received: 06/17/91
Results by Sample

SAMPLE ID SD-1/Lagoon #1 FRACTION 04C TEST CODE TC_PHQ NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 13:15:00 Category SLUDGE

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3091 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 4 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D012	72-20-8	Endrin	BDL	122	BDL	0.4	20
D013	58-89-9	Lindane	BDL	107	BDL	0.2	400
D014	72-43-5	Methoxychlor	BDL	102	BDL	2	10000
D015	8001-35-2	Toxaphene	BDL	NA	BDL	4	500
D020	57-74-9	Chlordane	BDL	NA	BDL	2	30
D031	76-44-8	Heptachlor	BDL	89	BDL	0.2	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3103 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 40 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D016	94-75-7	2,4-D	BDL	11	BDL	40	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	99	BDL	8	1000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91 Results by Sample

SAMPLE ID SD-1/Lagoon #1 FRACTION 04B TEST CODE TC_SVQ NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 13:15:00 Category SLUDGE

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15905 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 8 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D023	95-48-7	o-Cresol	BDL	92	BDL	40	200000
D024	108-39-4	m-Cresol	** BDL	94	BDL	40	200000
D025	106-44-5	p-Cresol	** BDL	**	BDL	40	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	78	BDL	40	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	93	BDL	40	130
D032	118-74-1	Hexachlorobenzene	BDL	93	BDL	40	130
D033	87-68-3	Hexachlorobutadiene	BDL	71	BDL	40	500
D034	67-72-1	Hexachloroethane	BDL	80	BDL	40	3000
D036	98-95-3	Nitrobenzene	BDL	91	BDL	40	2000
D037	87-86-5	Pentachlorophenol	BDL	57	BDL	200	100000
D038	110-86-1	Pyridine	BDL	85	BDL	200	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	46	BDL	40	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	38	BDL	40	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY
** = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-1/Lagoon #1 FRACTION 04A TEST CODE TC_VOQ NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 13:15:00 Category SLUDGE

ANALYST: JLK FILE #: 2EE17703 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN2 INJECTED: 06/24/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D018	71-43-2	Benzene	8	93	9	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	99	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	96	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	112	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	99	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	97	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	64	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	96	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	84	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	72	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-2/Lagoon #2

FRACTION 05D TEST CODE TC_ME NAME TCLP Metals
Date & Time Collected 06/17/91 14:45:00 Category SLUDGE

TCLP EXTRACTION DATE: *

UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	REGULATORY LIMIT
D004	7440-38-2	Arsenic	<0.04	5.0
D005	7440-39-3	Barium	<1	100.0
D006	7440-43-9	Cadmium	<0.1	1.0
D007	7440-47-3	Chromium	47	5.0
D008	7439-92-1	Lead	<2	5.0
D009	7439-97-6	Mercury	<0.005	0.2
D010	7782-49-2	Selenium	<0.04	1.0
D011	7440-22-4	Silver	<0.4	5.0

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED
* Filtered Only

Received: 06/17/91 Results by Sample

SAMPLE ID SD-2/Lagoon #2 FRACTION 05C TEST CODE TC_PH NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 14:45:00 Category SLUDGE

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3093 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 2 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D012	72-20-8	Endrin	BDL	0.2	20
D013	58-89-9	Lindane	BDL	0.1	400
D014	72-43-5	Methoxychlor	BDL	1	10000
D015	8001-35-2	Toxaphene	BDL	2	500
D020	57-74-9	Chlordane	BDL	1	30
D031	76-44-8	Heptachlor	BDL	0.1	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3123 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 20 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D016	94-75-7	2,4-D	BDL	20	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	4	1000

NOTES AND DEFINITIONS FOR THIS REPORT.
DET LIMIT = DETECTION LIMIT
BDL=BELOW DETECTION LIMIT
NA =NOT ANALYZED

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-2/Lagoon #2 FRACTION 05B TEST CODE TC_SV NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 14:45:00 Category SLUDGE

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15908 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 4 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D023	95-48-7	o-Cresol	BDL	20	200000
D024	108-39-4	m-Cresol*	BDL	20	200000
D025	106-44-5	p-Cresol*	BDL	20	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	20	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	20	130
D032	118-74-1	Hexachlorobenzene	BDL	20	130
D033	87-68-3	Hexachlorobutadiene	BDL	20	500
D034	67-72-1	Hexachloroethane	BDL	20	3000
D036	98-95-3	Nitrobenzene	BDL	20	2000
D037	87-86-5	Pentachlorophenol	BDL	100	100000
D038	110-86-1	Pyridine	BDL	100	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	20	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	20	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

Results by Sample

SAMPLE ID SD-2/Lagoon #2 FRACTION 05A TEST CODE TC_VOA NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 14:45:00 Category SLUDGE

ANALYST: JLK FILE #: 2EE17708 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN2 INJECTED: 06/24/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D018	71-43-2	Benzene	6	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-3/Lagoon #3

FRACTION 06D TEST CODE TC_ME NAME TCLP Metals
Date & Time Collected 06/17/91 13:30:00 Category SLUDGE

TCLP EXTRACTION DATE: *

UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	REGULATORY LIMIT
D004	7440-38-2	Arsenic	<0.04	5.0
D005	7440-39-3	Barium	<1	100.0
D006	7440-43-9	Cadmium	<0.1	1.0
D007	7440-47-3	Chromium	<0.2	5.0
D008	7439-92-1	Lead	<2	5.0
D009	7439-97-6	Mercury	<0.005	0.2
D010	7782-49-2	Selenium	<0.04	1.0
D011	7440-22-4	Silver	<0.4	5.0

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED
* Filtered Only

Received: 06/17/91 Results by Sample

SAMPLE ID SD-3/Lagoon #3 FRACTION 06C TEST CODE TC_PH NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 13:30:00 Category SLUDGE

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3094 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 2 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D012	72-20-8	Endrin	BDL	0.2	20
D013	58-89-9	Lindane	BDL	0.1	400
D014	72-43-5	Methoxychlor	BDL	1	10000
D015	8001-35-2	Toxaphene	BDL	2	500
D020	57-74-9	Chlordane	BDL	1	30
D031	76-44-8	Heptachlor	BDL	0.1	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3124 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 20 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D016	94-75-7	2,4-D	BDL	20	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	4	1000

NOTES AND DEFINITIONS FOR THIS REPORT.
DET LIMIT = DETECTION LIMIT
BDL=BELOW DETECTION LIMIT
NA =NOT ANALYZED

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-3/Lagoon #3 FRACTION 06B TEST CODE TC_SV NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 13:30:00 Category SLUDGE

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15910 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 4 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D023	95-48-7	o-Cresol	BDL	20	200000
D024	108-39-4	m-Cresol*	BDL	20	200000
D025	106-44-5	p-Cresol*	BDL	20	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	20	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	20	130
D032	118-74-1	Hexachlorobenzene	BDL	20	130
D033	87-68-3	Hexachlorobutadiene	BDL	20	500
D034	67-72-1	Hexachloroethane	BDL	20	3000
D036	98-95-3	Nitrobenzene	BDL	20	2000
D037	87-86-5	Pentachlorophenol	BDL	100	100000
D038	110-86-1	Pyridine	BDL	100	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	20	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	20	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-3/Lagoon #3 FRACTION 06A TEST CODE TC_VOA NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 13:30:00 Category SLUDGE

ANALYST: JPM FILE #: 2EE17709 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN2 INJECTED: 06/24/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	RESULT	DET LIMIT	REGULATORY LIMIT
D018	71-43-2	Benzene	BDL	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-4/Soil

FRACTION 07C TEST CODE TC MEQ NAME TCLP Metals
Date & Time Collected 06/17/91 15:10:00 Category SOIL

TCLP EXTRACTION DATE: **
UNITS: mg/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	REG LIMIT
D004	7440-38-2	Arsenic	0.017	112	0.017	5.0
D005	7440-39-3	Barium	<1	87	<1	100.0
D006	7440-43-9	Cadmium	<0.01	85	<0.01	1.0
D007	7440-47-3	Chromium	<0.02	85	<0.02	5.0
D008	7439-92-1	Lead	<0.2	85	<0.2	5.0
D009	7439-97-6	Mercury	0.0008	95	0.0008	0.2
D010	7782-49-2	Selenium	<0.004	104	<0.004	1.0
D011	7440-22-4	Silver	<0.04	91	<0.04	5.0

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

** Filtered Only

Received: 06/17/91

Results by Sample

SAMPLE ID SD-4/Soil FRACTION 07B TEST CODE TC_PHQ NAME TCLP Pesticides/Herbicides
Date & Time Collected 06/17/91 15:10:00 Category SOIL

TCLP PESTICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3095 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/02/91 FACTOR: 4 UNITS: ug/L VERIFIED: CRS

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D012	72-20-8	Endrin	BDL	125	BDL	0.4	20
D013	58-89-9	Lindane	BDL	122	BDL	0.2	400
D014	72-43-5	Methoxychlor	BDL	110	BDL	2	10000
D015	8001-35-2	Toxaphene	BDL	NA	BDL	4	500
D020	57-74-9	Chlordane	BDL	NA	BDL	2	30
D031	76-44-8	Heptachlor	BDL	98	BDL	0.2	8

TCLP HERBICIDES

ANALYST: SLN EXTRACTED: 06/24/91 FILE #: 3132 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: HP_IV INJECTED: 07/03/91 FACTOR: 40 UNITS: ug/L

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D016	94-75-7	2,4-D	BDL	28	BDL	40	10000
D017	93-72-1	2,4,5-TP (Silvex)	BDL	100	BDL	8	1000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-4/Soil FRACTION 07A TEST CODE TC_SVQ NAME TCLP Semivolatiles
Date & Time Collected 06/17/91 15:10:00 Category SOIL

ANALYST: MMB EXTRACTED: 06/21/91 FILE #: 1EC15911 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN1 INJECTED: 07/05/91 FACTOR: 8 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D023	95-48-7	o-Cresol	BDL	93	BDL	40	200000
D024	108-39-4	m-Cresol	** BDL	95	BDL	40	200000
D025	106-44-5	p-Cresol	** BDL	**	BDL	40	200000
D027	106-46-7	1,4-Dichlorobenzene	BDL	74	BDL	40	7500
D030	121-14-2	2,4-Dinitrotoluene	BDL	87	BDL	40	130
D032	118-74-1	Hexachlorobenzene	BDL	84	BDL	40	130
D033	87-68-3	Hexachlorobutadiene	BDL	70	BDL	40	500
D034	67-72-1	Hexachloroethane	BDL	76	BDL	40	3000
D036	98-95-3	Nitrobenzene	BDL	83	BDL	40	2000
D037	87-86-5	Pentachlorophenol	BDL	105	BDL	200	100000
D038	110-86-1	Pyridine	BDL	63	BDL	200	5000
D041	95-95-4	2,4,5-Trichlorophenol	BDL	107	BDL	40	400000
D042	88-06-2	2,4,6-Trichlorophenol	BDL	109	BDL	40	2000

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY
** = UNRESOLVEABLE COMPOUNDS

Received: 06/17/91

KEMRON REPORT
Results by Sample

Work Order # N1-06-235

SAMPLE ID SD-4/Soil

FRACTION 07A TEST CODE TC_VOQ NAME TCLP Volatile Compounds
Date & Time Collected 06/17/91 15:10:00 Category SOIL

ANALYST: JPM FILE #: 2EE17814 TCLP EXTRACTION DATE: 06/19/91
INSTRMT: FINN2 INJECTED: 06/27/91 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

EPA HW#	CAS#	COMPOUND NAME	SAMPLE RESULT	SPIKE REC.(%)	CORRECTED RESULT	DET LIMIT	REG LIMIT
D018	71-43-2	Benzene	40	84	48	5.0	500
D019	56-23-5	Carbon tetrachloride	BDL	100	BDL	5.0	500
D021	108-90-7	Chlorobenzene	BDL	97	BDL	5.0	100000
D022	67-66-3	Chloroform	BDL	109	BDL	5.0	6000
D028	107-06-2	1,2-Dichloroethane	BDL	101	BDL	5.0	500
D029	75-35-4	1,1-Dichloroethene	BDL	94	BDL	5.0	700
D035	78-93-3	Methyl ethyl ketone	BDL	68	BDL	100	200000
D039	127-18-4	Tetrachloroethene	BDL	99	BDL	5.0	700
D040	79-01-6	Trichloroethene	BDL	83	BDL	5.0	500
D043	75-01-4	Vinyl chloride	BDL	81	BDL	10	200

NOTES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

TEST CODE TC_EX NAME TCLP Extraction - Regular

SW1311 (Bottle Extraction for Non-volatiles)

TEST CODE TC_FIL NAME TCLP Filtration

Method not available.

TEST CODE TC_ME NAME TCLP Metals

SW1311 (TCLP Bottle Extraction)
SW7061 (Arsenic)
SW6010 (Barium)
SW6010 (Cadmium)
SW6010 (Chromium)
SW6010 (Lead)
SW7470 (Mercury)
SW7741 (Selenium)
SW6010 (Silver)

TEST CODE TC_MEQ NAME TCLP Metals

SW1311 (TCLP Bottle Extraction)
SW7061 Arsenic
SW6010 Barium
SW6010 Cadmium
SW6010 Chromium
SW6010 Lead
SW7470 Mercury
SW7741 Selenium
SW6010 Silver

TEST CODE TC_PH NAME TCLP Pesticides/Herbicides

SW1311 (TCLP Rotary Extraction)
SW8080 (Pesticides)
SW8150 (Herbicides)

TEST CODE TC_PHQ NAME TCLP Pesticides/Herbicides

Method not available.

TEST CODE TC_SV NAME TCLP Semivolatiles

SW1311 (TCLP Rotary Extraction)
SW8270 (Semivolatile Compounds)

TEST CODE TC_SVQ NAME TCLP Semivolatiles

Method not available.

TEST CODE TC_VOA NAME TCLP Volatile Compounds

SW1311 (TCLP Extraction - ZHE)
SW8240 (Volatile Compounds)

TEST CODE TC_VOQ NAME TCLP Volatile Compounds

Method not available.

TEST CODE TC_ZHE NAME TCLP Zero Headspace Extr.

SW1311 (Zero Headspace Extraction)

QUALITY ASSURANCE SECTION

AND

ATTACHMENTS

- BFB Summary-Method 624, 8240 (VOA)
- Method 624, 8240 (VOA) Standard RIC
- Method 624, 8240 (VOA) Blank RIC
- Method 624, 8240 (VOA) Sample RIC
- Mass Spectra - Identified VOA Compounds
- DFTPP Summary - Method 625, 8270 (SV)
- Method 625, 8270 (SV) Standard RIC
- Method 625, 8270 (SV) Blank RIC
- Method 625, 8270 (SV) Sample RIC
- Mass Spectra - Identified SV Compounds
- Glossary
- Chain-of-Custody Record
  (if initiated by client)

BROMOFLUOROBENZENE

Tuning Report
6/24/91 8:16:00 + 6:47
Instrument: FINN_2
Case Number:

Data: 2BF17695 # 155
Cali: 2CAL062491 # 3
Analyst: JLK
Laboratory:

Base m/z: 95
RIC: 118400.
Acct. No.:
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	3496.	26.3	15.0	40.0	95	26.3	PASS
75	6888.	51.9	30.0	60.0	95	51.9	PASS
95	13280.	100.0	100.0	---	---	100.0	PASS
96	1092.	8.2	5.0	9.0	95	8.2	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	10496.	79.0	50.0	---	95	79.0	PASS
175	763.	5.7	5.0	9.0	174	7.3	PASS
176	10080.	75.9	95.0	101.0	174	96.0	PASS
177	678.	5.1	5.0	9.0	176	6.7	PASS

BROMOFLUOROBENZENE

Tuning Report
06/24/91 21:00:00 + 8:45
Instrument: FINN_3
#199 to #200 averaged - #190
Case Number:

Data: 3BF13540 # 199
Cali: 3CAL062491 # 3
Analyst: TLD
Laboratory: KEMRON # 2

Base m/z: 95
RIC: 25184.
Acct. No.:
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	1272.	28.8	15.0	40.0	95	28.8	PASS
75	2412.	54.6	30.0	60.0	95	54.6	PASS
95	4416.	100.0	100.0	---	---	100.0	PASS
96	312.	7.1	5.0	9.0	95	7.1	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	3164.	71.6	50.0	---	95	71.6	PASS
175	222.	5.0	5.0	9.0	174	7.0	PASS
176	3028.	68.6	95.0	101.0	174	95.7	PASS
177	210.	4.8	5.0	9.0	176	6.9	PASS

BROMOFLUOROBENZENE

Tuning Report
6/27/91 9:40:00 + 7:08
nstrument: FINN_2
Case Number:

