INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-8014

FAX: (201) 344-1948

February 16, 1995

Mr. Lance R. Richman, P.G.
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
26 Federal Plaza
Room 13-100
New York, New York 10278

Re: Request for Information Under 42 U.S.C. 9601 et seq. and 42 U.S.C. 6901 et seq. ; Diamond Alkali Superfund Site, Passaic River Study Area

Dear Mr. Richman:

This letter is in response to a letter received on January 5, 1995 by Elan Chemical Company, Inc. dated January 3, 1995 from Kathleen Callahan, Director of Emergency and Remedial Response Division of the U.S. Environmental Protection Agency. The letter references the Diamond Alkali Superfund Site, Passaic River Study Area. Elan's response is being made within the time frame allowed by the extension granted until February 21, 1995.

Attached are the responses prepared by Elan Chemical Company.

Please call if you have any questions.

Very truly yours,

David Weisman

cc: Ms. Patricia C. Hick
Assistant Regional Counsel
Office of Regional Counsel
Room 310
26 Federal Plaza
New York, New York 10278

bcc: Jeffrey M. Schawartz, Esq.
Randi Schillinger, Esq.

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ELAN CHEMICAL COMPANY, INC.
RESPONSES TO
ENVIRONMENTAL PROTECTION AGENCY
REQUEST FOR INFORMATION

QUESTION 1.

Since December 30, 1977, Elan Chemical Company, Inc. ("Elan") has operated at a portion of the current facility. A copy of the 1977 deed is located at Appendix 1. On April 24, 1983, Elan acquired additional property adjacent to the property acquired in 1977. A copy of this deed also is located at Appendix 1. Since 1983, the Elan facility has consisted of both parcels of property. Please refer to the response to question 15, for an explanation of the corporate history of Elan at this facility.

QUESTION 2.

a) Elan currently holds no RCRA permits and, to our knowledge has not held a RCRA permit in the past. Elan is currently permitted to accumulate hazardous waste for ninety days or less in a 10,000 gallon above-ground vertical carbon steel tank. See Appendix 2.a) for a copy of New Jersey Department of Environmental Protection ("DEP") authorization letters. Elan's EPA Identification Number is NJD 042-895-680.

b) Elan currently holds no Federal Water Pollution Control Act ("WPCA") permits and, to Elan's knowledge has not held a WPCA permit in the past. Elan currently holds a Passaic Valley Sewerage Commission Sewer Connection Permit ("PVSC Permit"), Permit No. 20 40 3242. The effective date of the current permit is April 14, 1991. Elan has held PVSC Permits since April 1981. Copies of the current PVSC Permit and Elan's past PVSC Permits are located at Appendix 2.b).

QUESTION 3.

2,3,7,8, tetrachlorodibenzo-p-dioxin
or other dioxin compounds----------No
Benzy chloride----------Yes
Methyl ethyl ketone----------Yes
Benzene/ethyl benzene----------Yes
Toluene----------Yes
Acetone----------Yes
Xylene----------Yes
Hydrochloric acid----------Yes

QUESTION 4.

a) Elan is in the business of manufacturing chemicals which are used by the food flavor and fragrance industries. Various catalysts and processing aids are typically utilized in the manufacturing process. A list of Elan's current raw materials and finished products are provided at Appendix 4.a).

The manufacturing process is a batch process and typically consists of three major steps:

Step 1 - Reaction.

During the reaction step the raw materials, catalysts and processing aids (solvents, etc.) are loaded into a reactor. Typically, heat is applied for a period of time during which the reaction mixture is agitated.

Step 2 - Wash

At the end of the reaction step the reaction mixture is typically washed with water or a mildly caustic solution to remove the un-reacted acids. This is accomplished in the reactor or a wash tank.

Step 3 - Purification

Purification is typically achieved by vacuum distillation. During this step the solvents and unreacted raw materials are removed from the reaction mixture, thereby isolating the finished product. This is accomplished in specially equipped distillation stills.

The recovered solvents are reused until they are degraded.

After purification, the finished product is drummed and shipped to customers.

The materials listed in question 3 are not a product or by-product of the manufacturing process. In addition, we do not believe that other hazardous substances are a product or by-product of the manufacturing process. Please refer to a copy of the product list provided at Appendix 4.a). Hazardous substances are utilized as either (i) raw materials, which are converted into new compounds during the manufacturing process, (ii) processing aids, or (iii) solvents, which are materials that are not chemically altered and are recovered for reuse in subsequent batches.

b) We do not believe that our manufacturing processes involve the generation of hazardous substances. Please refer to our product list provided at Appendix 4.a). As explained in the

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response to question 4.a) above, Elan utilizes hazardous substances as part of its manufacturing process in its raw materials catalysts and processing aids. Solvents are recovered during the Purification step when the product is isolated from the un-reacted raw materials. These recovered solvents are reused until they are degraded. When the solvent is no longer usable it is disposed of as a hazardous waste.

i) The recovered solvents are better than 95% pure. The remaining 5% is typically comprised of un-reacted raw materials, product and water. The recovered solvent is most likely to be reused in the subsequent production batch in the Reaction step.

ii) We do not believe any hazardous substances are generated in finished product. (Please refer to the responses to questions 4.a) and 4.b)).

iii) When solvents are degraded and no longer usable, they are disposed of as a hazardous waste. Such hazardous wastes are currently combined in one waste stream from the entire production facility.

QUESTION 5.

Hazardous substances which constitute raw materials utilized in Elan's manufacturing activities are delivered to Elan from vendors in Department of Transportation approved packaging. Solid materials are packed in polyethylene lined fiber drums or polyethylene lined paper bags. Liquids are enclosed in 55 gallon steel or 55 gallon plastic drums. Some materials are packed in 15 or 30 gallon plastic or steel drums. Some materials are delivered in bulk tanker trucks.

These new raw material hazardous substances are stored on site (Elan does not have any off-site storage facilities) in designated areas in drums on pallet racks resting on paved surface. There are separate storage areas for poisons, corrosive materials, flammable materials and non-hazardous materials. Materials delivered in bulk tanker trucks are stored in bulk storage tanks. Where applicable, bulk storage tanks are equipped with conservation vents and each vent is permitted by the DEP.

Unfinished products which await additional processing are stored in 55 gallon steel or plastic drums on pallet racks in the designated "Work In Process" area of the property.

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Recovered solvents that are reused are stored in 55 gallon steel or plastic drums on pallet racks in the designated "Work In Process" area of the property.

Spent solvents are classified as hazardous waste and are pumped directly to the accumulation tank mentioned in the response to question 2.a). Please refer to Appendix 5 for a copy of Elan's DEP approved DPCC Plan for a detailed description of the storage facilities.

a) Yury Langer is the Environmental and Safety Manager currently responsible for the proper handling of hazardous waste at Elan. Yury Langer's home address is 26 Pomona Road, P. O. Box 135, Pomona, New York 10970, (914) 362-6753. Mr. John Vassiliades, the production manager at Elan, is currently responsible for the proper handling of hazardous substances, other than hazardous waste at Elan. Mr. Vassiliades home address is 189-144 44th Avenue, Flushing, New York 11358 (718) 353-0777. Prior to Mr. Langer, Mr. Albert Roque, who resigned from Elan and moved out of State in May of 1994 was responsible for the handling of hazardous waste at Elan. Mr. Roque held this position since 1993. Mr. Roque's address is 608 Bronwood Estates, Fort Smith, Arizona 72916. Prior to Albert Roque, the responsibilities for proper handling of hazardous substances (including hazardous waste) were a part of Mr. Vassiliades' position, since 1978.

b) Oldover Corp., State Road 652, Arvonia, VA 23004
Marisol Inc., 125 Factory Lane, Middlesex, NJ 08846
S&W Waste, Inc., 105 Jacobus Avenue, So. Kearny, NJ 07032
Cycle Chem Inc., 217 So. First St., Elizabeth, NJ 07206
SCA Chemical Services, Co. 100 Lister Ave., Newark, NJ 07105
Solvent Recovery Service of NJ, Inc., 1200 Sylvan Street, Linden, NJ 07036
Laidlaw Env. Services, 2815 Old Greenbrier Pike, Greenbrier, TN 37073

c) Please refer to the response to question 5 above with respect to Elan's current storage practices. New raw materials, unfinished product and recovered solvents to be reused have, throughout Elan's history, generally been stored as described in the response to question 5 above except certain of the surfaces upon which the drums were stored may not have been paved. With respect to hazardous waste, prior to Elan having a DEP approved accumulation tank for hazardous waste, Elan stored the spent solvents in a 4500 gallon above ground storage tank and/or in 55 gallon steel drums. These drums were accumulated and stored on site in a designated area on

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pallet racks. The waste was shipped to the facilities mentioned in response to question 5.

QUESTION 6.

a)

i) At least from 1977, the date of Elan's organization, the process waste water stream from the facility has been connected to a sanitary sewer system.

ii) The process waste water stream is currently pretreated and has been pretreated since 1986. From 1986 through approximately December 1991, the pretreatment process consisted of aeration and Ph adjustment. In January of 1992, extraction with Isopar H to remove organics was added to the pretreatment process.

iii) Please see response to question 6(a)(i).

b) i) At least from 1977, the date of Elan's organization, the floor drains have been connected to a sanitary sewer.

ii) Pretreatment of the waste stream commenced in 1986. Floor drains direct waters (wash waters, rain waters) to sump pumps which pump the waters to the pretreatment system as described above, and which are ultimately discharged to the sanitary sewer.

iii) See response to question 6b)(i) above.

c) i) A map of unknown origin, dated April 16, 1968, found in Elan's historical files makes reference to a waste pond on the property. No information is known about the pond. Please see Appendix 6c)(i) for a copy of the map.

Prior to 1985, Elan utilized a cistern, located to the left of its entrance door, to collect process effluent before its discharge into the sewer. The cistern has been sealed.

ii) We have no knowledge if the pond was lined or unlined.

iii) We have no information regarding any treatment or discharges from the pond.

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d) Please refer to Appendix 6.d) for a diagram of Elan's waste water collection and pre-treatment system.

QUESTION 7.

a) Hazardous substances, including the substances listed in response to item (3) or identified in the response to item (4), were not generated during the operation of the facility. As indicated above, at the response to question 4, hazardous substances were utilized as raw materials or processing aids, and solvents are recovered and reused. When the solvents are no longer reusable, they are disposed of as hazardous waste. Please refer to Appendix 7 for copies of Elan's manifests.

b) There has been no disposal or discharge of hazardous substances into the Passaic River since 1977, the date of Elan's organization. There is no data available prior to 1977.

QUESTION 8.

We know of no incidents that resulted in discharges of hazardous substances to the Passaic River.

With respect to incidents resulting in releases of hazardous substances onto the property:

1. On November 4, 1992, a small fire occurred at the Elan facility. During the Fire Department's attempts to extinguish the fire, several wooden pallets were ignited which ultimately caused four plastic drums containing 20-25 gallons of benzy chloride to melt. Prior to this time, there had not been a leak of hazardous substances. When the plastic drums melted, the contents leaked. The area where the drums melted was paved, pitched and bermed. The Fire Department immediately informed the DEP of the leak. Elan personnel were present when the Fire Department notified the DEP of this leak. Once the fire was extinguished, all further action ceased until the DEP arrived at the scene. Upon the DEP's arrival, cleanup activities were performed, a vacuum and absorbent speedy dry was utilized. Please refer to Appendix 8 for relevant documents relating to this incident.

2. In or about the summer of 1989, certain drums (some determined to contain hazardous substances) stored in a then unpaved gravel area of the property, were determined by the DEP to have corroded and leaked. DEP required a delineation of the contamination in this area. Soil

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sampling of the area was undertaken. Remediation for the area was conducted under a "Memorandum of Agreement" entered into on August 27, 1992 with the DEP. The contaminated area was encapsulated with DEP approval. Please refer to Appendix 8 for relevant documents relating to this incident.

QUESTION 9.

Please refer to the response to question 8 above for the date of incidents involving discharges of hazardous substances onto the property.

With respect to incidents involving discharges of hazardous substances into the wastewater system, we are unaware of any specific incidents involving a discharge into the wastewater system. We do not consider PVSC Permit excursions as discharges and accordingly, have not treated them as such.

QUESTION 10.

a) The facility is subject to flooding due to:

i) flood overflow from the Passaic River, and
ii) overflow from sanitary sewer back-up.

b) November 8, 1993 the facility was flood by the overflow from the Passaic River. The flood lasted approximately 5 hours.

December 11, 1992 the facility was flooded by the overflow from the sanitary sewer and overflow from the Passaic River. The facility was flooded for 3 days.

In January 1988, the facility was flooded by the overflow from the Passaic River. The facility was flooded for 6 hours.

QUESTION 11.

A. On July 12, 1993, the DEP issued a Notice of Violation to Elan alleging (i) the failure of Elan to prepare a manifest before transporting or offering for transport hazardous waste off-site in violation of N.J.A.C. 7:26-7.4(a)3, and (ii) the failure of Elan to determine if waste is hazardous, in violation of N.J.A.C. 7:26-8.5(a). On October 19, 1993, Elan received from DEP a Notice of Civil Administrative Penalty Assessment assessing penalties for these alleged violations.

Elan requested and was granted an adjudicatory hearing.

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Settlement negotiations ensued and a Stipulation of Settlement was filed with the State of New Jersey Office of Administrative Law (OAL) on July 13, 1994. The OAL issued a Decision Approving Settlement on July 15, 1994 resolving this matter.

Please refer to Appendix 11.A for copies of relevant pleadings and related documents providing additional detail with regards to this matter.

B. On January 5, 1994, the Passaic Valley Sewerage Commissioners (PVSC) filed suit against Elan alleging that Elan violated the provisions of N.J.S.A. 58:14-1 et seq. by discharging pollutants in excess of the discharge limitations of its PVSC Permit No. 20403242, the rules and regulations of the PVSC, and the Organic Chemicals, Plastics and Synthetic Fibers ("OCPSF") Categorical Pretreatment Standards adopted by the EPA at 40 C.F.R. 414.

On February 10, 1994, Elan filed its Answer. Subsequently, a pretrial conference was scheduled by the court for May 27, 1994. The court also scheduled a trial date of July 11, 1994. Settlement negotiations ensued. These negotiations yielded a verbal settlement of this case. Presently, as evidenced by the attached correspondence, the parties are revising the terms of a proposed Consent Order and Final Judgement. It is expected that the terms of Order will be finalized shortly, thereby resolving this matter.

Please refer to Appendix 11.B for copies of relevant pleadings and related documents providing additional detail with regards to this matter.

C. On April 22, 1991, Elan was served with an Administrative Order and Notice of Civil Administrative Penalty Assessment issued by the DEP. The DEP alleged that Elan violated the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated thereunder. The Order alleged, among other things, leakage of the drums in the then hazardous waste storage area. (This is the same drum leakage referenced in our response to question 8 above.) Elan contested this action and on May 6, 1991 requested an administrative hearing to adjudicate the findings and penalty assessment set forth in the Administrative Order. Elan's request for an adjudicatory hearing was granted by the DEP.

A telephone prehearing conference was held in this matter on July 22, 1992. Subsequently, a Prehearing Order was issued by the court on August 5, 1992 (amended on October 30, 1992). Thereafter, the parties exchanged interrogatories. During the same time period, the parties entered into a "Memorandum of Agreement" and Elan agreed to encapsulate the entire former

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drum storage area with impermeable asphalt cover. Please refer to response to question 8.

In December 1992, the court scheduled a hearing to decide this matter. However, by letter dated January 26, 1993 the parties notified the court that a settlement had been reached and a Stipulation of Settlement was filed with the State of New Jersey Office of Administrative Law (OAL) on March 17, 1993. The OAL issued a Decision Approving Settlement on March 29, 1993 resolving this matter.

Please refer to Appendix 11.C for copies of relevant pleadings and related documents providing additional detail with regards to this matter.

We do not consider a Notice of Violation letter that was not ultimately incorporated into a formal DEP administrative order and notice of civil administrative penalty or into a formal complaint to be a "proceeding" against Elan and, have not treated them as such.

QUESTION 12.

Please refer to Appendix 12 for copies of Elan's Manifests.

The following documents relating to the purchase, use and handling of hazardous substances at Elan have not been supplied with this Request For Information, but are available upon request.

a) Purchase Orders for Raw Materials - Elan's purchase orders for raw materials, for the last two (2) years are stored in trailers on site, at the facility. The purchase orders are filed by vendor name, in chronological order. Each purchase order is attached to its shipping and receiving documents and a copy of payment to the vendor. Due to the volume of these documents, they have not been supplied with this request.

b) Production Batch Records - Elan's production batch records for the past six (6) months are retained at the facility by John Vassiliades, Vice President of Production. These records contain a detailed description of the raw materials utilized, their quantities, the temperature, pressure or other relevant information as to a particular manufacturing process. Due to the volume of these documents, they have not been supplied with this request. If these documents are requested, Elan considers the information in these documents to be confidential and will, if requested, to provide these documents, assert a claim of confidentiality as to such documents.

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c) Material Safety Data Sheets (MSDS) - Elan's MSDS for each raw material hazardous substances is retained at the site. Hard copies are kept by Mr. John Vassiliades in the production office. Yury Langer, Environmental and Safety Manager also retains copies on CD Rom. Due to the volume of these documents, they have not been supplied with this request.

QUESTION 13.

In addition to the documents provided in the foregoing responses please refer to Appendix 13 for additional documentation. We do not consider the sampling conducted of our process wastewater and reported on Elan's Pretreatment Monitoring Reports submitted to PVSC to be results of "any other environmental media performed at the facility" and accordingly have not included these monitoring reports at Appendix 13.

QUESTION 14.

a) Please refer to response to question 1. Pursuant to a deed dated December 30, 1977, Elan purchased a portion of the current facility from the New Jersey Economic Development Authority. Pursuant to a deed dated April 24, 1983, Elan purchased a portion of the current facility from Consolidated Rail Corporation. Please refer to Appendix 14 for a copy of each of the deeds and other relevant documents of sale.

b) Not Applicable

c) Please refer to response to question 15.f) below.

Answer to Question 15.

a) Elan Chemical Company, Inc.

b)

Ira B. Kapp	Chairman of the Board
Jerry Guerrara	President
Jerome Scharf	Vice President
David Weisman	Secretary/Treasurer

all located at:
Elan Chemical Company, Inc.
268 Doremus Avenue
Newark, New Jersey 07105

c) State of Incorporation - New Jersey.
Registered Agent - Jeffrey M. Schwartz, Esq.

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d) Attached at Appendix 15 are Elan's:

Certificate of Incorporation	9/26/77
Certificate of Amendment	1/4/78
Certificate of Amendment	12/29/93

e) No subsidiaries or affiliates.

f) The present Elan Chemical Company, Inc. was organized in 1977.

In May of 1964 a corporation under the name Elan Chemical Company ("Elan-Conn") was incorporated under the laws of the State of Connecticut. Elan-Conn acquired the assets of another chemical company in 1964 and commenced business operations as a manufacturer of chemicals in Springdale, Connecticut.

In 1968, Elan-Conn acquired the facility located at 268 Doremus Avenue, Newark, New Jersey from Essex Chemical Co. Elan-Conn qualified to do business in New Jersey and began operating at the Doremus Avenue site. In 1971, the owners of Elan-Conn, via a tax-free "F Reorganization," organized a New Jersey corporation and liquidated Elan-Conn into the new New Jersey corporation. The effect of this reorganization was to convert Elan-Conn from a Connecticut corporation into a New Jersey Corporation ("Old Elan-NJ").

In September 1977, Felton International, Inc. ("FII"), a New York corporation doing business in Brooklyn, organized the present Elan Chemical Company, Inc. ("Present Elan") as a New Jersey subsidiary for the purpose of acquiring Old Elan-NJ from its then owners, Messrs. Herbert Halpern, Herman Kaplan and Harold Kwart. The acquisition was effected via a complex transaction designed to provide for the availability of New Jersey Economic Development ("E.D.A.") financing for a portion of the assets to be acquired. Present Elan was originally incorporated by FII under the name Elan Acquisition Corporation.

The acquisition transaction was comprised of a series of steps, which were all concluded on the same day:

1. First, Elan Acquisition Corporation (as a subsidiary of FII) purchased 56% of the shares of Old Elan-NJ and the E.D.A. purchased the remaining 44% of the shares. E.D.A. paid for its shares by issuing E.D.A. bonds to the sellers.

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2. Then, Elan Acquisition Corporation and E.D.A. immediately liquidated Old Elan-NJ, with the real estate and tangible depreciable assets of Old Elan-NJ being distributed to E.D.A. and the remaining assets of Old Elan-NJ being distributed to Elan Acquisition Corporation.

3. Then, all of the real estate and tangible depreciable property received by E.D.A. on the liquidation was sold to Elan Acquisition Corporation for an amount equal to the face amount of the E.D.A. bonds issued to the sellers.

4. Elan Acquisition Corporation, after the foregoing series of steps, acquired all of the assets of Old Elan-NJ, and the sellers held E.D.A. bonds having a value equal to the value of the corporation's real estate and tangible depreciable property.

5. Elan Acquisition Corporation then changed its name to Elan Chemical Company, Inc. (referred to above as Present Elan).

Thereafter, until July 1985, Present Elan conducted its business operations as a New Jersey subsidiary of FII. In July 1985, FII terminated its operations and liquidated. A portion of its assets were assigned to a liquidating trust established for the benefit of FII's shareholders. Among the FII assets assigned to the liquidating trust was the stock of Present Elan.

In July 1986, five individuals purchased the stock of Present Elan from the liquidating trust: D. Weisman (35%), I. Kapp (35%), D. Katzman (10%), J. Scharf (10%) and J. Guerrera (10%). At such time, the said five individuals also purchased a vanilla business from the liquidation trust as a partnership, Elan Food Laboratories (the "Partnership").

In 1989, Katzman's interests in Present Elan and the Partnership were redeemed by such entities, and the other four principals continued as the remaining owners.

g) Please refer to the response to question 15.f)

h) Please refer to the responses to question 15, above.

i) Herman Kaplan
Garden Road
Harrison, New York 10528

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Herbert Halpern
12 Fenimore Drive
Harrison, New York 10528

Harold Kwart
203 Cheltenham Road
Newark, Delaware 19711

Ira Kapp)
David Weisman)
Jerry Guerrera)
Jerome Scharf)

all located at:
268 Doremus Avenue
Newark, New Jersey 07105

David Katzman
20-G Weavers Hill
Greenwich, Connecticut 06931

As to changes in ownership, please refer to the responses to question 15, above.

QUESTION 16.

The answers to this "Request for Information" were prepared by

Yury Langer
Environmental & Safety Manager
Elan Chemical Company, Inc.
268 Doremus Avenue
Newark, New Jersey 07105
Tel.: 201-344-8014, Ext. 110 and

David Weisman, President
Elan Chemical Company, Inc.
268 Doremus Avenue
Newark, New Jersey 07105
Tel. 201-344-8014, Ext. 125

Yury Langer has limited personal knowledge of the responses and was assisted by the following Elan personnel

John Vassiliades Question 8
V.P. Production
Elan Chemical Company, Inc.
Home Address:
189-14 44th Avenue
Flushing, New York 11358

Karol Sulimirski — Questions 1-7, 9-14
Plant Manager
Elan Chemical Company, Inc.
Home Address:
11 Mile Road
Suffern, New York 10901

In addition, this "Request for Information" was prepared based on review of corporate and other documents by our attorneys, and employee interviews.

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CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

STATE OF NEW JERSEY)
)
COUNTY OF ESSEX)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that my company is under a continuing obligation to supplement its response to EPA's Request for Information if any additional information relevant to the matters addressed in EPA's Request for Information or the company's response thereto should become known or available to the company.

David Weisman
Name (print or type)

President
Title (print or type)

Signature

Sworn to before me this
16 day of February, 1995.

Notary Public

JOANNE E. HOFFMANN
Notary Public of New Jersey
My Commission Expires October 20, 1997

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Elan Chemical Company, Inc.
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APPENDIX

ELAN CHEMICAL COMPANY, INC.
RESPONSES TO
ENVIRONMENTAL PROTECTION AGENCY
REQUEST FOR INFORMATION

VOLUME 1 OF 3

VOLUME 1 OF 3

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QUESTION 1

847520019

This Deed, *made the* 30th *day of* December 19 77 ,

Between NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY, a public body corporate and politic constituting an instrumentality of the State of New Jersey

~~a corporation existing under the laws of the State of~~
having its principal office at John Fitch Plaza *in the* City *of* Trenton *in the County of* Mercer *and State of* New Jersey *herein designated as the Grantor,*

And

ELAN ACQUISITION CORPORATION,
a New Jersey corporation

~~residing or~~ *located at* 268 Doremus Avenue *in the* City *of* Newark *in the County of* Essex *and State of* New Jersey *herein designated as the Grantees;*

Witnesseth, *that the Grantor, for and in consideration of*

----ONE DOLLAR ($1) and OTHER GOOD AND VALUABLE CONSIDERATION -----

lawful money of the United States of America, to it in hand well and truly paid by the Grantees, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, and the Grantor being therewith fully satisfied, does by these presents grant, bargain, sell and convey unto the Grantees forever,

All those certain tracts or parcels *of land and premises, situate, lying and being in the* City *of* Newark *in the County of* Essex *and State of New Jersey, more particularly described* ~~as follows:~~ in Schedule A annexed hereto and made a part hereof consisting of 2 pages.

SUBJECT to covenants, easements, restrictions and rights-of-way of record, if any, and such state of facts as an accurate survey of the premises would disclose.

BEING the same premises conveyed to Grantor herein by ELAN CHEMICAL COMPANY, a New Jersey corporation, by Deed dated December , 1977 and about to be recorded immediately prior to the recordation of the within Deed.

BEING premises known and designated as Lot 8 and Lot 8A in Block 5014 on the current Tax Assessment Maps of the City of Newark.

BEING premises commonly known by the post office address: 268 Doremus Avenue, Newark, New Jersey 07105.

SUBJECT to the lien of a mortgage made by NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY, a public body corporate and politic constituting an instrumentality of the State of New Jersey, to HERBERT HALPERN, HERMAN KAPLAN, HAROLD KWART, MELINDA KWART, LIDA KWART, DOUGLASS D. KWART, LAWRENCE D. KWART, JESSICA D. KAPLAN, JANE KAPLAN, RUTH GILLIN, JULES GILLIN, DEBORAH HALPERN, ANN HALPERN and FREDRICK R. KAPLAN dated December , 1977 and about to be recorded immediately prior to recordation of the within Deed.

BOOK 4592 PAGE 292

BOOK 4592 PAGE 293

COUNTY OF ESSEX
CONSIDERATION
REALTY TRANSFER FEE
DATE BY

RECEIVED & RECORDED
REGISTER'S OFFICE
ESSEX COUNTY, N.J.
JAN 3 1 25 PM '78
REGISTER

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the approval of the New Jersey Harbor Commission or said Board of Commerce and Navigation, under the authority given by P.L. 1914, Page 205, Section 4.

6. Paramount rights of the United States to fix a line from time to time for navigation or a pierhead line at any point below high water mark without compensation.

7. Subject to rights, easements and reservations as contained in Deed Book Y-74, Page 469.

8. Subject to outstanding rights in all Railroad tracts, crossing or bounding premises in question.

9. Subject to terms, covenants and conditions of agreement recorded in Deed Book V-59, Page 256.

10. Subject to agreement recorded in Essex County Registrar's Office, in Deed Book I-104, Page 32.

TRACT II

BEGINNING at a point in the northwesterly shore line of the Passaic River, distant 70 feet northeasterly at right angles from the filed center line of the former Newark and New York Railroad, later the Newark Branch of the railroad of the Central Railroad Company of New Jersey, said point being also the same beginning point of a tract of land described in a deed dated January 12, 1916 from The Central Railroad Company of New Jersey to Butter-Worth-Judson Company and recorded in Book T-56 of Deeds for Essex County, on Page 592, etc.; thence (1) northwesterly along the first course of the tract of land described in the above mentioned deed dated January 12, 1916, parallel to said center line a distance of 515 feet more or less to a point in the easterly side line of Doremus Avenue (formerly Avenue "R"); thence (2) southwesterly along said easterly side line of Doremus Avenue a distance of 20 feet to a point distant 50 feet northeasterly at right angles from said center line of said Railroad; thence (3) southeasterly through lands of said Railroad Company parallel to said center line a distance of 515 feet more or less to a point in the aforesaid northwesterly shore line of the Passaic River; thence (4) northeasterly along said shore line a distance of 20 feet more or less to the BEGINNING point.

TOGETHER with that part of the fourth tract as described in a riparian grant from the State of New Jersey to The Central Railroad Company of New Jersey, dated April 25, 1912, and recorded in Book K-51 of Deeds for Essex County, on pages 589-595 as lies easterly thereof and adjacent thereto and flowed by the waters of the Passaic River.

TOGETHER with all right, title and interest in and to so much of Doremus Avenue, to the center line thereof, as lies in front of the above described tract of land.

THIS conveyance is made and accepted subject to any pole, wire, pipe lines and drainage facilities located on or crossing the land hereby conveyed.

THIS conveyance is subject to reservations, covenants and easements set forth in deed from The Central Railroad Company of New Jersey to Doremus-Passaic Realty Corp. dated March 19, 1957 and recorded on June 12, 1957 in the Essex County Registrar's Office, in Book 3492 of Deeds for said County at Page 359.

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Together *with all and singular the buildings, improvements, ways, woods, waters, watercourses, rights, liberties, privileges, hereditaments and appurtenances to the same belonging or in anywise appertaining; and the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and of every part and parcel thereof;* **And also** *all the estate, right, title, interest, use, possession, property, claim and demand whatsoever, of the Grantor both in law and in equity, of, in and to the premises herein described, and every part and parcel thereof, with the appurtenances.* **To Have and to Hold** *all and singular, the premises herein described, together with the appurtenances, unto the Grantees and to Grantees' proper use and benefit forever.*

In all references herein to any parties, persons, entities or corporations, the use of any particular gender or the plural or singular number is intended to include the appropriate gender or number as the text of the within instrument may require.

Wherever in this instrument any party shall be designated or referred to by name or general reference, such designation is intended to and shall have the same effect as if the words "heirs, executors, administrators, personal or legal representatives, successors and assigns" had been inserted after each and every such designation.

In Witness Whereof, *the Grantor has caused these presents to be signed and attested by its proper corporate officers and its corporate seal to be hereto affixed the day and year first above written.*

ATTEST:

(Assistant) *Secretary*

NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY

By:

ROBERT S. POWELL, JR.,
Executive Director

State of New Jersey, County of Essex } **ss.:** **Be it Remembered,**
that on December *1977, before me, the subscriber,* an Attorney at Law of New Jersey
personally appeared

who, being by me duly sworn on h oath, deposes and makes proof to my satisfaction, that he is the Assistant *Secretary of* NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY *the Authority named in the within Instrument; that* Robert S. Powell, Jr. *is the* Executive Director *of said* Authority; *that the execution, as well as the making of this Instrument, has been duly authorized by a proper resolution of the* Members *of the said* Authority; *that deponent well knows the* Authority *seal of said* Authority; *and that the seal affixed to said Instrument is the proper* Authority *seal and was thereto affixed and said Instrument signed and delivered by said* Executive Director *as and for the voluntary act and deed of said* Authority *in presence of deponent, who thereupon subscribed his name thereto as attesting witness. and that the full and actual consideration paid or to be paid for the transfer of title to realty evidenced by the within deed, as such consideration is defined in P.L. 1968, c. 49, Sec. 1(c), is* exempt per N.J.S.A. 46:15-10(b), being a Deed by an instrumentality of the State of New Jersey.

Sworn to and subscribed before me, the date aforesaid.

An Attorney At Law of New Jersey

Assistant Secretary

Prepared by: Clapp & Eisenberg, Esqs.
744 Broad Street
Newark, New Jersey 07102

847520022

SCHEDULE A
Page 1 of 2 Pages

SCHEDULE A annexed to Deed between NEW JERSEY ECONOMIC DEVELOPMENT AUTHORITY, a public body corporate and politic constituting an instrumentality of the State of New Jersey, and ELAN ACQUISITION CORPORATION, a New Jersey corporation, dated December 30, 1977.

DESCRIPTION OF PREMISES

All those tracts or parcels of land and premises hereinafter described situate, lying and being in the City of Newark, County of Essex and State of New Jersey:

TRACT I

BEGINNING at a point in the easterly line of Doremus Avenue where the same is intersected by the northerly line of lands of the Central Railroad of New Jersey which said point of beginning is distant 70 feet northerly from the center line of said Railroad Company; and running thence (1) along the northerly line of lands of the said Railroad Company south 65 degrees 7 minutes 30 seconds east 501.12 feet, be the same more or less, to high-water line of the Passaic River; thence (2) along the same north 24 degrees 5 minutes 30 seconds east 157 feet, be the same more or less, to a line drawn parallel with the first course and distant 157 feet northerly and at right angles therefrom; thence (3) north 65 degrees 7 minutes 30 seconds west running part of the way through a tract partly on the premises hereby conveyed and partly on lands remaining to Lewis New York Terminals, Inc., adjoining on the north 497 feet, be the same more or less, to the easterly line of Doremus Avenue aforesaid and thence (4) along the same south 24 degrees 52 minutes 30 seconds west 157 feet to the point or place of BEGINNING.

TOGETHER with that part of the fourth tract described in a riparian grant from the State of New Jersey to the Central Railroad of New Jersey, dated April 25, 1912 and recorded in Book K-51 of Deeds for Essex County on pages 589-595, as lies easterly thereof and adjacent thereto under the waters of the Passaic River.

TOGETHER with all rights, if any, of the party of the first part, to use the Railroad track or siding and any other trackage rights, rights of way or riparian rights or privileges, if any, which were granted to Dixon Chemical & Research, Inc., a corporation which changed its name on June 20, 1962 to Essex Chemical Corporation, the party of the first part, by Better Finishes & Coatings, Inc. and recorded on April 3, 1968 in the Register's Office of Essex County in Book 4269 of Deeds for said County at pages 613-616.

THIS conveyance is subject to the covenants, conditions, descriptions, reservations and encumbrances as follows:

1. Statutory and Municipal requirements relating to land, buildings, their use and construction.

2. Rights of tenants and occupants, if any.

3. Facts and conditions shown on a survey made by Borrie & McDonald dated February 13, 1968.

4. Terms and conditions of Riparian Grant from State of New Jersey in Deed Book K-51, Page 589.

5. Rights of the Board of Commerce and Navigation to supervise plans for any building or other improvement or development to be erected or made on the waterfront and to abate as a public nuisance any improvement thereon commenced or made since April 8, 1914 without

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(n) xm

8.00
2.00
40
10 40

(3)

Deed

(00) +7

A corporation of

TO

Dated *19*

BR

CLAPP & EISENBERG
744 BROAD ST
NEWARK, N J
07102

847520024

THIS DEED, made the 19 day of APRIL, in the year of our Lord one thousand nine hundred and eighty-three (1983),

BETWEEN CONSOLIDATED RAIL CORPORATION, a Corporation of the Commonwealth of Pennsylvania, having an office at Six Penn Center Plaza, Philadelphia, Pennsylvania, 19103, hereinafter referred to as the Grantor, and ELAN CHEMICAL COMPANY, a Corporation of the State of New Jersey, whose mailing address is 268 Doremus Avenue, Newark, New Jersey 07105, hereinafter referred to as the Grantee.

WITNESSETH, that the said Grantor, for and in consideration of the sum of NINETY FIVE THOUSAND DOLLARS ($95,000.00) lawful money of the United States of America, unto it well and truly paid by the said Grantee, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, does by these presents, remise, release and forever quitclaim unto the said Grantee, the heirs or successors and assigns of the said Grantee, all right, title and interest of the said Grantor of, in and to

ALL THAT CERTAIN piece or parcel of land situate in the City of Newark, County of Essex and State of New Jersey being more particularly bounded and described according to a plat of survey prepared by James F. Pica New Jersey License No. 21205, of Keelen and Pica, Land Surveyors and Planners dated November 5, 1982 as follows:

BEGINNING at a point in the southeasterly line of Doremus Avenue said point being distant 1122.65 feet southwesterly from the corner formed by said southeasterly line of Doremus Avenue and the southwesterly line of Roanoke Avenue; and running thence; (1) South 65° 07'30" East 585.45 feet to a point in the pier and bulkhead line; thence (2) along said bulkhead line, South 23° 45' 01" West 50.01 feet; thence (3) still along the bulkhead line, South 17° 18' West 70.62 feet; thence (4) North 65° 07' 30" West 595.78 feet to the southeasterly line of Doremus Avenue; thence (5) along said southeasterly line of Doremus Avenue, North 24° 52' 30" East 120.00 feet to the point and place of BEGINNING.

CONTAINING 70,993.8 square feet or 1.63 acres, more or less, and being Lot 20 in Block 5014 and Lots 35 and 35A in Block 5070 on the tax maps of the City of Newark, New Jersey.

BEING a part of the premises which the Trustee of the Property of The Central Railroad Company of New Jersey, Debtor, by Conveyance Document No. CNJ-CRC-RP-5, dated March 30, 1976 and recorded in the Office of the Secretary of State of the State of New Jersey on October 12, 1978, granted and conveyed unto Consolidated Rail Corporation.

TOGETHER with all the right, title and interest of the said Grantor of, in and to the existing reinforced concrete railroad bridges, including the abutments, wingwalls, arches and all appurtenances thereto located on, over, and across Doremus Avenue at the extreme westerly end of the premises hereby conveyed and on other property of the Grantor on the westerly side of Doremus Avenue, together with ground occupational easements on Grantor's property to support said structures.

THIS instrument prepared by George R. Stevenson, Consolidated Rail Corporation, Ninth Floor, 1528 Walnut Street, Philadelphia, Pennsylvania 19102 George R. Stevenson.

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IT BEING EXPRESSLY understood and agreed by and between the parties hereto (1) that Grantee at its sole cost and expense may demolish at any time the bridge structures and appurtenances at which time the aforesaid right and ensement shall extinguish. If the City of Newark or any governmental agency requires that the bridges and appurtenances be demolished, Grantee at its sole cost and expense, shall arrange for the demolition and removal; however, Grantee's obligations shall include the entire easterly abutments and the entire arch spans of both bridges and all appurtenances, and including other incidental expenses thereto and Grantor's obligation shall be limited to only the westerly abutments and wingwalls on its property; (2) that Grantor or any of its successors and assigns shall have the option and right to demolish and remove at its expense, and at any time, the arch spans of said bridges over Doremus Avenue, and the westerly abutments and wingwalls on its property. The aforesaid option and right can include just the wingwalls to provide better access to Grantor's property on the westerly side of Doremus Avenue. It is distinctly understood by the Grantee that the aforesaid easement rights on Grantor's property shall extinguish once the bridge arch spans are removed under any of the conditions or requirements in either this provison or provision No. 1 above.

RESERVING, HOWEVER, unto the said Grantor, its successors and assigns, the right and easement to use the top of the existing concrete bridge abutment for the support of its railroad bridge and appurtenances attached thereto, all of which is located at the easterly end of the premises hereby conveyed along the bank of the Passaic River; it being expressly understood and agreed (1) that the Grantor shall have the option and right to remove all its rail facilities from said concrete bridge abutment at its expense at any time. Upon said removal, Grantor's easment rights for said specific use shall extinguish; (2) that Grantee shall have the option and right to remove the facilities referred to in this provision at Grantee's sole cost and expense and at any time. Grantee, but at Grantor's option, shall place the rail material at its expense on the easterly end of the premises being conveyed for Grantor's disposition over the premises to either Doremus Avenue or the Passaic River. However, if such disposition is not completed by Grantor within one hundred twenty (120) days after Grantee's removal and written notification thereof, then Grantee, may dispose of this material in any way it deems necessary, but without any liability or cost to Grantor; and (3) It is distinctly understood by the Grantor that its easement rights for the support of its facilities shall extinguish once its railroad bridge and appurtenances are removed under any of the above conditions.

ALSO RESERVING, however, unto the said Grantor, its successors and assigns, the existing pole and wire lines and appurtenances thereto substantially as now located on the parcel of land hereinbefore described, together with the right of using, maintaining, inspecting, repairing, renewing and removing the same and together with the right of entering upon said land for the purposes aforesaid.

SUBJECT, however, to (1) any easements or agreements of record or otherwise affecting the land hereby conveyed; (2) any pipes, wires, poles, cables, culverts, drainage courses or systems and their appurtenances now existing and remaining in, on, under, over, across and through the herein conveyed premises, together with the right to maintain, repair, renew, replace, use and remove same; and (3) the state of facts disclosed by survey made by Keelen and Pica, Land Surveyors and Planners, Belleville, New Jersey, dated November 5, 1982; and (4) the rights of the City of Newark, to construct, reconstruct maintain and repair a storm sewer over and across the extreme southwesterly portion of the land hereby conveyed; said portion being more particularly described as beginning at a point in the southeasterly line of Doremus Avenue, said point being the southwesterly corner of Lot 35 in Block 5070 on the Official Tax Map of the City of Newark, and running, thence; 1) North 24° 52' 30" East along said line of

847520026

Doremus Avenue, 25.00 feet, thence; 2) South 65° 07' 30" East 592.46 feet to the U.S. Government Pier and Bulkhead Line, Passaic River, thence; 3) South 17° 18' West along said line 25.23 feet, thence; 4) North 65° 07' 30" West along the southwesterly line of Lot 35A and Lot 35 in Block 5070, 595.78 feet to the southeasterly line of Doremus Avenue, and the point of beginning; it being expressly understood and agreed, however, that the said Grantee, for itself and its successors and assigns, by the acceptance and recordation of this deed, covenants and agrees that it will not erect or permit to be erected any permanent structures on or over said 25 feet wide strip.

TOGETHER with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in any wise appertaining and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, property, claim and demand whatsoever of it, the said Grantor as well at law as in equity or otherwise howsoever of, in and to the same and every part thereof, SUBJECT and RESERVING as aforesaid.

TO HAVE AND TO HOLD, all and singular the said premises together with the appurtenances, unto the ~~Grantee, the~~ heirs or successors and assigns of the Grantee, forever, SUBJECT and RESERVING as aforesaid.

THIS INSTRUMENT is executed, delivered and accepted upon the understanding and agreement:

(1) that the said Grantee shall not have or assert to have any claim or demand whatsoever for compensation for damages, whether said damages be direct or consequential, to the land hereinbefore described or to any buildings or improvements now or hereafter erected thereon, or to the contents thereof, which may be caused by the operation, maintenance, repair or renewal of Grantor's railroad or which may be caused by vibration resulting from the operation, maintenance, repair or renewal thereof; and the said Grantee hereby expressly releases the said Grantor from liability for any such damages;

(2) that in the event the tracks of the railroad of Grantor are elevated or depressed, or the grades of any streets, avenues, roads, lanes, highways or alleys over said railroad in the vicinity of the land hereinbefore described are changed so that they shall pass overhead or underneath the said tracks and railroad, or in the event any grade crossing is vacated and closed, the said Grantee, as owner of the land hereinbefore described, shall not ask, demand, recover or receive any compensation whatsoever for any damage of whatsoever nature caused by or in any manner growing out of the separation or change of grades of said railroad and/or said streets, avenues, roads, lanes, highways or alleys or out of the vacation and closing of any grade crossing;

(3) that a right or means of ingress, egress or passageway to or from the land hereinbefore described is not hereby granted, specifically or by implication, and that the said Grantor shall not and will not be liable or obliged to obtain for the said Grantee such means of ingress, egress or passageway and also that the said Grantee WILL obtain a means of access to and from the said land at Grantee's own cost and expense;

(4) that should a claim adverse to the title hereby quitclaimed be asserted and/or proved, no recourse shall be had against the Grantor herein.

THE words "Grantor" and "Grantee" used herein shall be construed as if they read "Grantors" and "Grantees", respectively, whenever the sense of this Instrument so requires and whether singular or plural, such words shall be deemed to include in all cases the heirs or successors and assigns of the respective parties.

IN WITNESS WHEREOF, the Grantor has caused this Indenture

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THIS DEED made the 24 day of APRIL

to be signed in its name and behalf by its Assistant Vice President-Real Estate duly authorized thereunto and has caused its corporate seal to be hereunto affixed and attested by its Assistant Secretary, the day and year first above written.

SEALED and DELIVERED
in the presence of us:

George R. Stevenson

Julius P. Alzeurt

CONSOLIDATED RAIL CORPORATION
BY:

Lawrence A. Huff, Assistant
Vice President-Real Estate

ATTEST:

J. D. McGEHAN
Assistant Secretary

COMMONWEALTH OF PENNSYLVANIA)
: SS
COUNTY OF PHILADELPHIA)

BE IT REMEMBERED, that on this 24TH day of APRIL in the year one thousand nine hundred and eighty-three (1983), before me, the subscriber, a Notary Public for the Commonwealth and County aforesaid, personally appeared Lawrence A. Huff, Assistant Vice President-Real Estate of CONSOLIDATED RAIL CORPORATION, the corporate Grantor named in the within Instrument, who I am satisfied is the person who has signed the within Instrument on behalf of said Corporation; and I having first made known to him the contents thereof, he did acknowledge that he signed, sealed and delivered the same as such officer aforesaid; that the foregoing Instrument is the voluntary act and deed of said Corporation, made by virtue of authority from its Board of Directors; and that the full and actual consideration paid or to be paid for the transfer of title to realty evidenced by the within Instrument as such consideration is defined in P.L. 1968, C. 49, Sec. 1(c), is Ninety Five Thousand Dollars ($95,000.00).

Joseph L. Keeley
Notary Public

JOSEPH L. KEELEY

appurtenances thereto [illegible] at the extreme westerly end of the premises hereby [illegible] on other property of the Grantor on the westerly side of Doremus Avenue, together with ground/occupational easements on Grantor's property to support said structures.

THIS instrument prepared by George R. Stevenson, Consolidated Rail Corporation, Ninth Floor, 1528 Walnut Street, Philadelphia, Pennsylvania 19102 George R. Stevenson.

847520028

QUESTION 2.A)

State of New Jersey
Department of Environmental Protection and Energy
Environmental Regulation
Hazardous Waste Regulation Program
CN 421
Trenton, NJ 08625-0421
Phone# 609-633-1418

Scott A. Weiner
Commissioner

Frank Coolick
Administrator

APR 16 1993

John Vassiliades
Plant Manager
Elan Chemical Corp.
268 Doremus Ave.
Newark, NJ 07105

RE: Accumulation of Hazardous Waste for Ninety (90) Days or Less in a Proposed Aboveground Tank, Elan Chemical Corp., Newark, N.J., EPA ID No. NJD 042 895 680, TS-93-1.

Dear Mr. Vassiliades:

The Bureau of Hazardous Waste Engineering (Bureau) has reviewed the submittal dated January 2, 1993 and additional information dated April 13, 1993, made on your behalf by Macdel Inc., concerning accumulation of hazardous waste for ninety (90) days or less in a proposed ten thousand (10,000) gallon aboveground, vertical, carbon steel tank (Tank). The Bureau has found the submittal to be in compliance with N.J.A.C. 7:26-9.3(b). Therefore, the Bureau hereby approves accumulation of hazardous waste in the Tank for ninety (90) days or less provided the following conditions are maintained:

1. The Tank shall have sufficient shell thickness to prevent rupture or collapse. Shell thickness shall be maintained at a minimum of 0.167 inch (shell), 0.240 inch (bottom) and 0.123 inch (top). If the shell thickness becomes less than required, the facility shall immediately notify the Bureau and discontinue use;

2. The controls to prevent overfilling shall be maintained in accordance with N.J.A.C. 7:26-10.5(c);

3. The Tank secondary containment shall be maintained as specified in the aforementioned submittal and shall meet all the requirements specified under N.J.A.C. 7:26-10.5(d);

4. The Tank shall be maintained so that at least ninety nine (99) percent of the volume of the tank can be emptied by direct pumping or drainage;

5. The Tank is rendered empty every ninety (90) days or less as defined by N.J.A.C. 7:26-1.4;

6. All waste removed from the Tank shall be shipped off-site to an authorized facility as defined in N.J.A.C. 7:26-1.4;

7. Elan Chemical Corp. shall comply with the requirements for owners or operators of hazardous waste facilities under N.J.A.C. 7:26-9.4(g), 9.6 and 9.7 concerning personnel training, preparedness and prevention, contingency plans, and emergency procedures;

8. The Tank shall be clearly labeled or marked with the words "Hazardous Waste"; and

9. Elan Chemical Corp. shall notify the Bureau after the installation of the Tank has been completed, at least thirty (30) days prior to bringing the Tank on line for an inspection by the Bureau.

If you have any questions concerning this matter, please call Mr. Yefim Kantor of my staff at (609) 292-9880.

Very truly yours,

Thomas Sherman, Chief
Bureau of Hazardous Waste Engineering

EP11/cfd
c: Peter T. Lynch, P.E., Chief, MBW&HWEFO

Kevin C. Reilly, P.E.
Project Engineer
Macdel Inc.
One Harmon Meadow Boulevard
Secaucus, NJ 07094

DOCUMENT: ECC
FOLDER: CFDMOB

State of New Jersey
Department of Environmental Protection and Energy
Environmental Regulation
Hazardous Waste Regulation Program
CN 421
Trenton, NJ 08625-0421
Phone# 609-633-1418

Scott A. Weiner
Commissioner

Frank Coolick
Administrator

JUL 09 1993

John Vassiliades
Plant Manager
Elan Chemical Corp.
268 Doremus Ave.
Newark, NJ 07105

RE: Accumulation of Hazardous Waste for Ninety (90) Days or Less in a Proposed Aboveground Tank, Elan Chemical Corp., Newark, N.J., EPA ID No. NJD 042 895 680, TS-93-1

Dear Mr. Vassiliades:

The Bureau of Hazardous Waste Engineering (the Bureau) acknowledges receipt of the letter dated June 8, 1993, made on your behalf by Macdel Engineering, P.C., stating that the construction of the new aboveground hazardous waste tank has been completed in accordance with the design submitted to the Bureau on January 13, 1993. The Bureau approved the construction of the tank by a letter dated April 16, 1993.

Based on the above letter and the inspection of the tank conducted by Yefim Kantor of the Bureau on July 8, 1993, the Bureau hereby approves the operation of the tank in accordance with the conditions outlined in the Bureau's letter dated April 16, 1993.

If you have any questions, please contact Yefim Kantor of my staff at (609) 292-9880.

Very truly yours,

Thomas Sherman, Chief
Bureau of Hazardous Waste Engineering

EP11/cfd
cc: Peter T. Lynch, P.E., Chief, MBW&HWEFO

Kevin C. Reilly, P.E.
Project Engineer
Macdel Engineering, P.C.
One Harmon Meadow Boulevard
Secaucus, NJ 07094

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QUESTION 2.B)

847520033

RONALD W. GIACONIA
CHAIRMAN

JAMES KRONE
VICE CHAIRMAN

DANIEL F. BECHT
ROBERT M. BURKE, JR.
THOMAS J. CIFELLI
DOMINIC W. CUCCINELLO
RAYMOND LUCHKO
FRANK ORECHIO
DONALD TUCKER
COMMISSIONERS

Passaic Valley
Sewerage Commissioners

600 WILSON AVENUE
NEWARK, N.J. 07105
(201) 344-1800
Fax: (201) 344-2951

CARMINE T. PERRAPATO
EXECUTIVE DIRECTOR

ROBERT J. DAVENPORT
DEPUTY EXECUTIVE DIRECTOR

GABRIEL M. AMBROSIO
CHIEF COUNSEL

LOUIS LANZILLO
CLERK

September 23, 1993

Elan Chemical Company
268 Doremus Avenue
Newark, New Jersey 07105

Certified Mail
P 093 844 677

Attn: Karol Sulimirski

RE: REVISIONS TO SEWER CONNECTION PERMIT

Dear Mr. Sulimirski:

Enclosed are the revisions to your Industrial Sewer Connection Permit. Please review and attach these changes to your existing Permit accordingly.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

Frank P. D'Ascensio,
Manager of Industrial & Pollution Control

FPD/mc

Enclosures

cc: City of Newark

847520034

PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION PERMIT

PERMIT # 20403242

(Please use the Permit Number on any correspondence with PVSC)
In compliance with the provisions of the Federal Water Pollution Control Act, its amendments, the Clean Water Act and the Rules and Regulations of the Passaic Valley Sewerage Commissioners:

Elan Chemical Company

(herein, after referred to as the Permittee)

is authorized to discharge from a facility located at

268 Doremus Avenue

Newark, New Jersey 07105

to the Passaic Valley Sewerage Commissioners Treatment Works in accordance with discharge limitations, monitoring requirements and other conditions set forth herein.

EFFECTIVE DATE 04/14/91

EXPIRATION DATE 04/14/96

PASSAIC VALLEY SEWERAGE COMMISSIONERS

BY: _____
EXECUTIVE DIRECTOR

847520035

ADDITIONAL REQUIREMENTS SECTION C2 CONTINUED:

			REGULATION CONCENTRATIONS		PERMIT LIMITS		SAMPLE TYPE
	EFFLUENT	VOLUME*	LIMITS ug/l		MASS LIMITS g/day		GRAB/
#	CHARACTERISTICS	MGD	AVG	MAX	AVG	MAX	COMPOSITE
1	Benzene	0.135024	57	134	29.13075	68.48282	GRAB
2	Carbon Tetrachloride	0.135024	142	380	72.57135	194.20502	GRAB
3	Chlorobenzene	0.135024	142	380	72.57135	194.20502	GRAB
4	1,2,4,-Trichlorobenzene	0.135024	196	794	100.16890	405.78628	COMPOSITE
5	Hexachlorobenzene	0.135024	196	794	100.16890	405.78628	COMPOSITE
6	1,2-Dichloroethane	0.135024	180	574	91.99185	293.35179	GRAB
7	1,1,1-Trichloroethane	0.135024	22	59	11.24345	30.15288	GRAB
8	Hexachloroethane	0.135024	196	794	100.16890	405.78628	COMPOSITE
9	1,1-Dichloroethane	0.135024	22	59	11.24345	30.15288	GRAB
10	1,1,2-Trichloroethane	0.135024	32	127	16.35411	64.90536	GRAB
11	Chloroethane	0.135024	110	295	56.21724	150.76442	GRAB
12	Chloroform	0.135024	111	325	56.72831	166.09640	GRAB
13	1,2-Dichlorobenzene	0.135024	196	794	100.16890	405.78628	COMPOSITE
14	1,3-Dichlorobenzene	0.135024	142	380	72.57135	194.20502	COMPOSITE
15	1,4-Dichlorobenzene	0.135024	142	380	72.57135	194.20502	COMPOSITE
16	1,1-Dichloroethylene	0.135024	22	60	11.24345	30.66395	GRAB
17	1,2-Trans-Dichloroethylene	0.135024	25	66	12.77665	33.73035	GRAB
18	1,2-Dichloropropane	0.135024	196	794	100.16890	405.78628	GRAB
19	1,3-Dichloropropylene	0.135024	196	794	100.16890	405.78628	GRAB
20	Ethylbenzene	0.135024	142	380	72.57135	194.20502	GRAB
21	Methlyene Chloride	0.135024	36	170	18.39837	86.88119	GRAB
22	Methyl Chloride (Chloromethane)	0.135024	110	295	56.21724	150.76442	GRAB
23	Hexachlorobutadiene	0.135024	142	380	72.57135	194.20502	COMPOSITE
24	Nitrobenzene	0.135024	2237	6402	1143.25428	3271.84351	COMPOSITE
25	2-Nitrophenol	0.135024	65	231	33.21928	118.05621	COMPOSITE
26	4-Nitrophenol	0.135024	162	576	82.79267	294.37392	COMPOSITE
27	4,6-Dinitro-O-Cresol	0.135024	78	277	39.86314	141.56524	COMPOSITE
28	Tetrachloroethylene	0.135024	52	164	26.57542	83.81480	GRAB
29	Toluene	0.135024	28	74	14.30984	37.81887	GRAB
30	Trichloroethylene	0.135024	26	69	13.28771	35.26354	GRAB
31	Vinyl Chloride	0.135024	97	172	49.57339	87.90332	GRAB
32	Total Cyanide	0.135024	420	1200	214.64765	613.27901	GRAB
33	Total Lead	0.135024	320	690	163.54107	352.63543	COMPOSITE
34	Total Zinc	0.135024	1050	2610	536.61913	1333.88184	COMPOSITE

***REGULATED VOLUME = GPD DURING 07/01/90 TO 06/30/91 PRODUCTION YEAR.**

 # OF PRODUCTION DAYS = 228

MASS LIMITS (g/DAY, #/DAY, Kg/DAY, ETC.) = COLUMN C X COLUMN D or E X CONVERSION FACTOR(S).

COLUMN C = VOLUME

COLUMN D = AVERAGE REGULATED CONCENTRATION.

COLUMN E = MAXIMUM REGULATED CONCENTRATION.

Rev: 09/93

DONALD TUCKER
CHAIRMAN

RAYMOND LUCHKO
VICE CHAIRMAN

ART M. BURKE JR.
THOMAS J. CIFELLI
JAMES KRONE
FRANK ORECHIO
COMMISSIONERS

Passaic Valley
Sewerage Commissioners

600 WILSON AVENUE
NEWARK, N.J. 07105
(201) 344-1800
Fax: (201) 344-2951

CARMINE T. PERRAPATO
EXECUTIVE DIRECTOR

ROBERT J. DAVENPORT
DEPUTY EXECUTIVE DIRECTOR

GABRIEL M. AMBROSIO
CHIEF COUNSEL

April 15, 1991

Elan Chemical Company
268 Doremus Avenue
Newark, New Jersey 07105

Attn: Karol Sulimirski

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P836 451 609

RE: SEWER CONNECTION PERMIT

Dear Mr. Sulimirski:

Enclosed you will find your Sewer Connection Permit for discharge into the Passaic Valley Sewerage Commissioners system.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

Frank P. D'Ascensio

Frank P. D'Ascensio,
Manager of Industrial & Pollution Control

FPD/mc

Enclosure

cc: City of Newark

847520037

PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION PERMIT

PERMIT # 20403242

(Please use the Permit Number on any correspondence with PVSC)
In compliance with the provisions of the Federal Water Pollution Control Act, its amendments, the Clean Water Act and the Rules and Regulations of the Passaic Valley Sewerage Commissioners:

Elan Chemical Company

(herein, after referred to as the Permittee)

is authorized to discharge from a facility located at

268 Doremus Avenue

Newark, New Jersey 07105

to the Passaic Valley Sewerage Commissioners Treatment Works in accordance with discharge limitations, monitoring requirements and other conditions set forth herein.

EFFECTIVE DATE 04/14/91

EXPIRATION DATE 04/14/96

PASSAIC VALLEY SEWERAGE COMMISSIONERS

BY: _____
EXECUTIVE DIRECTOR

847520038

CONDITIONS

A. GENERAL PROHIBITIONS

1. No person shall discharge or deposit or cause or allow to be discharged or deposited into the treatment works or public sewer any waste which contains the following:

   a. **EXPLOSIVE MIXTURES**

   Pollutants which create a fire or explosion hazard to the treatment works, collection system or to the operation of the system. Prohibited materials include, but are not limited to, gasoline, kerosene, naphta, benzene, toluene, xylene, ethers, etc.

   b. **CORROSIVE WASTES**

   Any waste which will cause corrosion or deterioration of the treatment works. All wastes must have a pH not less than 5. Unless otherwise stated in the Sewer Connection Permit, all waste shall have a pH not more than 10.5 . Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride or flouride compounds, etc.

   c. **SOLID OR VISCOUS WASTES**

   Solid or viscous wastes which would cause obstruction to the flow in a sewer, or otherwise interfere with the proper operation of the treatment works. Prohibited materials include, but are not limited to, uncomminuted garbage, bones, hides or fleshings, cinders, sand, stove or marble dust, glass, etc.

   d. **OILS AND GREASE**

   (1) any industrial wastes containing floatable fats, wax, grease or oils.

   (2) any industrial wastes containing more than 100 mg/l of petroleum hydrocarbons.

   e. **NOXIOUS MATERIAL**

   Noxious or malodorous solids, liquids or gases, which, either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to prevent entry into a sewer for its maintenance and repair.

   f. **RADIOACTIVE WASTES**

   Radioactive wastes or isotopes of such half life or concentration that they do not comply with regulations or orders issued by the appropriate authority having control over their use and which will, or may cause damage or hazards to the treatment works or personnel operating the system.

g. **EXCESSIVE DISCHARGE RATE**

Industrial wastes discharged in a slug of such volume or strength so as to cause a treatment process upset and subsequent loss of treatment efficiency.

h. **HEAT**

(1) any discharge in excess of 150^0 F (65^0C)

(2) Heat in amounts which would inhibit biological activity in the PVSC treatment works resulting in a treatment process upset and subsequent loss of treatment efficiency, but in no case shall heat be introduced into the PVSC treatment works in such quantities that the temperature of the influent waters at the treatment plant exceed 40^0C (104^0F).

i. **UNPOLLUTED WATERS**

Any unpolluted water including, but not limited to, cooling water or uncontaminated storm water, which will increase the hydraulic load on the treatment system, except as approved by PVSC.

j. **WATER**

Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limits.

2. No person shall discharge or convey, or permit to be discharged or conveyed, to the treatment works any wastes containing pollutants of such character or quantity that will:

a. Not be susceptible to treatment or interfere with the process or efficiency of the treatment system.

b. Violate pretreatment standards. As pretreatment standards for toxic or other hazardous pollutants are promulgated by USEPA for a given industrial category, all industrial users within that category must immediately conform to the USEPA timetable as well as any numeric limitations imposed by USEPA. In addition, an industrial user shall comply with any more stringent standards as determined by PVSC or other agency.

c. Cause the PVSC treatment plant to violate its NJPDES permit, applicable receiving water standards, permit regulating sludge which is produced during treatment or any other permit issued to PVSC.

B. **INSTALLATION OF SAMPLERS**

The permittee shall install a 24 hour composite sampler on Outlet #1 acceptable to PVSC with attachments for affixing seals,

which shall be maintained in proper working order at all times. The installed samplers shall draw a sample, over each operating day, which shall be representative of plant waste.

A one quart or one liter aliquot shall be set aside by (9:00 am Outlet #1 **) each operating day and refrigerated. A PVSC representative may pick up this sample during the day. Any sample not picked up by PVSC may be discarded at the end of that day.**

Permittee shall insure that the sample is maintained between 1^0C-4^0C during and after sample collection.

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is authorized to discharge from outlet(s) number(ed) (20403241-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from flowmeter readings.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
		DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXX	XXXXX	Twice/Month	24 hr. comp.	Quarterly
TSS (0530)	XXXXX	XXXXX	Twice/Month	24 hr. comp.	Quarterly
pH (9000)	XXXXX	5 to 10.5	Continuous	Recorder	*
LEL **	XXXXX	XXXXX	Continuous	Recorder	*
Volume	XXXXX	XXXXX	XXXXX	XXXXX	Quarterly

* Permittee to store pH and LEL Recorder Charts and have available for review by PVSC personnel on demand.

** Regulated as defined in Appendix B, Pretreatment Limitation #2 of PVSC Rules and Regulations.

847520042

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is authorized to discharge from outlet(s) number(ed) (20403242-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from water consumption data. Outlet to have separate water consumption meters. Domestic waste only to be discharged from this outlet.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
			MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXX	XXXXX	N/A *	N/A	XXXXX
TSS (0530)	XXXXX	XXXXX	N/A *	N/A	XXXXX
Volume	XXXXX	XXXXX	XXXXX	XXXXX	Quarterly

* Concentration for User Charge to be determined from Residential Strength Standards.

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is authorized to discharge from outlet(s) numbered (20403241-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from flowmeter readings. Permittee to submit volume in accordance with PVSC Pretreatment Discharge Monitoring Report Form MR-1.

40 CFR 414.85, Subpart H.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	All units are in Micrograms per liter		Measurement Frequency	Sample Type	Reporting Period
	DAILY MAX.	MONTHLY AVG.			
VOLUME	XXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXX	Semi-Annually
(a)	(a)	(a)	Twice/Year	(a)	Semi-Annually

(a) See Page 9 of 15, Section 2 C of this Permit for Effluent Characteristics, Daily and Monthly Discharge Limitations, and Sample Type.

84752044

Clan Chemical 20403242

2. In addition to the monitoring required in Section C.1. the Permittee is required to meet the following schedule of compliance:

A. Analysis of wastewater parameters shall be performed by a laboratory that has been certified by the State of New Jersey.

B. Pretreatment Compliance Requirements - Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.

Permittee to be in compliance with Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.85 Subpart H.

07/21/91 First Periodic Compliance Monitoring Report due. Permittee to submit a Periodic Compliance Monitoring Report Semi-Annually January 21 and July 21 in accordance with General Pretreatment Regulations 40 CFR 403.12 section (e).

ADDITIONAL REQUIREMENTS SECTION C2 CONTINUED:

C. Effluent Characteristics	Maximum for any one day	Maximum for monthly average	Sample Type
Benzene	134	57	Grab
Carbon Tetrachloride	380	142	Grab
Chlorobenzene	380	142	Grab
1,2,4-Trichlorobenzene	794	196	Composite
Hexachlorobenzene	794	196	Composite
1,2-Dichloroethane	574	180	Grab
1,1,1-Trichloroethane	59	22	Grab
Hexachloroethane	794	196	Composite
1,1-Dichloroethane	59	22	Grab
1,1,2-Trichloroethane	127	32	Grab
Chloroethane	295	110	Grab
Chloroform	325	111	Grab
1,2-Dichlorobenzene	794	196	Composite
1,3-Dichlorobenzene	380	142	Composite
1,4-Dichlorobenzene	380	142	Composite
1,1-Dichloroethylene	60	22	Grab
1,2-Trans-Dichloroethylene	66	25	Grab
1,2-Dichloropropane	794	196	Grab
1,3-Dichloropropylene	794	196	Grab
Ethylbenzene	380	142	Grab
Methylene Chloride	170	36	Grab
Methyl Chloride	295	110	Grab
Hexachlorobutadiene	380	142	Composite
Nitrobenzene	6402	2237	Composite
2-Nitrophenol	231	65	Composite
4-Nitrophenol	576	162	Composite
4,6-Dinitro-O-Cresol	277	78	Composite
Tetrachloroethylene	164	52	Grab
Toluene	74	28	Grab
Trichloroethylene	69	26	Grab
Vinyl Chloride	172	97	Grab
Total Cyanide	1200	420	Grab
Total Lead	690	320	Composite
Total Zinc	2610	1050	Composite

D. MONITORING AND REPORTING

1. USER CHARGE

Monitoring results obtained during the previous 3 months shall be reported on Discharge Monitoring Report Form MR-2. Reports are due January 21, April 21, July 21, October 21. The first report is due on (*). If an Industrial user fails to submit Form MR-2 on a timely basis, the Executive Director shall estimate the use for the period. The estimates may be made 30 days after the due date of the report, except for the fourth quarter where the estimates may be made after October 21.

2. PRETREATMENT

Monitoring results shall be reported on Discharge Monitoring Report Form, MR-1 Semi-Annually. Reports are due January 21 and July 21.

3. REPORTS

Properly signed reports required herein shall be submitted to PVSC at the following address:

PASSAIC VALLEY SEWERAGE COMMISSIONERS
INDUSTRIAL WASTE CONTROL DEPARTMENT
600 Wilson Avenue
Newark, NJ 07105

4. TEST PROCEDURES

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Test procedures for the analysis of pollutants shall conform to regulations contained in the PVSC Rules and Regulations, Federal, State and local laws or regulations.

5. RECORDING OF RESULTS

For each measurement of a sample taken pursuant to the requirements of this permit, the permittee shall maintain a record of the following information:

a. The date, exact place and time of sampling;
b. The dates the analyses were performed;
c. The person (s) who performed the analysis;
d. The analytical techniques or methods used;
e. The results of all required analyses.

* Permittee has been required to submit Monitoring Reports MR-2 to PVSC since 07/15/81.

6. **ADDITIONAL MONITORING BY PERMITTEE**

If the permittee monitors any pollutant at the location (s) designated herein more frequently than required by this permit, using the approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Forms (PVSC Form MR-1 or MR-2). Such increased frequency shall also be indicated.

7. **RECORDS RETENTION**

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of (5) years.

8. **DEFINITIONS**

a. The "30 day average" discharge means the average of daily values for 30 consecutive monitoring days. For the purpose of enforcement of Pretreatment Standards, consecutive samples taken and analyzed shall be considered as being taken on consecutive days even though one or more non-sampling days intervene. In applying the Pretreatment Standards where more than one but less than 30 samples have been taken and analyzed during any month, a formula, specified by USEPA, will be used to calculate the "30 day average".

b. The "daily maximum" discharge means the highest discharge by weight or other appropriate units, as specified herein, during any calendar day.

c. "Daily" - each operating day.

d. "Weekly" - one day each week during a normal operating day.

e. "Monthly" - one day each month during a normal operating day.

f. "Composite" - a combination of individual samples obtained at regular intervals over the entire discharge day.

The volume of each sample shall be proportional to the discharge flow rate unless specifically modified by PVSC. For a 24 hour continuous discharge, a minimum of 24 individual samples shall be collected at equal intervals and at least once per hour. For continuous discharges of less than 12 hours, individual samples shall be taken at least once every 30 minutes. For discharges which are not continuous, individual samples shall be taken such that they will be representative of plant waste.

g. "Grab" - an individual sample collected in less than 15 minutes.

h. "Quarterly" - every three (3) months.

i. "N/A" - not applicable.

E. MANAGEMENT REQUIREMENTS

1. CHANGE IN DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or modification which will result in new, different, or increased discharges of pollutants must be reported by submission of a new PVSC Sewer Connection Application or, if such changes will not violate the effluent limitations specified in this permit, by notices to PVSC of such changes. Following such notices, the permit may be modified to specify and limit any pollutants not previously limited.

2. NONCOMPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall notify PVSC within 24 hours of the occurrence.

If this report is made orally, a written report containing the following information, shall be submitted within five (5) working days:

a. A description of the discharge and the cause of the period of noncompliance;

b. The period of noncompliance, including exact dates and times, or, if not corrected, the anticipated time the noncompliance is expected to continue, and

c. The steps being taken to reduce, eliminate and prevent a recurrence of the noncomplying discharge.

3. **FACILITIES OPERATION**

The permittee shall at all times maintain in good working order and operate as efficiently as possible all pretreatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. **ADVERSE IMPACT**

The permittee shall take all reasonable steps to minimize any adverse impact to the PVSC Treatment Works resulting from noncompliance with any pretreatment limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. This condition in no way affects PVSC's right to suspend a permit in order to stop a discharge which presents an imminent or substantial hazard to the public health, safety or welfare to the local environment or which interferes with the operation of the PVSC Treatment Works.

5. **REMOVED SUBSTANCES**

Solids, sludges, filter backwash or other pollutants or hazardous waste removed in the course of pretreatment or control of wastewaters and/or the treatment of intake waters shall be disposed of in accordance with applicable Federal, State and local laws and regulations. Records documenting such disposal shall be made available to PVSC for review upon request.

F. MANAGEMENT RESPONSIBILITIES

1. RIGHT OF ENTRY

The permittee shall allow the authorized representatives of PVSC, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring methods required in this permit; and to sample any discharge of pollutants.

2. TRANSFER OF OWNERSHIP OR CONTROL

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall, in writing, notify the succeeding owner or controller of the existence of this permit, and the need to apply for a new permit, a copy of which shall be forwarded to PVSC.

3. PERMIT MODIFICATION

After notice and opportunity for a hearing, this permit may be modified, or revoked in whole or in part during its terms for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

4. **TOXIC POLLUTANTS**

Notwithstanding (Section C), above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition), is established under Section 307 (b) of the Federal Water Pollution Control Act (the Act), its amendments, or any other subsequent law or regulation, for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

5. **CIVIL AND CRIMINAL LIABILITY**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

6. **STATE LAWS**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State Law or regulation under authority preserved by Section 510, of the Federal Water Pollution Control Act. (The Act)

7. **PROPERTY RIGHTS**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. **SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances , is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION PERMIT

PERMIT # 20403242

(Please use the Permit Number on any correspondence with PVSC)
In compliance with the provisions of the Federal Water Pollution Control Act, its amendments, the Clean Water Act and the Rules and Regulations of the Passaic Valley Sewerage Commissioners:

Elan Chemical Company

(herein, after referred to as the Permittee)

is authorized to discharge from a facility located at

268 Doremus Avenue

Newark, New Jersey 07105

to the Passaic Valley Sewerage Commissioners Treatment Works in accordance with discharge limitations, monitoring requirements and other conditions set forth herein.

EFFECTIVE DATE 04/14/86

EXPIRATION DATE 04/14/91

PASSAIC VALLEY SEWERAGE COMMISSIONERS

BY: _____
EXECUTIVE DIRECTOR

Rev:6/90

847520053

CONDITIONS

A. GENERAL PROHIBITIONS

1. No person shall discharge or deposit or cause or allow to be discharged or deposited into the treatment works or public sewer any waste which contains the following:

   a. **EXPLOSIVE MIXTURES**

   Pollutants which create a fire or explosion hazard to the treatment works, collection system or to the operation of the system. Prohibited materials include, but are not limited to, gasoline, kerosene, naphta, benzene, toluene, xylene, ethers, etc.

   b. **CORROSIVE WASTES**

   Any waste which will cause corrosion or deterioration of the treatment works. All wastes must have a pH not less than 5. Unless otherwise stated in the Sewer Connection Permit, all waste shall have a pH not more than 10.5 . Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride or flouride compounds, etc.

   c. **SOLID OR VISCOUS WASTES**

   Solid or viscous wastes which would cause obstruction to the flow in a sewer, or otherwise interfere with the proper operation of the treatment works. Prohibited materials include, but are not limited to, uncomminuted garbage, bones, hides or fleshings, cinders, sand, stove or marble dust, glass, etc.

   d. **OILS AND GREASE**

   (1) any industrial wastes containing floatable fats, wax, grease or oils.

   (2) any industrial wastes containing more than 100 mg/l of petroleum hydrocarbons.

   e. **NOXIOUS MATERIAL**

   Noxious or malodorous solids, liquids or gases, which, either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to prevent entry into a sewer for its maintenance and repair.

   f. **RADIOACTIVE WASTES**

   Radioactive wastes or isotopes of such half life or concentration that they do not comply with regulations or orders issued by the appropriate authority having control over their use and which will, or may cause damage or hazards to the treatment works or personnel operating the system.

g. **EXCESSIVE DISCHARGE RATE**

Industrial wastes discharged in a slug of such volume or strength so as to cause a treatment process upset and subsequent loss of treatment efficiency.

h. **HEAT**

(1) any discharge in excess of 150^0 F (65^0C)

(2) Heat in amounts which would inhibit biological activity in the PVSC treatment works resulting in a treatment process upset and subsequent loss of treatment efficiency, but in no case shall heat be introduced into the PVSC treatment works in such quantities that the temperature of the influent waters at the treatment plant exceed 40^0C (104^0F).

i. **UNPOLLUTED WATERS**

Any unpolluted water including, but not limited to, cooling water or uncontaminated storm water, which will increase the hydraulic load on the treatment system, except as approved by PVSC.

j. **WATER**

Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limits.

2. No person shall discharge or convey, or permit to be discharged or conveyed, to the treatment works any wastes containing pollutants of such character or quantity that will:

a. Not be susceptible to treatment or interfere with the process or efficiency of the treatment system.

b. Violate pretreatment standards. As pretreatment standards for toxic or other hazardous pollutants are promulgated by USEPA for a given industrial category, all industrial users within that category must immediately conform to the USEPA timetable as well as any numeric limitations imposed by USEPA. In addition, an industrial user shall comply with any more stringent standards as determined by PVSC or other agency.

c. Cause the PVSC treatment plant to violate its NJPDES permit, applicable receiving water standards, permit regulating sludge which is produced during treatment or any other permit issued to PVSC.

B. **INSTALLATION OF SAMPLERS**

The permittee shall install a 24 hour composite sampler on Outlet #1 acceptable to PVSC with attachments for affixing seals,

which shall be maintained in proper working order at all times. The installed samplers shall draw a sample, over each operating day, which shall be representative of plant waste.

A one quart or one liter aliquot shall be set aside by (9:00am Outlet #1 **) each operating day and refrigerated. A PVSC representative may pick up this sample during the day. Any sample not picked up by PVSC may be discarded at the end of that day.**

Permittee shall insure that the sample is maintained between 1^0C-4^0C during and after sample collection.

Rev:6/90

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (04/14/86) and lasting through (04/14/91) the permittee is authorized to discharge from outlet(s) number(ed) (20403241-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from flowmeter readings.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	DAILY MAX		MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXXX	XXXXXX	Monthly	24 hr. comp.	Quarterly
TSS (0530)	XXXXXX	XXXXXX	Monthly	24 hr. comp.	Quarterly
Volume	XXXXXX	XXXXXX	XXXXXX	XXXXX	Quarterly
pH(9000)	XXXXXX	5 to 10.5	Continuous	Recorder	*
LEL	XXXXXX	40%	Continuous	Recorder	*

* Permittee to store pH and LEL recorder charts and have available for review by PVSC personnel on demand.

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (04/14/86) and lasting through (04/14/91) the permittee is authorized to discharge from outlet(s) number(ed) (20403242-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from water consumption data. Outlet to have separate water consumption meters. Domestic waste only to be discharged from this outlet.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	DAILY MAX		MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXXX	XXXXX	N/A*	N/A	XXXXXXX
TSS (0530)	XXXXXX	XXXXX	N/A*	N/A	XXXXXXX
Volume	XXXXXX	XXXXXX	XXXXXX	XXXXXXXX	Quarterly

* Concentration for User Charge to be determined from Residential Strength Standards.

C. **EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS**

1. During the period beginning (11/05/90) and lasting through (04/14/91) the permittee is authorized to discharge from outlet(s) numbered (20403241-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from flowmeter readings. Permittee to submit volume in accordance with PVSC Pretreatment Monitoring Report Form MR-1.

40 CFR 414.85, Subpart H

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	All units are in Micrograms per liter		Measurement Frequency	Sample Type	Reporting Period
	DAILY MAX.	MONTHLY AVG.			
VOLUME	XXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXXXXX	XXXXXXXXXXXX	Semi-Annually
(a)	(a)	(a)	Twice/Year	(a)	Semi-Annually

(a) See Page 9 of 15, Section 2 D of this Permit for Effluent Characteristics, Daily and Monthly Discharge Limitations, and Sample Type.

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2. In addition to the monitoring required in Section C.1. the Permittee is required to meet the following schedule of compliance:

   A. 4/15/86 Permittee to install (2) water meters on (2) sanitary discharges.
   4/15/86 Permittee to have Marsh McBirney effluent discharge meter recalibrated.

   B. Analysis of wastewater parameters shall be performed by a laboratory that has been certified by the State of New Jersey.

   C. Pretreatment Compliance Requirements - Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.

   11/05/90 Permittee to be in compliance with Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.85 Subpart H.

   02/05/91 Permittee to submit a Compliance Report to PVSC demonstrating compliance with Organic Chemicals Pretreatment Standards. The report shall be in accordance with General Pretreatment Regulations 40 CFR 403.12 section (d).

   07/21/91 First Periodic Compliance Monitoring Report due. Permittee to submit a Periodic Compliance Monitoring Report Semi-Annually January 21 and July 21 in accordance with General Pretreatment Regulations 40 CFR 403.12 section (e).

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ADDITIONAL REQUIREMENTS SECTION C2 CONTINUED:

Effluent Characteristics	Maximum for any one day	Maximum for monthly average	Sample Type
	parts per billion		
Benzene	134	57	Grab
Carbon Tetrachloride	380	142	Grab
Chlorobenzene	380	142	Grab
1,2,4-Trichlorobenzene	794	196	Composite
Hexachlorobenzene	794	196	Composite
1,2-Dichloroethane	574	180	Grab
1,1,1-Trichloroethane	59	22	Grab
Hexachloroethane	794	196	Composite
1,1-Dichloroethane	59	22	Grab
1,1,2-Trichloroethane	127	32	Grab
Chloroethane	295	110	Grab
Chloroform	325	111	Grab
1,2-Dichlorobenzene	794	196	Composite
1,3-Dichlorobenzene	380	142	Composite
1,4-Dichlorobenzene	380	142	Composite
1,1-Dichloroethylene	60	22	Grab
1,2-Trans-Dichloroethylene	66	25	Grab
1,2-Dichloropropane	794	196	Grab
1,3-Dichloropropylene	794	196	Grab
Ethylbenzene	380	142	Grab
Methylene Chloride	170	36	Grab
Methyl Chloride	295	110	Grab
Hexachlorobutadiene	380	142	Composite
Nitrobenzene	6402	2237	Composite
2-Nitrophenol	231	65	Composite
4-Nitrophenol	576	162	Composite
4,6-Dinitro-O-Cresol	277	78	Composite
Tetrachloroethylene	164	52	Grab
Toluene	74	28	Grab
Trichloroethylene	69	26	Grab
Vinyl Chloride	172	97	Grab
Total Cyanide	1200	420	Grab
Total Lead	690	320	Composite
Total Zinc	2610	1050	Composite

D. MONITORING AND REPORTING

1. USER CHARGE

Monitoring results obtained during the previous 3 months shall be reported on Discharge Monitoring Report Form MR-2. Reports are due January 21, April 21, July 21, October 21. The first report is due on (*). If an Industrial user fails to submit Form MR-2 on a timely basis, the Executive Director shall estimate the use for the period. The estimates may be made 30 days after the due date of the report, except for the fourth quarter where the estimates may be made after October 21.

2. PRETREATMENT

Monitoring results shall be reported on Discharge Monitoring Report Form, MR-1 Semi-Annually. Reports are due January 21 and July 21.

3. REPORTS

Properly signed reports required herein shall be submitted to PVSC at the following address:

PASSAIC VALLEY SEWERAGE COMMISSIONERS
INDUSTRIAL WASTE CONTROL DEPARTMENT
600 Wilson Avenue
Newark, NJ 07105

4. TEST PROCEDURES

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Test procedures for the analysis of pollutants shall conform to regulations contained in the PVSC Rules and Regulations, Federal, State and local laws or regulations.

5. RECORDING OF RESULTS

For each measurement of a sample taken pursuant to the requirements of this permit, the permittee shall maintain a record of the following information:

a. The date, exact place and time of sampling;
b. The dates the analyses were performed;
c. The person (s) who performed the analysis;
d. The analytical techniques or methods used;
e. The results of all required analyses.

* Permittee has been required to submit Monitoring Reports MR-2 to PVSC since 07/15/81.

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6. **ADDITIONAL MONITORING BY PERMITTEE**

If the permittee monitors any pollutant at the location (s) designated herein more frequently than required by this permit, using the approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Forms (PVSC Form MR-1 or MR-2). Such increased frequency shall also be indicated.

7. **RECORDS RETENTION**

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of (5) years.

8. **DEFINITIONS**

a. The "30 day average" discharge means the average of daily values for 30 consecutive monitoring days. For the purpose of enforcement of Pretreatment Standards, consecutive samples taken and analyzed shall be considered as being taken on consecutive days even though one or more non-sampling days intervene. In applying the Pretreatment Standards where more than one but less than 30 samples have been taken and analyzed during any month, a formula, specified by USEPA, will be used to calculate the "30 day average".

b. The "daily maximum" discharge means the highest discharge by weight or other appropriate units, as specified herein, during any calendar day.

c. "Daily" - each operating day.

d. "Weekly" - one day each week during a normal operating day.

e. "Monthly" - one day each month during a normal operating day.

f. "Composite" - a combination of individual samples obtained at regular intervals over the entire discharge day.

The volume of each sample shall be proportional to the discharge flow rate unless specifically modified by PVSC. For a 24 hour continuous discharge, a minimum of 24 individual samples shall be collected at equal intervals and at least once per hour. For continuous discharges of less than 12 hours, individual samples shall be taken at least once every 30 minutes. For discharges which are not continuous, individual samples shall be taken such that they will be representative of plant waste.

g. "Grab" - an individual sample collected in less than 15 minutes.

h. "Quarterly" - every three (3) months.

i. "N/A" - not applicable.

E. MANAGEMENT REQUIREMENTS

1. CHANGE IN DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or modification which will result in new, different, or increased discharges of pollutants must be reported by submission of a new PVSC Sewer Connection Application or, if such changes will not violate the effluent limitations specified in this permit, by notices to PVSC of such changes. Following such notices, the permit may be modified to specify and limit any pollutants not previously limited.

2. NONCONPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall notify PVSC within 24 hours of the occurrence.

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If this report is made orally, a written report containing the following information, shall be submitted within five (5) working days:

a. A description of the discharge and the cause of the period of noncompliance;

b. The period of noncompliance, including exact dates and times, or, if not corrected, the anticipated time the noncompliance is expected to continue, and

c. The steps being taken to reduce, eliminate and prevent a recurrence of the noncomplying discharge.

3. **FACILITIES OPERATION**

The permittee shall at all times maintain in good working order and operate as efficiently as possible all pretreatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. **ADVERSE IMPACT**

The permittee shall take all reasonable steps to minimize any adverse impact to the PVSC Treatment Works resulting from noncompliance with any pretreatment limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. This condition in no way affects PVSC's right to suspend a permit in order to stop a discharge which presents an imminent or substantial hazard to the public health, safety or welfare to the local environment or which interferes with the operation of the PVSC Treatment Works.

5. **REMOVED SUBSTANCES**

Solids, sludges, filter backwash or other pollutants or hazardous waste removed in the course of pretreatment or control of wastewaters and/or the treatment of intake waters shall be disposed of in accordance with applicable Federal, State and local laws and regulations. Records documenting such disposal shall be made available to PVSC for review upon request.

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F. MANAGEMENT RESPONSIBILITIES

1. RIGHT OF ENTRY

The permittee shall allow the authorized representatives of PVSC, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring methods required in this permit; and to sample any discharge of pollutants.

2. TRANSFER OF OWNERSHIP OR CONTROL

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall, in writing, notify the succeeding owner or controller of the existence of this permit, and the need to apply for a new permit, a copy of which shall be forwarded to PVSC.

3. PERMIT MODIFICATION

After notice and opportunity for a hearing, this permit may be modified, or revoked in whole or in part during its terms for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

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4. **TOXIC POLLUTANTS**

Notwithstanding (Section C), above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition), is established under Section 307 (b) of the Federal Water Pollution Control Act (the Act), its amendments, or any other subsequent law or regulation, for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

5. **CIVIL AND CRIMINAL LIABILITY**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

6. **STATE LAWS**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State Law or regulation under authority preserved by Section 510, of the Federal Water Pollution Control Act. (The Act)

7. **PROPERTY RIGHTS**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. **SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances , is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

847520067

PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION PERMIT

Permit # 20403240

(Please use the Permit Number on any correspondence with PVSC)

In compliance with the provisions of the Federal Water Pollution Control Act, its amendments, the Clean Water Act and the Rules and Regulations of the Passaic Valley Sewerage Commissioners:

ELAN CHEMICAL COMPANY

(herein, after referred to as the Permittee)

is authorized to discharge from a facility located at

268 DOREMUS AVENUE

NEWARK, NJ 07105

to the Passaic Valley Sewerage Commissioners Treatment Works in accordance with discharge limitations, monitoring requirements and other conditions set forth herein.

Effective Date 4/14/81

Expiration Date 4/14/86

PASSAIC VALLEY SEWERAGE COMMISSIONERS

by: _____
Chief Engineer

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CONDITIONS

A. General Prohibitions

(1) No person shall discharge or deposit or cause or allow to be discharged or deposited into the treatment works or public sewer any waste which contains the following:

(A) Explosive Mixtures. Pollutants which create a fire or explosion hazard to the treatment works, collection system or to the operation of the system. Prohibited materials include, but are not limited to, gasoline, kerosine, naphta, benzene, toluene, xylene, ethers, etc.

(B) Corrosive Wastes. Any waste which will cause corrosion or deterioration of the treatment works. All wastes must have a pH not less than 5 nor more than 9. Prohibited materials include, but are not limited to, acids, sulfides, concentrated chloride or fluoride compounds, etc.

(C) Solid or Viscous Wastes. Solid or viscous wastes which would cause obstruction to the flow in a sewer, or otherwise interfere with the proper operation of the treatment works. Prohibited materials include, but are not limited to, uncomminuted garbage, bones, hides or fleshings, cinders, sand, stove or marble dust, glass, etc.

(D) Oils and Grease. (a) Any industrial wastes containing floatable fats, wax, grease or oils. (b) Any industrial wastes containing more than 100 mg/l of emulsified mineral oil or grease.

(E) Noxious Material. Noxious or malodorous solids, liquids or gases, which, either singly or by interaction with other wastes, are capable of creating a public nuisance or hazard to life, or are or may be sufficient to prevent entry into a sewer for its maintenance and repair.

(F) Radioactive Wastes. Radioactive wastes or isotopes of such half life or concentration that they do not comply with regulations or orders issued by the appropriate authority having control over their use and which will, or may, cause damage or hazards to the treatment works or personnel operating the system.

(G) Excessive Discharge Rate. Industrial wastes discharged in a slug of such volume or strength so as to cause a treatment process upset and subsequent loss of treatment efficiency.

(H) Heat. (a) any discharge in excess of 150°F (65°C) (b) Heat in amounts which would inhibit biological activity in the PVSC treatment works resulting in a treatment process upset and subsequent loss of treatment efficiency, but in no case shall heat be introduced into the PVSC treatment works in such quantities that the temperature of the influent waters at the treatment plant exceed 40°C (104°).

(I) Unpolluted Waters. Any unpolluted water including, but not limited to, cooling water or uncontaminated storm water, which will increase the hydraulic load on the treatment system, except as approved by PVSC.

(J) Water. Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limits.

(2) No person shall discharge or convey, or permit to be discharged or conveyed, to the treatment works any wastes containing pollutants of such character or quantity that will:

(A) Not be susceptible to treatment or interfere with the

process or efficiency of the treatment system.

(B) Violate pretreatment standards. As pretreatment standards for toxic or other hazardous pollutants are promulgated by USEPA for a given industrial category, all industrial users within that category must immediately conform to the USEPA timetable as well as any numeric limitations imposed by USEPA. In addition, an industrial user shall comply with any more stringent standards as determined by PVSC or other agency.

(C) Cause the PVSC treatment plant to violate its NPDES permit, applicable receiving water standards, permit regulating sludge which is produced during treatment or any other permit issued to PVSC.

B. INSTALLATION OF SAMPLERS

The permittee shall install - 24 hour composite sampler acceptable to PVSC with attachment for affixing seals. which shall be maintained in proper working order at all times. The installed samplers shall draw a sample, over each operating day, which shall be representative of plant waste.

A one quart or one liter aliquot shall be set aside by (9:00 a.m.) each operating day and refrigerated. A PVSC representative may pick up this sample during the day. Any sample not picked up by PVSC may be discarded at the end of that day.

C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (4/14/81) and lasting through (4/14/86) the permittee is authorized to discharge from outlet(s) number (ed) (20403240-~~441~~ 44100-0201) Such discharges shall be monitored by the permittee as specified below.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30 DAY AVERAGE	DAILY MAX.	MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD	X X X X X X	X X X X X X	WEEKLY	24 HR.COMP.	QUARTERLY
TSS	X X X X X X	X X X X X X	WEEKLY	24 HR.COMP.	QUARTERLY
VOLUME	X X X X X X	X X X X X X	X X X X X X X	X X X X X	QUARTERLY

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2. In addition to the monitoring required in Section C.1. the Permittee is required to meet the following schedule of compliance:

A. INSTALLATION OF MONTHLY EQUIPMENT

4/15/81 - schematic diagram of installation to be submitted to PVSC
5/1/81 - commence daily sampling and metering of flow

B. Permittee will install flow meter on discharge.

C. Within 180 days after promulgation of pretreatment standards it is permittee's responsibility to submit baseline report to PVSC. Reporting requirements listed in 40 CFR 403.12. (copy attached)

D. Monitoring and Reporting

1. Monitoring results obtained during the previous (3) months shall be reported on the designated Discharge Monitoring Report, PVSC Form MR-1 or 2, postmarked no later than the (15th) day of the month following the completed reporting period. The first report is due on (7/15/81). Properly signed reports required herein shall be submitted to PVSC at the following address:

Chief Engineer
Passaic Valley Sewerage Commissioners
600 Wilson Avenue
Newark, New Jersey 07105

2. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

3. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations contained in the PVSC Rules and Regulations, Federal, State and local laws or regulations.

4. Recording of Results

For each measurement of a sample taken pursuant to the requirements of this permit, the permittee shall maintain a record of the following information:

a) The date,exact place and the time of sampling;

b) The dates the analyses were performed;

c) The person(s) who performed the analysis;

d) The analytical techniques or methods used; and

e) The results of all required analyses.

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5. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the locations (s) designated herein more frequently than required by this permit, using the approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Forms, (PVSC Form MR-1 or MR-2). Such increased frequency shall also be indicated.

6. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of (5) years.

7. Definitions

a. The "30 day average" discharge means the average of daily values for 30 consecutive monitoring days. For the purpose of enforcement of Pretreatment Standards, consecutive samples taken and analyzed shall be considered as being taken on consecutive days even though one or more non-sampling days intervene. In applying the Pretreatment Standards where more than one but less than 30 samples have been taken and analyzed during any month, a formula, specified by USEPA, will be used to calculate the "30 day average".

b. The "daily Maximum" discharge means the highest discharge by weight or other appropriate units, as specified herein, during any calendar day.

c. "Daily" - each operating day.

d. "Weekly" - one day each week during a normal operation day.

e. "Monthly - one day each month during a normal operating day.

f. "Composite - a combination of individual samples obtained at regular intervals over the entire discharge day.

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The volume of each sample shall be proportional to the discharge flow rate unless specifically modified by PVSC. For a 24 hour continuous discharge, a minimum of 24 individual samples shall be collected at equal intervals and at least once per hour. For continuous discharges of 12 to 24 hours, individual samples shall be taken at equal intervals and at least once per hour. For continuous discharges of less than 12 hours, individual samples shall be taken at least once every 30 minutes. For discharges which are not continuous, individual samples shall be taken such that they will be representative of plant waste.

g. "Grab" - an individual sample collected in less than 15 minutes.

h. "Quarterly" - every three (3) months.

i. "N/A" - not applicable.

MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or modification which will result in new, different, or increased discharges of pollutants must be reported by submission of a new PVSC Sewer Connection Application or, if such changes will not violate the effluent limitations specified in this permit, by notices to PVSC of such changes. Following such notices, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall notify PVSC within 24 hours of the occurrence. If this report is made orally, a written report containing the following information, shall be submitted within five (5) working days:

a. a description of the discharge and the cause of the period of noncompliance;

b. the period of noncompliance, including exact dates and times, or, if not corrected, the anticipated time the noncompliance is expected to continue, and

c. the steps being taken to reduce, eliminate and prevent a recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all pretreatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the PVSC Treatment Works resulting from non-compliance with any pretreatment limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. This condition in no way affects PVSC's right to suspend a permit in order to stop a discharge which presents an imminent or substantial hazard to the public health, safety or

welfare to the local environment or which interferes with the operation of the PVSC Treatment Works.

5. Removed Substances

Solids, sludges, filter backwash or other pollutants or hazardous waste removed in the course of pretreatment or control of wastewaters and/or the treatment of intake waters shall be disposed of in accordance with applicable Federal, State and local laws and regulations. Records documenting such disposal shall be made available to PVSC for review upon request.

F. MANAGEMENT RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the authorized representatives of PVSC, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring methods required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall, in writing, notify the succeeding owner or controller of the existence of this permit, and the need to apply for a new permit, a copy of which shall be forwarded to PVSC.

3. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, or revoked in whole or in part during its terms for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

4. Toxic Pollutants

Notwithstanding (Section C), above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition), is established under Section 307 (b) of the Federal Water Pollution Control Act (the Act), its amendments, or any other subsequent law or regulation, for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

5. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

6. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to

any applicable State Law or regulation under authority preserved by Section 510, of the Federal Water Pollution Control Act. (The Act)

7. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

8. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

the Approval Authority shall commence its review. Within 5 days after making a determination that a Submission meets the requirements of § 403.9(b), and, where removal allowance approval is sought, §§ 403.7(d) and 403.9(d), or at such later time under § 403.7(c) that the Approval Authority elects to review the removal allowance Submission, the Approval Authority shall:

(1) Issue a public notice of request for approval of the Submission;

(i) This public notice shall be circulated in a manner designed to inform interested and potentially interested persons of the Submission. Procedures for the circulation of public notice shall include:

(A) Mailing notices of the request for approval of the Submission to designated 208 planning agencies, Federal and State fish, shellfish, and wildlife resource agencies; and to any other person or group who has requested individual notice, including those on appropriate mailing lists; and

(B) Publication of a notice of request for approval of the Submission in the largest daily newspaper within the jurisdiction(s) served by the POTW.

(ii) The public notice shall provide a period of not less than 30 days following the date of the public notice during which time interested persons may submit their written views on the Submission.

(iii) All written comments submitted during the 30 day comment period shall be retained by the Approval Authority and considered in the decision on whether or not to approve the Submission. The period for comment may be extended at the discretion of the Approval Authority; and

(2) Provide an opportunity for the applicant, any affected State, any interested State or Federal agency, person or group of persons to request a public hearing with respect to the Submission.

(i) This request for public hearing shall be filed within the 30 day (or extended) comment period described in paragraph (b)(1)(ii) of this section and shall indicate the interest of the person filing such request and the reasons why a hearing is warranted.

(ii) The Approval Authority shall hold a hearing if the POTW so requests. In addition, a hearing will be held if there is a significant public interest in issues relating to whether or not the Submission should be approved. Instances of doubt should be resolved in favor of holding the hearing.

(iii) Public notice of a hearing to consider a Submission and sufficient to inform interested parties of the nature of the hearing and the right to participate shall be published in the same newspaper as the notice of the original request for approval of the Submission under paragraph (b)(1)(i)(B) of this section. In addition, notice of the hearing shall be sent to those persons requesting individual notice.

(3) Whenever the approval authority elects to defer review of a submission which authorizes the POTW to grant conditional revised discharge limits under § 403.7(b)(2) and 403.7(c), the Approval Authority shall publish public notice of its election in accordance with paragraph (b)(1) of this section.

(c) *Approval authority decision.* At the end of the 30 day (or extended) comment period and within the 90 day (or extended) period provided for in paragraph (a) of this section, the Approval Authority shall approve or deny the Submission based upon the evaluation in paragraph (a) of this section and taking into consideration comments submitted during the comment period and the record of the public hearing, if held. Where the Approval Authority makes a determination to deny the request, the Approval Authority shall so notify the POTW and each person who has requested individual notice. This notification shall include suggested modifications and the Approval Authority may allow the requestor additional time to bring the Submission into compliance with applicable requirements.

(d) *EPA objection to Director's decision.* No POTW pretreatment program or authorization to grant removal allowances shall be approved by the Director if following the 30 day (or extended) evaluation period provided for in paragraph (b)(1)(ii) of this section and any hearing held pursuant to paragraph (b)(2) of this section the Regional Administrator sets forth in writing objections to the approval of such Submission and the reasons for such objections. A copy of the Regional Administrator's objections shall be provided to the applicant, and each person who has requested individual notice. The Regional Administrator shall provide an opportunity for written comments and may convene a public hearing on his or her objections. Unless retracted, the Regional Administrator's objections shall constitute a final ruling to deny approval of a POTW pretreatment program or authorization to grant removal allowances 90 days after the date the objections are issued.

(e) *Notice of decision.* The Approval Authority shall notify those persons who submitted comments and participated in the public hearing, if held, of the approval or disapproval of the Submission. In addition, the Approval Authority shall cause to be published a notice of approval or disapproval in the same newspapers as the original notice of request for approval of the Submission was published. The Approval Authority shall identify in any notice of POTW Pretreatment Program approval any authorization to modify categorical Pretreatment Standards which the POTW may make, in accordance with § 403.7, for removal of pollutants subject to Pretreatment Standards.

(f) *Public access to submission.* The Approval Authority shall ensure that the Submission and any comments upon such Submission are available to the public for inspection and copying.

§ 403.12 Reporting requirements for POTW's and industrial users.

(a) *Definition.* The term "Control Authority" as it is used in this section refers to: (1) The POTW if the POTW's Submission for its pretreatment program (§ 403.3(t)(1)) has been approved in accordance with the requirements of § 403.11; or (2) the Approval Authority if the Submission has not been approved.

(b) *Reporting requirement for industrial users upon effective date of categorical pretreatment standard—baseline report.* Within 180 days after the effective date of a categorical Pretreatment Standard, or 180 days after the final administrative decision made upon a category determination submission under § 403.6(a)(4), whichever is later, existing Industrial Users subject to such categorical Pretreatment Standards and currently discharging to or scheduled to discharge to a POTW shall be required to submit to the Control Authority a report which contains the information listed in paragraph (b)(1)–(7) of this section. Where reports containing this information already have been submitted to the Director or Regional Administrator in compliance with the requirements of 40 CFR 128.140(b), the Industrial user will not be required to submit this information again. New sources shall be required to submit to the Control Authority a report which contains the information listed in paragraphs (b)(1)–(5) of this section:

(1) *Identifying information.* The User shall submit the name and address of the facility including the name of the operator and owners;

(2) *Permits.* The User shall submit a list of any environmental control permits held by or for the facility;

(3) *Description of operations.* The User shall submit a brief description of the nature, average rate of production,

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and Standard Industrial Classification of the operation(s) carried out by such Industrial User. This description should include a schematic process diagram which indicates points of Discharge to the POTW from the regulated processes.

(4) *Flow measurement.* The User shall submit information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from each of the following:

(i) regulated process streams; and

(ii) other streams as necessary to allow use of the combined wastestream formula of § 403.6(e). (See paragraph (b)(5)(v) of this section.)

The Control Authority may allow for verifiable estimates of these flows where justified by cost or feasibility considerations.

(5) *Measurement of Pollutants.* (i) The user shall identify the Pretreatment Standards applicable to each regulated process;

(ii) In addition, the User shall submit the results of sampling and analysis identifying the nature and concentration (or mass, where required by the Standard or Control Authority) of regulated pollutants in the Discharge from each regulated process. Both daily maximum and average concentration (or mass, where required) shall be reported. The sample shall be representative of daily operations;

(iii) Where feasible, samples must be obtained through the flow-proportional composite sampling techniques specified in the applicable categorical Pretreatment Standard. Where composite sampling is not feasible, a grab sample is acceptable;

(iv) Where the flow of the stream being sampled is less than or equal to 950,000 liters/day (approximately 250,000 gpd), the User must take three samples within a two-week period. Where the flow of the stream being sampled is greater than 950,000 liters/day (approximately 250,000 gpd), the User must take six samples within a two-week period;

(v) Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other wastewaters are mixed with the regulated wastewater prior to pretreatment the User should measure the flows and concentrations necessary to allow use of the combined wastestream formula of § 403.6(e) in order to evaluate compliance with the Pretreatment Standards. Where an alternate concentration or mass limit has been calculated in accordance with § 403.6(e) this adjusted limit along with supporting data shall be submitted to the Control Authority;

(vi) Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. Where 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator;

(vii) The Control Authority may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures;

(viii) The baseline report shall indicate the time, date and place, of sampling, and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant Discharges to the POTW;

(6) *Certification.* A statement, reviewed by an authorized representative of the Industrial User (as defined in subparagraph (k) of this section) and certified to by a qualified professional, indicating whether Pretreatment Standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O and M) and/or additional pretreatment is required for the Industrial User to meet the Pretreatment Standards and Requirements; and

(7) *Compliance Schedule.* If additional pretreatment and/or O and M will be required to meet the Pretreatment Standards; the shortest schedule by which the Industrial User will provide such additional pretreatment and/or O and M. The completion date in this schedule shall not be later than the compliance date established for the applicable Pretreatment Standard.

(i) Where the Industrial User's categorical Pretreatment Standard has been modified by a removal allowance (§ 403.7), the combined wastestream formula (§ 403.6(e)), and/or a Fundamentally Different Factors variance (§ 403.13) at the time the User submits the report required by paragraph (b) of this section, the information required by paragraphs (b)(6) and (7) of this section shall pertain to the modified limits.

(ii) If the categorical Pretreatment Standard is modified by a removal allowance (§ 403.7), the combined wastestream formula (§ 403.6(e)), and/or a Fundamentally Different Factors variance (§ 403.13) after the User submits the report required by paragraph (b) of this section, any necessary amendments to the information requested by paragraphs (b)(6) and (7) of this section shall be submitted by the User to the Control Authority within 60 days after the modified limit is approved.

(c) *Compliance Schedule for Meeting Categorical Pretreatment Standards.* The following conditions shall apply to the schedule required by paragraph (b)(7) of this section:

(1) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the Industrial User to meet the applicable categorical Pretreatment Standards (e.g., hiring an engineer, completing preliminary plans, completing final plans, executing contract for major components, commencing construction, completing construction, etc.).

(2) No increment referred to in paragraph (c)(1) of this section shall exceed 9 months.

(3) Not later than 14 days following each date in the schedule and the final date for compliance, the Industrial User shall submit a progress report to the Control Authority including, at a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps being taken by the Industrial User to return the construction to the schedule established. In no event shall more than 9 months elapse between such progress reports to the Control Authority.

(d) *Report on compliance with categorical pretreatment standard deadline.* Within 90 days following the date for final compliance with applicable categorical Pretreatment Standards or in the case of a New Source following commencement of the introduction of wastewater into the POTW, any Industrial User subject to Pretreatment Standards and Requirements shall submit to the Control Authority a report indicating the nature and concentration of all pollutants in the Discharge from the regulated process which are limited by Pretreatment Standards and Requirements and the average and maximum daily flow for these process

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units in the Industrial User which are limited by such Pretreatment Standards and Requirements. The report shall state whether the applicable Pretreatment Standards or Requirements are being met on a consistent basis and, if not, what additional O and M and/or pretreatment is necessary to bring the Industrial User into compliance with the applicable Pretreatment Standards or Requirements. This statement shall be signed by an authorized representative of the Industrial User, as defined in paragraph (k) of this section, and certified to by a qualified professional.

(e) *Periodic reports on continued compliance.* (1) Any Industrial User subject to a categorical Pretreatment Standard, after the compliance date of such Pretreatment Standard, or, in the case of a New Source, after commencement of the discharge into the POTW, shall submit to the Control Authority during the months of June and December, unless required more frequently in the Pretreatment Standard or by the Control Authority or the Approval Authority, a report indicating the nature and concentration of pollutants in the effluent which are limited by such categorical Pretreatment Standards. In addition, this report shall include a record of measured or estimated average and maximum daily flows for the reporting period for the Discharge reported in paragraph (b)(4) of this section except that the Control Authority may require more detailed reporting of flows. At the discretion of the Control Authority and in consideraton of such factors as local high or low flow rates, holidays, budget cycles, etc., the Control Authority may agree to alter the months during which the above reports are to be submitted.

(2) Where the Control Authority has imposed mass limitations on Industrial Users as provided for by § 403.6(d), the report required by paragraph (e)(1) of this section shall indicate the mass of pollutants regulated by Pretreatment Standards in the Discharge from the Industrial User.

(f) *Notice of slug loading.* The Industrial User shall notify the POTW immediately of any slug loading, as defined by § 403.5(b)(4), by the Industrial User.

(g) *Monitoring and analysis to demonstrate continued compliance.* The reports required in paragraphs (b)(5), (d), and (e) of this section shall contain the results of sampling and analysis of the Discharge, including the flow and the nature and concentration, or production and mass where requested by the Control Authority, of pollutants contained therein which are limited by the applicable Pretreatment Standards. The frequency of monitoring shall be prescribed in the applicable Pretreatment Standard. All analyses shall be performed in accordance with procedures established by the Administrator pursuant to section 304(g) of the Act and contained in 40 CFR Part 136 and amendments thereto or with any other test procedures approved by the Administrator. Sampling shall be performed in accordance with the techniques approved by the Administrator. Where 40 CFR Part 136 does not include sampling or analytical techniques for the pollutants in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed using validated analytical methods or any other sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator.

(h) *Compliance schedule for POTW's.* The following conditions and reporting requirements shall apply to the compliance schedule for development of an approvable POTW Pretreatment Program required by § 403.8.

(1) The schedule shall contain increments of progress in the form of dates for the commencement and completion of major events leading to the development and implementation of a POTW Pretreatment Program (e.g., acquiring required authorities, developing funding mechanisms, acquiring equipment);

(2) No increment referred to in paragraph (h)(1) of this section shall exceed nine months;

(3) Not later than 14 days following each date in the schedule and the final date for compliance, the POTW shall submit a progress report to the Approval Authority including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for delay, and the steps taken by the POTW to return to the schedule established. In no event shall more than nine months elapse between such progress reports to the Approval Authority.

(i) *Initial POTW report on compliance with approved removal allowance.* A POTW which has received authorization to modify categorical Pretreatment Standards for pollutants removed by the POTW in accordance with the requirements of § 403.7 must submit to the Approval Authority within 60 days after the effective date of a Pretreatment Standard for which authorization to modify has been approved, a report which contains the information required by §§ 403.7(d)(2), 403.7(d)(5) and 403.7(d)(6). A minimum of one sample per month during the reporting period is required.

(j) *Periodic reports by POTW to demonstrate continued compliance with removal allowance.* The reports referred to in paragraph (i) of this section will be submitted to the Approval Authority at 6-month intervals beginning with the submission of the initial report referred to in paragraph (i) of this section unless required more frequently by the Approval Authority.

(k) *Signatory requirements for industrial user reports.* The reports required by paragraphs (b), (d), and (e), of this section must be signed by an authorized representative of the Industrial User. An authorized representative may be:

(1) A principal executive officer of at least the level of vice president, if the Industrial User submitting the reports required by paragraphs (b), (d) and (e) of this section is a corporation.

(2) A general partner or proprietor if the Industrial User submitting the report required by paragraphs (b), (d) and (e) of this section is a partnership or sole proprietorship respectively.

(3) A duly authorized representative of the individual designated in subparagraph (1) or (2) of this paragraph if such representative is responsible for the overall operation of the facility from which the Indirect Discharge originates.

(l) *Signatory requirements for POTW reports.* Reports submitted to the Approval Authority by the POTW in accordance with paragraphs (h), (i) and (j) of this section must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for overall operation of the POTW.

(m) *Provisions governing fraud and false statements.* The reports required by paragraphs (b), (d), (e), (h), (i) and (j) of this section shall be subject to the provisions of 18 U.S.C. section 1001 relating to fraud and false statements and the provisions of section 309(c)(2) of the Act governing false statements, representations or certifications in reports required under the Act.

(n) *Record-keeping requirements.*

(1) Any Industrial User and POTW subject to the reporting requirements established in this section shall maintain records of all information resulting from any monitoring activities required by this section. Such records shall include for all samples:

(i) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples;

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(ii) The dates analyses were performed;

(iii) Who performed the analyses;

(iv) The analytical techniques/methods use; and

(v) The results of such analyses.

(2) Any Industrial User or POTW subject to the reporting requirements established in this section shall be required to retain for a minimum of 3 years any records of monitoring activities and results (whether or not such monitoring activities are required by this section) and shall make such records available for inspection and copying by the Director and the Regional Administrator (and POTW in the case of an Industrial User). This period of retention shall be extended during the course of any unresolved litigation regarding the Industrial User or POTW or when requested by the Director or the Regional Administrator.

(3) Any POTW to which reports are submitted by an Industrial User pursuant to paragraphs (b), (d), and (e) of this section shall retain such reports for a minimum of 3 years and shall make such reports available for inspection and copying by the Director and the Regional Administrator. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.

§ 403.13 Variances from categorical pretreatment standards for fundamentally different factors.

(a) *Definition.* The term "Requester" means an Industrial User or a POTW or other interested person seeking a variance from the limits specified in a categorical Pretreatment Standard.

(b) *Purpose and scope.* In establishing categorical Pretreatment Standards for existing sources, the EPA will take into account all the information it can collect, develop and solicit regarding the factors relevant to pretreatment standards under section 307(b). In some cases, information which may affect these Pretreatment Standards will not be available or, for other reasons, will not be considered during their development. As a result, it may be necessary on a case-by-case basis to adjust the limits in categorical Pretreatment Standards, making them either more or less stringent, as they apply to a certain Industrial User within an industrial category or subcategory. This will only be done if data specific to that Industrial User indicates it presents factors fundamentally different from those considered by EPA in developing the limit at issue. Any interested person believing that factors relating to an Industrial User are fundamentally different from the factors considered during development of a categorical Pretreatment Standard applicable to that User and further, that the existence of those factors justifies a different discharge limit from that specified in the applicable categorical Pretreatment Standard, may request a fundamentally different factors variance under this section or such a variance request may be initiated by the EPA.

(c) *Criteria.*—(1) *General criteria.* A request for a variance based upon fundamentally different factors shall be approved only if:

(i) There is an applicable categorical Pretreatment Standard which specifically controls the pollutant for which alternative limits have been requested; and

(ii) Factors relating to the discharge controlled by the categorical Pretreatment Standard are fundamentally different from the factors considered by EPA in establishing the Standards; and

(iii) The request for a variance is made in accordance with the procedural requirements in paragraphs (g) and (h) of this section.

(2) *Criteria applicable to less stringent limits.* A variance request for the establishment of limits less stringent than required by the Standard shall be approved only if:

(i) The alternative limit requested is no less stringent than justified by the fundamental difference;

(ii) The alternative limit will not result in a violation of prohibitive discharge standards prescribed by or established under § 403.5;

(iii) The alternative limit will not result in a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Pretreatment Standards; and

(iv) Compliance with the Standards (either by using the technologies upon which the Standards are based or by using other control alternatives) would result in either

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(3) *Criteria applicable to more stringent limits.* A variance request for the establishment of limits more stringent than required by the Standards shall be approved only if:

(i) The alternative limit request is no more stringent than justified by the fundamental difference; and

(ii) Compliance with the alternative limit would not result in either:

(A) A removal cost (adjusted for inflation) wholly out of proportion to the removal cost considered during development of the Standards; or

(B) A non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the Standards.

(d) *Factors considered fundamentally different.* Factors which may be considered fundamentally different are:

(1) The nature or quality of pollutants contained in the raw waste load of the User's process wastewater;

(2) The volume of the User's process wastewater and effluent discharged;

(3) Non-water quality environmental impact of control and treatment of the User's raw waste load;

(4) Energy requirements of the application of control and treatment technology;

(5) Age, size, land availability, and configuration as they relate to the User's equipment or facilities; processes employed; process changes; and engineering aspects of the application of control technology;

(6) Cost of compliance with required control technology.

(e) *Factors which will not be considered fundamentally different.* A variance request or portion of such a request under this section may not be granted on any of the following grounds:

(1) The feasibility of installing the required waste treatment equipment within the time the Act allows;

(2) The assertion that the Standards cannot be achieved with the appropriate waste treatment facilities installed, if such assertion is not based on factors listed in paragraph (d) of this section;

(3) The User's ability to pay for the required waste treatment; or

(4) The impact of a Discharge on the quality of the POTW's receiving waters.

(f) *State or local law.* Nothing in this section shall be construed to impair the right of any state or locality under section 510 of the Act to impose more stringent limitations than required by Federal law.

(g) *Application deadline.*

(1) Requests for a variance and supporting information must be submitted in writing to the Director or to the Enforcement Division Director, as appropriate.

(2) In order to be considered, request for variances must be submitted within

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QUESTION 4.A)

RAW MATERIALS LIST

RAW MATERIALS LIST

RMLST1.XLS

RUN DATE: 1/24/95 ELAN
SYS DATE: 1/24/95 INVENTORY ITEM LISTING
SORTED BY ITEM DESCRIPTION

521 T-BUTYL CHLORIDE
586 1-HEXENE
537 2 AMINO NAPHTHALENE SULFONIC
510 2,3 LUTIDINE
132 2-METHYL BUTANOL
131 3-METHYL BUTANOL
280 4-ISOPROPYLANALINE
293 4-SEC-BUTYLANALINE
278 4-TERT-BUTYLANALINE
233 ACETALDEHYDE
675 ACETALDEHYDE, NATURAL
516 ACETIC ACID NATURAL
3 ACETIC ANHYDRIDE
4 ACETONE
300 ACETONE NATURAL
5 ACETOPHENONE
6 ACRYLIC ACID
296 ACTISIL
77 ALCOHOL C-10
382 ALDEHYDE C-10
14 ALLYL ALCOHOL
8 ALLYL CHLORIDE
383 ALLYL CYCLOHEXYL PROPIONATE
360 ALLYL HEPTOATE
22 ALUMINUM CHLORIDE
23 ALUMINUM ISOPROPYLATE
16 AMBERLYST 15
564 AMMONIA SOLUTION 29.5%
331 AMMONIA, ANHYDROUS GAS
10 AMMONIA, AQUEOUS TECH
11 AMMONIUM SULFIDE-40% SOLUTION
7 AMYL ALCOHOL TERT.
13 AMYL CINNAMIC ALDEHYDE
245 ANETHOLE 90
211 ANISIC ACID
287 ANISIC ALCOHOL
15 ANISIC ALDEHYDE
18 ANTIFOAM A-DC

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565 ANTIFOAM H-10
533 APPLE ALCOHOL SDA
295 APRICOT KERNALS
566 ARQUAD 16-29
19 ARQUAD HT-75
21 ATTAPULGUS CLAY
259 AZELAIC ACID
36 B.H.A.
26 BALSAM COPAIDA
370 BALSAM PERU
288 BARIUM SULFATE CATALYST
9 BARLENE #38-TRIOCTYLAMINE
28 BAY LEAF OIL
30 BENZALDEHYDE
347 BENZENE
539 BENZENE SULFONYL CHLORIDE
31 BENZOIC ACID
677 BENZONITRILE
311 BENZOYL CHLORIDE
25 BENZYL ACETATE CRUDE
390 BENZYL ACETATE FCC
32 BENZYL ALCOHOL NF
33 BENZYL ALCOHOL TECH.
34 BENZYL CHLORIDE
35 BENZYL CYANIDE
2 BENZYL PHENYL ACETATE CRUDE
72 BENZYL PROPIONATE CRUDE
37 BOIS DE ROSE OIL
38 BORIC ACID
39 BORON TRIFL. ETH.
329 BROMINE
299 BUTANOL NATURAL
246 BUTTER OIL
481 BUTYL 4 NORMAL ANALINE
482 BUTYL ANALINE
44 BUTYL LACTATE
284 BUTYRIC ACID SYNTH.
43 BUTYROYL CHLORIDE
518 CALCIUM CHLORIDE
151 CALCIUM PROPIONATE PTX
45 CALCIUM SULFATE ANHYD.
46 CAMPHENE

408 CAMPHOLENIC ALDEHYDE
47 CAPRIC ACID
48 CAPROIC ACID
241 CAPROIC ACID NATURAL
49 CAPRYL ALCOHOL
50 CAPRYLIC ACID
547 CASSIA OIL 70%
12 CASSIA OIL 80%
56 CATALYST 49-B
55 CATALYST G-22
58 CATALYST RHANEY NICKEL
59 CAUSTIC POTASH - FLAKE
60 CAUSTIC POTASH - LIQUID
61 CAUSTIC SODA FLAKE
64 CEDARWOOD OIL
304 CEDARWOOD OIL - TOPPED
126 CEDRANONE
63 CEDROL CRUDE-X POL
410 CEDROL CRYSTALS
500 CEDRYL ACETATE
65 CERELOSE
54 CHLORINE
309 CHLOROACETALDEHYDE DMA
68 CHLOROETHYLAMINE HCL
336 CHLOROFORM TECH.
220 CINNAMIC ACID
66 CINNAMIC ALCOHOL
67 CINNAMIC ALDEHYDE
499 CINNAMON OIL IMPERIAL 95%
53 CITRONELLA OIL
325 CITRONELLOL 750
545 CITRONELLOL 850
544 CITRONELLYL ACETATE 90 EXTRA
69 CLOVE LEAF OIL
563 COPPER CHROMITE
71 COPPER POWDER
216 CORNMINT OIL
219 COUMARIN
73 CUPRIC ACETATE
290 CUPRIC CHLORIDE
483 CURCUMIN 95%
387 CYCLAMAL 96%

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328 CYCLOHEXANE
237 CYCLOHEXANOL
70 CYCLOHEXANONE
319 CYCLOOCTADIENE
74 DARCO
350 DDVP
397 DEIONIZED WATER
349 DELTA VALEROLACTONE
80 DI-TERT BUTYL PEROXIDE
76 DIBENZYL ETHER
396 DIBUTYL TIN OXIDE
254 DIETHYL ANALINE N,N
492 DIETHYL FORMAMIDE
488 DIETHYL MALONATE
273 DIETHYL SUCCINATE
81 DIETHYL SULFATE
593 DIETHYLENE TRI-PENTA ACET.ACID
409 DIISOBUTYLALUMINUM HYDRIDE
321 DIMETHYL OCTANYL ACETATE
400 DIMETHYL ANTHRANILATE
75 DIMETHYL FORMAMIDE
489 DIMETHYL MALONATE
78 DIMETHYL SULFATE
79 DIMETHYL SULFOXIDE
662 DIOXANE 1,4
83 DIPHENYL METHANE
617 DIPROPYLENE GLYCOL FRAGRANCE
166 DRAKEOL 34
297 ETHYL ACETATE NATURAL
125 ETHYL ACETATE NF
266 ETHYL ALCOHOL 190 NAT
606 ETHYL ALCOHOL 190 PROOF GRAIN
267 ETHYL ALCOHOL 200 NAT
82 ETHYL ALCOHOL 2B
580 ETHYL ALCOHOL 39C - NAT.
581 ETHYL ALCOHOL SDA 40A ANHYDR.
583 ETHYL ALCOHOL SDA 40B ANHYDR.
386 ETHYL BUTYRATE
88 ETHYL CAPRINATE
84 ETHYL CHLORACETATE
86 ETHYL HEXANOL
497 ETHYL IODIDE

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310 ETHYL LACTATE
512 ETHYL LACTATE, NATURAL
496 ETHYL ORTHOFORMATE
230 ETHYLENE DICHLORIDE
85 ETHYLENE GLYCOL
393 EUGENOL USP
562 FERRIC CHLORIDE ANHYDROUS 98%
260 FERRIC CHLORIDE SOL. 42%
294 FERROUS SULFATE HEPTAHYDRATE
239 FORMALDEHYDE 37%
87 FORMIC ACID
89 FURFURYL ALCOHOL
90 FUSEL OIL
618 GAMMA BUTYROLACTONE
323 GERANIOL 90 or 902
92 GERANIOL 60 or 500 or PRIME
322 GERANIOL 80 or 8020
224 GERANIOL 902 - do not use
93 GERANIOL CRUDE NATURAL
534 GERANIOL PRIME - do not use
509 GERANYL ACET. PRIME
320 GERANYL ACETATE EXTRA - RM
567 GERANYL ACETATE PURE 98%
568 GERANYL NITRILE
249 GIRDLER 49-B
346 GLACIAL ACETIC ACID
250 GLIXOLIC ACID
95 GLYCERINE - KOSHER GRADE 96%
685 GLYCOL ETHER
240 GRAIN ALCOHOL 190 TAX PD
268 GRANULATED SUGAR
238 GRAPEFRUIT OIL
94 GUAIACWOOD OIL
451 GUM KARAYA
96 H.B. 40
404 HELIOTROPINE
97 HEPTALDEHYDE
99 HEPTANE
100 HEPTANOIC ACID
101 HEPTYL ALCOHOL
102 HEXANE
104 HEXENE

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98	HTG OIL HT-43
480	HYDRAZINE HYDRATE 55%
380	HYDROCHLORIC ACID GAS - CYL.
20	HYDROGEN PEROXIDE 35% - TECH
106	HYDROQUIN MON ETH
111	ICE
117	IRON PENTACARBONYL
384	ISO AMYL ACETATE
108	ISO AMYL ALCOHOL-NAT
109	ISO BORNYL ACETATE
112	ISO BUTANOL
232	ISO BUTANOL NATURAL
385	ISO BUTYL BENZOATE
306	ISO BUTYL BORATE
113	ISO BUTYRIC ACID
114	ISO BUTYRIC ANHYDRIDE
110	ISO NONANOIC ACID
577	ISO OCTANE PURE
115	ISO PROPANOL
116	ISO VALERIC ACID
513	ISO VALERIC ACID, NATURAL
502	ISO VALERIC ACID-DO NOT USE
610	ISOEUGENOL
269	ISONOX 129
324	ISOPAR H
24	L-PHENYLALANINE
243	L-PROLINE
120	LACTIC ACID
121	LAURIC ACID
316	LEMONGRASS OIL
229	LEVULINIC ACID
119	LIME ANHYD.
248	LINALOOL 925
221	LINALOOL PURE 99%
274	LINALYL PROPIONATE
213	LITSEA CUBEBA
128	M-AMINO ACETOPHENONE
523	MAGNESIUM CHIPS
343	MAGNESIUM METAL
137	MAGNESOL
334	MALEIC ANHYDRIDE
258	MALIC ACID

526 MANDARIN PET. OIL - DMA 38%
528 MANDARIN PET. OIL - DMA 48%
529 MANDARIN PET. OIL - DMA 98%
235 MANGANESE DIOXIDE
130 METH ACETO ACETATE
129 METHANOL
490 METHOXY ETHANOL (ETHYL GLYCOL)
134 METHYL ACRYLATE
144 METHYL AMYL KEYTONE
133 METHYL CINNAMATE
514 METHYL CINNAMATE, NATURAL
135 METHYL ETHYL KEYTONE
303 METHYL HEXYL KETONE
485 METHYL ISO PROPYL KETONE
498 METHYL ISO-BUTYRATE
140 METHYL ISOBUTYL KETONE
145 METHYL MYRISTATE
388 METHYL OCTINE CARBONATE
142 METHYL PARABEN
275 METHYL PARABEN
141 METHYL PHENYL CARBINOL
146 METHYL SALICYLATE
381 METHYL-T BUTYL ETHER
283 METHYLAMINE IN WATER 40%
138 METHYLENE CHLORIDE
180 MONOCHLORBENZENE-DO NOT USE
72 MONOCHLOROBENZENE
127 MONOETHANOL AMINE
136 MYRCENE
143 MYRISTIC ACID
40 N-BUTYL ALCOHOL
41 N-BUTYRIC ACID
42 N-BUTYRIC ANHYDRIDE
103 N-HEXANOL
307 N-METHYL PYRROLIDANE
161 N-PENTANOL
165 N-PROPANOL
206 N-VALERIC ACID
540 NAT LEMON OIL
452 NATURAL BUTYRIC ACID - BUY
305 NEOFAT
149 NEROL 80

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327 NEROLEX
326 NERYL ACETATE
344 NITRIC ACID
615 NITROGEN CYL.HIGH PRESSURE
148 NONYL ALCOHOL
298 OCTENE NATURAL
236 OCTENE-1
222 OCTENE-2
150 OCTYL ALCOHOL
277 OCTYL SALICYLATE
399 OENANTHIC ETHER
505 OIL OF BITTER ALMOND
542 OLEORESIN TURMERIC
215 ORANGE OIL
395 ORANGE OIL
392 ORANGE TERPENES
152 OXALIC ACID
155 P-HYDROXY BENZALDEHYDE
228 P-HYDROXY BENZOIC ACID
292 P-N-BUTYLANALINE
156 P-TOLUENE SULFONIC ACID
308 PALLADIUM ON BARIUM SULFATE
680 PALLADIUM - FABRICATION CHARGE
 57 PALLADIUM CATALYST 5%
153 PARA CRESOL
154 PARA FORMALDEHYDE
261 PARA NITROBENZOIC ACID
157 PELARGONIC ACID
160 PENTANE
345 PERACETIC ACID 35%
231 PERCHLORETHYLENE
484 PETITGRAIN OIL
212 PHEN ACET ACID
159 PHEN CELLOSOLVE
330 PHENOL
337 PHENOL 99%
398 PHENYL ACET DMA-buy
350 PHENYL ACETALDEHYDE
501 PHENYL ACETIC ACID-do not use
158 PHENYL ETHYL ALCOHOL
272 PHENYL PROPYL ALCOHOL
162 PHOSPHORIC ACID

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494 PHOSPHORUS OXYCHLORIDE 99%
163 PHTHALIC ANHYDRIDE
164 POLYPHOSPHORIC ACID 115%
170 POT. BROMIDE
171 POT. CARBONATE
255 POT. IODIDE
279 POTASSIUM DICHROMATE
487 POTASSIUM NITRATE
335 POTASSIUM PERMANGONATE
332 POTASSIUM-T-BUTOXIDE
139 PROPIONALDEHYDE
167 PROPIONIC ACID
168 PROPIONIC ANHYDRIDE
244 PROPYLENE GLYCOL
169 PYRIDINE
543 PYRIDINE HYDROCHLORIDE
263 RASPBERRY KEYTONE
242 RHAMNOSE
227 RUTH. ON CARBON POWDER 5%
172 SALICYLALDEHYDE
173 SALICYLIC ACID
585 SALT - GRANULAR
503 SANDALMYSORE CORE
175 SEBACIC ACID
679 SEC. BUTYL ANALINE
254 SEC. BUTYL BROMIDE
191 SILICA GEL
176 SODA ASH
177 SODIUM
285 SODIUM ACETATE
181 SODIUM BICARBONATE
184 SODIUM BISULFATE
182 SODIUM BOROHYDRIDE
291 SODIUM BUTYRATE
178 SODIUM DICHROMATE
122 SODIUM ETHYLATE SOL.
214 SODIUM HYDRIDE
185 SODIUM HYPOCHLORITE
179 SODIUM IODIDE
314 SODIUM METABISULFATE
183 SODIUM METHYLATE
186 SODIUM METHYLATE SOL.

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190 SODIUM NITRITE
187 SODIUM SULFATE
282 SODIUM-N-NITROBENZENE SULFONAT
607 SOLTROL 10
375 STYRAX GUM
188 STYRENE OXIDE
217 SUCCINIC ANHYD.
256 SUCRATONE #2
312 SULFANILIC ACID
189 SULFURIC ACID
264 TANNIC ACID
192 TARTARIC ACID
223 TBBAC
193 TENOX BHA
200 TEQUINOL
194 TERPINOL 318
525 TERT-BUTYL ALCOHOL
341 TERT-BUTYL CHLORIDE
541 TERT-BUTYL PARA CRESOL
420 TETRAGLYME
318 TETRAHYDROFURAN
301 TETRAPHOSPHORIC ACID
195 THIOUREA
123 TOL. DISOCYANATE
197 TOLUOL
652 TOLYL ACETATE FCC
226 TONSIL
196 TRIBUTYLAMINE
262 TRICABALLYLIC ACID
281 TRICAPRYLAMINE
405 TRICHLOROACETIC ACID 100 SOLID
362 TRICHLOROACETIC ACID 90% SOLN
199 TRIETH. AMINE
454 TRIETHYL ORTHOFORMATE
198 TRIMETH ORTH FORMATE
486 TUNGSTIC ACID 99%
201 TYZOR TPT
202 UNDECYLENIC ACID
203 UNIPINE 90
204 UREA TECH
208 VETIVERT OIL
207 VINAGER 10%

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205 VITRIDE
1 WATER
517 WINTERGREEN OIL NATURAL 99%
403 XYLENE
209 XYLOL
491 ZINC CHLORIDE
210 ZINC DUST
391 delta UNDECALACTONE
389 gamma HEPTALACTONE

FINISHED PRODUCTS LIST

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-8014
FAX: (201) 344-1948

Aromatic Chemical Price List

PRODUCT NAME	Fema	55 Gallon Drum
ALDEHYDE C-14 (Gamma Undecalactone) FCC	3091	9.25
ALDEHYDE C-16 (Ethyl Methyl Phenyl Glycidate) FCC	2444	8.00
ALDEHYDE C-18 (Gamma Nonalactone) FCC	2781	9.70
ALLYL CAPROATE FCC	2032	6.50
ALLYL HEPTOATE FCC	2031	7.95
(ISO)AMYL CAPROATE (Amyl Hexanoate) FCC	2075	8.95
(ISO) AMYL CINNAMATE FCC	2063	18.40
(ISO) AMYL FORMATE FCC	2069	6.60
(ISO) AMYL ISO-VALERATE FCC	2085	6.50
(ISO) AMYL PHENYLACETATE	2081	8.40
SO) AMYL PROPIONATE FCC	2082	5.55
ANISYL ACETATE FCC	2098	11.75
ANISYL ALCOHOL FCC	2099	11.00
BENZO DIHYDRO PYRONE FCC	2381	12.00
BENZYL BUTYRATE FCC	2140	5.55
BENZYL ISO BUTYRATE FCC	2141	8.40
BENZYL ISO VALERATE FCC	2152	13.25
BENZYL PHENYL ACETATE FCC	2149	10.75
BENZYL PROPIONATE FCC	2150	5.25
N-BUTYL BUTYRATE FCC	2186	6.00
BUTYL BUTYRYL LACTATE FCC	2190	7.00
N-BUTYL ISO VALERATE FCC	2218	7.60
CEDARWOOD OIL (PERFUMERY GRADE)	6373	6.00
CEDROL CRYSTALS	7726	17.00
CEDROL SPECIAL	7726	6.50
CEDRYL ACETATE CRYSTALS	8701	24.00
CEDRYL ACETATE STANDARD (50% ESTER)	8701	6.50
EDRYL ACETATE EXTRA (60% ESTER)	8701	7.00
CINNAMYL ACETATE FCC	2293	9.00

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INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-80

FAX: (201) 344-194

CINNAMYL FORMATE FCC	*2299*	**16.50**
CINNAMYL ISO BUTYRATE	*2297*	**17.00**
CINNAMYL ISO VALERATE FCC	*2302*	**19.10**
CINNAMYL PROPIONATE FCC	*2301*	**16.50**
CITRONELLOL 90/92 FCC	*2309*	**6.45**
CITRONELL0L 96/98 FCC	*2309*	**6.70**
CITRONELLYL ACETATE FCC	*2311*	**7.25**
CITRONELLYL FORMATE FCC	*2314*	**8.40**
CYCLOHEXYL ACETATE	*2349*	**5.80**
DIETHYL SEBACATE FCC	*2376*	**7.00**
DIMETHYL OCTANOL FCC	*2391*	**7.45**
DIPHENYL METHANE		**6.30**
ETHYL BENZOATE FCC	*2422*	**4.00**
ETHYL CAPROATE (Ethyl Hexanoate) FCC	*2439*	**6.00**
ETHYL HEPTOATE FCC	*2437*	**8.65**
ETHYL ISOBUTYRATE FCC	*2428*	**6.55**
ETHYL ISOVALERATE FCC	*2463*	**7.00**
ETHYL LAURATE FCC	*2441*	**5.25**
ETHYL MYRISTATE FCC	*2445*	**6.50**
ETHYL PELARGONATE FCC	*2447*	**6.30**
ETHYL PHENYL ACETATE FCC	*2452*	**7.60**
GERANIOL 90/92 FCC	*2507*	**6.65**
GERANIOL 96/98 FCC	*2507*	**7.15**
GERANYL ACETATE EXTRA FCC	*2509*	**7.55**
GERANYL BUTYRATE FCC	*2512*	**9.05**
GERANYL FORMATE FCC	*2514*	**9.00**
GERANYL PROPIONATE FCC	*2517*	**14.75**
GUAIACWOOD ACETATE EXTRA	*7729*	**8.90**
HEXYL ACETATE FCC	*2565*	**5.25**
ISO BORNYL PROPIONATE	*2163*	**5.55**
ISO BUTYL PHENYL ACETATE FCC	*2210*	**6.50**
ISO EUGENOL ACETATE (Acetyl Iso Eugenol) FCC	*2470*	**14.25**
LINALOOL EX BOIS DE ROSE FCC	*2635*	**INQUIRE**

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-80
FAX: (201) 344-194

METHOXY PHENYL BUTANONE (Para Anisyl Acetone)	*2672*	**19.00**
METHYL EUGENOL FCC	*2475*	**7.40**
METHYL HEXYL KETONE (Octanone-2)	*2802*	**5.25**
METHYL ISO EUGENOL FCC	*2476*	**8.25**
NEROL FCC	*2770*	**7.55**
NERYL ACETATE	*2773*	**8.05**
OENANTHIC ETHER (Ethyl Oenanthate)		**5.50**
PADIMA (Phenyl Acetaldehyde Dimethyl Acetal) FCC	*2876*	**5.95**
PHENYL ACETALDEHYDE ETHYLENE GLYCOL ACETAL		**19.40**
PHENYL ETHYL FORMATE	*2864*	**8.50**
PHENYL ETHYL ISO BUTYRATE FCC	*2862*	**6.85**
PHENYL ETHYL PHENYL ACETATE FCC	*2866*	**8.75**
PHENYL ETHYL PROPIONATE	*2867*	**6.30**
3-PHENYL PROPIONIC ACID (Hydrocinnamic Acid)	*2889*	**28.00**
PHENYL PROPYL ACETATE FCC	*2890*	**7.90**
PHENYL PROPYL ALCOHOL FCC	*2885*	**5.65**
TEPYL ACETATE (So called)		**7.00**
TERPINYL PROPIONATE FCC	*3053*	**5.80**
TOLYL ACETATE (Para Methyl Benzyl Acetate) FCC	*3702*	**9.95**
VETIVERYL ACETATE STANDARD		**INQUIRE**
VETIVERYL ACETATE EXTRA		**INQUIRE**

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-80

FAX: (201) 344-19

** SPECIAL LIST **

PRODUCT NAME	Fema	Drum
CEDRENOL	-	6.05
CITRONELLYL ISOBUTYRATE FCC	*2313*	9.50
ETHYL CINNAMATE FCC	*2430*	17.00
ETHYL LEVULINATE	*2442*	16.25
ETHYL N-VALERATE	*2462*	7.35
HEXYL CAPRYLATE (Hexyl Octanoate)	*2575*	13.45
ISO BUTYL ISO-VALERATE	*3369*	13.25
ISO BUTYL QUINOLINE	-	85.00
ISO PROPYL QUINOLINE	-	65.00
NONANE DIOL-1:3-ACETATE (Nonane Diacetate)	*2783*	5.25
PARA CRESYL ACETATE FCC	*3073*	12.50
PHENYL ETHYL CINNAMATE	*2863*	27.00
PHENYL ETHYL ISOVALERATE	*2871*	8.00

Inquire about the availability of the items on this page
Minimum 10 lb. packing on SYNTHETIC PRODUCTS
ALL PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

PACKING DIFFERENTIALS:

10/LBS - ADD.....$ 4.00/LB TO THE DRUM PRICE
35/LBS - ADD.....$ 0.35/LB TO THE DRUM PRICE
100/LBS - ADD.....$ 0.20/LB TO THE DRUM PRICE
200/LBS - ADD.....$ 0.10/LB TO THE DRUM PRICE

OUR TERMS : NET 30

WE MAKE SPECIALTY CHEMICALS ON A CONFIDENTIAL BASIS

847520102

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-801
FAX: (201) 344-194

Natural Products Price List

PRODUCT NAME	Fema	1 Lb	5 Lb	10 Lb	25 Lb
ACETIC ACID (90% min.)	2006	30.00	25.00	21.00	20.00
ALDEFRESH (Sol. of Nat. Acetaldehyde in Ethanol)	2003	25.00	20.00	16.00	15.00
ALLYL CAPROATE	2032	1210.00	1205.00	1201.00	1200.00
AMYL CINNAMIC ALDEHYDE	2061	260.00	255.00	251.00	250.00
BENZALDEHYDE (Roasted Cassia Oil Distillated Flavor)	2127	70.00	65.00	61.00	60.00
BENZYL ACETATE	2135	295.00	290.00	286.00	285.00
BENZYL ALCOHOL	2137	285.00	280.00	276.00	275.00
BUTYRIC ACID	2221	80.00	75.00	71.00	70.00
CARMELAN 20 (4Hydroxy-2,5-dimethyl-3(2H)-Furanone)	3174	230.00	220.00	210.00	200.00
CINNAMIC ALDEHYDE	2286	42.00	37.00	33.00	32.00
ETHYL ACETATE	2414	25.00	20.00	16.00	15.00
ETHYL BUTYRATE	2427	81.00	76.00	72.00	71.00
ETHYL CAPROATE	2439	30.00	25.00	21.00	20.00
ETHYL CINNAMATE	2430	160.00	155.00	151.00	150.00
ETHYL ISO BUTYRATE	2428	270.00	265.00	261.00	260.00
ETHYL PROPIONATE	2456	135.00	130.00	126.00	125.00
FERMENTA BERRY (Nat. Ionone)	2594	1550.00	1525.00	1510.00	1500.00
HEXYL ACETATE	2565	550.00	525.00	500.00	475.00
HEXYL ALCOHOL	2567	525.00	500.00	475.00	450.00
HEXYL N-BUTYRATE	2568	460.00	455.00	451.00	450.00
ISO AMYL ACETATE	2055	25.00	20.00	16.00	15.00
ISO AMYL ALCOHOL	2057	14.00	9.00	5.00	4.00
ISO AMYL BUTYRATE	2060	120.00	115.00	111.00	110.00
ISO AMYL PROPIONATE	2082	190.00	185.00	181.00	180.00
ISO BUTYL ACETATE	2175	48.00	43.00	39.00	38.00
ISO BUTYL BUTYRATE	2187	120.00	115.00	111.00	110.00
ISO BUTYL PROPIONATE	2212	190.00	185.00	181.00	180.00
ISO BUTYRIC ACID	2222	265.00	260.00	257.00	255.00
ISO JASMONE	3916	510.00	505.00	501.00	500.00
MALTONE		100.00	95.00	90.00	85.00
MALTONE EXTRA		130.00	125.00	121.00	120.00
MALTONE OIL SOLUBLE		130.00	125.00	121.00	120.00
METHYL ANTHRANILATE (Mandarin Pettigrain F.D.)	2682	2500.00	2500.00	2500.00	2500.00
OIL OF BITTER ALMOND	2046	110.00	105.00	101.00	100.00
PROPIONIC ACID	2924	160.00	155.00	151.00	150.00
RASPBERRY KETONE 4(p-Hydroxy Phenyl 2Butanone)	2588	1250.00	1200.00	1150.00	1100.00

QUESTION 5

847520104

State of New Jersey
Department of Environmental Protection and Energy
Environmental Safety, Health and Analytical Programs
CN 424
Trenton, N.J. 08625-0424
Tel: (609) 984-7573
Fax: (609) 633-7031

Robert C. Shinn, Jr.
Commissioner

CERTIFIED MAIL P627 061 351
RETURN RECEIPT REQUESTED

APR 15 1994

Yury Langer
Elan Chemical Company
268 Doremus Ave
Newark, N.J. 07105

SUBJECT: Discharge Prevention, Containment and Countermeasure Plan and Discharge Cleanup and Removal Plan Approval.

DIFF# 071400412001
Elan Chemical Company
Newark, N.J. 07105
Newark, Essex County

Dear Mr. Langer:

The Bureau of Discharge Prevention (bureau) is pleased to inform you of the approval of the Discharge Prevention, Containment and Countermeasure (DPCC) Plan and the incorporated Discharge Cleanup and Removal (DCR) Plan for Elan Chemical Company. The DPCC/DCR plan was deemed administratively complete on September 21, 1993, and technically reviewed by the bureau in accordance with N.J.A.C. 7:1E-1.1 et seq. Implementation of the DPCC/DCR plan shall begin immediately upon your receipt of this approval. A copy of the approved plan shall be readily available onsite at all times.

Please note that the bureau is suspending enforcement of the financial responsibility requirements until August 31, 1994. If the properly executed finanical forms are not submitted by this date, you may be subject to a first offense penalty of $15,000 for failure to demonstrate financial responsibility as cited in N.J.A.C. 7:1E-4.5 (a) & (b).

The bureau will conduct inspections of your facility to verify the successful implementation of upgrades for the prevention and control of discharges in accordance with the schedule included in the DPCC/DCR plan and for overall compliance with the approved DPCC/DCR plan. Failure to comply may result in the assessment of civil administrative penalties and the revocation of this approval.

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Information which supplements the submitted DPCC/DCR plans prior to plan approval, whether as a result of the administrative or technical review process, must be incorporated as part of the plans. This may be accomplished either by revising the entire DPCC/DCR plans or by revising selected pages which may then be inserted into the existing plan.

If you have any questions or would like to schedule a meeting to discuss the specific issues regarding your plan, please contact myself at (609) 984-7573.

Sincerely,

Gary Sobin
Project Manager
Bureau of Discharge Prevention

C: Jayne Warne, Matrix Environmental

847520106

MATRIX

DISCHARGE PREVENTION, CONTAINMENT AND COUNTERMEASURE (DPCC) PLAN AND DISCHARGE CLEANUP AND REMOVAL (DCR) PLAN

Prepared for:

Elan Chemical Company, Inc.
268 Doremus Avenue
Newark, NJ 07105

Prepared by:

MATRIX Environmental Management, Inc.
76 Ashland Avenue
West Orange, NJ 07052

MATRIX Project No. 93W100

August 1, 1993

847520107

MATRIX

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D	LEPC Agreement
E	Environmentally Sensitive Areas Protection Plan

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1.0 INTRODUCTION

This Discharge Prevention, Containment and Countermeasure (DPCC) Plan has been prepared by **MATRIX Environmental Management, Inc.** (MATRIX) for the Elan Chemical Company, Inc. (Elan) facility located in Newark, New Jersey. The Elan facility is bordered by Doremus Avenue to the west and the Passaic River to the east. Elan is a chemical facility which produces flavors and fragrances for manufacturing use. This Plan describes procedures and equipment in place to prevent and control the discharge of hazardous substances, as defined by N.J.A.C. 7:1E-1.7, stored in aboveground tanks, drums and various containers. Based on the above total liquid storage capacity of 252,450 gallons, Elan is considered a "major facility" as defined by N.J.A.C. 7:1E-1.6 and is therefore required to meet the standards for discharge prevention and control as described in N.J.A.C 7:1E. A schedule for upgrading the facility to fully meet these standards is provided in Section 13.0 of this Plan.

The hazardous substance storage areas addressed in this Plan were identified by MATRIX during site inspections conducted on February 25, April 19 and July 21, 1993. These areas are described in detail in Section 3.0. Additional information contained in this Plan, as required by N.J.A.C. 7:1E-4.3, includes the following:

- The name, telephone number and location of the facility including street and mailing address, county, municipality, tax lot and block number, and the coordinate centroid in the New Jersey State Plane.
- The name(s), telephone number(s) and business address(es) of the owner or operator of the facility.
- A General Site Plan of the facility at a scale of one inch equals 50 feet, showing the location of storage tanks, transfer areas, and structures used for the prevention of discharges, and all facility fencing and gates.
- A description of all hazardous substance storage areas and a schedule for integrity testing and maintenance or reconstruction, pursuant to N.J.A.C. 7:1E-2.2.
- A description of truck loading and unloading areas, pursuant to N.J.A.C. 7:1E-2.3.

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- A description of all secondary containment, including their capacity and materials of construction, pursuant to N.J.A.C. 7:1E-2.6.
- A description of all leak detection and monitoring procedures, pursuant to N.J.A.C. 7:1E-2.10.
- An outline of the housekeeping and maintenance program, pursuant to N.J.A.C. 7:1E-2.11.
- An outline of the personnel training program pursuant to N.J.A.C. 7:1E-2.12.
- A description of the physical security measures at the facility, pursuant to N.J.A.C. 7:1E-2.13.
- A catalog list of all standard operating procedures that will be written pursuant to N.J.A.C. 7:1E-2.14.
- A description of the record keeping system employed by the facility, pursuant to N.J.A.C. 7:1E-2.15.

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2.0 GENERAL FACILITY INFORMATION

2.1 General Information

Name and Location of Plant:

Name:	Elan Chemical Company
Location:	268 Doremus Avenue Newark, NJ 07105
Telephone Number:	(201) 344 8014
County:	Essex
Tax Lot and Block No:	Lots 8, 8A, 9A & 20; Block 5014
NJ State Plane Coordinate Centroid:	N689, 000 E2, 150, 6000
Municipality Name:	Newark

Facility Mailing Address:

Elan Chemical Company
268 Doremus Avenue
Newark, NJ 07105

Facility Operator:

Mr. Jerry Guerrera
Telephone Number: (201) 344-8014 - work

Response Coordinator:

Mr. Al Roque
Telephone Number: (201)344-8014 - work

2.2 Facility Drainage and Spill Control System

Drainage at the facility flows towards the Spill Control System located throughout the facility. This system prevents any discharge from leaving the Elan Property. The Spill Control System is designed to capture any and all spills within the Plant which originate outside the areas that are protected by secondary containment. This system is comprised of a series of drains, catch basins, sumps, trenches and underground piping located throughout the facility. The entire facility is paved with impermeable material, either concrete or asphalt, with the exception of the city easment located along the south side of the site.

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Any potential discharges on-site would flow towards the drains or catch basins and be pumped to the on-site treatment system. The on-site treatment system discharges the treated effluent at the Passaic Valley Sewerage Authority. Also, the west and north boundaries of the property have either an asphalt berm or concrete wall to prevent discharges from leaving the property.

Three floods have occurred in the past five years, with the most recent flooding event occurring in December of 1992. Waterlines on facility walls indicate floodwaters up to 36 inches above ground elevation. However, all hazardous substances are located above the flood elevation or within a secondary containment system which prevents them from being transported or discharged into flood waters. There are no stormsewers located on-site.

2.3 Description of Discharge Events

A discharge of 20 gallons to 25 gallons of benzylchloride occurred in October of 1992. A small fire also developed in the Doremus Avenue driveway in October of 1992. The discharge resulted from a drum meltdown associated with fire.

2.4 Flood Control Procedures

Hazardous materials which are stored outside may be subject to flooding. Consequently, Elan will install a fence along the east side of the property bounded by the Passaic River. The fence will prevent partial drums of finished goods or raw materials from floating off the Elan property with high flood waters.

In addition, in the event of a potential flood, any bulk tank trucks inthe yard for loading or unloading are to be immediately turned away and removed from the facility. If this is not possible, then Elan will make sure that all valves are closed and hoses disconnected and secured.