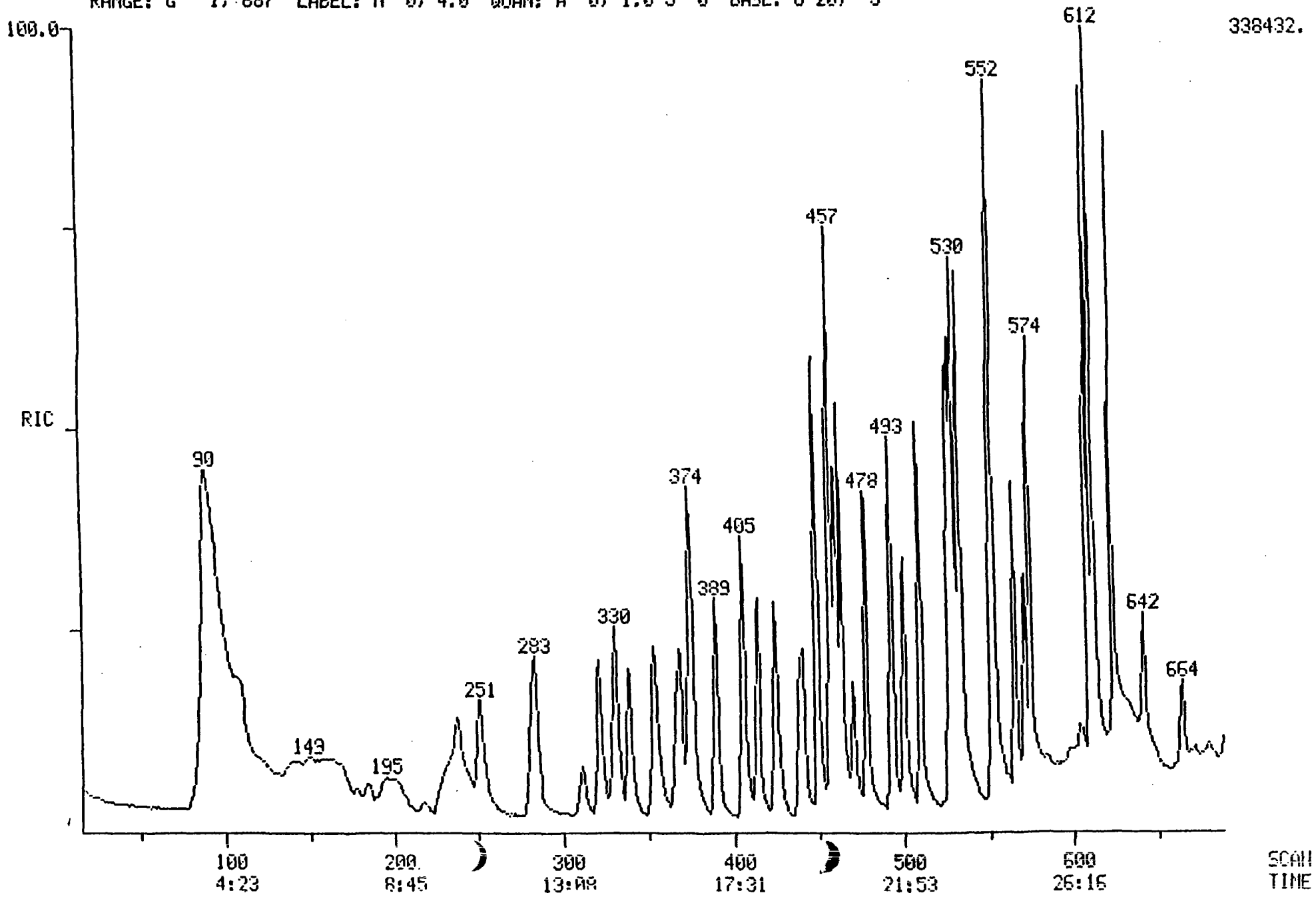
Data: ZBF17803 # 163
Cali: ZCAL062791 # 3
Analyst: JLK
Laboratory:

Base m/z: 95
RIC: 91392.
Acct. No.:
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	2744.	21.7	15.0	40.0	95	21.7	PASS
75	6520.	51.6	30.0	60.0	95	51.6	PASS
95	12640.	100.0	100.0	---	---	100.0	PASS
96	934.	7.4	5.0	9.0	95	7.4	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	7656.	60.6	50.0	---	95	60.6	PASS
175	494.	3.9	5.0	9.0	174	6.5	PASS
176	7488.	59.2	95.0	101.0	174	97.8	PASS
177	510.	4.0	5.0	9.0	176	6.8	PASS

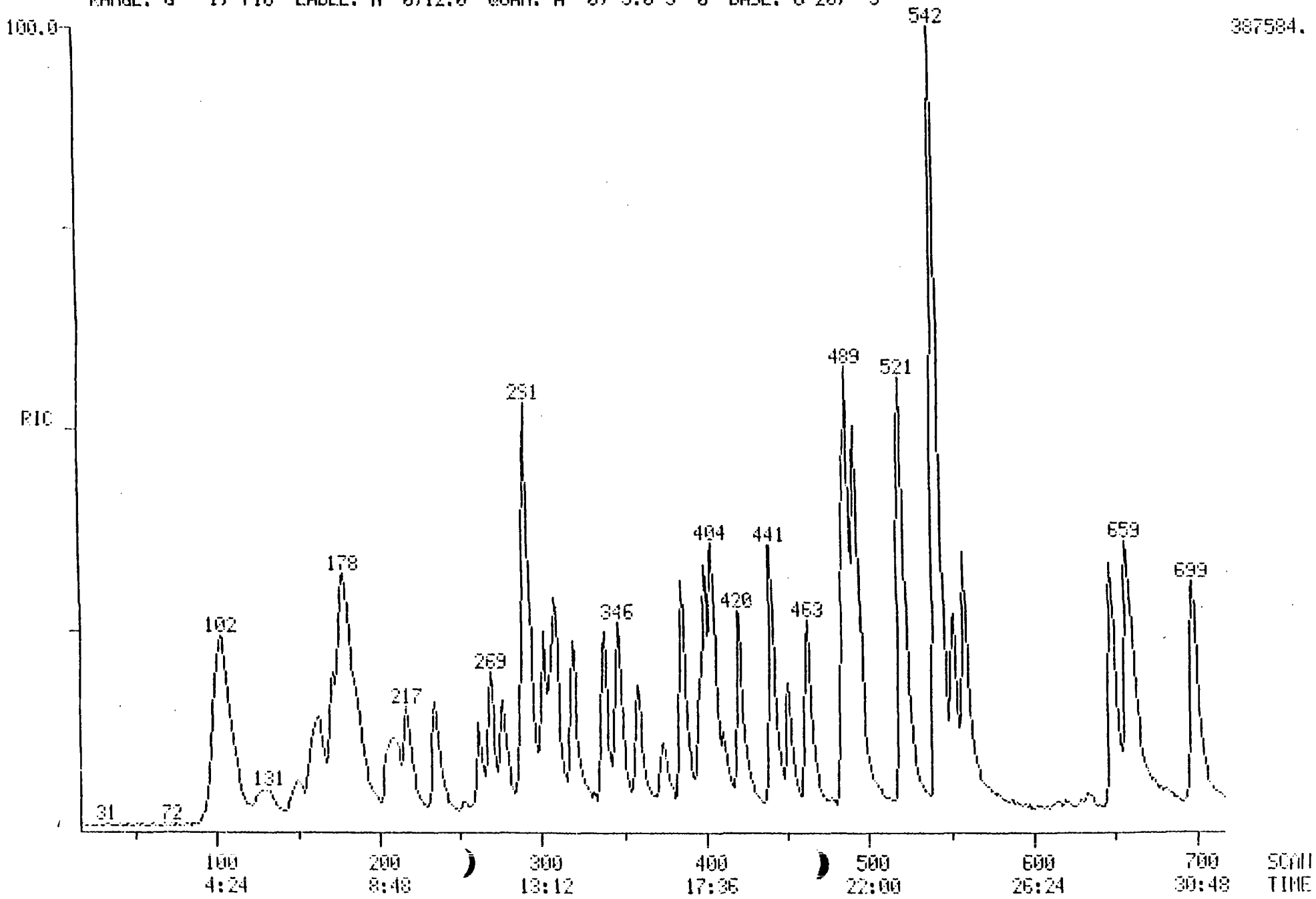
4

RIC DATA: 2ST17696 #1 SCANS 15 TO 687
06/24/91 8:38:00 CALI: 2ST17696 #3
SAMPLE: VSTD050 50 PPB VOA STD + DCB 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



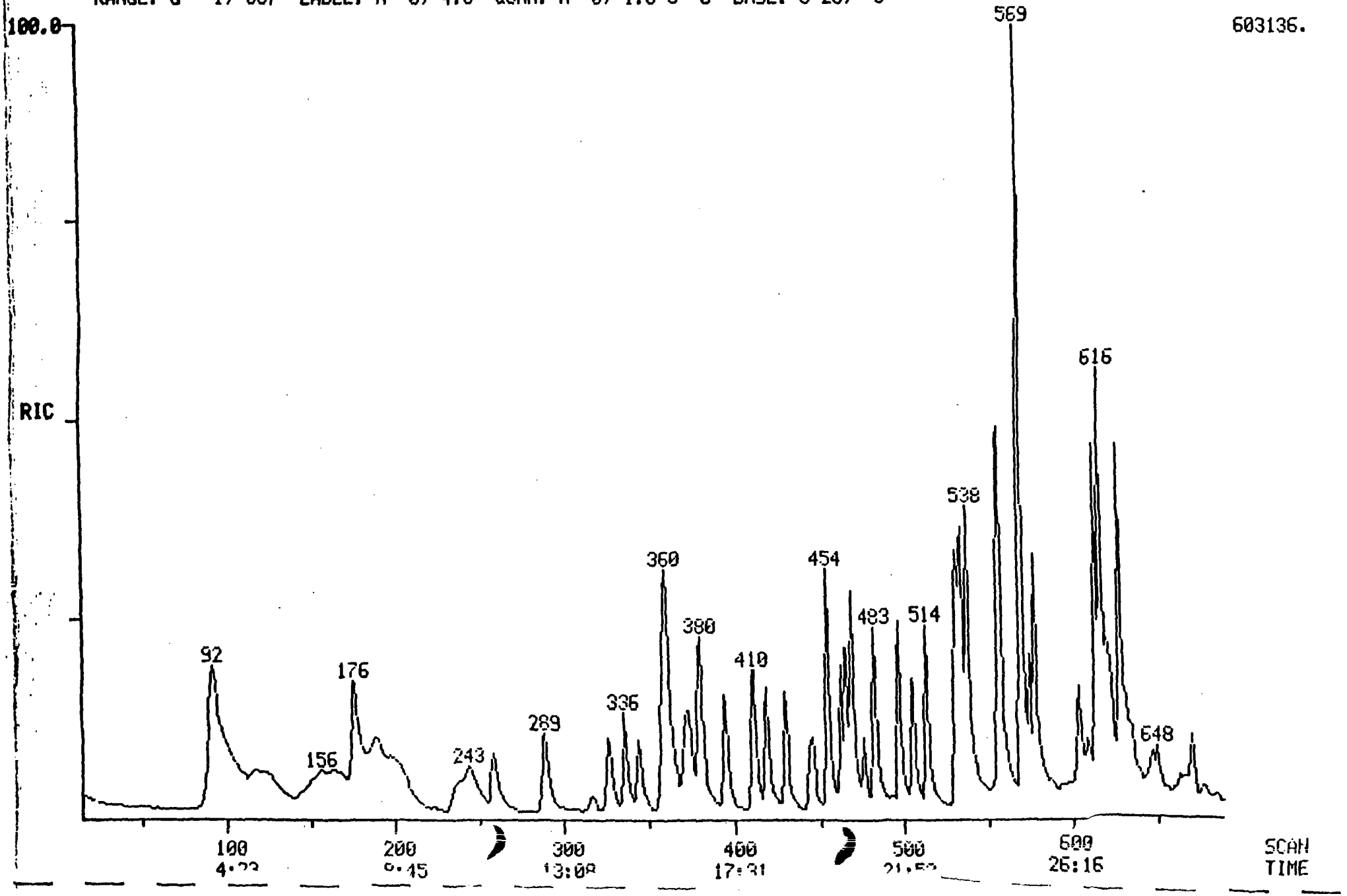
5

RIC DATA: 3ST13541 #1 SCANS 15 TO 716
06/24/91 21:16:00 CALI: 3ST13541 #3
SAMPLE: VSTD050 50PPB VOA STD + DCB 5ML
CONDS.:
RANGE: G 1, 716 LABEL: N 0,12.0 QUAN: A 0, 3.0 J 0 BASE: U 20, 3



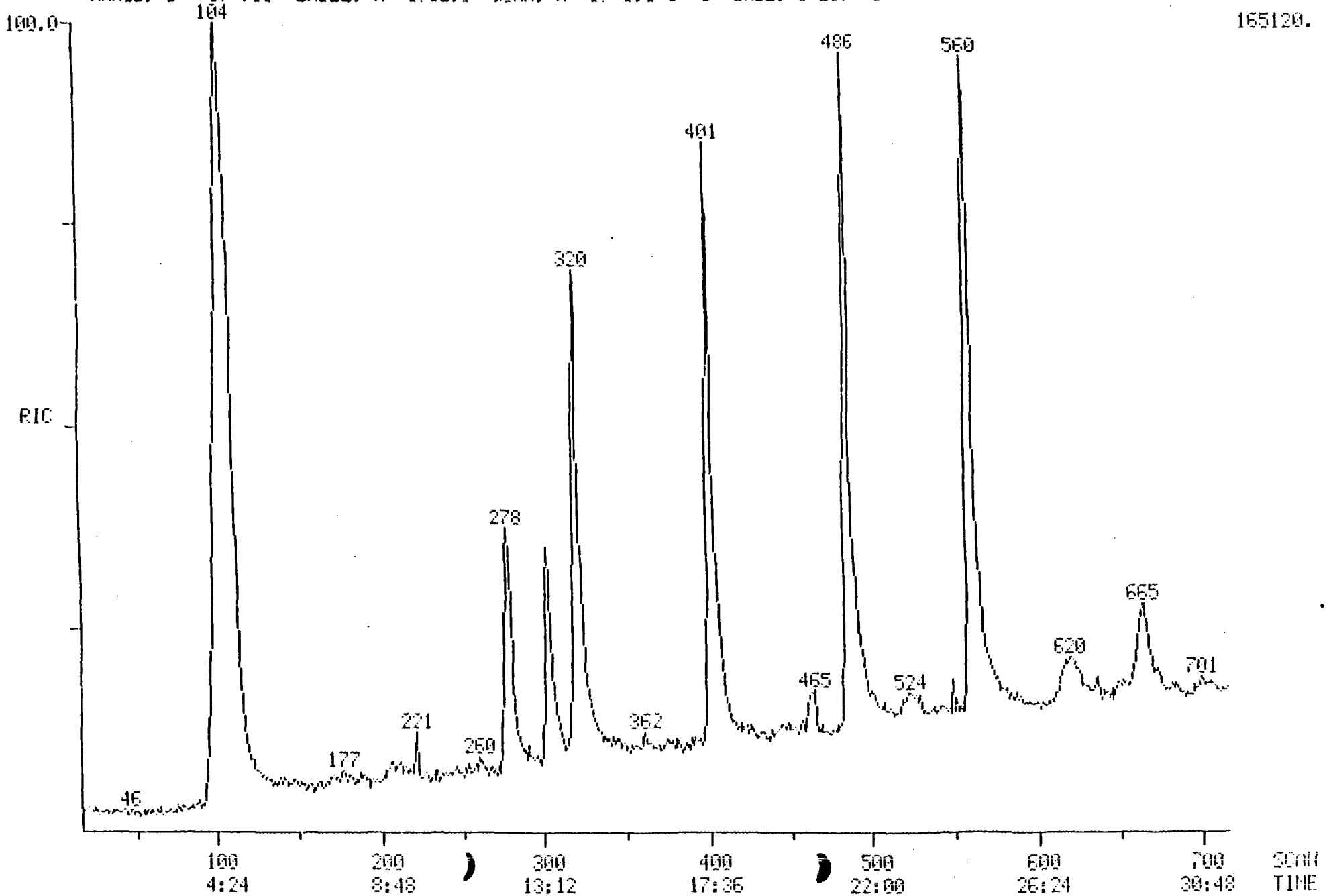
CD

RIC DATA: 2ST17805 #1 SCANS 15 TO 687
06/27/91 10:56:00 CALI: 2ST17805 #3
SAMPLE: VSTD050 50 PPB VOA STD + DCB 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