3.0 HAZARDOUS SUBSTANCE STORAGE AREAS

Storage, process, and transfer areas located throughout the facility are used to store and handle a variety of raw and intermediate products within Aboveground Storage Tanks (ASTs) and Process Tanks (PTs). Most storage areas have secondary containment capable of holding the contents of the largest tank plus six inches of accumulated rain water. Where appropriate, volume calculations for secondary containment are provided in Appendix B. A description of the secondary containment for hazardous substances stored, handled, processed, or transferred are included in the following sections.

The facility piping which contains hazardous materials requires labeling. The piping will be marked by lettering, color banding or color coding to indicate the substance transferred through them. This upgrade will be performed in accordance with the Compliance Schedule included in Section 13.0 of the DPCC Plan.

The truck transfer areas which are paved with asphalt are not impermeable to all the hazardous materials being transferred. These areas will be washed down frequently to prevent hazardous materials from permeating the asphalt. At that time when the asphalt is beyond repair and requires upgrading, the asphalt will then be replaced with a material impermeable to the hazardous materials being transferred.

The facility operates no underground storage tanks, transmission pipelines, underground pipelines, marine transfer facilities or mobile storage tanks. Integrity testing is required on all aboveground storage tanks (ASTs) with a capacity greater than 2,000 gallons as per API 653. Integrity test results will be supplied to the NJDEPE within 30 days of the test performance. Refer to Figure 1, General Site Plan, for the locations of each area.

The locations of hazardous substance areas at the Elan facility were identified by MATRIX during the site inspections conducted on February 25, April 19, and July 21, 1993. A description of each area is described below:

3.1 PTs 104A, 104E, 104F, 104G, and ASTs 105, 107 and 78

Storage Area (N.J.A.C. 7:1E-2.2)

PTs 104A, 104E, 104F, and 104G are all 12,000 gallon vertical aboveground steel process tanks. AST 105 is a 5,000 gallon vertical aboveground fiberglass tank containing hydrochloric acid. AST 107 is a 8,000 gallon vertical steel tank containing sodium hydroxide 25%. Also, AST 78 is a 12,000 gallon vertical aboveground steel tank used to store hazardous wastes. A concrete slab underlies these tanks.

ASTs 105 and 107 tank valves are located approximately 1.5 feet aboveground.

Note that concrete dissolves in the presence of hydrochloric acid; however, the concrete slab is of sufficient thickness that in the event of a discharge of hydrochloric acid (HCL) in this area, the spill would be removed before the HCL could completely dissolve the concrete.

ASTs 105, 107 and 78 are not equipped with an audible or visual high level liquid alarm designed to alert personnel of overfills. These tanks also require initial integrity testing. All upgrades will be performed in accordance with the Compliance Schedule included in Section 13.0 of the DPCC Plan.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The secondary containment system is present at this location and consists of a 19 feet x 77 feet x 4 foot high wall. The walls of the secondary containment system are constructed of masonry blocks and the floor is constructed of concrete. The containment capacity is sufficient to contain a discharge from the largest tank including six inches of rain water.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is one transfer area associated with the hazardous waste tank. A valve is located on top of the block wall which transfers the hazardous waste. This area is paved with asphalt. There is no secondary containment associated with this transfer area. However, any discharge in this area would be directed to a drain connected to the on-site treatment system. Wheel chocks are available to help prevent accidental or premature withdrawal of the tank truck. Tank trucks in the process of being loaded are attended at all times during the procedures.

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3.2 ASTs 104B, 104C, 72, 73, 74, 75, 76 and 108

Storage Area (N.J.A.C. 7:1E-2.2)

ASTs 104B and 104C are 12,000 gallon vertical aboveground steel tanks used for storage of sodium hydroxide 5%. AST 72, a vertical aboveground 5,000 gallon steel tank containing methanol. ASTs 76 and 108, which are both 9,000 gallon vertical aboveground steel tanks store toluene.

AST 73 is presently not-in-use. ASTs 74 and 75 are 9,000 gallon vertical aboveground steel tanks. AST 74 contains sodium ethylate and AST 75 contains ethyl alcohol. Neither sodium ethylate or ethyl alcohol are considered a hazardous substance in accordance with 7:1E-Appendix A. ASTs 104B, 104C, 76 and 78 are not equipped with audible or visual overfill devices and will be integrity tested as per the Compliance Schedule included in Section 13.0. All tanks are located approximately 1.5 feet above ground level.

Secondary Containment (N.J.A.C. 7:1E-2.6)

A secondary containment system is present and consists of a 29.5 feet x 77 feet x 6 feet high wall. The walls are constructed of masonry blocks. The floor is constructed of concrete. The dike capacity is sufficient to contain a discharge, which accounts for 6 inches of rainwater. All pipes leading to and from the tank are aboveground. No incompatible materials drain into this system.

Transfer Area (N.J.A.C. 7:1E-2.3)

Two transfer areas occur in this vicinity. AST 72 transfers methanol adjacent to AST 104D on the west side of the secondary containment. The methanol from AST 72 flows through a 1.5" inner diameter plastic hose and loads 55 gallon drums. This area is paved with asphalt. The unloading area does not have secondary containment, but the area does slope towards a drain connected to the on-site treatment system.

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A second transfer area occurs on the east side of this storage area. This area transfers toluene, caustic soda, ethyl alcohol, methanol and hydrochloric acid. This area is paved with asphalt. This eastern transfer area also lacks secondary containment. However, any discharge in this area would be directed to a drain connected to the on-site treatment system. Wheel chocks are available to help prevent accidental or premature withdrawal of a tank truck. Tank trucks in the process of being loaded or unloaded are attended at all times during the procedure.

3.3 PT 104D

Storage Area (N.J.A.C. 7:1E-2.2)

PT 104D is a 12,000 gallon vertical aboveground steel process tank containing sodium hydroxide 5%. A concrete base underlies this tank.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is presently no secondary containment present at PT 104D, however, there is a diversion system. Any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

No transfer areas are associated with this tank. Product is transferred to and from process areas throughout the facility.

3.4 AST 50

AST 50 is a 14,500 gallon vertical aboveground steel water tank. This tank is not discussed further in this Plan.

3.5 AST 49

Storage Area (N.J.A.C. 7:1E-2.2)

AST 49 is an 8,000 gallon vertical aboveground tank constructed of aluminum and used to store #4 fuel oil. An asphalt base underlies this tank. This tank has a visual high level liquid alarm. All valves are located within the secondary containment and are easily accessible. This tank requires initial integrity testing and will be tested per the Compliance Schedule in Section 13.0. The tank valve is located approximately 1 foot above ground level.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The immediate secondary containment system at this location consists of a 5 feet x 5 feet x 4 feet high wall. This secondary containment system is part of a larger sytem that contains ASTs T51, T52, T53 and T54. The walls of this system are constructed of masonry blocks and the floor is constructed of concrete. The secondary containment system is sufficient to contain a discharge from this tank. However, any discharge from this tank would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area located with this tank. #4 fuel oil is transferred to this tank from AST 150 via an aboveground pipe.

3.6 ASTs 51, 52, 53 and 54

AST 51 is a 4,000 gallon hexanol/octanol stainless steel tank. ASTs 52 and 54 are both 4,000 gallon vertical aboveground stainless steel tanks which store octanol. AST 53 is a 7,000 gallon vertical aboveground aluminum tank which stores hexanol. The contents of these tanks are not considered hazardous substances in accordance to N.J.A.C. 7:1E-Appendix A and consequently are not discussed further in this Plan.

3.7 ASTs 55, 56, 57 and 58

Storage Area (N.J.A.C. 7:1E-2.2)

AST 55 is a 4,500 gallon stainless steel tank containing ethyl alcohol 2B. ASTs 56 and 57 are stainless steel 1,300 gallon tanks also containing ethyl alcohol 2B. Ethyl alcohol 2B is not considered a hazardous substance in accordance with N.J.A.C. 7:1E-Appendix A and consequently these ASTs are not discussed further in this Plan.

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AST 58 is a stainless steel, vertical aboveground tank used for the storage of potassium hydroxide 45%. This tank has a capacity of 4,500 gallons and is not equipped with a high level liquid level alarm. This tank also requires initial integrity testing. A high level alarm will be installed and integrity testing will be performed as per the Compliance Schedule in Section 13.0. The tank valve for AST 58 is located approximately 1 foot above ground level.

Secondary Containment (N.J.A.C. 7:1E-2.6)

AST 55, 56, 57 and 58 are all located within the same secondary containment system. This system is 24 feet x 12 feet x 4 feet high. The walls are constructed of masonry blocks and the base is constructed of concrete. The dike has a sufficient capacity to accommodate a discharge from AST 58 plus six inches of rainwater. All pipes leading to and from this tank are aboveground.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is one transfer area located with AST 58. The transfer area consists of a valve located on top of the masonry block secondary containment system wall which extends outside of the secondary containment. This area is paved with asphalt. There is no secondary containment associated with the transfer area. However, any discharge in this area would be directed to a drain connected to the on-site treatment system. Wheel chocks are available to help prevent accidental or premature withdrawal of the tank truck. Tank trucks in the process of being loaded are attended at all times during the procedures.

3.8 ASTs 59, 60A, 60B, 60C and 60D

Storage Area (N.J.A.C 7:1E-2.2)

AST 59 is a 4,500 gallon vertical stainless steel tank which contains diethyl sulfate. ASTs 60A, 60B, 60C and 60D are all 1,300 gallon, vertical stainless steel tanks which also contain diethyl sulfate.

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All of these tanks are interconnected with piping. A concrete base underlies these tanks. ASTs 60A, 60B, 60C and 60D are all less than 2,000 gallons and are not required to be equipped with a high level alarm, nor do they require integrity testing. AST 59 is not equipped with a high level liquid alarm. AST 59 requires initial integrity testing. The installation of high level alarms and initiation of integrity testing will be performed as per the Compliance Schedule in Section 13.0. All of the these ASTs have valves located approximately 1 foot above ground level.

Secondary Containment (N.J.A.C. 7:1E-2.6)

A secondary containment system surrounds the tanks. This system is 20.5 feet x 12 feet x 4 feet high. The walls of a dike are constructed of masonry blocks, while the base is constructed of concrete. The dike capacity is sufficient to accommodate a 4,500 gallon discharge plus six inches of rainwater.

Transfer Area (N.J.A.C. 7:1E-2.3)

The transfer area consists of a single valve located on the top of the masonry block secondary containment wall. This area is paved with asphalt. The loading area does not have secondary containment. However, any discharge in this area would be directed to a drain connected to the on-site treatment system. Wheel chocks are available to help prevent accidental or premature withdrawal of the tank truck. Tank trucks in the process of unloading are attended at all times.

3.9 AST 62

Storage Area (N.J.A.C. 7:1E-2.2)

AST 62 is a 1,300 gallon aboveground stainless steel tank containing xylene. A concrete base underlies this area. AST 62 is less than 2,000 gallons and is not required to have a high level liquid alarm, nor does this tank require integrity testing. AST 62 has a valve located approximately 1 foot above ground level.

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Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment present at this location, however, there is a diversion system. Any discharge in this area would be directed to a drain connected to the on-site sewer.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area associated with this tank. Product is transferred to and from process areas throughout the facility.

3.10 PTs 80, 81, 82, 83, 84, and 137

Storage Area (N.J.A.C. 7:1E-2.2)

PTs 80, 81, 82, 83, 84 and 137 are all process tanks located adjacent to the Processing Building. PT 80 is a 1,300 gallon horizontal stainless steel tank containing aldehyde C-14. PT 81 is a 2,500 gallon horizontal stainless steel tank containing ethyl p-ethoxy benzoate. PT 82 is a 2,000 gallon tank which is not in use. PT 83 is a 2,000 gallon horizontal stainless steel tank containing acetophenone. PTs 84 and 137 are 2,000 gallon horizontal tanks. PT 84 is a stainless steel tank which stores gamma-nonalactone. PT 137 is a fiberglass tank which has a high level control valve and stores washed toluene. PTs 80, 81, 82, 83, 84 and 137 are not required to have high level alarms or integrity testing.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment associated with these tanks. However, any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area associated with these tanks. Product is transferred to an from process areas throughout the facility.

847520121

3.11 ASTs 200 and 201

Storage Area (N.J.A.C. 7:1E-2.2)

ASTs 200 and 201 are located south of the Processing Building and immediately north of the Effluent Pit. AST 200 is a 2,000 gallon stainless steel tank which stores sodium hydroxide 25%. AST 201 is a 1,500 gallon fiberglass tank which contains Hydrochloric Acid.

These tanks aid in adjusting the pH in the effluent stream. AST 200 and 201 do require high level alarms or integrity testing since there capacity is 2,000 gallons or less. Tank valves are located at ground level.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment associated with these tanks. However, any discharge from these tanks would be diverted to a drain to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is one transfer area associated with both of these tanks. This transfer area is located at the southwest corner of the Effluent Pit. There is presently no secondary containment and one can not be constructed at this location because this area is located within a city easement. A new transfer area associated with these tanks will be constructed east of the Effluent Pit. The new transfer area will divert any discharges to the on-site treatment system. This area will be upgraded as per the Compliance Schedule in Section 13.0.

Wheel chocks are available to help prevent accidental or premature withdrawal of the tank truck. Tank trucks in the process of unloading are attended at all times.

3.12 AST 17

Storage Area (N.J.A.C. 7:1E-2.2)

AST 17 is a 3,000 gallon process tank that produces sodium ethylate. This area is paved with concrete. This process tank does not require a high level liquid alarm or integrity testing.

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Secondary Containment (N.J.A.C. 7:1E-2.6)

This tank does not have a secondary containment system, however, there is a diversion system. Any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area with this tank. Product is transferred to and from the process areas throughout the facility.

3.13 PTs 113, 132 and 133

Storage Area (N.J.A.C. 7:1E-2.2)

PT 113 is a 4,500 gallon vertical, fiberglass process tank. PT 133 is a 3,000 gallon vertical steel process tank containing toluene. PT 132 is a 300 gallon counter current extractor involved in processing. These process tanks do not require high level liquid alarm or integrity testing.

Secondary Containment (N.J.A.C. 7:1E-2.6)

A secondary containment system is present at this location which consists of masonry block walls and a concrete slab. The volume is sufficient to contain a discharge from the largest process tank including six inches of rainwater.

Transfer Area (N.J.A.C. 7:1E-2.6)

There is no transfer area associated with these tanks. Product is transferred to and from process areas throughout the facility.

3.14 ASTs 100, 101, 102, and PTs A1, A2, A3, A4 and A5

Storage Areas (N.J.A.C. 7:1E-2.2)

ASTs 101 and 102 are 1,800 gallon steel tanks that contain a mixture of water, granulated corn cob and caustic. Valves are located 1 foot above ground level for AST 100 and 2 feet above ground level for ASTs 101 and 102. PTs A1, A2, A3, A4 and A5 are stainless steel high pressure autoclaves that process the contents of ASTs 101 and 102 into a different form.

These tanks vary in size from 200 gallons to 1,500 gallons. Tank valves are located approximately 2 feet above ground level. A concrete slab underlies these tanks.

The ASTs do not require high level alarms or integrity testing since their capacities are all less than 2,000 gallons.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment present at this location, however, there is a diversion system. Any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There are no transfer areas associated with these tanks. Product is transferred to and from process areas throughout the facility.

3.15 PTs R38, S15, R35, R35R, R85, PF10, PF9, PF8 and PF7

Storage Area (N.J.A.C. 7:1E-2.2)

PTs R35, R35R, R37 and R38 are all reactors. R35 is 2,200 gallons, R35R is 1,500 gallons, R37 is 1,200 gallons and R38 is 4,000 gallons. PTs 15 is a 1,800 gallon still. PF8, PF9 and PF10 are all 50 gallon glass-lined pfaudlers. These process tanks are used in making whatever batch of product is needed at that time (usually toluene). These PTs do not require devices to detect overfills nor do they require integrity testing.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment present at this location. However, any discharge in this area would be directed to a drain connected to an on-site treatment system.

Transfer Areas (N.J.A.C. 7:1E-2.3)

There are no transfer areas associated with these tanks. Product is transferred to and from process areas throughout the facility.

847520124

3.16 ASTs 150 and 151

Storage Areas (N.J.A.C. 7:1E-2.2)

AST 151 is presently not-in-use. AST 150 is a 14,000 gallon steel tank containing #4 fuel oil. All valves are accessible in the event of a discharge. This tank is not equipped with an audible or visual high level liquid alarm designed to alert personnel of overfills. Also, this tank requires initial integrity testing. All upgrades will be performed in accordance with the Compliance Schedule in Section 13.0.

Secondary Containment (N.J.A.C. 7:1E-2.6)

There is no secondary containment present at this location. However, any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

Fuel trucks load AST 150 from Doremus Avenue, and consequently, this area does not have a secondary containment system. This transfer area will be moved within the Elan property boundaries as per the Compliance Schedule in Section 13.0.

Wheel chocks are available to help prevent accidental or premature withdrawal at the tank truck. Tank trucks in the process of unloading are attended at all times.

3.17 ASTs 134, 204, 205, 206 and 207

Storage Area (N.J.A.C. 7:1E-2.2)

AST 134 and 135 are 12,000 gallon storage tanks which contain effluent pre-treatment. AST 204 is a 5,000 gallon tank which stores extracted effluent. AST 206 is a 3,500 gallon tank; AST 207 is a 2,000 gallon tank. AST 206 and 207 store iso par H used in the effluent pre-treatment process. The contents of these tanks are not considered hazardous substances in accordance with N.J.A.C. 7:1E-Appendix A and consequently are not discussed further in this Plan.

847520125

3.18 Vanilla Warehouse Building

Storage Area (N.J.A.C. 7L:1E-2.2)

The Vanilla Warehouse Building contains ethyl alcohol (flammable), bulk vanilla product, vanilla extract and isopropyl alcohol. These materials are stored in 55 gallon steel drums, 1 gallon steel drums, paper drums and plastic bottles. The Warehouse Building is well illuminated and is constructed of masonry walls and a concrete floor. The Vanilla Building contains 23 stainless steel process tanks (VS1-VS3, EX1-EX4, T1-T3, T7-T19) which do not contain hazardous materials. Four additional stainless steel storage tanks are located outside the Vanilla Warehouse Building (T4 -T6, T20). AST T4, T5 and T6 contain ethyl alcohol which is not considered a hazardous substance in accordance with N.J.A.C. 7:1E - Appendix A. The capacity and contents of these tanks are listed on page 3-15. AST T20 requires initial integrity testing and a high level liquid alarm. All upgrades will be performed in accordance with the Compliance Schedule in Section 13.0.

Secondary Containment (N.J.A.C. 7:1E-2.6)

AST T20 does not have secondary containment system, however, any discharge in this area would be directed to a drain connected to the on-site treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is a transfer area with two loading bays located at the west end of the Vanilla Warehouse. Finished product is unloaded at this location. This area is well illuminated. This area is paved with asphalt. There is no secondary containment associated with this transfer area. However, any discharge in the transfer area would be diverted to the on-site treatment system.

There is an additional transfer area on the south side of the Vanilla Building. This area transfers ethyl alcohol to T4 and isopropyl alcohol to T20. Wheel chocks are available to help prevent accidental or premature withdrawal of the tank truck. Trucks in the process of unloading are attended at all times. There is no secondary containment associated with this transfer area. However, any discharge in this area would be diverted to the on-site treatment system.

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MATRIX

ABOVEGROUND STORAGE TANKS AND PROCESS TANKS IN VANILLA BUILDING

Tank No.	Cap. (Gal)	Contents	Cas No.	Dimensions	Mat. of Const.
T1*	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 12' H	Stainless Steel
T2*	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 12' H	Stainless Steel
T3*	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 12' H	Stainless Steel
T4	5,000	Ethyl Alcohol	64-17-5	8' D x 12' H	Stainless Steel
T5	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 12' H	Stainless Steel
T6	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 12' H	Stainless Steel
T7*	1,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	6' D x 10' H	Stainless Steel
T8*	300	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	3' D x 5' H	Stainless Steel
T9*	500	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	3' D x 8' H	Stainless Steel
T10*	500	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	3' D x 8' H	Stainless Steel
T11*	2,500	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 7' H	Stainless Steel
T12*	500	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	3' D x 8' H	Stainless Steel
T13*	3,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 8' H	Stainless Steel
T14*	3,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D x 8' H	Stainless Steel
T15*	100	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	2' D x 4' H	Stainless Steel
T16*	500	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	3' D x 8' H	Stainless Steel
T17*	150	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	2' D x 6' H	Stainless Steel
T20	4,000	Isopropyl Alcohol	64-17-5	8' D x 12' H	Stainless Steel
VS1*	100	Vanilla Extract Distillation Unit	64-17-5	8' D x 12' H	Stainless Steel
VS2*	200	Vanilla Extract Distillation Unit	64-17-5	8' D x 12' H	Stainless Steel
VS3*	300	Vanilla Extract Distillation Unit	64-17-5	8' D x 12' H	Stainless Steel
EX1*	****	Vanilla Extracting Unit	64-17-5	****	Stainless Steel
EX2*	****	Vanilla Extracting Unit	64-17-5	****	Stainless Steel
EX3*	****	Vanilla Extracting Unit	64-17-5	****	Stainless Steel
EX4*	****	Vanilla Extracting Unit	64-17-5	****	Stainless Steel

* Indicates process tank.

3.19 Natural Flavors Building

The Natural Flavors Building is not owned or operated by Elan. This separate facility produces less than 10,000 gallons of hazardous substances and is not regulated by N.J.A.C. 7:1E.

3.20 Temperature Controlled Storage Area

Storage Area (N.J.A.C. 7:1E-2.2)

The Temperature Controlled Storage Area is a trailer type building which contains acrylic acid stored in 55 gallon drums. Acrylic acid is required to be in a temperature controlled atmosphere.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The trailer serves as the secondary containment. Any potential discharge would not leave the trailer.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area at this building.

3.21 Crystallizer Room

Storage Area (N.J.A.C. 7:1E-2.2)

The Crystallizer Room contains heptane, a solvent. The room is contained within a concrete slab building, is well illuminated and contains floor drains.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The building serves as the secondary containment. Any potential discharge would not leave the building.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area at this building.

3.22 Dry Chemical Storage Area

Storage Area (N.J.A.C. 7:1E-2.2)

Hazardous chemicals stored in the dry chemical storage area include: Benzoic Acid, Cupric chloride, Para-formaldehyde, and zinc.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The building serves as the secondary containment. Any potential discharge would not leave the building.

Transfer Area (N.J.A.C. 7:1E-2.3)

There is no transfer area at this building.

3.23 Production Building

Storage Area (N.J.A.C. 7:1E-2.2)

PTs 109 and 111 are both 4,000 gallon process tanks. PT 110 is a 3,500 gallon process tank. These process tanks do not require initial integrity testing and high level alarms.

Secondary Containment (N.J.A.C. 7:1E-2.6)

The Production Building has a concrete slab which effectively serves as a secondary containment system. Also, floor drains are located within the building. These drains are connected to the treatment system.

Transfer Area (N.J.A.C. 7:1E-2.3)

There are no transfer areas associated with this building.

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4.0 DRUM STORAGE AREAS

Drum Storage Areas are located throughout the Elan facility. The primary Drum Storage Areas are located south of the Crystallizer Room, south of the Vanilla Warehouse Area and southeast of Trailers #1 - #17.

The Drum Storage Area located south of the Crystallizer Room consists of steel racks on which 55 gallon steel drums are stacked three-high. The lighting is adequate. This area is dedicated to the storage of "Work in Progress." The Drum Storage Area south of the Vanilla Warehouse consists of steel racks on which 55 gallon steel drums are stacked three-high. This Drum Storage Area is floored by asphalt. The lighting is adequate. This area is dedicated to finished goods, raw materials and "Work in Progress." There is no secondary containment present at either of these Drum Storage Areas, however, the Elan facility is graded so that any spill or discharge would enter either a catch basin or trench, and be pumped to the on-site treatment system.

The Drum Storage Area located southeast of the Trailers #1 - #17 contains raw materials stored in 55 gallon drums. This area is floored by asphalt and the lighting is adequate. This Drum Storage Area is bounded by a 4-inch asphalt curb which acts a secondary containment system. The secondary containment system is capable of containing entire contents of a 55-gallon drum in the event of a discharge.

The Drum Storge Area is floored by asphalt. Asphalt is not impermeable to many of the hazardous materials stored within this area. Consequently, the asphalt will be maintained free of cracks to prevent hazardous materials from entering the soil and/or groundwater. In addition, this area will be inspected daily.

At that time, when the asphalt is beyond repair and requires upgrading, the asphalt will then be replaced with a material impermeable to the hazardous materials stored within this area.

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5.0 PROCESS AREAS

Drainage at the process areas throughout the Elan facility are within a secondary containment system or diverted to the on-site treatment facility.

Process wastewater, cooling water pipes, plant drains and similar installations do not drain into the waters of New Jersey.

847520131

6.0 HOUSEKEEPING AND MAINTENANCE

Housekeeping and maintenance procedures routinely employed at the Elan facility are described below:

- Any employee who discovers a leak will immediately report the leak to the Response Coordinator as discussed in Section 3.0 of the attached DCR plan. The Response Coordinator will ensure that the leaking tank or container is either promptly repaired, replaced, or taken out of service. Released material will be contained and cleaned up immediately following discovery of the leak.

- Elan maintains an adequate supply of spill cleanup equipment for responding to minor leaks of hazardous substances. Protective equipment such as gloves, safety glasses, and coveralls are available for use from the Response Coordinator, if needed. Emergency response equipment is described in Section 4.0 of the DCR plan.

- The facility keeps on hand adequate quantities of sorbent material to contain and cleanup small leaks which may occur in the ordinary operations of the facility. An adequate supply of "Speedy Dry" is kept on site, sufficient to clean up small leaks or discharges as may be expected to occur in the ordinary operations of the facility.

- Secondary containment systems are maintained free of cracks through which hazardous substances could be discharged.

- Elan maintains daily innage and outage records of storage tank readings. Inventory will indicate the non obvious product loss such as could occur from tank bottoms or periodic thermal leakage when hidden.

847520132

7.0 PERSONNEL TRAINING PROGRAM

All personnel who handle hazardous substances on a routine or emergency basis must receive periodic training in accordance with N.J.A.C. 7:1E - 2.12. Presently, Elan does not have a personnel training program.

The Elan training program will be structured to include classroom and on the job training. The training program will be updated to include:

1. A written job description which includes the duties and responsibilities relating to hazardous substances for each position, including the education, experience and training necessary to qualify for the position.

2. Procedures to determine whether an employee has demonstrated the ability to carry out the duties and responsibilities of a specific position. The procedures used to determine whether an employee has demonstrated the ability to carry out duties and responsibilities of the specific position are as follows:

   - An employee must pass a written exam demonstrating understanding of duties related to hazardous substances for his/her position. The employee must also pass a practical examination, a "dry run" through his/her duties such as a simulation of whatever truck unloading, leak inspection, housekeeping or maintenance duties are included with the position. These exams are conducted by the employee's foreman or supervisor.

   - Employees involved with the hazardous materials response team shall undergo a written examination at the end of their course on hazardous material awareness or hazardous material operations.

847520133

3. Specific time periods of in-house hazardous substances training for each position are being developed. Typical time period are:

• Orientation	4 hours
• Specific hazardous substance training	8 hours
• On the job training	80 hours
• Trainee evaluation	2 hours
• Final qualification	1 hour
• Periodic refresher training	4 hours

A procedure is being established for tracking the progress of each employee at regular intervals. All employees assigned to hazardous waste operations are being trained and oriented in the following areas.

- Personnel Safety Equipment
- Emergency Procedures
- Emergency Equipment
- Communications and Alarms
- Response to Fire or Explosions
- Proper Handling and Storage of Waste
- Semi-Annual Emergency Drill
- Disposal of Waste to Hazardous Waste Treatment
- General Site Rules and Practices
- Identification of all Environmentally Sensitive Areas Delineated in the Plan

Refresher training will be offered once a year and will present an overview and updated information on:

- The standard operating procedures
- Hazardous substances material safety data sheets

847520134

- Safe handling of the hazardous substances, including protection of the surrounding community and the environment.
- Emergency procedures of fires, leaks and discharges.

Documentation of all training, evaluation and qualifying activities for each employee, will be kept at the facility. This includes:

- Identification of all personnel trained
- Job titles
- Subject covered
- Training dates

Employees of outside contractors that perform duties on the Elan site will receive appropriate training by their employers before entering the facility. Contractors will maintain their own records.

7.1 Contractor Training Review Program

Prior to admittance of any Contractor's employees on-site, the designated Response Coordinator shall provide the Contractor with the following information (in written form):

- listing of substances (including MSDS) to which the Contractor's employees may be exposed.
- location of such substances
- safety and discharge prevention procedures/policies in effect at the location which the Contractor's employees must follow.

The Contractor in turn shall supply Elan's Primary Response Coordinator with:

- listing of substances he intends to bring and/or use on-site
- copies of appropriate MSDS

847520135

- written evidence that he/she and his/her employees have read and understand and will abide by safety and discharge prevention policies and procedures.

The purchase order for the work the Contractor employees shall be doing on Elan's property shall contain, as a condition of acceptance, wording stating that the Contractor shall inform his/her employees of all hazardous substances in use and of the appropriate safety procedures and notices to be followed. Should any Contractor not agree to abide by this condition he/she shall be informed in writing, that he/she is ineligible to conduct work at Elan. All correspondence, copies of materials (documents presented to and received from the Contractor and purchase orders) shall be retained by the Response Coordinator.

Contractors must also supply Elan with records demonstrating a level of safety and discharge prevention training equal to or better than Elan's personnel. This is also a condition of their purchase order from Elan.

847520136

8.0 SECURITY

Elan's facility is secured by an eight foot high chain link fence on the south and west sides. The north side of the property is bound by a concrete wall installed by Nimco Metal Shredding. The Passaic River bounds the east side of the property. The facility has adequate lighting to detect leaks or discharges from storage and transfer areas. Access to the site is restricted to two locked entrances. A guard house is also located on site. No visitors are permitted to enter the property without authorization.

847520137

9.0 STANDARD OPERATING PROCEDURES

In accordance with N.J.A.C. 7:1E - 2.14, Elan will develop Standard Operating Procedures (SOPs). SOPs will be developed for all operations at the facility involving the use or transfer of hazardous substances. SOPs will be kept in the Primary Response Coordinator's office and made readily available to plant personnel. SOPs will be reviewed annually as part of the required training program. A schedule for development of SOPs is provided in Section 13.0.

All SOPs which are developed will include:

- Safety procedures related to each specific operation in the standard operating procedures.
- Procedures for visual inspection of equipment.
- Procedures to prepare equipment for maintenance, and inspection of maintenance work upon completion and prior to placement of equipment in service, and
- Log sheets and checklists where appropriate to the operation.

847520138

10.0 RECORD KEEPING

Elan shall maintain records of employee training and drills for discharge prevention, hazardous substances inventories and confirmation reports of discharges pursuant to N.J.A.C. 7:1E-5.8 for a period of 10 years.

Elan shall maintain records of integrity testing, inspection, major maintenance and major repair of all structures, equipment, and detection or monitoring, prevention or safety devices related to discharge prevention and response for the lifetime of the structure, equipment or device.

All records shall be available for inspection upon the request of the New Jersey Department of Environmental Protection and Energy (NJDEPE) or appropriate local agencies.

Records may be kept in an electronic or computerized form if they are adequately backed up.

847520139

11.0 LEAK DETECTION AND MONITORING

Elan will implement an inspection program in accordance with the schedule provided in Section 13.0. A general description of the inspection schedule is provided below.

All equipment and areas of the facility using hazardous substances will be visually inspected according to Standard Operating Procedures. The number of inspections required will be dependent on the area being inspected. Lighting, pumps, valves, and connections will visually be checked for leaks and working conditions before being used. On a daily basis, all secondary containment systems and on-site treatment system will be checked. On a weekly basis, all storage areas will be checked at the facility. On a quarterly basis, all other aboveground valves, pumps, flanges, connections and equipment, along with fences and locks will be inspected. Once every five years, the interior of a aboveground storage tank with a capacity greater than 2,000 gallons will be inspected. A detailed record of each visual inspection and any actions taken because of the inspection will be kept on-site. The "Daily Inspection Report" form which will be filled out after each inspection is included in the next page.

In case of fire, the alarm will be sounded continuously. The Supervisor will immediately summon the Fire Department (Elan is also connected with ADT alarm system) and put into effect the Emergency/Contingency Plan. The site will then be evacuated and closed if necessary.

847520140

ELAN CHEMICAL COMPANY, INC.
DAILY INSPECTION REPORT

All equipment and portions of the facility shall be visually inspected in accordance with standard operating procedures pursuant to N.J.A.C. 7:1E-2:14 in order to detect any leaks.

Inspector	Date	Comments

INITIAL

847520141

12.0 DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The following documents will be maintained, updated, and made available for NJDEPE's review. In addition, a catalog list of all such documents will be maintained, and will show title, identification number, and date of issue.

1. Facility Inventory of Hazardous Substances
2. Standard Operating Procedures
3. Facility Emergency Response Plan
4. Job Classifications and Job Descriptions
5. Housekeeping and Maintenance Program Procedures and Records
6. Integrity Testing

847520142

13.0 SCHEDULE FOR UPGRADING FACILITY

This DPCC plan addresses the requirements of N.J.A.C. 7:1E regarding discharge of hazardous substances. Elan will upgrade it's facility to meet the requirements for the DPCC Plan in accordance with the following schedule:

Required Upgrade	Completion Date
Aboveground Storage Tanks	
ASTs 105, 107 and 78	
• Provide high level alarms	December 1994
• Perform initial integrity testing	May 1994
ASTs 104B, 104C, 72, 76 and 108	
• Provide high level alarms	December 1994
• Perform initial integrity testing	May 1994
AST 49	
• Perform initial integrity testing	May 1994
AST 58 and 59	
• Provide high level alarm	August 1995
• Perform initial integrity testing	May 1994
AST 200 and 201	
• Upgrade Transfer Area	August 1995
AST 150	
• Provide high level alarm	August 1995
• Perform initial integrity testing	May 1994
AST T20	
• Provide high level alarm	December 1994
• Perform initial integrity testing	May 1994

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Upgrade Schedule (Cont.)

	Completion Date
In facility piping	
• In facility pipes containing a hazardous material will be marked by lettering, color banding or color coding to indicate the substance flowing through it	August 1994
Training Program	
• Implement employee training program described in N.J.A.C. 7:1E-2.12	August 1994
• Update employee job descriptions as required by N.J.A.C. 7:1E-2.12	August 1994
Standard Operating Procedures	
• Prepare Standard Operating Procedures (SOP's) in accordance with N.J.A.C. 7:1E-2.14	August 1994
Recordkeeping	
• Update recordkeeping system for the following documents: - Employee Training records - Job classifications and job descriptions - Process flow and piping and instrumentation diagrams - Emergency response drills - Hazardous substance inventory - Tank testing results - Inspection Logs - Maintenance Logs	August 1994
Inspection Schedule	
• Develop an inspection schedule in accordance with N.J.A.C. 7:1E-2.10	May 1994

847520144

MATRIX

TABLE 1
ABOVEGROUND STORAGE TANK LIST

Tank No.	*Cap. (Gal)*	*Contents*	*Cas No.*
17	3,000	Sodium Ethylate	
48	4,500	Water (Boiler Feed Tank)	*****
49	8,000	Fuel Oil #4	68476-31-3
50	14,500	Water	*****
51	4,000	Hexanol/Octanol	111-27-3
52	4,000	Octanol	111-87-5
53	7,000	Hexanol	111-27-3
54	4,000	Octanol	111-87-5
55	4,500	Ethyl Alcohol 2B	64-17-5
56	1,300	Ethyl Alcohol 2B	64-17-5
57	1,300	Ethyl Alcohol 2B	64-17-5
58	4,500	Potassium Hydroxide 45%	1310-58-3
59	4,500	Diethyl Sulfate	64-67-5
60A	1,300	Diethyl Sulfate	64-67-5
60B	1,300	Diethyl Sulfate	64-67-5
60C	1,300	Diethyl Sulfate	64-67-5
60D	1,300	Diethyl Sulfate	64-67-5
62	1,300	Xylene (ex Peeb)	1330-20-7
72	5,000	Methanol	67-56-1
73	2,500	Not In Use	*****
74	9,000	Sodium Ethylate	64-17-5
75	9,000	Ethyl Alcohol	64-17-5
76	9,000	Toluene	108-88-3
78	12,000	Hazardous Waste	
79	4,500	Toluene/Methanol	1330-20-7
80	1,300	Aldehyde C-14 (1st Dist.)	108-88-3
81	2,500	Ethyl p-Ethoxy Benzoate (Crude)	1330-20-7

MATRIX

82	2,000	Not In Use	*****
83	2,000	Acetophenone	98-86-2
84	2,000	gamma-Nonalactone (Lites)	108-88-3
100		Water	
101		Water, corn cob & caustic	1310-73-2
102		Water, corn cob & caustic	1310-73-2
104A	12,000	Sodium Hydroxide 5%	1310-73-2
104B	12,000	Sodium Hydroxide 5%	1310-73-2
104C	12,000	Sodium Hydroxide 5%	1310-73-2
104D	12,000	Sodium Hydroxide 5%	1310-73-2
104E	12,000	Sodium Hydroxide 5%	1310-73-2
104F	12,000	Sodium Hydroxide 5%	1310-73-2
104G	12,000	Sodium Hydroxide 5%	1310-73-2
105	5,000	Hydrochloric Acid	7647-01-0
107	8,000	Sodium Hydroxide 25%	1310-73-2
108	9,000	Toluene (Recovered)	108-88-3
113	4,500	Hydrochloric Acid	
132	300	Counter Current Extractor	108-88-3
133	3,000	Toluene X	108-88-3
134	12,000	Effluent Pre-Treatment	64742-48-9
137	2,000	Washed Toluene X	108-88-3
150	14,000	#4 Fuel Oil	
151	14,000	Not In Use	*****
152	500	Centrifuge Wash Tank	
200	2,000	Sodium Hydroxide 25%	1310-73-2
201	1,500	Hydrochloric Acid	7647-01-0
202	*****	Nitrogen	772-73-9
203	*****	Hydrogen	
204	5,000	Extracted Effluent	64742-48-9
205	12,000	Effluent Pre-Treatment	64742-48-9
206	3,500	Iso Par H	64742-48-9

207	2,000	Saturated Iso Par H	64742-48-9
209	300	Antifreeze (Propylene Glycol)	57-55-6
R34	3,000	Diethylsulfate, Potassium Hydroxide 45% and Xylene	
R36	6,000	Diethylsulfate, Potassium Hydroxide 45% and Xylene	
R38	4,000		
R35	2,200		

* See page 3-16 for a list of Aboveground Storage Tanks in the Vanilla Building

MATRIX

TABLE 2
EMERGENCY RESPONSE COORDINATORS
ELAN CHEMICAL COMPANY
NEWARK, NEW JERSEY

Primary	**Yury Langer**	Work Phone: (201) 344-8014 Ext. 106 (201) 268-0487 Beeper	Home Phone: (914) 362-6753
Secondary	**Karol Sulimirski**	Work Phone: (201) 344-8014 Ext. 120	Home Phone: (914) 357-4115
Secondary	**John Vassiliades**	Work Phone: (201) 344-8014	Home Phone: (718) 353-0777

MATRIX

TABLE 3
EMERGENCY ACTION CHAIN OF COMMAND AND EMERGENCY RESPONSE ORGANIZATIONS

It is the responsibility of the Primary Response Coordinator, or Alternate Response Coordinator, to notify the following agencies in the event of an environmental emergency. In the absence of the Primary Response Coordinator, the following chain of command will be followed:

EMERGENCY/ACTIONS TO BE TAKEN/CHAIN OF COMMAND (COC)

Fire

Call Newark Fire Department 201-733-7400
COC - Yury Langer, Karol Sulimirski, John Vassiliades

Injury

Call Hazmate Response 201-733-7400
COC - Yury Langer, Karol Sulimirski, John Vassiliades

Chemical Spill or Release

Minor - To be handled by Supervisor. Assistance from personnel can also be provided.

Major
- Coordination evacuation and calls for help
- For Hazmat Response call NFD 201-733-7400
- Call contractor

Regulatory & Township Response

MAKE TIMELY NOTIFICATION

COC - Yury Langer, Karol Sulimirski, John Vassiliades

MATRIX

TABLE 4
EMERGENCY EQUIPMENT LIST

Available Spill Cleanup Equipment

Two Cases 3M Absorbent Pads
Three Cases 3M Absorbent Socks
Four X 50 lb. bags SPEEDI-DRY
Two Brooms
One Shovel
One Dozen Rubber Gloves
One Case TYVEK Disposable Hooded Uniforms
One 3M Full Face Cartridge Respirator
Three Polyethylene
Two Pair Chemical Resistant Goggles
Four Over-Pak Drums (55 Gal.)
Self-Contained Breathing Apparatus
Oxygen Tank
Fire hoses
Portable Fire Extinguishers
Water-Jel Fire Blankets

MATRIX

APPENDIX A
HAZARDOUS SUBSTANCE SPILL RELEASE REPORTING FORM

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MATRIX

Instructions for Completing Hazardous Substance Spill/Release Reporting Form

This form is to be used whenever a reportable quantity or a significant amount of a hazardous substance is released to the environment (air, water, soil, etc.) In general, information on the form should be completed as soon as possible and prior to making notifications to regulatory agencies. Further information may also be added if appropriate. If it is difficult to determine whether a notification is required, it is recommended that a notification be made.

The information requested on this form is generally self explanatory. However, the sections of the report that require some thought are the description of the incident and specific precautions to be taken. Identify facts only, do no speculate. In most cases, the specific precautions to be taken can be obtained from the MSDS for the released material.

847520152

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ELAN CHEMICAL COMPANY
HAZARDOUS SUBSTANCE
SPILL/RELEASE REPORTING FORM

Date of Release_____ Time_____ Duration _____
Name & Phone # of person making notification_____
Release Location (Name, Address & Phone#)_____

Hazardous Material Released_____
(Chemical Name & CAS Number)
Quantity Released (Lbs.)_____ Above reportable quantity Yes No

Release to: Surface Water Soil Air Storm Drain Other

Brief description of release cause, effects, and remedial measures taken (indicate time or response)

Samples Taken - Yes/No Laboratory used _____

Agencies Notified by Phone	Phone #	Person Contacted	Date	Time

Local Emergency Planning Commission_____
State Emergency Response Commission_____
National Response Center 800-424-8802
Police\Fire Departments_____
Local Health Department_____
U.S. EPA_____
Other_____

Written report submitted: Yes No To be submitted to agency(s) before_____
On-Site response by agency: Yes No Agency(s)_____
Outside cleanup contractor name:_____ Phone_____
Facility and\or community evacuation required: Yes No
Specific precautions to take as a result of release (i.e. health risks, medical treatment, personal protective equipment, incompatible substances, etc.)_____

Signature of Elan Primary Response Coordinator_____

Note: Contaminated soils/materials may be hazardous waste and must be handled properly.

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MATRIX

APPENDIX B
SECONDARY CONTAINMENT
VOLUME CALCULATIONS

847520154

MATRIX

SECONDARY CONTAINMENT VOLUME CALCULATIONS

1. ASTs 104A, 104E, 104F, 104G, 105, 107

   Dike Area = 19' x 77' = 1,463 sf
   1,463 sf x 7.5 gallon/cf = 10,973 gallons/ft. dike height
   Required Height = 12,000 gallons/10,973 = 1.09 ft. dike height
   1' - 1' + 6" (rain) = 1 foot - 7 inches

   The actual height of 4 feet is sufficient.

2. ASTs 104B, 104C, 72, 73, 74, 75, 76 and 108

   Dike Area = 29.5' x 77' = 2,271.5 sf
   2,271.5 sf x 7.5 gallons/cf = 17,037 gallons/ft. dike height
   Required Height = 12,000 gallons/17,037 gallons/ft. dike height = 0.7 ft. dike height
   8.5 inches + 6 inches (rain) = 1foot - 2.5 inches

   The actual height of 6 feet is sufficient.

3. Tank 49

   Dike Area = 10' x 10.7' - (4.7' x 4.7')/2 = 96 sf
   96 sf x 7.5 gallons/sf = 720 gallons/ft. dike height
   8,000 gallons/720 gallons = 11.1 ft. dike height
   11.1' + 6" (rain) = 11.6' required height
   11.6' required height > 4' actual height

4. ASTs 55, 56, 57 and 58

   Dike Area = 24 feet x 12 feet = 288 sf
   288 sf x 7.5 gallons/cf = 2,160 gallons/ft. dike height
   Required Height = 4,500 gallons/2,160 gallons/ft. dike height
   2 feet + 6"(rain) = 2 feet - 6 inches

   The actual height of 4 feet is sufficient.

5. ASTs 59, 60A, 60B, 60C and 60D

   Dike Area = 20.5 feet x 12 feet = 246 sf
   246 sf x 7.5 gallons/cf = 1,845/ft. dike height
   Required Height = 4,500 gallons/1,845 = 2.4 ft. dike height

   2 feet - 5 inches + 6 inches (rain) = 2 feet - 11 inches

   The actual height of 3.4 feet is sufficient.

MATRIX

6. ASTs 113, 132, and 134

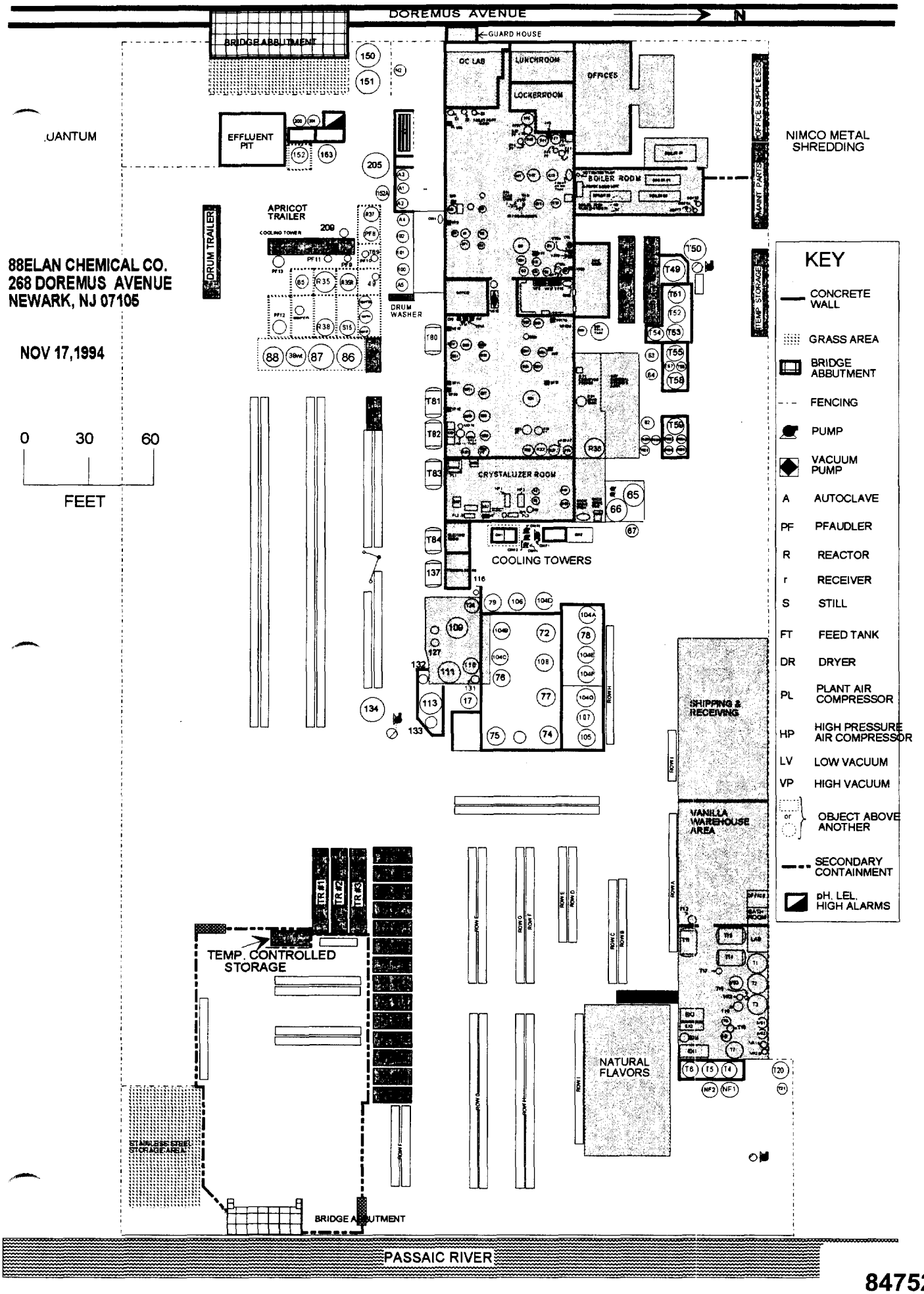
Dike Area = 202 sf + 68 sf + 32 sf = 302 sf
302 sf x 7.5 gallons/cf = 2,265/ft. dike height
Required =4,500 gallons/2,265 = 2.0 ft. dike height
2.0 + 6 inches (rain) = 2 feet - 6 inches

The actual height of 2.5 feet is sufficient.

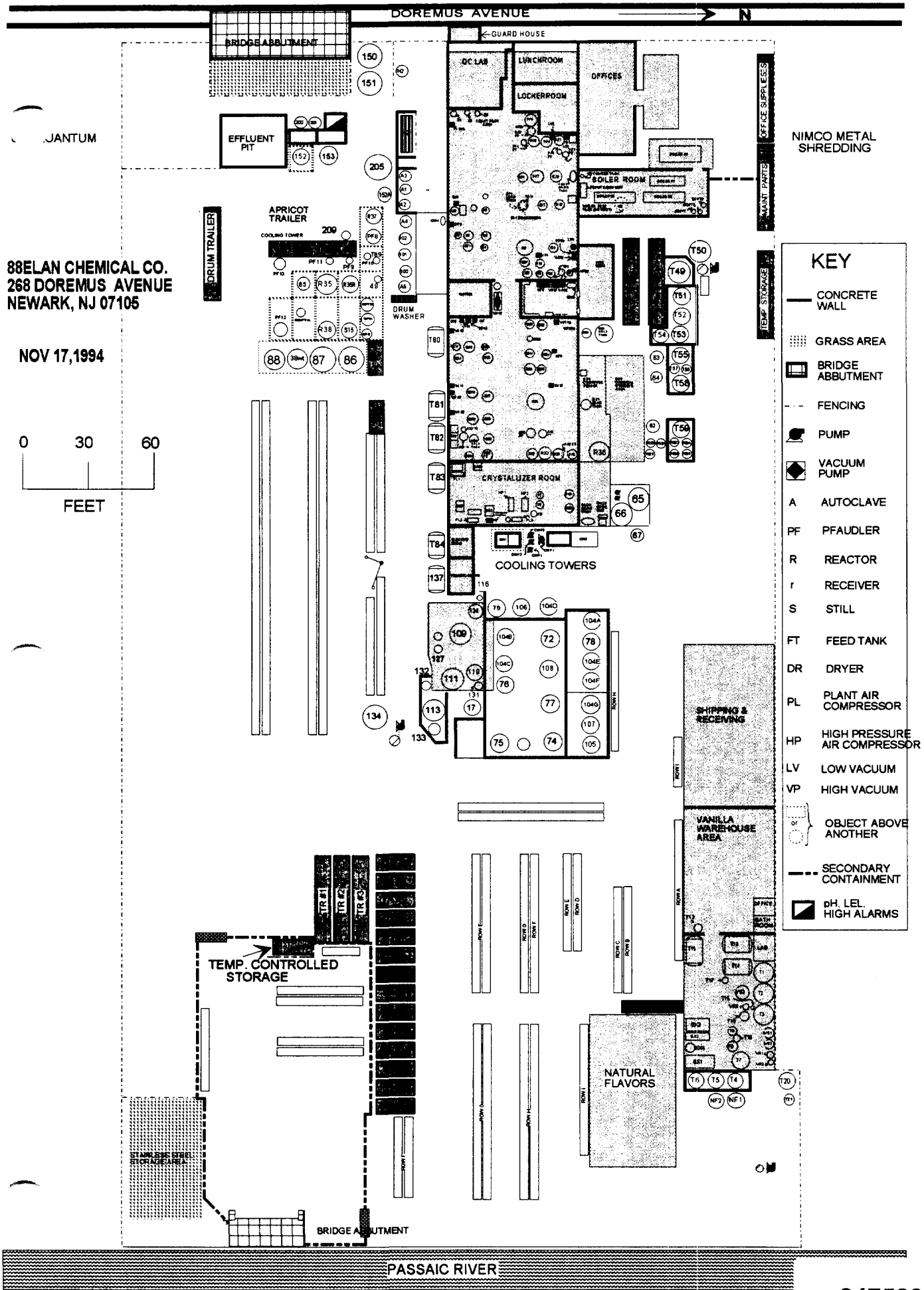
7. T4, T5, T6

Dike Area = 32 feet x 11 feet = 352 sf
352 sf x 7.5 gallons/cf = 2,640/ft. dike height
Required Height = 5,000 gallons/2,640 = 1.9 ft. dike height
1 feet - 11 inches + 6 inches (rain) = 2 feet - 5 inches

The actual height of 4 feet is sufficient.


DOREMUS AVENUE
N
GUARD HOUSE
BRIDGE ABBUTMENT
QC LAB
LUNCHROOM
LOCKERROOM
OFFICES
OFFICE SUPPLIES
MAINT. PARTS
TEMP. STORAGE
NIMCO METAL SHREDDING
QUANTUM
EFFLUENT PIT
BOILER ROOM
APRICOT TRAILER
COOLING TOWER
DRUM TRAILER
DRUM WASHER
88ELAN CHEMICAL CO.
268 DOREMUS AVENUE
NEWARK, NJ 07105
NOV 17,1994
0 30 60
FEET
CRYSTALLIZER ROOM
COOLING TOWERS
SHIPPING & RECEIVING
VANILLA WAREHOUSE AREA
NATURAL FLAVORS
TEMP. CONTROLLED STORAGE
STAINLESS STEEL STORAGE AREA
BRIDGE ABUTMENT
PASSAIC RIVER
KEY
CONCRETE WALL
GRASS AREA
BRIDGE ABBUTMENT
FENCING
PUMP
VACUUM PUMP
A AUTOCLAVE
PF PFAUDLER
R REACTOR
r RECEIVER
S STILL
FT FEED TANK
DR DRYER
PL PLANT AIR COMPRESSOR
HP HIGH PRESSURE AIR COMPRESSOR
LV LOW VACUUM
VP HIGH VACUUM
OBJECT ABOVE ANOTHER
SECONDARY CONTAINMENT
pH, LEL, HIGH ALARMS

847520157


DOREMUS AVENUE
N
BRIDGE ABBUTMENT
GUARD HOUSE
QC LAB
LUNCHROOM
LOCKERROOM
OFFICES
OFFICE SUPPLIES
PAINT PARTS
TEMP. STORAGE
NIMCO METAL SHREDDING
EFFLUENT PIT
BOILER ROOM
APRICOT TRAILER
COOLING TOWER
DRUM TRAILER
DRUM WASHER
CRYSTALIZER ROOM
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STAINLESS STEEL STORAGE AREA
BRIDGE ABUTMENT
PASSAIC RIVER
.JANTUM
88ELAN CHEMICAL CO.
268 DOREMUS AVENUE
NEWARK, NJ 07105
NOV 17,1994
0 30 60
FEET
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CONCRETE WALL
GRASS AREA
BRIDGE ABBUTMENT
FENCING
PUMP
VACUUM PUMP
A AUTOCLAVE
PF PFAUDLER
R REACTOR
r RECEIVER
S STILL
FT FEED TANK
DR DRYER
PL PLANT AIR COMPRESSOR
HP HIGH PRESSURE AIR COMPRESSOR
LV LOW VACUUM
VP HIGH VACUUM
OBJECT ABOVE ANOTHER
SECONDARY CONTAINMENT
pH, LEL, HIGH ALARMS

847520158

MATRIX ENVIRONMENTAL MANAGEMENT
STRATEGIES FOR COST-EFFECTIVE ENVIRONMENTAL MANAGEMENT

76 Ashland Avenue
West Orange, New Jersey 07052
201-736-4545
Fax 201-736-2662

March 25, 1994

Mr. Gary Sobin
Project Manager
New Jersey Department of Environmental
Protection and Energy
Division of Environmental Safety, Health
and Analytical Programs
CN 424
401 East State Street
Trenton, New Jersey 08625-0424

Re: DISCHARGE PREVENTION, CONTAINMENT AND COUNTERMEASURE (DPCC) AND DISCHARGE CLEANUP AND REMOVAL (DCR) PLANS
ELAN CHEMICAL COMPANY
NEWARK, ESSEX COUNTY
DIFF NO. 071400412001
MATRIX NO. 93W100A

Dear Mr. Sobin,

Please find enclosed two revised General Site Plans for the referenced site.

If you have any questions, please call me at (201) 736-4545.

Sincerely,
MATRIX Environmental Management, Inc.

Jayne Warne, P.E.
Project Manager

JW/mf

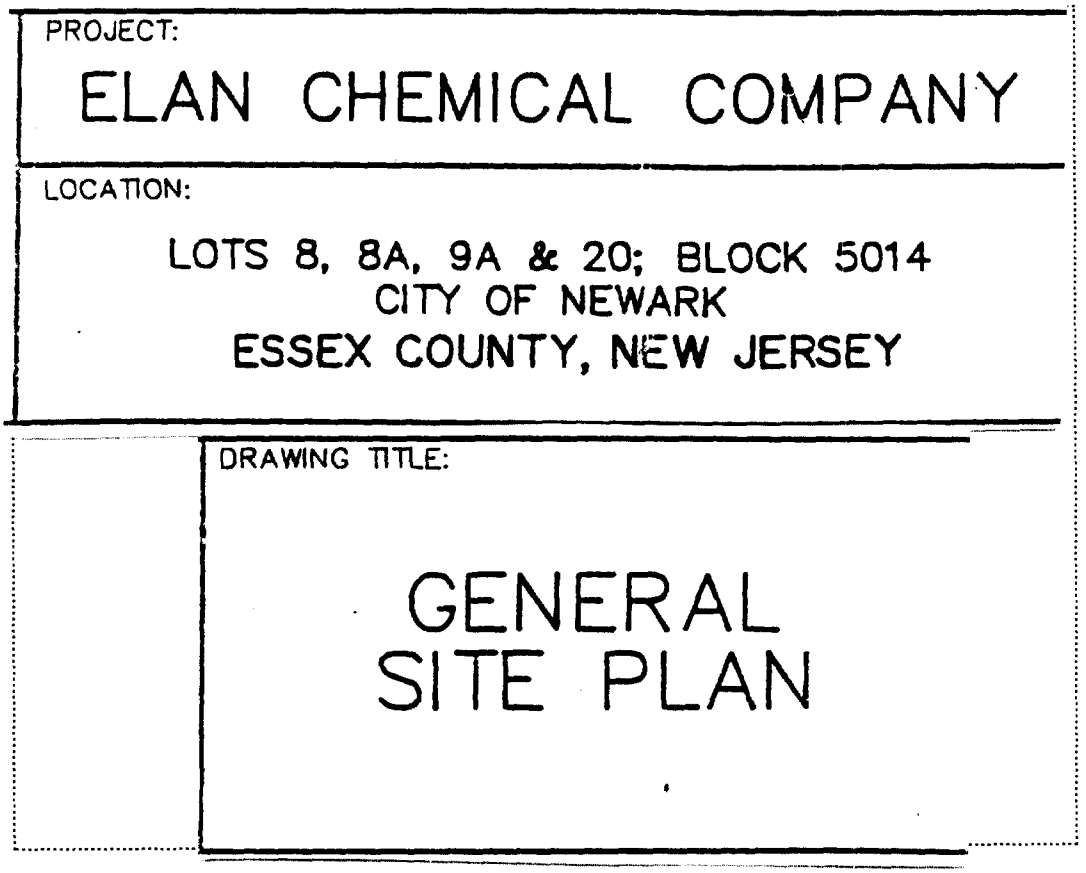
Enclosures

Copy to: Mr. Yury Langer - Elan

847520159

NOTICE ABOUT OVERSIZED MAP

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS CENTER, 290 BROADWAY, 18TH FLOOR, NY, NY 10007. TO MAKE AN APPOINTMENT TO VIEW THE MATERIAL PLEASE CONTACT THE RECORD CENTER AT (212) 637-4308.



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NOTICE ABOUT OVERSIZED MAP

THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS CENTER, 290 BROADWAY, 18TH FLOOR, NY, NY 10007. TO MAKE AN APPOINTMENT TO VIEW THE MATERIAL PLEASE CONTACT THE RECORD CENTER AT (212) 637-4308.

ELAN CHEMICAL COMPANY, INC.
NEWARK, NJ
TOPOGRAPHICAL MAP
with ENVIRONMENTALLY SENSITIVE AREAS
SOUTHERN LOCATIONS

847520161

NOTICE ABOUT OVERSIZED MAP

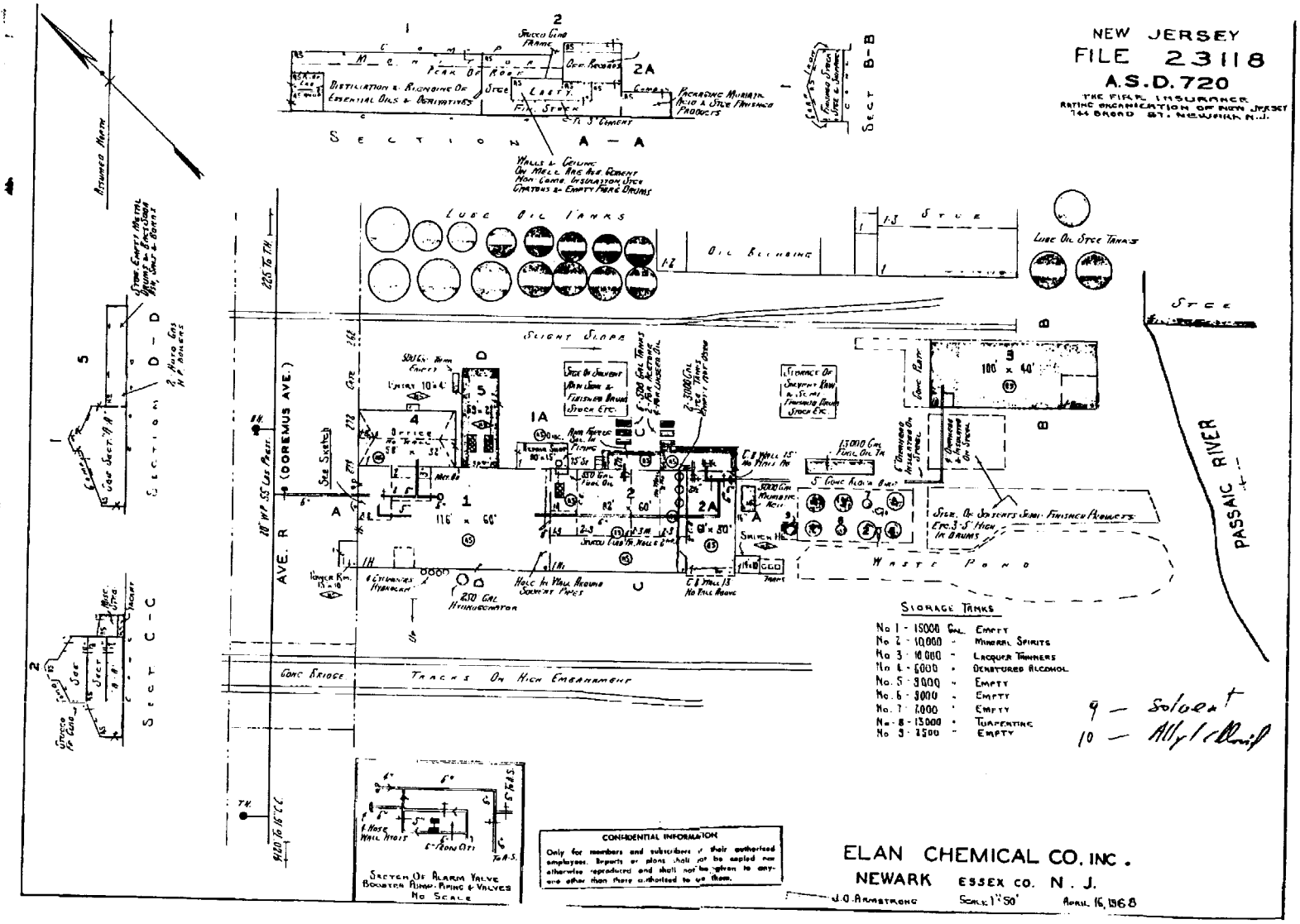
THIS MAP CAN BE FOUND IN THE SITE FILE LOCATED AT: U.S. EPA SUPERFUND RECORDS CENTER, 290 BROADWAY, 18TH FLOOR, NY, NY 10007. TO MAKE AN APPOINTMENT TO VIEW THE MATERIAL PLEASE CONTACT THE RECORD CENTER AT (212) 637-4308.

ELAN CHEMICAL COMPANY, INC.
NEWARK, NJ
TOPOGRAPHICAL MAP
with ENVIRONMENTALLY SENSITIVE AREAS
NORTHERN LOCATIONS

847520162

QUESTION 6.C)(i)

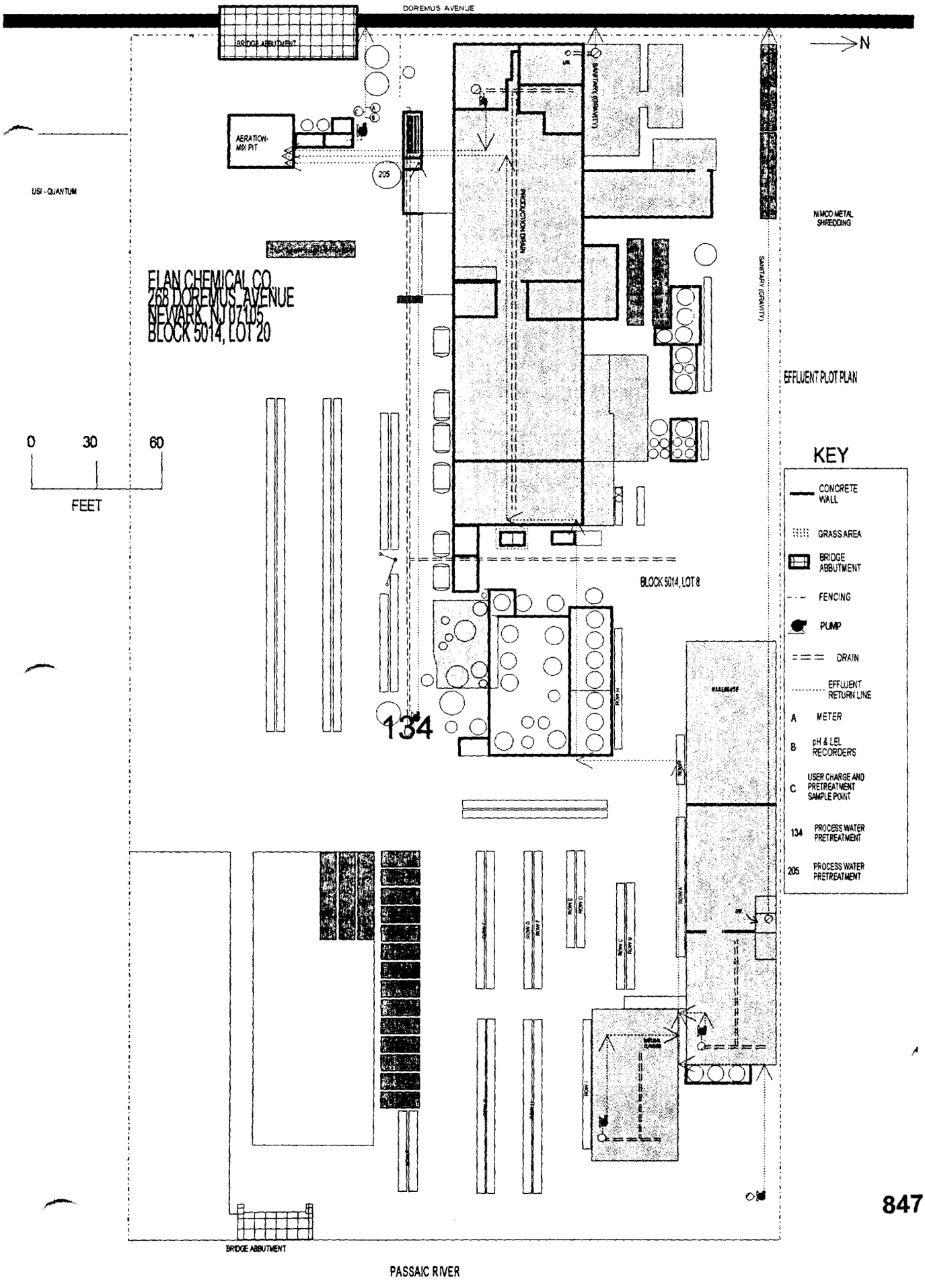
847520163


NEW JERSEY
FILE 23118
A.S.D. 720
THE FIRE INSURANCE RATING ORGANIZATION OF NEW JERSEY 744 BROAD ST. NEWARK N.J.
SECTION A — A
SECT B-B
SECTION D-D
SECT C-C
LUBE OIL TANKS
OIL BUILDING
LUBE OIL STGE TANKS
SLIGHT SLOPE
AVE. R (DOREMUS AVE.)
PASSAIC RIVER
WASTE POND
TRACKS ON HIGH EMBANKMENT
CONC BRIDGE
STORAGE TANKS
No 1 - 15000 GAL. EMPTY
No 2 - 10,000 " MINERAL SPIRITS
No 3 - 10,000 " LACQUER THINNERS
No 4 - 6000 " DENATURED ALCOHOL
No. 5 - 9000 " EMPTY
No. 6 - 3000 " EMPTY
No. 7 - 7000 " EMPTY
No. 8 - 13000 " TURPENTINE
No 9 - 7500 " EMPTY
9 — Solvent
10 — Allyl Chloride
SECTION OF ALARM VALVE BOOSTER PUMP PIPING & VALVES NO SCALE
CONFIDENTIAL INFORMATION
Only for members and subscribers of their authorized employees. Reports or plans shall not be copied nor otherwise reproduced and shall not be given to anyone other than those authorized to use them.
ELAN CHEMICAL CO. INC.
NEWARK ESSEX CO. N. J.
J.O. ARMSTRONG SCALE 1" = 50' APRIL 16, 1968

847520164

QUESTION 6.D)

847520165


DOREMUS AVENUE
BRIDGE ABBUTMENT
N
AERATION-MIX PIT
205
USI - QUANTUM
SANITARY (GRAVITY)
PRODUCTION DRAIN
NIMCO METAL SHREDDING
SANITARY (GRAVITY)
ELAN CHEMICAL CO.
768 DOREMUS AVENUE
NEWARK, NJ 07105
BLOCK 5014, LOT 20
EFFLUENT PLOT PLAN
0 30 60
FEET
KEY
CONCRETE WALL
GRASS AREA
BRIDGE ABBUTMENT
FENCING
PUMP
DRAIN
EFFLUENT RETURN LINE
A METER
B pH & LEL RECORDERS
C USER CHARGE AND PRETREATMENT SAMPLE POINT
134 PROCESS WATER PRETREATMENT
205 PROCESS WATER PRETREATMENT
BLOCK 5014, LOT 8
134
BRIDGE ABBUTMENT
PASSAIC RIVER

847520166

QUESTION 7

847520167

OMB#: 2050-0005 Expires: 1-31-83

1981 STATUS SHEET FOR NON-REGULATED FACILITIES

INSTRUCTIONS: THIS SHEET MUST BE COMPLETED ONLY BY FACILITIES THAT DID NOT TREAT, STORE, OR DISPOSE OF HAZARDOUS WASTE IN 1981 AND ARE NOT REQUIRED TO COMPLETE THE 1981 FACILITY ANNUAL REPORT. If you received a preprinted label attached to the envelope in which this form was enclosed, affix it in the space provided, complete section S-IV, sign the certification at the bottom of this page and return it to your EPA Regional Office by January 10, 1983 in the return envelope provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If you did not receive a preprinted label, complete all sections.

ELAN CHEMICAL COMPANY
268 DOREMUS AVE
AFFIX LABEL HERE
NEWARK N.J. 07105

S-I. FACILITY EPA I.D. NUMBER

T/A C

F NJD042895680 1

1 2 13 14 15

S-II. NAME OF FACILITY

ELAN CHEMICAL COMPANY

30 69

S-III. FACILITY MAILING ADDRESS

3 268 DOREMUS AVE

15 16 45

Street or P.O. Box

4 NEWARK NJ 07105

15 16 41 42 47 51

City or Town State Zip Code

S-IV. 1981 STATUS (please explain your 1981 non-regulated status here)

In the year of 1981, ELAN CHEMICAL COMPANY, did not generate or dispose of any Hazardous Waste Material.

S-V. CERTIFICATION

I certify under penalty of law that the installation identified above did not treat, store, or dispose of hazardous waste during 1981 and that to the best of my knowledge this facility is not subject to the RCRA Annual Reporting requirement.

JOHN VASSILIADES	VP-PRODUCTION	John Vassiliades	1/6/83
Print/Type Name	Title	Signature of Authorized Representative	Date Signed

847520168

OMB#: 2050-0005 Expires: 1-31-83

1981 STATUS SHEET FOR NON-REGULATED GENERATORS

INSTRUCTIONS: THIS SHEET MUST BE COMPLETED ONLY BY INSTALLATIONS THAT NOTIFIED EPA OF HAZARDOUS WASTE ACTIVITY UNDER SECTION 3010 OF RCRA BUT DID NOT HANDLE REGULATED QUANTITIES OF HAZARDOUS WASTE AT ANY TIME DURING 1981 AND ARE NOT REQUIRED TO COMPLETE THE 1981 GENERATOR ANNUAL REPORT. If you received a preprinted label attached to the envelope in which this form was enclosed, affix it in the space provided, circle the appropriate code in section S-IV, sign the certification at the bottom of this page and return it to your EPA Regional Office by January 10, 1983 in the return envelope provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If you did not receive a preprinted label, complete all sections.

NJD042895680 02 G

ELAN CHEMICAL COMPANY
ATTN: GUERRERA JERRY TECHNICAL DIR
268 DOREMUS AVE
NEWARK NJ 07105

S-I. GENERATOR'S EPA I.D. NUMBER

T/A C

F N J D 0 4 2 8 9 5 6 8 0 1

1 2 13 14 15

S-II. NAME OF FACILITY

E L A N C H E M I C A L C O M P A N Y

30 69

S-III. FACILITY MAILING ADDRESS

3 2 6 8 D O R E M U S A V E

15 16 45

Street or P.O. Box

4 N E W A R K N J 0 7 1 0 5

15 16 41 42 47 51

City or Town State Zip Code

S-IV. 1981 STATUS (Circle the code at right which best describes your installation's 1981 status. **Circle only one code**)

a. NON-HANDLER—did not handle hazardous waste in any quantity in 1981 ..... (1)

b. SMALL QUANTITY GENERATOR—did not generate more than 1000 kg. of hazardous waste (or 1 kg. of acutely hazardous waste) in any single month or accumulate more than 1000 kg. of hazardous waste (or 1 kg. of acutely hazardous waste) on-site at any time during 1981 (40 CFR §261.5) 2

c. EXEMPT—all wastes generated in farming operations (40 CFR §262.51) or exempt pursuant to 40 CFR §261.4 4

d. BENEFICIAL USE—All hazardous waste generated was beneficially used, reused, or recycled in accordance with 40 CFR §261.2 and 40 CFR §261.6 5

e. CLOSED—installation was closed prior to 1981 9

S-V. CERTIFICATION

I certify under penalty of law that the installation identified above did not handle regulated quantities of hazardous waste during 1981 and that to the best of my knowledge this installation is not subject to the RCRA Annual Reporting requirement.

JOHN VASSILIADES VP-PRODUCTION 1/6/83

Print/Type Name Title Signature of Authorized Representative Date Signed

847520169

Form VHW-001 (10/80)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY DOCUMENT NO. NJ 0069498

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Elan Chemical Co.	201-344-8014	NJD042895681

ADDRESS (STREET - CITY - STATE - ZIP CODE)			
268 Doremus Ave.	Newark	NJ	07105

TRANSPORTER NO. 1	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Metro Disposal Co.	201-738-9640	NJT000029981

ADDRESS (STREET - CITY - STATE - ZIP CODE)			
440 Smith St.	Keasbey	NJ	08832

TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.

ADDRESS (STREET - CITY - STATE - ZIP CODE)

TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc.	201-344-4004	NJD096865833

SITE ADDRESS (STREET - CITY - STATE - ZIP CODE)			
115 Jacobus Ave.	S. Kearny	NJ	07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. ____ OF A TOTAL OF ____. THE FIRST MANIFEST DOCUMENT NO. IS NJ→

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYP
1.	Creosote bottoms	Combustible	1993	4	3790	3	006	01		X188
2.	Cedarwood Oil	N/A	N/A	7	1084	3	002	01		X910
3.										
5.										
6.										

TO BE TYPED IN BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

X188 is a New Jersey Waste Type, not EPA waste Type
X910 is a New Jersey Waste Type, not EPA waste Type

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
John Vassiliades JOHN VASSILIADES	V.P. - Production	11 17 87 (MO. DAY YR.)	11 17 87 (MO. DAY YR.)

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 SWA REGISTRATION NO.	DATE RECEIVED
William M. Deitz William M. Deitz	NJSWAS3396BJ	11 17 87 (MO. DAY YR.)

TEAR AT THIS PERFORATION

847520170

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0180214

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Atlan Chemical Co.	(201) 344-8014	NJD042895680
ADDRESS (STREET - CITY - STATE)		ZIP CODE
288 Doremus Ave	Newark, NJ	07105
TRANSPORTER NO. 1	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc	(201) 344-4004	NJD096865837
ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylvania Ave	So. Kearny, NJ	07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc	(201) 344-4004	NJD096865837
SITE ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylvania Ave	So. Kearny, NJ	07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ→

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvents NOS	flammable	1270	1	4125	1	75	01	I	D001
2.										
3.										
5.										
6.										

TO BE TYPED IN BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) contains methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
JOHN VASSILIADES John Vassiliades	VP. PRODUCTION	02 17 83 (MO. DAY YR.)	02 17 83 (MO. DAY YR.)
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED	
[illegible]	NJSWAS 2002 BH	(MO. DAY YR.)	

TEAR AT THIS PERFORATION

847520171

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0180216

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
Elan Chemical Co.	(201) 344-8014	NJD042895688
ADDRESS (STREET - CITY - STATE)		ZIP CODE
268 Doremus Ave	Newark, NJ	07105
TRANSPORTER NO. 1	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc.	(201) 344-4004	NJD096865837
ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylania Ave	So, Kearny, NJ	07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc	(201) 344-4004	NJD096865837
SITE ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylvania Ave	So, Kearny, NJ	07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvents NOS	flammable	1270	1	1210	1	22	01	I	D001
2.										
3.										
5.										
6.										

TO BE TYPED IN BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) contains methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
ELWOOD RASMUS Elwood Rasmus.	SHIPPING FOREMAN	02 17 83 (MO. DAY YR.)	02 17 83 (MO. DAY YR.)
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED	
B MERSPOR	NJSWAS 3002 A4	02 17 83 (MO. DAY YR.)	

TEAR AT THIS PERFORATION

847520172

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE MANIFEST

Please TYPE all information.

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0188740

GENERATOR NAME Elan Chemical Co.	PHONE (INCLUDE AREA CODE) (201) 344-8014	EPA ID NO. NJD042895688
ADDRESS (STREET - CITY - STATE) 268 Doremus Ave Newark, NJ		ZIP CODE 07105
TRANSPORTER NO. 1 AS & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. NJD096865833
ADDRESS (STREET - CITY - STATE) 53 Pennsylvania Ave So, Kearny, NJ		ZIP CODE 07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY S & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. NJD096865833
SITE ADDRESS (STREET - CITY - STATE) 53 Penns-lvania Ave So, Kearny, NJ		ZIP CODE 07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYP
1.	Waste Solvents NOS	Flam	1270	1	1000	1	10	01	I	D001
2.										
3.										
5.										
6.										

TO BE TYPED IN BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED I SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) contains methand

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in prop condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described abo were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a val permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE Elwood Rasmus ELWOOD RASMUS	TITLE SHIPPING FOREMAN	DATE SHIPPED MO. 03 DAY 23 YR. 85	EXPECTED ARRIVAL DA MO. 03 DAY 23 YR. 85
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO. NJSWAS3003AC		DATE RECEIVED MO. 03 DAY 23 YR. 85

TEAR AT THIS PERFORATION

847520173

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PART I Use TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0188747

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
lan Chemical Co.	(201) 344-8014	N J D 0 4 2 8 9 5 6 8 0
ADDRESS (STREET - CITY - STATE)		ZIP CODE
268 Doremus Ave Newark, NJ		0 7 1 0 5
TRANSPORTER NO. 1	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc	(201) 344-4004	N J D 0 9 6 8 6 5 8 3 7
ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylvania Ave So. Kearny, NJ		0 7 0 3 2
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY	PHONE (INCLUDE AREA CODE)	EPA ID NO.
S & W Waste Inc	(201) 344-4004	N J D 0 9 6 8 6 5 8 3 7
SITE ADDRESS (STREET - CITY - STATE)		ZIP CODE
53 Pennsylvania Ave So, Kearny, NJ		0 7 0 3 2

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvents NOS	flam.	1270	1	4400	1	80	01	I	D001
2.										
3.										
4.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1(contains methand

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
Elwood Rasmus ELWOOD RASMUS	SHIPPING FOREMAN	3 / 23 / 83 (MO. / DAY / YR.)	3 / 23 / 83 (MO. / DAY / YR.)
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED	
[illegible]	NJSWAS B0028	3 / 23 / 83 (MO. / DAY / YR.)	

TEAR AT THIS PERFORATION

847520174

Form VHW-001 (5/82)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0174152

GENERATOR NAME	PHONE (INCLUDE AREA CODE)	EPA ID NO.
X Elan Chemi-cal Co	(201) 344-8014	NJD042895680
ADDRESS (STREET - CITY - STATE) 268 Doremus Ave Newark, NJ		ZIP CODE 07105
TRANSPORTER NO. 1 S & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. NJD096865837
ADDRESS (STREET - CITY - STATE) 53 Pennsylvania Ave So, Kearny, NJ		ZIP CODE 07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY S & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. NJD096865837
SITE ADDRESS (STREET - CITY - STATE) 53 Pennsylvania Ave So, Kearny, NJ		ZIP CODE 0703

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ→

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvent NOS	flam	1270	1	4400	1	80	01	I	D001
2.										
3.										
4.										
5.										
6.										

TO BE TYPED IN BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) contains Methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DATE
ELWOOD RASMUS Elwood Rasmus	SHIPPING FOREMAN	06 03 83 (MO. DAY YR.)	06 03 83 (MO. DAY YR.)
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED	
[illegible]	NJSWAS300280	06 03 83 (MO. DAY YR.)	

TEAR AT THIS PERFORATION

847520175

Form VHW-001 (5/82)

Please TYPE all information.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0174153

GENERATOR NAME: Elan Chemicals Co.	PHONE (INCLUDE AREA CODE): (201) 344-8014	EPA ID NO.: NJD042895680
ADDRESS (STREET - CITY - STATE): 268 Doremus Ave	Newark, NJ	ZIP CODE:
TRANSPORTER NO. 1: S & W Waste Inc	PHONE (INCLUDE AREA CODE): (201) 344-4004	EPA ID NO.: NJD096865837
ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Ave	So, Kearny, NJ	ZIP CODE: 07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY: S & W Waste Inc	PHONE (INCLUDE AREA CODE): (201) 344-4004	EPA ID NO.: NJD096865837
SITE ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Ave	So, Kearny, NJ	ZIP CODE: 07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. ____ OF A TOTAL OF ____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvent NOS	flam.	1270	1	1210	1	22	01	I	D001
2.										
3.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED IN SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) contains methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described above were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED (MO. DAY YR.)	EXPECTED ARRIVAL DATE (MO. DAY YR.)
ELWOOD RASMUS Elwood Rasmus	SHIPPING FOREMAN	06 03 83	06 03 83

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED (MO. DAY YR.)
B MORSINGER B M	NJSWAS 3002AC	06 03 83

TEAR AT THIS PERFORATION

TO BE TYPED IN BY GENERATOR

847520176

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Please TYPE all information.

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0178930

GENERATOR NAME Elan Chemical Co.	PHONE (INCLUDE AREA CODE) (201) 344-8014	EPA ID NO. N J D 0 4 2 8 9 5 6 8 0
ADDRESS (STREET - CITY - STATE) 268 Doremus Ave	Newark, NJ	ZIP CODE 0 7 1 0
TRANSPORTER NO. 1 S & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. N J D 0 9 6 8 6 5 8 3 7
ADDRESS (STREET - CITY - STATE) 53 Pennsylvania 'Ave	South Kearny, NJ	ZIP CODE 0 7 0 3
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY S & W Waste Inc	PHONE (INCLUDE AREA CODE) (201) 344-4004	EPA ID NO. N J D 0 9 6 8 6 5 8 3
SITE ADDRESS (STREET - CITY - STATE) 53 Pennsylvanlake	South Kearny, NJ	ZIP CODE 0 7 0 3

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYPE
1.	Waste Solvent NOS	Flammable	NA1270	1	1485	1	27	01	I	D001
2.										
3.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED I
SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1) ~~xxxxxx~~ comtains Methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in prop condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described abo were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a val permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DAT
John Vassiliades John Vassiliades	VP - Production	08 16 83 MO. DAY YR.	08 16 83 MO. DAY YR.
TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED	
Freddie McCeary FREDDIE MCCEARY	NJSWAS3002AV	08 16 83 MO. DAY YR.	

TEAR AT THIS PERFORATION

TEAR AT THIS PERFORATION

TO BE TYPED IN BY GENERATOR

847520177

State of New Jersey
Department of Enviromental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520178

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. TJ277
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.*

3. Generator's Name and Mailing Address: ELAN CHEMICAL COMPANY, 269 Doremus Avenue, Newark, NJ 07105
4. Generator's Phone (201) 344-8114

A. State Manifest Document Number: NJA0030649
B. State Gen. ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.
6. US EPA ID Number: NJD991291105
C. State Transporter's ID: NJSWAS-3002 DK

7. Transporter 2 Company Name:
8. US EPA ID Number:
D. Transporter's Phone: 201/344-4004
E. State Transporter's ID:
F. Transporter's Phone:
G. State Facility's ID:
H. Facility's Phone: 201/344-4004

9. Designated Facility Name and Site Address: S&W WASTE, INC., 105 Jacobus Avenue, So. Kearny, NJ 07032
10. US EPA ID Number: NJD991291105

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMMABLE LIQUID NOS Flammable Liquid UN1993 DOT-E8640	XX1	TT	X4730	G	D001
b.					
c.					
d.					

GENERATOR

Additional Descriptions for Materials Listed Above: a. Liquid/I; b.; c.; d.

K. Handling codes for Wastes Listed Above: a. T04 Blending; b.; c.; d.

15. Special Handling Instructions and Additional Information

S&W Approval # 005350-001 Solvents containing methanol

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws and regulations.

Printed/Typed Name: ELWOOD RASMUS — Signature: Elwood Rasmus — Date: Month 12 Day 14 Year 84

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KlEBowicz — Signature: Roy Klebowicz — Date: Month 12 Day 14 Year 84

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

Received Pending Quality Control Check

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Thomas H Nonten — Signature: [signature] — Date: Month 12 Day 14 Year 84

NJA0030649

EPA Form 8700-22 (3-84)

3 — TSD MAIL TO — GENERATOR

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES
Division of Hazardous Waste Management
P. O. Box 2063
Harrisburg, PA 17120

847520179

ER-SWM-51,R-5/84 Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. PR 067
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 Doremus Avenue
Newark, New Jersey 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number PAB 00850124

B. State Gen. ID SAME

5. Transporter 1 Company Name S & W WASTE, INC.
6. US EPA ID Number NJD991291105
C. State Trans. ID PA-AH NJSWAS 3002 ED
D. Transporter's Phone 201 344-4004

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID PA-AH
F. Transporter's Phone

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032
10. US EPA ID Number NJD991291105
G. State Facility's ID Not Required
H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE FLAMMABLE XXX LIQUID NOS Flammable Liquid UN 1993	001	TT	04860	G	D001
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code)
a. I LIQUID
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04-Blending
b.
d.

15. Special Handling Instructions and Additional Information
GENERATOR IS USING PA MANIFEST SICNE STATE OF NJ HAS NO SUPPLY

S & W APP XXXXXXXXXXX 005350-001 contains methanol

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws/regulations.

Printed/Typed Name	Signature	Date (Month Day Year)
F. WOOD MASMUS	Edward J. Masmus	11 01 16 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
DONALD RUITENBERG	Donald Ruitenberg	11 01 16 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FAC

19. Discrepancy Indication Space
Received Pending Quality Control Check

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

TY

Printed/Typed Name	Signature	Date (Month Day Year)
THOMAS H. NORTON	Thomas H. Norton	11 02 89

In case of an emergency or spill immediately call the National Response Center (800) 424-8802 and the PA DER (717) 787-4343

EPA Form 8700-22 (3-84) COPY 3 - Generator - Mailed by TSD Facility

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE MANIFEST

Please TYPE all information.

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0229020

GENERATOR NAME: ELAN CHEMICAL CO.	PHONE (INCLUDE AREA CODE): 201-344-8014	EPA ID NO.: NJD042895680
ADDRESS (STREET - CITY - STATE): 268 Doremus Avenue Newark, New Jersey		ZIP CODE: 07105
TRANSPORTER NO. 1: S & W WASTE, INC.	PHONE (INCLUDE AREA CODE): 201-344-4004	EPA ID NO.: NJD096865837
ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE: 0703
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY: S & W WASTE, INC.	PHONE (INCLUDE AREA CODE): 201-344-4004	EPA ID NO.: NJD096865837
SITE ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE: 07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYP
1. Flammable liquid Waste [redacted] nos	Flammable Liquid	UN [redacted]1993	1	X 4650	1	XX 1	03 [redacted]	I	D00
2. DOT-E 8640									
3.									
5.									
6.									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED I SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

1. contains methanol
S & W APP # 005350-001

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in prope condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described abov were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a vali permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED (MO. DAY YR.)	EXPECTED ARRIVAL DAT (MO. DAY YR.)
Elwood Rasmus ELWOOD RASMUS	SHIPPING FOREMAN	08 29 84	08 29 84

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED (MO. DAY YR.)
R. Klebowicz R. Klebowicz	NJSWAS 3002DK	08 29 84

TEAR AT THIS PERFORATION

TO BE TYPED IN BY GENERATOR

847520180

Form VHW-001/5/82

Please TYPE all information.

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

HAZARDOUS WASTE MANIFEST

PART A: GENERATOR'S COPY

DOCUMENT NO. NJ 0223179

GENERATOR NAME: ELAN CHEMICAL COMPANY	PHONE (INCLUDE AREA CODE): 201-344-8014	EPA ID NO.: NJD 0428 956 80
ADDRESS (STREET - CITY - STATE): 268 Doremus Avenue Newark, New Jersey		ZIP CODE: 07105
TRANSPORTER NO. 1: S & W WASTE, INC.	PHONE (INCLUDE AREA CODE): 201-344-4004	EPA ID NO.: NJD096865837
ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE: 07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY: S & W WASTE, INC.	PHONE (INCLUDE AREA CODE): 201-344-4004	EPA ID NO.: NJD 09 686 5837
SITE ADDRESS (STREET - CITY - STATE): 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE: 0703

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE

THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ →

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYP
1.	Waste Solvent nos	Flammable Liquid	NA1993 [illegible]	1	x 5390	1	xx1	03	I	D00
2.	DOT-E 8640									
3.										
5.										
6.										

TO BE TYP[illegible] BY GENERATOR

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED I[illegible] SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

S & W APP # 005350-001

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in prop[illegible] condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described abo[illegible] were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a val[illegible] permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED (MO. DAY YR.)	EXPECTED ARRIVAL DA[illegible] (MO. DAY YR.)
Elwood Rasmus ELWOOD RASMUS	SHIPPING FOREMAN	07 26 84	07 26 8[illegible]

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED (MO. DAY YR.)
K. KleBowicz K. Klebowicz	NJSWAS 3002 DK	07 26 8[illegible]

TEAR AT THIS PERFORATION

847520181

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE MANIFEST

Please TYPE all information.

PART 2 GENERATOR'S COPY

DOCUMENT NO. NJ 0223048

GENERATOR NAME ELAN CHEMICAL CO.	PHONE (INCLUDE AREA CODE) 201-344-8014	EPA ID NO. NJD042895688
ADDRESS (STREET - CITY - STATE) 268 Doremus Avenue Newark, New Jersey		ZIP CODE 07105
TRANSPORTER NO. 1 S & W WASTE, INC.	PHONE (INCLUDE AREA CODE) 201-344-4004	EPA ID NO. NJD096865831
ADDRESS (STREET - CITY - STATE) 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE 07032
TRANSPORTER NO. 2	PHONE (INCLUDE AREA CODE)	EPA ID NO.
ADDRESS (STREET - CITY - STATE)		ZIP CODE
TREATMENT, STORAGE OR DISPOSAL (TSD) FACILITY S & W WASTE, INC.	PHONE (INCLUDE AREA CODE) 201-344-4004	EPA ID NO. NJD096865831
SITE ADDRESS (STREET - CITY - STATE) 53 Pennsylvania Avenue South Kearny, New Jersey		ZIP CODE 07032

IF MORE THAN TWO TRANSPORTERS ARE TO BE UTILIZED, FILL OUT THE FOLLOWING AS APPROPRIATE
THIS FORM IS NO. _____ OF A TOTAL OF _____. THE FIRST MANIFEST DOCUMENT NO. IS NJ→

	PROPER US DOT SHIPPING NAME	US DOT HAZARD CLASS	UN NUMBER	FORM	NET QUANTITY	UNITS	CONTAINERS NO.	CONTAINERS TYPE	EPA HAZ CODE	EPA WASTE TYP
1.	Waste Solvent NOS	Flammable Liquid	NA1993	1	4840	1	001	03	I	D001
2.	DOT-E 8640									
3.										
4.										
5.										
6.										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION (i.e. IDENTIFICATION OF ADDITIONAL WASTES INCLUDED I SHIPMENT OF A NONHAZARDOUS NATURE WHICH DO NOT HAVE TO BE MANIFESTED)

S & W APP # 005350-001

1. Contains Methanol

GENERATOR'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, marked and labelled and are in prope condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The wastes described abov were consigned to the Transporter named. The Treatment, Storage or Disposal Facility can and will accept the shipment of hazardous waste, and has a vali permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S SIGNATURE - ALSO PRINT SIGNATURE	TITLE	DATE SHIPPED	EXPECTED ARRIVAL DAT
ELWOOD RASMUS Elwood Rasmus	SHIPPING FOREMAN	05 17 84 MO. DAY YR.	05 17 84 MO. DAY YR.

TRANSPORTER NO. 1 SIGNATURE AND CERTIFICATION OF RECEIPT OF SHIPMENT - ALSO PRINT SIGNATURE	TRANSPORTER NO. 1 VEHICLE ID NO.	DATE RECEIVED
K. KLEBOWICZ K. Klebowicz	NJSWAS3002DK	05 17 84 MO. DAY YR.

TEAR AT THIS PERFORATION

847520182

VHW-001 (REV. 9-84)

568

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520183

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 0000
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.*

3. Generator's Name and Mailing Address: ELAN CHEMICAL, 268 Doremus Avenue, Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA0159914

B. State Gen. ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.
6. US EPA ID Number: NJD991291105

C. State Transporter 1 ID: NJSWA S3002 6836

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone: 201-344-4004

E. State Transporter 2 ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032
10. US EPA ID Number: NJD991291105

F. Transporter's Phone:

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE FLAMMABLE LIQUID NOS, Flammable Liquid, UN 1993	13	DM	715	G	D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. 1/LIQUID Waste Solvents
b.
c.
d.

K. Handling codes for Wastes Listed Above
a. TC4 Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information

S & W APPROVAL NO. 005350-003

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Date: Month 11 Day 21 Year 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Scott Rogers — Signature: Scott Rogers — Date: Month 11 Day 21 Year 85

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name: Thomas H Nantz — Signature: [signature] — Date: Month 11 Day 21 Year 85

NJA0159914

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

VHW-001 (REV. 9-84)

State of New Jersey
Department of Enviromental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520184

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404, Expires 7-31-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. TJ393
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.*

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 Doremus Avenue
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA004424
B. State Gen. ID Same

5. Transporter 1 Company Name S&W WASTE, INC.
6. US EPA ID Number NJD991291105
C. State Transporter's ID NJSWAS-3002
D. Transporter's Phone 201/344-4004
E. State Transporter's ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone 201/344-4004

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
So. Kearny, NJ 07032

10. US EPA ID Number NJD991291105

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. WASTE FLAMMABLE LIQUID NOS Flammable Liquid UN1993	001	TT	1950	G	D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. Liquid/I
b.
c.
d.

K. Handling codes for Wastes Listed Above
a. TOA Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W Approval # 005351-001 Contains Methanol

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations, and all applicable State laws and regulations.

Printed/Typed Name ELWOOD RASMUS
Signature Elwood Rasmus
Date Month Day Year 07 18

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Roy Klebowicz
Signature Roy Klebowicz
Date Month Day Year 07 18

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Received Pending Quality Control Sheet
Printed/Typed Name Thomas H. Nonter
Signature Thomas H. Nonter
Date Month Day Year

In Case of an emergency or spill immediately call the State the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (3-84)

3. TSD MAIL TO GENERATOR

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520185

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 91507 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL, 268 Doremus Avenue, Newark, NJ 07105

A. State Manifest Document Number: NJA 0191507

B. State Gen. ID: SAME

4. Generator's Phone: (201) 344-8014

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Transporter 1 ID: NJSWA S3002

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-344-4004

E. State Transporter 2 ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone:

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMMABLE LIQUID NOS Flammable Liquid UN 1993	12	DM	660	G	D001
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above: a. 17 LIQUID dimethyl morpholine

K. Handling codes for Wastes Listed Above: a. T04 Blending

15. Special Handling Instructions and Additional Information: S & W APPROVAL NO. 005350/003

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: JOHN VASSILIADES — Signature: [signature] — Date: Month 4 Day 7 Year 86

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: P SNIFFEN — Signature: [signature] — Date: Month 4 Day 7 Year 86

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Date: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

received pending quality control check

Printed/Typed Name: Thomas H. Norton — Signature: [signature] — Date: Month 4 Day 7 Year 86

GENERATOR — TRANSPORTER — FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

3 – TSD MAIL TO – GENERATOR

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520186

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. K J D 0 4 2 8 9 5 6 6 0 | Manifest Document No. 9 1 5 0 7 | 2. Page 1 of | Information in the shaded areas is not required by Federal law.*

3. Generator's Name and Mailing Address
ELAM CHEMICAL
268 Dorcus Avenue
Newark, NJ 07105

A. State Manifest Document Number NJA 0191507
B. State Gen. ID
C. State Transporter 1 ID NJSWA 5002
D. Transporter's Phone 201-344-6004
E. State Transporter 2 ID
F. Transporter's Phone
G. State Facility's ID
H. Facility's Phone 201-344-6004

4. Generator's Phone (201) 344-6014

5. Transporter 1 Company Name: S & W WASTE, INC.
6. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032
10. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE FLAMMABLE LIQUID NOS Flammable Liquid UN 1993	12	DM	660	G	D001
b.					
c.					
d.					

GENERATOR

Additional Descriptions for Materials Listed Above		K. Handling codes for Wastes Listed Above	
a. liquid dimethyl morphaline	c.	a.	c.
b.	d.	b.	d.

15. Special Handling Instructions and Additional Information
S & W APPROVAL NO. 005350/003

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable state laws and regulations.
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Printed/Typed Name | Signature | Date Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date Month Day Year

FACILITY

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Date Month Day Year

NJA0191507

PA Form 8700-22 (Rev. 4-85) Previous edition obsolete

8 – GENERATOR COPY

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520187

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 55167

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.*

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA0155167

B. State Ben. Same

5. Transporter 1 Company Name: SCA Chemical Services, Co.

6. US EPA ID Number: NJD089216790

C. State Transporter 1 ID: S-1846-10176

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: (201) 465-9100

E. State Transporter 2 ID:

F. Transporter's Phone:

G. State Facility's ID:

H. Facility's Phone:

9. Designated Facility Name and Site Address
SCA
100 Lister Ave.
Newark, N.J. 07105

10. US EPA ID Number: NJD089216790

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Waste Chromic Acid Solution Corrosive Material UN 1755 Liquid	3	DF	165	G	D002
b.					
c.					
d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above
a. L, C
b.
c.
d.

K. Handling codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
SCA Code
15455/F42266/E75918

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: John Vassiliades
Signature: John Vassiliades
Date: Month 08 Day 01 Year 86

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Michael M Prisco
Signature: Michael M Prisco
Date: Month 08 Day 01 Year 86

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ULANDA SIMMONS
Signature: Ulanda Simmons
Date: Month 08 Day 04 Year 86

EPA Form 8700-22 (Rev. 4-85) Previous edition obsolete

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5566 (Day) (609) 292-7172 (Night)

HW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520188

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 202000

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 DOREMUS AVE.
NEWARK, N.J. 07105

A. State Manifest Document Number: NJA 0320200

B. State Generator's ID: SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: CONTINENTAL CARRIERS

6. US EPA ID Number: NJD990720658

C. State Transporter's ID: NJ DEPS5771

D. Transporter's Phone: 201-727-1188

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
SOLVENT RECOVERY SERVICE OF N.J. INC.
1200 SYLAN STREET
LINDEN, N.J. 07036

10. US EPA ID Number: NJD002182897

G. State Facility's ID

H. Facility's Phone: (201) 862-2000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
GENERATOR a. RQ WASTE FLAMMABLE LIQUID NOS FLAMMABLE LIQUID UN1993 (F005)	001	TT	04784	G	F005
b. EPA ELIMINATED					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
TOLUENE 20-30
METHANOL 10-15
HEPTANE 5-10
XYLENE 2-5

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
PIN# 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
JOHN VASSILIADES		

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Paul Kaminski		

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete

SIGNATURE AND INFORMATION

NJA0320200

Copies Required to be Sent to the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520189

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No: NJD042895680 — Manifest Document No: 012121

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
ELAN CHEMICAL CO.
268 DOREMUS AVE.
NEWARK, N.J. 07105

4. Generator's Phone: (201) 344-8014

A. State Manifest Document Number: **NJA 0320191**

B. State Generator's ID: SAME

5. Transporter 1 Company Name: CONTINENTAL CARRIERS
6. US EPA ID Number: NJD992070258

C. State Transporter's ID: NJ DEP55771

D. Transporter's Phone: 201-727-1188

7. Transporter 2 Company Name:
8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address:
SOLVENT RECOVERY SERVICE OF N.J. INC.
1200 SYLAN STREET
LINDEN, N.J. 07036
10. US EPA ID Number: NJD002182897

G. State Facility's ID:

H. Facility's Phone: (201) 862-2000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUID NOS FLAMMABLE LIQUID UN1993 (F005)	001	TT	04964	G	F005
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above:
TOLUENE 20-30
METHANOL 10-15
HEPTANE 5-10
XYLENE 2-5

K. Handling Codes for Wastes Listed Above:
T04 Blending

15. Special Handling Instructions and Additional Information:
PIN# 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
JOHN VASSILIADES	John Vassiliades	1	0	87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Stephen Yatchak	Stephen Yatchak	1	05	87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Michael R. Gillian	Michael R. Gillian	1	05	87

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

847520190

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 20141

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL
268 Doremus Ave.
Newark, N.J. 07105

A. State Manifest Document Number NJA 0320141

B. State Generator's ID Same

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: CONTINENTAL CARRIERS

6. US EPA ID Number: NJD990720658

C. State Transporter's ID NJ DEP 5771

D. Transporter's Phone 201 777-1159

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Solvent Recovery Service of N.J. INC
1200 Sylan Street
Linden, N.J. 07036

10. US EPA ID Number: NJD002182897

G. State Facility's ID

H. Facility's Phone (201) 862-2000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste flammable liquid NOS Flammable Liquid UN 1993 (F005)	001	TT	05274	G	F005
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Toluene 20-30
Methanol 10-15
Heptane 5-10
Xylene 2-5

K. Handling Codes for Wastes Listed Above
104 BLENDING

15. Special Handling Instructions and Additional Information
PIN# 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
John Vassiliades	John Vassiliades	10	23	87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Paul Karcich	Paul Karcich	10	23	87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
William Vargas	William Vargas	10	23	87

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520191

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 96612

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 0396612

B. State Generator's ID: Same

5. Transporter 1 Company Name: Continental Carriers

6. US EPA ID Number: NJD990720658

C. State Trans. ID: NJ DRPS5771

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201) 727-1188

E. State Trans. ID:

9. Designated Facility Name and Site Address
Solvents Recovery Service of N.J. Inc.
1200 Sylan Street
Linden, N.J. 07036

10. US EPA ID Number: NJD002118297

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 862-2000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste Flammable Liquid NOS Flammable Liquid UN1993 (F005)	001	TT	04554	G	F005
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. Toluene 20-30
b. Methanol 10-15
c. Heptane 5-10
d. Xylene 2-5

K. Handling Codes for Wastes Listed Above

a. T04 BLENDING
b.
c.
d.

15. Special Handling Instructions and Additional Information

PIN # 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
John Vassiliades	John Vassiliades	02	18	88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kevin Ruscoe	Kevin Ruscoe	02	18	88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Daniel Steinberg	Daniel Steinberg	02	18	88

NJA 0396612

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

HW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520192

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N JD 0 42 8 95 6 80 9 Manifest Document No. 66 1 4
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave.
Newark, N.J. 07105

A. State Manifest Document Number NJA 0396614

B. State Generator's ID Same

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: Continental Carriers
6. US EPA ID Number: N J D9 9 07 2 06 5 8
C. State Trans. ID NJ DEPS5771
D. Transporter's Phone 201-727-1188

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Solvents Recovery Services of N.J. Inc.
1200 Sylvan Street
Linden, N.J. 07036
10. US EPA ID Number: N J D0 0 21 8 28 9 7
G. State Facility's ID
H. Facility's Phone (201) 862-2000

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. RQ Waste Flammable Liquid NOS Flammable Liquid UN1993 (F005)	0 0 1	T T	5 0 6 0	G	F 0 0 5
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. Toluene 20-30
c. Heptane 5-10
b. Methanol 10-15
d. Xylene 2-5

K. Handling Codes for Wastes Listed Above

a. T04 BLENDING
c.
b.
d.

15. Special Handling Instructions and Additional Information

PIN # 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
John Vassiliades	John Vassiliades	05 25 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
GARY Buell	Gary Buell	05 25 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
WILLIAM VARGAS	William Vargas	05 25 88

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520193

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 9661 3

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
Elan Chemical Co.
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone: (201) 344-8014

A. State Manifest Document Number: NJA 0396613

B. State Generator's ID: Same

5. Transporter 1 Company Name: Continental Carriers

6. US EPA ID Number: NJD 092072065 8

C. State Trans. ID: NJ DEPS5771

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201 727-1188

E. State Trans. ID:

9. Designated Facility Name and Site Address:
Solvents Recovery Service of N.J. Inc.
1200 Sylan Street
Linden, N.J. 07036

10. US EPA ID Number: NJD 002128977

F. Transporter's Phone: ( )

G. State Facility's ID:

H. Facility's Phone: 201 862-2000

GENERATOR

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vo	I. Waste No.
a.		RQ Waste Flammable Liquid NOS Flammable Liquid UN1993 (F005)	001	TT	05500	G	F 0 0 5
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. Toluene 20-30
c. Heptane 5-10
b. Methanol 10-15
d. Xylene 2-5

K. Handling Codes for Wastes Listed Above

TOT ELEMENTS

a.
b.
c.
d.

15. Special Handling Instructions and Additional Information

PIN # 14922-FB

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John Vassiliades — Signature: John Vassiliades — Month Day Year: 05 04 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: JOHN RUSCOE — Signature: J Ruscoe — Month Day Year: 05 04 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

added # to street name Items # 9

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: William Vargas — Signature: William Vargas — Month Day Year: 05 04 88

NJA 0396613

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

TOP MAIL TO GENERATOR

White: Mail to the Emergency Response Unit of the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

(REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520194

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 05589

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL CO.
268 Doremus Avenue
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 0405589

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002 26048

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone ((201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID NOS FLAMMABLE LIQUID UN 1993 RQ (D001)	001	TT	05000	G	D001
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: I/L- Methanol, Toluene Xylene 2%, Hexanol, Octanol

K. Handling Codes for Wastes Listed Above: a. TOY BLENDING

15. Special Handling Instructions and Additional Information

S & W APPROVAL NO. 00005350-001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES — Signature: [signature] — Month Day Year: 06 20 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG — Signature: [signature] — Month Day Year: 06 20 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Received Pending Manifest Review & Quality Control

Printed/Typed Name: Eric Arn — Signature: [signature] — Month Day Year: 06 20 88

EPA Form 8700-22 (Rev. 9-86) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520195

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 7220

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL, 268 Doremus Avenue, Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 0472201

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Transporter's ID: NISWA S 3002 26048

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID NOS FLAMMABLE LIQUID UN 1993 RQ (F005)	001	TT	05200	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: T/L- Methanol, Toluene Xylene, Hexanol, Octanol

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

S & W APPROVAL NO. 005350-001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES — Signature: [signature] — Month Day Year: 07 14 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALL RUITENBERG — Signature: [signature] — Month Day Year: 07 14 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [signature] — Signature: [signature] — Month Day Year: 07 14 88

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520196

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 72356

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL COMPANY, 268 Doremus Avenue, Newark, New Jersey 07105

A. State Manifest Document Number: NJA 0472356

4. Generator's Phone (201) 344-8014

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002 *

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMMABLE LIQUID, NOS Flammable Liquid UN 1993 RQ ([redacted], F005)	X	001	TT	05200	G	F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: T/TL-Methanol (10-15%), Toluene (15-30%), Xylene (5-10%), Hexanol (5-10%), Octanol (5-10%), Heptane (0-5%)

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information

S & W APPROVAL NO. 005350 - 001

*26048

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES — Signature: [signature] — Month Day Year: 08 08 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG — Signature: Donald Ruitenberg — Month Day Year: 08 08 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: DOREEN BOSWELL — Signature: Doreen Boswell — Month Day Year: 08 08 88

8 — GENERATOR COPY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in and the N... Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520197

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Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042950805 — Manifest Document No. 5299

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL
268 Doremus Avenue
Newark, N.J. 07105

A. State Manifest Document Number: NJA 0453299

4. Generator's Phone (201) 344-4014

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC. — 6. US EPA ID Number: NJD991291110

C. State Trans. ID: NJSWA 513002

7. Transporter 2 Company Name: / — 8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032

10. US EPA ID Number: NJD991291110

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID NOS, FLAMMABLE LIQUID, UN 1993, RQ (D001/F005)	11	TT	5000	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
1/L- Methanol 10-15%, Toluene 15-30%
Xylene 5-10%, Hexanol 5-10%
Octanol 5-10%, Heptane 0-5% Acetone [redacted]
c. D001
b.
d.

K. Handling Codes for Wastes Listed Above
a. T0
c.
b.
d.

15. Special Handling Instructions and Additional Information
S & W APPROVAL NO. 005350-001 * NJ DECAL # 2604E

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR — Printed/Typed Name: JOHN VASSILIADES — Signature: [signature] — Month Day Year: 9 [illegible]

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: P. SNIFFEN — Signature: [signature] — Month Day Year: 9 [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: 09 [illegible]

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5580 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

8 — GENERATOR COPY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

FORM 001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520198

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Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 535389

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL CO. 268 Doremus Avenue Newark, N.J. 0715

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 0535389

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002 *

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC. 105 Jacobus Avenue South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID NOS ~~FLAMMABLE LIQUID~~ UN 1993 RQ(F005)	001	TT	05200	G	F005
b.							
c.							
d.							

GENERATOR

I/I. Additional Descriptions for Materials Listed Above: Methanol 10-15%, Toluene 15-30% Xylene 5-10%, Hexanol 5-10% Octanol 5-10%, Heptane 0-5%

K. Handling Codes for Wastes Listed Above: 104 Blending

15. Special Handling Instructions and Additional Information: S & W APPROVAL NO. 005350-001 *26048

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: CHANDRA PATEL Signature: [signature] Month Day Year: 09 28 88

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG Signature: Donald Ruitenberg Month Day Year: 09 28 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: Signature: Month Day Year:

19. Discrepancy Indication Space

[illegible]

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Signature: [signature] Month Day Year:

NJA 0535389

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

GENERATOR COPY

001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520199

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD 042895680 Manifest Document No. 34657
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL, 268 Doremus Avenue, Newark, New Jersey 07105

A. State Manifest Document Number: NJA 0534657

4. Generator's Phone (201) 344-8014

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S & W WASTE, INC.
6. US EPA ID Number: NJD991291165

C. State Trans. ID: NJSWA S 3002 *

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address: S & W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032
10. US EPA ID Number: NJD991291165

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS Flammable Liquid UN 1993 RQ(D001/F005)	001	TT	05200	G	F005
b.		DOT-E8640					
c.							
d.							

J. Additional Descriptions for Materials Listed Above: a. T/L-Methanol(10-15%), Toluene (15-30%), Xylene(5-10%), Hexanol (5-10%), Octanol(5-10%), Heptane (0-5%) ALSO D001 b. c. d.

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information: *21431

S & W APPROVAL NO. 005350 - 001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John Vassiliades — Signature: JOHN VASSILIADES — Month Day Year: 11 01 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG — Signature: Donald Ruitenberg — Month Day Year: 11 01 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: DOREEN BOSWELL — Signature: Doreen Boswell — Month Day Year: 11 01 88

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520200

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD 980 529 660 5 4 1 5 4 — Manifest Document No.

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 Doremus Avenue
Newark, N.J. 07105

A. State Manifest Document Number: NJA 0534734

B. State Generator's ID: SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD 980 529 115

C. State Trans. ID: NJDEP # 0082

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone: 201 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032

10. US EPA ID Number: NJD 980 529 115

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMMABLE LIQUID NOS, FLAMMABLE LIQUID, UN 1993, RQ (D001/F005)	X	001	TT	055	G	D001
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. M/E-Methanol 10-15%, Toluene 15-30%
Xylene 5-10%, Hexanol 5-10%
Octanol 5-10%, Heptane 0-5%
b. Also F005
c.
d.

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
S & W APPROVAL NO. 005350-001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR — Printed/Typed Name: JOHN WASSILOWSKI — Signature — Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Shillace — Signature — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

8—GENERATOR COPY

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520201

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 34999

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL
268 Doremus Avenue
Newark, N.J. 07105

A. State Manifest Document Number NJA 0534999

B. State Generator's ID SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name S & W WASTE, INC.

6. US EPA ID Number NJD991291105

C. State Trans. ID NJSWA S 3002

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201) 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID NOS FLAMMABLE LIQUID UN 1993 RQ (~~D001~~/F005)	7 X 1	TT	X 5000	G	D001
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
I/E Methanol 10-15%, Toluene 10-30%
Xylene 5-10%, Hexanol 5-10%
Octanol 5-10%, Heptane 0-5% Also F005

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
S & W APPROVAL NO. 005350-001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name JOHN PASSILIADES Signature [signature] Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name [illegible] Signature [signature] Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Signature Month Day Year

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the U. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 3/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

8 — GENERATOR COPY

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520202

Type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 4 2 8 9 5 6 8 0 8 — Manifest Document No. 8 6 5 6 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number **NJA 0788656**

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC. — 6. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5 — C. State Trans's ID: NJSWA S 3002 — D. Transporter's Phone: 201 344-4004

7. Transporter 2 Company Name — 8. US EPA ID Number — E. State Trans's ID — F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5 — G. State Facility's ID — H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a. WASTE FLAMMABLE LIQUID, NOS RQ (D001/F005) Flammable Liquid UN1993 DOT-E 8742	X	XXX	TT	X5400	G	XXXXXXXXX F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. Oil 1%, Methanol 10-15% T/I/L
Toluene 15-30%, Xylene 5-10%
Hexanol 5-10%, Octanol 5-10% / ALSO D001
Heptane 0-5%, Trace Methylene Chloride ~~XXXXX~~ 1000ppm

K. Handling Codes for Wastes Listed Above
a. — c. — b. — d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001
DECA (33460)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Month Day Year: 03 19 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy LeBouef — Signature — Month Day Year: 03 19 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 3-89) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

1 — TSD MAIL TO - TSD'S STATE

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520203

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0042895650 — Manifest Document No. 28298

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: NJA 0788298

3. Generator's Name and Mailing Address
Clean Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

B. State Generator's ID: Same

5. Transporter 1 Company Name: S & W WASTE, INC.

6. US EPA ID Number: NJD991291100

C. State Trans. ID: NJSWA 5300

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, NJ 07032

10. US EPA ID Number: NJD991291100

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ((201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X WASTE FLAMMABLE LIQUID, NOS RQ (FO05) Flammable Liquid UN 1993	XX1	TT	X5300	G	F003
b.	DOT-E 8640					
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. Toluene 10-30%, Xylene 5-10%, Hexanol 5-10%, Octanol 5-10%, Heptone 0-5%
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a.
c.
b.
d.

15. Special Handling Instructions and Additional Information
X 21431
S & W APPROVAL NO. 005350 a) 001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: JOHN PASSILONGO — Signature: John Passilongo — Month Day Year: 11 31 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bill Marsack — Signature: Bill Marsack — Month Day Year: 11 31 90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Month Day Year

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

8 — GENERATOR COPY

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

NJA 0788298

Mail completed form to the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520204

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895660 — Manifest Document No. 8805

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8016

A. State Manifest Document Number NJA 0788656

B. State Generator's ID Same

5. Transporter 1 Company Name S&W WASTE, INC. — 6. US EPA ID Number NJD991291105

C. State Trans. ID NJSWA-S-3015-86

7. Transporter 2 Company Name — 8. US EPA ID Number

D. Transporter's Phone (201) 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (D001/F005) Flammable Liquid UN1993 DOT-E 8742	XXI	TI	X5400	G	XXXXXXXX F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. DCE 1%, Methanol 10-15% T/I/L Toluene 15-30%, Xylene 5-10% / ALSO D001
Hexanol 5-10%, Octanol 5-10%
b. Heptane 0-5%, Trace Methylene Chloride XXXXXX 1000ppm

K. Handling Codes for Wastes Listed Above
a. H011 T19
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001
DECA (33460)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Month Day Year: 03 19 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy ICEBOWICZ — Signature: Roy [illegible] — Month Day Year: 03 19 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space
Received 1 Bag Rejected Quality Control

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Lynn Bishop — Signature: Carol Lynn Bishop — Month Day Year: 03 19 90

In case of an emergency or spill immediately call the state the emergency occurr and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520205

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 13452

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
218 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1013452

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3902 /

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005) Flammable Liquid UN1993	XX1	TT	X5300	G	F005
b.							
c.							
d.							

I. Additional Descriptions for Materials Listed Above
T/ I, Methanol 5-15%, Toluene 10-30% Isopropyl Alcohol 0-1%
L/ Xylene 5-10%, Hexanol 5-10% Ethanol 0-2%, Ethlene Dichloride 0-2%
a. Octanol 5-10%, Heptane 0-5%
Hexene 0-5%, Gamma Underalacta Tails 0-15%
X Gamma Nonalacta Tails 0-15%

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001

DECAY # (33458)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADEI — Signature: John Vassiliadei — Month Day Year: 04 30 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KlEBowicz — Signature: Roy Klebowicz — Month Day Year: 04 30 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Received Pending Manifest Review Quality Control
Printed/Typed Name: Carol Lynn Bishop — Signature: Carol Lynn Bishop — Month Day Year: 04 30 90

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

A Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520206

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 013782

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number **NJA 1013782**

B. State Generator's ID Same

5. Transporter 1 Company Name S&W WASTE, INC.

6. US EPA ID Number NJD991291105

C. State Trans. ID NJSWA S 3002

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201) 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005/D001) Flammable Liquid UN1993	XX1	FT	X5400	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
L/I/T, Oil 1%, Also D001
Methanol 10-15%, Toluene 15-30%
Xylene 5-10%, Hexanol 5-10%
Octanol 5-10%, Heptane 0-5%
Trace Methylene Chloride

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001

ODECA (#33458)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name JOHN VASSILIADES | Signature [signature] | Month Day Year 060590

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Roy KLEBOWICZ | Signature [signature] | Month Day Year 060590

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol Lynn Bishop | Signature [signature] | Month Day Year 060590

GENERATOR

TRANSPORTER

FACILITY

NJA1013782

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION

3 — TSD MAIL TO - GENERATOR

...ately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520207

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD 0 8 4 3 8 9 5 6 8 0 4 6 7 8 6
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: **NJA 0946786**

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.
6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005/D001) Flammable Liquid UN1993 DOT-E 8640	XXI	TT	X5200	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Oil 1%, Methanol 10-15%, Toluene 15-30% Xylene 5-10%, Hexanol 5-10%, Octanol 5-10% IT/IL Also D001

K. Handling Codes for Wastes Listed Above
a. Blending T04
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001
XDECA-1 (33466)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ALBERT ROQUE
Signature: [signature]
Month Day Year: 08 15 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy Klebowicz
Signature: [signature]
Month Day Year: 08 15 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Lynn Bishop
Signature: Carol Lynn Bishop
Month Day Year: 08 15 90

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/88)

Rev # 17716

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520208

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 49771
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: **NJA 1049771**

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.
6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (201) 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005) (D001) Flammable Liquid UN1993	XX1	TT	X5300	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. I/T/L/X 10, Methanol 10-15% Toluene 15-30%, Xylene 5-10% Hexanol 5-10%, Octanol 5-10%, Heptane 0-5% — ALSO D001
b.
d.

K. Handling Codes for Wastes Listed Above
a. [illegible]
b.
c.
d.

15. Special Handling Instructions and Additional Information *33442/33458
S&W APPROVAL NO. 005350 a) 001

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: X Yury Langer — Signature: X [signature] — Month Day Year: X 9 13 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Morsinger — Signature: [signature] — Month Day Year: X 9 13 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space
[illegible]

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Carol Lynn Bishop — Signature: Carol Lynn Bishop — Month Day Year: 09 13 90

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520209

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 50171

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chem. Co.
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone ( ) 201-344-2014

A. State Manifest Document Number: NJA 1050171

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone ( ) 201 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone ( ) (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X	WASTE FLAMMABLE LIQUID, NOS RQ (F005) (D001) Flammable Liquid UN1993	XX1	TT	X4950	G	F005
b.						
c.						
d.						

GENERATOR

Additional Descriptions for Materials Listed Above
Methanol 5-15%, Toluene 10-30%
Xylene 5-10%, Hexanol 5-10%, Octanol 5-10%
Heptone 0-5%, Hexane 0-5%, Isopropyl Alcohol 0-1%
Ethanol 0-2%, Ethlene Dichloride 0-2%
b. I /T/L ALSO D001 d.

K. Handling Codes for Wastes Listed Above
a. [illegible] c.
b. d.

15. Special Handling Instructions and Additional Information

S&W APPROVAL NO. 005350 a) 001

*DECAT #33436

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Month Day Year: 10 22 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KLEBOWKZ — Signature: [signature] — Month Day Year: 10 22 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

Printed/Typed Name: Carol Lynn Bishop — Signature: Carol Lynn Bishop — Month Day Year: 10 22 90

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520210

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Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 57784

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave.
Newark N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number: **NJA 0957784**

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002

D. Transporter's Phone ( ) 201 344-4004

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone ( ) (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS Flammable Liquid RQ D001,F005 UN1993	001	TT	05000	G	F005
b.		DOT-E8640					
c.							
d.							

I. Additional Descriptions for Materials Listed Above
Oil 1% Methanol 10/25%
Toluene 15/30% Hexanol 5/20%
Qatanol 5/20% Heptane 0/5%
T/T/L
a. b. Also D001
c. d.

K. Handling Codes for Wastes Listed Above
a. Blending Tol
b.
c.
d.

15. Special Handling Instructions and Additional Information

S&W APPROVAL NO. 005350 (001)

* 63359

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER — Signature: [signature] — Month Day Ye 12 17 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DONALD RUITENBERG — Signature: [signature] — Month Day Ye 12 17 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Ye

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Lynn Bishop — Signature: Carol Lynn Bishop — Month Day Ye 12 17 9

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIE

In case of an emergency or spill immediately call the state the emergency occurred the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520211

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

In case of an emergency or spill immediately call the state the emergency occurred ! the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 4953 2

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Etan Chemical
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1049532

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWA S 3002

D. Transporter's Phone (201 344-4004

E. State Trans. ID:

7. Transporter 2 Company Name:

8. US EPA ID Number:

F. Transporter's Phone ( )

G. State Facility's ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

H. Facility's Phone ((201) 344-4004

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X Waste Corrosive Liquid Nos RQ (D005/D006/D007) Corrosive Material (D008) UN 1760	X18	DF	XX990	G	D002
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Sulfuric Acid 30-35%, Water 35-42%
Sodium Dichloromate 15-14%
Butyl Alcohol 0-3%, ButyleButyrate 0-3%
also D006/D007/D008 Chromium 12.5ppm Lead 33ppm
b. Ellurium 18ppm Cadmium 1.4ppm

K. Handling Codes for Wastes Listed Above
a. T04 c.
b. d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 006
* 33451
* 33412

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Month Day Year: 08 22 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PAUL ROSSITER — Signature: Paul Rossiter — Month Day Year: 08 22 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space
Quantity Weight Verified

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Ann Bishop — Signature: Carol Ann Bishop — Month Day Year: 08 22 90

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520212

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Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042896680 Manifest Document No. 46610

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 0946610

B. State Generator's ID Same

5. Transporter 1 Company Name S&W WASTE, INC.

6. US EPA ID Number NJD991291105

C. State Trans. ID NJSWA S 3002

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ((201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ F005/D001 Flammable Liquid UN1993	XX1	DM	X4800	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Oil 1%, Methanol 10-15%, Toluene 15-30%, Xylene 5-10% Hexanol 5-10%, Octanol 5-10% Heptane 0-5%
a. EITIL Also D001
b.
d.

K. Handling Codes for Wastes Listed Above
a.
c.
b.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. a) 001 *33442 33436

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name JOHN VASSILIADES Signature [signature] Month Day Year X 7 30 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Bill Mersinger Signature [signature] Month Day Year X 7 30 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name Carol Lynn Bishop Signature [signature] Month Day Year 04 30 9

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520213

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Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: N J D 0 4 8 8 9 5 6 8 0 4 4 4 3 6

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone ( ) 201-344-8014

A. State Manifest Document Number: NJA 0946436

B. State Generator's ID: Same

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: N J D 0 9 1 2 9 1 1 0 5

C. State Trans. ID: NJSWA S 3002

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: N J D 0 9 1 2 9 1 1 0 5

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone ( ) (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005/D001) Flammable Liquid UN1993 DOT-E8640	XX1	TT	X5300	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
L/I/T, Oil 1%, Methanol 10-15%
Toluene 15-30%, Xylene 5-10%
Hexanol 5-10%, Octanol 5-10%
Heptane 0-5%, Also D001

K. Handling Codes for Wastes Listed Above
a. Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001

+DECAL #33466

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES | Signature: John Vassiliades | Month Day Year: 07 09 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KlEBOWICZ | Signature: Roy K | Month Day Year: 07 09 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Lynn Bishop | Signature: Carol Lynn Bishop | Month Day Year: 07 09 90

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520214

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 46415

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 0946415

B. State Generator's ID Same

5. Transporter 1 Company Name S&W WASTE, INC.

6. US EPA ID Number NJD991291105

C. State Trans. ID NJSWA S 3002

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201) 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	Waste Flammable Liquid NOS RQ (D001/F005) Flammable Liquid UN 1993	XX1	TT	X5400	G	F005
b.		DOTE 8640					
c.							
d.							

J. Additional Descriptions for Materials Listed Above
I/L/T, Oil 1%, Methanol 10-15%
Toluene 15-30%, Xylene 5-10%
Hexanol 5-10%, Octanol 5-10%
Heptane 0-5%, Also D001

K. Handling Codes for Wastes Listed Above
a. [illegible] c.
b. d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a) 001
#33442
33466

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name JOHN VASSILIADES | Signature [signature] | Month Day Year X7X3 90

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Bill Mersinger | Signature [signature] | Month Day Year X7X3 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Received Pending Manifest Review & Quantity Control
Printed/Typed Name Carol Lynn Bishop | Signature [signature] | Month Day Year 07 03 90

GENERATOR / TRANSPORTER / FACILITY

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EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VRW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520215

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0C4289560 — Manifest Document No. 09465 63

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Etan Chemical
268 Doremus Ave.
Newark, N.J 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 0946563

B. State Generator's ID Same

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: NJD981211105

C. State Trans. ID NJSNA S 3002*

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201 344-4004

E. State Trans. ID

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD981211105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ D001/F005 Flammable Liquid UN1993	XX	T	X5300	G	F005 D001
b.		DOT # 8640					
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. Toluene 15-30%, Xylene 5-10%, Hexanol 5-10%, Octanol 5-10%, Heptane 0-5%
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. a) 001 X-33966 33443

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: Albert Mace — Signature: [signature] — Month Day Year: X 7 25 90

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Mersincer — Signature: [signature] — Month Day Year: X 7 25 90

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

8 — GENERATOR COPY

VRW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520216

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ004289568 Manifest Document No. 077746

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 DOREMUS AVE.
NEWARK N.J. 07105

4. Generator's Phone (201 344-8014

A. State Manifest Document Number: NJA 1177746

B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS/277633573

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005,D001) Flammable Liquid UN 1993 (METHANOL, TOLUENE)	001	TT	04700	G	F 0 0
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. I/T/L- Oil 1%, Methanol 10/25% Toluene 15/30%, hexanol 5/20%, Heptane 0/5%, Trace Methylene 1000ppm
b.
c. Octanol 5/20% Chloride
d.

K. Handling Codes for Wastes Listed Above
a. Blending TO4
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE:
MR. JOHN VASSILIADES (718) 353 0777

S&W APPROVAL NO. 005350 a)001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES
Signature: John Vassiliades
Month Day Year: 11 26 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DONALD RUITENBERG
Signature: Donald Ruitenberg
Month Day Year: 11 26 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pamela Ruhold
Signature: Pamela Ruhold
Month Day Year: 11 26 91

SIGNATURE AND INFORMATION

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

(REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520217

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJDD828956807 Manifest Document No. 7593

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE.
NEWARK N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number NJA 1177593

B. State Generator's ID SAME

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS7277

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005, D001) Flammable Liquid UN 1993 METHANOL, TOLUENE	37	DM	1925	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. 1/T/L-ALSO D001, Oil 1%, Methanol 10%, Toluene 15/30%, Hexanol 5/20%, Octanol 5/20%, Heptane 0/5%, Trace Methylene Chloride 1000ppm
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a. Blending TOV
c.
b.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE:
JOHN VASSILIADES 718 353 0777
S&W APPROVAL NO. 005350 a)008
Section 11a: Non-Regulated. * 63216 material

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name ALBERT ASQUE | Signature [signature] | Month 11 Day 4 Year 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name P SNIFFEN | Signature [signature] | Month 11 Day 4 Year 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY ONLY
Printed/Typed Name C. WARD | Signature [signature] | Month 11 Day 04 Year 91

In case of an emergency or spill immediately call the state the emergency occurred the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520218

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Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0042896807506 — Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL
268 DOREMUS AVE.
NEWARK N.J. 07105

4. Generator's Phone (201 344 8014

A. State Manifest Document Number NJA 1177506

B. State Generator's ID SAME

5. Transporter 1 Company Name: NEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJ0988660999

C. State Trans. ID

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJ0991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-8014

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. NON HAZARDOUS NON REGULATED MATERIAL	x52	DM	x2860	G	X9010
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Aldehyde C14 5/10%, aldehyde c18 5/10%. /L
Aldehyde C16 5/10%, Citronellal 1/10%
Geranyl Acetate 1/20%, Butyl Buturyl
lactate 5/10%

K. Handling Codes for Wastes Listed Above
a. Blending F018
c.
b.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE:
JOHN VASSILIADES 201 344 8014
S&W APPROVAL NO.005350 a)007
* 63216

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: ALBERT ROQUE — Signature — Month Day Year: 10 24 91

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: George Destruisseaux — Signature — Month Day Year: 10 24 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or-Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: Pamela Rubald — Signature — Month Day Year: 10 24 91

In case of an emergency or spill immediately call the state the emergency occurr ...nd the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520219

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 50968

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL CO. 268 DOREMUS AVE NEWARK N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1156963

B. State Generator's ID: SAME

5. Transporter 1 Company Name: Merola ENTERPRISES INC

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEP57477

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201) 534-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE INC. 105 JACOBUS AVE SKEARNY NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID N.O.S. FLAMMABLE LIQUID UN 1993 METHANOL, TOLUENE FIOS DOOI	XX1	TT	X5300	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. ALSO CONTAINS 1% OIL 1% METHANOL 10-25% TOLUENE 15-30% HEXANOL 5-20% OCTANOL 5-20% HEPTHANE 5% TRACE METHYLENE

b. CHLORIDE 1000 PPM.

K. Handling Codes for Wastes Listed Above

a. Blending TOT

b.

c.

d.

15. Special Handling Instructions and Additional Information

S&W APP NO. 005350A(001)
EMERGENCY CONTACT # JOHN VASSILADES 718-353-0777

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER | Signature: [signature] | Month Day Year: 10 08 91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bill Mersinger | Signature: Bill M[signature] | Month Day Year: 10 08 91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Pamela Ruhrold | Signature: Pamela Ruhrold | Month Day Year: 10 08 91

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-01 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520220

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Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 77181

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave, Newark, N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number: NJA 1177181

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S&W Waste, Inc.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: [illegible]

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: [illegible]

E. State Trans. ID:

9. Designated Facility Name and Site Address
S&W Waste, Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	RQ.WASTE FLAMMABLE LIQUID NOS (F005,D001) FLAMMABLE LIQUID UN1993 Methanol, Toluene	XX1	TT	X4014	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Also (D001) I/T/L Oil 1%, Methanol 10/25% Toluene 15/30% Hexanol 5/20% Octanol 5/20%, Heptane 5%, Trace Methylene Chloride 1000PPM

K. Handling Codes for Wastes Listed Above
a. Blend TOY
b.
c.
d.

15. Special Handling Instructions and Additional Information

S&W APPROVAL NO. 005350 a(001)
Emergency Contact & # John Vassilades 718 353 0777

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER | Signature: Yury Langer | Month Day Year: 09 13 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Morsinger | Signature: Bill Morsinger | Month Day Year: 09 13 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: R. SCOTESE | Signature: R Scotese | Month Day Year: 09 13 91

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

3 — TSD MAIL TO - GENERATOR

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-00 RE

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520221

Pl... in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

...ORM HAZARDOUS ...ASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. [illegible]
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE.
NEWARK N.J. 07105

4. Generator's Phone (201 344 8014

A. State Manifest Document Number NJA 1157519
B. State Generator's ID SAME

5. Transporter 1 Company Name: S&W Waste, Inc.
6. US EPA ID Number: NJD099129110
C. State Trans. ID: NJSWA3002
D. Transporter's Phone: 201-344-4004

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
S&W Waste, Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD099129110
G. State Facility's ID
H. Facility's Phone (201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE FLAMMABLE LIQUID NOS RQ (F005, D001) FLAMMABLE LIQUID UN1993 METHANOL, TOLUENE	X	XX	T T	X4500	G	F 0 0 5
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
I/T/L-AL30 D001, D11 1% Methanol 10/25% Toluene 15/30%, Hexanol 5/20%, Octanol 5/20% Heptane 0/5%, Trace Methylene Chloride 1000ppm

K. Handling Codes for Wastes Listed Above
a. T&T c.
b. d.

15. Special Handling Instructions and Additional Information EMERGENCY CONTACT & #MR. JOHN VASSILIADES 718 3530777
S&W APPROVAL NO. 005350 #001 * 63357

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES | Signature: John Vassiliades | Month Day Year: 7/26/91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: BILL MESSICK | Signature: Bill Messick | Month Day Year: 7/26/91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: R SCOTESE | Signature: R Scotese | Month Day Year: 7/26/91

GENERATOR
TRANSPORTER
FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

NW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520222

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 57018

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave. Newark, N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number: NJA 1157018

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S&W Waste, Inc.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWAS3002

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S&W Waste, Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201-344-4004)

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ.WASTE FLAMMABLE LIQUID N.O.S.(F005,D001) FLAMMABLE LIQUID UN1993 Methanol,Toluene	XX1	TT	X5300	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
Also(D001) 1/1/L Oil 1%, Methanol 10/25% Toluene 15/30% Hexanol 5/20% Octanol 5/20% Heptane 5%, Trace Methylene Chloride 1000ppm

K. Handling Codes for Wastes Listed Above
a. Blending TOV
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a(001)
Emergency Contact & # John Vassiliades 718 353 0777

+DECA-1 #(63353)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: KAREL SULIMIRSKI — Signature: [signature] — Month Day Year: 05 24 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KLEBOWICZ — Signature: [signature] — Month Day Year: 05 24 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: ROBERT SCOTESE — Signature: [signature] — Month Day Year: 05 24 91

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurrence and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

YHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520223

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 58494

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave. Newark, N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number: NJA 0958494

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S&W Waste, Inc.

6. US EPA ID Number: NJD991291105

C. State Trans. ID: NJSWAS3002

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S&W Waste, Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ WASTE FLAMMABLE LIQUID N.O.S. (F005,D001) FLAMMABLE LIQUID UN1993 Methanol Toluene	XX1	TT	X3950	G	F005
b.		DOT-E8640					
c.							
d.							

Additional Descriptions for Materials Listed Above
Also (D001) Oil 1%, Methanol 10/25%, Toluene 15/30%, Hexanol 5/20% Octanol 5/20%, Heptane 5%, Trace Methylene Chloride 1000ppm I/T/L

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 a(001)
Emergency Contact & # John Vassiliades 718 353 0777

DECA / #63359

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN VASSILIADES
Signature: John Vassiliades
Month Day Year: 04 03 91

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roy KlEBowicz
Signature: [signature]
Month Day Year: 04 03 91

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Carol Lynn Bishop
Signature: Carol Lynn Bishop
Month Day Year: 04 03 91

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

GENERATOR / TRANSPORTER / FACILITY

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520224

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 / 58160

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Company
268 Doremus Ave., Newark, N.J. 07105

4. Generator's Phone (201) 344-0014

5. Transporter 1 Company Name: S&W Waste, Inc.

6. US EPA ID Number: NJD991291105

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address
S&W Waste, Inc.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

A. State Manifest Document Number: NJA 0958160

B. State Generator's ID: SAME

C. State Trans. ID: 63853

D. Transporter's Phone: NJSWAS3002

E. State Trans. ID: 201-344-4004

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID N.O.S. (F005, D001) FLAMMABLE LIQUID UN1993 (Methanol, Toluene)	XX1	TT	X4129	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
also D001 DT: 1% Methanol 10/25%
Toluene 15/30% Hexanol 5/20%
Octanol 5/20% Heptane 0/5%
Trace Of Methylene Chloride 1000 ppm
b. IT/L
c.
d.

K. Handling Codes for Wastes Listed Above
a. 704
b.
c.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350 (001)
Emergency Contact & # John Vassiliades (718)353 0777

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES
Signature: John Vassiliades
Month Day Year: X2129 1

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Mersinger
Signature: Bill M
Month Day Year: X2129 1

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: Carol Lynn Bishop
Signature: Carol Lynn Bishop
Month Day Year: 02129 1

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-6580 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

2 TSD MAIL TO GENERATOR

-001 (REV. 9/85)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520225

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 4 2 8 9 5 6 8 0 5 — Manifest Document No. 7 9 2 5

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave.
Newark N.J. 07105

4. Generator's Phone (201) 344 8014

A. State Manifest Document Number **NJA 0957925**

B. State Generator's ID: SAME

5. Transporter 1 Company Name: S&W WASTE, INC.

6. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5

C. State Trans. ID: NJSWA S 3002 *

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201 344-4004

E. State Trans. ID:

9. Designated Facility Name and Site Address
S & W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: N J D 9 9 1 2 9 1 1 0 5

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ WASTE FLAMMABLE LIQUID, NOS Flammable Liquid UN1993 Toluene Hexane, Octanol METHANOL	001	T	04200	G	F D 0 5
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
also D001 Methanol 10/25% Oil 1%
Toluene 15/30% Hexanol 5/20%
Octanol 5/20% Heptane 0/5% I/T/L

K. Handling Codes for Wastes Listed Above
a. c. b. d.

15. Special Handling Instructions and Additional Information
*63354
S&W APPROVAL NO. 005350 (001)
Emergency Contact John Vassiliades
Emergency #(718)353 0777

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: JOHN VASSILIADES — Signature: John Vassiliades — Month Day Year: 10 11 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DONALD RUITENBERG — Signature: Donald Ruitenberg — Month Day Year: 10 11 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Paul Lynn Bishop — Signature: Paul Lynn Bishop — Month Day Year: 10 11 89

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

SIGNATURES AND INFORMATION MUST BE LEGIBLE ON ALL COPI

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

HW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520226

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0042895680 Manifest Document No. 01488

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 Doremus Avenue
Newark, N.J. 07105

A. State Manifest Document Number NJA 1301488

B. State Generator's ID SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS7277 6 D353

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005, D001) Flammable Liquid UN 1993 (Methanol, Toluene)	XX1	TT	X5200	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
1,1,1-Oil(1)Methanol(10-25) Toluene(10-30)Hexanol(5-20) Octanol(5-20)Heptane(0-5) Xylene(0-5)Trace Methylene Chloride(1000PPM)Trace Ethylene Dichloride(1000PPM)
ALSO D001

K. Handling Codes for Wastes Listed Above
a. c. b. d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliades (718) 353-0777

S&W APPROVAL NO. 005350 - 001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ALBERT ROQUE
Signature: [signature]
Month Day Year: X 1 1992

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Mersinger
Signature: [signature]
Month Day Year: X 1 1992

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pamela Ruhold
Signature: [signature]
Month Day Year: 10/1/1992

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/88)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520227

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 016055
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
268 Doremus Ave.
Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1301605

B. State Generator's ID: SAME

5. Transporter 1 Company Name: NEROLA ENTERPRISES, INC.
6. US EPA ID Number: NJD986609949
C. State Trans. ID: NJDEPS7277 63284
D. Transporter's Phone: 201-589-1600

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. WASTE FLAMMABLE LIQUID, NOS RQ.(F005,D001) Flammable Liquid UN 1993 Methanol, Toluene	X	XX1	TT	X2050	G	F005
b.						
c.						
d.						

G. Handling Codes for Wastes Listed Above
a. Bertling
b.
c.
d.

13. (001) Oil 15, Methanol 10/25%, Toluene 15/30%, Hexanol 5/20%, Octanol 5/20%, Heptane 5%, Xylene 5%, Trace Methylen Chloride 1000PPM Trace Ethylene Dichloride 1000PPM
I/T/L

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliades 718-353-0777
S&W APPROVAL NO. 005350 a(001)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: ALBERT ROQUE
Signature:
Month Day Year: 11 7 92

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Messinger
Signature:
Month Day Year: 11 12 92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: PATRICIA WOJCIK
Signature:
Month Day Year: 11 20 92

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520228

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 00958

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
260 DOREMUS AVE.
NEWARK NJ 07105

4. Generator's Phone (201) 344-4004

A. State Manifest Document Number NJA 1300958

B. State Generator's ID SAME

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS/277/1420

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005,D001) Flammable Liquid UN 1993 (Methanol, Toluene)	XX1	TT	X5200	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
T/T/L-ALSO D001, OIT 1%, Methanol 10/25%, Toluene 15/30%, Hexanol 5/20%, Heptane 0/5%, Xylene 0/5%, Trace Methylene Chloride 1000ppm
Trace Ethylene Dichloride 1000ppm

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE:
JOHN VASSILIADAS (718) 353-0777
S&W APPROVAL NO. 005350 a)001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name JOHN VASSILIADES Signature John Vassiliadas Month Day Year X 2 24 9

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Bill MERSINGER Signature Bill M Month Day Year X 2 24 9

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space
The material manifested on line 11A will be rejected As per generators request 2-24-92 ML 2-24-92

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19
Printed/Typed Name Pamela Rubrold Signature Pamela Rubrold Month Day Year 2 24 9

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520229

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 01113

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Elan Chemical Co. 268 Doremus Ave. Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1301113

B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277 14206

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE, INC. 105 Jacobus Avenue South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ.(F005,D001) Flammable Liquid UN 1993 Methanol, Toluene	XX1	TT	X3270	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: Also (D001) Methanol 10/25%, Toluene 15/30%, Hexanol 5/20%, Octanol 5/20%, Xylene 5%, 1/T/L

K. Handling Codes for Wastes Listed Above: a. b. c. d.

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: John Vassilades 718-353-0777

S&W APPROVAL NO. 005350 a(001)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: F SULIMIRSKI | Signature: [signature] | Month Day Year: X3 19 92

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bill MERSINGER | Signature: [signature] | Month Day Year: X3 19 92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Pamela Ruhrold | Signature: [signature] | Month Day Year: 03 19 9

In case of an emergency or spill immediately call the state the emergency occurred to the N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 – TSD MAIL TO GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520230

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895690 Manifest Document No. 000630

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 Doremus Ave.
Newark, NJ 07105

A. State Manifest Document Number NJA 1400630

B. State Generator's ID SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEP57277 14206

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291108

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( ) 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005,D001) Flammable Liquid UN 1993 (Methanol,Toluene)	XX1	TT	X5300	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
ALSO D001, Oil 1%, Methanol 10/25%, Toluene 15/30%, Hexanol 5/20%, Octanol 5/20%, Heptane 0/5% Xylene 0/5% (1/T/L)

K. Handling Codes for Wastes Listed Above
a. Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiadas (718)353-0777
S&W APPROVAL NO. 000530 a)001

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ALBERT REQUE
Signature: [signature]
Month Day Year: 05 27 92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Massinger
Signature: [signature]
Month Day Year: 05 27 92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: Jamela Rubold
Signature: [signature]
Month Day Year: 05 27 92

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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2. TSD MAIL TO GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520231

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 00816

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 Doremus Ave.
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 1400816

B. State Generator's ID SAME

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS7277/

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( ) 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005,D001) Flammable Liquid UN 1993 (Methanol, Toluene)	XX1	TT	X5500	G	F 00
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
ALSO D001, Oil 1%, Methanol 10/25% Toluene 15/30%, Hexanol 5/20%, Octanol 5/20%, Heptane 0/5%, Xylene 0/5%, Trace Methylene Chloride, Trace Ethylene Dichloride (1/T/L)

K. Handling Codes for Wastes Listed Above
a. [illegible] c.
b. d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE:
John Vassiliadas (718) 353-0777

S&W APPROVAL NO. 005350 a)001

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Printed/Typed Name: Albert Rogue
Signature: [signature]
Month Day Year: 07 09

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Mersinger
Signature: Bill M[signature]
Month Day Year: 07 09

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pam Rubold
Signature: Pam Rubold
Month Day Year: 07 09

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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3 — TSD MAIL TO - GENERATOR

HW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520232

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJ004289568 — Manifest Document No.: 001193
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Elan Chemical Co., 268 Doremus Ave., Newark, NJ. 07105
4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: **NJA 1401193**
B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.
6. US EPA ID Number: NJD986609949
C. State Trans. ID: NJDEPS7277 14209
7. Transporter 2 Company Name:
8. US EPA ID Number:
D. Transporter's Phone: 201-589-1600
E. State Trans. ID:
F. Transporter's Phone ( )
G. State Facility's ID:
H. Facility's Phone: 201-344-4004

9. Designated Facility Name and Site Address: S&W WASTE, INC., 105 Jacobus Avenue, South Kearny, N.J. 07032
10. US EPA ID Number: NJD991291105

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ.(F005,D001) Flammable Liquid UN 1993 Methanol,Toluene	XX1	TT	X5000	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: Also(D001) I/I/L Oil 1%, Methanol 10/25%, Toluene 15/30%Hexanol 5/20% Octanol 5/20%, Heptane 5%, Xylene 5%,

K. Handling Codes for Wastes Listed Above: a. [illegible] b. c. d.

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: John Vassiliade 718-353-0777

S&W APPROVAL NO. 005350 a(001)

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: ALBERT ROGUE — Signature: [signature] — Month Day Year: X8 1 92

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Bill Mersinger — Signature: Bill M[signature] — Month Day Year: X8 1 92

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: PAH Rubrold — Signature: Pam Rubrold — Month Day Year: 08 1 92

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

2. TOP MAIL TO GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520233

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 99606

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL COMPANY, 268 Doremus Avenue, Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1489609

B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277/4198

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE, INC., 105 Jacobus Avenue, South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ (F005,D001) Flammable Liquid UN 1993 (Methanol, Toluene)	XX1	TT	X3675	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: (1/T/L)ALSO(D001)Off(1)Methanol (10/25)Toluene(15/30)Hexanol(5/20)Octanol(5/20)Heptane(0/5) Xylene(0/5)Trace Methylene Chloride, Trace Ethylene Dichloride

K. Handling Codes for Wastes Listed Above: a. [illegible] c. d. b. d.

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: John Vassiliadas(718)353-0777

S&W APPROVAL NO. 005350 a)001

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Printed/Typed Name: AL ACQUE | Signature: [signature] | Month Day Year: X 9 10 92

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Bill Mersinger | Signature: [signature] | Month Day Year: X 9 10 92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: | Signature: | Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name: Tom Ruhold | Signature: [signature] | Month Day Year: 09 10 92

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

2. TSD MAIL TO GENERATOR

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

Version 001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520234

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 68444

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Company
268 Doremus Ave.
Newark, NJ 07105

4. Generator's Phone (201) 344-4004

A. State Manifest Document Number: **NJA 1489844**

B. State Generator's ID: Same

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986466666

C. State Trans. ID: NJ2287427 11/209

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone: 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD981211105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( ) 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. X WASTE FLAMMABLE LIQUID, NOS NQ D001, F005 Flammable Liquid UN 1993 (Methanol, Toluene)	XX	TT	X5200	G	F005
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
1,T/L-Methanol(10-25)Toluene(15-30) Hexanol(5-30)Octenol(5-20)Heptano a(0-5) ALSO D001

K. Handling Codes for Wastes Listed Above
a. T
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliack(718)353-077
S&W APPROVAL NO. 005350-001

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GENERATOR — Printed/Typed Name: JOHN VASSILIADES — Signature — Month Day Year: 10059

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: R KIEBOWICZ — Signature — Month Day Year: 10059

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Month Day Year

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

In case of an emergency or spill immediately call the state the emergency occurred and the N.J. Dept. of Environmental Protection, (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

3 — TSD MAIL TO - GENERATOR

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520235

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 9147

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave.
Newark, NJ. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 1489147

B. State Generator's ID SAME

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS7277 (45737)

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ.(F005,D001) Flammable Liquid UN 1993 Methanol,Toluene	XX1	TT	X4900	G	F005
b.							
c.							
d.							