RIC
06/24/91 22:16:00
SAMPLE: VBLK0624 VOA BLANK 5ML
CONDS.:
RANGE: G 1, 716 LABEL: N 0,12.0 QUAN: A 0, 3.0 J 0 BASE: U 20, 3

DATA: 3BK13543 #1 SCANS 15 TO 716
CALI: 3BK13543 #3

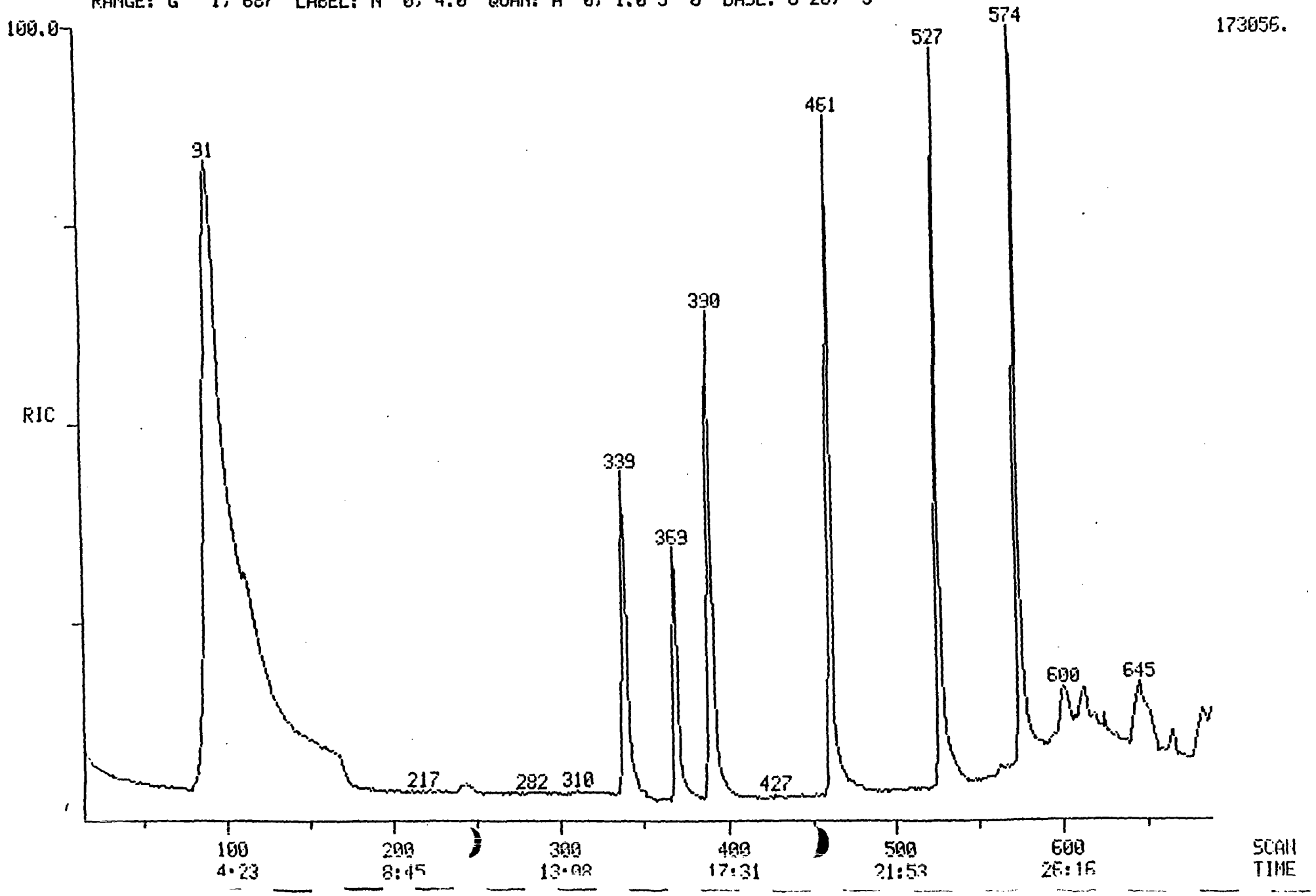


8

RIC
06/24/91 9:56:00
SAMPLE: VBLK0624 VOA BLANK 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 2BK17697 #1
CALI: 2BK17697 #3

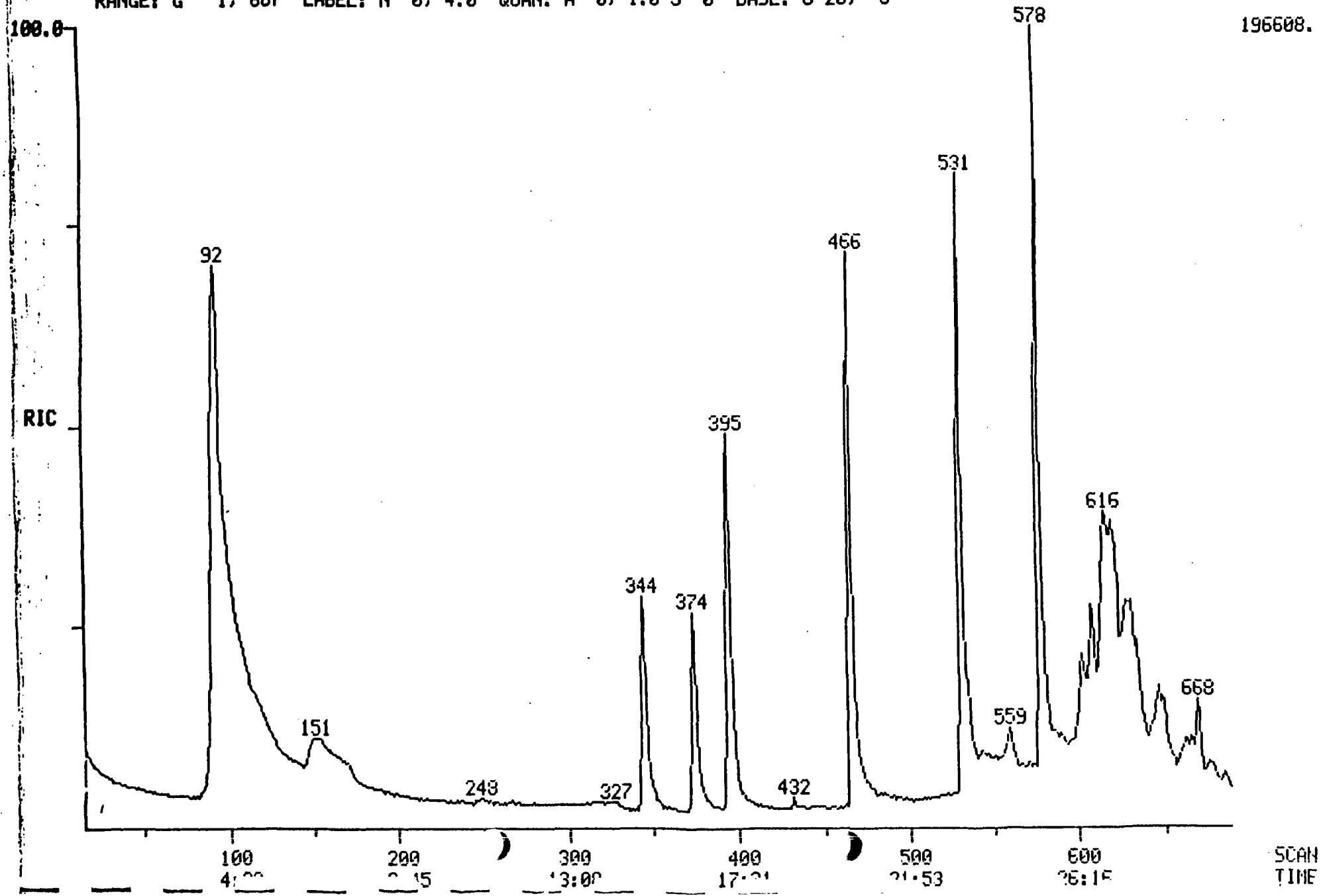
SCANS 15 TO 687



RIC
06/27/91 12:22:00
SAMPLE: VBLK0627 VOA BLANK 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

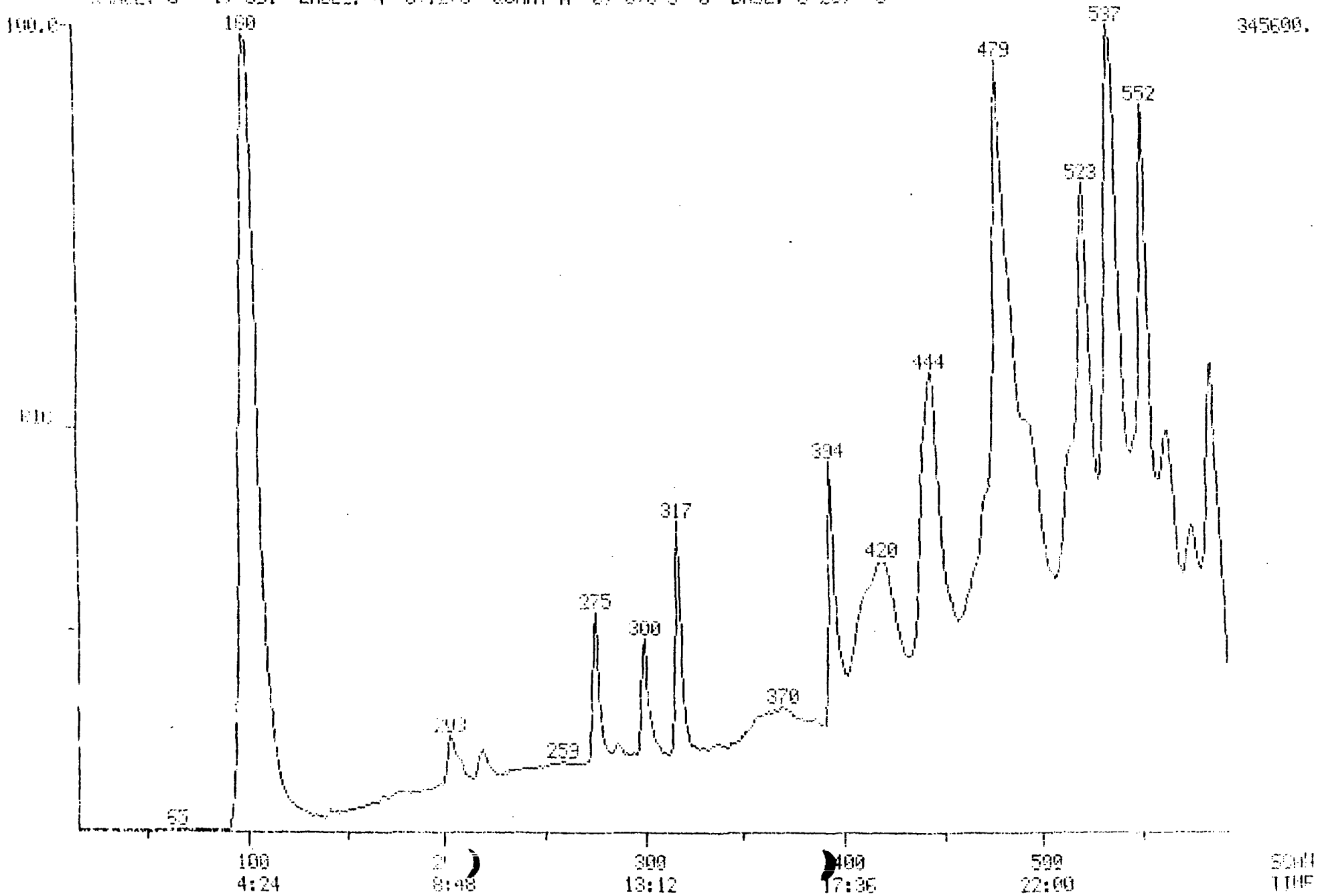
DATA: 2BK17806 #1
CALI: 2BK17806 #3

SCANS 15 TO 687



10

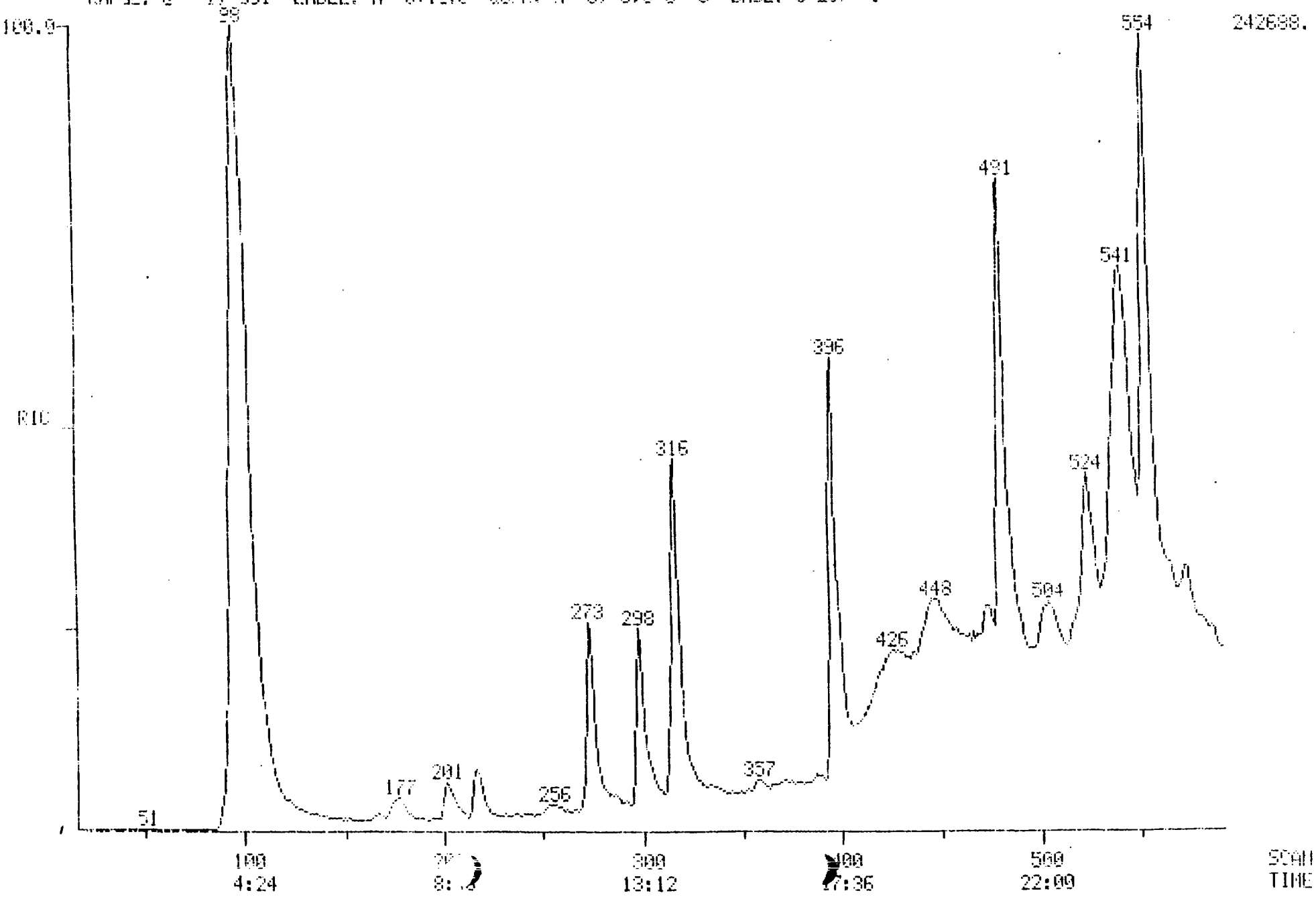
PIC DATA: 3EC13551 #1 SCANS 15 TO 591
06/25/91 2:50:00 CALI: 3EC13551 #3
SAMPLE: ECO ENV 06-235-01 (TCLP) 5ML
COMDS.:
RANGE: G 1, 591 LABEL: Y 0.12.0 QUAN: A 0, 3.0 J 0 BASE: U 20, 3