I/T/A Also (D001) Oil 1%
Methanol 10/25%, Toluene 15/30%
Hexanol 5/20% Octanol 5/20%

J. Additional Descriptions for Materials Listed Above

a. c.

b. d.

K. Handling Codes for Wastes Listed Above

a. c.

b. d.

15. Special Handling Instructions and Additional Information EMERGENCY CONTACT & PHONE: John Vassilade 718-353-0777

S&W APPROVAL NO. 005350 a(001)

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Printed/Typed Name A. Roque | Signature [signature] | Month Day Year 10 29 92

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name R. Klebowicz | Signature [signature] | Month Day Year 10 29 92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name A. Roque | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name Tom Rubold | Signature Tom Rubold | Month Day Year 10 29 92

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO - GENERATOR

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520236

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 36095

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Elan Chemical Company, 268 Doremus Ave., Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1536095

B. State Generator's ID: Same

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277 HS737

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE, INC., 105 Jacobus Avenue, South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOS RQ F005 D001 Flammable Liquid UN 1993 Methanol Toluene	001	TT	04900	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: I/T/L-OTL(<1)Methanol(10-25) Toluene(15-30)Hexanol(5-20) Octanol(5-20)Heptane(0-5) a. c.

ALSO D001 b. d.

K. Handling Codes for Wastes Listed Above: a. c. b. d.

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: John Vassilades(718)353-0777

S&W APPROVAL NO. 005350 - 001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: AL ROGUE — Signature: [signature] — Month Day Year: 12 07 92

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG — Signature: Donald Ruitenberg — Month Day Year: 12 07 92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Pam Rubold — Signature: [signature] — Month Day Year: 12 07 92

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

2 - TSD MAIL TO GENERATOR

VHW-001 (Rev. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520237

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD043395680 — Manifest Document No. 000001

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical
263 Doremus Ave. Newark, N.J. 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1565092

B. State Generator's ID

5. Transporter 1 Company Name: Laidlaw Environmental Services

6. US EPA ID Number: MDD980554653

C. State Trans. ID

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 800 251-1227

E. State Trans. ID

9. Designated Facility Name and Site Address
Laidlaw Environmental Services
2815 Old GreenBrier Pike
Greenbrier, TN 37073

10. US EPA ID Number: TND000645870

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (615) 244-8960

11. US DOT Description (Including Proper Shipping Name, Hazard-Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a.	X	RQ, Waste Flammable Liquid, N.O.S. Flammable Liquid, UN - 1993 (ERG=27) (Heptane & Hexane)	003	DM	00165	G	D001
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. c.
b. d.

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
Emergency Contract & Chem Exec 1-800-424-9300

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: 04 15 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Chris Hubbard — Signature: Chris Hubbard — Month Day Year: 04 15 93

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520238

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 4 2 8 9 5 6 8 0 | Manifest Document No. 1 9 9 0 0 9
2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Company
268 Doremus Avenue
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1499009

B. State Generator's ID: SAME

5. Transporter 1 Company Name: American Industrial Marine Service
6. US EPA ID Number: N J D 9 8 1 8 7 3 6 6 4
C. State Trans. ID: NJDEPE S 1 0 3 4 0
D. Transporter's Phone (908) 756-4200
E. State Trans. ID:

7. Transporter 2 Company Name:
8. US EPA ID Number:
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
Cycle Chem Inc.
217 S. First Street
Elizabeth, NJ 07206
10. US EPA ID Number: T N J D 0 0 2 2 0 0 0 4 6
G. State Facility's ID:
H. Facility's Phone 908) 355-5800

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ-Waste Flammable Liquid, N.O.S. (D001,F002 Flammable Liquid UN-1993 F003,F005)	0 0 1	T T	1 5 0 0 0	G	D001 F002 F003 F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
L.I.T/ Water 0-5%, Oil<1%, Methanol 10-25%, Toluene 15-30%, Hexanol 5-20%, Octanol 5-20%, Heptane 0-5%, Xylene 0-5%, Trace Methylene Chloride >1000 PPM, Trace Ethylene Dichloride >1000 PPM

K. Handling Codes for Wastes Listed Above
a. c. b. d.

15. Special Handling Instructions and Additional Information
PCN#3451291K
NJDEPE S10340 Decal#
24 HR. EMERGENCY #908-756-4200

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Printed/Typed Name	Signature	Month Day Year
AL ROCCO		0 1 2 7 1 3

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
THOMAS PALUZZI	Thomas Paluzzi	0 1 2 7 1 3

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space
15) DECAL #'s - TRL46006 TRCT45987

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Jean Mutone	Jean Mutone	1 2 1 2 7 1 3

NJA 1499009

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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3 — TSD MAIL TO - GENERATOR

GENERATOR | TRANSPORTER | FACILITY

Questions regarding this manifest? Call the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520239

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Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. / Manifest Document No.: NJD042895680 99011
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Elan Chemical Company, 268 Doremus Avenue, Newark, NJ 07105
4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1499011

B. State Generator's ID: SAME

5. Transporter 1 Company Name: American Industrial Marine Service
6. US EPA ID Number: NJD981873664

C. State Trans. ID: NJDEPE S10340

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (908) 756-4200

E. State Trans. ID:

9. Designated Facility Name and Site Address: Cycle Chem Inc., 217 S. First Street, Elizabeth, NJ 07206
10. US EPA ID Number: NJD002200046

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (908) 355-5800

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ-Waste Flammable Liquid, N.O.S. (D001,F002 F003,F005) Flammable Liquid Un-1993	001	TT	X5000	G	D001 F002 F003 F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. L.I. T/Water 0-5%, Oil < 1%, Methanol 10-25%, Toluene 15-30%, Hexanol 5-20%, Octanol 5-20%, Heptane 0-5%, Xylene 0-5%, Trace Methylene Chloride < 1000PPM,

b. Trace Ethylene Dichloride < 1000PPM

c. d.

K. Handling Codes for Wastes Listed Above

a. c.

b. d.

15. Special Handling Instructions and Additional Information

PCN#3451297K
NJDEPE S10340 Decal # 46006
24 Hr. Emergency #908-756-4200

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Printed/Typed Name: [illegible] Signature: [illegible] Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: THOMAS PALUZZI Signature: Thomas Paluzzi Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: Signature: Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Signature: Month Day Year

GENERATOR / TRANSPORTER / FACILITY

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VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520240

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895660 Manifest Document No. 37345

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 Doremus Ave.
Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number NJA 1537345

B. State Generator's ID SAME

5. Transporter 1 Company Name MEROLA ENTERPRISES, INC.

6. US EPA ID Number NJD986609949

C. State Trans. ID NJDEPS7277 (45746)

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone 201-589-1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	WASTE FLAMMABLE LIQUID, NOSRQ(F005,D001) Flammable Liquid UN 1993 Methano, Toluene	XX1	TT	X5250	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. T/L also D001 Oil(1%) Methanol (10-25%) Toluene(15-30%) hexanol(5-20%) Octanol(5-20%) Heptane(0-5%) Xylene(0-5%) ALSO D001
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. [illegible]
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliadas (718)353-0777

S&W APPROVAL NO.005350-001

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: BRADLEY R BARRETT
Signature: [signature]
Month Day Year: 03 05 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: R. KLEBOWICZ
Signature: [signature]
Month Day Year: 03 05 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: BRADLEY
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: [illegible] RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL
Printed/Typed Name: Pam Ruhrold
Signature: Pam Ruhrold
Month Day Year: 03 05 93

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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2 - TSD MAIL TO GENERATOR

VHW-004 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520241

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 37593

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL CO. 268 Doremus Ave Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1537593

B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277 45743

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone: 201-589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE, INC. 105 Jacobus Avenue South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUID N.O.S (F005,D001) Flammable Liquid UN1993 Methanol, Toluene	X	001	TT	05200	G	F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: D/Methanol (10-25%) Toluene(15-30%) Hexanol (5-20%) Octanol(5-20%) Heptane (0-5%) Xylene(0-5%)

K. Handling Codes for Wastes Listed Above: a. T8 Blending c.

b. d.

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: (718)353-0777 John Vassiliades

S&W APPROVAL NO. 005350-001

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Printed/Typed Name: Lacol Sulimirski — Signature: [signature] — Month Day Year: 04 13 93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Donald Ruitenberg — Signature: Donald Ruitenberg — Month Day Year: 04 13 93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of materials covered by this manifest except as noted in Item 19.

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

Printed/Typed Name: Pam Rubrold — Signature: Pam Rubrold — Month Day Year: 04 13 93

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred [illegible] the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520242

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 081659

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 Doremus Ave
Newark, NJ 07105

A. State Manifest Document Number NJA 1681689

B. State Generator's ID SANE

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD936609949

C. State Trans. ID NJDEPS7277

D. Transporter's Phone 201-589-1600

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUID N.O.S (F005,D001) Flammable Liquid UN1993 Methanol,Toluene	X	1	T	5400	G	F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. (10-25%)Toluene(15-30%)Hexanol (0-20%) Octanol(5-20%)Heptane (0-5%)Xylene(0-5%)
c.
b.
d. EMERGENCY CONTACT & PHONE: (718)353-0777 John Vassiliades

K. Handling Codes for Wastes Listed Above
a. T04 Blending
c.
b.
d.

15. Special Handling Instructions and Additional Information
S&W APPROVAL NO. 005350-001

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GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
YURI LAUER		4	22	93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
P SNIFFEN		4	22	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Pam Ruhrdd		04	29	93

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520243

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 81806

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: ELAN CHEMICAL COMPANY, 268 Doremus Avenue, Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1681806

B. State Generator's ID: SAME

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277 45746

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (201) 589-1600

E. State Trans. ID:

9. Designated Facility Name and Site Address: S&W WASTE, INC., 105 Jacobus Avenue, South Kearny, NJ 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (201) 344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ WASTE FLAMMABLE LIQUID, NOS (F005,D001) Flammable Liquid UN 1993 (Methanol, Toluene)	001	TT	05100	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above: L,T/L-Oil(21)Methanol(10-25) Toluene(15-30)Hexanol(5-20) Octanol(5-20)Heptane(0-5)Xylene (0-5)Trace Methylene Chloride also D001

K. Handling Codes for Wastes Listed Above: a. T04 Blending

15. Special Handling Instructions and Additional Information: EMERGENCY CONTACT & PHONE: John Vassiliadas(718)353-0777

S&W APPROVAL NO. 005350 - 001

(a) (>1,000PPM)Trace Ethylene Dichloride(>1,000PPM) ALSO D001

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ALBERT ROGUE — Signature: Albert Rogue — Month Day Year: 05 06 93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DONALD RUITENBERG — Signature: Donald Ruitenberg — Month Day Year: 05 06 93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name: Pam Ruhrold — Signature: Pam Ruhrold — Month Day Year: 05 06 93

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

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State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520244

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 819055

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL
268 Doremus Ave
Newark, NJ 07105

A. State Manifest Document Number NJA 1681905

B. State Generator's ID SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID NJDEPS727745737

D. Transporter's Phone 201-589-1600

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone 201-344-4004

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUID N.O.S (F005,D001) Flammable Liquid UN1993 (Methanol, Toluene)	X	001	TT	04800	G	F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
I/I/L also D001 Oil(1%) Methanol(10-25%) Toluene(15-30%) Hexanol(5-20%) Octanol(5-20%) Heptane(0-5%) Xylene(0-5%)

K. Handling Codes for Wastes Listed Above
a. TOY Blending
c.
b.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliades (718)353-0777
S&W APPROVAL NO. 005350-001

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Printed/Typed Name: AL ROQUE — Signature — Month 05 Day 13 Year 93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: D. RUITENBERG — Signature — Month 05 Day 13 Year 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pam Ruhrold — Signature — Month 05 Day 13 Year 93

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520245

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 | Manifest Document No.: 819964

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address:
ELAN CHEMICAL CO.
268 Doremus Ave
Newark, NJ 07105

A. State Manifest Document Number: NJA 1681964

B. State Generator's ID: SAME

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986060994

C. State Trans. ID: NJDEPS727145880

D. Transporter's Phone: 201-589-1600

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Trans. ID:

F. Transporter's Phone ( )

9. Designated Facility Name and Site Address:
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

G. State Facility's ID:

H. Facility's Phone: 201-344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ WASTE FLAMMABLE LIQUID N.O.S (F005,D001) Flammable Liquid UN1993 (Methanol, Toluen)	001	TT	04600	G	F005
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. (10-25%)Toluene(15-30%) Hexanol (5-20%) Octanol(5-20%) Heptane(0-5%) Xylene(0-5%) Trace Methylene Chloride, trace Ethylene Dichloride
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04 Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliades (718)353-0777
S&W APPROVAL NO. 005350-001

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Printed/Typed Name	Signature	Month	Day	Year
K SULIMIESKI		05	21	93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
D. RUITENBERG	D. Ruitenberg	05	21	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Pam Ruhrold	Pam Ruhrold	05	21	93

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy, (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

847520246

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

EMERGENCY CONTACT: 718-353-0777

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042695680 Manifest Document No. 30042

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 DOREMUS AVE NEWARK NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number
NJA 1487003

B. State Generator's ID
268 DOREMUS AVE
NEWARK NJ 07105

5. Transporter 1 Company Name
MEROLA ENTERPRISES

6. US EPA ID Number
NJD986609949

C. State Trans. ID S-7277 45737

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (201) 589.1600

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 JACOBUS AVENUE
SOUTH KEARNY, NJ 07032

10. US EPA ID Number
NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201) 344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ.WASTE FLAMMABLE LIQUID NOS (F005,D001) FLAMMABLE LIQUID UN1993 (METHANOL,TOLUENE)	001	TT	04850	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
S&W APP.005350 (a):001
I/T/L ALSO(D001) OIL <1,
METHANOL 10/25%,TOLUENE 15/30%

K. Handling Codes for Wastes Listed Above
a. Tly Blending
c.
b.
d.

15. Special Handling Instructions and Additional Information
METHANOL 5/20%,OCTANOL 5/20%,XYLENE 0/5%

Emergency Contact: John Vassilinda 718-353-0777

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Printed/Typed Name: AL ROQUE
Signature: [signature]
Month Day Year: 06 07 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DONALD RUITENBERG
Signature: Donald Ruitenberg
Month Day Year: 06 07 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Pam Ruhrold
Signature: [signature]
Month Day Year: 06 07 94

In case of emergency or spill immediately call the state the emergency occurred the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

2. TSD MAIL TO GENERATOR

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520247

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Form Approved. OMB No. 2050-0039. Expires 9-30

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ0042895680 — Manifest Document No. 82103

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 Doremus Ave
Newark, NJ 07105

A. State Manifest Document Number: NJA 1682103

B. State Generator's ID: same

4. Generator's Phone (201) 344-8014

5. Transporter 1 Company Name: MEROLA ENTERPRISES, INC.

6. US EPA ID Number: NJD986609949

C. State Trans. ID: NJDEPS7277

D. Transporter's Phone: 201-589-1600

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Trans. ID

9. Designated Facility Name and Site Address
S&W WASTE, INC.
105 Jacobus Avenue
South Kearny, N.J. 07032

10. US EPA ID Number: NJD991291105

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (201-344-4004

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ WASTE FLAMMABLE LIQUID N.O.S (F005,D001) Flammale Liquid UN1993 (Methanol, Toluene)	XX1	TT	4480	G	F005
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
T/I/L also D001(1%) Methanol(10-25%) Methanol(10-25%)Toluene(15-30%) Octanol(5-20%) Heptane(0-5%) Xylene(0-5%)

K. Handling Codes for Wastes Listed Above
a. 104 Blending
b.
c.
d.

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT & PHONE: John Vassiliades (718)353-0777
S&W APPROVAL NO. 005350-001

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GENERATOR — Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: 6/1/93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: B.J. Morsiek — Signature: [signature] — Month Day Year: 6/1/93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

TRANSPORTER

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Pam Ruhrod — Signature: [signature] — Month Day Year: 6/1/93

RECEIVED PENDING MANIFEST REVIEW & QUALITY CONTROL

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ...

3 — TSD MAIL TO - GENERATOR

...y or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy, (609) 292-7172

51280

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

IJBK

847520248

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 66277

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVENUE
NEWARK,, NJ 07105 AL ROQUE

4. Generator's Phone (201) 344-80[illegible]14 ATTN: ~~[illegible]~~

A. State Manifest Document Number NJA 1766277

B. State Generator's ID SAME

5. Transporter 1 Company Name MARISOL INC. US EPA ID Number NJD002454544

C. State Trans. NJDEPE S 2 8 0 9

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (908-469-5100

E. State Trans. ID

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908-469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ,WASTE FLAMMABLE LIQUID, NOS (TOLUENE, METHANOL) 3, UN1993, PG II	001	TT	05725	G	F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. L,I,T. F005,D001 SEE SECTION 15
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04
b.
c.
d.

15. Special Handling Instructions and Additional Information JA.CONT. TOLUENE 15-30%,HEXANOL 5-20%,METHANOL 10-25% OCTANOL 5-20%,HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%.
24 HOUR EMERGENCY RESPONSE # 908/469-5100. DRIVER EQUIPPED WITH ERG GUIDE.
DECAL # 44099 T04-RECOVERY

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: AL ROQUE
Signature: Albert Roque
Month Day Year: 08 03 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: TONY LAEYT
Signature: Tony Laeyt
Month Day Year: 08 03 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H Donelson
Signature: [signature]
Month Day Year: 08 03 93

GENERATOR

TRANSPORTER

FACILITY

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EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

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State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520249

5,228 gals received

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJ D 04 2 89 56 8 0 — Manifest Document No.: 12 94 7

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 DOREMUS AVE.
NEWARK, NJ 07105
(201) 344-8014

4. Generator's Phone

A. State Manifest Document Number: NJA 1712947

B. State Generator's ID

5. Transporter 1 Company Name: OLDOVER CORPORATION

6. US EPA ID Number: VA D 040 1 5 94 3 6

C. State Trans. ID: 7157-NJDEPS

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone: (804) 581-3226

E. State Trans. ID: 195-7481

9. Designated Facility Name and Site Address
OLDOVER CORPORATION
STATE ROAD 652
ARVONIA, VA 23004

10. US EPA ID Number: VA D 0 9 8 44 34 43

F. Transporter's Phone: (804) 581-3226

G. State Facility's ID

H. Facility's Phone: (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID, NOS 3, PG II, UN 1993 (METHANOL, TOLUENE, XYLENE)	00	DTI	X5200	G	F005 D001 F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. c.

b. d.

K. Handling Codes for Wastes Listed Above

S-02 T-18 Lightwt Aggregate Rotary Kiln

c.

b. d.

15. Special Handling Instructions and Additional Information
Guide # 27 Eng # 1-800-424-9300
DECAL# 45282 TRK
45249 TRL

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: AL ROQUE — Signature: [signature] — Month Day Year: 09 02 93

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Monte Gibbs — Signature: Monte Gibbs — Month Day Year: 09 02 93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Marie C. Christian — Signature: Marie C Christian — Month Day Year: 09 03 93

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

52107

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520250

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 015677

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVENUE
NEWARK, , NJ 07105

4. Generator's Phone (201) 344-8041 ATTN:KAROL SULIMIRSKI

5. Transporter 1 Company Name: MARISOL INC.
6. US EPA ID Number: NJD002454544

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number: NJD002454544

A. State Manifest Document Number: NJA 1501567
B. State Generator's ID: SAME
C. State Trans. NJDEPE 8 2 8 0 9
D. Transporter's Phone 908-469-5100
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone 908-469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ,WASTE FLAMMABLE LIQUID, NOS (TOLUENE, METHANOL) 3, UN1993, PG II	001	TT	X6136	G	F003
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
L,1,T. F005,D001
SEE SECTION 15

K. Handling Codes for Wastes Listed Above
a. T04

15. Special Handling Instructions and Additional Information
JA.CONT. TOLUENE 15-30%,HEXANOL 5-20%,METHANOL 10-25%
OCTANOL 5-20%,HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%.
24 HOUR EMERGENCY RESPONSE # 908/469-5100. DRIVER EQUIPPED WITH ERG GUIDE.
DECAL # T0724 T04=RECOVERY

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
AL ROQUE		10 25 92

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
E.P.GARDELLA		10 25 92

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Lemuel H Dawson		10 25 92

In case of an emergency or spill immediately call the state the emergency occurred (609) 292-7172 (Night) the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520251

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 12923

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: Elan Chemical Co., 268 Doremus Avenue, Newark, NJ 07105

4. Generator's Phone (201) 344-8014

A. State Manifest Document Number: NJA 1712923

B. State Generator's ID

5. Transporter 1 Company Name: Oldover Corporation

6. US EPA ID Number: VAD040159436

C. State Trans. ID

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (804) 798-7981

E. State Trans. ID

9. Designated Facility Name and Site Address: Oldover Corporation, State Road 652, Arvonia, VA 23004

10. US EPA ID Number: VAD098443443

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (804) 581-3226

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID, N.O.S., 3, PG II, UN 1993 (Methanol, Toluene, Xylene)	001	TT	05000	G	D001 F005 F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. Methanol 10-25
Toluene 15-30 Xylene 0-5

b.

c.

d.

K. Handling Codes for Wastes Listed Above

a. S-02 T-18 Lightwt Aggregate Rotary Kiln

b. Net #03053Jun93

c.

d.

15. Special Handling Instructions and Additional Information

Guide #27 Emerg. # 1-800-424-9300

Please Bill Network Environmental Technologies, INc.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: AL ROQUE — Signature: [signature] — Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: MONTE GIBBS — Signature: [signature] — Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name — Signature — Month Day Year

GENERATOR — TRANSPORTER — FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

#53 11/17

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520252

4,903 gals received

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 129466
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Avenue
Newark, NJ 07105

4. Generator's Phone ( ) 201-344-8014

A. State Manifest Document Number: NJA 1712946

B. State Generator's ID: Same

5. Transporter 1 Company Name: Oldover Corporation
6. US EPA ID Number: VAD040159436
C. State Trans. ID: NJDEPS7157

7. Transporter 2 Company Name
8. US EPA ID Number
D. Transporter's Phone (804) 798-7981
E. State Trans. ID

9. Designated Facility Name and Site Address
Oldover Corporation
Rt. State Road 652
Arvonia, VA 23004

10. US EPA ID Number: VAD098443443
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (804) 581-3226

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, WASTE FLAMMABLE LIQUID, N.O.S., 3, UN 1993, PG II (Methanol, Toluene, Xylene)	001	TT	05100	G	D001 F005 F003
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. Methanol 10-25 Toluene 15-30 Xylene 0-5
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S-02 T-18 Lightwt Aggregate Rotary Kiln
b.
c.
d.

15. Special Handling Instructions and Additional Information
Guide #27, Emerg. 1-800-424-9300

NET #53
Please bill and send manifest to
Network of Environmental Technologies, Inc.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: AL ROQUE — Signature — Month 1 Day 1 Year 89

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: D.K. Chancellor — Signature — Month 1 Day 1 Year 89

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marie C. Christian — Signature — Month Day

In case of an emergency or spill immediately call the state the emergency o ed in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL C

VHW-001 (REV. 9/86)

52668

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520253

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 851713 | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
CLOW CHEMICAL COMPANY
260 DORIS AVE.
NEWARK, NJ 07105

A. State Manifest Document Number **NJA 1405813**

B. State Generator's ID

4. Generator's Phone (201) 344-8810

5. Transporter 1 Company Name | 6. US EPA ID Number
EAGLEHOLD PORTAGE INC. | NJD 981 561 615

C. State Trans. ID NJDEPE 9216615

7. Transporter 2 Company Name | 8. US EPA ID Number

D. Transporter's Phone (908) 462-1001

E. State Trans. ID

9. Designated Facility Name and Site Address | 10. US EPA ID Number
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846 | NJD 980 505 606

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908) 469-9100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ WASTE FLAMMABLE LIQUID, NOS (TOLUENE, METHANOL), 3, UN1993, PGII	001	FT	06000	G	F 003
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. T, I, T. F005, D001 SEE SECTION 15
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a. T04 Recovery
c.
b.
d.

15. Special Handling Instructions and Additional Information
IN CONT TOLUENE 15-20%, HEXANE 5-10%, METHANOL 10-20% OCTANOL 5-25%, HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%. DRIVER EQUIPPED WITH RAD BADGE EMERGENCY RESPONSE # 908/469-5100. TSD=RECOVERY 55302 ERG #27

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxic ty of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
X AL ROGUE	X	12	17	93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Robert Krol		12	17	93

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
James H Dawson		12	17	93

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

VHW-001 (REV. 9/86)

52784

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520254

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE.
NEWARK, NJ 07105

A. State Manifest Document Number
NJA 1405562

4. Generator's Phone (201) 344-8014 ATTN: AL ROQUE

B. State Generator's ID
SAME

5. Transporter 1 Company Name
MARISOL Inc

6. US EPA ID Number
NJD002454544

C. State Trans. ID
NJDEP S-2809

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (908 469-5100

E. State Trans. ID

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number
NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908-469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ	WASTE FLAMMABLE LIQUID, NOS (TOLUENE, METHANOL), 3, UN1993, PGII	001	TT	06024	G	F003
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
L, I, T. F005, D001
a. SEE SECTION 15
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a. Tol Recovery
c.
b.
d.

15. Special Handling Instructions and Additional Information
JA. CON'T TOLUENE 15-30%, HEXANOL 5-20%, METHANOL 10-25 OCTANOL 5-20%, HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%. DRIVER EQUIPPED WITH RAD BOOK EMERGENCY RESPONSE # 908/469-5100: T04=RECOVERY
DECAL # 50735

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: AL ROQUE
Signature: [signature]
Month Day Year: 12 30 93

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony J. Cwalinski
Signature: [signature]
Month Day Year: 12 30 93

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H. Donovan
Signature: [signature]
Month Day Year: 12 30 93

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in the N.J. Dept. of Environmental Protection. (609) 292-5960 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

2. TSD MAIL TO GENERATOR

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520255

4,961 gals received

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N J D 0 4 2 8 9 5 6 8 0 | Manifest Document No. 1 2 9 4 5

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
268 Doremus Avenue
Newark, NJ 07105

4. Generator's Phone 201-344-8014

A. State Manifest Document Number **NJA 1712945**

B. State Generator's ID SAME

5. Transporter 1 Company Name: Oldover Corporation

6. US EPA ID Number: V A D 0 4 0 1 5 9 4 3 6

C. State Trans. ID NJDEPST167

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (804) 798-7981

E. State Trans. ID

9. Designated Facility Name and Site Address
Oldover Corporation
Rt 1 State Road 652
Arvonia, VA 23004

10. US EPA ID Number: V A D 0 9 8 4 4 3 4 4 3

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. RQ, WASTE FLAMMABLE LIQUID, n.o.s. 3, UN1993, PG II (Methanol, Toluene, Xylene) D001, F003, F005	001	TT	05000	G	D001 F005 F003
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. Methanol 10-25 Toluene 15-30 Xylene 0-5
c.
b.
d.

K. Handling Codes for Wastes Listed Above
a. S-02 T-18 Lightwt Aggregate Rotary Kiln
b.
d.

15. Special Handling Instructions and Additional Information
Guide #27 Emergency 1-800-424-9300
NET #53 Decal 53094

Please send bill and manifest to:
Network of Environmental Technologies

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: AL ROQUE | Signature | Month Day Year: 02 08 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Monte Gibbs | Signature | Month Day Year: 02 08 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marie C. Christian | Signature | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8720-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

VHW-001 (REV. 9/86)

53600

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520256

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 01401

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE. NEWARK, NJ 07105

4. Generator's Phone (201-) 344-8014 ATTN: YURY LANGER

A. State Manifest Document Number: NJA 1501401

B. State Generator's ID: SAMEW

5. Transporter 1 Company Name: MARISOL INC.

6. US EPA ID Number: NJD 0 0 2 4 5 4 5 4 4

C. State Trans. ID: NJ DEPE 2809

7. Transporter 2 Company Name:

8. US EPA ID Number:

D. Transporter's Phone (908-469-5100

E. State Trans. ID:

9. Designated Facility Name and Site Address
Marisol Inc.
125 Factory Lane
Middlesex, NJ ~~[illegible]~~ 08846

10. US EPA ID Number: NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908) 469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ	Waste Flammable Liquid, NOS (Toluene, Methanol), 3, UN1993, PGII Approval 2-11786-1	001	TT	05050	G	~~[illegible]~~ F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. L.I.T. F005, D001 See section 15
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. Tou Recovery
b.
c.
d.

15. Special Handling Instructions and Additional Information
Ja. Con't Toluene 15-30%, Hexanol 5-20%, Methanol 10-25 Octanol 5-20%, Heptane 0-5%, Xylene 0-5%, Oil 0-1%. Driver equipped with ERG book
Emergency Responce # 908-469-5100 T04 = Recovery Seal # 50734

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Yury Langer — Signature: [signature] — Month Day Year: 03 31 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony J. Cwalinski — Signature: [signature] — Month Day Year: 03 31 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H Denison — Signature: [signature] — Month Day Year: 03 31 94

GENERATOR — TRANSPORTER — FACILITY

In case of an emergency or spill immediately call the state the emergency occurred the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

847520257

RECEIVED

MAY 0 9 1994

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

6,132 gals received

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 12939

2. Page 1 of 1

Information in the shaded area is not required by Federal law

3. Generator's Name and Mailing Address: ELAN CHEMICAL CO.
268 Doremus Avenue
Newark, NJ 07105

201-344-8014

4. Generator's Phone ( )

A. State Manifest Document Number: NJA 1712939

B. State Generator's ID

5. Transporter 1 Company Name: OLDOVER CORPORATION

6. US EPA ID Number: VAD040159436

C. State Trans. ID: NJDEPS715

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone ( ) 804 798-798

E. State Trans. ID

9. Designated Facility Name and Site Address: OLDOVER CORPORATION
Rt 1 State Road 652
Arvonia, VA 23004

10. US EPA ID Number: VAD098443443

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( ) 804 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID, n.o.s., 3, UN1993 PG II (Methanol, Toluene, Xylene) D001, F003 F005	001	TT	05700	G	D 0 0 F 0 0 F 0 0
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

a. Methanol 10-25
a. Toluene 15-30, Xylene 0-5
b.
c.
d.

K. Handling Codes for Wastes Listed Above

a. S-02 T-83 Lightwt Aggrega Rotary Kiln
b.
d.

15. Special Handling Instructions and Additional Information

Guide #27 Emergency # 1-800-424-9300 Please send bill and manifest to Network of Environmental TEchnologies

NET #53 DECAL 53106

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and a classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and nation government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to b economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present ar future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and sele the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Ye: 05 02 9

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Robert T. Oliver / Lance Campbell — Signature: Robert Oliver / [illegible] — Month Day Ye: 05 02 9

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Month Day Yea

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Marie C. Christian — Signature: Marie C. Christian — Month Day Yea: 05 05 9

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency c d in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

847520258

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-3(

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. 57373

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number **NJA 1857373**

B. State Generator's ID (Gen. Site Address)

5. Transporter 1 Company Name: NAPPI TRUCKING CORP

6. US EPA ID Number: NJD099813477

C. State Trans. ID-NJDEPE: 01034

Decal No.: 05001

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (908) 566-30(

E. State Trans. ID-NJDEPE

Decal No.

9. Designated Facility Name and Site Address

10. US EPA ID Number

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone ( )

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.		001	T T	05500	G	F 0 0 6
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

a. SEE SECTION 12

b.

c.

d.

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and ar classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and nationa government regulations.

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Printed/Typed Name	Signature	Month	Day	Ye
YURY LANGER	Yury Langer	05	31	9

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye
RUSSELL T. EMMETT JR	Russell T. Emmett Jr	05	31	9

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Ye

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency c d in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

847520259

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 12938
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO.
260 Doremus Avenue
Newark, NJ 07105

4. Generator's Phone (201-344-8014)

A. State Manifest Document Number: NJA 1712938
B. State Generator's ID:

5. Transporter 1 Company Name: OLDOVER CORPORATION
6. US EPA ID Number: VAD041015943
C. State Trans. ID: NJDEPS7157
D. Transporter's Phone (804) 798-7981
E. State Trans. ID:

7. Transporter 2 Company Name:
8. US EPA ID Number:
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
OLDOVER CORPORATION
Rt 1 State Road 652
Arvonia, VA 23004
10. US EPA ID Number: VAD098444343
G. State Facility's ID:
H. Facility's Phone (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE FLAMMABLE LIQUID, n.o.s., 3, UN1993, PG II (Methanol, Toluene, Xylene) D001, F003 F005	X	001	TT	015500	G	D001 F005 F003
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. Methanol 10-25 Toluene 15-30 Xylene 0-5
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S-02 T-18 Lightwt Aggregate Rotary Kiln
b.
d.

15. Special Handling Instructions and Additional Information
Guide #27 Emergency: 1-800-424-9300

Please send bill and manifest to:
Network of Environmental Technologies

NET #53 Decal: 53098

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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GENERATOR

Printed/Typed Name: YURY LANGER — Signature: [signature] — Month Day Year: 05 12 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Signature: [signature] — Month Day Year: [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: — Signature: — Month Day Year:

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

4,724 [illegible]s received

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

847520260

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Form Approved. OMB No. 2050-0039. Expires 9-30-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 — Manifest Document No. 12930

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL CO
268 Doremus Avenue
Newark, NJ 07105

A. State Manifest Document Number **NJA 1712930**

B. State Generator's ID

4. Generator's Phone (201) 34408014

5. Transporter 1 Company Name — 6. US EPA ID Number
OLDOVER CORPORATION — VAD040159436

C. State Trans. ID NJDEPS7157

7. Transporter 2 Company Name — 8. US EPA ID Number

D. Transporter's Phone (804) 798-7981

E. State Trans. ID

9. Designated Facility Name and Site Address — 10. US EPA ID Number
OLDOVER CORPORATION
Rt 1 State Road 652
Arvonia, VA 23004 — VAD098443443

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, WASTE FLAMMABLE LIQUID, n.o.s., 3, UN1993, PGII (Methanol, Toluene, Xylene)(D001, F003, F005)	001	TT	05500	G	D001 F005 F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. Xylene 0-5
Methanol 10-25 Toluene 15-30
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S-02 see 83 Lightwt Aggregate Rotary Kiln
b.
d.

15. Special Handling Instructions and Additional Information
Buide #27 Emergency: 1-800-424-9300
NET #53 Decal: 53101
Please send bill and manifes to Network of Environmental Technologies

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Year: 10 7 15 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Benjamin W Eddy — Signature: Benjamin W Eddy — Month Day Year: 10 7 15 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space
776 gals discrepancy

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marie C. Christian — Signature: Marie C Christian — Month Day Year: 10 16 94

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

55037

847520261

1-KAW

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895600 — Manifest Document No.: 57372
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
262 DOREMUS AVE. NEWARK, NJ 07105

4. Generator's Phone (201) 344-8014 ATTN: YURY LANGER

A. State Manifest Document Number: NJA 1857372

B. State Generator's ID (Gen. Site Address): SAME

5. Transporter 1 Company Name: Marisol Inc
6. US EPA ID Number: NJD002454544

C. State Trans. ID-NJDEPE: 2809
Decal No.: 050738

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone: 908 469-5100

E. State Trans. ID-NJDEPE:
Decal No.:

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number: NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (908-469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RG	WASTE FLAMMABLE LIQUID, NOS(TOLUENE, METHANOL),3,UN1993,PGII APPROVAL 2-11786-1	001	TT	06295	G	F003
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. L,I,T. F005,D001 SEE SECTION 15
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04
b.
c.
d.

15. Special Handling Instructions and Additional Information
JA. CONT TOLUENE 15-30%, HEXANOL 5-20%, METHANOL 10-25 OCTANOL 5-20%, HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%. DRIVER EQUIPPED WITH ERG BOOK EMERGENCY RESPONSE # 908/469-5100:
T04 = RECOVERY

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Year: 08 15 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Joe E. Holdren — Signature: Joe E. Holdren — Month Day Year: 08 15 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: PAUL D. ORAZI — Signature: [signature] — Month Day Year: 08 15 94

GENERATOR

TRANSPORTER

FACILITY

55197

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

847520262

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Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 57374
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE. NEWARK, NJ 07105

4. Generator's Phone (201) 344-8014 ATTN: YURY LANGER

A. State Manifest Document Number: NJA 1857374

B. State Generator's ID (Gen. Site Address): SAME

5. Transporter 1 Company Name: MARISOL INC
6. US EPA ID Number: NJD002454544

C. State Trans. ID-NJDEPE: 2809
Decal No.: 50735

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (908) 469-5100

E. State Trans. ID-NJDEPE:
Decal No.:

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number: NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID:

H. Facility's Phone (908-469-5100

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	HM RQ WASTE FLAMMABLE LIQUID, NOS(TOLUENE, METHANOL),3,UN1993,PGII APPROVAL 2-11786-1	001	TT	06024	G	F003
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
a. L,I,T. F005,D001 SEE SECTION 15
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. Tol Recovery
b.
c.
d.

15. Special Handling Instructions and Additional Information JA. CON'T TOLUENE 15-30%,HEXANOL 5-20%,METHANOL 10-25 OCTANOL 5-20%,HEPTANE 0-5%,XYLENE 0-5%,OIL 0-1%. DRIVER EQUIPPED WITH ERG BOOK EMERGENCY RESPONSE # 908/469-5100:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Year: 08 30 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony J. Cwalinski — Signature: Anthony J Cwalinski — Month Day Year: 08 30 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H. Donelson — Signature: [signature] — Month Day Year: 08 30 94

GENERATOR

TRANSPORTER

FACILITY

NJA 1857374

55360

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

847520263

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UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042095680 — Manifest Document No.: 57375
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE. NEWARK, NJ 07105

4. Generator's Phone (201) 344-8014 ATTN: YURY LANGER

A. State Manifest Document Number: NJA 1857375

B. State Generator's ID (Gen. Site Address): SAME

5. Transporter 1 Company Name: MARISOL INC
6. US EPA ID Number: NJD002454544

C. State Trans. ID NJDEPE: 2809
Decal No.: 50739

7. Transporter 2 Company Name:
8. US EPA ID Number:

D. Transporter's Phone (908) 469-5100

E. State Trans. ID NJDEPE:
Decal No.:

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846

10. US EPA ID Number: NJD002454544

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (908-469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ	WASTE FLAMMABLE LIQUID, NOS(TOLUENE, METHANOL),3,UN1993,PGII APPROVAL 2-11786-1	001	TT	06211	G	F003
b.							
c.							
d.							

GENERATOR

J. Additional Descriptions for Materials Listed Above
a. L,I,T. F005,D001 SEE SECTION 15
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04 Recovery
b.
c.
d.

15. Special Handling Instructions and Additional Information: JA. CON'T TOLUENE 15-30%, HEXANOL 5-20%, METHANOL 10-25 OCTANOL 5-20%, HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%. DRIVER EQUIPPED WITH ERG BOOK EMERGENCY RESPONSE # 908/469-5100:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOE KNIGHT — Signature: Joseph Knight — Month Day Year: 09 16 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Anthony J. Cwalinski — Signature: Anthony J Cwalinski — Month Day Year: 09 16 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H Donovan — Signature: [signature] — Month Day Year: 09 16 94

NJA 1857375

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

55532

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

847520264

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.) — Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD021420356 Manifest Document No. 13776
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
ELAN CHEMICAL COMPANY
268 DOREMUS AVE. NEWARK, NJ 07105
4. Generator's Phone (201) 344-8014 ATTN: YURY LANGER

A. State Manifest Document Number **NJA 1857376**
B. State Generator's ID (Gen. Site Address) SAME
C. State Trans. ID-NJDEPE 3507
Decal No. 50337
D. Transporter's Phone (908) 469-5100
E. State Trans. ID-NJDEPE
Decal No.
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (908-469-5100

5. Transporter 1 Company Name: Marisol Inc
6. US EPA ID Number: NJD002454544

7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
MARISOL INC.
125 FACTORY LANE
MIDDLESEX, NJ 08846
10. US EPA ID Number: NJD002454544

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUID, NOS(TOLUENE, METHANOL), 3, UN1993, PGII APPROVAL 2-11786-1		001	TT	X6211	G	F003
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
L, I, T. F005, D001
a. SEE SECTION 15
c.
b.
d.

K. Handling Codes for Wastes Listed Above
T04 R-recovery
a.
c.
b.
d.

15. Special Handling Instructions and Additional Information 14a. CON'T TOLUENE 15-30%, HEXANOL 5-20%, METHANOL 10-25 OCTANOL 5-20%, HEPTANE 0-5%, XYLENE 0-5%, OIL 0-1%. DRIVER EQUIPPED WITH ERG BOOK EMERGENCY RESPONSE # 908/469-5100.

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR,** if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Year: 10 04 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: M. Tarantino — Signature — Month Day Year: 10 04 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Lemuel H Dowdood — Signature — Month Day Year: 10 04 94

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.
3 — TSD MAIL TO - GENERATOR

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

NJA 1857376

VHW-001 (REV. 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

847520265

6,010 gals

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJD042895680 Manifest Document No. 72 a 82

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave., Newark, NJ 07105

4. Generator's Phone (201) 344-8014 Attn: Yury Langer

A. State Manifest Document Number
NJA 1472865

B. State Generator's ID

5. Transporter 1 Company Name
OLDOVER CORP.

6. US EPA ID Number
VAD040159436

C. State Trans. ID NJDEP89157

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (804) 798-7981

E. State Trans. ID

9. Designated Facility Name and Site Address
OLDOVER CORPORATION
Rt 1 State Road 652
Arvonia, VA 23004

10. US EPA ID Number
VAD098443443

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. XX RQ, WASTE FLAMMABLE LIQUID, n.o.s. UN1993, PGII (Methanol, Toluene, Xylene) D001, F003, F005	001		06000		F003
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. Methanol 10-25
Toluene 15-30 Xylene 0-5
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. US-92 1-83 Lightwt Aggr.
b. Rotary Kiln
c.
d.

15. Special Handling Instructions and Additional Information
Guide #27 Emergency 1-800-424-9300
Decal: 615 360

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Yury Langer
Signature: [signature]
Month Day Year: 09 08 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Eugene Tyler
Signature: Eugene Tyler
Month Day Year: 09 08 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marie C. Christian
Signature: Marie C. Christian
Month Day Year: 09 10 94

GENERATOR

TRANSPORTER

FACILITY

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

NJA 1472865

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

3 — TSD MAIL TO GENERATOR

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

847520266

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-9

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NJD042895680 — Manifest Document No.: 06440
2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: NJA 2006440

B. State Generator's ID (Gen. Site Address)

3. Generator's Name and Mailing Address
Elan Chemical Co.
268 Doremus Ave., Newark, NJ 07105

4. Generator's Phone (201) 344-8014 Att: yury LANGER

5. Transporter 1 Company Name: Oldover Corp.
6. US EPA ID Number: VAD040159436

7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Oldover Corporation
RT. 1 State Road 652
Arvonia, VA 23004

10. US EPA ID Number: VAD098443443

C. State Trans. ID-NJDEPE: 5-7157
Decal No.: 61549
D. Transporter's Phone (804) 798-798
E. State Trans. ID-NJDEPE: 5-7157
Decal No.: 61547
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (804) 581-3226

11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	xx	RQ. WASTE FLAMMABLE LIQUID, n.o.s., 3. UN1993, PGII (Methanol, Toluene, Xylene) D001, F003, F005	001	TT	5500	G	F003
b.							
c.							
d.							

07:43 AM 12/22/94 72000 LB GA
09:44 AM 12/22/94 70200 LB GA

J. Additional Descriptions for Materials Listed Above
a. Methanol 10-25
Toluene 15-30 Xylene0-5
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. S-02 T-83 Lightwt aggregate Rotary Kiln
b.
c.
d.

15. Special Handling Instructions and Additional Information
Guide #27 Emergency 1-800-424-9300
Decal: 61547

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: YURY LANGER — Signature: Yury Langer — Month Day Year: 12/22/94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: D.K. BURRIS — Signature: D.K. B — Month Day Year: 12/22/94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space
5,457 gals received

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Marie C. Christian — Signature: Marie C Christian — Month Day Year:

SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

QUESTION 8
FIRE INFORMATION

847520267

DEQ-116
4/89

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
BUREAU OF EMERGENCY RESPONSE

FIELD NOTICE OF VIOLATIONS

CASE NO. 92-11-4-0912-06 DATE 11-4-92

CASE NAME Elan Chemical Fire

INCIDENT LOCATION 269 Doremus Ave Newark NJ

RESPONSIBLE PARTY ADDRESS Same

RESPONSIBLE PARTY REPRESENTATIVE David Wiesman President

You are hereby NOTIFIED that during an investigation by DEP on the above date, the following violations of New Jersey Statute and/or Regulation were observed. This violation has been recorded as part of a permanent enforcement history file. In addition, this case is being forwarded to the appropriate Division with a recommendation that formal enforcement action be taken.

- [X] NJSA 58:10-23.11 E . _____ SPILL COMPENSATION AND CONTROL ACT
- [ ] NJSA 23:5-28 POLLUTION AND OBSTRUCTION OF WATER
- [ ] NJAC 7:26— _____ . _____ HAZARDOUS WASTE REGULATIONS
- [ ] _____
- [X] Received by David Wiesman

DESCRIPTION OF VIOLATION Non notification of a discharge caused by a Fire.

Within 10 days of receipt of this notice, you shall submit in writing, to the address and investigator indicated below, an account of the incident and corrective measures taken to attain compliance.

Investigator Christopher Gibbons
Address 2 Babcock PL
West Orange NJ 07052
201-669-3951

COPIES: White - File Yellow - Investigator Pink - Responsible Party

847520268

elan INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-6014
FAX: (201) 344-1948

November 16, 1992

Mr. Christopher Gibbons
New Jersey Department of Environmental
Protection & Energy
Metro Field Office
2 Babcock Place
West Orange, New Jersey 07470

Re: Elan Chemical Company
268 Doremus Avenue
Newark, New Jersey

Dear Mr. Gibbons:

We are in receipt of the Field Notice of Violation issued on November 4, 1992. On November 4, 1992, at approximately 7:00 a.m., a small fire occurred at the Elan site. The city of Newark Fire Department was called. The Fire Department responded immediately. During the Fire Department's attempts to extinguish the fire, several wooden pallets were ignited which ultimately caused four plastic drums to melt. Prior to this time, there had not been a leak of hazardous substances. When the plastic drums melted, their contents leaked [1]. From the Elan facility, the Fire Department immediately notified the Department of Environmental Protection & Energy (the "Department"). The fire was extinguished and all further action ceased until the Department arrived. Once the Department arrived, cleanup activities were performed.

The Newark Fire Department provided immediate notification to the Department of the "discharge". Elan personnel were present when the Department was notified; an additional and separate notification of the leak by Elan is not required under law and would not be appropriate under the circumstances.

Please feel free to contact me if you have any questions or comments.

Very truly yours,

David R. Weisman
PRESIDENT

DRW/gd

[1] A "leak is defined as "any escape of a hazardous substance from the ordinary containers employed in the normal course of storage, transfer, processing or use...onto a surface from which it is cleaned up and removed prior to its escape into the waters or onto the lands of the State." The area where the drums melted was paved, pitched and bermed. The cleanup activities were completed prior to any escape into the waters or onto the lands.

APPENDIX

ELAN CHEMICAL COMPANY, INC.
RESPONSES TO
ENVIRONMENTAL PROTECTION AGENCY
REQUEST FOR INFORMATION

VOLUME 2 OF 3

847520271

QUESTION 8
DRUM LEAKAGE

8475202 72

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-8014

FAX: (201) 344-1948

July 14, 1989

Mr. Edward A. Phillips
State of New Jersey
Department of Environmental Protection
2 Babcock Plaza
West Orange, New Jersey 07052

Dear Mr. Phillips:

Pursuant to our last meeting, I am submitting the following work plan for the clean up of the drum storage area.

To provide an assessment of the extent of the contamination, if any, samples will be collected around the perimeter of the storage area to delineate the horizontal extent of contamination and samples in the interior of the drum storage area to delineate the vertical extent of contamination.

All sampling procedures, analysis and Quality Assurance/Quality Control, (QA/QC), protocols will be conducted in accordance with the DEP's Draft ECRA Sampling Plan Guidelines and will follow procedures outlined in the DEP Hazardous Waste Programs Field Sampling Procedures Manual.

Figure I outlines the sample locations. Fourteen (14) samples will be taken throughout the perimeter of the drum storage areas I & II, and six (6) samples in the interior to a depth of six (6) inches. Eight (8) samples will be collected from the same center locations, but this time to a depth of fifteen (15) inches. (locations 4-7 and 14-17).

Of the twenty eight (28) samples taken, analyses will be run on six (6) composites as follows:

Four (4) composites will be made and analyzed from the twenty (20) samples taken to a depth of six (6) inches.

Two (2) composites will be made and analyzed from the eight (8) samples taken to a depth of fifteen (15) inches.

847520273

Each composite will be analyzed for:

1) Volative organics (USEPA Method 8240)

2) Total Petroleum Hydrocarbons

3) EP Toxicity Metals on two (2) composites

All samples will be collected with a hand auger.

In accordance with DEP and laboratory protocol, one (1) field blank, and one (1) trip blank will also be collected.

S & W Waste Inc. will perform the above services in conjunction with NYTEST Environmental of Port Washington, New York.

If you should have any questions or any recommendations, please feel free to call me.

Sincerely,

John Vassiliades
V.P. PRODUCTION

JV/gd

847520275

FIGURE #1

KEY

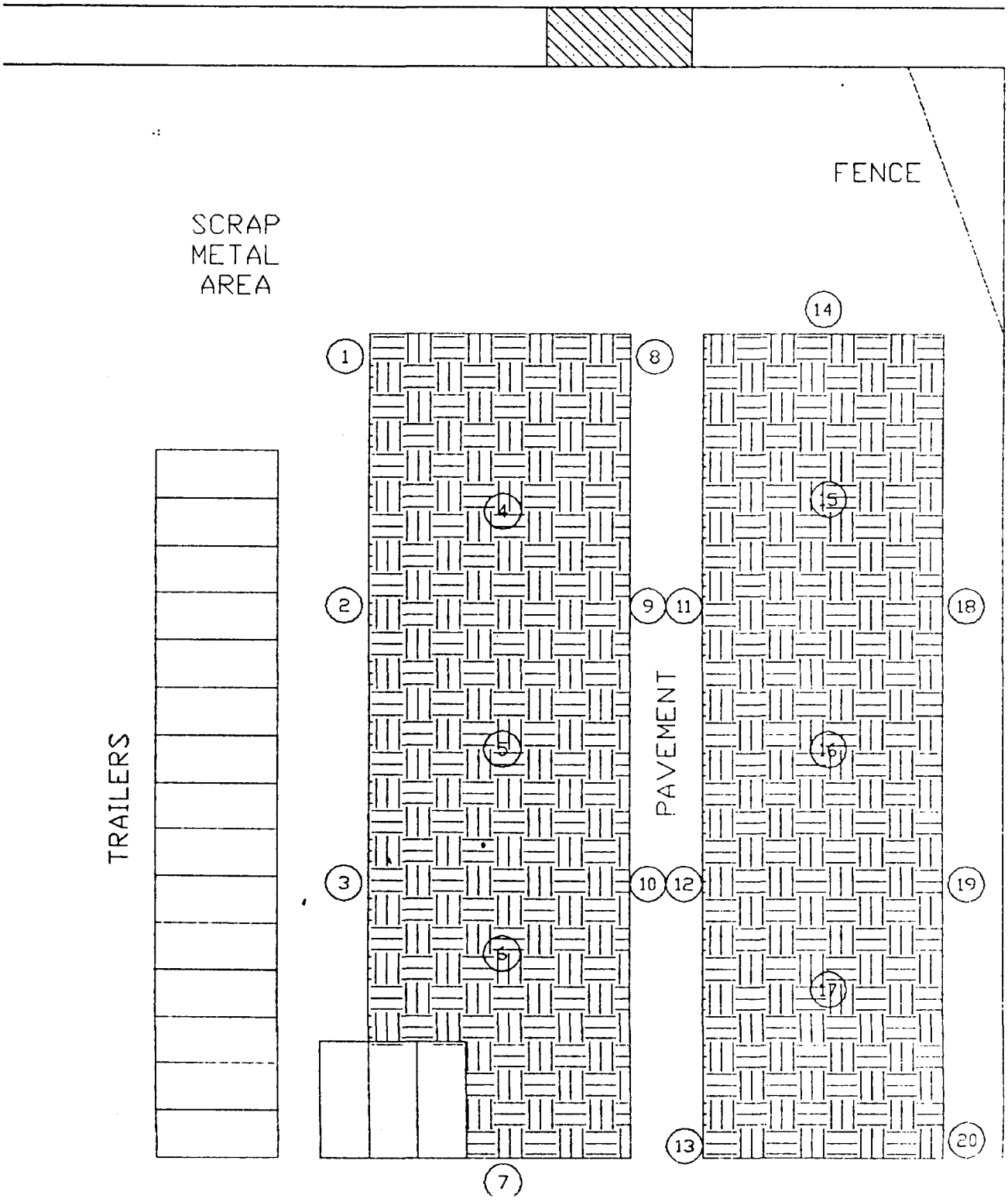
CONCRETE

SOIL

PASSAIC RIVER

N ←

SCALE 1 IN = 25 FT



Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
Metro Regional Office
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3960

August 14, 1990

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 151 929 827

Mr. John Vassiliades
Elan Chemical Co.
268 Doremus Avenue
Newark, NJ 07105

RE: Drum storage area closure and cleanup plan

Dear Mr. Vassiliades:

I am writing to you as per our telephone conversation recently, in reference to your submitted drum storage area and cleanup plan. As we discussed, no digging is to commence, including the visually observable contaminated soils, until all pre-excavation samples are taken, and the results submitted to the Department for review. It was agreed that a grid sampling plan, as well as a biased sampling plan would be done. It was also agreed that a proposal for the "treatment" or "solvent recovery" of the contaminated soil would be submitted to the Department, prior to the excavation.

According to your previously submitted proposal, the sampling plan stated that analysis would be done for volatile organics + 15, total petroleum hydrocarbons and EP toxicity metals. These are the parameters that are acceptable. In your recently submitted plan, it was stated that analysis would be limited to volatile organics +15 only. This is not complete enough.

If you have any further questions, please do not hesitate to call me at (201)669-3960.

Sincerely,

Judie M. Stein
Environmental Specialist

JMS:jap

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847520276

INCORPORATED 268 DOREMUS AVE. NEWARK, N.J. 07105 (201) 344-8014

FAX: (201) 344-1948

September 14, 1990

Jodie M. Stein, Case Manager
Metro Bureau of Field Operations
New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, New Jersey 07052

RE: Drum storage area closure and cleanup plan

Dear Ms. Stein:

As was mentioned in your letter dated July 14, no digging will commence until all pre-excavation samples are taken.

We are presently seeking price estimates from different independent contractors for pre-excavation sampling. The samples will be analyzed for volatile organics + 15, total petroleum hydrocarbons and priority pollutant metals.

All sampling procedures, analysis and quality assurance / quality control protocols will be conducted in accordance with the New Jersey Department of Environmental Protection's Division of Hazardous Waste Management Remedial Investigation Guide.

Rather than performing extensive pre-excavation sampling we propose to take three samples biased towards each of the areas most visually contaminated. One sample will be taken to a depth of six inches from the center of each of the three areas indicated in Figure I in yellow. The samples will be analyzed for volatile organics + 15, total petroleum hydrocarbons and priority pollutant metals. The results should give an indication of the presence of any contamination.

Once excavation is completed, post-excavation sampling in accordance with our prior submission will be undertaken. That post-excavation sampling will be for the parameters indicated in this letter.

Please let us know if you have any comments or questions.

Sincerely,

Carol Sulimirski
Plant Engineer

847520277

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION

COUNSELLORS AT LAW

80 PARK PLAZA

NEWARK, N.J. 07102

(201) 642-3900 (212) 571-0240

TELECOPIER (201) 642-7413

CABLE CLAPPEISEN

TWX 7109954409

ATLANTIC CITY OFFICE

26 SO. PENNSYLVANIA AVE.

P. O. BOX 957

ATLANTIC CITY, N.J. 08404

(609) 347-7330

ALFRED C. CLAPP (1959-1988)
ARNOLD K. MYTELKA
STUART L. PACHMAN
ROGER S. CLAPP
WILLIAM J. O'SHAUGHNESSY
EDWARD N. FITZPATRICK
HOWARD T. ROSEN
JOHN J. BARRY
MICHAEL A. BACKER
JEFFREY W. LORELL
LAWRENCE B. MINK
ELMER M. MATTHEWS
DOROTHY G. BLACK
RONALD H. JANIS
SALVATORE T. ALFANO
JEFFREY M. SCHWARTZ
FREDERIC S. KESSLER
MARK FALK
ROBERT A. MARSICO
JOHN L. CONOVER
JOHN M. DONNELLY
JOHN A. AVERY
KATHY M. HOOKE
KAREN L. GILMAN
ALAN J. LANDZBERG†

OF COUNSEL
JEROME C. EISENBERG
GEORGE S. FISCHLER
THOMAS A. PENN

PETER R. YAREM
DANIEL J. WAGNER
AGNES I. RYMER
RANDI SCHILLINGER
MICHAEL W. ZELENTY
JOHN L. LASKEY
COLLEEN D. SHIARELLA
HARVEY C. KAISH
JOHN F. TODD
VINCENT F. PAPALIA
CAMILLE M. KENNY
CHRISTOPHER M. HARTWYK
ROBERT J. ROHRBERGER
MARK F. KLUGER
LINDA A. ELFENBEIN
PAUL L. ZELENTY
MARY BETH CLARK
JOHN R. LLOYD
KATHLEEN A. SOLED
LAWRENCE M. ROSA
ROBERT A. SCHWARTZ
LEE HENIG-ELONA
MARK S. CALIGUIRE
PHILIP M. KRUGER
KIMBERLY D. SUTTON
RICHARD H. EPSTEIN
MAUREEN A. HOLAHAN-SALING
LISA LEFANTE
ROSALIND M. KENDELLEN
NANCY B. MARCHIONI

† MEMBER OF N.Y. BAR ONLY

September 24, 1990

Jodie M. Stein, Case Manager
Metro Bureau of Field Operations
New Jersey Department of Environmental
Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, New Jersey 07053

Re: Elan Chemical Co.
268 Doremus Avenue
Newark, New Jersey
Closure and Sampling Plan
Our Reference No. 11213-7/(LHE #18)

Dear Ms. Stein:

Pursuant to your conference with Dave Oster and our telephone conversation of Monday, September 24, 1990, we hereby rescind our cleanup plan proposal dated September 14, 1990 and re-propose that pre-excavation sampling be omitted. As was stated in our Cleanup and Closure Plan dated August 1, 1990, post-excavation sampling will be undertaken. We hereby request that we conduct post-excavation sampling in the three areas of visually contaminated soils. In the areas which do not appear contaminated, we will conduct grid sampling at the center of every square measuring approximately 50 feet by 50 feet. Sampling will be for volatile organics + 15, TPHC and priority pollutant metals. Sampling will be at the first 6" interval from grade or from depth of excavation. We will also obtain one "background" sample directly in front of the building near Doremus Avenue.

847520278

We will be providing you with information on the proposed on-site treatment of the soils under separate cover.

Please let me know if this Sampling and Closure Plan meets the Department's requirements. I look forward to hearing from you.

Very truly yours,

Lee Henig-Elona

LHE/pl

cc: Yury Langer, Elan Chemical Co.
Jeffrey M. Schwartz, Esq.

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION

COUNSELLORS AT LAW

80 PARK PLAZA

NEWARK, N.J. 07102

(201) 642-3900 (212) 571-0240

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ATLANTIC CITY, N.J. 08404

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THOMAS A. PENN

PETER R. YAREM
DANIEL J. WAGNER
AGNES I. RYMER
RANDI SCHILLINGER
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MARY BETH CLARK
JOHN R. LLOYD
KATHLEEN A. SOLED
LAWRENCE M. ROSA
ROBERT A. SCHWARTZ
LEE HENIG-ELONA
MARK S. CALIGUIRE
PHILIP M. KRUGER
KIMBERLY D. SUTTON
RICHARD H. EPSTEIN
MAUREEN A. HOLAHAN-SALING
LISA LEFANTE
ROSALIND M. KENDELLEN
NANCY B. MARCHIONI

† MEMBER OF N.Y. BAR ONLY

October 10, 1990

Jodie M. Stein, Case Manager
Metro Bureau of Field Operations
New Jersey Department of
Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, New Jersey 07053

Re: Elan Chemical Co.
268 Doremus Avenue
Newark, New Jersey
Closure and Sampling Plan
Our Reference No. 11213-7

Dear Ms. Stein:

Kindly confirm the terms of my September 24, 1990 letter.

Very truly yours,

Lee Henig-Elona

LHE/ss

cc: Yury Langer, Elan Chemical Co.
Jeffrey M. Schwartz, Esq.

847520280

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
Metro Regional Office
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3960

October 12, 1990

RECEIVED
OCT 22 1990
CLAPP & EISENBERG

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 286 423 273

Lee-Hening Elona
Clapp & Eisenberg
80 Park Plaza
Newark, N.J. 07112

Re: Elan Chemical Co

Dear Ms. Heng-Elona:

I am writing to you in response to your recently (Sept. 24, 1990) submitted proposal for the clean up of soil contamination at Elan chemical in Newark.

A review of this sampling & closure plan was done, and is acceptable to the department. However, all sampling results obtained should be forwarded to the department for review.

Please submit the on-site treatment proposal as soon as possible.

Thank you for your cooperation. If you have any further questions, feel free to contact me at (201)669-3960.

Sincerely,

Jodie M. Stein
Environmental Specialist

JMS:tg

847520281

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
METRO FIELD OFFICE - REGION IV
2 BABCOCK PLACE
WEST ORANGE NJ 07052

CERTIFIED
P 286 423 273
MAIL

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Lee-Hening Elona
Clapp & Eisenberg
80 Park Plaza
Newark, N.J. 07112

300

RETURN RECEIPT REQUESTED

847520282

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT

CERTIFIED MAIL
RETURN RECEIPT R
P 256 813 231

John Vassiliades
Elan Chemical In
268 Doremus Ave
Newark, New Jers

Dear Mr. Vassili

I am writin; t
since Ms. Meg
in regards

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JMS:tg

847520283

TOTAL P.02

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† MEMBER OF N.Y. BAR ONLY

January 11, 1991

Jodie M. Stein, Environmental
Specialist
New Jersey Department of Environmental
Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co.
268 Doremus Avenue
Newark, New Jersey 07105
Our Reference No. 11213-7

Dear Ms. Stein:

I am in receipt of a copy of your letter to John Vassiliades dated December 27, 1990 requesting a summary of Elan's activities on site to date and activities proposed for the future.

You will recall that on July 26, 1990, the Department conducted a site inspection. At that time, it was your recommendation that Elan conduct pre-excavation sampling to determine whether the areas of soil staining were contaminated with hazardous or toxic substances. Elan's initial response was that pre-excavation sampling should be omitted because it assumed that the stained areas consisted of spilled fragrances, flavors, and solvents used in the manufacturing process. See my letter to you dated September 24, 1990. The request to omit pre-excavation sampling was approved by the Department on October 12, 1990.

Thereafter, Elan consulted Dr. Richard Greenberg, President of Environmental Waste Management Associates ("EWMA"), to gain

professional guidance in connection with the implementation of the approved Closure Plan. Dr. Greenberg strongly recommended that prior to any excavation activities some preliminary sampling be undertaken to identify the nature of the contamination. Consequently, on December 11, 1990, an initial soil sample was collected from the 0"-6" interval biased toward the most visually contaminated are and analysed for priority pollutant + 40. We enclose a copy of the Analytical Data Report prepared for that sample by Integrated Analytical Laboratories, Inc. Dr. Greenberg has now recommended that Elan perform pre-excavation sampling in the three stained areas and obtain a "background sample" to compare with the pre-excavation sampling results. Because the initial preliminary investigative sampling did not reveal elevated PCBs, pesticides, herbicides, acid extractable organics, phenols or total cyanide, the sampling parameters for the pre-excavation and background sampling are to be Volatile Organics + 15, Base Neutrals + 15 and Priority Pollutant Metals. The pre-excavation samples are to be taken from the center of each of the three areas of visually contaminated soil identified in the Sampling and Closure Plan and the background sample is to be taken in front of the Elan property, near Doremus Avenue. In accordance with the Department's sampling protocol, the BN+15 and PP Metals will be sampled from the 0"-6" interval; the VO+15 will be sampled from the 18"-24" interval. EWMA will collect the samples, maintaining all quality assurance/quality control standards.

In view of the foregoing recommendations, Elan wishes to amend its Sampling and Closure plan as described above, and hereby seeks Department approval of this amendment. After you have reviewed the enclosed Analytical Date Report and reviewed the foregoing, kindly contact me.

Very truly yours,

Lee Henig-Elona

LHE/pl
Enclosures

cc: Richard Greenberg, Ph.D.
Environmental Waste Management Associates

David Weisman, President
Yury Langer
Elan Chemical Co.

847520285

ANALYTICAL DATA REPORT

for

ELAN Incorporated
268 Doremus Ave.
Newark, NJ 07105

Project: ELAN Inc.
Lab Case Number: 10900-636
Date Received: December 11, 1990

CLIENT SAMPLE ID	LABORATORY SAMPLE #
S1	636001

All NJDEP protocol was followed during analysis. This data has been reviewed and accepted by:

Michael H. Leftin, Ph.D.
Laboratory Director

847520286

INTEGRATED ANALYTICAL LABORATORIES, INC.

PCB

No.: 10900-636

Lab ID#:	636001		PB1219					
Client ID#:	S1		QCBlank					
Matrix:	Soil		Soil					
Dil. Fact.:	71.2		16.8					
% Solid:	92.3		100					
Units:	mg/kg		mg/kg					
Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL	Conc.	MDL
PCB's, total	0.111	1.50	ND	0.351				

1-5

J Indicates compound concentration below MDL.
ND Indicates compound Not Detected.
B Indicates compound detected in Sample and Blank.

INTEGRATED ANALYTICAL LABORATORIES, INC.

Pesticides

No.:	10900-636					
Lab ID#:	636001		PB1219			
Client ID#:	S1		QCBlank			
Matrix:	Soil		Soil			
Dil. Fact.:	71.2		16.8			
% Solid:	92.3		100			
Units:	mg/kg		mg/kg			
Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
a-BHC	ND	35.6	ND	8.4		
r-BHC	ND	35.6	ND	8.4		
b-BHC	ND	35.6	ND	8.4		
Heptachlor	ND	35.6	ND	8.4		
d-BHC	ND	35.6	ND	8.4		
Aldrin	ND	35.6	ND	8.4		
Heptachlor epoxide	ND	35.6	ND	8.4		
Endosulfan I	ND	35.6	ND	8.4		
4,4'-DDE	ND	35.6	ND	8.4		
Deldrin	ND	35.6	ND	8.4		
Endrin	ND	35.6	ND	8.4		
4,4'-DDD	ND	35.6	ND	8.4		
Endosulfan II	ND	213.6	ND	1.5		
4,4'-DDT	ND	35.6	ND	8.4		
Endrin aldehyde	ND	71.2	ND	16.8		
Endosulfan sulfate	ND	35.6	ND	8.4		
Chlordane	ND	35.6	ND	8.4		
Toxaphene						

J Indicates compound concentration below MDL.
ND Indicates compound Not Detected.
B Indicates compound detected in Sample and Blank.

INTEGRATED ANALYTICAL LABORATORIES, INC.

Volatile Organics
No.: 10900-636

Lab ID#:	636001	VB1211
Client ID#:	S1	QCBlank
Matrix:	Soil	Water
Dil. Fact.:	217	1
% Solid:	92.3	0
Units:	ug/kg	ug/l

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Chloromethane	ND	2170	ND	10		
Vinyl chloride	ND	2170	ND	10		
Bromomethane	ND	2170	ND	10		
Chloroethane	ND	2170	ND	10		
1,1-Dichloroethene	ND	1085	ND	5		
Methylene chloride	9.2B	1085	7.4	5		
Trichlorofluoromethane	ND	1085	ND	5		
trans-1,2-Dichloroethene	ND	1085	ND	5		
1,1-Dichloroethane	ND	1085	ND	5		
Chloroform	ND	1085	ND	5		
1,1,1-Trichloroethane	ND	1085	ND	5		
Carbon tetrachloride	ND	1085	ND	5		
Benzene	ND	1085	ND	5		
1,2-Dichloroethane	2750	1085	ND	5		
Trichloroethene	ND	1085	ND	5		
1,2-Dichloropropane	ND	1085	ND	5		
Bromodichloromethane	ND	1085	ND	5		
trans-1,3-Dichloropropene	ND	1085	ND	5		
Toluene	2010	1085	ND	5		
cis-1,3-Dichloropropene	ND	1085	ND	5		
1,1,2-Trichloroethane	ND	1085	ND	5		
Tetrachloroethene	ND	1085	ND	5		
Dibromochloromethane	ND	1085	ND	5		
2-Chloroethylvinyl ether	ND	1085	ND	5		
Chlorobenzene	ND	1085	ND	5		
Ethylbenzene	410J	1085	ND	5		
Total Xylenes	432J	3255	ND	15		
Bromoform	ND	1085	ND	5		
1,1,2,2-Tetrachloroethane	ND	1085	ND	5		
1,3-Dichlorobenzene	ND	1085	ND	5		
1,4-Dichlorobenzene	ND	1085	ND	5		
1,2-Dichlorobenzene	ND	1085	ND	5		

Ethylene dichloride

B Indicates compound detected in blank and in sample.
J Indicates compound concentration below MDL.
ND Indicates compound Not Detected.

1 ppm = 1,000 ppb

847520289

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: S1
Analysis Date: 12/11/90
Concentration Units: ug/kg

Case No.: 10900-636
Lab ID: 636001
Matrix: Soil

COMPOUND	EST. CONC.	RETENTION TIME
3,7-Dimethyl-1,6-octadien-3-ol,propanoate	3660	20:04
1-Methyl-3-(1-methylethylidene)cyclohexane	4460	20:34
4,6-Decadiene	10300	21:00
D-Limonene	5840	21:06
(1S,3S,6R)-(-)-4-Carene	1490	21:15
Ocimene(VAN)	2970	21:46
7,7-Dimethyl-2-methylenebicyclo[2.2.1]heptane	1390	24:30
(2R-Cis)-5-Methyl-2-(1-methylethyl)cyclohexanone	2080	25:18
Cis-1-Methyl-4-(1-methylthenyl)cyclohexane	1880	25:34
3,7-Dimethyl-1,6-octadien-3-ol, acetate	99000	26:14
Menthyl acetate (VAN)	18000	26:36
.α.α.4., 4-Trimethyl-3-cyclohexene-1-methanol,acetate	67600	27:03
(Z)-3,7-Dimethyl-2,6-octadien-1-ol,acetate	11800	27:13
1,1'-Oxybisbenzene	3660	27:33
Caryophyllene(VAN)	5050	27:36

847520290

Base/Neutral Compounds

Lab ID#:	636001		SBS1217A
Client ID#:	S1		QCBlank
Matrix:	Soil		Soil
Dil. Fact.:	1446		33.3
% Solid:	92.3		100
Units:	ug/kg		ug/kg

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
N-Nitrosodimethylamine	ND	14460	ND	333		
Bis(2-chloroethyl)ether	ND	14460	ND	333		
1,3-Dichlorobenzene	ND	14460	ND	333		
1,4-Dichlorobenzene	ND	14460	ND	333		
1,2-Dichlorobenzene	ND	14460	ND	333		
Bis(2-chloroisopropyl)ether	ND	14460	ND	333		
N-Nitrosodi-n-propylamine	ND	14460	ND	333		
Hexachloroethane	ND	14460	ND	333		
Nitrobenzene	14900	14460	ND	333		
Isophorone	ND	14460	ND	333		
Bis(2-chloroethoxy)methane	ND	14460	ND	333		
1,2,4-Trichlorobenzene	ND	14460	ND	333		
Naphthalene	ND	14460	ND	333		
Hexachlorobutadiene	ND	14460	ND	333		
Hexachlorocyclopentadiene	ND	14460	ND	333		
2-Chloronaphthalene	ND	14460	ND	333		
Dimethyl phthalate	ND	14460	ND	333		
Acenaphthalene	ND	14460	ND	333		
2,6-Dinitrotoluene	ND	14460	ND	333		
Acenaphthene	ND	14460	ND	333		
2,4-Dinitritoluene	ND	14460	ND	333		
Fluorene	ND	14460	ND	333		
Diethyl phthalate	27500	14460	ND	333		
4-Chlorophenyl-phenyl ether	ND	14460	ND	333		
1,2-Diphenyl hydrazine	ND	14460	ND	333		
N-Nitrosodiphenylamine	ND	14460	ND	333		
4-Bromophenyl-phenyl ether	ND	14460	ND	333		
Hexachlorobenzene	ND	14460	ND	333		
Phenanthrene	3900J	14460	ND	333		
Anthracene	ND	14460	ND	333		
Di-n-butyl phthalate	ND	14460	90J	333		
Fluoranthene	3900J	14460	ND	333		
Benzidine	ND	72300	ND	1670		
Pyrene	3180J	14460	ND	333		
Butylbenzyl phthalate	ND	14460	ND	333		
3,3-Dichlorobenzidine	ND	14460	ND	333		
Benzo(a)anthracene	ND	14460	ND	333		
Chrysene	14300J	14460	ND	333		
Bis(2-ethylhexyl) phthalate	7520J	14460	ND	333		
Di-n-octyl phthalate	ND	14460	ND	333		
Benzo(b)fluoranthene	ND	14460	ND	333		
Benzo(k)fluoranthene	ND	14460	ND	333		
Benzo(a)pyrene	3900J	14460	ND	333		
Benzyl alcohol	5500J	14460	ND	333		
Indeno(1,2,3-cd)pyrene	3180J	14460	ND	333		
Benzo(a,h)anthracene	ND	14460	ND	333		
Benzo(g,h,i)perylene	ND	14460	ND	333		
Aniline	ND	14460	ND	333		
4-Chloroaniline	ND	14460	ND	333		
2-Methylnaphthalene	ND	14460	ND	333		
Nitroaniline	ND	14460	ND	333		

847520291

ACID EXTRACTABLE ORGANICS

Lab ID#:	636001		SBS1217A			
Client ID#:	S1		QCBlank			
Matrix:	Soil		Soil			
Dil. Fact.:	1446		33.3			
% Solid:	92.3		100			
Units:	ug/kg		ug/kg			
Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Phenol	ND	14460	ND	333		
2-Chlorophenol	ND	14460	ND	333		
2-Nitrophenol	ND	14460	ND	333		
2,4-Dimethylphenol	ND	14460	ND	333		
2,4-Dichlorophenol	ND	14460	ND	333		
4-Chloro-3-methylphenol	ND	14460	ND	333		
2,4,6-Trichlorophenol	ND	14460	ND	333		
2,4-Dinitrophenol	ND	72300	ND	1670		
4-Nitrophenol	ND	14460	ND	333		
2-Methyl-4,6-dinitrophenol	ND	43380	ND	1000		
Pentachlorophenol	ND	14460	ND	333		

J Indicates compound detected below the MDL.
B Indicates compound detected in blank and sample.
ND Indicates compound Not Detected.