11

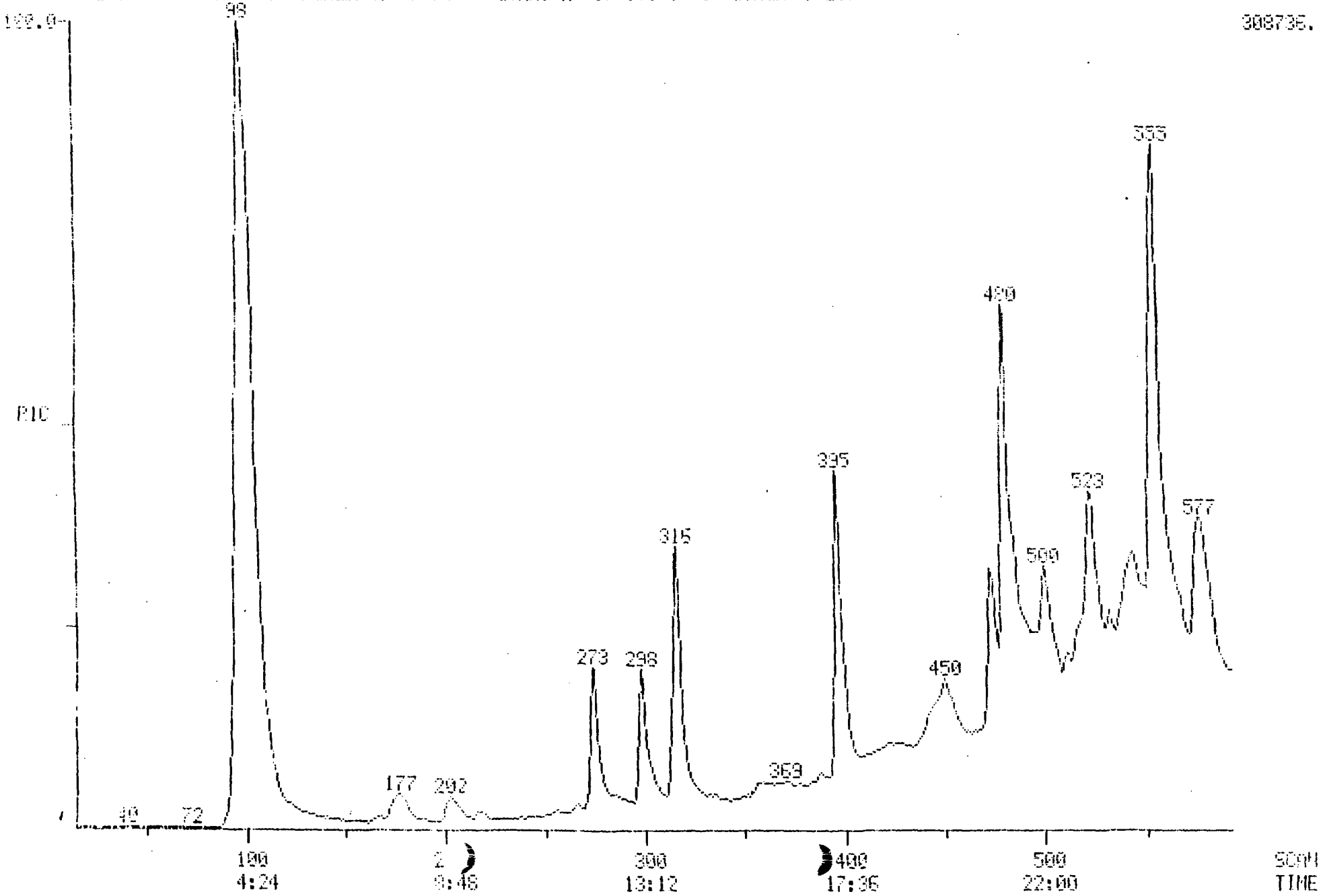
RIC
06/25/91 3:20:00
SAMPLE: ECO ENV 05-235-02 (TCLP) 5ML
CONDS.:
RANGE: G 1, 591 LABEL: H 0.12.0 DUMP: A 0, 3.0 J 0 BASE: U 20, 3

DATA: 3EC13552 #1 SCANS 15 TO 591
CALI: 3EC13552 #3



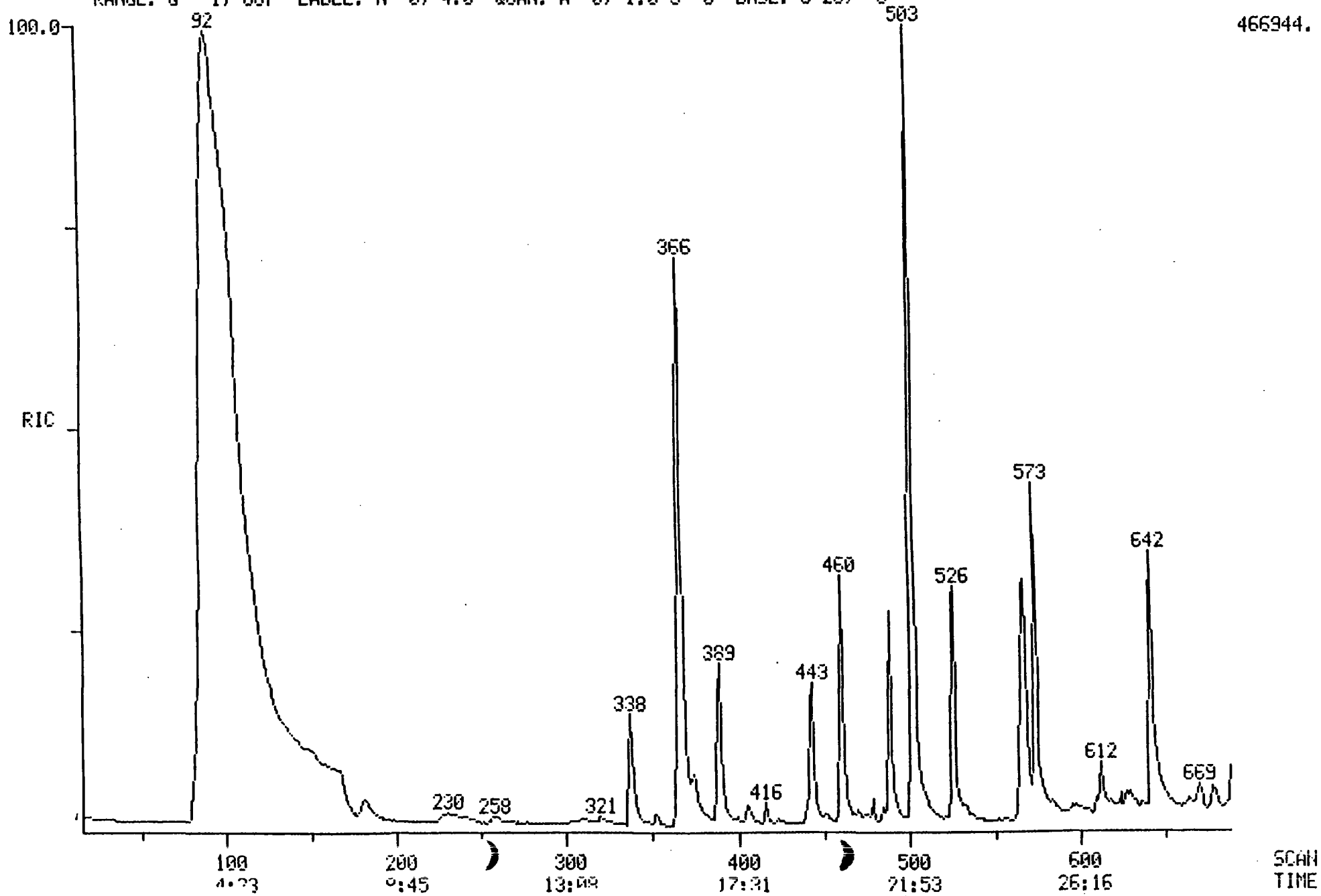
12

RIC DATA: 3EC13553 #1 SCANS 15 10 591
05/25/91 3:50:00 CALI: 3EC13553 #3
SAMPLE: ECO ENV 05-235-03 (TCLP) SML
CONDS.:
RANGE: G 1, 591 LABEL: H 0-12.0 QUAN: A 0, 3.0 J 0 BASE: U 20, 3



RIC
06/24/91 13:43:00
SAMPLE: ECO ENV 06-235-04 TCLP 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

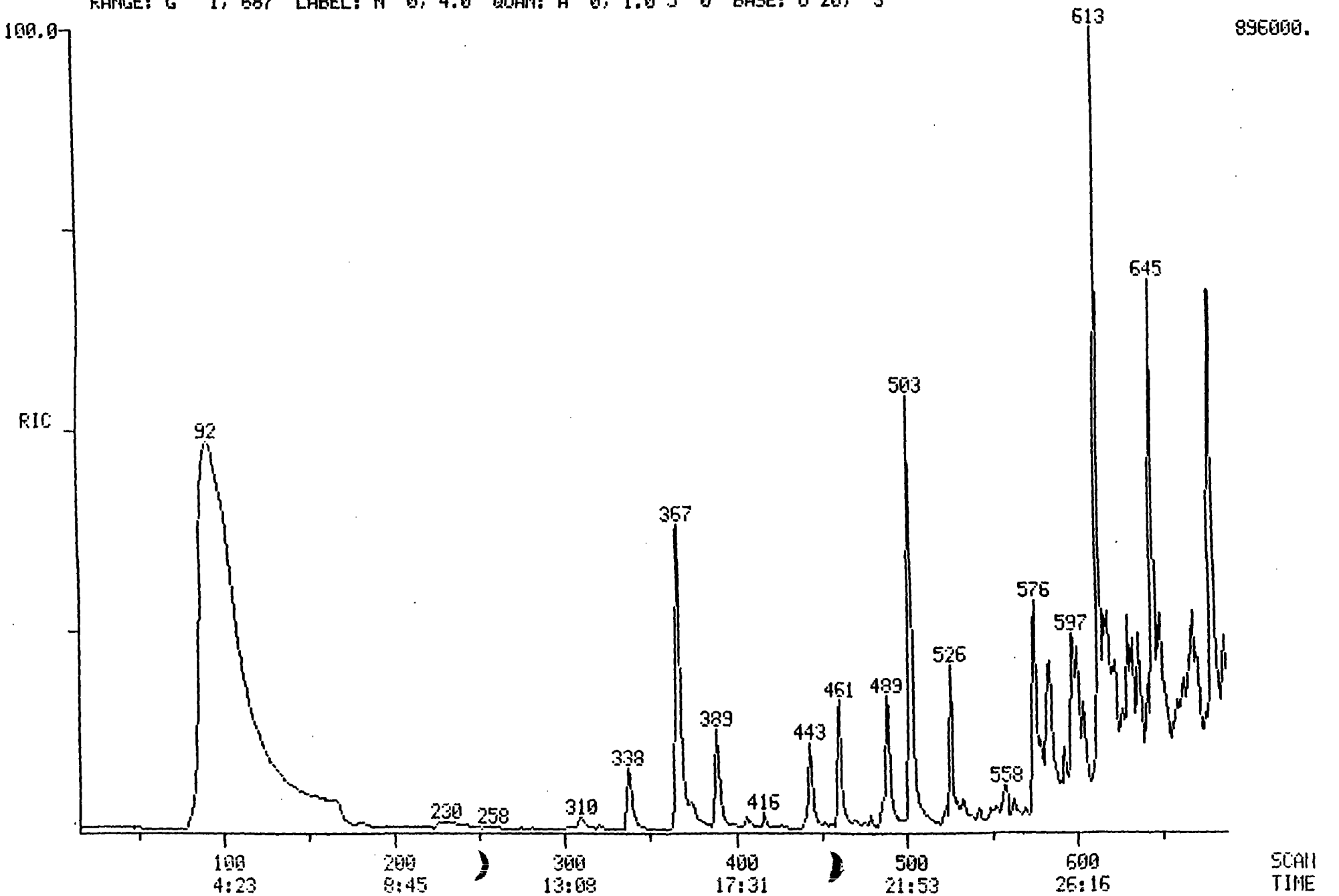
DATA: 2EE17703 #1 SCANS 15 TO 687
CALI: 2EE17703 #3



RIC
06/24/91 16:45:00
SAMPLE: ECO ENV 06-235-05 TCLP 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 2EE17708 #1
CALI: 2EE17708 #3

SCANS 15 TO 687

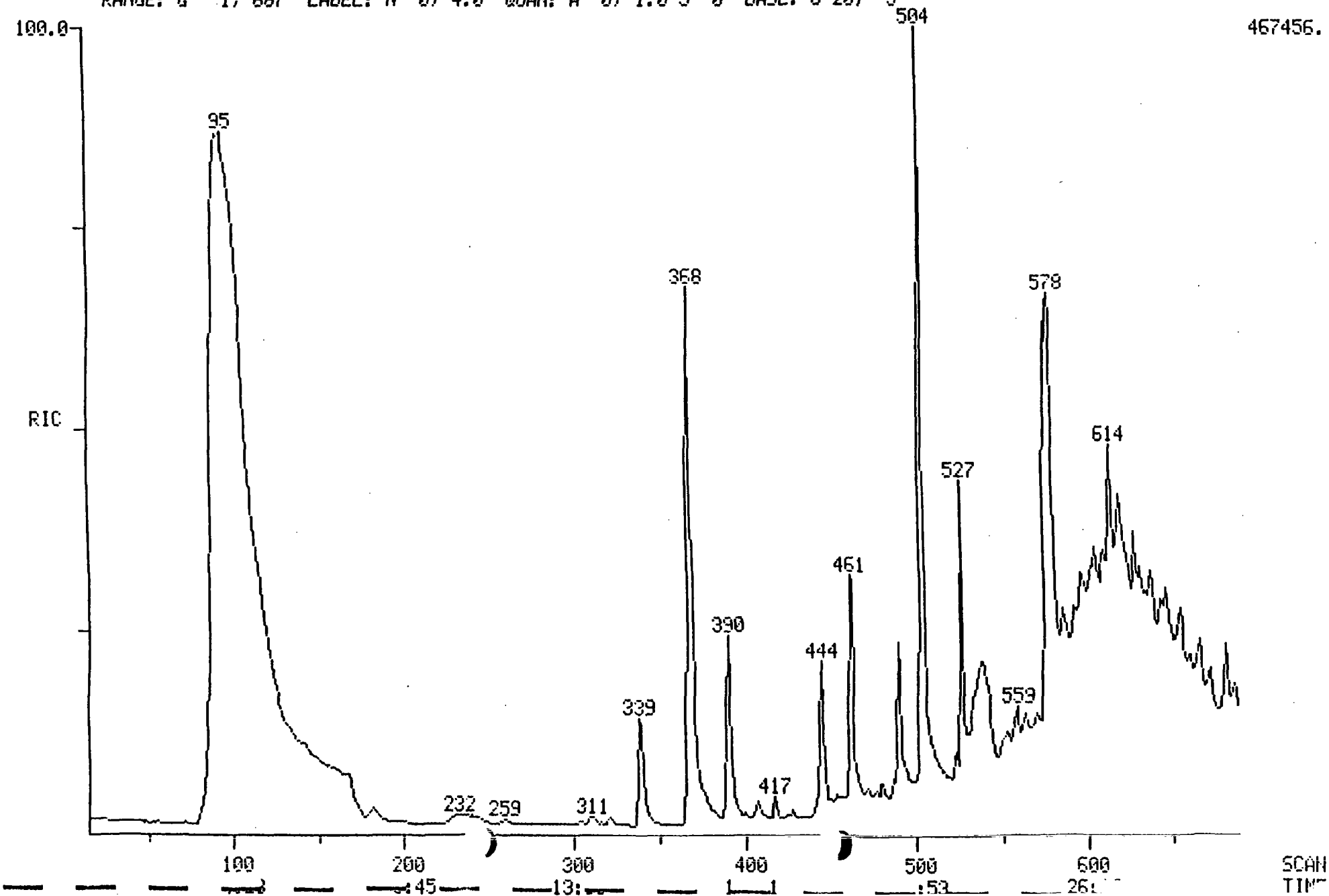


15

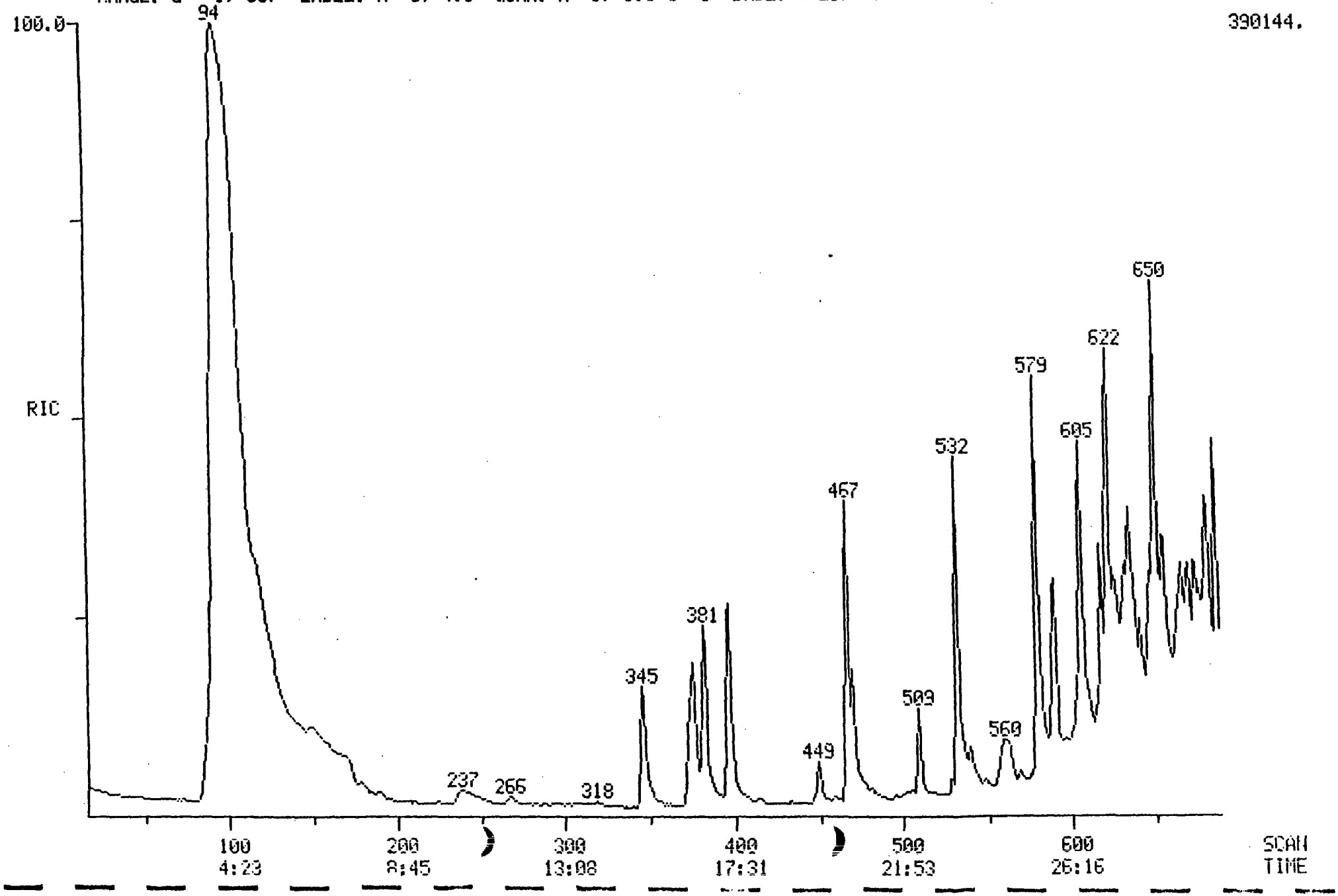
RIC
06/24/91 17:24:00
SAMPLE: ECO ENV 06-235-06 TCLP 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 2EE17709 #1
CALI: 2EE17709 #3

SCANS 15 TO 687



RIC DATA: 2EE17814 #1 SCANS 15 TO 687
06/27/91 17:30:00 CALI: 2EE17814 #3
SAMPLE: ECO ENV 06-235-07 TCLP 5ML
CONDS.:
RANGE: G 1, 687 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



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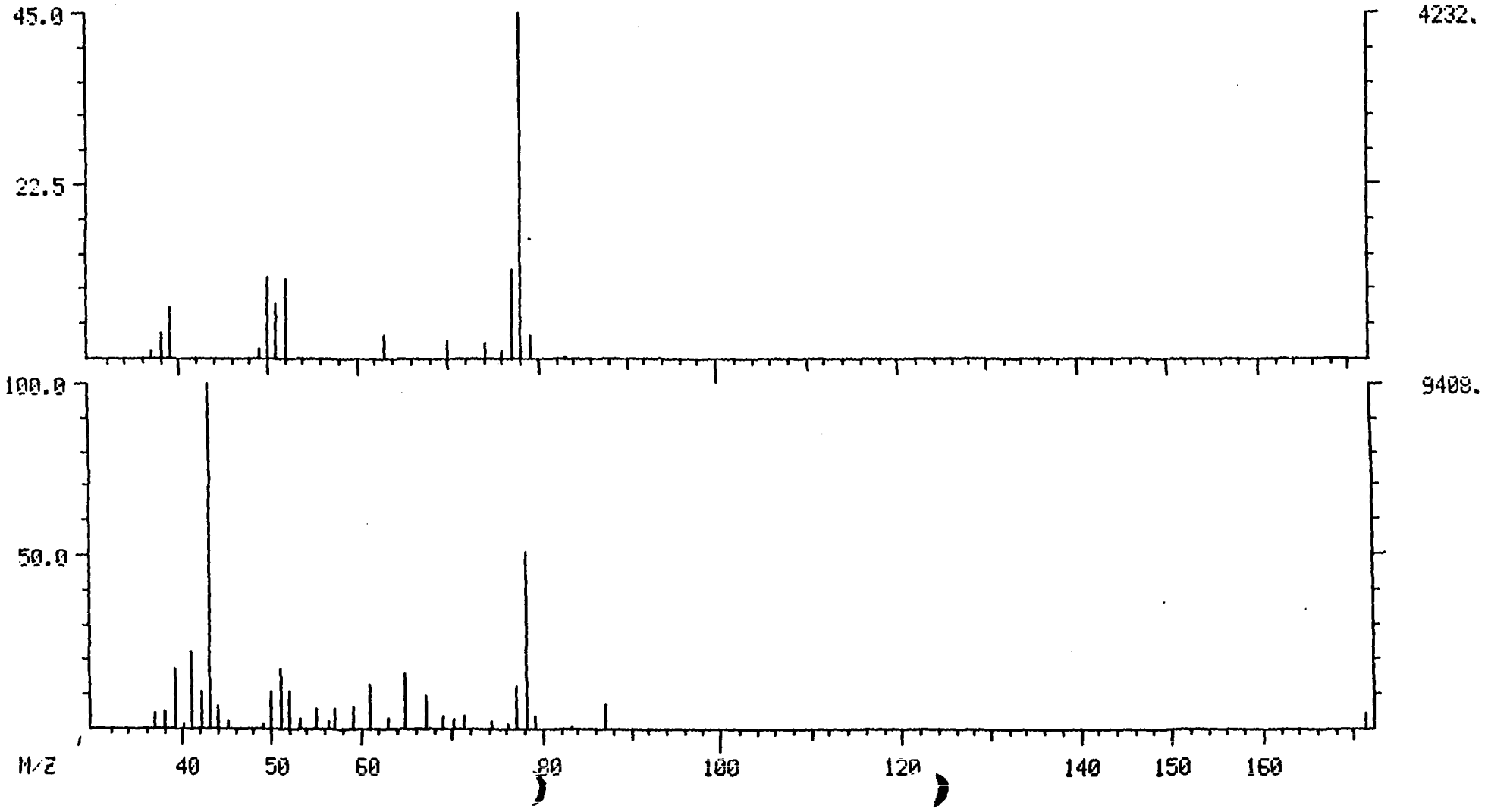
DUAL MASS SPECTRUM
06/24/91 16:45:00 + 16:22
SAMPLE: ECO ENV 06-235-05 TCLP 5ML
CONDS.:
TEMP: 30 DEG. C
ENHANCED (S 15B 2N 0T)

DATA: 2EE17708 #374 BASE M/Z: 78/ 43
CALI: 2EE17708 #3 RIC: 10160./ 34560.

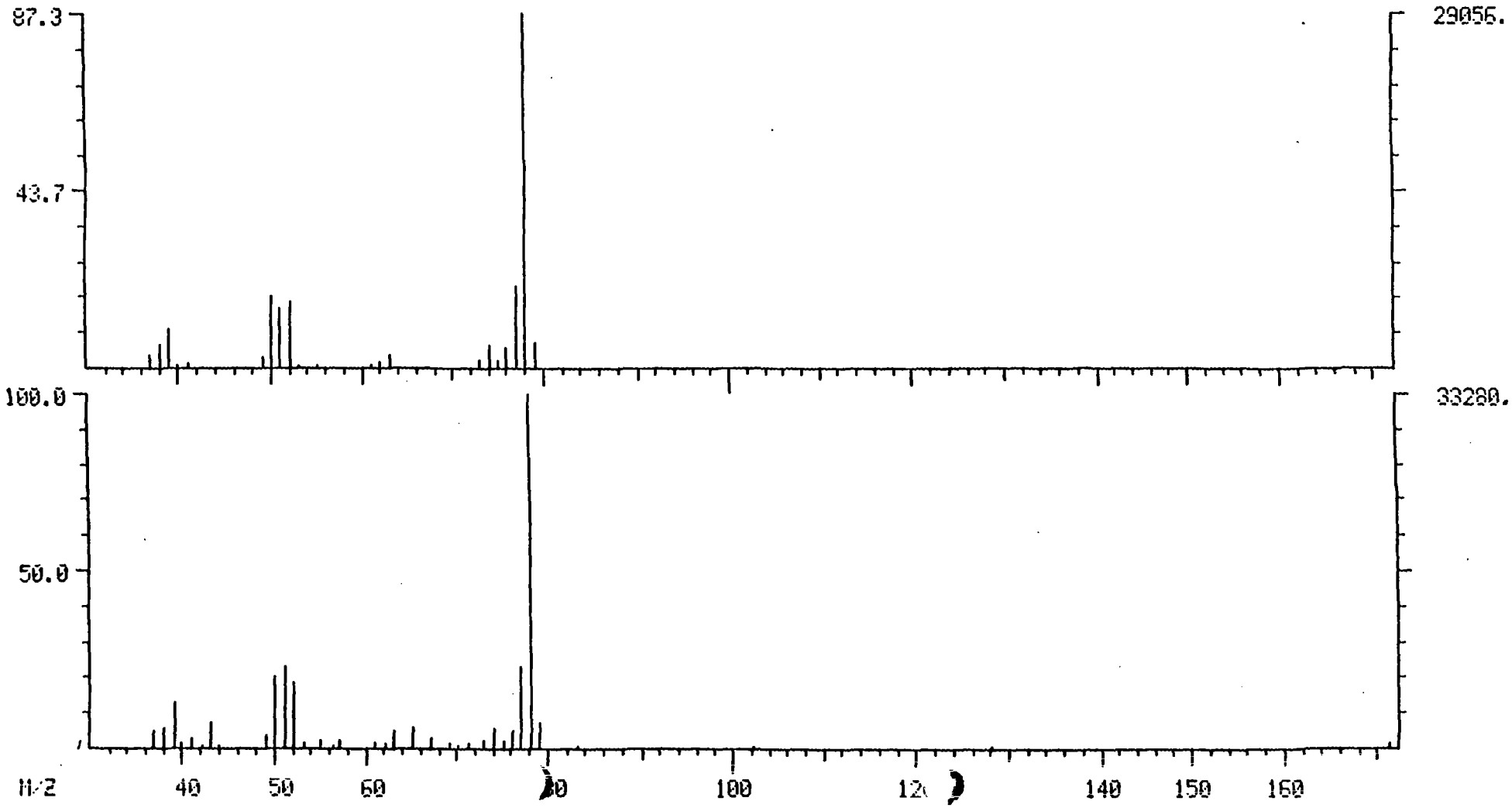
benzene



DUAL MASS SPECTRUM
06/27/91 17:30:00 + 16:41
SAMPLE: ECO ENV 06-235-07 TCLP 5ML
CONDS.:
TEMP: 93 DEG. C
ENHANCED (S 15B 2N 0T)

DATA: 2EE17814 #381 BASE M/Z: 78/ 78
CALI: 2EE17814 #3 RIC: 68480./ 93440.

Benzene



DECAFLUOROTRIPHENYLPHOSPHINE

Tuning Report
07/00/91 8:48:00 + 3:10
Instrument: FINN_1
Case Number:

Data: 1DF15885 # 333
Cali: 1CAL0700 # 3
Analyst: EDG
Laboratory:

Base m/z: 198
RIC: 91392.
Acct. No.:
Contract:

Ion Abundance Criteria

m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
51	5736.	58.2	30.0	60.0	198	58.2	PASS
68	0.	0.0	---	2.0	69	0.0	PASS
69	6896.	70.0	---	---	---	70.0	PASS
70	36.	0.4	---	2.0	69	0.5	PASS
127	5448.	55.3	40.0	60.0	198	55.3	PASS
197	0.	0.0	---	1.0	198	0.0	PASS
198	9856.	100.0	100.0	---	---	100.0	PASS
199	626.	6.4	5.0	9.0	198	6.4	PASS
275	2092.	21.2	10.0	30.0	198	21.2	PASS
365	214.	2.2	1.0	---	198	2.2	PASS
441	1204.	12.2	---	100.0	443	100.0	PASS
442	6632.	67.3	40.0	---	198	67.3	PASS
443	1204.	12.2	17.0	23.0	442	18.2	PASS

DECAFLUOROTRIPHENYLPHOSPHINE

Tuning Report
07/03/91 8:46:00 + 3:14
Instrument: FINN_1
Case Number:

Data: 1DF15900 # 339
Cali: 1CAL0705 # 3
Analyst: MMB
Laboratory:

Base m/z: 198
RIC: 47936.
Acct. No.:
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
51	3016.	59.3	30.0	60.0	198	59.3	PASS
68	0.	0.0	---	2.0	69	0.0	PASS
69	3628.	71.3	---	---	---	71.3	PASS
70	52.	1.0	---	2.0	69	1.4	PASS
127	2836.	55.7	40.0	60.0	198	55.7	PASS
197	0.	0.0	---	1.0	198	0.0	PASS
198	5088.	100.0	100.0	---	---	100.0	PASS
199	348.	6.8	5.0	9.0	198	6.8	PASS
275	1110.	21.8	10.0	30.0	198	21.8	PASS
365	102.	2.0	1.0	---	198	2.0	PASS
441	550.	10.8	---	100.0	443	86.2	PASS
442	3408.	67.0	40.0	---	198	67.0	PASS
443	638.	12.5	17.0	23.0	442	18.7	PASS

DECAFLUOROTRIPHENYLPHOSPHINE

Tuning Report
[illegible]/91 9:1[illegible]:00 + 3:14
Instrument: FINN_1
Case Number:

Data: 1DF15[illegible] # 340
Cali: 1CAL07[illegible] # 3
Analyst: SFL
Laboratory:

Base m/z: 198
RIC: 46400.
Acct. No.:
Contract:

Ion Abundance Criteria

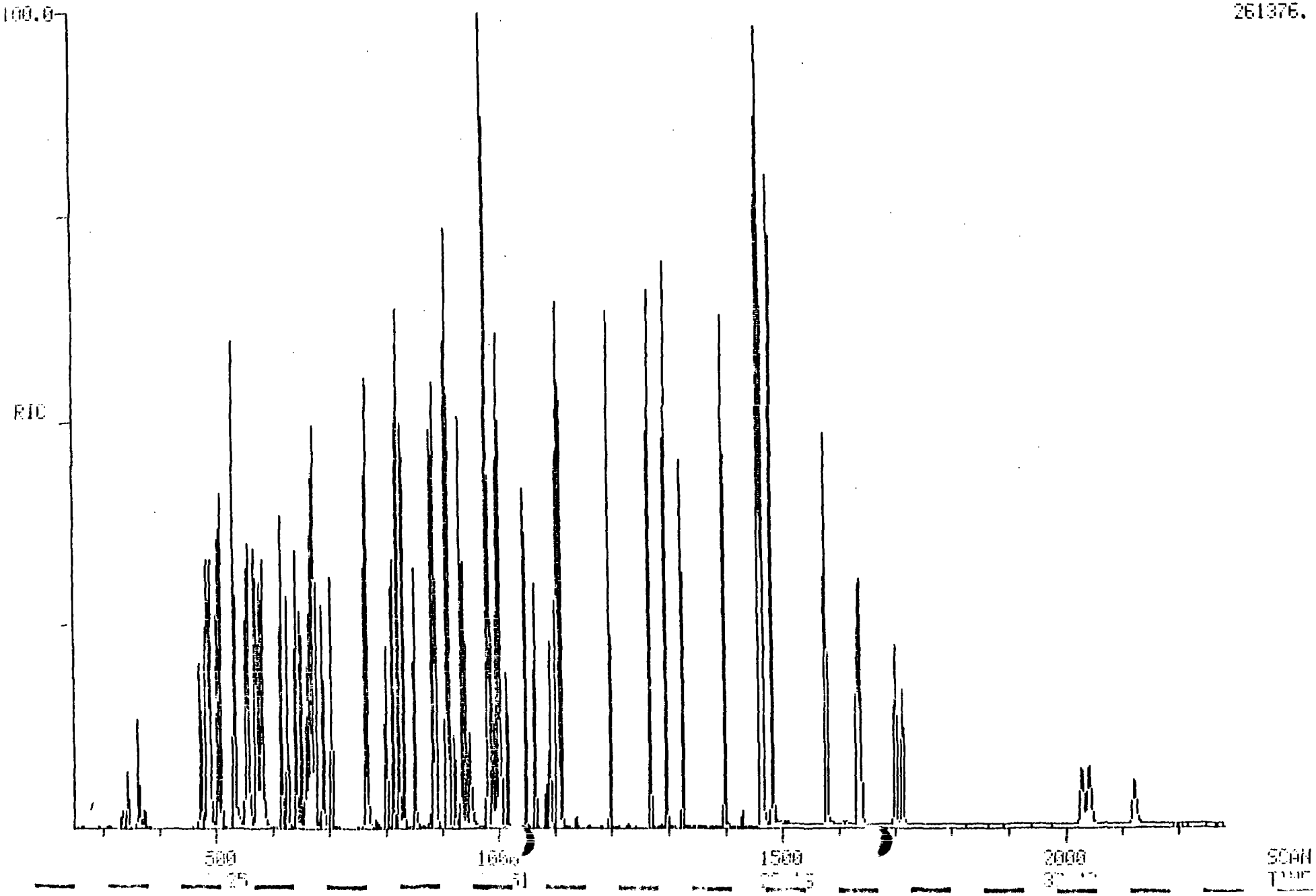
m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
51	2800.	58.2	30.0	60.0	198	58.2	PASS
68	0.	0.0	---	2.0	69	0.0	PASS
69	3548.	73.8	---	---	---	73.8	PASS
70	22.	0.5	---	2.0	69	0.6	PASS
127	2700.	56.2	40.0	60.0	198	56.2	PASS
197	0.	0.0	---	1.0	198	0.0	PASS
198	4808.	100.0	100.0	---	---	100.0	PASS
199	358.	7.4	5.0	9.0	198	7.4	PASS
275	1054.	21.9	10.0	30.0	198	21.9	PASS
365	116.	2.4	1.0	---	198	2.4	PASS
441	612.	12.7	---	100.0	443	88.4	PASS
[illegible]	3648.	75.9	40.0	---	198	75.9	PASS
443	692.	14.4	17.0	23.0	442	19.0	PASS

22

RIC
07/03/91 8:55:00
SAMPLE: SSTD050 50 PPM BNA STD
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

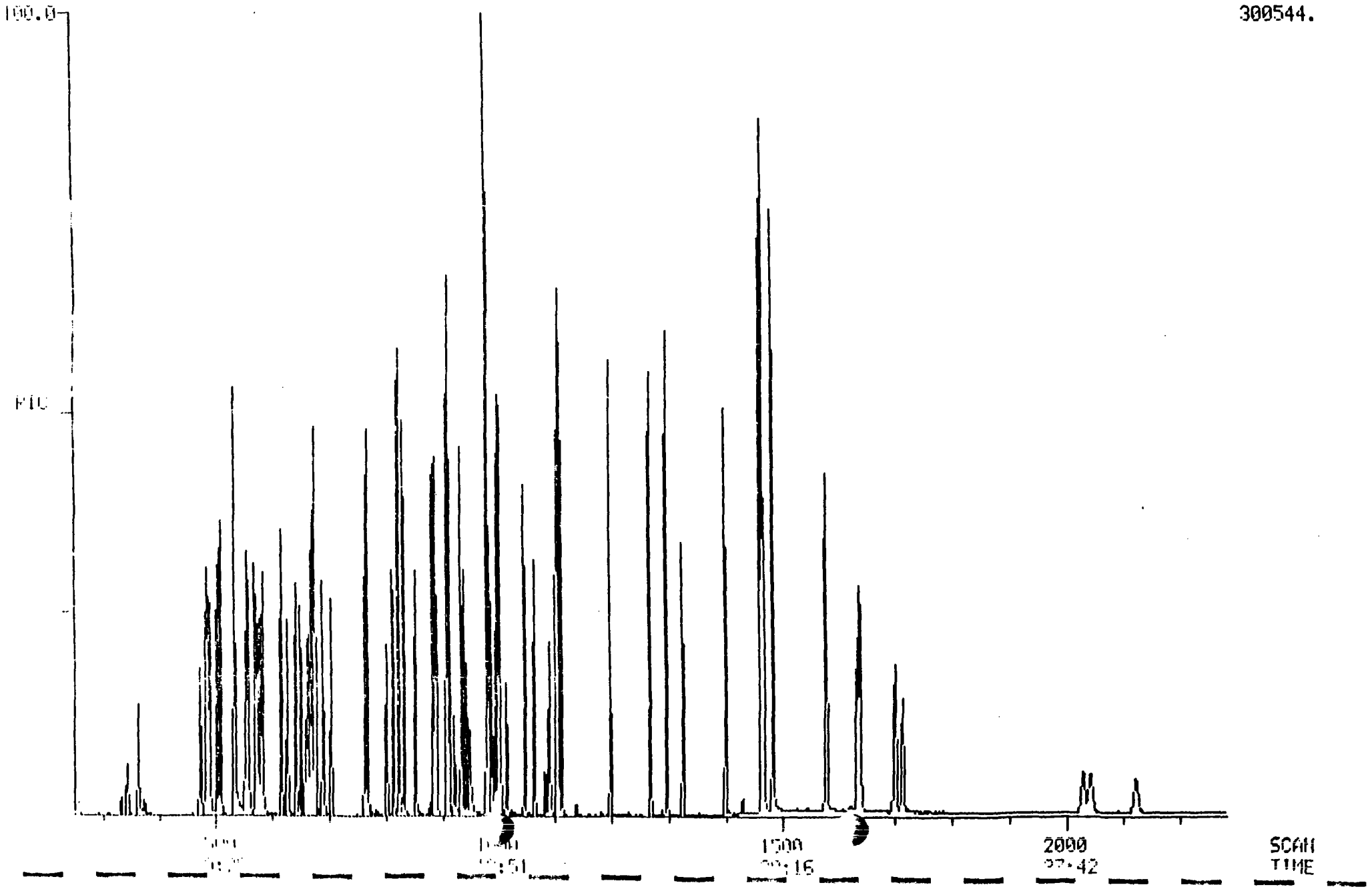
DATA: 1ST15886 #1
CALI: 1ST15886 #3

SCANS 250 TO 2281



23

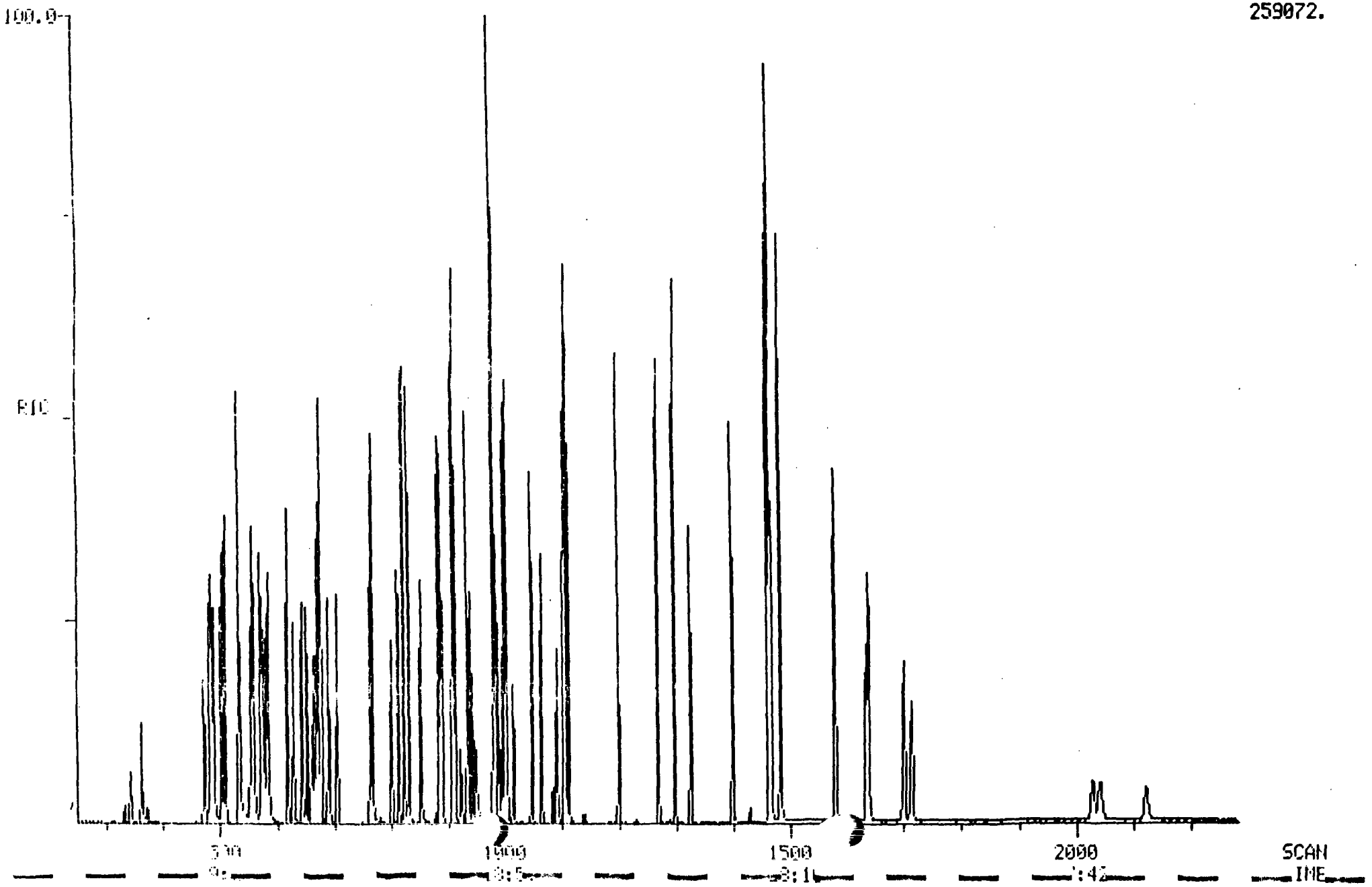
FID DATA: 1ST15901 #1 SCANS 250 TO 2281
07.05.91 9:26:00 CALI: 1ST15901 #3
SAMPLE: SSTD050 50 PPM BHA STD
COMDS.:
RANGE: G 1.2281 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3



RIC
07/06/91 9:27:00
SAMPLE: SSTD050 50 PPM BNA STD
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