INTEGRATED ANALYTICAL LABORATORIES, INC.

Phenols Analysis Report

Client: Environmental Waste Management Associates

Project: ELAN Inc.

Date of Extraction: 12/18/90
Date of Analysis: 12/18/90

Client ID	Lab ID	Result	MDL	Units
S1	636001	3.15	2.4	mg/kg

QC Data

Method Blank	0	mg/kg
Percent Spike Recovery	85.0	%
Relative Percent Difference of Replicates	0	%

847520293

INTEGRATED ANALYTICAL LABORATORIES, INC.

Total Cyanide Analysis Report

Client: Environmental Waste Management Associates

Project: ELAN Inc.

Date of Extraction: 12/14/90
Date of Analysis: 12/14/90

Client ID	Lab ID	Result	MDL	Units
S1	636001	2.72	2.4	mg/kg

QC Data

Method Blank	0	mg/kg
Percent Spike Recovery	85.0	%
Relative Percent Difference of Replicates	4.0	%

847520294

INTEGRATED ANALYTICAL LABORATORIES, INC.

METALS
PRIORITY POLLUTANT

Client ID: S1
Lab ID: 636001
Project: ELAN, Inc.
Date Sampled: 12/10/90
Client: ELAN

Date of Analysis: 12/19/90-12/27/90

	Parameter	Results	MDL	Units	RPD	%R
	Antimony	ND	0.25	mg/kg	0.79	93.7
20	Arsenic	22.7	0.125	mg/kg	8.65	88.5
	Beryllium	2.79	0.02	mg/kg	8.00	98.6
3	Cadmium	2.72	0.01	mg/kg	4.30	104.4
100	Chromium	644	0.30	mg/kg	14.2	95.0
170	Copper	137	0.20	mg/kg	4.00	97.2
100	Lead	935	0.60	mg/kg	2.38	107.0
1	Mercury	2.07	0.01	mg/kg	9.21	114.8
100	Nickel	87.7	0.03	mg/kg	7.01	102.3
4	Selenium	1.26	0.025	mg/kg	5.52	89.0
5	Silver	ND	0.02	mg/kg	0.24	91.8
	Thallium	15.7	0.10	mg/kg	2.67	106.0
350	Zinc	410	0.25	mg/kg	0.13	105.6

ND Indicates Compound was not detected
MI Indicates Compound concentration could not be determined due to matrix interferences
J Indicates Compound was detected below the Method Detection Limit
B Indicates Compound was detected in Sample and Blank

Percent solids of 92.3 was used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: S1
Extraction Date: 12/14/90
Matrix: Soil

Case No.: 10900-636
Lab ID: 636001
Analysis Date: 12/17/90
Concentration Units: ug/kg

COMPOUND	EST. CONC.	RETENTION TIME
3-Carene	145000	12:22
Benzeneethanamine	146000	21:26
Octahydr-7,7-dimethyl-1H-3A,6-methanoazulene-3-carboxylic acid	207000	21:41
9-Butyl-9-methyl-9H-fluorene	392000	22:18
1,1':2',1''-Terphenyl	338000	22:41
2-Phenyl ester benzeneacetic acid	947000	23:00
2,5-Dimethyl-2,4-hexadiene	161000	24:05
4-Phenylbicyclohexyl	408000	24:13
6-Heptynylbenzene	205000	24:24
3,4-Dihydro-2-(phenylmethyl)-1(2H)-naphthalenone	136000	24:40
Unknown	355000	24:50
1,1'-Cyclohexylidene bis-benzene	429000	25:20
1,1'-(1-Heptenylidene)bis-benzene	338000	25:51
2-Methylmethyl ester octadecanoic acid	89700	31:07
1,1':2',1'':4'',1'''-Quaterphenyl	85300	31:14
1,1':2',1'':2'',1'''-Quaterphenyl	123000	32:02
Octahydro-1-phenanthrenecarboxaldehyde	82000	32:15
8-Oxomethyl ester 17-octadecene-9,11-diynoic acid	105000	32:32
α-Phenylmethyl ester benzeneacetic acid	88200	32:36
2,3,3-Trimethyl-1,4-pentadiene	102000	32:42
3,3-Bis(3-methyl-2-butenyl)-5-(2-methyl*)-1,2,4-cyclopentanetrione	188000	33:14
3,8-Azo-4,7-methanocyclobuta[B]naphthalene	73900	33:35
4-Dodecyltetradecahydr-phenanthrene	111000	35:50
Unknown	241000	37:40
7-Ethynyl-4A,5,6,7,8,8A-hexahydro-1,4A-dimethyl-2(1H)-naphthalenone	74000	38:41

INTEGRATED ANALYTICAL LABORATORIES, INC.

HERBICIDES

No.: 10900-636

Lab ID#:	636001		KAN102					
Client ID#:	S-1		QCBlank					
Matrix:	Soil		Soil					
Dil. Fact.:	1		1					
% Solid:	0		0					
Units:	mg/kg		mg/kg					
Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL	Conc.	MDL
2,4-D	ND	0.015	ND	0.015				
2,4-DB	ND	0.015	ND	0.015				
2,4,5-T	ND	0.005	ND	0.005				
Silvex	ND	0.005	ND	0.005				
Dalapon	ND	0.075	ND	0.075				
Dicamba	ND	0.005	ND	0.005				
Dichloroprop	ND	0.015	ND	0.015				
Dinoseb	ND	0.005	ND	0.005				
MCPA	ND	2.50	ND	2.50				
MCPP	ND	2.00	ND	2.00				

J Indicates compound concentration below MDL.
ND Indicates compound Not Detected.
B Indicates compound detected in Sample and Blank.

INTEGRATED ANALYTICAL LABORATORIES, INC.

Herbicides
SURROGATE RECOVERY

Client ID.	Lab ID#	Matrix	% Recovery	Total Out
S1	636001	Soil	164	0

Surrogate
2,4-Dichlorophenyl acetic acid

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION

COUNSELLORS AT LAW

80 PARK PLAZA

NEWARK, N.J. 07102

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† MEMBER OF N.Y. BAR ONLY

January 15, 1991

Jodie M. Stein, Environmental
Specialist
New Jersey Department of Environmental
Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co.
268 Doremus Avenue
Newark, New Jersey 07105
Our Reference No. 11213-7

Dear Ms. Stein:

In accordance with our telephone conversation of today, enclosed please find a copy of Figure 1, taken from our original Sampling and Closure Plan, which now indicates the location of our pre-excavation sample location, the sampling results of which were submitted to you on January 11, 1991.

As was discussed on the telephone, the sampling parameters for the three areas of concern and for the background sample are proposed to be volatile organics + 15, base neutrals + 15 and priority pollutant metals.

Please let me know if there is anything further I can provide you or Dave Oster with to assist you in reviewing our request for an amended approval.

847520299

Please do not hesitate to give me a call to discuss this.

Very truly yours,

Lee Henig-Elona

LHE/pl
Enclosure

cc: Richard Greenberg, Ph.D.
Environmental Waste Management Associates

Yury Langer
Elan Chemical Co.

bcc: JMS

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
Metro Regional Office
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3960

RECEIVED
FEB - 4 1991
CLAPP & EISENBERG

January 28, 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 258 818 258

Lee Henig-Elona
Clapp & Eisenberg
80 Park Plaza
Newark, NJ 07102

RE: Elan Chemical Co.
268 Doremus Avenue
Newark, NJ 07105
Ref. No. 11213-7

Dear Ms. Henig-Elona:

Reference to the letter I received from you on January 16, 1991 for an amended approval request and in review of the sampling results submitted, please be advised that first and foremost, it is essential that you contact me before any further excavation is begun. The reason for this is because the Department needs to know who Elan Chemical is hiring as a contractor. There are many soil contaminants that are of concern, one being elevated levels of Chromium. Therefore the contractor used must be approved by the State, and be qualified to handle Chromium cleanups.

Please contact me with any further questions at (201)669-3960.

Sincerely,

Jodie M. Stein
Environmental Specialist

JMS:jap

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION

COUNSELLORS AT LAW

80 PARK PLAZA

NEWARK, N.J. 07102

(201) 642-3900 (212) 571-0240

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CABLE CLAPPEISEN

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ATLANTIC CITY OFFICE

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ATLANTIC CITY, N.J. 08404

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† MEMBER OF N.Y. BAR ONLY

February 5, 1991

Jodie M. Stein, Environmental Specialist
New Jersey Department of Environmental
Protection
Division of Hazardous Waste Management
Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co.
268 Doremus Avenue
Newark, New Jersey
Our Reference No. 11213-7

Dear Jodie:

I am in receipt of your January 28, 1991 letter regarding the proposed drum storage area closure. The contractor which Elan has retained is Environmental Waste Management Associates. Its' present address is 1235 A Route 23 South, Wayne, New Jersey 07474.

Please let me know whether my amended Sampling and Closure Plan is acceptable. We are eager to commence sampling. I look forward to hearing from you.

Very truly yours,

Lee Henig-Elona

LHE/pl
cc: Yury Langer, Elan Chemical
Richard Greenberg, Ph.D., EWMA (w/enc.)

847520302

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
Metro Regional Office
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3960

February 21, 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 286 423 566

Ms. Lee Henig-Elona
Clapp & Eisenberg
80 Park Plaza
Newark, N.J. 07102

Re: Elan Chemical

Dear Ms. Henig-Elona:

I am in receipt of your letter on Feb 5, 1990. The contractor Environmental Waste Management Associates is indeed acceptable by the Division of Hazardous Waste Management Metro Field Office. Therefore, commence sampling and subsequent soil excavation as previously discussed.

During your remediation activities, please submit to me, periodically, all actions and going ons.

If you have any further questions, please feel free to contact me at (201) 669-3960

Sincerely,

Jodie M. Stein
Environmental Specialist

JS:Jp

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052
Tel. #201-669-3960
Fax. # 201-669-3987

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

November 8, 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 893 868 177

John Vassiliades
Elan Chemical Company
268 Doremus Avenue
Newark, NJ

Re: Spill Cleanup Drum Storage Area

Dear Mr. Vassiliades:

I am in receipt of Ms. Henig-Elona's letter on September 6, 1991 including an amendment to Elan's remediation activities. I am writing to you to confirm that all the Departments's requirements have been met in this amendment, and to recommend that Elan commence delineation proceedings as proposed.

If you have any questions regarding this matter, please call me at (201) 669-3960.

Sincerely,

Jodie M. Stein

Jodie M. Stein
Sr. Environmental Specialist

847520304

SAMPLING RESULTS REPORT
April 1, 1992

ELAN CHEMICAL CORP.
268 DOREMUS AVE
NEWARK, NEW JERSEY
EWMA CASE #91025

Volume I of II

Prepared By:
Environmental Waste Management Associates
1235A Route 23, P.O. Box 648
Wayne, New Jersey 07474

847520305

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847520306

INTRODUCTION:

Environmental Waste Management Associates ("EWMA") was retained by Elan Chemical Company ("Elan") to address potential soil contamination in a former drum storage area at the above referenced facility. EWMA collected four soil samples on March 25, 1991 to screen three visually stained areas for contamination and to establish a background soil profile. EWMA's discovery of contamination was detailed in the March 26, 1991, Sampling Results Report (submitted to the NJDEPE) along with a recommendation to perform further sampling. On November 8, 1991, the NJDEPE approved EWMA's recommendation to collect additional samples to delineate and characterize the contamination.

EWMA returned to the site on January 6, 1992 to install eight soil borings in the former drum storage area.

SCOPE OF WORK:

This report details observations made during boring and sampling activities at the Elan Chemical facility, 268 Doremus Avenue, Newark, New Jersey. The sampling objective was to gather information (delineate and characterize soil contamination in a former drum storage area) in preparation for the development of a remediation strategy. The following sections of this report detail site conditions, sampling activities, field observations, analytical results and their implications for the development of the remediation plan.

SITE GEOLOGY, TOPOGRAPHY AND DRAINAGE:

The site is located within the Piedmont Physiographic Province of New Jersey. This area is comprised of a broad lowland composed of gently rounded hills with a few ridges and steeper hills rising above the plain. The altitudes within the Piedmont average 200 to 400 feet above mean sea level. Several large swamps occupy the low-lying areas of the Piedmont. Surface conditions have been modified considerably by the Wisconsin Glaciation of Pleistocene Age. The subject site is relatively level near Doremus Avenue, to moderately sloped to the east toward the Passaic River.

The Engineering Soil Survey of Essex County, New Jersey has classed the soils in the area of the subject site as "Made Land." According to the soil survey, the site soils consist of areas of tidal marsh that have been reclaimed for industrial development. The substantial depth of fill material required to support industrial construction is usually underlain by a somewhat compressed tidal marsh profile. This tidal marsh profile consists of a decomposed organic mat extending from two to possibly more than five feet below the level of the overlying fill material. The mat is underlain by highly organic silts, clayey silts, and clays extending down to Brunswick shale at depths that may exceed two hundred feet. Groundwater flow at the subject site is tidal in nature.

Soil boring activities showed the stratigraphic column at the site to be fairly consistent. Specifically, the surface of the site was covered by suspected fill materials consisting of brown to dark gray, fine to medium and fine to coarse sands with gravel and residue consisting of crushed brick and cinders typical of urban fill.

The site soils were classified in the field visually and texturally according to the Unified Soil Classification System, a copy of which is contained in Appendix # 1 along with the soil boring logs.

SITE HYDROGEOLOGY:

According to the Soil Survey for Essex County, New Jersey the depth to seasonal high water table in the vicinity of the site is less than six feet below grade. In addition, groundwater flow at the site is tidal in nature due to the close proximity of the Passaic River and Newark Bay and the underlying tidal marsh. Groundwater levels recorded during soil boring activities ranged from six and one half feet below grade at 9:30 AM (Boring "B") to six feet below grade at 1:30 PM (Boring "G").

SOIL BORING AND SAMPLING ACTIVITIES:

On January 6, 1992 EWMA representatives visited the above referenced site to supervise the installation of soil borings and collect soil samples. The soil borings were installed by a New Jersey licensed driller from S.B.I. Environmental Well Drilling, Inc. using a truck mounted drill rig. Soil samples were collected during boring advancement with 2 inch stainless steel split spoon sampling devices. The samples were field screened with a portable photoionization detector ("PID") and selected samples were retained for laboratory analysis for volatile organics plus a forward library search ("VO+15"), base neutral compounds plus a forward library search ("BN+15"), chromium, and mercury.

All split spoon samplers were decontaminated prior to sample collection according to EWMA's QA/QC Plan contained in Appendix #2; all samples were collected and preserved according to EWMA's QA/QC Plan contained in Appendix #2; site specific stratigraphy is recorded in EWMA's boring logs contained in Appendix #1; and the Site Plan (Figure #1) shows the boring locations.

Boring locations and sample depths were chosen based on information obtained from the previous sampling episode (March 25, 1991) and the Sampling Plan Approval of November 8, 1991. Six inch incremental samples were collected from borings "A", "C", "E", "F", and "G" at the surface (1.5 - 2.0 feet below grade) and at 0 to 6 inches above groundwater. Samples were collected from borings "B" and "D" at a depth of 3.5 to 4.0 feet below grade and 0 to 6 inches above groundwater. The depth to groundwater decreased from 6.5 feet below site grade in the morning to 6.0 feet below site grade in the afternoon. Mechanical problems in the field precluded vertical delineation at sample location "S-1" and an additional subsurface background sample could not be collected.

FINDINGS:

EWMA's field screening records and laboratory analytical information are summarized in the enclosed data summary tables. Data summary tables were broken down as follows: Table #1 contains the summarized laboratory analytical data for samples collected less than four feet below grade; Table #2 contains the summarized laboratory analytical data for samples collected 0 to 6 inches above

groundwater (tidal influence zone); and Table #3 is a record of EWMA's PID field screening results. The laboratory analytical data report package is contained in Appendix #3.

SUMMARY AND RECOMMENDATIONS:

Although a background sample could not be obtained on January 6, 1992, EWMA believes that laboratory analytical data from the background sample (laboratory data from S-4-A/B has been incorporated into Table #1 and Table #2), collected on March 25, 1991, is relevant to this second phase of sampling. EWMA makes this contention because the organic contaminants detected above NJDEPE proposed cleanup standards in the former drum storage area were also detected in the background sample which was collected across Doremus Avenue. Specifically, benzo (a) anthracene, chrysene, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (a) pyrene and benzo (g,h,i) perylene were detected at concentrations corresponding to, if not greater than, the levels detected in the samples collected form Borings A, B, C, D, E, F and G. In addition, chromium was detected in the background sample. The only organic contaminants detected above proposed NJDEPE standards and not detected in the background sample were ethylbenzene (detected in sample D-1) and indeno (1,2,3-cd) pyrene (a suspected fill contaminant detected in A-1, F-1, G-1 and D-2).

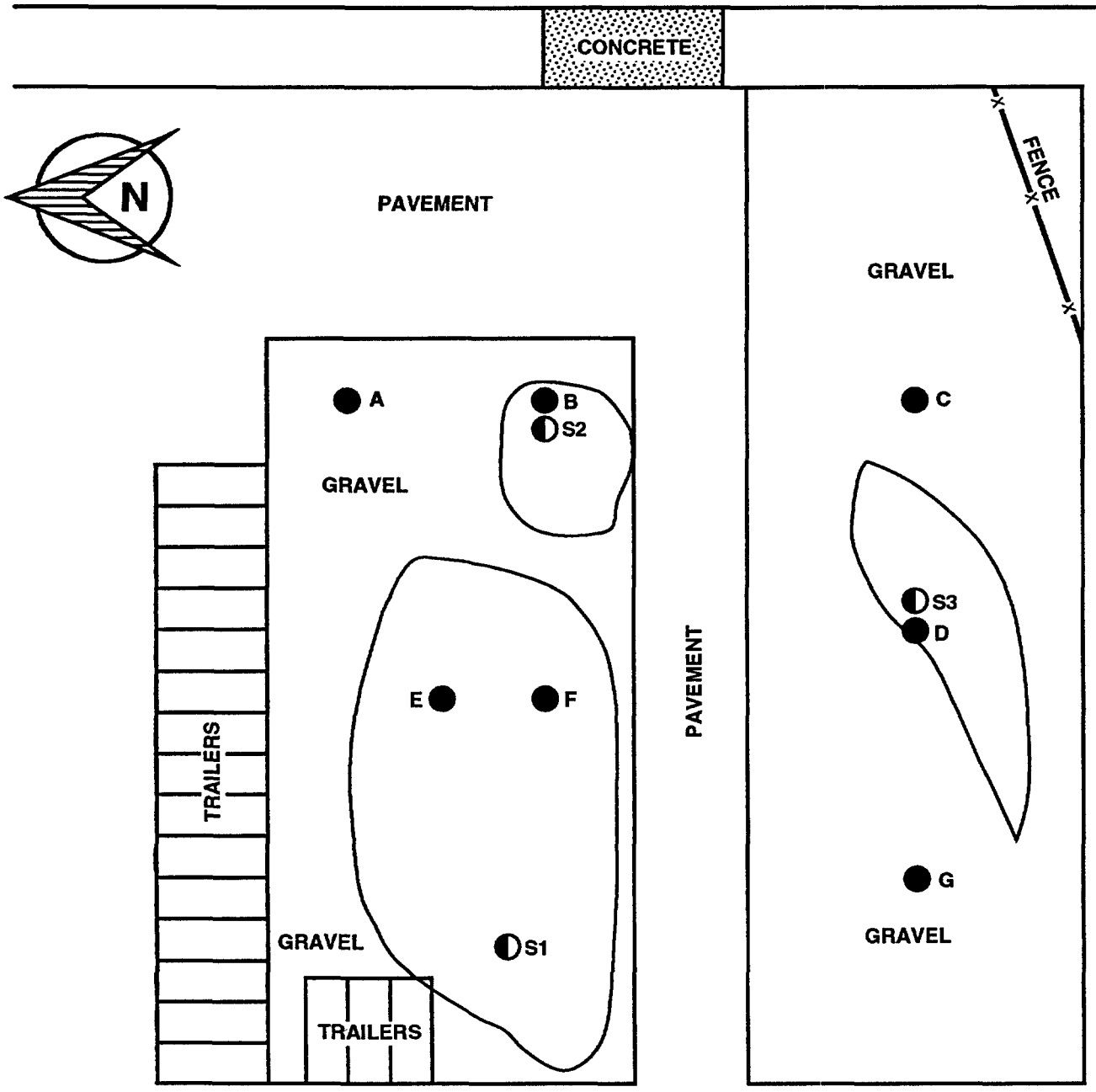
Based on the laboratory analytical findings detailed in this report, EWMA believes that base neutral contamination, detected in samples collected in the former drum storage area, is characteristic of the poor quality urban fill material used to reclaim

the land from the former tidal marsh that the site is located on. In addition, ash, cinders, and decomposed brick were observed throughout the borings as in the previous sampling episode.

Ethylbenzene was detected in all samples collected from the site, but was not detected in the background sample. Therefore, ethylbenzene in the soil may be the result of the former drum storage in the area. However, although ethylbenzene was detected in all samples, none of the samples exceeded the proposed NJDEPE contaminant specific residential surface soil cleanup standard (pursuant to N.J.A.C. 7:26D), and only sample D-1 exceeded the subsurface soil standard.

The Elan Chemical facility is located in a heavily industrialized section of Newark, NJ. The land in this area (including the surrounding sites) was created for industrial use, and is zoned for that purpose. The contamination detected in the former drum storage area of the Elan Chemical facility, has been contributed to by the poor quality of the fill materials used to create the land in this area. The remote location of the former drum storage area precludes any actual or potential impact to subsurface structures. Therefore, based upon the findings of this sampling investigation, EWMA recommends that the former drum storage area should be paved with an impervious cover to isolate the soil contaminants. Further remediation, or removal of the contaminants is not warranted.

847520313



DOREMUS AVENUE

~300'

S4

LEGEND:

- SAMPLE LOCATION (3/25/91)
- BORING LOCATION (1/6/92)

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES P.O.BOX 648 Wayne, N.J. 07474 Tel. (201)633-7900	SCALE: NOT TO SCALE DATE: 1/6/92	PROJECT# 91025
	DRAWN BY: A P CHECKED BY: C L	
BORING LOCATION MAP ELAN CHEMICAL 268 DOREMUS AVENUE NEWARK, N J.		DRAWING# 1

TABLE 1

SHALLOW SAMPLES

TABLE #1 ELAN CHEMICAL V. ATILE ORGANIC RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	S4-B**	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	1.5' - 2.0'	3.5' - 4.0'	1.5' - 2.0'	3.5' - 4.0'	1.5' - 2.0'	1.5' - 2.0'	1.5' - 2.0'	1.5' - 2.0'	-
Mercury	1100	540	1100	470	1130	600	310	477	0.7
Chromium	177000	44600	490000	31400	198000	230000	476000	142000	ND
Targeted Volatile Organic Compounds:									
Methylene chloride	ND	3.0J	4.3J	2.6J	7.5	6.4	11.1	6B	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Toluene	45.4	ND	1410	ND	ND	3410	ND	1.9J	ND
Ethylbenzene	267	103	1580	557000	81500	1820J	7160	ND	ND
Total Xylenes	67.2	ND	40.7	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	17.9	ND	ND	ND	ND	1.2J	ND
TOTAL TARGETED VOs	379.6	106J	3052.9J	557002.6J	81507.5J	5236.4J	7171.1	4.3J	ND
Volatile Organic Tentatively Identified Compounds:									
3-Carene	ND	72.6	ND	ND	ND	ND	ND	ND	ND
1,3,6-Octatriene-3,7-dimethyl(E)	ND	14.2	ND	ND	ND	ND	ND	ND	ND
2-Methyltrimer-1-propene	ND	9.94	ND	ND	ND	ND	ND	ND	ND
1,7,7-Trimethylbicyclo[2.2.1]hept-2-ene	ND	5.62	ND	ND	ND	ND	ND	ND	ND
1-Methyl-4-(1-methylethyl)benzene	ND	14.2	ND	ND	ND	ND	ND	ND	ND
1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one	ND	14.2	ND	ND	ND	ND	ND	ND	ND
Camphor (ACN)	ND	23.4	ND	ND	ND	ND	ND	ND	ND
2-Ethyl-3-methyloxetane	ND	ND	ND	ND	ND	ND	ND	ND	ND
(TBA) 2-Methyl-2-propanol	ND	ND	69.6	ND	ND	ND	ND	ND	ND
t-Butyl-3,3-dimethylbutylether	ND	ND	47.2	ND	ND	ND	ND	ND	ND
Limonene	ND	ND	156	ND	ND	ND	ND	ND	ND
1-Phenylethanone	ND	ND	162	ND	ND	ND	ND	ND	ND
Camphor	ND	ND	38.6	ND	ND	ND	ND	ND	ND
(2-Methoxyethenyl) benzene	ND	ND	46.1	ND	ND	ND	ND	ND	ND
1-Methoxy-4-propylbenzene	ND	ND	122	ND	ND	ND	ND	ND	ND
(2,2-Diethoxyethyl)benzene	ND	ND	102	ND	ND	ND	ND	ND	ND
(Bicyclo[2.2.1]heptan-2-ol)	ND	ND	274	ND	ND	ND	ND	ND	ND
Freon-113	ND	ND	ND	14700	17800	23300	14300	ND	ND
1-Phenylethanone	ND	ND	ND	ND	46000	ND	ND	ND	ND
(E)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	61100	ND	ND	ND
Freon-12	ND	ND	ND	ND	ND	ND	11400	ND	ND
TOTAL VO TICs	ND	154.16	1017.5	14700	63800	84400	25700	ND	ND
TOTAL VO+15	379.6	260.6J	4070.4J	571702.6J	145307.5J	89636.4J	32871.1J	4.3J	ND

S4-B was collected on 3/25/91 to establish a background contamination level**

84752031S

TABLE #1 ELAN CHEMICAL TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	S4-A**	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	1.5'-2.0'	1.5'-2.0'	0 -0.5'	~
Targeted Base Neutral Compounds:									
Acenaphthene	ND	93.0J	ND	ND	ND	803J	ND	2560J	ND
Phenanthrene	10000	1550	2970J	ND	4400J	12900	7770	28400	ND
Anthracene	280J	384	ND	ND	ND	3760	2640J	7090J	ND
Di-n-butyl phthalate	ND	90.0JB	ND	ND	ND	ND	ND	1580J	22.8B
Fluoranthene	18200	2440	3770J	1760J	7440J	12400	10800	40300	ND
Pyrene	8730	1290	2030J	ND	4400J	6860	6290	22200	ND
Benzo (a) anthracene	5150	808	1730J	ND	3110J	4200	4610	17100	ND
Chrysene	4480	847	1960J	ND	3340J	4230	5430	16400	ND
Bis(2-ethylhexyl) phthalate	1120J	463	ND	ND	ND	767J	ND	2640J	ND
Benzo (b) fluoranthene	8650	592	3240J	ND	3040J	6020	ND	21900	ND
Benzo (k) fluoranthene	ND	488	ND	ND	1970J	ND	ND	17800	ND
Benzo (a)pyrene	4100	628	1880J	ND	2960J	3980	3980	21600	ND
Indeno (1,2,3-cd) pyrene	2460J	305J	ND	ND	ND	1680J	1530J	ND	ND
Benzo (a,h) anthracene	ND	108J	ND	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	1940J	291J	ND	ND	ND	1570J	1490J	8750	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	803J	ND	ND	ND
TOTAL TARGETED BN'S	65110J	10287J	17580J	1760J	30660J	59973J	44540J	208320J	ND

**S4-A was collected on 3/25/91 to establish a background contamination level

84752031 6

TABLE #1 ELAN CHEMICAL NON-TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92
Sample depth (feet):	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	1.5'-2.0'	1.5'-2.0'	~
Base Neutral Tentatively Identified Compounds:								
Mol.Sulfur (S8)	18200	1180	ND	ND	ND	12600	13200	ND
Benzo [J] fluoranthene	5520	1130	ND	ND	ND	ND	ND	ND
(Z)-3,7-dimethyl-1,3,6-octatriene	ND	560	ND	ND	ND	ND	ND	ND
Limonene	ND	363	ND	ND	ND	ND	ND	ND
(1R)-1,3,3-Trimethylbicyclo-[2.2.1] heptan-1-one	ND	510	ND	ND	ND	ND	ND	ND
1,7,7-Trimethylbicyclo[2.2.1] heptan-2-one	ND	499	ND	ND	ND	ND	ND	ND
11-Nitro-1-undecene	ND	926	ND	ND	ND	ND	ND	ND
(2-Methoxyethenyl)benzene	ND	ND	7350J	ND	ND	ND	ND	ND
Diisooctylesterdiphosphoric acid	ND	ND	7760	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	44600	ND	ND	ND	ND	ND
(Phenylmethyl) monohydrochloridehydrazine	ND	ND	14200	ND	ND	ND	ND	ND
1-Phenylnaphthalene	ND	ND	9110	ND	ND	ND	ND	ND
(Z)-3-Methyl-5-undecene	ND	ND	8580	ND	ND	ND	ND	ND
1-Ethenyl-4-methoxybenzene	ND	ND	5050J	ND	ND	ND	ND	ND
(Isothiocyanatomethyl) benzene	ND	ND	7450J	ND	ND	ND	4050	ND
Benzeneethanamine	ND	ND	ND	ND	ND	ND	15500	ND
(1,1-Dimethylethyl)cyclohexane	ND	ND	ND	117000	ND	ND	ND	ND
6-Cyclohexyl-6-cyclohexylundecane	ND	ND	ND	16000	ND	ND	ND	ND
1-Tetradecanol	ND	ND	ND	24400	ND	ND	ND	ND
Dioctadecylesterphosphonic acid	ND	ND	ND	10100	ND	ND	ND	ND
9-Eicosyne	ND	ND	ND	25500	ND	ND	ND	ND
0-Decylhydroxylamine	ND	ND	ND	11100	ND	ND	ND	ND
10-[(Tetrahydro-2H-pyran-2-yl)oxy]-1-decanol	ND	ND	ND	12300	ND	ND	ND	ND
3,9-Diethyl-6-tridecanol	ND	ND	ND	32300	ND	ND	ND	ND
Tetrahydro-2-(12-pentadecynyloxy)-2H-pyran	ND	ND	ND	11000	ND	ND	ND	ND
5-Docecyne	ND	ND	ND	13400	ND	ND	ND	ND
Spiro [4.5] decane	ND	ND	ND	16700	ND	ND	ND	ND
17-Pentatriacontene	ND	ND	ND	15000	ND	ND	ND	ND
(E)-9-Octadecene	ND	ND	ND	34400	ND	ND	ND	ND
1,9-Dibromononane	ND	ND	ND	15200	ND	ND	ND	ND
.a.Methylbenzenemethanol	ND	ND	ND	ND	29900	ND	ND	ND
1-Phenylethanone	ND	ND	ND	ND	368000	ND	ND	ND
2,6-bis(1,1-Dimethylethyl) phenol	ND	ND	ND	ND	11000	ND	ND	ND
Xylazine	ND	ND	ND	ND	15500	ND	ND	ND
2,4,5-Trimethyl-2-phenyl-1,3-dioxolane	ND	ND	ND	ND	57500	ND	ND	ND
1,4-bis(1-Methylethyl) benzene	ND	ND	ND	ND	25400	ND	ND	ND
. .,3,4-Trimethylester-benzenebutanoic acid	ND	ND	ND	ND	43200	ND	ND	ND
AR,AR-Diethylbenzeneethanol	ND	ND	ND	ND	584000	ND	ND	ND
1,3,6,8-Tetramethylpyrido[3,4-D]-pyrmidine-2,4 (1,3H)dione	ND	ND	ND	ND	82700	ND	ND	ND
6-Methyl-1-heptanol	ND	ND	ND	ND	36200	ND	ND	ND
N,N,1-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	39100	ND	ND	ND
1,2,4-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	110000	4230	ND	ND
N-(Trimethylsilyl)-6-[(trimethylsilyl)oxy]-8-quinolinamine	ND	ND	ND	ND	12800	ND	ND	ND
P-Di-Tert-pentylbenzene	ND	ND	ND	ND	26300	ND	ND	ND
1,1'-(1-Methylethylidene) bisbenzene	ND	ND	ND	ND	26300	ND	ND	ND
1-Cyclohexylidene-2-propanone	ND	ND	ND	ND	ND	160000	ND	ND
1,2-Propadienylcyclohexane	ND	ND	ND	ND	ND	28800	ND	ND
P-Menth-3-en-9-ol	ND	ND	ND	ND	ND	68300	ND	ND
1,5-Heptandien-3-yne	ND	ND	ND	ND	ND	101000	ND	ND
2-Cyclohexyl-4-methyphenol	ND	ND	ND	ND	ND	10400	ND	ND
1-Ethyl-3,5-diisopropylbenzene	ND	ND	ND	ND	ND	4820	ND	ND
3-(Bromoethyl)cyclohexane	ND	ND	ND	ND	ND	ND	3270J	ND
4-Methylbicyclo[2.2.2] octane-1-carboxylic acid	ND	ND	ND	ND	ND	ND	10000	ND
(Ethoxymethyl) benzene	ND	ND	ND	ND	ND	ND	8180	ND
(Z)-9-Methyl-5-undecene	ND	ND	ND	ND	ND	ND	3570J	ND
5-(4-Methoxyphenyl)-1,3,5-trimethyl-2,4-imidazolidinedione	ND	ND	ND	ND	ND	ND	2600J	ND
Benzo [E] pyrene	ND	ND	ND	ND	ND	ND	10300	ND
TOTAL BN TICs	**23720**	**5168**	**104100J**	**354400**	**1467900**	**390150**	**70670J**	**ND**
TOTAL BN+15	**88830J**	**15455J**	**121680J**	**356160J**	**1498560J**	**450123J**	**115210J**	**ND**

TABLE 2

DEEP SAMPLES

TABLE #2 ELAN CHEMICAL VOLATILE ORGANIC RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	S4-B**	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	6.0 - 6.5'	6.0 - 6.5'	5.5'-6.0'	5.5'-6.0'	6.0 - 6.5'	6.0 - 6.5'	5.5'-6.0'	1.5' - 2.0'	~
Mercury	140	480	650	4550	250	550	1830	477	500
Chromium	126000	432000	247000	4970000	610000	1500000	1230000	142000	ND
Targeted Volatile Organic Compounds:									
Methylene chloride	ND	4.7J	1.5J	8.5	3.6J	5.2	ND	6B	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Toluene	ND	3.25J	59	10.5J	15.9J	2360J	ND	1.9J	ND
Ethylbenzene	124	44.1	25.9	12200	177	1300J	6.5J	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Total Xylenes	63.7J	ND	7.62J	ND	ND	ND	ND	ND	ND
TOTAL TARGETED VOs	187.7J	52.05J	94.02J	12219J	196.5J	3665.2J	6.5J	4.3J	ND
Volatile Organic Tentatively Identified Compounds:									
2-Ethyl-3-methyloxetane	ND	7.75	ND	ND	ND	ND	ND	ND	ND
Freon-113	ND	ND	ND	ND	56.6	25400	ND	ND	ND
3,3,5,5-Tetramethyl-1,2,4-trithiolane	ND	ND	ND	105	ND	ND	ND	ND	ND
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazole	ND	ND	ND	28.1	ND	ND	ND	ND	ND
2,3,4-Trimethyl-2-pentene	ND	ND	ND	133	ND	ND	ND	ND	ND
(1-Methylethyl)benzene	ND	ND	ND	133	ND	ND	ND	ND	ND
2-Methyltrimer-1-propene	ND	ND	ND	986	ND	ND	ND	ND	ND
2,4,4-Trimethyl-1-pentene	ND	ND	ND	1480	ND	ND	ND	ND	ND
1,1,3,5-Tetramethylciscyclohexane	ND	ND	ND	217	ND	ND	ND	ND	ND
1,1,3-Trimethylcyclopentane	ND	ND	ND	452	ND	ND	ND	ND	ND
3,4,4-Trimethyl-2-pentene	ND	ND	ND	133	ND	ND	ND	ND	ND
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazoie	ND	ND	ND	156	ND	ND	ND	ND	ND
1-(1,1-Dimethylethyl)-3-methylbenzene	ND	ND	ND	1040	ND	ND	ND	ND	ND
2-Methoxy-2-Octene	ND	ND	ND	ND	12	ND	ND	ND	ND
(E)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	24800	ND	ND	ND
Freon-12	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown (Retention Time 20:59)	ND	ND	ND	276	ND	ND	ND	ND	ND
TOTAL VO TICs	ND	7.75	ND	5139.1	68.6	50200	ND	ND	ND
TOTAL VO+15	187.7J	59.8J	94.02J	17358.1J	265.1J	53865.2J	6.5J	4.3J	ND

S4-B** was collected on 3/25/91 to establish a background contamination level

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TABLE #2 ELAN CHEMICAL TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	S4-A**	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	5.5'-6.0'	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	0-0.5'	~
Targeted Base Neutral Compounds:									
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	2560J	ND
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND	ND	2640J	ND
Phenanthrene	ND	ND	786	63300	ND	1160J	851J	28400	ND
Anthracene	ND	ND	217J	11600J	ND	ND	ND	7090J	ND
Di-n-butyl phthalate	ND	ND	1690B	ND	ND	ND	ND	1580J	22.8B
Fluoranthene	ND	ND	2180	65000	ND	1570J	1080J	40300	ND
Pyrene	ND	ND	1300	36700	ND	823J	690J	22200	ND
Benzo (a) anthracene	ND	ND	881	19800	ND	823J	690J	17100	ND
Chrysene	ND	ND	893	23500	ND	823J	759J	16400	ND
Benzo (b) fluoranthene	ND	ND	1110	ND	ND	ND	1290J	21900	ND
Benzo (k) fluoranthene	ND	ND	640	36100	ND	ND	ND	17800	ND
Benzo (a)pyrene	ND	ND	960	18500	ND	823J	805J	21600	ND
Indeno (1,2,3-cd) pyrene	ND	ND	431	7710J	ND	ND	ND	ND	ND
Benzo (a,h) anthracene	ND	ND	158J	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	ND	ND	403	ND	ND	ND	ND	8750	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED BN'S	ND	ND	9959J	282210J	ND	6022J	6165J	208320J	ND

S4-A was collected on 3/25/91 to establish a background contamination level**

847520320

TABLE #2 ELAN CHEMICAL NON-TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92
Sample depth (feet):	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	5.5'-6.0'	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	~
Base Neutral Tentatively Identified Compounds:								
Mol.Sulfur (S8)	ND	32500	1020	ND	13200	18400	13200	ND
Benzo [J] fluoranthene	ND	ND	912	ND	ND	ND	ND	ND
Mol.Sulfur	21000	ND	ND	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	1440	ND	ND	ND	ND	ND
1-Phenylnaphthalene	ND	ND	478	ND	ND	ND	ND	ND
(Isothiocyanatomethyl) benzene	ND	ND	1440	ND	ND	ND	ND	ND
2-Hydroxypentylesterbenzoic acid	ND	ND	304J	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	ND	ND	ND	ND	1360J	ND
11-H-Benzo [A] fluorene	ND	ND	434	ND	ND	ND	ND	ND
1-Dodecanethiol	ND	ND	1080	ND	ND	ND	ND	ND
2,3,4-Trimethylthiophene	ND	ND	ND	38200	ND	ND	ND	ND
AR,AR-Diethylbenzeneethanol	ND	ND	ND	ND	25200	ND	ND	ND
1,2,4-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	7840J	ND	ND	ND
P-Menth-3-en-9-ol	ND	ND	ND	ND	ND	7440	ND	ND
(Z)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	30100	ND	ND
1,2-Propadienylcyclohexane	ND	ND	ND	ND	ND	5460	ND	ND
(Butoxymethyl) benzene	ND	ND	ND	ND	ND	38500	ND	ND
Unknown (Retention Time 17:19)	ND	ND	ND	ND	ND	ND	2230J	ND
Unknown (Retention Time 17:21)	ND	ND	ND	ND	ND	3400J	ND	ND
TOTAL BN TICs	**21000**	**32500**	**7108J**	**38200**	**46240J**	**149540J**	**16790J**	**ND**
TOTAL BN+15	**21000**	**32500**	**17067J**	**583310J**	**46240J**	**105922J**	**22955J**	**ND**

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TABLE 3

PHOTOIONIZATION DETECTOR SCREENING RESULTS

ELAN CHEMICAL TABLE #3

BORING LOCATION	PID RESULT SAMPLE - 1 (Parts Per Million)	PID RESULT SAMPLE - 2 (Parts Per Million)
A	29	37.3
B	25.4	24.7
C	58	24.9
D	340	87.7
E	83.2	32.8
F	204	137
G	533	46.8

APPENDIX 1

SOIL BORING LOGS

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

GRADATION *

% FINER BY WEIGHT	
TRACE	0% TO 10%
LITTLE	10% TO 20%
SOME	20% TO 35%
AND	35% TO 50%

COMPACTNESS * SAND AND/OR GRAVEL

	RELATIVE DENSITY
LOOSE	0% TO 40%
MEDIUM DENSE	40% TO 70%
DENSE	70% TO 90%
VERY DENSE	90% TO 100%

CONSISTENCY * CLAY AND/OR SILT

	RANGE OF SHEARING STRENGTH IN POUNDS PER SQUARE FOOT
VERY SOFT	LESS THAN 250
SOFT	250 TO 500
MEDIUM	500 TO 1000
STIFF	1000 TO 2000
VERY STIFF	2000 TO 4000
HARD	GREATER THAN 4000

* VALUES ARE FROM LABORATORY OR FIELD TEST DATA, WHERE APPLICABLE. WHEN NO TESTING WAS PERFORMED, VALUES ARE ESTIMATED.

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

847520325

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # A SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical
LOCATION:		**TOPO SETTING :**
268 Doremus Avenue, Newark, N.J.		Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.
DRILLING RIG TYPE:	**SIZE & TYPE OF BIT:**	**DATE STARTED:**	**DATE COMPLETED:**
Air Rotary	NA	1/6/92	1/6/92
SAMPLE TYPE:	**HAMMER WT. / DROP**	**TOTAL DEPTH:**	**WATER LEVEL:**
Split Spoon	140 lbs / 30 in.	10'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
A1	6"	10, 15, 25, 32	0 – 2		Fine to Medium, Dark Gray, Very Dense Sand, Some Fine Gravel
	0"	34, 24, 25	2 – 3		No Recovery
A2	4"	14, 3, 2, 3	3 – 5		Fine to Medium, Brown, Medium Dense Sand, Brick Fragments, Mica (Moist)
	6"	3, 12, 5, 13	5 – 7	Wet	
	11"	18, 6, 30, 19, 14	7 – 10		Fine to Medium, Dark Gray,Very Dense Sand, Some Fine Gravel, Some Brick Fragments (Wet)

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ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

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Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # B SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
B-1	5"	11, 9, 11	0 – 1		Decomposed Asphalt Fine to Medium, Dark Gray, Dense Sand, With Some Fine Gravel
	12"	18, 23, 22, 15	1 – 4		Fine to Medium, Brown, Very Dense Sand, Some Fine Gravel, Ashes, Glass, Mica and Brick Fragments
B-2	3.5"	18, 30, 30, 13	4 – 6		
	9"	10, 9, 21, 14, 10	6 – 8	Wet	Fine to Medium, Brown, Very Dense Sand, Some Fine Gravel and Brick Fragments (Wet)
			8 – 20		

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ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

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Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # C SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
C-1	4"	2, 2	1		Fine to Medium, Dark Gray, Medium Dense Sand With Some Gravel
		5, 4	2		
	12"	13, 16	3		
		10, 7	4		
	6"	6, 21	5		
C-2		20, 12	6	Wet	Fine to Medium, Brown, Dense Sand, With Some Fine Gravel and Ashes (Wet)
	10"	7, 5, 6	7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

847520328

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

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Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG

BORING # D SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
D-1	3"	7 2 3 4	1 2		Fine to Medium, Dark Gray, Medium Dense Sand, Some Fine Gravel, Some Wood Fragments
	15"	4 15 15 10	3 4		Fine to Medium, Dark Gray, Dense Sand, Some Fine Gravel,Unidentified Object (Fragment of Melted Plastic?)
D-2	6"	6 5 20 22	5 6	Wet	
	6"	9 3 6 5	7 8		Last 2" of Sample Consisted of Dark Gray Silt (A Sheen Was Noted On Water Within The Spoon)
			9 10 11 12 13 14 15 16 17 18 19 20		

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ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

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BORING LOG BORING # E SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
E-1	3"	5, 7, 11	0 – 1		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel, Brick Fragments and Fine Mica Particles
	7"	13, 14, 11, 11	2 – 3		
		6, 5	4		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel
	12"	5, 4	5		
E-2		9, 2	6		
	7"	4, 12, 11	7 – 8	Wet	Fine to Medium, Brown, Medium Dense Sand (Wet)
			9 – 20		

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ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # F SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical
LOCATION: 268 Doremus Avenue, Newark, N.J.		**TOPO SETTING :** Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.
DRILLING RIG TYPE: Air Rotary	**SIZE & TYPE OF BIT:** NA	**DATE STARTED:** 1/6/92	**DATE COMPLETED:** 1/6/92
SAMPLE TYPE: Split Spoon	**HAMMER WT.** 140 lbs / **DROP** 30 in.	**TOTAL DEPTH:** 11'	**WATER LEVEL:** 6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
F-1	5"	2, 4, 29, 16	1, 2		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel, Brick Fragments and Fine Mica Particles
	14"	11, 9, 7, 8	3, 4		
	15.5"	5, 5, 4, 4	5, 6		
F-2	5"	11, 9, 2, 9	7, 8	Wet	Fine to Medium, Dark Gray, Medium Dense Sand, With Fine Gravel
	7"	12, 10, 14, 13	9, 10		Fine to Medium, Red, Dense Sand and Clay
			11, 12, 13, 14, 15, 16, 17, 18, 19, 20		

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ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # G SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
G-1	9"	2, 4, 19, 16	0–2		Fine to Medium, Dark Gray, Dense Sand, Some Fine Gravel
	14"	11, 9, 7, 8	2–4		
G-2	15.5"	5, 5, 4, 4	4–6		Fine to Medium, Brown, Dense Sand
	17"	11, 12, 5, 4	6–8	Wet	Fine to Medium, Brown, Dense Sand

* The Cable Used to RaiseThe 140 lb Hammer snapped

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APPENDIX 2

EWMA QA/QC
HEALTH AND SAFETY PLAN

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES
QUALITY ASSURANCE / QUALITY CONTROL

In order to assure the validity of the chemical test results for samples collected from the subject facility during the sampling program, the following QA/QC Program will be strictly adhered to:

QUALITY CONTROL

A. Equipment:

1. Hand turned augers, split spoon samplers and stainless steel hand trowels.
2. Disposable fiber brushes.
3. Distilled/deionized water.
4. Liquinox soap/tap water mixture.
5. Pesticide grade acetone.
6. Wide mouth, amber colored glass jars with Teflon-lined screw caps, water bottles, volatile organic vials.
7. Cooler and ice packs.
8. Labels and permanent markers.

B. Sampling Equipment Decontamination:

All soil sampling equipment will be cleaned and decontaminated by the following procedures:

1. Oil, grit, rust and soil shall be removed with the brush.
2. Liquinox soap and tap water scrub wash.
3. Tap water rinse.
4. Distilled/deionized water rinse.
5. 10% acidic solution rinse (only if sample is to be tested for metals).
6. Distilled/deionized water rinse.
7. Acetone rinse.
8. Total air dry.
9. Distilled/deionized water rinse, wrap in clean foil and tapesecurely.

All drilling equipment will be steam cleaned using a portable pressure washer prior to drilling at each sample location.

C. Sample Collection:

1. Soil:

Samples will be retrieved using either a split spoon sampler mounted on a drilling rig or a hand turned auger, or with stainless steel hand trowels. Samples which are submitted to the laboratory for analysis will be collected in six inch increments either from the below the surface or immediately below the relevant excavation. Samples to be analyzed for volatile organic compounds will be collected from a minimum depth of eighteen to twenty-four inches from the surface; while samples for all other parameters will be collected in six inch increments beginning at a depth of zero to six inches. Should samples being analyzed for volatile organic compounds indicate presence of contamination by field inspection (HNu monitoring), additional samples may be taken to delineate vertical spread of the suspected contamination. These sample depths shall be determined by field personnel during sampling activities. Deep samples shall also be taken in six inch increments.

D. Sample Handling:

1. Soil:

Samples will be removed from the sampling equipment with sterilized and disposable wooden, polyethylene or reusable stainless steel spatulas. In no case will the soil sample come in contact with the field personnel or any foreign objects. All samples will be transferred into glassware supplied by the testing laboratory. Upon transferral to the containers, the samples will be placed into coolers packed with ice and kept chilled at four degrees Centigrade until they reach the testing laboratory.

2. Water:

All water samples will be transferred to laboratory supplied glassware. Care shall be taken to insure that no air bubbles are present in the VOA sample bottles after filling. Upon transfer to the appropriate containers, the samples will be placed into coolers packed with ice and kept chilled until they reach the testing laboratory.

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E. Chain of Custody:

Chain of custody will be initiated by the field team and maintained through sample analysis and reporting of results. Each transfer of sample custody will be recorded on the custody record, and upon transfer to the laboratory a copy will be maintained by the sampling team.

QUALITY ASSURANCE

A. Trip and Field Blanks:

Each batch of laboratory glassware shall contain a travel blank of double distilled/deionized water. A trip blank will accompany the field team, be given a sample number and returned to the laboratory for analysis in order to detect possible glassware or reagent contamination during each day of sampling. Field blanks will be generated during the soil sampling phase of the sampling program by pouring deionized/distilled water over the equipment and collecting it in a laboratory prepared bottle. At least one field blank will be generated on each day of sampling.

B. Duplicate Samples:

As a check on the reproducibility of the chemical test results, a duplicate sample may be collected from each testing area identified in the above sampling plan. The duplicate sample will be tested for all of the parameters proposed within each area of concern. Each duplicate sample will be given a unique sample number to insure that the testing laboratory is unaware of the internal check.

C. Sample Documentation:

All information pertaining to the sampling event will be recorded in ink in a bound field notebook with consecutively numbered pages. This shall include, but not be limited to date and time of sampling, weather conditions, people on site, maps of sample locations and sample numbers, listing of any significant events.

D. Chemical Analysis:

The laboratory we have chosen to do our analyses is:
Integrated Analytical Laboratories, Inc.
150 Railroad Avenue
Paterson, New Jersey 07501

This lab is state certified by the NJDEP,
Certification #16751.

Health and Safety Plan for Elan Chemical

Environmental Waste Management Associates:
Chain of Command:

In case of difficulties on site requiring notification of EWMA, the following are EWMA contacts listed in order of priority.

Environmental Waste Management Associates
1235A Route 23, Wayne, New Jersey 07470
(201) 633-7900

Dr. Richard S. Greenberg, President
(201) 956-0677 -home

Tracy Straka, Director of Operations
(201) 509-7482 -home

Chris Kirby, Environmental Specialist
(201) 226-7884 -home

The chain of command for this project is as follows:

Immediate job coordination problems will be directed to the attention of the project manager or assistant project manager.

Problems relative to health and safety will be directed to the safety manager.

Job progress meetings and problems requiring corporate coordination will be directed to Dr. Greenberg.

A. Introduction:

This site specific health and safety plan will be in effect throughout the duration of the project. All personnel on site, regardless of the company they are employed through, are subject to the requirements of this plan.

B. Work Areas:

Work and support areas will be designated based on measured ambient air quality and proposed sampling locations.

Adequate safety instruction will be provided to all personnel on site. Restricted areas due to hazardous environmental conditions will be clearly posted. Care will be taken to insure that all work areas are contained.

Personnel will not be admitted on the site alone. All personnel will visit and work on the site in teams of two or more.

C. Protective Equipment:

Protective clothing will be worn by all personnel on site. The site safety manager will predetermine the appropriate level of protection for personnel entering the work area.

Contractors will be responsible for providing their personnel with appropriate protective equipment.

D. Personnel Protection Requirements:

It is anticipated that level D protection will be adequate for the proposed sampling episode. Level D protection must be work when contaminants are known to be within acceptable respiratory limits and there is no hazard

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from direct skin contact.

All personnel on site will be equipped with a standard work uniform, alternatively, a supply of Tyvek suits will be available in the personnel support area on site. In addition, personnel entering the work area must wear appropriate work boots.and disposable Tyvek boot coverings. Any personnel handling soil and or water must be equipped with neoprine gloves.

Personnel working with machinery including but not limited to drilling rigs and earth moving equipment must wear a hardhat.

Constant ambient air monitoring will be conducted with a HNU and/or OVA. Should air contaminants be identified
as above acceptable levels (above 5 ppm), personal protection will be upgraded to level C. Level C protection includes all apparel as required in level D protection plus approved full face, air purifying respirators, and chemical resistant clothing and gloves.

E. Action Levels

All initial site activities will be performed in level D attire. Constant monitoring of ambient conditions will document presence of airborne contaminants. A background air reading will be recorded as a baseline for general environmental conditions.

If the levels detected are less than 5 ppm, level D protection will be continued. If the detectors indicate levels greater than 5 ppm above background conditions, level C protection will be implemented. Alternatively, level D protection may be continued if exposure is limited to less than fifteen minute intervals with at least sixty minutes between exposures.

F. Site Security:

The project supervisor will be responsible for maintaining adequate site security. Access to the site will be at the sole discretion of the site supervisor. Visitors will not be permitted to enter areas of known or suspected contamination.

The project supervisor will be responsible for securing all work areas prior to leaving the site each night. All areas of potential hazard will be fenced, flagged and posted. The main gate will secured, and any openings in the fencing surrounding the property will be sealed.

G. Medical Services:

If a medical emergency occurs, limited first aid is available on site. If the victim(s) can be transported safely, the closest hospital is Saint James Hospital, 155 Jefferson Road, Newark, New Jersey.

Emergency Phone Numbers:

Hospital	589-1300
Police	911
Fire	733-7400

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APPENDIX 3

LABORATORY ANALYTICAL RESULTS

Integrated Analytical Labs

Integrated Analytical Laboratories, Inc.

150 Railroad Avenue
Paterson, N.J. 07501

201-523-2509
Fax # 201-523-2818

ANALYTICAL DATA REPORT

for

Environmental Waste Management Associates
1235A Route 23 South
Wayne, NJ 07470

Project: Elan Chemical #91025
Lab Case Number: 10920-017
Date Received: January 7, 1992

CLIENT SAMPLE ID	LABORATORY SAMPLE #
A-1	017001
A-2	017002
B-1	017003
B-2	017004
C-1	017005
C-2	017006
D-1	017007
D-2	017008
E-1	017009
E-2	017010
F-1	017011
F-2	017012
G-1	017013
G-2	017014
Field	017015

All NJDEPE protocol were followed during analyses. These data have been reviewed and accepted by:

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, Inc. is limited to the actual cost of the analyses performed.

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MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous.

O - Indicates the sample is an Oil.

S - Indicates the sample is a Soil, Sludge or Sediment.

X - Indicates the sample is an other as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.

D - The surrogate was not detected due to the high Dilution of the sample.

J - Indicates an estimated value. The compound was detected at a value below the minimum detection limit and greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MI - Indicates Compound concentration could not be determined due to Matrix Interferences

NA - Indicates the compound was Not Applicable.

ND - Indicates the compound was analyzed for but was Not Detected.

REPORT QUALIFIERS

All analyses were performed within the required holding time.

All solid sample analyses were reported on a dry weight basis.

All solid sample values are corrected for original sample size and percent solids.

INTEGRATED ANALYTICAL LABORATORIES, INC.

NON-CONFORMANCE SUMMARY

Integrated Analytical Laboratories, Inc. received fourteen (14) soil and one (1) water samples (Project: Elan Chemical) from Environmental Waste Management Associates on January 7, 1992 for the analysis of:

Volatile Organics + 15
Base Neutral Extractables + 15
Mercury
Chromium

Methylene chloride is a system wide contaminant. Values reported are actual values and do not reflect any dilution factor.

Lab samples 017010 and 017014 for VOA were initially run within the required holding time. Reanalysis at a different dilution was one day out of analysis holding time.

All NJDEPE protocol were followed during analyses. These data have been reviewed and accepted by:

Michael Lutz
Laboratory Manager

2/3/92
Date

002

847520345

INTEGRATED ANALYTICAL LABORATORIES, INC.

LABORATORY DELIVERABLES CHECK LIST

Client: Environmental Waste Management Associates
Project: Elan Chemical Case #: 10920-017

		Check If Complete
1.	Cover Page, Format, and Laboratory Certification (include Cross Reference Table of Field ID # and Laboratory ID #).	X
2.	Chain of Custody	X
3.	Summary Sheets Listing Analytical Results including QA Data Information	X
4.	Laboratory Chronicle and Methodology Summary including Sample Holding Time Check	X
5.	Initial Calibration and Continuing Calibration	X
6.	Tune Summary (MS)	X
7.	Blanks (Method, Field, Trip)	X
8.	Surrogate Recovery Summary	X
9.	Chromatographs Labelled/Compound Identification	X
10.	Minimum Detection Limits (Lower than Action Level if Clean Zone Sample - and consistent with method guidelines).	X
11.	Non-conformance Summary	X

Michael Lufti
Laboratory Manager

2/3/92
Date

003

847520346

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Let's protect our earth

Certifies That

Integrated Analytical Lab.
150 Railroad Avenue
Paterson, NJ 07501

having duly met the requirements of the

Regulations Governing Laboratory Certification
And Standards Of Performance N.J.A.C. 7:18 et. seq.

is hereby approved as a

State Certified Water Laboratory

To perform the analyses as indicated on the Annual Certified Parameter List which must accompany this certificate to be valid

16751
PERMANENT CERTIFICATION NUMBER

January 11, 1990
DATE

Helen O. Hunter
COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL PROTECTION

This certification is subject to unannounced laboratory inspections as specified by N.J.A.C. 7:18-2.11(d) and agreed to by the Laboratory Manager on filing the application

847520347

INTEGRATED ANALYTICAL LABORATORIES, INC.

GCMS ANALYSIS
Conformance/Nonconformance Summary

Case: 10920-017 Project: Elan Chemical Client: EWMA

	No	Yes
GC/MS Tuning Specifications		
a. BFB Passed	___	X
b. DFTPP Passed	___	X
GC/MS Tuning Frequency -Performed every 12 hours	___	X
GC/MS Calibration - Initial calibration performed within 30 days before sample analysis, and continuing calibration performed within 24 hours before analysis	___	X
GC/MS Calibration Requirements		
a. Calibration Check Compounds	___	X
b. System Performance Check Compounds	___	X

Blank Contamination
- a. VOA Fraction _____
- b. B/N Fraction Di-n-butyl phthalate
- c. Acid Fraction _____

Surrogate Recoveries Meet Criteria — No: X — Yes: ___

List those compounds and their out of range recoveries:
- VOA Fraction _____
- B/N Fraction Nitrobenzene-d_5 - D; 2-Flourobiphenyl - D; Terphenyl-d_{14} - D
- Acid Fraction _____

Extraction Holding Time Met — No: ___ — Yes: X

Comments _____

Analysis Holding Time Met — No: X — Yes: ___

Comments Lab samples 017010 and 017014 for VOA were initially run within the required holding time. Reanalysis at a different dilution was one day out of analysis holding time.

Michael Lufton
Organic Manager

2/3/92
Date

005

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VOLATILE ORGANICS

No.:	10920-017		
Lab ID#:	017001	017002	017003
Client ID#:	A-1	A-2	B-1
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	5.60	11.8	1.08
% Solid:	89.4	84.7	92.2

Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	56.0	ND	118	ND	10.8
Vinyl chloride	ND	56.0	ND	118	ND	10.8
Bromomethane	ND	56.0	ND	118	ND	10.8
Chloroethane	ND	56.0	ND	118	ND	10.8
1,1-Dichloroethene	ND	28.0	ND	59.0	ND	5.4
Methylene chloride	ND	5.0	ND	5.0	3.0J	5.0
Trichlorofluoromethane	ND	28.0	ND	59.0	ND	5.4
trans-1,2-Dichloroethene	ND	28.0	ND	59.0	ND	5.4
1,1-Dichloroethane	ND	28.0	ND	59.0	ND	5.4
Chloroform	ND	28.0	ND	59.0	ND	5.4
1,1,1-Trichloroethane	ND	28.0	ND	59.0	ND	5.4
Carbon tetrachloride	ND	28.0	ND	59.0	ND	5.4
Benzene	ND	28.0	ND	59.0	ND	5.4
1,2-Dichloroethane	ND	28.0	ND	59.0	ND	5.4
Trichloroethene	ND	28.0	ND	59.0	ND	5.4
1,2-Dichloropropane	ND	28.0	ND	59.0	ND	5.4
Bromodichloromethane	ND	28.0	ND	59.0	ND	5.4
trans-1,3-Dichloropropene	ND	28.0	ND	59.0	ND	5.4
Toluene	45.4	28.0	ND	59.0	ND	5.4
cis-1,3-Dichloropropene	ND	28.0	ND	59.0	ND	5.4
1,1,2-Trichloroethane	ND	28.0	ND	59.0	ND	5.4
Tetrachloroethene	ND	28.0	ND	59.0	ND	5.4
Dibromochloromethane	ND	28.0	ND	59.0	ND	5.4
2-Chloroethylvinyl ether	ND	28.0	ND	59.0	ND	5.4
Chlorobenzene	ND	28.0	ND	59.0	ND	5.4
Ethylbenzene	267	28.0	124	59.0	103	5.4
Total Xylenes	67.2J	84.0	63.7J	177	ND	16.2
Bromoform	ND	28.0	ND	59.0	ND	5.4
1,1,2,2-Tetrachloroethane	ND	28.0	ND	59.0	ND	5.4
1,3-Dichlorobenzene	ND	28.0	ND	59.0	ND	5.4
1,4-Dichlorobenzene	ND	28.0	ND	59.0	ND	5.4
1,2-Dichlorobenzene	ND	28.0	ND	59.0	ND	5.4

VOLATILE ORGANICS

No.:	10920-017		
Lab ID#:	017004	017005	017006
Client ID#:	B-2	C-1	C-2
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	1.25	2.26	2.38
% Solid:	79.9	88.6	84.1

Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	12.5	ND	22.6	ND	23.8
Vinyl chloride	ND	12.5	ND	22.6	ND	23.8
Bromomethane	ND	12.5	ND	22.6	ND	23.8
Chloroethane	ND	12.5	ND	22.6	ND	23.8
1,1-Dichloroethene	ND	6.3	ND	11.3	ND	11.9
Methylene chloride	4.7J	5.0	4.3J	5.0	1.5J	5.0
Trichlorofluoromethane	ND	6.3	ND	11.3	ND	11.9
trans-1,2-Dichloroethene	ND	6.3	ND	11.3	ND	11.9
1,1-Dichloroethane	ND	6.3	ND	11.3	ND	11.9
Chloroform	ND	6.3	ND	11.3	ND	11.9
1,1,1-Trichloroethane	ND	6.3	ND	11.3	ND	11.9
Carbon tetrachloride	ND	6.3	ND	11.3	ND	11.9
Benzene	ND	6.3	ND	11.3	ND	11.9
1,2-Dichloroethane	ND	6.3	ND	11.3	ND	11.9
Trichloroethene	ND	6.3	ND	11.3	ND	11.9
1,2-Dichloropropane	ND	6.3	ND	11.3	ND	11.9
Bromodichloromethane	ND	6.3	ND	11.3	ND	11.9
trans-1,3-Dichloropropene	ND	6.3	ND	11.3	ND	11.9
Toluene	3.25J	6.3	1580	1410	59.0	11.9
cis-1,3-Dichloropropene	ND	6.3	ND	11.3	ND	11.9
1,1,2-Trichloroethane	ND	6.3	ND	11.3	ND	11.9
Tetrachloroethene	ND	6.3	17.9	11.3	ND	11.9
Dibromochloromethane	ND	6.3	ND	11.3	ND	11.9
2-Chloroethylvinyl ether	ND	6.3	ND	11.3	ND	11.9
Chlorobenzene	ND	6.3	ND	11.3	ND	11.9
Ethylbenzene	44.1	6.3	1580	1410	25.9	11.9
Total Xylenes	ND	18.8	40.7	33.9	7.62J	35.7
Bromoform	ND	6.3	ND	11.3	ND	11.9
1,1,2,2-Tetrachloroethane	ND	6.3	ND	11.3	ND	11.9
1,3-Dichlorobenzene	ND	6.3	ND	11.3	ND	11.9
1,4-Dichlorobenzene	ND	6.3	ND	11.3	ND	11.9
1,2-Dichlorobenzene	ND	6.3	ND	11.3	ND	11.9

VOLATILE ORGANICS

No.:	10920-017		
Lab ID#:	017007	017008	017009
Client ID#:	D-1	D-2	E-1
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	1160	5.51	570
% Solid:	86.6	36.3	87.8

Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	11600	ND	55.1	ND	5700
Vinyl chloride	ND	11600	ND	55.1	ND	5700
Bromomethane	ND	11600	ND	55.1	ND	5700
Chloroethane	ND	11600	ND	55.1	ND	5700
1,1-Dichloroethene	ND	5800	ND	27.6	ND	2850
Methylene chloride	2.6J	5	8.5	5.0	7.5	5
Trichlorofluoromethane	ND	5800	ND	27.6	ND	2850
trans-1,2-Dichloroethene	ND	5800	ND	27.6	ND	2850
1,1-Dichloroethane	ND	5800	ND	27.6	ND	2850
Chloroform	ND	5800	ND	27.6	ND	2850
1,1,1-Trichloroethane	ND	5800	ND	27.6	ND	2850
Carbon tetrachloride	ND	5800	ND	27.6	ND	2850
Benzene	ND	5800	ND	27.6	ND	2850
1,2-Dichloroethane	ND	5800	ND	27.6	ND	2850
Trichloroethene	ND	5800	ND	27.6	ND	2850
1,2-Dichloropropane	ND	5800	ND	27.6	ND	2850
Bromodichloromethane	ND	5800	ND	27.6	ND	2850
trans-1,3-Dichloropropene	ND	5800	ND	27.6	ND	2850
Toluene	ND	5800	10.5J	27.6	ND	2850
cis-1,3-Dichloropropene	ND	5800	ND	27.6	ND	2850
1,1,2-Trichloroethane	ND	5800	ND	27.6	ND	2850
Tetrachloroethene	ND	5800	ND	27.6	ND	2850
Dibromochloromethane	ND	5800	ND	27.6	ND	2850
2-Chloroethylvinyl ether	ND	5800	ND	27.6	ND	2850
Chlorobenzene	ND	5800	ND	27.6	ND	2850
Ethylbenzene	557000	58000	12200	1380	81500	2850
Total Xylenes	ND	17400	ND	82.7	ND	8550
Bromoform	ND	5800	ND	27.6	ND	2850
1,1,2,2-Tetrachloroethane	ND	5800	ND	27.6	ND	2850
1,3-Dichlorobenzene	ND	5800	ND	27.6	ND	2850
1,4-Dichlorobenzene	ND	5800	ND	27.6	ND	2850
1,2-Dichlorobenzene	ND	5800	ND	27.6	ND	2850

VOLATILE ORGANICS

No.: 10920-017

Lab ID#:	017010		017011		017012	
Client ID#:	E-2		F-1		F-2	
Matrix-Units:	S-µg/kg		S-µg/kg		S-µg/kg	
Dil. Fact.:	12.2		550		563	
% Solid:	81.9		90.9		88.9	
Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	122	ND	5500	ND	5630
Vinyl chloride	ND	122	ND	5500	ND	5630
Bromomethane	ND	122	ND	5500	ND	5630
Chloroethane	ND	122	ND	5500	ND	5630
1,1-Dichloroethene	ND	61.0	ND	2750	ND	2815
Methylene chloride	3.6J	5	6.4	5	5.2	5
Trichlorofluoromethane	ND	61.0	ND	2750	ND	2815
trans-1,2-Dichloroethene	ND	61.0	ND	2750	ND	2815
1,1-Dichloroethane	ND	61.0	ND	2750	ND	2815
Chloroform	ND	61.0	ND	2750	ND	2815
1,1,1-Trichloroethane	ND	61.0	ND	2750	ND	2815
Carbon tetrachloride	ND	61.0	ND	2750	ND	2815
Benzene	ND	61.0	ND	2750	ND	2815
1,2-Dichloroethane	ND	61.0	ND	2750	ND	2815
Trichloroethene	ND	61.0	ND	2750	ND	2815
1,2-Dichloropropane	ND	61.0	ND	2750	ND	2815
Bromodichloromethane	ND	61.0	ND	2750	ND	2815
trans-1,3-Dichloropropene	ND	61.0	ND	2750	ND	2815
Toluene	15.9J	61.0	3410	2750	2360J	2815
cis-1,3-Dichloropropene	ND	61.0	ND	2750	ND	2815
1,1,2-Trichloroethane	ND	61.0	ND	2750	ND	2815
Tetrachloroethene	ND	61.0	ND	2750	ND	2815
Dibromochloromethane	ND	61.0	ND	2750	ND	2815
2-Chloroethylvinyl ether	ND	61.0	ND	2750	ND	2815
Chlorobenzene	ND	61.0	ND	2750	ND	2815
Ethylbenzene	177	61.0	1820J	2750	1300J	2815
Total Xylenes	ND	183	ND	8250	ND	8445
Bromoform	ND	61.0	ND	2750	ND	2815
1,1,2,2-Tetrachloroethane	ND	61.0	ND	2750	ND	2815
1,3-Dichlorobenzene	ND	61.0	ND	2750	ND	2815
1,4-Dichlorobenzene	ND	61.0	ND	2750	ND	2815
1,2-Dichlorobenzene	ND	61.0	ND	2750	ND	2815

VOLATILE ORGANICS

No.:	10920-017		
Lab ID#:	017013	017014	017015
Client ID#:	G-1	G-2	Field
Matrix-Units:	S-µg/kg	S-µg/kg	A-µg/l
Dil. Fact.:	559	1.38	1
% Solid:	89.4	72.3	0

Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	5590	ND	13.8	ND	10
Vinyl chloride	ND	5590	ND	13.8	ND	10
Bromomethane	ND	5590	ND	13.8	ND	10
Chloroethane	ND	5590	ND	13.8	ND	10
1,1-Dichloroethene	ND	2795	ND	6.9	ND	5
Methylene chloride	11.1	5	ND	5	ND	5
Trichlorofluoromethane	ND	2795	ND	6.9	ND	5
trans-1,2-Dichloroethene	ND	2795	ND	6.9	ND	5
1,1-Dichloroethane	ND	2795	ND	6.9	ND	5
Chloroform	ND	2795	ND	6.9	ND	5
1,1,1-Trichloroethane	ND	2795	ND	6.9	ND	5
Carbon tetrachloride	ND	2795	ND	6.9	ND	5
Benzene	ND	2795	ND	6.9	ND	5
1,2-Dichloroethane	ND	2795	ND	6.9	ND	5
Trichloroethene	ND	2795	ND	6.9	ND	5
1,2-Dichloropropane	ND	2795	ND	6.9	ND	5
Bromodichloromethane	ND	2795	ND	6.9	ND	5
trans-1,3-Dichloropropene	ND	2795	ND	6.9	ND	5
Toluene	ND	2795	ND	6.9	ND	5
cis-1,3-Dichloropropene	ND	2795	ND	6.9	ND	5
1,1,2-Trichloroethane	ND	2795	ND	6.9	ND	5
Tetrachloroethene	ND	2795	ND	6.9	ND	5
Dibromochloromethane	ND	2795	ND	6.9	ND	5
2-Chloroethylvinyl ether	ND	2795	ND	6.9	ND	5
Chlorobenzene	ND	2795	ND	6.9	ND	5
Ethylbenzene	7160	2795	6.5J	6.9	ND	5
Total Xylenes	ND	8385	ND	20.7	ND	15
Bromoform	ND	2795	ND	6.9	ND	5
1,1,2,2-Tetrachloroethane	ND	2795	ND	6.9	ND	5
1,3-Dichlorobenzene	ND	2795	ND	6.9	ND	5
1,4-Dichlorobenzene	ND	2795	ND	6.9	ND	5
1,2-Dichlorobenzene	ND	2795	ND	6.9	ND	5

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

No.:	10920-017	
Lab ID#:	VB011092	VB011392
Client ID#:	QCBlank	QCBlank
Matrix-Units:	A-µg/l	A-µg/l
Dil. Fact.:	1	1
% Solid:	0	0

Compound	Result	MDL	Result	MDL	Result	MDL
Chloromethane	ND	10	ND	10		
Vinyl chloride	ND	10	ND	10		
Bromomethane	ND	10	ND	10		
Chloroethane	ND	10	ND	10		
1,1-Dichloroethene	ND	5	ND	5		
Methylene chloride	ND	5	ND	5		
Trichlorofluoromethane	ND	5	ND	5		
trans-1,2-Dichloroethene	ND	5	ND	5		
1,1-Dichloroethane	ND	5	ND	5		
Chloroform	ND	5	ND	5		
1,1,1-Trichloroethane	ND	5	ND	5		
Carbon tetrachloride	ND	5	ND	5		
Benzene	ND	5	ND	5		
1,2-Dichloroethane	ND	5	ND	5		
Trichloroethene	ND	5	ND	5		
1,2-Dichloropropane	ND	5	ND	5		
Bromodichloromethane	ND	5	ND	5		
trans-1,3-Dichloropropene	ND	5	ND	5		
Toluene	ND	5	ND	5		
cis-1,3-Dichloropropene	ND	5	ND	5		
1,1,2-Trichloroethane	ND	5	ND	5		
Tetrachloroethene	ND	5	ND	5		
Dibromochloromethane	ND	5	ND	5		
2-Chloroethylvinyl ether	ND	5	ND	5		
Chlorobenzene	ND	5	ND	5		
Ethylbenzene	ND	5	ND	5		
Total Xylenes	ND	15	ND	15		
Bromoform	ND	5	ND	5		
1,1,2,2-Tetrachloroethane	ND	5	ND	5		
1,3-Dichlorobenzene	ND	5	ND	5		
1,4-Dichlorobenzene	ND	5	ND	5		
1,2-Dichlorobenzene	ND	5	ND	5		