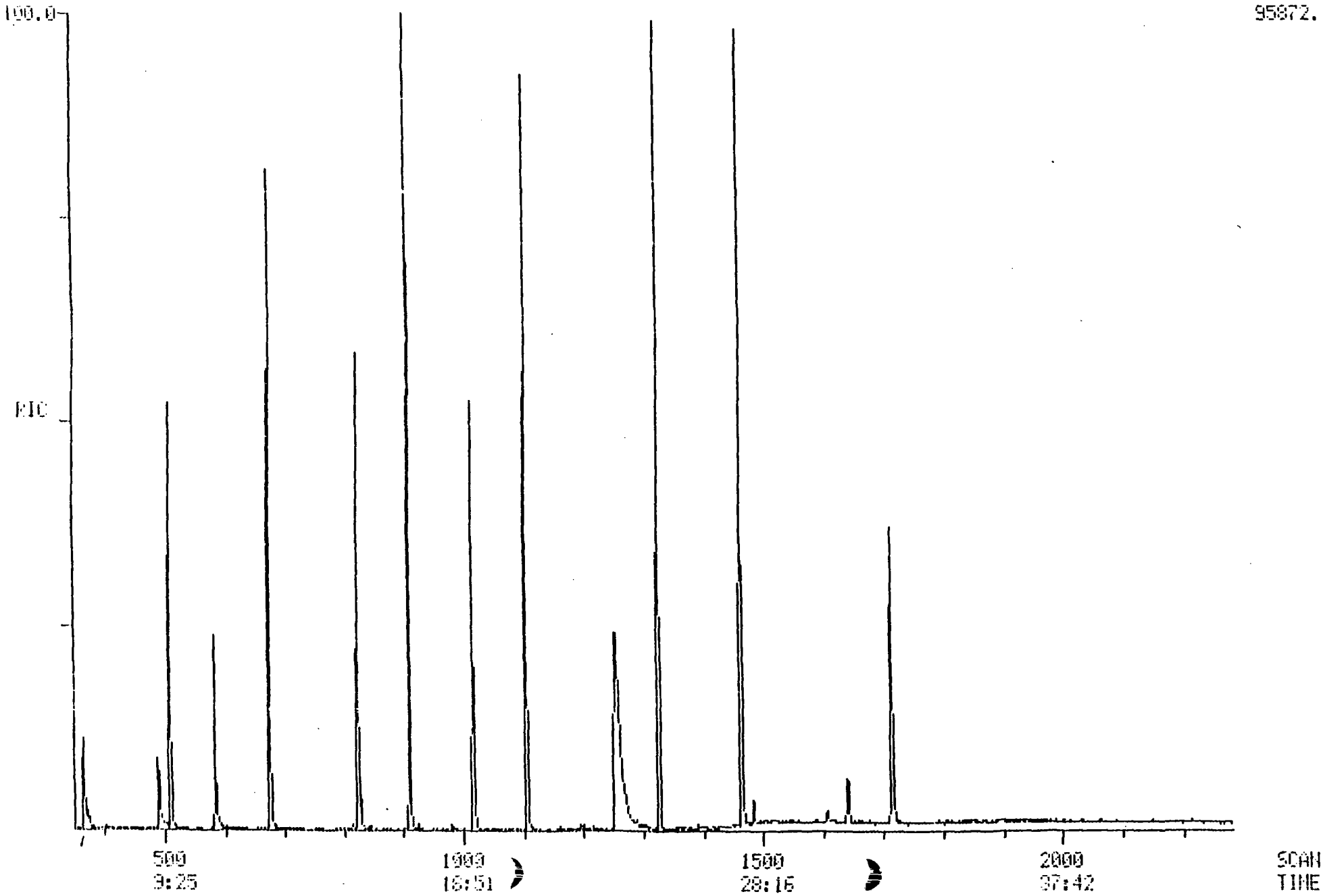
DATA: 1ST15914 #1
CALI: 1ST15914 #3

SCANS 250 TO 2281

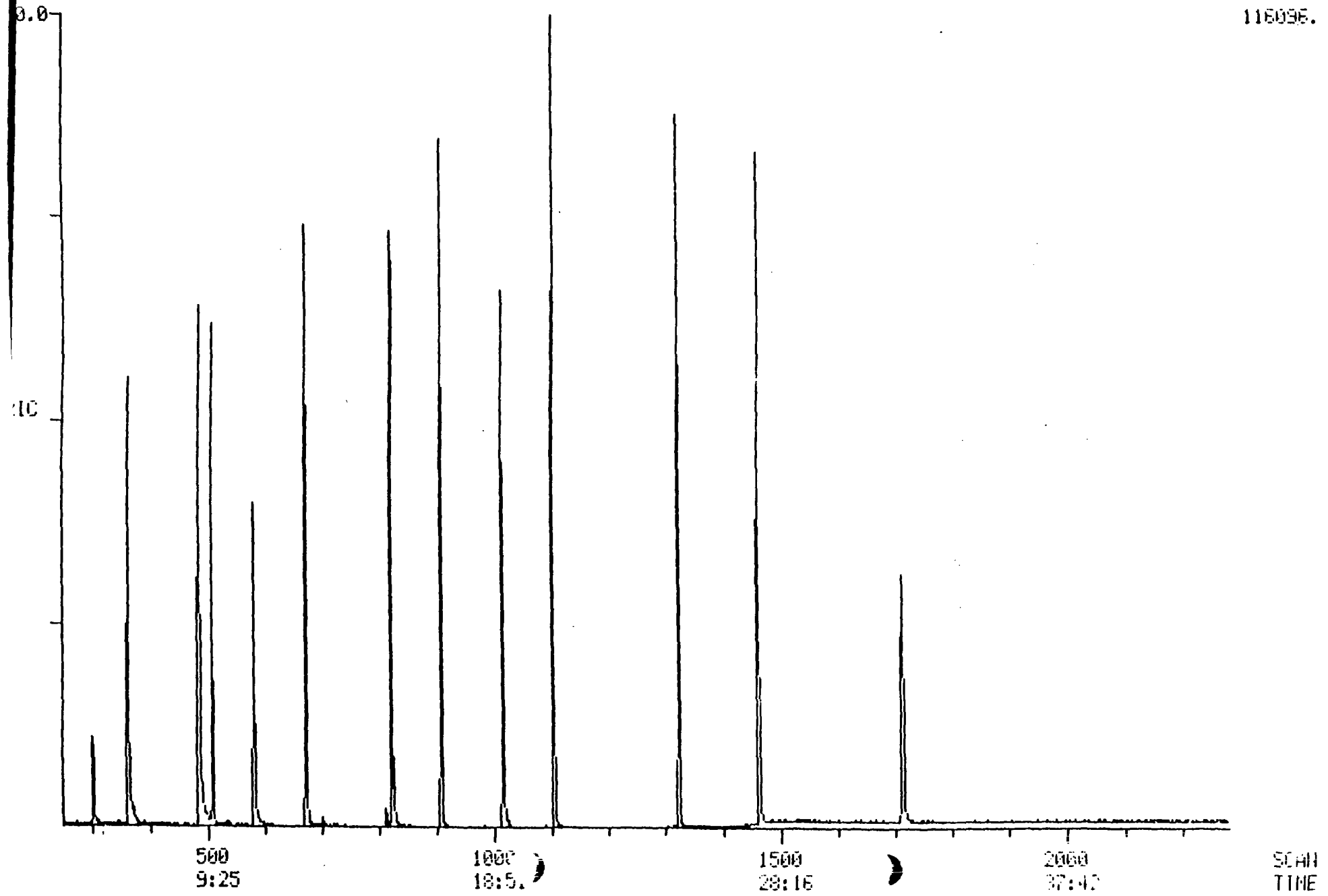


C2

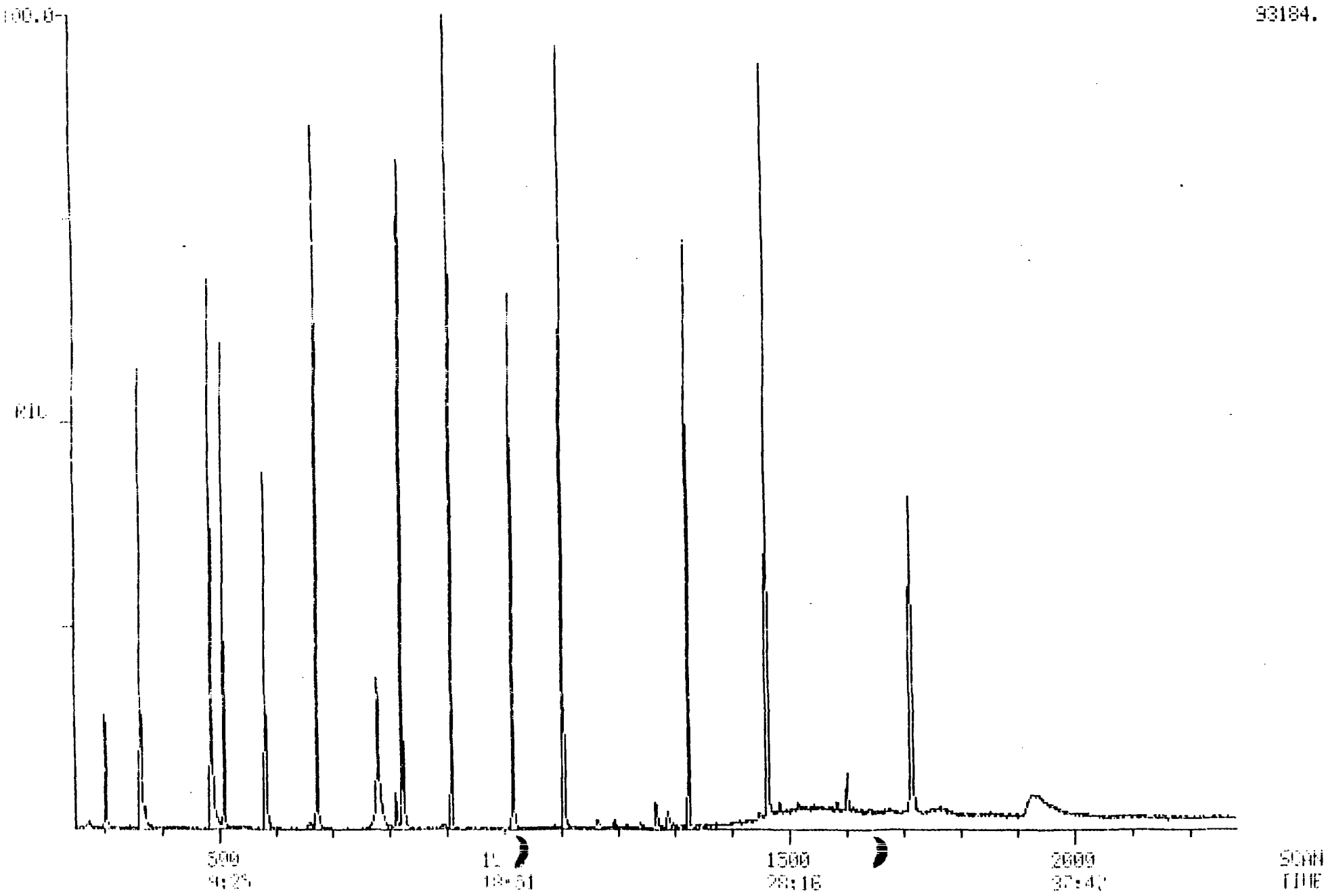
RIC DATA: 1BK15887 #1 SCANS 350 TO 2281
07/03/91 10:06:00 CALI: 1BK15887 #3
SAMPLE: SBLK0628 1L/2ML BN:A BLK 6/28
CONDS.: SEP FUNNEL
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



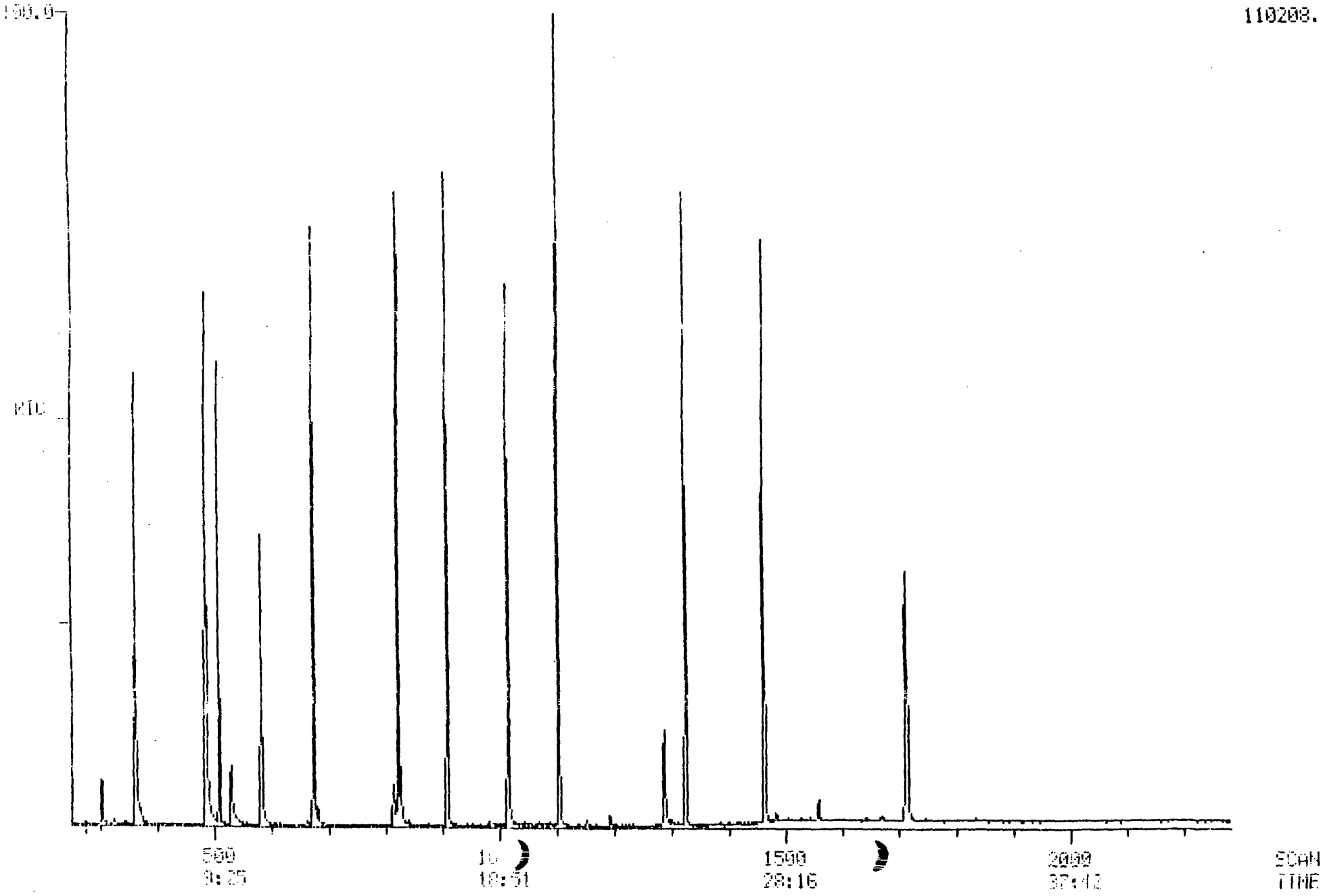
RIC DATA: 1BK15907 #1 SCANS 250 TO 2281
07/05/91 16:52:00 CALI: 1CAL0705 #3
SAMPLE: TCLP FILTER BLK 500ML/2ML BN:A 6/21 TCLP 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



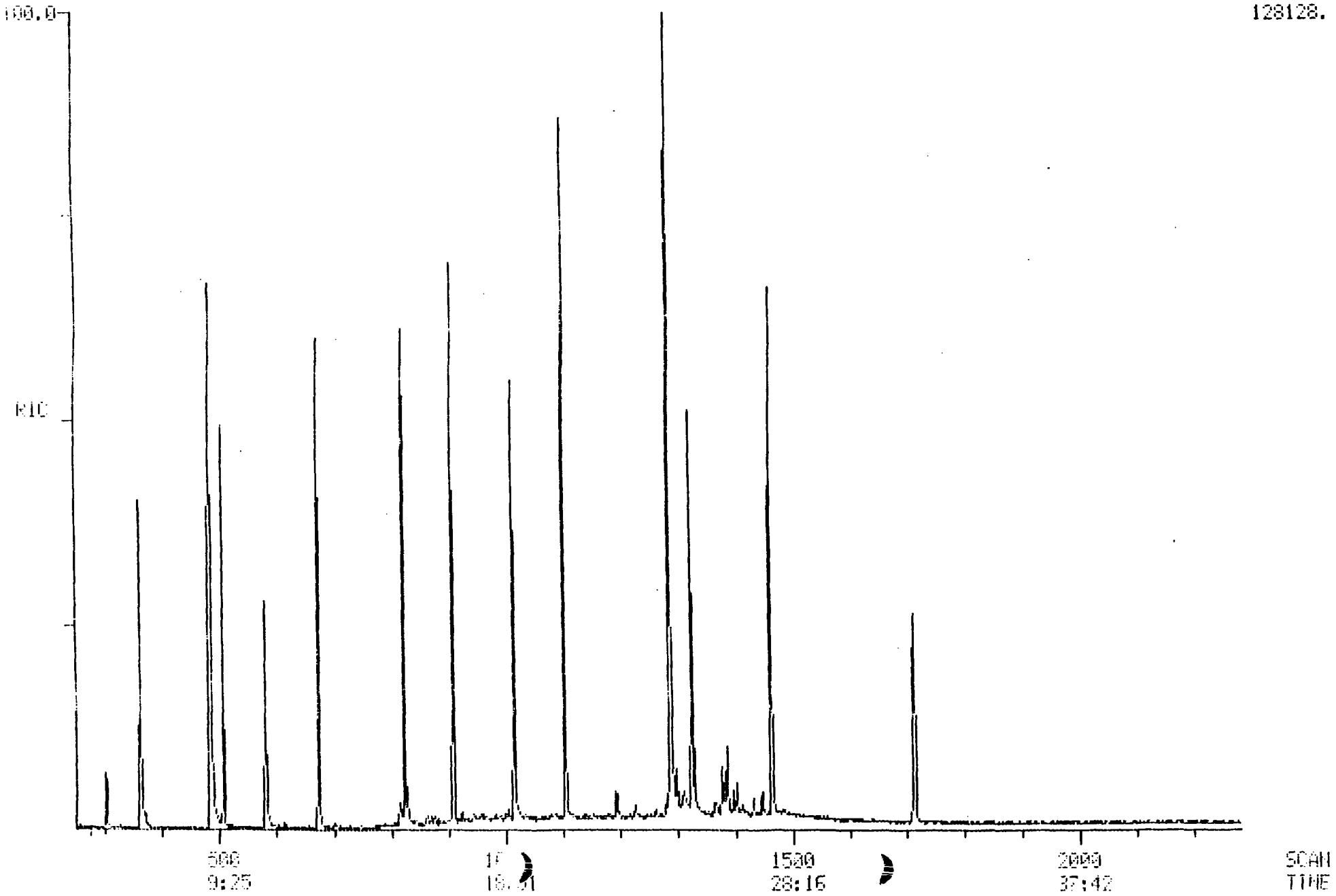
RIC OPTA: 1EC15897 #1 SCANS 250 TO 2281
07/03/91 19:41:00 CALI: 1EC15897 #3
SAMPLE: ECO_ENV 06-235-01 250ML/2ML BN:A 6/21 TCLP FILTER 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



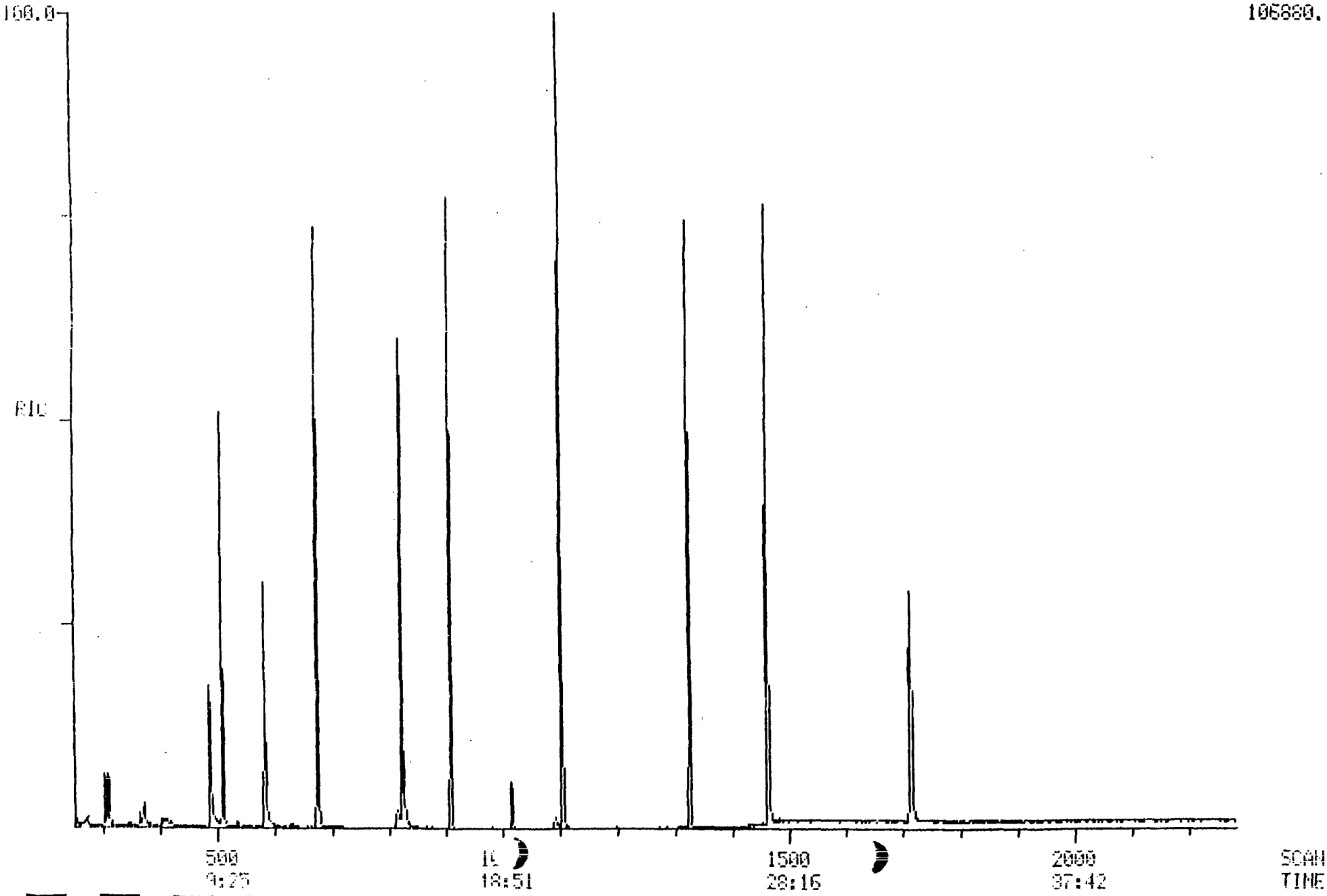
RIC DATA: 1EC15902 #1 SCANS 250 TO 2281
07/05/91 14:19:00 CALI: 1EC15902 #3
SAMPLE: ECO_ENV 05-235-02 500ML/2ML BN:A 6/21 FILTERED TCLP 6/19
COMDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



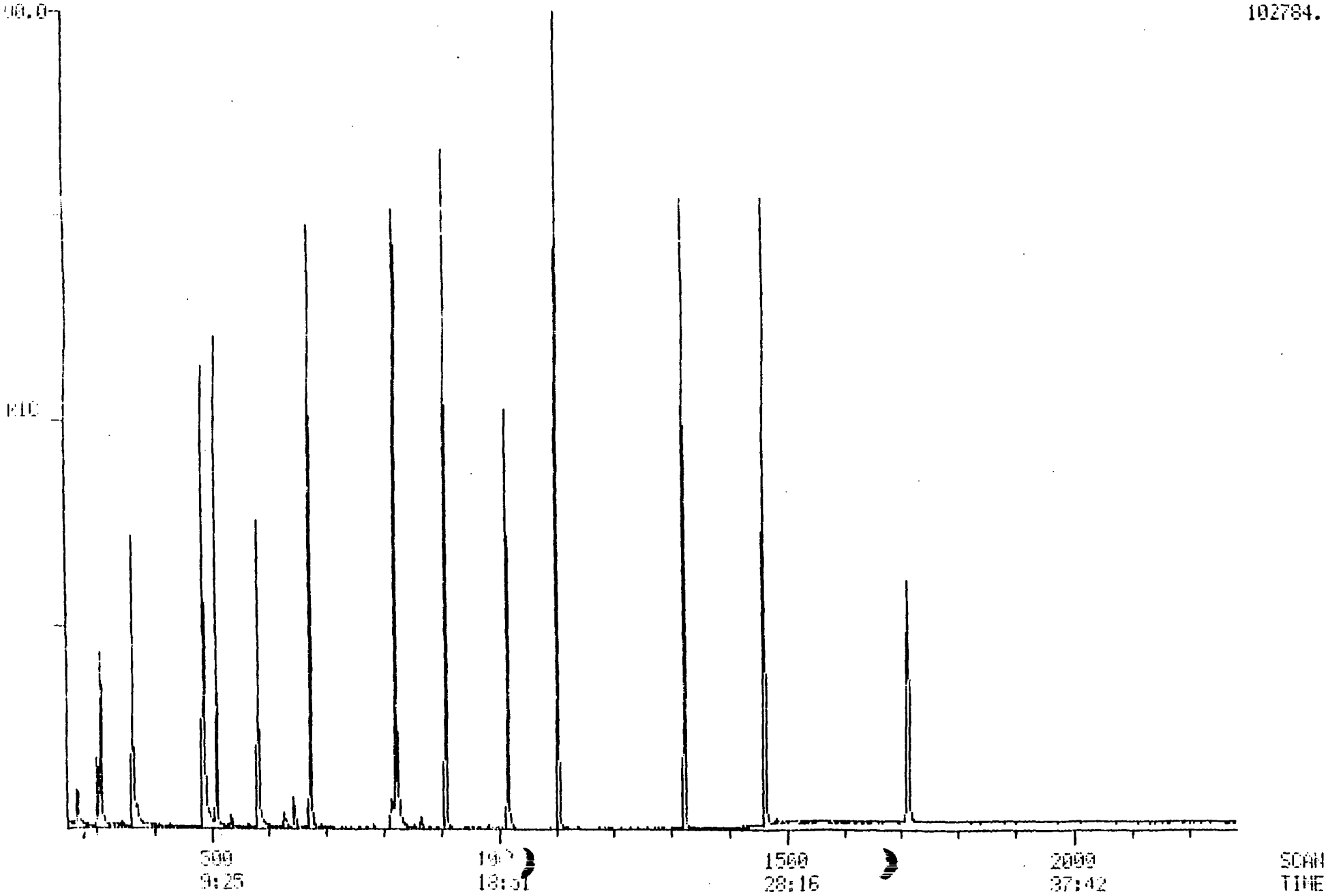
RIC DATA: 1EC15904 #1 SCANS 250 TO 2281
07/05/91 15:11:00 CALI: 1EC15904 #3
SAMPLE: ECO_ENV 06-235-03 500ML/2ML BN:A 6/21 FILTERED TCLP 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



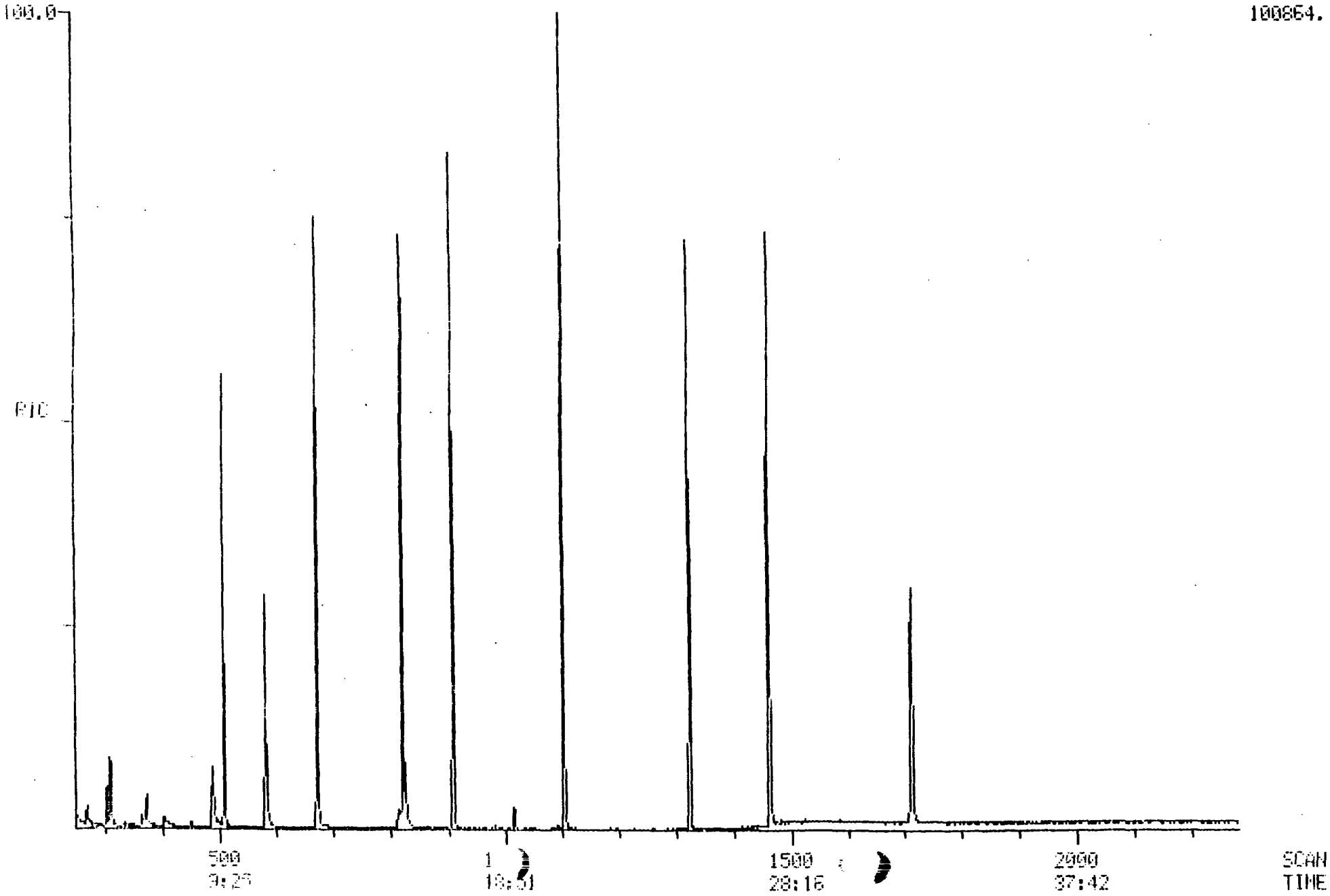
RIC DATA: 1EC15905 #1830 SCANS 250 TO 2281
07/05/91 16:04:00 CALI: 1CAL0705 #3
SAMPLE: ECOLENV 06-235-04 250ML/2ML BN:A 6/21 FILTERED TCLP 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



RIC DATA: 1EC15308 #1 SCANS 250 TO 2281
07/05/91 17:45:00 CALI: 1CAL0705 #3
SAMPLE: ECOLENV 06-235-05 500ML/2ML BN:A 6/21 FILTERED TCLP 6/19
COMDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

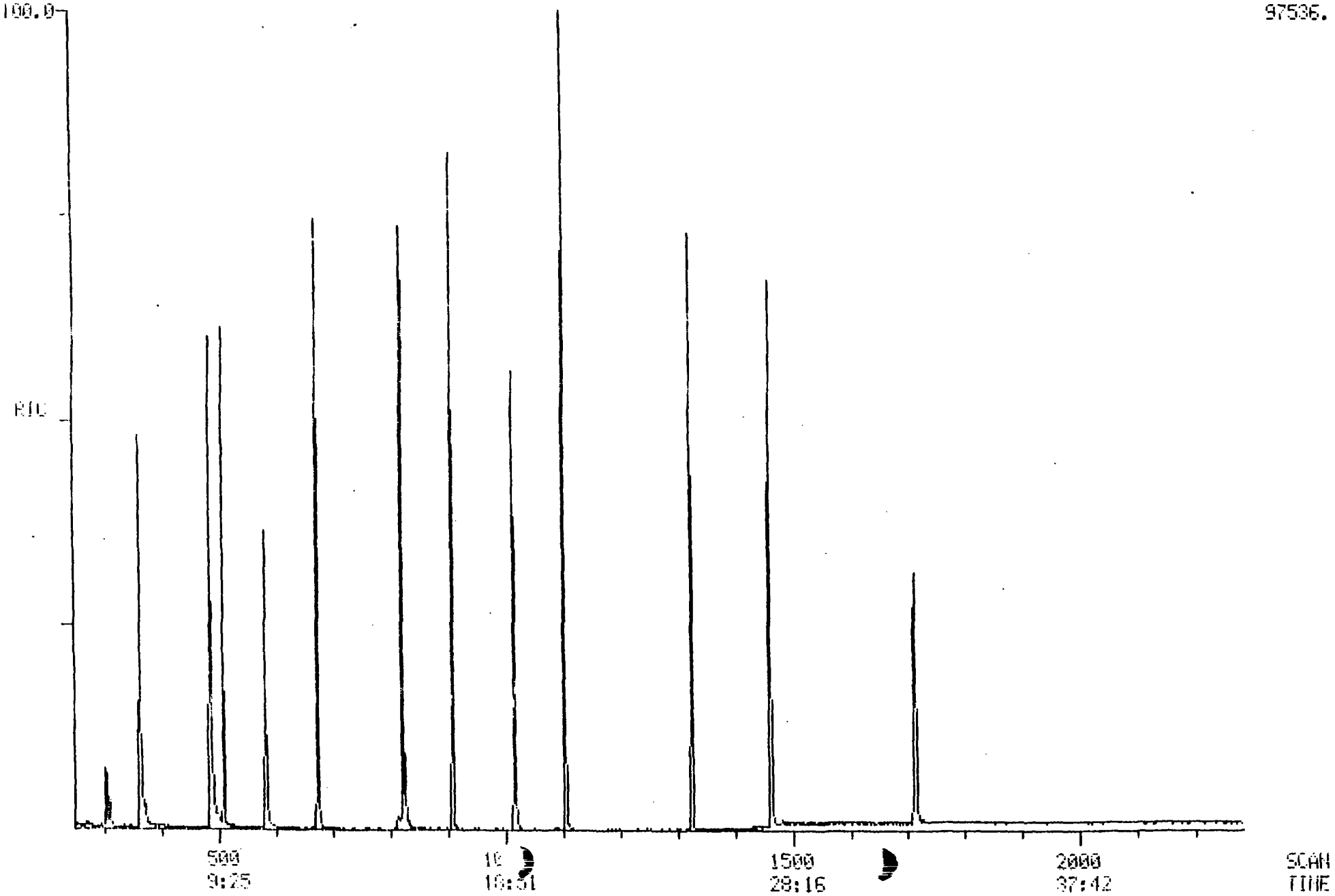


RIC DATA: 1EC15910 #1 SCANS 250 TO 2281
07/05/91 19:30:00 CALI: 1CAL0705 #3
SAMPLE: ECO_ENV 06-235-06 500ML/2ML BN:A 6/21 FILTERED TCLP 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



33

RIC DATA: 1EC15911 #1 SCANS 250 TO 2281
07/05/91 20:22:00 CALI: 1CAL0705 #3
SAMPLE: ECO_ENV 06-235-07 250ML/2ML BN:A 6/21 FILTERED TCLP 6/19
CONDS.:
RANGE: G 1,2281 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



GLOSSARY

BFB:	Bromoflurorbenzene; the compound specified in EPA Method 624/8240 for which the mass spectrometer must meet performance criteria for VOA analysis.
DFTPP:	Decafluorotriphenylphosphine; the compound specified in EPA Method 625/8270 for which the mass spectrometer must meet performance criteria for semivolatile compounds.
EPA Method 624:	GC/MS method for determining volatile organic compounds in water using the purge and trap technique.
EPA Method 625:	GC/MS method for determining semivolatile organic compounds in water using liquid/liquid extraction.
EPA Method 8240:	GC/MS Method for determining volatile organic compounds in a variety of water and waste matrices using the purge and trap technique. Reference: SW-846.
EPA Method 8270:	GC/MS Method for determining semivolatile organic compounds in a variety of water and waste matrices using liquid/liquid extraction and capillary column technique. Reference: SW-846.
IS:	Internal Standard: compound used to determine response factors (RF) for individual analytes and subsequent quantitative analysis.
RIC:	Reconstructed Ion Chromatograph; GC/MS chromatograph which plots total ion current versus scan number (time).
SS:	Surrogate Standard; quality control compounds similar to the compounds of interest which are spiked into every sample matrix. The surrogate's recovery is determined using the same internal standard procedures and the analytes.
VOA:	Volatile Organic Analysis; see EPA Method 624/8240.
SV:	Semivolatile compounds; refers to the analytes determined by liquid/liquid extraction technique Method 625/8270.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: [illegible]SBA
PROJECT NAME: L. H. Inc.
SAMPLERS: (Signature) [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TCLP Analysis only: VOA (40 ml)	Semivolatiles (ABN)	Pesticides/Herbicides (VOA)	Metals (1 ℓ)	MC/MSD (1 ℓ)		REMARKS: Tag #'s	Matrix
[illegible]	6/17/91	12:35		X	Water sample lagoon #1	6	2	1	1	1	1		092026-31	surface water
[illegible]	6/17/91	12:[illegible]		X	Water sample lagoon #2	5	2	1	1	1			092032-36	surface water
[illegible]	6/17/91	12:50		X	Water sample lagoon #3	5	2	1	1	1			092037-41	surface water
SB1	6/17/91	13:[illegible]		X	Sediment sample lagoon #1	4	1	1	1	1	X		092042-45	sediment
SB2	6/17/91	14:45	X		Sediment sample lagoon #2	4	1	1	1	1			092046-49	sediment
SB3	6/17/91	13:[illegible]	X		Sediment sample lagoon #3	4	1	1	1	1			092876-79	sediment
SB4	6/17/91	15:10		X	Soil sample	BW 3	1	1	1	⊛	X		092880-82	soil

X - indicates that this sample should have MS/MSD run but no extra volume collected

⊛ Metal Analysis was not requested on C. of C, however, analysis was requested on sample label per mkw 6/18/91 1610

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[illegible]	6/17/91 17:45	Brenda Hamrick			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
			6/17 18:0	KEMRON Marietta, OH 45750 Brenda Hamrick	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File