VOLATILE ORGANICS
SURROGATE RECOVERY

Client ID.	Lab ID#	Matrix	S1	S2	S3	Total Out
A-1	017001	Soil	106	105	91.8	0
A-2	017002	Soil	89.8	82.6	102	0
B-1	017003	Soil	78.4	85.8	103	0
B-2	017004	Soil	78.0	108	87.2	0
C-1	017005	Soil	86.8	110	102	0
C-2	017006	Soil	80.0	93.8	101	0
D-1	017007	Soil	78.8	110	100	0
D-2	017008	Soil	116	91.8	88.4	0
E-1	017009	Soil	82.8	106	102	0
E-2	017010	Soil	103	93.2	105	0
F-1	017011	Soil	96.0	99.6	99.4	0
F-2	017012	Soil	89.2	109	97.2	0
G-1	017013	Soil	90.6	116	99.0	0
G-2	017014	Soil	94.6	103	107	0
Field	017015	Aqueous	85.0	109	92.2	0
QCBlank	VB011092	Aqueous	76.0	93.2	89.8	0
QCBlank	VB011392	Aqueous	83.0	108	93.0	0

EPA CLP QC Limits for:		Aqueous	Soil
S1	1,2-Dichloroethane-d_4	(76-114)	(70-121)
S2	Toluene-d_8	(88-110)	(81-117)
S3	4-Bromofluorobenzene	(86-115)	(74-121)

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL COMPOUNDS

Lab ID#:	017001	017002	017003
Client ID#:	A-1	A-2	B-1
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	373	780	35.9
% Solid:	89.4	84.7	92.2

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Aniline	ND	3730	ND	7800	ND	359
Bis(2-chloroethyl)ether	ND	3730	ND	7800	ND	359
1,3-Dichlorobenzene	ND	3730	ND	7800	ND	359
1,4-Dichlorobenzene	ND	3730	ND	7800	ND	359
Benzyl alcohol	ND	3730	ND	7800	ND	359
1,2-Dichlorobenzene	ND	3730	ND	7800	ND	359
Bis(2-chloroisopropyl)ether	ND	3730	ND	7800	ND	359
N-Nitrosodi-n-propylamine	ND	3730	ND	7800	ND	359
Hexachloroethane	ND	3730	ND	7800	ND	359
Nitrobenzene	ND	3730	ND	7800	ND	359
Isophorone	ND	3730	ND	7800	ND	359
Bis(2-chloroethoxy)methane	ND	3730	ND	7800	ND	359
1,2,4-Trichlorobenzene	ND	3730	ND	7800	ND	359
Naphthalene	ND	3730	ND	7800	ND	359
4-Chloroaniline	ND	3730	ND	7800	ND	359
Hexachlorobutadiene	ND	3730	ND	7800	ND	359
2-Methylnaphthalene	ND	3730	ND	7800	ND	359
Hexachlorocyclopentadiene	ND	3730	ND	7800	ND	359
2-Chloronaphthalene	ND	3730	ND	7800	ND	359
2-Nitroaniline	ND	3730	ND	7800	ND	359
Acenaphthalene	ND	3730	ND	7800	ND	359
Dimethyl phthalate	ND	3730	ND	7800	ND	359
3-Nitroaniline	ND	3730	ND	7800	ND	359
2,6-Dinitrotoluene	ND	3730	ND	7800	ND	359
Acenaphthene	ND	3730	ND	7800	93.0J	359
Dibenzofuran	ND	3730	ND	7800	ND	359
2,4-Dinitrotoluene	ND	3730	ND	7800	ND	359
Fluorene	ND	3730	ND	7800	ND	359
Diethyl phthalate	ND	3730	ND	7800	ND	359
4-Chlorophenyl-phenyl ether	ND	3730	ND	7800	ND	359
4-Nitroaniline	ND	3730	ND	7800	ND	359
N-Nitrosodiphenylamine	ND	3730	ND	7800	ND	359
1,2-Diphenyl hydrazine	ND	3730	ND	7800	ND	359
4-Bromophenyl-phenyl ether	ND	3730	ND	7800	ND	359
Hexachlorobenzene	ND	3730	ND	7800	ND	359
Phenanthrene	10000	3730	ND	7800	1550	359
Anthracene	280J	3730	ND	7800	384	359
Di-n-butyl phthalate	ND	3730	ND	7800	90.0J	359
Fluoranthene	18200	3730	ND	7800	2440	359
Benzidine	ND	18650	ND	39000	ND	50
Pyrene	8730	3730	ND	7800	1290	359
Butylbenzyl phthalate	ND	3730	ND	7800	ND	359
Benzo(a)anthracene	5150	3730	ND	7800	808	359
3,3'-Dichlorobenzine	ND	3730	ND	7800	ND	359
Chrysene	4480	3730	ND	7800	847	359
Bis(2-ethylhexyl) phthalate	1120J	3730	ND	7800	463	359
Di-n-octyl phthalate	ND	3730	ND	7800	ND	359
Benzo(b)fluoranthene	8650	3730	ND	7800	592	359
Benzo(k)fluoranthene	ND	3730	ND	7800	488	359
Benzo(a)pyrene	4100	3730	ND	7800	628	359
Indeno(1,2,3-cd)pyrene	2460J	3730	ND	7800	305J	359
Benzo(a,h)anthracene	ND	3730	ND	7800	108J	359
Benzo(g,h,i)perylene	1940J	3730	ND	7800	291J	359

BASE/NEUTRAL COMPOUNDS

Lab ID#:	017004	017005	017006
Client ID#:	B-2	C-1	C-2
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	828	753	39.5
% Solid:	79.9	88.6	84.1

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Aniline	ND	8280	ND	7530	ND	395
Bis(2-chloroethyl)ether	ND	8280	ND	7530	ND	395
1,3-Dichlorobenzene	ND	8280	ND	7530	ND	395
1,4-Dichlorobenzene	ND	8280	ND	7530	ND	395
Benzyl alcohol	ND	8280	ND	7530	ND	395
1,2-Dichlorobenzene	ND	8280	ND	7530	ND	395
Bis(2-chloroisopropyl)ether	ND	8280	ND	7530	ND	395
N-Nitrosodi-n-propylamine	ND	8280	ND	7530	ND	395
Hexachloroethane	ND	8280	ND	7530	ND	395
Nitrobenzene	ND	8280	ND	7530	ND	395
Isophorone	ND	8280	ND	7530	ND	395
Bis(2-chloroethoxy)methane	ND	8280	ND	7530	ND	395
1,2,4-Trichlorobenzene	ND	8280	ND	7530	ND	395
Naphthalene	ND	8280	ND	7530	ND	395
4-Chloroaniline	ND	8280	ND	7530	ND	395
Hexachlorobutadiene	ND	8280	ND	7530	ND	395
2-Methylnaphthalene	ND	8280	ND	7530	ND	395
Hexachlorocyclopentadiene	ND	8280	ND	7530	ND	395
2-Chloronaphthalene	ND	8280	ND	7530	ND	395
2-Nitroaniline	ND	8280	ND	7530	ND	395
Acenaphthalene	ND	8280	ND	7530	ND	395
Dimethyl phthalate	ND	8280	ND	7530	ND	395
3-Nitroaniline	ND	8280	ND	7530	ND	395
2,6-Dinitrotoluene	ND	8280	ND	7530	ND	395
Acenaphthene	ND	8280	ND	7530	ND	395
Dibenzofuran	ND	8280	ND	7530	ND	395
2,4-Dinitrotoluene	ND	8280	ND	7530	ND	395
Fluorene	ND	8280	ND	7530	ND	395
Diethyl phthalate	ND	8280	ND	7530	ND	395
4-Chlorophenyl-phenyl ether	ND	8280	ND	7530	ND	395
4-Nitroaniline	ND	8280	ND	7530	ND	395
N-Nitrosodiphenylamine	ND	8280	ND	7530	ND	395
1,2-Diphenyl hydrazine	ND	8280	ND	7530	ND	395
4-Bromophenyl-phenyl ether	ND	8280	ND	7530	ND	395
Hexachlorobenzene	ND	8280	ND	7530	ND	395
Phenanthrene	ND	8280	2790J	7530	786	395
Anthracene	ND	8280	ND	7530	217J	395
Di-n-butyl phthalate	ND	8280	ND	7530	1690	395
Fluoranthene	ND	8280	3770J	7530	2180	395
Benzidine	ND	41400	ND	37650	ND	1975
Pyrene	ND	8280	2030J	7530	1300	395
Butylbenzyl phthalate	ND	8280	ND	7530	ND	395
Benzo(a)anthracene	ND	8280	1730J	7530	881	395
3,3'-Dichlorobenzine	ND	8280	ND	7530	ND	395
Chrysene	ND	8280	1960J	7530	893	395
Bis(2-ethylhexyl) phthalate	ND	8280	ND	7530	ND	395
Di-n-octyl phthalate	ND	8280	ND	7530	ND	395
Benzo(b)fluoranthene	ND	8280	3240J	7530	1110	395
Benzo(k)fluoranthene	ND	8280	ND	7530	640	395
Benzo(a)pyrene	ND	8280	1880J	7530	960	395
Indeno(1,2,3-cd)pyrene	ND	8280	ND	7530	431	395
Benzo(a,h)anthracene	ND	8280	ND	7530	158J	395
Benzo(g,h,i)perylene	ND	8280	ND	7530	403	395

BASE/NEUTRAL COMPOUNDS

Lab ID#:	017007	017008	017009
Client ID#:	D-1	D-2	E-1
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	767	1835	759
% Solid:	86.6	36.3	87.8

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Aniline	ND	7670	ND	18350	ND	7590
Bis(2-chloroethyl)ether	ND	7670	ND	18350	ND	7590
1,3-Dichlorobenzene	ND	7670	ND	18350	ND	7590
1,4-Dichlorobenzene	ND	7670	ND	18350	ND	7590
Benzyl alcohol	ND	7670	ND	18350	ND	7590
1,2-Dichlorobenzene	ND	7670	ND	18350	ND	7590
Bis(2-chloroisopropyl)ether	ND	7670	ND	18350	ND	7590
N-Nitrosodi-n-propylamine	ND	7670	ND	18350	ND	7590
Hexachloroethane	ND	7670	ND	18350	ND	7590
Nitrobenzene	ND	7670	ND	18350	ND	7590
Isophorone	ND	7670	ND	18350	ND	7590
Bis(2-chloroethoxy)methane	ND	7670	ND	18350	ND	7590
1,2,4-Trichlorobenzene	ND	7670	ND	18350	ND	7590
Naphthalene	ND	7670	ND	18350	ND	7590
4-Chloroaniline	ND	7670	ND	18350	ND	7590
Hexachlorobutadiene	ND	7670	ND	18350	ND	7590
2-Methylnaphthalene	ND	7670	ND	18350	ND	7590
Hexachlorocyclopentadiene	ND	7670	ND	18350	ND	7590
2-Chloronaphthalene	ND	7670	ND	18350	ND	7590
2-Nitroaniline	ND	7670	ND	18350	ND	7590
Acenaphthalene	ND	7670	ND	18350	ND	7590
Dimethyl phthalate	ND	7670	ND	18350	ND	7590
3-Nitroaniline	ND	7670	ND	18350	ND	7590
2,6-Dinitrotoluene	ND	7670	ND	18350	ND	7590
Acenaphthene	ND	7670	ND	18350	ND	7590
Dibenzofuran	ND	7670	ND	18350	ND	7590
2,4-Dinitrotoluene	ND	7670	ND	18350	ND	7590
Fluorene	ND	7670	ND	18350	ND	7590
Diethyl phthalate	ND	7670	ND	18350	ND	7590
4-Chlorophenyl-phenyl ether	ND	7670	ND	18350	ND	7590
4-Nitroaniline	ND	7670	ND	18350	ND	7590
N-Nitrosodiphenylamine	ND	7670	ND	18350	ND	7590
1,2-Diphenyl hydrazine	ND	7670	ND	18350	ND	7590
4-Bromophenyl-phenyl ether	ND	7670	ND	18350	ND	7590
Hexachlorobenzene	ND	7670	ND	18350	ND	7590
Phenanthrene	ND	7670	63300	18350	4400J	7590
Anthracene	ND	7670	11600J	18350	ND	7590
Di-n-butyl phthalate	ND	7670	ND	18350	ND	7590
Fluoranthene	1760J	7670	65000	18350	7440J	7590
Benzidine	ND	38350	ND	91750	ND	37950
Pyrene	ND	7670	36700	18350	4400J	7590
Butylbenzyl phthalate	ND	7670	ND	18350	ND	7590
Benzo(a)anthracene	ND	7670	19800	18350	3110J	7590
3,3'-Dichlorobenzine	ND	7670	ND	18350	ND	7590
Chrysene	ND	7670	23500	18350	3340J	7590
Bis(2-ethylhexyl) phthalate	ND	7670	ND	18350	ND	7590
Di-n-octyl phthalate	ND	7670	ND	18350	ND	7590
Benzo(b)fluoranthene	ND	7670	ND	18350	3040J	7590
Benzo(k)fluoranthene	ND	7670	36100	18350	1970J	7590
Benzo(a)pyrene	ND	7670	18500	18350	2960J	7590
Indeno(1,2,3-cd)pyrene	ND	7670	7710J	18350	ND	7590
Benzo(a,h)anthracene	ND	7670	ND	18350	ND	7590
Benzo(g,h,i)perylene	ND	7670	ND	18350	ND	7590

BASE/NEUTRAL COMPOUNDS

Lab ID#:	017010	017011	017012
Client ID#:	E-2	F-1	F-2
Matrix-Units:	S-µg/kg	S-µg/kg	S-µg/kg
Dil. Fact.:	808	365	374
% Solid:	81.9	90.9	88.9

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Aniline	ND	8080	ND	3650	ND	3740
Bis(2-chloroethyl)ether	ND	8080	ND	3650	ND	3740
1,3-Dichlorobenzene	ND	8080	ND	3650	ND	3740
1,4-Dichlorobenzene	ND	8080	ND	3650	ND	3740
Benzyl alcohol	ND	8080	ND	3650	ND	3740
1,2-Dichlorobenzene	ND	8080	ND	3650	ND	3740
Bis(2-chloroisopropyl)ether	ND	8080	ND	3650	ND	3740
N-Nitrosodi-n-propylamine	ND	8080	ND	3650	ND	3740
Hexachloroethane	ND	8080	ND	3650	ND	3740
Nitrobenzene	ND	8080	ND	3650	ND	3740
Isophorone	ND	8080	ND	3650	ND	3740
Bis(2-chloroethoxy)methane	ND	8080	ND	3650	ND	3740
1,2,4-Trichlorobenzene	ND	8080	ND	3650	ND	3740
Naphthalene	ND	8080	ND	3650	ND	3740
4-Chloroaniline	ND	8080	ND	3650	ND	3740
Hexachlorobutadiene	ND	8080	ND	3650	ND	3740
2-Methylnaphthalene	ND	8080	ND	3650	ND	3740
Hexachlorocyclopentadiene	ND	8080	ND	3650	ND	3740
2-Chloronaphthalene	ND	8080	ND	3650	ND	3740
2-Nitroaniline	ND	8080	ND	3650	ND	3740
Acenaphthalene	ND	8080	ND	3650	ND	3740
Dimethyl phthalate	ND	8080	ND	3650	ND	3740
3-Nitroaniline	ND	8080	ND	3650	ND	3740
2,6-Dinitrotoluene	ND	8080	ND	3650	ND	3740
Acenaphthene	ND	8080	803J	3650	ND	3740
Dibenzofuran	ND	8080	ND	3650	ND	3740
2,4-Dinitrotoluene	ND	8080	876J	3650	ND	3740
Fluorene	ND	8080	ND	3650	ND	3740
Diethyl phthalate	ND	8080	ND	3650	ND	3740
4-Chlorophenyl-phenyl ether	ND	8080	ND	3650	ND	3740
4-Nitroaniline	ND	8080	ND	3650	ND	3740
N-Nitrosodiphenylamine	ND	8080	ND	3650	ND	3740
1,2-Diphenyl hydrazine	ND	8080	ND	3650	ND	3740
4-Bromophenyl-phenyl ether	ND	8080	ND	3650	ND	3740
Hexachlorobenzene	ND	8080	ND	3650	ND	3740
Phenanthrene	ND	8080	12900	3650	1160J	3740
Anthracene	ND	8080	3760	3650	ND	3740
Di-n-butyl phthalate	ND	8080	ND	3650	ND	3740
Fluoranthene	ND	8080	12400	3650	1570J	3740
Benzidine	ND	40400	ND	18250	ND	18700
Pyrene	ND	8080	6860	3650	823J	3740
Butylbenzyl phthalate	ND	8080	ND	3650	ND	3740
Benzo(a)anthracene	ND	8080	4200	3650	823J	3740
3,3'-Dichlorobenzine	ND	8080	ND	3650	ND	3740
Chrysene	ND	8080	4230	3650	823J	3740
Bis(2-ethylhexyl) phthalate	ND	8080	767J	3650	ND	3740
Di-n-octyl phthalate	ND	8080	ND	3650	ND	3740
Benzo(b)fluoranthene	ND	8080	6020	3650	ND	3740
Benzo(k)fluoranthene	ND	8080	ND	3650	ND	3740
Benzo(a)pyrene	ND	8080	3980	3650	823J	3740
Indeno(1,2,3-cd)pyrene	ND	8080	1680J	3650	ND	3740
Benzo(a,h)anthracene	ND	8080	ND	3650	ND	3740
Benzo(g,h,i)perylene	ND	8080	1570J	3650	ND	3740

BASE/NEUTRAL COMPOUNDS

Lab ID#:	017013	017014	017015
Client ID#:	G-1	G-2	Field
Matrix-Units:	S-µg/kg	S-µg/kg	A-µg/l
Dil. Fact.:	372	230	1
% Solid:	89.4	72.3	0

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Aniline	ND	3720	ND	2300	ND	10
Bis(2-chloroethyl)ether	ND	3720	ND	2300	ND	10
1,3-Dichlorobenzene	ND	3720	ND	2300	ND	10
1,4-Dichlorobenzene	ND	3720	ND	2300	ND	10
Benzyl alcohol	ND	3720	ND	2300	ND	10
1,2-Dichlorobenzene	ND	3720	ND	2300	ND	10
Bis(2-chloroisopropyl)ether	ND	3720	ND	2300	ND	10
N-Nitrosodi-n-propylamine	ND	3720	ND	2300	ND	10
Hexachloroethane	ND	3720	ND	2300	ND	10
Nitrobenzene	ND	3720	ND	2300	ND	10
Isophorone	ND	3720	ND	2300	ND	10
Bis(2-chloroethoxy)methane	ND	3720	ND	2300	ND	10
1,2,4-Trichlorobenzene	ND	3720	ND	2300	ND	10
Naphthalene	ND	3720	ND	2300	ND	10
4-Chloroaniline	ND	3720	ND	2300	ND	10
Hexachlorobutadiene	ND	3720	ND	2300	ND	10
2-Methylnaphthalene	ND	3720	ND	2300	ND	10
Hexachlorocyclopentadiene	ND	3720	ND	2300	ND	10
2-Chloronaphthalene	ND	3720	ND	2300	ND	10
2-Nitroaniline	ND	3720	ND	2300	ND	10
Acenaphthalene	ND	3720	ND	2300	ND	10
Dimethyl phthalate	ND	3720	ND	2300	ND	10
3-Nitroaniline	ND	3720	ND	2300	ND	10
2,6-Dinitrotoluene	ND	3720	ND	2300	ND	10
Acenaphthene	ND	3720	ND	2300	ND	10
Dibenzofuran	ND	3720	ND	2300	ND	10
2,4-Dinitrotoluene	ND	3720	ND	2300	ND	10
Fluorene	ND	3720	ND	2300	ND	10
Diethyl phthalate	ND	3720	ND	2300	ND	10
4-Chlorophenyl-phenyl ether	ND	3720	ND	2300	ND	10
4-Nitroaniline	ND	3720	ND	2300	ND	10
N-Nitrosodiphenylamine	ND	3720	ND	2300	ND	10
1,2-Diphenyl hydrazine	ND	3720	ND	2300	ND	10
4-Bromophenyl-phenyl ether	ND	3720	ND	2300	ND	10
Hexachlorobenzene	ND	3720	ND	2300	ND	10
Phenanthrene	7770	3720	851J	2300	ND	10
Anthracene	2640J	3720	ND	2300	ND	10
Di-n-butyl phthalate	ND	3720	ND	2300	22.8B	10
Fluoranthene	10800	3720	1080J	2300	ND	10
Benzidine	ND	18600	ND	11500	ND	50
Pyrene	6290	3720	690J	2300	ND	10
Butylbenzyl phthalate	ND	3720	ND	2300	ND	10
Benzo(a)anthracene	4610	3720	690J	2300	ND	10
3,3'-Dichlorobenzine	ND	3720	ND	2300	ND	10
Chrysene	5430	3720	759J	2300	ND	10
Bis(2-ethylhexyl) phthalate	ND	3720	ND	2300	ND	10
Di-n-octyl phthalate	ND	3720	ND	2300	ND	10
Benzo(b)fluoranthene	ND	3720	1290J	2300	ND	10
Benzo(k)fluoranthene	ND	3720	ND	2300	ND	10
Benzo(a)pyrene	3980	3720	805J	2300	ND	10
Indeno(1,2,3-cd)pyrene	1530J	3720	ND	2300	ND	10
Benzo(a,h)anthracene	ND	3720	ND	2300	ND	10
Benzo(g,h,i)perylene	1490J	3720	ND	2300	ND	10

BASE/NEUTRAL COMPOUNDS

Lab ID#:	SBW0108	SBS0117
Client ID#:	QCBlank	QCBlank
Matrix-Units:	A-µg/l	S-µg/kg
Dil. Fact.:	1	33.3
% Solid:	0	100

Compound	Conc.	MDL	Conc.	MDL	Conc. MDL
Aniline	ND	10	ND	333	
Bis(2-chloroethyl)ether	ND	10	ND	333	
1,3-Dichlorobenzene	ND	10	ND	333	
1,4-Dichlorobenzene	ND	10	ND	333	
Benzyl alcohol	ND	10	ND	333	
1,2-Dichlorobenzene	ND	10	ND	333	
Bis(2-chloroisopropyl)ether	ND	10	ND	333	
N-Nitrosodi-n-propylamine	ND	10	ND	333	
Hexachloroethane	ND	10	ND	333	
Nitrobenzene	ND	10	ND	333	
Isophorone	ND	10	ND	333	
Bis(2-chloroethoxy)methane	ND	10	ND	333	
1,2,4-Trichlorobenzene	ND	10	ND	333	
Naphthalene	ND	10	ND	333	
4-Chloroaniline	ND	10	ND	333	
Hexachlorobutadiene	ND	10	ND	333	
2-Methylnaphthalene	ND	10	ND	333	
Hexachlorocyclopentadiene	ND	10	ND	333	
2-Chloronaphthalene	ND	10	ND	333	
2-Nitroaniline	ND	10	ND	333	
Acenaphthalene	ND	10	ND	333	
Dimethyl phthalate	ND	10	ND	333	
3-Nitroaniline	ND	10	ND	333	
2,6-Dinitrotoluene	ND	10	ND	333	
Acenaphthene	ND	10	ND	333	
Dibenzofuran	ND	10	ND	333	
2,4-Dinitrotoluene	ND	10	ND	333	
Fluorene	ND	10	ND	333	
Diethyl phthalate	ND	10	ND	333	
4-Chlorophenyl-phenyl ether	ND	10	ND	333	
4-Nitroaniline	ND	10	ND	333	
N-Nitrosodiphenylamine	ND	10	ND	333	
1,2-Diphenyl hydrazine	ND	10	ND	333	
4-Bromophenyl-phenyl ether	ND	10	ND	333	
Hexachlorobenzene	ND	10	ND	333	
Phenanthrene	ND	10	ND	333	
Anthracene	ND	10	ND	333	
Di-n-butyl phthalate	7.8J	10	ND	333	
Fluoranthene	ND	10	ND	333	
Benzidine	ND	50	ND	1665	
Pyrene	ND	10	ND	333	
Butylbenzyl phthalate	ND	10	ND	333	
Benzo(a)anthracene	ND	10	ND	333	
3,3'-Dichlorobenzine	ND	10	ND	333	
Chrysene	ND	10	ND	333	
Bis(2-ethylhexyl) phthalate	ND	10	ND	333	
Di-n-octyl phthalate	ND	10	ND	333	
Benzo(b)fluoranthene	ND	10	ND	333	
Benzo(k)fluoranthene	ND	10	ND	333	
Benzo(a)pyrene	ND	10	ND	333	
Indeno(1,2,3-cd)pyrene	ND	10	ND	333	
Benzo(a,h)anthracene	ND	10	ND	333	
Benzo(g,h,i)perylene	ND	10	ND	333	

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BASE/NEUTRAL EXTRACTABLES
SURROGATE RECOVERY

Client ID.	Lab ID#	Matrix	S1	S2	S3	Total Out
A-1	017001	Soil	D	D	55.2	2
A-2	017002	Soil	D	D	20.2	0
B-1	017003	Soil	56.5	69.9	49.1	0
B-2	017004	Soil	D	D	23.0	2
C-1	017005	Soil	37.4	48.0	44.4	0
C-2	017006	Soil	54.2	61.2	55.7	0
D-1	017007	Soil	D	D	D	3
D-2	017008	Soil	D	D	41.2	2
E-1	017009	Soil	49.6	34.0	38.8	0
E-2	017010	Soil	D	D	37.0	2
F-1	017011	Soil	42.2	55.2	47.9	0
F-2	017012	Soil	34.4	50.6	54.4	0
G-1	017013	Soil	D	40.6	38.1	1
G-2	017014	Soil	40.5	48.9	40.5	0
Field	017015	Aqueous	78.7	93.2	135	0
QCBlank	SBW0108	Aqueous	81.1	75.4	129	0
QCBlank	SBS0117	Soil	67.4	71.7	67.7	0

EPA CLP QC Limits for:		Aqueous	Soil
S1	Nitrobenzene-d_5	(35-114)	(23-120)
S2	2-Fluorobiphenyl	(43-116)	(30-115)
S3	Terphenyl-d_{14}	(33-141)	(18-137)

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: A-1
Date Analyzed: 01/10/92

Matrix-Units: S-ug/kg
Dil. Fact.: 5.60
Lab ID: 017001

Compound	Conc.	MDL
Chloromethane	ND	56.0
Vinyl chloride	ND	56.0
Bromomethane	ND	56.0
Chloroethane	ND	56.0
1,1-Dichloroethene	ND	28.0
Methylene chloride	ND	5.0
Trichlorofluoromethane	ND	28.0
trans-1,2-Dichloroethene	ND	28.0
1,1-Dichloroethane	ND	28.0
Chloroform	ND	28.0
1,1,1-Trichloroethane	ND	28.0
Carbon tetrachloride	ND	28.0
Benzene	ND	28.0
1,2-Dichloroethane	ND	28.0
Trichloroethene	ND	28.0
1,2-Dichloropropane	ND	28.0
Bromodichloromethane	ND	28.0
trans-1,3-Dichloropropene	ND	28.0
Toluene	45.4	28.0
cis-1,3-Dichloropropene	ND	28.0
1,1,2-Trichloroethane	ND	28.0
Tetrachloroethene	ND	28.0
Dibromochloromethane	ND	28.0
2-Chloroethylvinyl ether	ND	28.0
Chlorobenzene	ND	28.0
Ethylbenzene	267	28.0
Total Xylenes	67.2J	84.0
Bromoform	ND	28.0
1,1,2,2-Tetrachloroethane	ND	28.0
1,3-Dichlorobenzene	ND	28.0
1,4-Dichlorobenzene	ND	28.0
1,2-Dichlorobenzene	ND	28.0

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	106	70-121	OK
Toluene-d_8	105	81-117	OK
4-Bromofluorobenzene	91.8	74-121	OK

Percent solids of 89.4 is used for all target compounds.

847520363

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: A-1
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017001
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847520364

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: A-2
Date Analyzed: 01/10/92

Matrix-Units: S-µg/kg
Dil. Fact.: 11.8
Lab ID: 017002

Compound	Conc.	MDL
Chloromethane	ND	118
Vinyl chloride	ND	118
Bromomethane	ND	118
Chloroethane	ND	118
1,1-Dichloroethene	ND	59.0
Methylene chloride	ND	5.0
Trichlorofluoromethane	ND	59.0
trans-1,2-Dichloroethene	ND	59.0
1,1-Dichloroethane	ND	59.0
Chloroform	ND	59.0
1,1,1-Trichloroethane	ND	59.0
Carbon tetrachloride	ND	59.0
Benzene	ND	59.0
1,2-Dichloroethane	ND	59.0
Trichloroethene	ND	59.0
1,2-Dichloropropane	ND	59.0
Bromodichloromethane	ND	59.0
trans-1,3-Dichloropropene	ND	59.0
Toluene	ND	59.0
cis-1,3-Dichloropropene	ND	59.0
1,1,2-Trichloroethane	ND	59.0
Tetrachloroethene	ND	59.0
Dibromochloromethane	ND	59.0
2-Chloroethylvinyl ether	ND	59.0
Chlorobenzene	ND	59.0
Ethylbenzene	124	59.0
Total Xylenes	63.7J	177
Bromoform	ND	59.0
1,1,2,2-Tetrachloroethane	ND	59.0
1,3-Dichlorobenzene	ND	59.0
1,4-Dichlorobenzene	ND	59.0
1,2-Dichlorobenzene	ND	59.0

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	89.8	70-121	OK
Toluene-d_8	82.6	81-117	OK
4-Bromofluorobenzene	102	74-121	OK

Percent solids of 84.7 is used for all target compounds.

847520365

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: A-2
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017002
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847520366

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: B-1
Date Analyzed: 01/10/92

Matrix-Units: S-ug/kg
Dil. Fact.: 1.08
Lab ID: 017003

Compound	Conc.	MDL
Chloromethane	ND	10.8
Vinyl chloride	ND	10.8
Bromomethane	ND	10.8
Chloroethane	ND	10.8
1,1-Dichloroethene	ND	5.4
Methylene chloride	3.0J	5.0
Trichlorofluoromethane	ND	5.4
trans-1,2-Dichloroethene	ND	5.4
1,1-Dichloroethane	ND	5.4
Chloroform	ND	5.4
1,1,1-Trichloroethane	ND	5.4
Carbon tetrachloride	ND	5.4
Benzene	ND	5.4
1,2-Dichloroethane	ND	5.4
Trichloroethene	ND	5.4
1,2-Dichloropropane	ND	5.4
Bromodichloromethane	ND	5.4
trans-1,3-Dichloropropene	ND	5.4
Toluene	ND	5.4
cis-1,3-Dichloropropene	ND	5.4
1,1,2-Trichloroethane	ND	5.4
Tetrachloroethene	ND	5.4
Dibromochloromethane	ND	5.4
2-Chloroethylvinyl ether	ND	5.4
Chlorobenzene	ND	5.4
Ethylbenzene	103	5.4
Total Xylenes	ND	16.2
Bromoform	ND	5.4
1,1,2,2-Tetrachloroethane	ND	5.4
1,3-Dichlorobenzene	ND	5.4
1,4-Dichlorobenzene	ND	5.4
1,2-Dichlorobenzene	ND	5.4

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	78.4	70-121	OK
Toluene-d_8	85.8	81-117	OK
4-Bromofluorobenzene	103	74-121	OK

Percent solids of 92.2 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: B-1
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017003
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
3-Carene	72.6	18:03
1,3,6-Octatriene-3,7-dimethyl(E)	14.2	18:33
2-Methyltrimer-1-propene	9.94	20:18
1,7,7-Trimethylbicyclo[2.2.1]hept-2-ene	5.62	21:07
1-Methyl-4-(1-methylethyl)benzene	14.2	21:15
1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one	14.2	23:44
Camphor(ACN)	23.4	25:12

847520368

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: B-2
Date Analyzed: 01/10/92

Matrix-Units: S-µg/kg
Dil. Fact.: 1.25
Lab ID: 017004

Compound	Conc.	MDL
Chloromethane	ND	12.5
Vinyl chloride	ND	12.5
Bromomethane	ND	12.5
Chloroethane	ND	12.5
1,1-Dichloroethene	ND	6.3
Methylene chloride	4.7J	5.0
Trichlorofluoromethane	ND	6.3
trans-1,2-Dichloroethene	ND	6.3
1,1-Dichloroethane	ND	6.3
Chloroform	ND	6.3
1,1,1-Trichloroethane	ND	6.3
Carbon tetrachloride	ND	6.3
Benzene	ND	6.3
1,2-Dichloroethane	ND	6.3
Trichloroethene	ND	6.3
1,2-Dichloropropane	ND	6.3
Bromodichloromethane	ND	6.3
trans-1,3-Dichloropropene	ND	6.3
Toluene	3.25J	6.3
cis-1,3-Dichloropropene	ND	6.3
1,1,2-Trichloroethane	ND	6.3
Tetrachloroethene	ND	6.3
Dibromochloromethane	ND	6.3
2-Chloroethylvinyl ether	ND	6.3
Chlorobenzene	ND	6.3
Ethylbenzene	44.1	6.3
Total Xylenes	ND	18.8
Bromoform	ND	6.3
1,1,2,2-Tetrachloroethane	ND	6.3
1,3-Dichlorobenzene	ND	6.3
1,4-Dichlorobenzene	ND	6.3
1,2-Dichlorobenzene	ND	6.3

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	78.0	70-121	OK
Toluene-d_8	108	81-117	OK
4-Bromofluorobenzene	87.2	74-121	OK

Percent solids of 79.9 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: B-2
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017004
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
2-Ethyl-3-methyloxetane	7.75	21:26

847520370

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: C-1
Date Analyzed: 01/10/92

Matrix-Units: S-µg/kg
Dil. Fact.: 2.26
Lab ID: 017005

Compound	Conc.	MDL
Chloromethane	ND	22.6
Vinyl chloride	ND	22.6
Bromomethane	ND	22.6
Chloroethane	ND	22.6
1,1-Dichloroethene	ND	11.3
Methylene chloride	4.3J	5.0
Trichlorofluoromethane	ND	11.3
trans-1,2-Dichloroethene	ND	11.3
1,1-Dichloroethane	ND	11.3
Chloroform	ND	11.3
1,1,1-Trichloroethane	ND	11.3
Carbon tetrachloride	ND	11.3
Benzene	ND	11.3
1,2-Dichloroethane	ND	11.3
Trichloroethene	ND	11.3
1,2-Dichloropropane	ND	11.3
Bromodichloromethane	ND	11.3
trans-1,3-Dichloropropene	ND	11.3
Toluene	1580	1410
cis-1,3-Dichloropropene	ND	11.3
1,1,2-Trichloroethane	ND	11.3
Tetrachloroethene	17.9	11.3
Dibromochloromethane	ND	11.3
2-Chloroethylvinyl ether	ND	11.3
Chlorobenzene	ND	11.3
Ethylbenzene	1580	1410
Total Xylenes	40.7	33.9
Bromoform	ND	11.3
1,1,2,2-Tetrachloroethane	ND	11.3
1,3-Dichlorobenzene	ND	11.3
1,4-Dichlorobenzene	ND	11.3
1,2-Dichlorobenzene	ND	11.3

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	86.8	70-121	OK
Toluene-d_8	110	81-117	OK
4-Bromofluorobenzene	102	74-121	OK

Percent solids of 88.6 is used for all target compounds.

847520371

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: C-1
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017005
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
(TBA)2-Methyl-2-propanol	69.6	03:46
t-Butyl-3,3-dimethylbutylether	47.2	20:08
Limonene	156	21:06
1-Phenylethanone	162	23:28
Camphor	38.6	25:11
(2-Methoxyethenyl)benzene	46.1	25:29
1-Methoxy-4-propylbenzene	122	25:43
(2,2-Diethoxyethyl)benzene	102	25:55
(Bicyclo[2.2.1]heptan-2-ol)	274	27:17

847520372

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: C-2
Date Analyzed: 01/10/92

Matrix-Units: S-µg/kg
Dil. Fact.: 2.38
Lab ID: 017006

Compound	Conc.	MDL
Chloromethane	ND	23.8
Vinyl chloride	ND	23.8
Bromomethane	ND	23.8
Chloroethane	ND	23.8
1,1-Dichloroethene	ND	11.9
Methylene chloride	1.5J	5.0
Trichlorofluoromethane	ND	11.9
trans-1,2-Dichloroethene	ND	11.9
1,1-Dichloroethane	ND	11.9
Chloroform	ND	11.9
1,1,1-Trichloroethane	ND	11.9
Carbon tetrachloride	ND	11.9
Benzene	ND	11.9
1,2-Dichloroethane	ND	11.9
Trichloroethene	ND	11.9
1,2-Dichloropropane	ND	11.9
Bromodichloromethane	ND	11.9
trans-1,3-Dichloropropene	ND	11.9
Toluene	59.0	11.9
cis-1,3-Dichloropropene	ND	11.9
1,1,2-Trichloroethane	ND	11.9
Tetrachloroethene	ND	11.9
Dibromochloromethane	ND	11.9
2-Chloroethylvinyl ether	ND	11.9
Chlorobenzene	ND	11.9
Ethylbenzene	25.9	11.9
Total Xylenes	7.62J	35.7
Bromoform	ND	11.9
1,1,2,2-Tetrachloroethane	ND	11.9
1,3-Dichlorobenzene	ND	11.9
1,4-Dichlorobenzene	ND	11.9
1,2-Dichlorobenzene	ND	11.9

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	80.0	70-121	OK
Toluene-d_8	93.8	81-117	OK
4-Bromofluorobenzene	101	74-121	OK

Percent solids of 84.1 is used for all target compounds.

030

847520373

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: C-2
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017006
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847520374

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: D-1
Date Analyzed: 01/13/92

Matrix-Units: S-µg/kg
Dil. Fact.: 1160
Lab ID: 017007

Compound	Conc.	MDL
Chloromethane	ND	11600
Vinyl chloride	ND	11600
Bromomethane	ND	11600
Chloroethane	ND	11600
1,1-Dichloroethene	ND	5800
Methylene chloride	2.6J	5
Trichlorofluoromethane	ND	5800
trans-1,2-Dichloroethene	ND	5800
1,1-Dichloroethane	ND	5800
Chloroform	ND	5800
1,1,1-Trichloroethane	ND	5800
Carbon tetrachloride	ND	5800
Benzene	ND	5800
1,2-Dichloroethane	ND	5800
Trichloroethene	ND	5800
1,2-Dichloropropane	ND	5800
Bromodichloromethane	ND	5800
trans-1,3-Dichloropropene	ND	5800
Toluene	ND	5800
cis-1,3-Dichloropropene	ND	5800
1,1,2-Trichloroethane	ND	5800
Tetrachloroethene	ND	5800
Dibromochloromethane	ND	5800
2-Chloroethylvinyl ether	ND	5800
Chlorobenzene	ND	5800
Ethylbenzene	557000	58000
Total Xylenes	ND	17400
Bromoform	ND	5800
1,1,2,2-Tetrachloroethane	ND	5800
1,3-Dichlorobenzene	ND	5800
1,4-Dichlorobenzene	ND	5800
1,2-Dichlorobenzene	ND	5800

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	78.8	70-121	OK
Toluene-d_8	110	81-117	OK
4-Bromofluorobenzene	100	74-121	OK

Percent solids of 86.6 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: D-1
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017007
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	14700	02:26

847520376

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: D-2
Date Analyzed: 01/10/92

Matrix-Units: S-µg/kg
Dil. Fact.: 5.51
Lab ID: 017008

Compound	Conc.	MDL
Chloromethane	ND	55.1
Vinyl chloride	ND	55.1
Bromomethane	ND	55.1
Chloroethane	ND	55.1
1,1-Dichloroethene	ND	27.6
Methylene chloride	8.5	5.0
Trichlorofluoromethane	ND	27.6
trans-1,2-Dichloroethene	ND	27.6
1,1-Dichloroethane	ND	27.6
Chloroform	ND	27.6
1,1,1-Trichloroethane	ND	27.6
Carbon tetrachloride	ND	27.6
Benzene	ND	27.6
1,2-Dichloroethane	ND	27.6
Trichloroethene	ND	27.6
1,2-Dichloropropane	ND	27.6
Bromodichloromethane	ND	27.6
trans-1,3-Dichloropropene	ND	27.6
Toluene	10.5J	27.6
cis-1,3-Dichloropropene	ND	27.6
1,1,2-Trichloroethane	ND	27.6
Tetrachloroethene	ND	27.6
Dibromochloromethane	ND	27.6
2-Chloroethylvinyl ether	ND	27.6
Chlorobenzene	ND	27.6
Ethylbenzene	12200	1380
Total Xylenes	ND	82.7
Bromoform	ND	27.6
1,1,2,2-Tetrachloroethane	ND	27.6
1,3-Dichlorobenzene	ND	27.6
1,4-Dichlorobenzene	ND	27.6
1,2-Dichlorobenzene	ND	27.6

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	116	70-121	OK
Toluene-d_8	91.8	81-117	OK
4-Bromofluorobenzene	88.4	74-121	OK

Percent solids of 36.3 is used for all target compounds.

034

847520377

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: D-2
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017008
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
3,3,5,5-Tetramethyl-1,2,4-trithiolane	105	02:04
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazole	28.1	11:46
2,3,4-Trimethyl-2-pentene	133	12:42
(1-Methylethyl)benzene	133	18:11
2-Methyltrimer-1-propene	986	20:02
2,4,4-Trimethyl-1-pentene	1480	20:17
1,1,3,5-Tetramethylciscyclohexane	217	20:33
Unknown	276	20:59
1,1,3-Trimethylcyclopentane	452	21:25
3,4,4-Trimethyl-2-pentene	133	21:56
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazoie	156	22:06
1-(1,1-Dimethylethyl)-3-methylbenzene	1040	23:09

847520378

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: E-1
Date Analyzed: 01/13/92

Matrix-Units: S-ug/kg
Dil. Fact.: 570
Lab ID: 017009

Compound	Conc.	MDL
Chloromethane	ND	5700
Vinyl chloride	ND	5700
Bromomethane	ND	5700
Chloroethane	ND	5700
1,1-Dichloroethene	ND	2850
Methylene chloride	7.5	5
Trichlorofluoromethane	ND	2850
trans-1,2-Dichloroethene	ND	2850
1,1-Dichloroethane	ND	2850
Chloroform	ND	2850
1,1,1-Trichloroethane	ND	2850
Carbon tetrachloride	ND	2850
Benzene	ND	2850
1,2-Dichloroethane	ND	2850
Trichloroethene	ND	2850
1,2-Dichloropropane	ND	2850
Bromodichloromethane	ND	2850
trans-1,3-Dichloropropene	ND	2850
Toluene	ND	2850
cis-1,3-Dichloropropene	ND	2850
1,1,2-Trichloroethane	ND	2850
Tetrachloroethene	ND	2850
Dibromochloromethane	ND	2850
2-Chloroethylvinyl ether	ND	2850
Chlorobenzene	ND	2850
Ethylbenzene	81500	2850
Total Xylenes	ND	8550
Bromoform	ND	2850
1,1,2,2-Tetrachloroethane	ND	2850
1,3-Dichlorobenzene	ND	2850
1,4-Dichlorobenzene	ND	2850
1,2-Dichlorobenzene	ND	2850

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	82.8	70-121	OK
Toluene-d_8	106	81-117	OK
4-Bromofluorobenzene	102	74-121	OK

Percent solids of 87.8 is used for all target compounds.

036

847520379

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: E-1
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017009
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	17800	02:26
1-Phenylethanone	46000	23:29

847520380

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: E-2
Date Analyzed: 01/13/92

Matrix-Units: S-µg/kg
Dil. Fact.: 12.2
Lab ID: 017010

Compound	Conc.	MDL
Chloromethane	ND	122
Vinyl chloride	ND	122
Bromomethane	ND	122
Chloroethane	ND	122
1,1-Dichloroethene	ND	61.0
Methylene chloride	3.6J	5
Trichlorofluoromethane	ND	61.0
trans-1,2-Dichloroethene	ND	61.0
1,1-Dichloroethane	ND	61.0
Chloroform	ND	61.0
1,1,1-Trichloroethane	ND	61.0
Carbon tetrachloride	ND	61.0
Benzene	ND	61.0
1,2-Dichloroethane	ND	61.0
Trichloroethene	ND	61.0
1,2-Dichloropropane	ND	61.0
Bromodichloromethane	ND	61.0
trans-1,3-Dichloropropene	ND	61.0
Toluene	15.9J	61.0
cis-1,3-Dichloropropene	ND	61.0
1,1,2-Trichloroethane	ND	61.0
Tetrachloroethene	ND	61.0
Dibromochloromethane	ND	61.0
2-Chloroethylvinyl ether	ND	61.0
Chlorobenzene	ND	61.0
Ethylbenzene	177	61.0
Total Xylenes	ND	183
Bromoform	ND	61.0
1,1,2,2-Tetrachloroethane	ND	61.0
1,3-Dichlorobenzene	ND	61.0
1,4-Dichlorobenzene	ND	61.0
1,2-Dichlorobenzene	ND	61.0

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	103	70-121	OK
Toluene-d_8	93.2	81-117	OK
4-Bromofluorobenzene	105	74-121	OK

Percent solids of 81.9 is used for all target compounds.

847520381

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: E-2
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017010
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	56.6	02:26
2-Methoxy-2-Octene	12.0	21:20

847520382

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: F-1
Date Analyzed: 01/13/92

Matrix-Units: S-ug/kg
Dil. Fact.: 550
Lab ID: 017011

Compound	Conc.	MDL
Chloromethane	ND	5500
Vinyl chloride	ND	5500
Bromomethane	ND	5500
Chloroethane	ND	5500
1,1-Dichloroethene	ND	2750
Methylene chloride	6.4	5
Trichlorofluoromethane	ND	2750
trans-1,2-Dichloroethene	ND	2750
1,1-Dichloroethane	ND	2750
Chloroform	ND	2750
1,1,1-Trichloroethane	ND	2750
Carbon tetrachloride	ND	2750
Benzene	ND	2750
1,2-Dichloroethane	ND	2750
Trichloroethene	ND	2750
1,2-Dichloropropane	ND	2750
Bromodichloromethane	ND	2750
trans-1,3-Dichloropropene	ND	2750
Toluene	3410	2750
cis-1,3-Dichloropropene	ND	2750
1,1,2-Trichloroethane	ND	2750
Tetrachloroethene	ND	2750
Dibromochloromethane	ND	2750
2-Chloroethylvinyl ether	ND	2750
Chlorobenzene	ND	2750
Ethylbenzene	1820J	2750
Total Xylenes	ND	8250
Bromoform	ND	2750
1,1,2,2-Tetrachloroethane	ND	2750
1,3-Dichlorobenzene	ND	2750
1,4-Dichlorobenzene	ND	2750
1,2-Dichlorobenzene	ND	2750

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	96.0	70-121	OK
Toluene-d_8	99.6	81-117	OK
4-Bromofluorobenzene	99.4	74-121	OK

Percent solids of 90.9 is used for all target compounds.

847520383

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: F-1
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017011
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	23300	02:27
(E)-3,8-Nonadien-2-one	61100	21:00

847520384

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: F-2
Date Analyzed: 01/13/92

Matrix-Units: S-ug/kg
Dil. Fact.: 563
Lab ID: 017012

Compound	Conc.	MDL
Chloromethane	ND	5630
Vinyl chloride	ND	5630
Bromomethane	ND	5630
Chloroethane	ND	5630
1,1-Dichloroethene	ND	2815
Methylene chloride	5.2	5
Trichlorofluoromethane	ND	2815
trans-1,2-Dichloroethene	ND	2815
1,1-Dichloroethane	ND	2815
Chloroform	ND	2815
1,1,1-Trichloroethane	ND	2815
Carbon tetrachloride	ND	2815
Benzene	ND	2815
1,2-Dichloroethane	ND	2815
Trichloroethene	ND	2815
1,2-Dichloropropane	ND	2815
Bromodichloromethane	ND	2815
trans-1,3-Dichloropropene	ND	2815
Toluene	2360J	2815
cis-1,3-Dichloropropene	ND	2815
1,1,2-Trichloroethane	ND	2815
Tetrachloroethene	ND	2815
Dibromochloromethane	ND	2815
2-Chloroethylvinyl ether	ND	2815
Chlorobenzene	ND	2815
Ethylbenzene	1300J	2815
Total Xylenes	ND	8445
Bromoform	ND	2815
1,1,2,2-Tetrachloroethane	ND	2815
1,3-Dichlorobenzene	ND	2815
1,4-Dichlorobenzene	ND	2815
1,2-Dichlorobenzene	ND	2815

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	89.2	70-121	OK
Toluene-d_8	109	81-117	OK
4-Bromofluorobenzene	97.2	74-121	OK

Percent solids of 88.9 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: F-2
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017012
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	25400	02:26
(E)-3,8-Nonadien-2-one	24800	21:00

847520386

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: G-1
Date Analyzed: 01/13/92

Matrix-Units: S-ug/kg
Dil. Fact.: 559
Lab ID: 017013

Compound	Conc.	MDL
Chloromethane	ND	5590
Vinyl chloride	ND	5590
Bromomethane	ND	5590
Chloroethane	ND	5590
1,1-Dichloroethene	ND	2795
Methylene chloride	11.1	5
Trichlorofluoromethane	ND	2795
trans-1,2-Dichloroethene	ND	2795
1,1-Dichloroethane	ND	2795
Chloroform	ND	2795
1,1,1-Trichloroethane	ND	2795
Carbon tetrachloride	ND	2795
Benzene	ND	2795
1,2-Dichloroethane	ND	2795
Trichloroethene	ND	2795
1,2-Dichloropropane	ND	2795
Bromodichloromethane	ND	2795
trans-1,3-Dichloropropene	ND	2795
Toluene	ND	2795
cis-1,3-Dichloropropene	ND	2795
1,1,2-Trichloroethane	ND	2795
Tetrachloroethene	ND	2795
Dibromochloromethane	ND	2795
2-Chloroethylvinyl ether	ND	2795
Chlorobenzene	7160	2795
Ethylbenzene	ND	2795
Total Xylenes	ND	8385
Bromoform	ND	2795
1,1,2,2-Tetrachloroethane	ND	2795
1,3-Dichlorobenzene	ND	2795
1,4-Dichlorobenzene	ND	2795
1,2-Dichlorobenzene	ND	2795

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	90.6	70-121	OK
Toluene-d_8	116	81-117	OK
4-Bromofluorobenzene	99.0	74-121	OK

Percent solids of 89.4 is used for all target compounds.

847520387

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: G-1
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017013
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME
Freon-113	14300	02:21
Freon-12	11400	02:27

847520388

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: G-2
Date Analyzed: 01/13/92

Matrix-Units: S-µg/kg
Dil. Fact.: 1.38
Lab ID: 017014

Compound	Conc.	MDL
Chloromethane	ND	13.8
Vinyl chloride	ND	13.8
Bromomethane	ND	13.8
Chloroethane	ND	13.8
1,1-Dichloroethene	ND	6.9
Methylene chloride	ND	5
Trichlorofluoromethane	ND	6.9
trans-1,2-Dichloroethene	ND	6.9
1,1-Dichloroethane	ND	6.9
Chloroform	ND	6.9
1,1,1-Trichloroethane	ND	6.9
Carbon tetrachloride	ND	6.9
Benzene	ND	6.9
1,2-Dichloroethane	ND	6.9
Trichloroethene	ND	6.9
1,2-Dichloropropane	ND	6.9
Bromodichloromethane	ND	6.9
trans-1,3-Dichloropropene	ND	6.9
Toluene	ND	6.9
cis-1,3-Dichloropropene	ND	6.9
1,1,2-Trichloroethane	ND	6.9
Tetrachloroethene	ND	6.9
Dibromochloromethane	ND	6.9
2-Chloroethylvinyl ether	ND	6.9
Chlorobenzene	ND	6.9
Ethylbenzene	6.5J	6.9
Total Xylenes	ND	20.7
Bromoform	ND	6.9
1,1,2,2-Tetrachloroethane	ND	6.9
1,3-Dichlorobenzene	ND	6.9
1,4-Dichlorobenzene	ND	6.9
1,2-Dichlorobenzene	ND	6.9

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	94.6	70-121	OK
Toluene-d_8	103	81-117	OK
4-Bromofluorobenzene	107	74-121	OK

Percent solids of 72.3 is used for all target compounds.

847520389

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: G-2
Analysis Date: 01/13/92

Case No.: 10920-017
Lab ID: 017014
Matrix-Units: S-µg/kg

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847520390

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: Field
Date Analyzed: 01/10/92

Matrix-Units: A-µg/l
Dil. Fact.: 1
Lab ID: 017015

Compound	Conc.	MDL
Chloromethane	ND	10
Vinyl chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
1,1-Dichloroethene	ND	5
Methylene chloride	ND	5
Trichlorofluoromethane	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
trans-1,3-Dichloropropene	ND	5
Toluene	ND	5
cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Total Xylenes	ND	15
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	85.0	76-114	OK
Toluene-d_8	109	88-110	OK
4-Bromofluorobenzene	92.2	86-115	OK

847520391

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: Field
Analysis Date: 01/10/92

Case No.: 10920-017
Lab ID: 017015
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847520392

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: A-1
Lab ID: 017001

Matrix-Units: S-µg/kg
Dil. Fact.: 373
Date Extracted: 01/17/92
Date Analyzed: 01/24/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	3730	2,4-Dinitrotoluene	ND	3730
Bis(2-chloroethyl)ether	ND	3730	Fluorene	ND	3730
1,3-Dichlorobenzene	ND	3730	Diethyl phthalate	ND	3730
1,4-Dichlorobenzene	ND	3730	4-Chlorophenyl-phenyl ether	ND	3730
Benzyl alcohol	ND	3730	4-Nitroaniline	ND	3730
1,2-Dichlorobenzene	ND	3730	N-Nitrosodiphenylamine	ND	3730
Bis(2-chloroisopropyl)ether	ND	3730	1,2-Diphenyl hydrazine	ND	3730
N-Nitrosodi-n-propylamine	ND	3730	4-Bromophenyl-phenyl ether	ND	3730
Hexachloroethane	ND	3730	Hexachlorobenzene	ND	3730
Nitrobenzene	ND	3730	Phenanthrene	10000	3730
Isophorone	ND	3730	Anthracene	280J	3730
Bis(2-chloroethoxy)methane	ND	3730	Di-n-butyl phthalate	ND	3730
1,2,4-Trichlorobenzene	ND	3730	Fluoranthene	18200	3730
Naphthalene	ND	3730	Benzidine	ND	18650
4-Chloroaniline	ND	3730	Pyrene	8730	3730
Hexachlorobutadiene	ND	3730	Butylbenzyl phthalate	ND	3730
2-Methylnaphthalene	ND	3730	Benzo(a)anthracene	5150	3730
Hexachlorocyclopentadiene	ND	3730	3,3'-Dichlorobenzine	ND	3730
2-Chloronaphthalene	ND	3730	Chrysene	4480	3730
2-Nitroaniline	ND	3730	Bis(2-ethylhexyl)phthalate	1120J	3730
Acenaphthalene	ND	3730	Di-n-octyl phthalate	ND	3730
Dimethyl phthalate	ND	3730	Benzo(b)fluoranthene	8650	3730
3-Nitroaniline	ND	3730	Benzo(k)fluoranthene	ND	3730
2,6-Dinitrotoluene	ND	3730	Benzo(a)pyrene	4100	3730
Acenaphthene	ND	3730	Indeno(1,2,3-cd)pyrene	2460J	3730
Dibenzofuran	ND	3730	Benzo(a,h)anthracene	ND	3730
			Benzo(g,h,i)perylene	1940J	3730

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	55.2	18-137	OK

Percent solids of 89.4 is used for all target compounds.

050

847520393

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: A-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017001
Analysis Date: 01/24/92

COMPOUND	EST. CONC.	RETENTION TIME
Mol.sulfur(S8)	18200	25:06
Benzo[J]fluoranthene	5520	33:56

847520394

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: A-2
Lab ID: 017002

Matrix-Units: S-µg/kg
Dil. Fact.: 780
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	7800	2,4-Dinitrotoluene	ND	7800
Bis(2-chloroethyl)ether	ND	7800	Fluorene	ND	7800
1,3-Dichlorobenzene	ND	7800	Diethyl phthalate	ND	7800
1,4-Dichlorobenzene	ND	7800	4-Chlorophenyl-phenyl ether	ND	7800
Benzyl alcohol	ND	7800	4-Nitroaniline	ND	7800
1,2-Dichlorobenzene	ND	7800	N-Nitrosodiphenylamine	ND	7800
Bis(2-chloroisopropyl)ether	ND	7800	1,2-Diphenyl hydrazine	ND	7800
N-Nitrosodi-n-propylamine	ND	7800	4-Bromophenyl-phenyl ether	ND	7800
Hexachloroethane	ND	7800	Hexachlorobenzene	ND	7800
Nitrobenzene	ND	7800	Phenanthrene	ND	7800
Isophorone	ND	7800	Anthracene	ND	7800
Bis(2-chloroethoxy)methane	ND	7800	Di-n-butyl phthalate	ND	7800
1,2,4-Trichlorobenzene	ND	7800	Fluoranthene	ND	7800
Naphthalene	ND	7800	Benzidine	ND	39000
4-Chloroaniline	ND	7800	Pyrene	ND	7800
Hexachlorobutadiene	ND	7800	Butylbenzyl phthalate	ND	7800
2-Methylnaphthalene	ND	7800	Benzo(a)anthracene	ND	7800
Hexachlorocyclopentadiene	ND	7800	3,3'-Dichlorobenzine	ND	7800
2-Chloronaphthalene	ND	7800	Chrysene	ND	7800
2-Nitroaniline	ND	7800	Bis(2-ethylhexyl)phthalate	ND	7800
Acenaphthalene	ND	7800	Di-n-octyl phthalate	ND	7800
Dimethyl phthalate	ND	7800	Benzo(b)fluoranthene	ND	7800
3-Nitroaniline	ND	7800	Benzo(k)fluoranthene	ND	7800
2,6-Dinitrotoluene	ND	7800	Benzo(a)pyrene	ND	7800
Acenaphthene	ND	7800	Indeno (1,2,3-cd)pyrene	ND	7800
Dibenzofuran	ND	7800	Benzo(a,h)anthracene	ND	7800
			Benzo(g,h,i)perylene	ND	7800

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	20.2	18-137	OK

Percent solids of 84.7 is used for all target compounds.

847520395

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: A-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017002
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
Mol.sulfur	21000	25:14

847520396

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: B-1
Lab ID: 017003

Matrix-Units: S-µg/kg
Dil. Fact.: 35.9
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	359	2,4-Dinitrotoluene	ND	359
Bis(2-chloroethyl)ether	ND	359	Fluorene	ND	359
1,3-Dichlorobenzene	ND	359	Diethyl phthalate	ND	359
1,4-Dichlorobenzene	ND	359	4-Chlorophenyl-phenyl ether	ND	359
Benzyl alcohol	ND	359	4-Nitroaniline	ND	359
1,2-Dichlorobenzene	ND	359	N-Nitrosodiphenylamine	ND	359
Bis(2-chloroisopropyl)ether	ND	359	1,2-Diphenyl hydrazine	ND	359
N-Nitrosodi-n-propylamine	ND	359	4-Bromophenyl-phenyl ether	ND	359
Hexachloroethane	ND	359	Hexachlorobenzene	ND	359
Nitrobenzene	ND	359	Phenanthrene	1550	359
Isophorone	ND	359	Anthracene	384	359
Bis(2-chloroethoxy)methane	ND	359	Di-n-butyl phthalate	90.0J	359
1,2,4-Trichlorobenzene	ND	359	Fluoranthene	2440	359
Naphthalene	ND	359	Benzidine	ND	1795
4-Chloroaniline	ND	359	Pyrene	1290	359
Hexachlorobutadiene	ND	359	Butylbenzyl phthalate	ND	359
2-Methylnaphthalene	ND	359	Benzo(a)anthracene	808	359
Hexachlorocyclopentadiene	ND	359	3,3'-Dichlorobenzine	ND	359
2-Chloronaphthalene	ND	359	Chrysene	847	359
2-Nitroaniline	ND	359	Bis(2-ethylhexyl)phthalate	463	359
Acenaphthalene	ND	359	Di-n-octyl phthalate	ND	359
Dimethyl phthalate	ND	359	Benzo(b)fluoranthene	592	359
3-Nitroaniline	ND	359	Benzo(k)fluoranthene	488	359
2,6-Dinitrotoluene	ND	359	Benzo(a)pyrene	628	359
Acenaphthene	93.0J	359	Indeno(1,2,3-cd)pyrene	305J	359
Dibenzofuran	ND	359	Benzo(a,h)anthracene	108J	359
			Benzo(g,h,i)perylene	291J	359

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	56.5	23-120	OK
2-Fluorobiphenyl	69.9	30-115	OK
Terphenyl-d_{14}	49.1	18-137	OK

Percent solids of 92.2 is used for all target compounds.

847520397

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: B-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017003
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
(Z)-3,7-dimethyl-1,3,6-octatriene	560	06:16
Limonene	363	08:17
(1R)-1,3,3-Trimethylbicyclo-[2.2.1]heptan-1-one	510	09:32
1,7,7-Trimethylbicyclo[2.2.1]heptan-2-one	499	10:42
Mol.sulfur(S8)	1180	25:15
11-Nitro-1-undecene	926	33:00
Benzo[J]fluoranthene	1130	34:05

847520398

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: B-2
Lab ID: 017004

Matrix-Units: S-µg/kg
Dil. Fact.: 828
Date Extracted: 01/17/92
Date Analyzed: 01/22/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	8280	2,4-Dinitrotoluene	ND	8280
Bis(2-chloroethyl)ether	ND	8280	Fluorene	ND	8280
1,3-Dichlorobenzene	ND	8280	Diethyl phthalate	ND	8280
1,4-Dichlorobenzene	ND	8280	4-Chlorophenyl-phenyl ether	ND	8280
Benzyl alcohol	ND	8280	4-Nitroaniline	ND	8280
1,2-Dichlorobenzene	ND	8280	N-Nitrosodiphenylamine	ND	8280
Bis(2-chloroisopropyl)ether	ND	8280	1,2-Diphenyl hydrazine	ND	8280
N-Nitrosodi-n-propylamine	ND	8280	4-Bromophenyl-phenyl ether	ND	8280
Hexachloroethane	ND	8280	Hexachlorobenzene	ND	8280
Nitrobenzene	ND	8280	Phenanthrene	ND	8280
Isophorone	ND	8280	Anthracene	ND	8280
Bis(2-chloroethoxy)methane	ND	8280	Di-n-butyl phthalate	ND	8280
1,2,4-Trichlorobenzene	ND	8280	Fluoranthene	ND	8280
Naphthalene	ND	8280	Benzidine	ND	41400
4-Chloroaniline	ND	8280	Pyrene	ND	8280
Hexachlorobutadiene	ND	8280	Butylbenzyl phthalate	ND	8280
2-Methylnaphthalene	ND	8280	Benzo(a)anthracene	ND	8280
Hexachlorocyclopentadiene	ND	8280	3,3'-Dichlorobenzine	ND	8280
2-Chloronaphthalene	ND	8280	Chrysene	ND	8280
2-Nitroaniline	ND	8280	Bis(2-ethylhexyl)phthalate	ND	8280
Acenaphthalene	ND	8280	Di-n-octyl phthalate	ND	8280
Dimethyl phthalate	ND	8280	Benzo(b)fluoranthene	ND	8280
3-Nitroaniline	ND	8280	Benzo(k)fluoranthene	ND	8280
2,6-Dinitrotoluene	ND	8280	Benzo(a)pyrene	ND	8280
Acenaphthene	ND	8280	Indeno(1,2,3-cd)pyrene	ND	8280
Dibenzofuran	ND	8280	Benzo(a,h)anthracene	ND	8280
			Benzo(g,h,i)perylene	ND	8280

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	23.0	18-137	OK

Percent solids of 79.9 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: B-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017004
Analysis Date: 01/22/92

COMPOUND	EST. CONC.	RETENTION TIME
Mol.sulfur(S8)	32500	25:14

847520400

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: C-1
Lab ID: 017005

Matrix-Units: S-µg/kg
Dil. Fact.: 753
Date Extracted: 01/17/92
Date Analyzed: 01/22/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	7530	2,4-Dinitrotoluene	ND	7530
Bis(2-chloroethyl)ether	ND	7530	Fluorene	ND	7530
1,3-Dichlorobenzene	ND	7530	Diethyl phthalate	ND	7530
1,4-Dichlorobenzene	ND	7530	4-Chlorophenyl-phenyl ether	ND	7530
Benzyl alcohol	ND	7530	4-Nitroaniline	ND	7530
1,2-Dichlorobenzene	ND	7530	N-Nitrosodiphenylamine	ND	7530
Bis(2-chloroisopropyl)ether	ND	7530	1,2-Diphenyl hydrazine	ND	7530
N-Nitrosodi-n-propylamine	ND	7530	4-Bromophenyl-phenyl ether	ND	7530
Hexachloroethane	ND	7530	Hexachlorobenzene	ND	7530
Nitrobenzene	ND	7530	Phenanthrene	2790J	7530
Isophorone	ND	7530	Anthracene	ND	7530
Bis(2-chloroethoxy)methane	ND	7530	Di-n-butyl phthalate	ND	7530
1,2,4-Trichlorobenzene	ND	7530	Fluoranthene	3770J	7530
Naphthalene	ND	7530	Benzidine	ND	37650
4-Chloroaniline	ND	7530	Pyrene	2030J	7530
Hexachlorobutadiene	ND	7530	Butylbenzyl phthalate	ND	7530
2-Methylnaphthalene	ND	7530	Benzo(a)anthracene	1730J	7530
Hexachlorocyclopentadiene	ND	7530	3,3'-Dichlorobenzine	ND	7530
2-Chloronaphthalene	ND	7530	Chrysene	1960J	7530
2-Nitroaniline	ND	7530	Bis(2-ethylhexyl)phthalate	ND	7530
Acenaphthalene	ND	7530	Di-n-octyl phthalate	ND	7530
Dimethyl phthalate	ND	7530	Benzo(b)fluoranthene	3240J	7530
3-Nitroaniline	ND	7530	Benzo(k)fluoranthene	ND	7530
2,6-Dinitrotoluene	ND	7530	Benzo(a)pyrene	1880J	7530
Acenaphthene	ND	7530	Indeno(1,2,3-cd)pyrene	ND	7530
Dibenzofuran	ND	7530	Benzo(a,h)anthracene	ND	7530
			Benzo(g,h,i)perylene	ND	7530

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	37.4	23-120	OK
2-Fluorobiphenyl	48.0	30-115	OK
Terphenyl-d_{14}	44.4	18-137	OK

Percent solids of 88.6 is used for all target compounds.

847520401

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: C-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017005
Analysis Date: 01/22/92

COMPOUND	EST. CONC.	RETENTION TIME
(2-Methoxyethenyl)benzene	7350J	12:09
Diisooctylesterdiphosphoric acid	7760	21:53
Benzeneethanamine	44600	23:35
(Phenylmethyl)monohydrochloridehydrazine	14200	23:43
1-Phenylnaphthalene	9110	24:14
(Z)-3-Methyl-5-undecene	8580	29:06
1-Ethenyl-4-methoxybenzene	5050J	32:24
(Isothiocyanatomethyl)benzene	7450J	33:09

847520402

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: C-2
Lab ID: 017006

Matrix-Units: S-µg/kg
Dil. Fact.: 39.5
Date Extracted: 01/17/92
Date Analyzed: 01/17/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	395	2,4-Dinitrotoluene	ND	395
Bis(2-chloroethyl)ether	ND	395	Fluorene	ND	395
1,3-Dichlorobenzene	ND	395	Diethyl phthalate	ND	395
1,4-Dichlorobenzene	ND	395	4-Chlorophenyl-phenyl ether	ND	395
Benzyl alcohol	ND	395	4-Nitroaniline	ND	395
1,2-Dichlorobenzene	ND	395	N-Nitrosodiphenylamine	ND	395
Bis(2-chloroisopropyl)ether	ND	395	1,2-Diphenyl hydrazine	ND	395
N-Nitrosodi-n-propylamine	ND	395	4-Bromophenyl-phenyl ether	ND	395
Hexachloroethane	ND	395	Hexachlorobenzene	ND	395
Nitrobenzene	ND	395	Phenanthrene	786	395
Isophorone	ND	395	Anthracene	217J	395
Bis(2-chloroethoxy)methane	ND	395	Di-n-butyl phthalate	1690	395
1,2,4-Trichlorobenzene	ND	395	Fluoranthene	2180	395
Naphthalene	ND	395	Benzidine	ND	1975
4-Chloroaniline	ND	395	Pyrene	1300	395
Hexachlorobutadiene	ND	395	Butylbenzyl phthalate	ND	395
2-Methylnaphthalene	ND	395	Benzo(a)anthracene	881	395
Hexachlorocyclopentadiene	ND	395	3,3'-Dichlorobenzine	ND	395
2-Chloronaphthalene	ND	395	Chrysene	893	395
2-Nitroaniline	ND	395	Bis(2-ethylhexyl)phthalate	ND	395
Acenaphthalene	ND	395	Di-n-octyl phthalate	ND	395
Dimethyl phthalate	ND	395	Benzo(b)fluoranthene	1110	395
3-Nitroaniline	ND	395	Benzo(k)fluoranthene	640	395
2,6-Dinitrotoluene	ND	395	Benzo(a)pyrene	960	395
Acenaphthene	ND	395	Indeno(1,2,3-cd)pyrene	431	395
Dibenzofuran	ND	395	Benzo(a,h)anthracene	158J	395
			Benzo(g,h,i)perylene	403	395

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	54.2	23-120	OK
2-Fluorobiphenyl	61.2	30-115	OK
Terphenyl-d_{14}	55.7	18-137	OK

Percent solids of 84.1 is used for all target compounds.

847520403

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: C-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017006
Analysis Date: 01/17/92

COMPOUND	EST. CONC.	RETENTION TIME
2-Hydroxypentylesterbenzoic acid	304J	21:56
Benzeneethanamine	1440	23:38
(Isothiocyanatomethyl)benzene	450	23:46
1-Phenylnaphthalene	478	24:18
Mol.sulfur(S8)	1020	25:18
11H-Benzo[A]fluorene	434	27:22
Benzo[J]fluoranthene	912	34:09
1-Dodecanethiol	1080	36:03

847520404

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: D-1
Lab ID: 017007

Matrix-Units: S-µg/kg
Dil. Fact.: 767
Date Extracted: 01/17/92
Date Analyzed: 01/22/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	7670	2,4-Dinitrotoluene	ND	7670
Bis(2-chloroethyl)ether	ND	7670	Fluorene	ND	7670
1,3-Dichlorobenzene	ND	7670	Diethyl phthalate	ND	7670
1,4-Dichlorobenzene	ND	7670	4-Chlorophenyl-phenyl ether	ND	7670
Benzyl alcohol	ND	7670	4-Nitroaniline	ND	7670
1,2-Dichlorobenzene	ND	7670	N-Nitrosodiphenylamine	ND	7670
Bis(2-chloroisopropyl)ether	ND	7670	1,2-Diphenyl hydrazine	ND	7670
N-Nitrosodi-n-propylamine	ND	7670	4-Bromophenyl-phenyl ether	ND	7670
Hexachloroethane	ND	7670	Hexachlorobenzene	ND	7670
Nitrobenzene	ND	7670	Phenanthrene	ND	7670
Isophorone	ND	7670	Anthracene	ND	7670
Bis(2-chloroethoxy)methane	ND	7670	Di-n-butyl phthalate	ND	7670
1,2,4-Trichlorobenzene	ND	7670	Fluoranthene	1760J	7670
Naphthalene	ND	7670	Benzidine	ND	38350
4-Chloroaniline	ND	7670	Pyrene	ND	7670
Hexachlorobutadiene	ND	7670	Butylbenzyl phthalate	ND	7670
2-Methylnaphthalene	ND	7670	Benzo(a)anthracene	ND	7670
Hexachlorocyclopentadiene	ND	7670	3,3'-Dichlorobenzine	ND	7670
2-Chloronaphthalene	ND	7670	Chrysene	ND	7670
2-Nitroaniline	ND	7670	Bis(2-ethylhexyl)phthalate	ND	7670
Acenaphthalene	ND	7670	Di-n-octyl phthalate	ND	7670
Dimethyl phthalate	ND	7670	Benzo(b)fluoranthene	ND	7670
3-Nitroaniline	ND	7670	Benzo(k)fluoranthene	ND	7670
2,6-Dinitrotoluene	ND	7670	Benzo(a)pyrene	ND	7670
Acenaphthene	ND	7670	Indeno(1,2,3-cd)pyrene	ND	7670
Dibenzofuran	ND	7670	Benzo(a,h)anthracene	ND	7670
			Benzo(g,h,i)perylene	ND	7670

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	D	18-137	

Percent solids of 86.6 is used for all target compounds.

847520405

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: D-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017007
Analysis Date: 01/22/92

COMPOUND	EST. CONC.	RETENTION TIME
(1,1-Dimethylethyl)cyclohexane	117000	21:42
6-Cyclohexyl-6-cyclohexylundecane	16000	21:54
1-Tetradecanol	24400	22:02
Dioctadecylesterphosphonic acid	10100	22:08
9-Eicosyne	25500	23:59
0-Decylhydroxylamine	11100	24:12
Unknown	11700	25:34
10-[(Tetrahydro-2H-pyran-2-yl)oxy]-1-decanol	12300	26:40
3,9-Diethyl-6-tridecanol	32300	28:16
Tetrahydro-2-(12-pentadecynyloxy)-2H-pyran	11000	28:53
5-Dodecyne	13400	30:08
Spiro[4.5]decane	16700	30:30
17-Pentatriacontene	15000	32:34
(E)-9-Octadecene	34400	32:50
1,9-Dibromononane	15200	37:41

847520406

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: D-2
Lab ID: 017008

Matrix-Units: S-µg/kg
Dil. Fact.: 1835
Date Extracted: 01/17/92
Date Analyzed: 01/22/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	18350	2,4-Dinitrotoluene	ND	18350
Bis(2-chloroethyl)ether	ND	18350	Fluorene	ND	18350
1,3-Dichlorobenzene	ND	18350	Diethyl phthalate	ND	18350
1,4-Dichlorobenzene	ND	18350	4-Chlorophenyl-phenyl ether	ND	18350
Benzyl alcohol	ND	18350	4-Nitroaniline	ND	18350
1,2-Dichlorobenzene	ND	18350	N-Nitrosodiphenylamine	ND	18350
Bis(2-chloroisopropyl)ether	ND	18350	1,2-Diphenyl hydrazine	ND	18350
N-Nitrosodi-n-propylamine	ND	18350	4-Bromophenyl-phenyl ether	ND	18350
Hexachloroethane	ND	18350	Hexachlorobenzene	ND	18350
Nitrobenzene	ND	18350	Phenanthrene	63300	18350
Isophorone	ND	18350	Anthracene	11600J	18350
Bis(2-chloroethoxy)methane	ND	18350	Di-n-butyl phthalate	ND	18350
1,2,4-Trichlorobenzene	ND	18350	Fluoranthene	65000	18350
Naphthalene	ND	18350	Benzidine	ND	91750
4-Chloroaniline	ND	18350	Pyrene	36700	18350
Hexachlorobutadiene	ND	18350	Butylbenzyl phthalate	ND	18350
2-Methylnaphthalene	ND	18350	Benzo(a)anthracene	19800	18350
Hexachlorocyclopentadiene	ND	18350	3,3'-Dichlorobenzine	ND	18350
2-Chloronaphthalene	ND	18350	Chrysene	23500	18350
2-Nitroaniline	ND	18350	Bis(2-ethylhexyl)phthalate	ND	18350
Acenaphthalene	ND	18350	Di-n-octyl phthalate	ND	18350
Dimethyl phthalate	ND	18350	Benzo(b)fluoranthene	ND	18350
3-Nitroaniline	ND	18350	Benzo(k)fluoranthene	36100	18350
2,6-Dinitrotoluene	ND	18350	Benzo(a)pyrene	18500	18350
Acenaphthene	ND	18350	Indeno(1,2,3-cd)pyrene	7710J	18350
Dibenzofuran	ND	18350	Benzo(a,h)anthracene	ND	18350
			Benzo(g,h,i)perylene	ND	18350

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	41.2	18-137	OK

Percent solids of 36.3 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: D-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017008
Analysis Date: 01/22/92

COMPOUND	EST. CONC.	RETENTION TIME
2,3,4-Trimethylthiophene	38200	33:20

847520408

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: E-1
Lab ID: 017009

Matrix-Units: S-µg/kg
Dil. Fact.: 759
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	7590	2,4-Dinitrotoluene	ND	7590
Bis(2-chloroethyl)ether	ND	7590	Fluorene	ND	7590
1,3-Dichlorobenzene	ND	7590	Diethyl phthalate	ND	7590
1,4-Dichlorobenzene	ND	7590	4-Chlorophenyl-phenyl ether	ND	7590
Benzyl alcohol	ND	7590	4-Nitroaniline	ND	7590
1,2-Dichlorobenzene	ND	7590	N-Nitrosodiphenylamine	ND	7590
Bis(2-chloroisopropyl)ether	ND	7590	1,2-Diphenyl hydrazine	ND	7590
N-Nitrosodi-n-propylamine	ND	7590	4-Bromophenyl-phenyl ether	ND	7590
Hexachloroethane	ND	7590	Hexachlorobenzene	ND	7590
Nitrobenzene	ND	7590	Phenanthrene	4400J	7590
Isophorone	ND	7590	Anthracene	ND	7590
Bis(2-chloroethoxy)methane	ND	7590	Di-n-butyl phthalate	ND	7590
1,2,4-Trichlorobenzene	ND	7590	Fluoranthene	7440J	7590
Naphthalene	ND	7590	Benzidine	ND	37950
4-Chloroaniline	ND	7590	Pyrene	4400J	7590
Hexachlorobutadiene	ND	7590	Butylbenzyl phthalate	ND	7590
2-Methylnaphthalene	ND	7590	Benzo(a)anthracene	3110J	7590
Hexachlorocyclopentadiene	ND	7590	3,3'-Dichlorobenzine	ND	7590
2-Chloronaphthalene	ND	7590	Chrysene	3340J	7590
2-Nitroaniline	ND	7590	Bis(2-ethylhexyl)phthalate	ND	7590
Acenaphthalene	ND	7590	Di-n-octyl phthalate	ND	7590
Dimethyl phthalate	ND	7590	Benzo(b)fluoranthene	3040J	7590
3-Nitroaniline	ND	7590	Benzo(k)fluoranthene	1970J	7590
2,6-Dinitrotoluene	ND	7590	Benzo(a)pyrene	2960J	7590
Acenaphthene	ND	7590	Indeno(1,2,3-cd)pyrene	ND	7590
Dibenzofuran	ND	7590	Benzo(a,h)anthracene	ND	7590
			Benzo(g,h,i)perylene	ND	7590

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	49.6	23-120	OK
2-Fluorobiphenyl	34.0	30-115	OK
Terphenyl-d_{14}	38.8	18-137	OK

Percent solids of 87.8 is used for all target compounds.

063

847520409

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: E-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017009
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
.α.Methylbenzenemethanol	29900	08:58
1-Phenylethanone	368000	09:06
2,6-bis(1,1-Dimetylethyl)phenol	11000	17:10
Xylazine	15500	18:09
2,4,5-Trimethyl-2-phenyl-1,3-dioxolane	57500	18:27
1,4-bis(1-Methylethyl)benzene	254000	19:52
.ß.,3,4-Trimethylmethylester-benzenebutanoic acid	43200	20:12
AR,AR-Diethylbenzeneethanol	584000	20:28
1,3,6,8-Tetramethylpryido[3,4-D]-pyrmidine-2,4-(1,3H)dione	82700	20:41
6-Methyl-1-heptanol	36200	20:51
N,N,1-Trimethyl-1-phenylboranamine	39100	21:14
1,2,4-Trimethyl-5-(1-methylethyl)benzene	110000	21:46
N-(Trimethylsilyl)-6-[(trimethylsilyl)oxy]-8-quinolinamine	12800	22:28
P-Di-Tert-penytlbenzene	26300	23:10
1,1'-(1-Methylethylidene)bisbenzene	26300	24:30

847520410

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: E-2
Lab ID: 017010

Matrix-Units: S-µg/kg
Dil. Fact.: 808
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	8080	2,4-Dinitrotoluene	ND	8080
Bis(2-chloroethyl)ether	ND	8080	Fluorene	ND	8080
1,3-Dichlorobenzene	ND	8080	Diethyl phthalate	ND	8080
1,4-Dichlorobenzene	ND	8080	4-Chlorophenyl-phenyl ether	ND	8080
Benzyl alcohol	ND	8080	4-Nitroaniline	ND	8080
1,2-Dichlorobenzene	ND	8080	N-Nitrosodiphenylamine	ND	8080
Bis(2-chloroisopropyl)ether	ND	8080	1,2-Diphenyl hydrazine	ND	8080
N-Nitrosodi-n-propylamine	ND	8080	4-Bromophenyl-phenyl ether	ND	8080
Hexachloroethane	ND	8080	Hexachlorobenzene	ND	8080
Nitrobenzene	ND	8080	Phenanthrene	ND	8080
Isophorone	ND	8080	Anthracene	ND	8080
Bis(2-chloroethoxy)methane	ND	8080	Di-n-butyl phthalate	ND	8080
1,2,4-Trichlorobenzene	ND	8080	Fluoranthene	ND	8080
Naphthalene	ND	8080	Benzidine	ND	40400
4-Chloroaniline	ND	8080	Pyrene	ND	8080
Hexachlorobutadiene	ND	8080	Butylbenzyl phthalate	ND	8080
2-Methylnaphthalene	ND	8080	Benzo(a)anthracene	ND	8080
Hexachlorocyclopentadiene	ND	8080	3,3'-Dichlorobenzine	ND	8080
2-Chloronaphthalene	ND	8080	Chrysene	ND	8080
2-Nitroaniline	ND	8080	Bis(2-ethylhexyl)phthalate	ND	8080
Acenaphthalene	ND	8080	Di-n-octyl phthalate	ND	8080
Dimethyl phthalate	ND	8080	Benzo(b)fluoranthene	ND	8080
3-Nitroaniline	ND	8080	Benzo(k)fluoranthene	ND	8080
2,6-Dinitrotoluene	ND	8080	Benzo(a)pyrene	ND	8080
Acenaphthene	ND	8080	Indeno(1,2,3-cd)pyrene	ND	8080
Dibenzofuran	ND	8080	Benzo(a,h)anthracene	ND	8080
			Benzo(g,h,i)perylene	ND	8080

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	D	30-115	
Terphenyl-d_{14}	37.0	18-137	OK

Percent solids of 81.9 is used for all target compounds.

847520411

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: E-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017010
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
1,2,4-Trimethyl-5-(1-methylethyl)benzene	7840J	19:47
AR,AR-Diethylbenzeneethanol	25200	20:18
Mol.sulfur(S8)	13200	25:14

847520412

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: F-1
Lab ID: 017011

Matrix-Units: S-µg/kg
Dil. Fact.: 365
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	3650	2,4-Dinitrotoluene	876J	3650
Bis(2-chloroethyl)ether	ND	3650	Fluorene	ND	3650
1,3-Dichlorobenzene	ND	3650	Diethyl phthalate	ND	3650
1,4-Dichlorobenzene	ND	3650	4-Chlorophenyl-phenyl ether	ND	3650
Benzyl alcohol	ND	3650	4-Nitroaniline	ND	3650
1,2-Dichlorobenzene	ND	3650	N-Nitrosodiphenylamine	ND	3650
Bis(2-chloroisopropyl)ether	ND	3650	1,2-Diphenyl hydrazine	ND	3650
N-Nitrosodi-n-propylamine	ND	3650	4-Bromophenyl-phenyl ether	ND	3650
Hexachloroethane	ND	3650	Hexachlorobenzene	ND	3650
Nitrobenzene	ND	3650	Phenanthrene	12900	3650
Isophorone	ND	3650	Anthracene	3760	3650
Bis(2-chloroethoxy)methane	ND	3650	Di-n-butyl phthalate	ND	3650
1,2,4-Trichlorobenzene	ND	3650	Fluoranthene	12400	3650
Naphthalene	ND	3650	Benzidine	ND	18250
4-Chloroaniline	ND	3650	Pyrene	6860	3650
Hexachlorobutadiene	ND	3650	Butylbenzyl phthalate	ND	3650
2-Methylnaphthalene	ND	3650	Benzo(a)anthracene	4200	3650
Hexachlorocyclopentadiene	ND	3650	3,3'-Dichlorobenzine	ND	3650
2-Chloronaphthalene	ND	3650	Chrysene	4230	3650
2-Nitroaniline	ND	3650	Bis(2-ethylhexyl)phthalate	767J	3650
Acenaphthalene	ND	3650	Di-n-octyl phthalate	ND	3650
Dimethyl phthalate	ND	3650	Benzo(b)fluoranthene	6020	3650
3-Nitroaniline	ND	3650	Benzo(k)fluoranthene	ND	3650
2,6-Dinitrotoluene	ND	3650	Benzo(a)pyrene	3980	3650
Acenaphthene	803J	3650	Indeno(1,2,3-cd)pyrene	1680J	3650
Dibenzofuran	ND	3650	Benzo(a,h)anthracene	ND	3650
			Benzo(g,h,i)perylene	1570J	3650

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	42.2	23-120	OK
2-Fluorobiphenyl	55.2	30-115	OK
Terphenyl-d_{14}	47.9	18-137	OK

Percent solids of 90.9 is used for all target compounds.

070

847520413

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: F-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017011
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
1-Cyclohexylidene-2-propanone	160000	07:26
1,2-Propadienylcyclohexane	28800	08:26
P-Menth-3-en-9-ol	68300	12:50
1,5-Heptandien-3-yne	101000	19:39
1,2,4-Trimethyl-5-(1-methylethyl)benzene	4230	20:18
Unknown	4780	25:06
Mol.sulfur(S8)	12600	25:16
2-Cyclohexyl-4-methylphenol	10400	27:43
1-Ethyl-3,5-diisopropylbnzene	4820	28:34

07:

847520414

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: F-2
Lab ID: 017012

Matrix-Units: S-µg/kg
Dil. Fact.: 374
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	3740	2,4-Dinitrotoluene	ND	3740
Bis(2-chloroethyl)ether	ND	3740	Fluorene	ND	3740
1,3-Dichlorobenzene	ND	3740	Diethyl phthalate	ND	3740
1,4-Dichlorobenzene	ND	3740	4-Chlorophenyl-phenyl ether	ND	3740
Benzyl alcohol	ND	3740	4-Nitroaniline	ND	3740
1,2-Dichlorobenzene	ND	3740	N-Nitrosodiphenylamine	ND	3740
Bis(2-chloroisopropyl)ether	ND	3740	1,2-Diphenyl hydrazine	ND	3740
N-Nitrosodi-n-propylamine	ND	3740	4-Bromophenyl-phenyl ether	ND	3740
Hexachloroethane	ND	3740	Hexachlorobenzene	ND	3740
Nitrobenzene	ND	3740	Phenanthrene	1160J	3740
Isophorone	ND	3740	Anthracene	ND	3740
Bis(2-chloroethoxy)methane	ND	3740	Di-n-butyl phthalate	ND	3740
1,2,4-Trichlorobenzene	ND	3740	Fluoranthene	1570J	3740
Naphthalene	ND	3740	Benzidine	ND	18700
4-Chloroaniline	ND	3740	Pyrene	823J	3740
Hexachlorobutadiene	ND	3740	Butylbenzyl phthalate	ND	3740
2-Methylnaphthalene	ND	3740	Benzo(a)anthracene	823J	3740
Hexachlorocyclopentadiene	ND	3740	3,3'-Dichlorobenzine	ND	3740
2-Chloronaphthalene	ND	3740	Chrysene	823J	3740
2-Nitroaniline	ND	3740	Bis(2-ethylhexyl)phthalate	ND	3740
Acenaphthalene	ND	3740	Di-n-octyl phthalate	ND	3740
Dimethyl phthalate	ND	3740	Benzo(b)fluoranthene	ND	3740
3-Nitroaniline	ND	3740	Benzo(k)fluoranthene	ND	3740
2,6-Dinitrotoluene	ND	3740	Benzo(a)pyrene	823J	3740
Acenaphthene	ND	3740	Indeno(1,2,3-cd)pyrene	ND	3740
Dibenzofuran	ND	3740	Benzo(a,h)anthracene	ND	3740
			Benzo(g,h,i)perylene	ND	3740

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	34.4	23-120	OK
2-Fluorobiphenyl	50.6	30-115	OK
Terphenyl-d_{14}	54.4	18-137	OK

Percent solids of 88.9 is used for all target compounds.

847520415

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: F-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017012
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
(Z)-3,8-Nonadien-2-one	30100	07:24
1,2-Propadienylcyclohexane	5460	08:25
P-Menth-3-en-9-ol	7440	12:48
Unknown	3400J	17:21
(Butoxymethyl)benzene	38500	19:38
Mol.sulfur(S8)	18400	25:16

847520416

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: G-1
Lab ID: 017013

Matrix-Units: S-µg/kg
Dil. Fact.: 372
Date Extracted: 01/17/92
Date Analyzed: 01/23/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	3720	2,4-Dinitrotoluene	ND	3720
Bis(2-chloroethyl)ether	ND	3720	Fluorene	ND	3720
1,3-Dichlorobenzene	ND	3720	Diethyl phthalate	ND	3720
1,4-Dichlorobenzene	ND	3720	4-Chlorophenyl-phenyl ether	ND	3720
Benzyl alcohol	ND	3720	4-Nitroaniline	ND	3720
1,2-Dichlorobenzene	ND	3720	N-Nitrosodiphenylamine	ND	3720
Bis(2-chloroisopropyl)ether	ND	3720	1,2-Diphenyl hydrazine	ND	3720
N-Nitrosodi-n-propylamine	ND	3720	4-Bromophenyl-phenyl ether	ND	3720
Hexachloroethane	ND	3720	Hexachlorobenzene	ND	3720
Nitrobenzene	ND	3720	Phenanthrene	7770	3720
Isophorone	ND	3720	Anthracene	2640J	3720
Bis(2-chloroethoxy)methane	ND	3720	Di-n-butyl phthalate	ND	3720
1,2,4-Trichlorobenzene	ND	3720	Fluoranthene	10800	3720
Naphthalene	ND	3720	Benzidine	ND	18600
4-Chloroaniline	ND	3720	Pyrene	6290	3720
Hexachlorobutadiene	ND	3720	Butylbenzyl phthalate	ND	3720
2-Methylnaphthalene	ND	3720	Benzo(a)anthracene	4610	3720
Hexachlorocyclopentadiene	ND	3720	3,3'-Dichlorobenzine	ND	3720
2-Chloronaphthalene	ND	3720	Chrysene	5430	3720
2-Nitroaniline	ND	3720	Bis(2-ethylhexyl)phthalate	ND	3720
Acenaphthalene	ND	3720	Di-n-octyl phthalate	ND	3720
Dimethyl phthalate	ND	3720	Benzo(b)fluoranthene	ND	3720
3-Nitroaniline	ND	3720	Benzo(k)fluoranthene	ND	3720
2,6-Dinitrotoluene	ND	3720	Benzo(a)pyrene	3980	3720
Acenaphthene	ND	3720	Indeno(1,2,3-cd)pyrene	1530J	3720
Dibenzofuran	ND	3720	Benzo(a,h)anthracene	ND	3720
			Benzo(g,h,i)perylene	1490J	3720

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	D	23-120	
2-Fluorobiphenyl	40.6	30-115	OK
Terphenyl-d_{14}	38.1	18-137	OK

Percent solids of 89.4 is used for all target compounds.

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: G-1
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017013
Analysis Date: 01/23/92

COMPOUND	EST. CONC.	RETENTION TIME
3-(Bromomethyl)cyclohexene	3270J	07:24
4-Methylbicyclo[2.2.2]octane-1-carboxylic acid	10000	13:59
(Ethoxymethyl)benzene	8180	19:36
5-(4-Methoxyphenyl)-1,3,5-trimethyl-2,4-imidazolidinedione	2600J	20:18
Benzeneethanamine	15500	23:34
(Isothiocyanatomethyl)benzene	4050	23:42
Mol.sulfur(S8)	13200	25:14
(Z)-9-Methyl-5-undecene	3570J	29:05
Benzo[E]pyrene	10300	33:22

847520418

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: G-2
Lab ID: 017014

Matrix-Units: S-µg/kg
Dil. Fact.: 230
Date Extracted: 01/17/92
Date Analyzed: 01/22/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	2300	2,4-Dinitrotoluene	ND	2300
Bis(2-chloroethyl)ether	ND	2300	Fluorene	ND	2300
1,3-Dichlorobenzene	ND	2300	Diethyl phthalate	ND	2300
1,4-Dichlorobenzene	ND	2300	4-Chlorophenyl-phenyl ether	ND	2300
Benzyl alcohol	ND	2300	4-Nitroaniline	ND	2300
1,2-Dichlorobenzene	ND	2300	N-Nitrosodiphenylamine	ND	2300
Bis(2-chloroisopropyl)ether	ND	2300	1,2-Diphenyl hydrazine	ND	2300
N-Nitrosodi-n-propylamine	ND	2300	4-Bromophenyl-phenyl ether	ND	2300
Hexachloroethane	ND	2300	Hexachlorobenzene	ND	2300
Nitrobenzene	ND	2300	Phenanthrene	851J	2300
Isophorone	ND	2300	Anthracene	ND	2300
Bis(2-chloroethoxy)methane	ND	2300	Di-n-butyl phthalate	ND	2300
1,2,4-Trichlorobenzene	ND	2300	Fluoranthene	1080J	2300
Naphthalene	ND	2300	Benzidine	ND	11500
4-Chloroaniline	ND	2300	Pyrene	690J	2300
Hexachlorobutadiene	ND	2300	Butylbenzyl phthalate	ND	2300
2-Methylnaphthalene	ND	2300	Benzo(a)anthracene	690J	2300
Hexachlorocyclopentadiene	ND	2300	3,3'-Dichlorobenzine	ND	2300
2-Chloronaphthalene	ND	2300	Chrysene	759J	2300
2-Nitroaniline	ND	2300	Bis(2-ethylhexyl)phthalate	ND	2300
Acenaphthalene	ND	2300	Di-n-octyl phthalate	ND	2300
Dimethyl phthalate	ND	2300	Benzo(b)fluoranthene	1290J	2300
3-Nitroaniline	ND	2300	Benzo(k)fluoranthene	ND	2300
2,6-Dinitrotoluene	ND	2300	Benzo(a)pyrene	805J	2300
Acenaphthene	ND	2300	Indeno(1,2,3-cd)pyrene	ND	2300
Dibenzofuran	ND	2300	Benzo(a,h)anthracene	ND	2300
			Benzo(g,h,i)perylene	ND	2300

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	40.5	23-120	OK
2-Fluorobiphenyl	48.9	30-115	OK
Terphenyl-d_{14}	40.5	18-137	OK

Percent solids of 72.3 is used for all target compounds.

847520419

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: G-2
Extraction Date: 01/17/92
Matrix-Units: S-µg/kg

Case No.: 10920-017
Lab ID: 017014
Analysis Date: 01/22/92

COMPOUND	EST. CONC.	RETENTION TIME
Unknown	2230J	17:19
Benzeneethanamine	1360J	23:23
Mol.sulfur(S8)	13200	25:16

847520420

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL ACID ANALYSIS DATA

Client: EWMA
Case No.: 10920-017
Client ID: Field
Lab ID: 017015

Matrix-Units: A-µg/l
Dil. Fact.: 1
Date Extracted: 01/08/92
Date Analyzed: 01/08/92

Compound	Conc.	MDL	Compound	Conc.	MDL
Aniline	ND	10	2,4-Dinitrotoluene	ND	10
Bis(2-chloroethyl)ether	ND	10	Fluorene	ND	10
1,3-Dichlorobenzene	ND	10	Diethyl phthalate	ND	10
1,4-Dichlorobenzene	ND	10	4-Chlorophenyl-phenyl ether	ND	10
Benzyl alcohol	ND	10	4-Nitroaniline	ND	10
1,2-Dichlorobenzene	ND	10	N-Nitrosodiphenylamine	ND	10
Bis(2-chloroisopropyl)ether	ND	10	1,2-Diphenyl hydrazine	ND	10
N-Nitrosodi-n-propylamine	ND	10	4-Bromophenyl-phenyl ether	ND	10
Hexachloroethane	ND	10	Hexachlorobenzene	ND	10
Nitrobenzene	ND	10	Phenanthrene	ND	10
Isophorone	ND	10	Anthracene	ND	10
Bis(2-chloroethoxy)methane	ND	10	Di-n-butyl phthalate	22.8B	10
1,2,4-Trichlorobenzene	ND	10	Fluoranthene	ND	10
Naphthalene	ND	10	Benzidine	ND	50
4-Chloroaniline	ND	10	Pyrene	ND	10
Hexachlorobutadiene	ND	10	Butylbenzyl phthalate	ND	10
2-Methylnaphthalene	ND	10	Benzo(a)anthracene	ND	10
Hexachlorocyclopentadiene	ND	10	3,3'-Dichlorobenzine	ND	10
2-Chloronaphthalene	ND	10	Chrysene	ND	10
2-Nitroaniline	ND	10	Bis(2-ethylhexyl)phthalate	ND	10
Acenaphthalene	ND	10	Di-n-octyl phthalate	ND	10
Dimethyl phthalate	ND	10	Benzo(b)fluoranthene	ND	10
3-Nitroaniline	ND	10	Benzo(k)fluoranthene	ND	10
2,6-Dinitrotoluene	ND	10	Benzo(a)pyrene	ND	10
Acenaphthene	ND	10	Indeno(1,2,3-cd)pyrene	ND	10
Dibenzofuran	ND	10	Benzo(a,h)anthracene	ND	10
			Benzo(g,h,i)perylene	ND	10

Surrogate Compounds	Recovery	Limits	Status
Nitrobenzene-d_5	78.7	35-114	OK
2-Fluorobiphenyl	93.2	43-116	OK
Terphenyl-d_{14}	135	33-141	OK

INTEGRATED ANALYTICAL LABORATORIES, INC.

BASE/NEUTRAL EXTRACTABLES
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: Field
Extraction Date: 01/08/92
Matrix-Units: A-µg/l

Case No.: 10920-017
Lab ID: 017015
Analysis Date: 01/08/92

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds found.

847520422

INTEGRATED ANALYTICAL LABORATORIES, INC.

MERCURY ANALYSIS REPORT

Client: Environmental Waste Management Associates

Project: Elan Chemical

Date of Analysis: 01/13/92 - 01/14/92

Client ID	Lab ID	Result	MDL	Units
A-1	017001	1.10	0.06	mg/kg
A-2	017002	0.14	0.006	mg/kg
B-1	017003	0.54	0.005	mg/kg
B-2	017004	0.48	0.006	mg/kg
C-1	017005	1.10	0.06	mg/kg
C-2	017006	0.65	0.006	mg/kg
D-1	017007	0.47	0.006	mg/kg
D-2	017008	4.55	0.14	mg/kg
E-1	017009	1.13	0.06	mg/kg
E-2	017010	0.25	0.006	mg/kg
F-1	017011	0.60	0.006	mg/kg
F-2	017012	0.55	0.006	mg/kg
G-1	017013	0.31	0.006	mg/kg
G-2	017014	1.83	0.007	mg/kg

QC Data

Method Blank	0	mg/kg
Percent Spike Recovery	104	%
Relative Percent Difference of Replicates	1.96	%

847520423

INTEGRATED ANALYTICAL LABORATORIES, INC.

MERCURY ANALYSIS REPORT

Client: Environmental Waste Management Associates

Project: Elan Chemical

Date of Analysis: 01/09/92

Client ID	Lab ID	Result	MDL	Units
Field	017015	0.0007	0.0005	mg/l

QC Data

Method Blank	0	mg/l
Percent Spike Recovery	95.2	%
Relative Percent Difference of Replicates	0.15	%

081

847520424

INTEGRATED ANALYTICAL LABORATORIES, INC.

CHROMIUM ANALYSIS REPORT

Client: Environmental Waste Management Associates

Project: Elan Chemical

Date of Analysis: 01/13/92 - 01/14/92

Client ID	Lab ID	Result	MDL	Units
A-1	017001	177	1.68	mg/kg
A-2	017002	1260	16.8	mg/kg
B-1	017003	44.6	0.33	mg/kg
B-2	017004	432	3.75	mg/kg
C-1	017005	490	6.77	mg/kg
C-2	017006	247	3.57	mg/kg
D-1	017007	31.4	0.35	mg/kg
D-2	017008	4970	41.3	mg/kg
E-1	017009	198	3.42	mg/kg
E-2	017010	610	7.32	mg/kg
F-1	017011	230	3.30	mg/kg
F-2	017012	1500	16.9	mg/kg
G-1	017013	476	6.71	mg/kg
G-2	017014	1230	20.7	mg/kg

QC Data		
Method Blank	0	mg/kg
Percent Spike Recovery	87.6	%
Relative Percent Difference of Replicates	1.80	%

847520425

INTEGRATED ANALYTICAL LABORATORIES, INC.

CHROMIUM ANALYSIS REPORT

Client: Environmental Waste Management Associates

Project: Elan Chemical

Date of Analysis: 01/09/92

Client ID	Lab ID	Result	MDL	Units
Field	017015	ND	0.03	mg/l

QC Data		
Method Blank	0	mg/l
Percent Spike Recovery	103	%
Relative Percent Difference of Replicates	1.76	%

847520426

METHODOLOGY SUMMARY

Volatile Organics - EPA 624 (Aqueous)

Helium is purged through a 5 ml water sample, contained in a purge tube at ambient temperature. The helium gas carries the volatile organics onto a gas column trap where they are collected. After the purging is completed the sorbent trap is heated and back flushed with helium to desorb the volatile organics onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

Volatile Organics - EPA 8240 (Soil)

Helium is purged through a 5 g soil sample, contained in a purge tube, at elevated temperature, with 5 ml of organic free water. The helium gas carries the volatile organics onto a gas column trap where they are collected. After the purging is completed the sorbent trap is heated and back flushed with helium to desorb the volatile organics onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

Base/Neutral Extractables - EPA 625 (Aqueous)

A one (1) liter portion of aqueous sample is serially extracted with methylene chloride at a pH greater than eleven (11). The methylene chloride extracts is dried and concentrated. Prior to analysis, the extract is spiked with the internal standard. A measured amount of the sample extract is injected onto a gas chromatograph column and the analytes are detected with a mass spectrometer.

Base/Neutral Extractables - EPA 8270, 3650, 3611 (Soil)

A thirty (30) gram portion of soil sample is mixed with anhydrous sodium sulfate and serially extracted into 1:1 methylene chloride/acetone with sonication. The extract is dried and concentrated. Prior to analysis, the extract is spiked with the internal standard. A measured amount of the sample extract is injected onto a gas chromatograph column and the analytes are detected with a mass spectrometer.

METHODOLOGY SUMMARY

Metals - (Aqueous)

A 50 ml portion of aqueous sample is digested with nitric acid on a hot plate and evaporated to near dryness. The digestate is then refluxed with nitric acid. Dilute nitric acid is used as the final reflux acid. For flame analysis, the digested sample is aspirated and atomized in a flame. The absorption of the hollow cathode lamp (HCL) radiation during atomization is directly proportional to the element concentration. The analytical procedures are derived from "EPA Methods for Chemical Analysis of Water and Waste." - 200 series.

Metals - (Soil)

A 5 g portion of sample is digested with nitric acid and hydrogen peroxide on a hot plate and evaporated to near dryness. The digestate is then refluxed with nitric acid. Dilute nitric acid is used as the final reflux acid. For flame analysis, the digested sample is aspirated and atomized in a flame. The absorption of the hollow cathode lamp (HCL) radiation during atomization is directly proportional to the element concentration. The analytical procedures are derived from "EPA Methods for Evaluating Solid Wastes" - 7000 series.

847520428

3B

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: __INTEGRATED ANALYTICAL LABS__ Contract: _____NA_____

Lab code:_NA_Case No.: __012,017,018,020,022__ SAS No.:_NA_ SDG No._NA_

Matrix Spike - EPA Sample No.: __V012006S1/S2___

COMPOUND	SPIKE ADDED (ug/L)	SAMPL CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	51.8	103.6	61-145
Trichloroethene	50	0.0	48.6	97.2	71-120
Benzene	50	0.0	45.8	91.6	76-127
Toluene	50	0.0	38.4	76.8	76-125
Chlorobenzene	50	0.0	49.9	99.8	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	48.1	96	7.4	14	61-145
Trichloroethene	50	46.3	93	4.8	14	71-120
Benzene	50	49.0	98	6.7	11	76-127
Toluene	50	40.6	81	5.5	13	76-125
Chlorobenzene	50	47.7	95	4.5	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD:___0___ out of __5__ outside limits
spike recovery:__0__ out of __10__ outside limits

COMMENTS: _____

086

847520429

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: INTEGRATED ANALYTICAL LABS Contract: NA

Lab code: NA Case No.: 017,031 SAS No: NA SDG No.: NA

Matrix Spike - EPA Sample No.: V003002S1/S2 Level: (low/med) L

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPL CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMI REC
1,1-Dichloroethene	50	0.0	49.3	98.6	59-1
Trichloroethene	50	0.0	49.5	99.0	62-1
Benzene	50	0.0	45.3	90.6	66-1
Toluene	50	0.0	45.4	90.8	59-1
Chlorobenzene	50	0.0	47.9	95.8	60-1

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMIT RPD	QC LIMIT REC
1,1-Dichloroethene	50	48.8	98	1.0	22	59-
Trichloroethene	50	48.5	97	2.0	24	62-
Benzene	50	46.2	92	1.9	21	66-
Toluene	50	46.0	92	1.3	21	59-
Chlorobenzene	50	51.5	103	7.2	21	60-

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
spike recovery: 0 out of 10 outside limits

COMMENTS: _____

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: INTEGRATED ANALYTICAL LABS Contract: NA

Lab code: NA Case No.: 003,009,017 SAS No: NA SDG No.: NA

Matrix Spike - EPA Sample No.: V889002S1/S2 Level: (low/med) L

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPL CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REEC.
1,1-Dichloroethene	50	0.0	32.5	65.0	59-172
Trichloroethene	50	0.0	63.7	127.4	62-137
Benzene	50	0.0	43.8	87.6	66-142
Toluene	50	0.0	51.6	103.2	59-139
Chlorobenzene	50	0.0	46.8	93.6	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	40.0	80	20.	22	59-172
Trichloroethene	50	63.5	127	0.3	24	62-137
Benzene	50	47.6	95	8.3	21	66-142
Toluene	50	53.2	106	3.0	21	59-139
Chlorobenzene	50	46.6	93	0.4	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits
spike recovery: 0 out of 10 outside limits

COMMENTS: _____

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10910 SAS No.: NA SDG No.: NA

Lab File ID: BF1212 BFB Injection Date: 12/12/91

Instrument ID: INCOS-50 BFB Injection Time: 16:28

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.2
75	30.0 - 60.0% of mass 95	43.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.1 (0.12)
174	Greater than 50.0% of mass 95	88.8
175	5.0 - 9.0% of mass 174	6.4 (7.2)
176	Greater than 95.0%, but less than 101.0% of mass 174	88.3 (99.5)
177	5.0 - 9.0% of mass 176	5.9 (6.6)

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method Blk	Lab Blk	VB1212	12/12/91	16:48
02	Method Blk	Lab Blk Rerun	VB1212A		17:24
03	VSTD 200	VOA CAL 1	V0200212		17:59
04	VSTD 150	VOA CAL 2	V0150212		18:36
05	VSTD 100	VOA CAL 3	V0100212		19:12
06	VSTD 50	VOA CAL 4	V050212		19:48
07	VSTD 20	VOA CAL 5	V020212		20:24
08	VSTD 50	VOA CAL CHK	VCK212		21:00
09	Composite	868001	V868001		21:36
10	S1	872001	V872001		22:12
11	S1	872001 Rerun	V872001A	↓	22:47
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					0830

BROMOFLUOROBENZENE

Tuning Report
12/12/91 16:28:00 + 9:50
Instrument: FINN
#384 to #403 summed
Case Number:

Data: BF1212 # 393
Cali: FC0723 # 3
Analyst: FRK

Laboratory:

Base m/z: 95
RIC: 386048.
Acct. No.: NA

Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	15408.	19.2	15.0	40.0	95	19.2	PASS
75	35200.	43.9	30.0	60.0	95	43.9	PASS
95	80128.	100.0	100.0	---	---	100.0	PASS
96	6040.	7.5	5.0	9.0	95	7.5	PASS
173	120.	0.1	---	2.0	174	0.2	PASS
174	71168.	88.8	50.0	---	95	88.8	PASS
175	5096.	6.4	5.0	9.0	174	7.2	PASS
176	70784.	88.3	95.0	101.0	174	99.5	PASS
177	4696.	5.9	5.0	9.0	176	6.6	PASS

090

847520433

Mass List Data: BF1212 # 393 Base m/z: 95
12/12/91 16:28:00 + 9:50 Cali: FC0723 # 3 RIC: 386048.
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#384 to #403 summed

45 0.00 0. Minima Min Inten: 0.
281 Maxima # 0

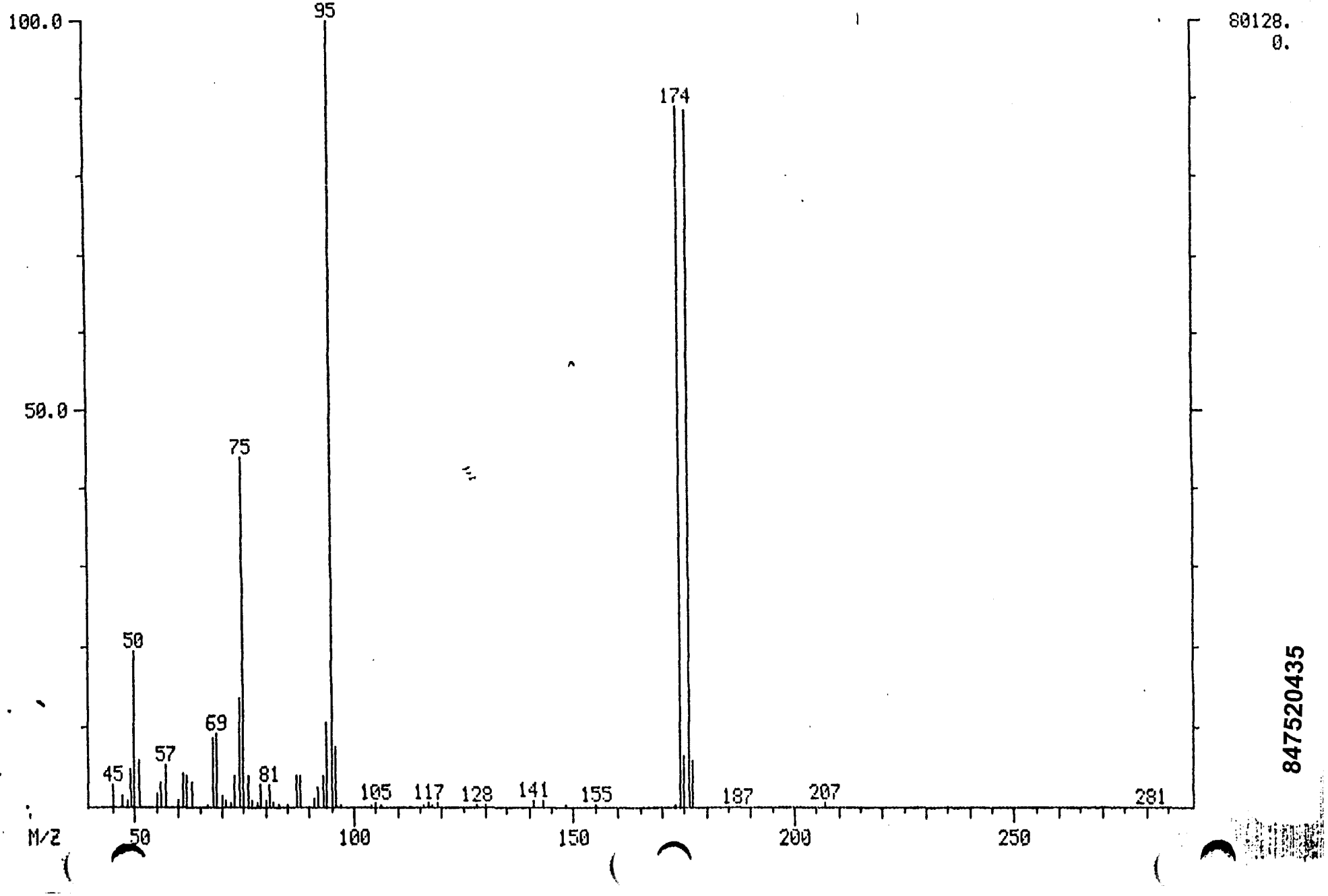
Mass	% RA	Inten.	Mass	% RA	Inten.
45?	2.64	2116.	104	0.27	217.
46?	0.05	44.	105	0.59	472.
47?	1.34	1076.	106	0.35	279.
48?	0.77	617.	111	0.02	15.
49?	4.76	3816.	112	0.02	17.
50?	19.23	15408.	115	0.05	38.
51?	5.76	4616.	116	0.21	165.
52?	0.13	105.	117	0.51	405.
53?	0.04	30.	118	0.32	255.
55?	1.52	1218.	119	0.48	386.
56?	3.06	2452.	120	0.04	31.
57?	5.25	4208.	128	0.24	190.
58?	0.13	107.	129	0.06	51.
60?	0.79	637.	130	0.22	173.
61?	4.09	3280.	131	0.03	24.
62?	3.98	3188.	135	0.04	34.
63?	2.99	2392.	136	0.02	19.
64?	0.09	69.	137	0.05	40.
65?	0.05	39.	140	0.04	30.
66?	0.12	96.	141	0.94	756.
67?	0.27	213.	142	0.02	16.
68?	8.57	6864.	143	0.92	739.
69	9.08	7272.	148	0.15	121.
70	1.46	1172.	151	0.02	15.
71	0.90	721.	154	0.02	15.
72	0.61	489.	155	0.18	144.
73	3.94	3160.	157	0.12	99.
74	13.64	10928.	159	0.02	19.
75	43.93	35200.	173	0.15	120.
76	3.93	3152.	174	88.82	71168.
77	0.75	597.	175	6.36	5096.
78	0.60	483.	176	88.34	70784.
79	2.77	2216.	177	5.86	4696.
80	0.76	609.	178	0.02	15.
81	2.86	2288.	187	0.10	81.
82	0.60	482.	206	0.02	16.
83	0.18	146.	207	0.48	381.
84	0.05	39.	280	0.02	18.
85	0.19	151.	281	0.02	19.
87	3.90	3128.			
88	3.83	3072.			
91	1.18	942.			
92	2.58	2064.			
93	3.88	3108.			
94	10.56	8464.			
95	100.00	80128.			
96	7.54	6040.			
97	0.33	261.			
99	0.02	15.			
101	0.05	40.			

847520434

MASS SPECTRUM
12/12/91 16:28:00 + 9:50
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#384 TO #403 SUMMED

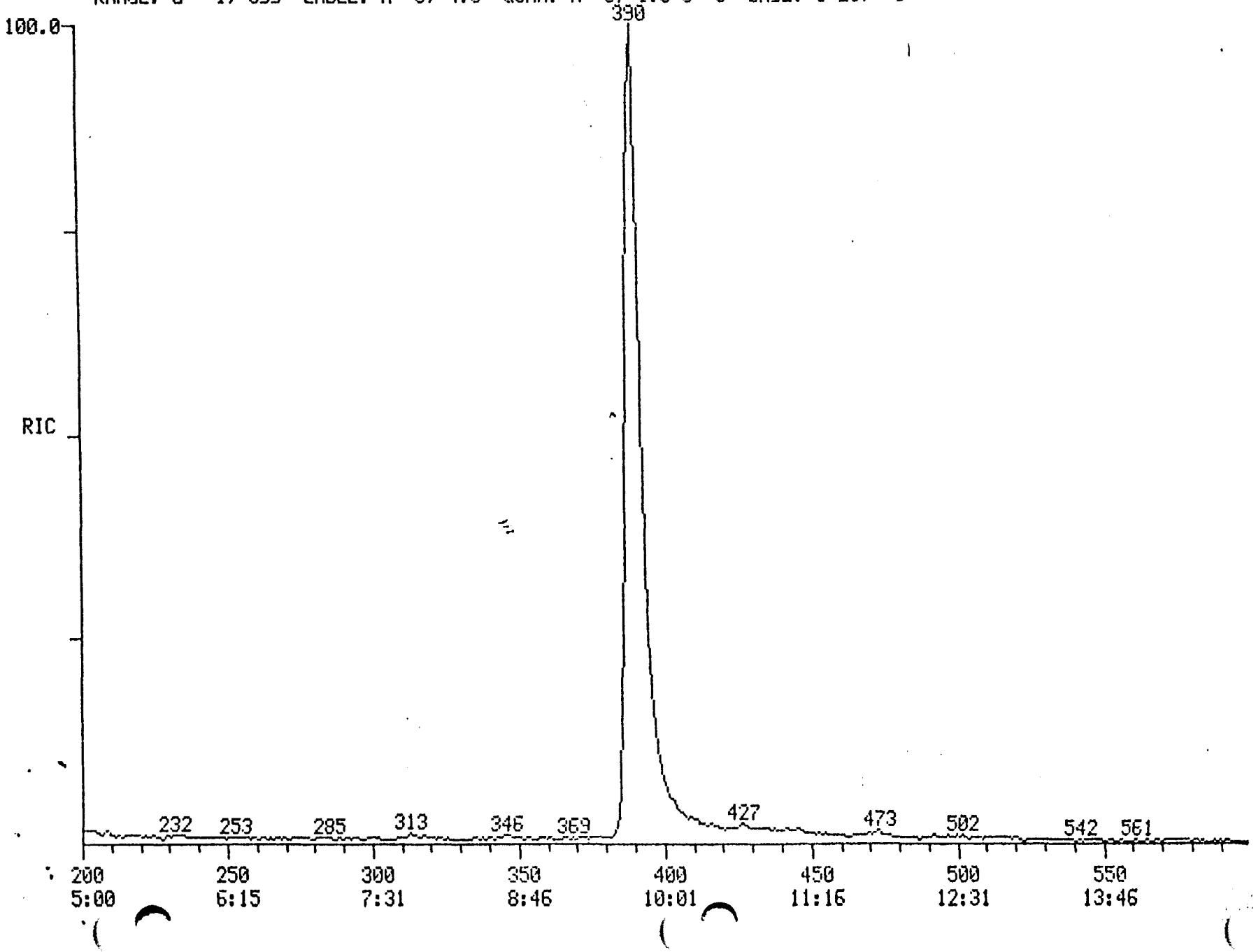
DATA: BF1212 #393
CALI: FC0723 #3

BASE M/Z: 95
RIC: 386048.



847520435

RIC DATA: BF1212 #384 SCANS 200 TO 599
12/12/91 16:28:00 CALI: FC0723 #3
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 599 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



847520436

847520437

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10910 SAS No.: NA SDG No.: NA

Lab File ID: BF010392 BFB Injection Date: 01/03/92

Instrument ID: INCOS-50 BFB Injection Time: 15:48:00

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.8
75	30.0 - 60.0% of mass 95	58.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0
174	Greater than 50.0% of mass 95	55.6
175	5.0 - 9.0% of mass 174	4.4 (7.9
176	Greater than 95.0%, but less than 101.0% of mass 174	53.7 (96.7
177	5.0 - 9.0% of mass 176	3.8 (7.1

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method BLK	VOA BLK	VB01092	01/03/92	16:29
02	VSTD50	VOA CAL CHK	VCK01092		17:05
03	889003 spk	889003 MS	V889003S1		17:43
04	889003 spk Dup	889003 MSD	V889003S2		18:19
05	BLK	904030	V904030		18:54
06	TRIP	904031	V904031		19:30
07	FI	003007	V003007		20:05
08	TRIP	003008	V003008		20:40
09	SI	908001	V908001		21:15
10	SB5234	004001	V004001		21:51
11	SBT221/0-6	904023	V904023		22:26
12	SB7221/18-24	024	024		23:01
13	SB7221/24-30	025	025		23:37
14	SB7222/0-6	026	026	01/04/92	0:12
15	SB7222/18-24	027	V904027		0:47
16	SB7222/24-30	028	028		1:23
17	SB5234	004001 Rerun	V004001A		1:58
18					
19					
20					
21					
22					

FORM V VOA 1/87

BROMOFLUOROBENZENE

Tuning Report
01/03/92 15:48:00 + 9:40
Instrument: FINN
#385 to #387 summed
Case Number:

Data: BF010392 # 386
Cali: FC1231 # 3
Analyst: FRK
Laboratory:

Base m/z: 95
RIC: 30656.
Acct. No.: NA
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	1534.	22.8	15.0	40.0	95	22.8	PASS
75	3924.	58.4	30.0	60.0	95	58.4	PASS
95	6720.	100.0	100.0	---	---	100.0	PASS
96	500.	7.4	5.0	9.0	95	7.4	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	3736.	55.6	50.0	---	95	55.6	PASS
175	297.	4.4	5.0	9.0	174	7.9	PASS
176	3612.	53.7	95.0	101.0	174	96.7	PASS
177	256.	3.8	5.0	9.0	176	7.1	PASS

847520438

Mass List
01/03/92 15:48:00 + 9:40
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#385 to #387 summed

Data: BF010392 # 386
Cali: FC1231 # 3

Base m/z: 95
RIC: 30656.

45 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

Mass	% RA	Inten.
45?	0.79	53.
48?	0.28	19.
49?	5.03	338.
50?	22.83	1534.
51?	6.83	459.
56?	3.20	215.
57?	4.40	296.
60?	0.45	30.
61?	6.16	414.
62?	6.58	442.
63?	5.24	352.
68?	11.53	775.
69	12.31	827.
70	0.67	45.
73	5.61	377.
74	21.99	1478.
75	58.39	3924.
76	5.40	363.
77	0.22	15.
79	8.44	567.
80	1.52	102.
81	8.26	555.
82	1.93	130.
87	3.38	227.
88	3.30	222.
92	2.89	194.
93	6.29	423.
94	13.84	930.
95	100.00	6720.
96	7.44	500.
117	0.61	41.
118	0.22	15.
141	1.46	98.
143	1.31	88.
174	55.60	3736.
175	4.42	297.
176	53.75	3612.
177	3.81	256.

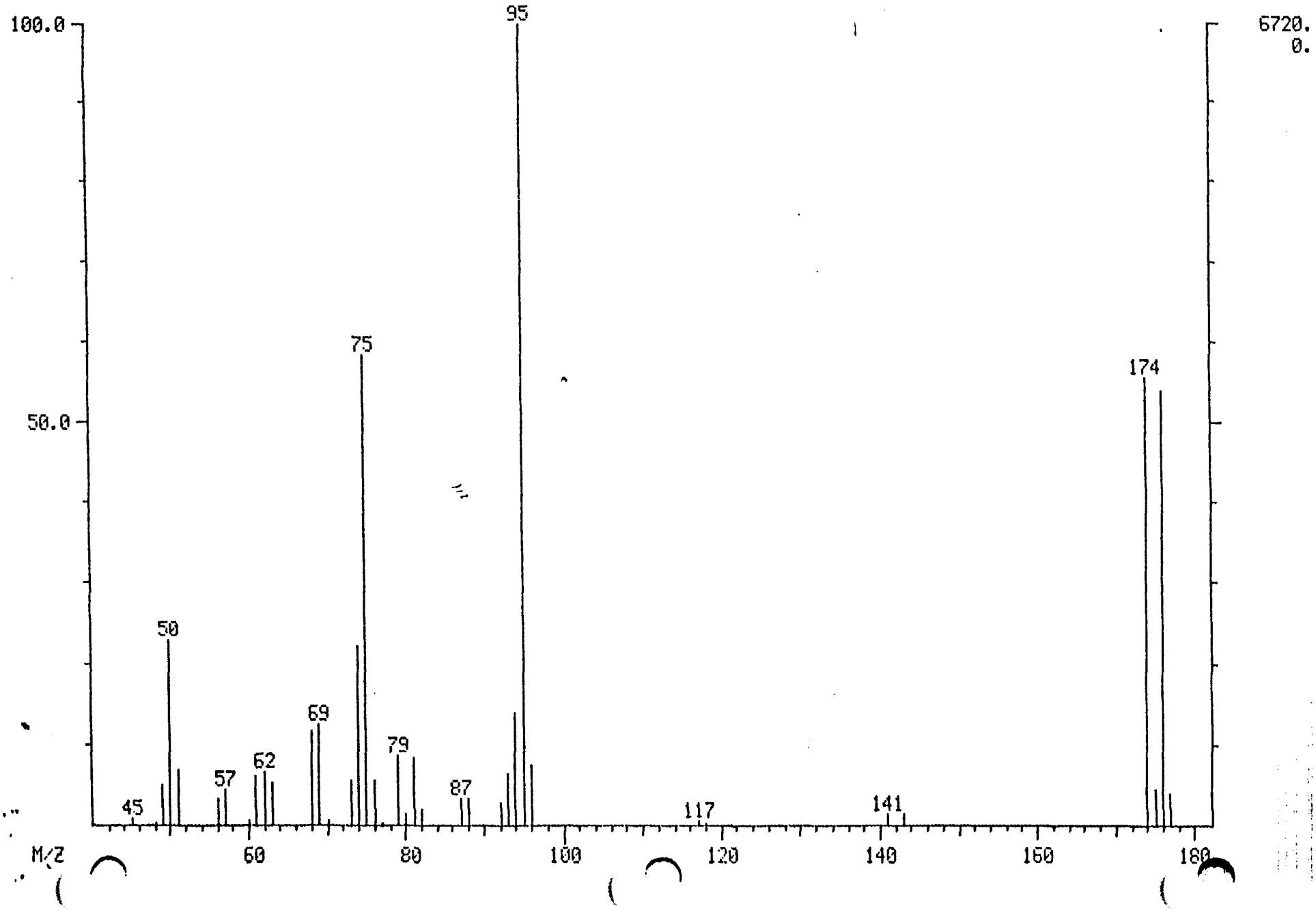
847520439

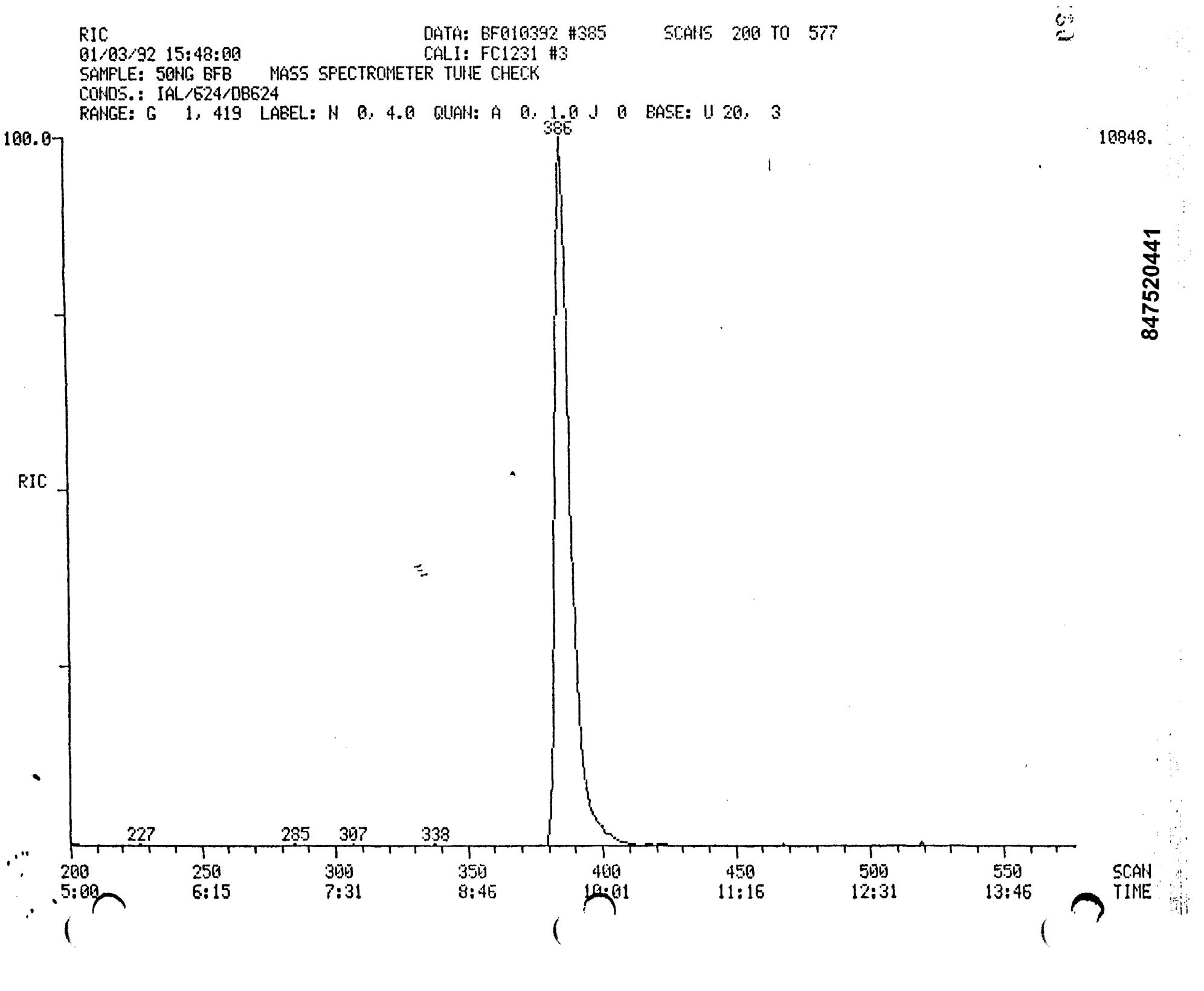
847520440

MASS SPECTRUM
01/03/92 15:48:00 + 9:40
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#385 TO #387 SUMMED

DATA: BF010392 #386
CALI: FC1231 #3

BASE M/Z: 95
RIC: 30656.




RIC
DATA: BF010392 #385 SCANS 200 TO 577
01/03/92 15:48:00
CALI: FC1231 #3
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 419 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
10848.
386
RIC
227
285
307
338
200
250
300
350
400
450
500
550
5:00
6:15
7:31
8:46
10:01
11:16
12:31
13:46
SCAN
TIME
847520441

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10910 SAS No.: NA SDG No.: NA

Lab File ID: BF010892 BFB Injection Date: 01/08/91

Instrument ID: INCOS-50 BFB Injection Time: 16:14

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.9
75	30.0 - 60.0% of mass 95	59.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)
174	Greater than 50.0% of mass 95	54.2
175	5.0 - 9.0% of mass 174	3.5 (6.4)
176	Greater than 95.0%, but less than 101.0% of mass 174	34.0 (99.6)
177	5.0 - 9.0% of mass 176	3.0 (5.5)

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method BLK	VOA BLK	VB010892	1/8/92	16:57
02	VSTD200	VOA CAL 1	V0200192	"	17:35
03	VSTD 150	VOA CAL 2	V0150192	"	18:11
04	VSTD 100	VOA CAL 3	V0100192	"	18:47
05	VSTD 50	VOA CAL 4	V0050192	"	19:23
06	VSTD 20	VOA CAL 5	V0020192	"	19:59
07	VSTD 50	VOA CAL CHK	VCK010892	"	20:34
08	VSTD 50	VOA CAL CHK RE	VCK010892A	"	21:10
09	PTG1	006002	V006002	"	21:46
10	PTG2	008002	V008002	"	22:21
11	FIELD	009005	V009005	"	22:56
12	AT1	009001	V009001	"	23:32
13	AT2	002	002	1/09/92	0:07
14	AT3	003	003	"	0:43
15	TRIP	013003	V013003	"	1:18
16	FIELD	002	002	"	1:54
17	MW1	001	001	"	2:29
18					
19					
20					
21					
22					

FORM V VOA 847520442 1/87

BROMOFLUOROBENZENE

Tuning Report
01/08/92 16:14:00 + 9:46
Instrument: FINN
#381 to #399 summed
Case Number:

Data: BF010892 # 390
Cali: FC1231 # 3
Analyst: FRK
Laboratory:

Base m/z: 95
RIC: 71424.
Acct. No.: NA
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	3584.	21.9	15.0	40.0	95	21.9	PASS
75	9776.	59.7	30.0	60.0	95	59.7	PASS
95	16384.	100.0	100.0	---	---	100.0	PASS
96	1174.	7.2	5.0	9.0	95	7.2	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	8880.	54.2	50.0	---	95	54.2	PASS
175	566.	3.5	5.0	9.0	174	6.4	PASS
176	8848.	54.0	95.0	101.0	174	99.6	PASS
177	490.	3.0	5.0	9.0	176	5.5	PASS

847520443

Mass List
01/08/92 16:14:00 + 9:46
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#381 to #399 summed

Data: BF010892 # 390
Cali: FC1231 # 3

Base m/z: 95
RIC: 71424.

45 0.00 0.
177

Minima Min Inten: 0.
Maxima # 0

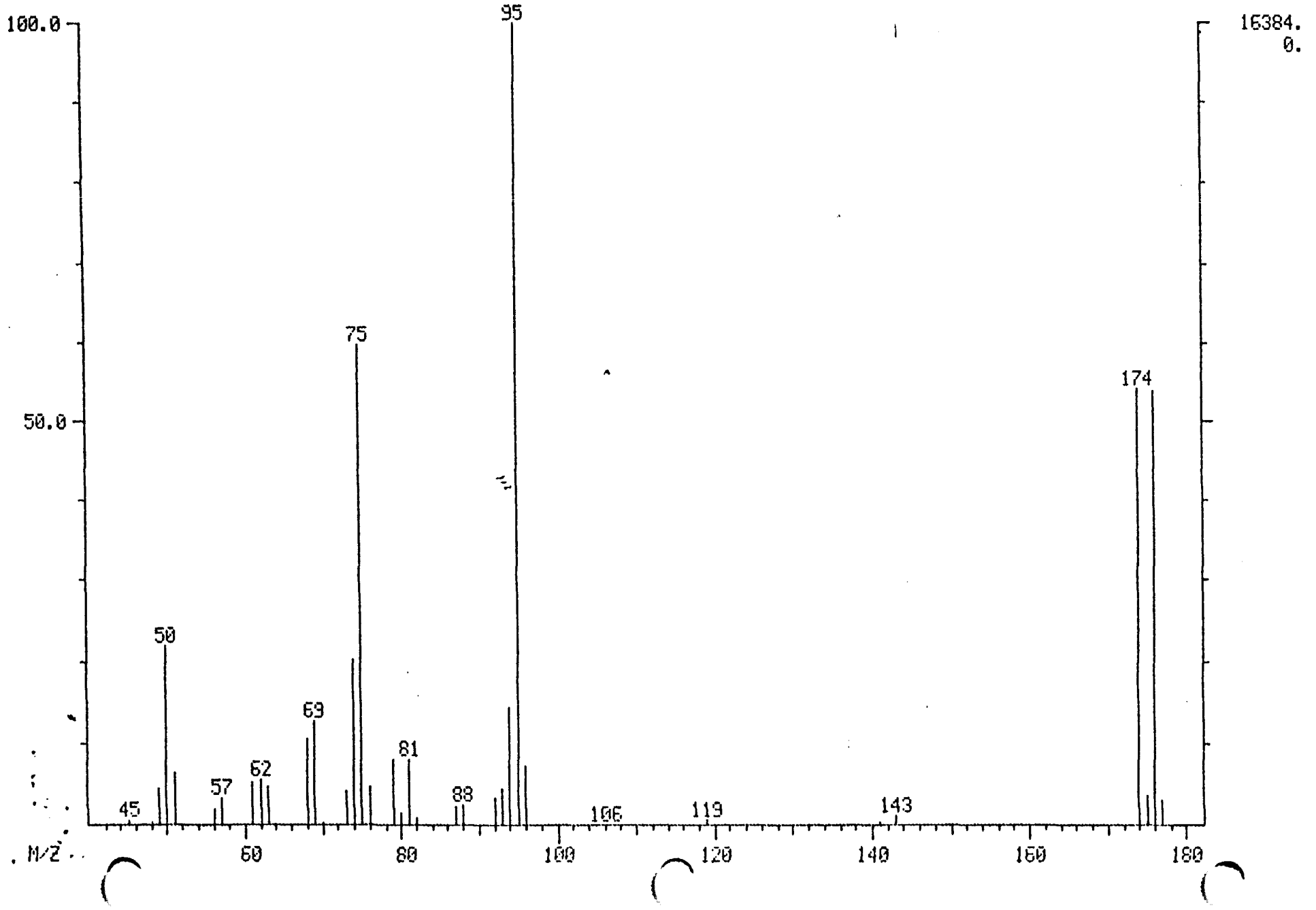
Mass	% RA	Inten.
45?	0.63	104.
47?	0.12	19.
48?	0.26	43.
49?	4.36	715.
50?	21.87	3584.
51?	6.27	1028.
52?	0.09	15.
56?	2.03	332.
57?	3.18	521.
60?	0.10	17.
61?	5.19	850.
62?	5.64	924.
63?	4.66	764.
68?	10.55	1728.
69	12.62	2068.
70	0.26	43.
73	4.02	658.
74	20.09	3292.
75	59.67	9776.
76	4.74	777.
79	8.01	1312.
80	1.50	245.
81	8.12	1330.
82	0.93	152.
87	2.26	370.
88	2.53	415.
92	3.19	522.
93	4.38	718.
94	14.36	2352.
95	100.00	16384.
96	7.17	1174.
106	0.12	19.
117	0.10	16.
118	0.13	21.
119	0.43	70.
141	0.38	63.
143	1.19	195.
174	54.20	8880.
175	3.45	566.
176	54.00	8848.
177	2.99	490.

847520444

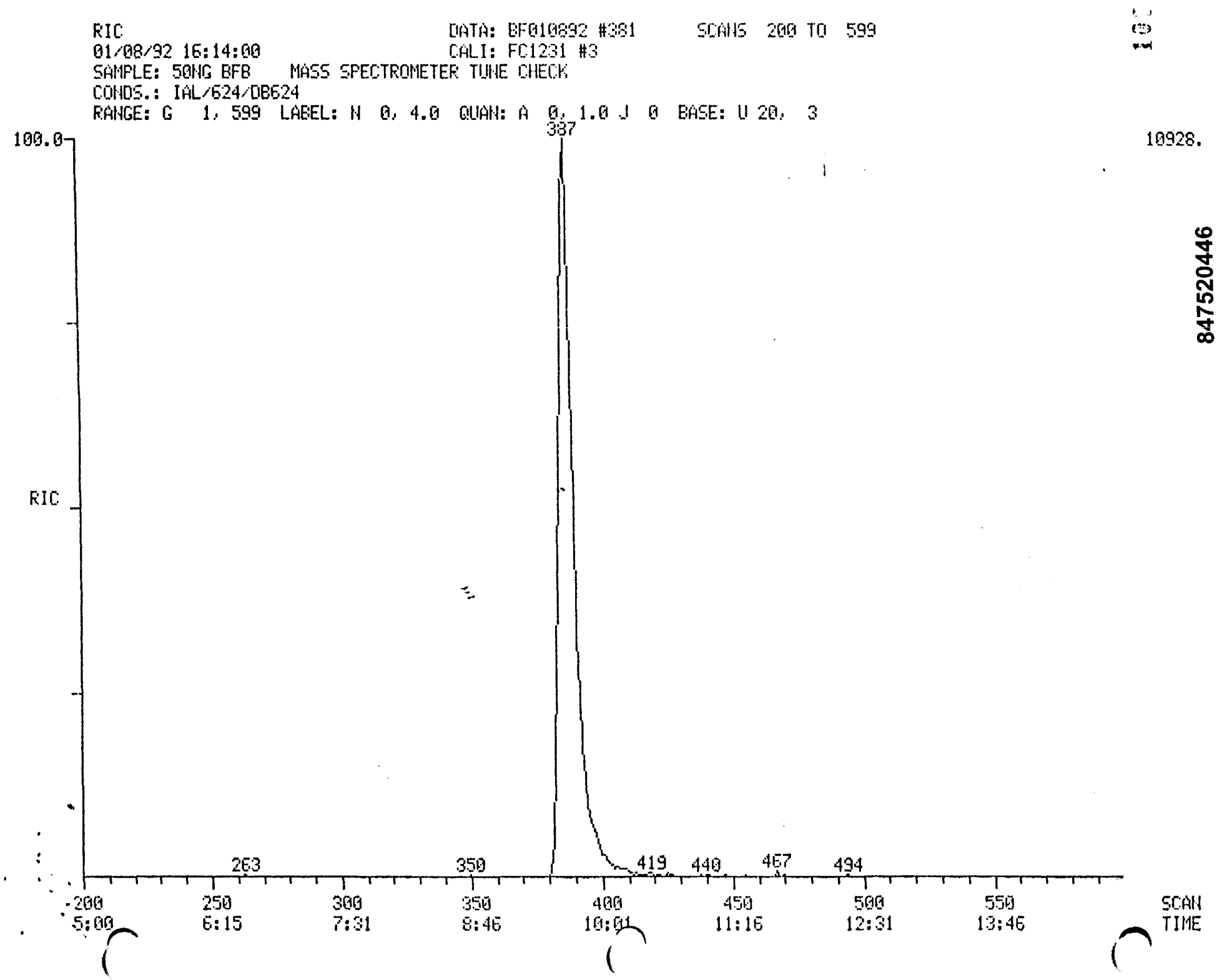
MASS SPECTRUM
01/08/92 16:14:00 + 9:46
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#381 TO #399 SUMMED

DATA: BF010892 #390
CALI: FC1231 #3

BASE M/Z: 95
RIC: 71424.



847520445


RIC
01/08/92 16:14:00
DATA: BF010892 #381
SCANS 200 TO 599
CALI: FC1231 #3
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 599 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
10928.
387
RIC
263
350
419
440
467
494
200
250
300
350
400
450
500
550
5:00
6:15
7:31
8:46
10:01
11:16
12:31
13:46
SCAN
TIME
847520446

847520447

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10970 SAS No.: NA SDG No.: NA

Lab File ID: BF010992 BFB Injection Date: 01/09/92

Instrument ID: INCOS-50 BFB Injection Time: 15:56

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.1
75	30.0 - 60.0% of mass 95	59.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.0 (1) 0.0
174	Greater than 50.0% of mass 95	56.3
175	5.0 - 9.0% of mass 174	3.7 (1) 6.6
176	Greater than 95.0%, but less than 101.0% of mass 174	56.1 (1) 99.5
177	5.0 - 9.0% of mass 176	4.7 (2) 8.4

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method BLK	VOA BLK	VB010992	01/09/92	16:38
02	VSTD50	VOA CAL CHK	VCK010992		17:17
03	012006 WSpk	012006 MS	V012006S1		17:53
04	012006 WSpkDup	012006 MSD	V012006S2		18:29
05	TRIP	012006	V012006		19:05
06	FIELD	005	005		19:40
07	MW4	004	004		20:15
08	MW3	003	003		20:51
09	MW2	002	002		21:26
10	MW1	001	001		22:02
11	TRIP	018005	V018005		22:37
12	FIELD	004	004		23:13
13	MW3	003	003		23:48
14	MW2	002	002	01/10/92	0:23
15	MW1	001	001		0:59
16	ATZ	009002 Rerun	V009002A		1:34
17	AT1	009001	V009001A		2:09
18	AT1	009001	V009001C		2:45
19					
20					
21					
22					10.

BROMOFLUOROBENZENE

Tuning Report
01/09/92 15:56:00 + 9:41
Instrument: FINN
#387 to #388 summed
Case Number:

Data: BF010992 # 387
Cali: FC1231 # 3
Analyst: FRK

Laboratory:

Base m/z: 95
RIC: 20640.
Acct. No.: NA

Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	993.	22.1	15.0	40.0	95	22.1	PASS
75	2660.	59.3	30.0	60.0	95	59.3	PASS
95	4488.	100.0	100.0	---	---	100.0	PASS
96	349.	7.8	5.0	9.0	95	7.8	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	2528.	56.3	50.0	---	95	56.3	PASS
175	168.	3.7	5.0	9.0	174	6.6	PASS
176	2516.	56.1	95.0	101.0	174	99.5	PASS
177	211.	4.7	5.0	9.0	176	8.4	PASS

847520448

Mass List
01/09/92 15:56:00 + 9:41
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#387 to #388 summed

Data: BF010992 # 387
Cali: FC1231 # 3

Base m/z: 95
RIC: 20640.

45 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

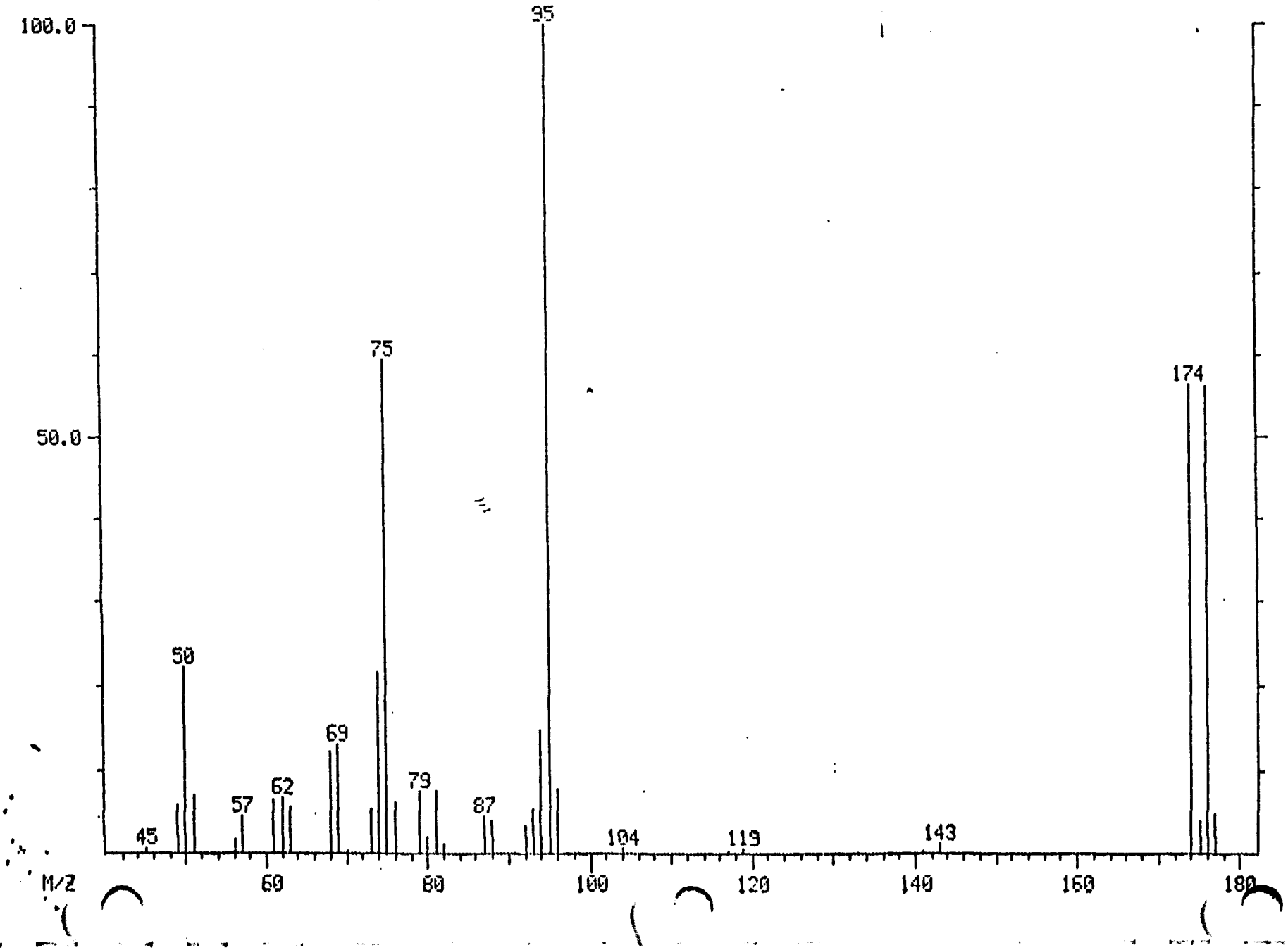
Mass	% RA	Inten.
45?	0.42	19.
49?	5.82	261.
50?	22.13	993.
51?	6.93	311.
56?	1.65	74.
57?	4.52	203.
61?	6.37	286.
62?	6.60	296.
63?	5.46	245.
68?	12.28	551.
69	12.95	581.
70	0.36	16.
73	5.24	235.
74	21.43	962.
75	59.27	2660.
76	6.06	272.
79	7.58	340.
80	1.87	84.
81	7.35	330.
82	1.14	51.
87	4.55	204.
88	3.83	172.
92	3.19	143.
93	5.30	238.
94	14.64	657.
95	100.00	4488.
96	7.78	349.
104	0.69	31.
117	0.40	18.
119	0.47	21.
141	0.36	16.
143	1.18	53.
174	56.33	2528.
175	3.74	168.
176	56.06	2516.
177	4.70	211.

847520450

MASS SPECTRUM
01/09/92 15:56:00 + 9:41
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#387 TO #388 SUMMED

DATA: BF010992 #387
CALI: FC1231 #3

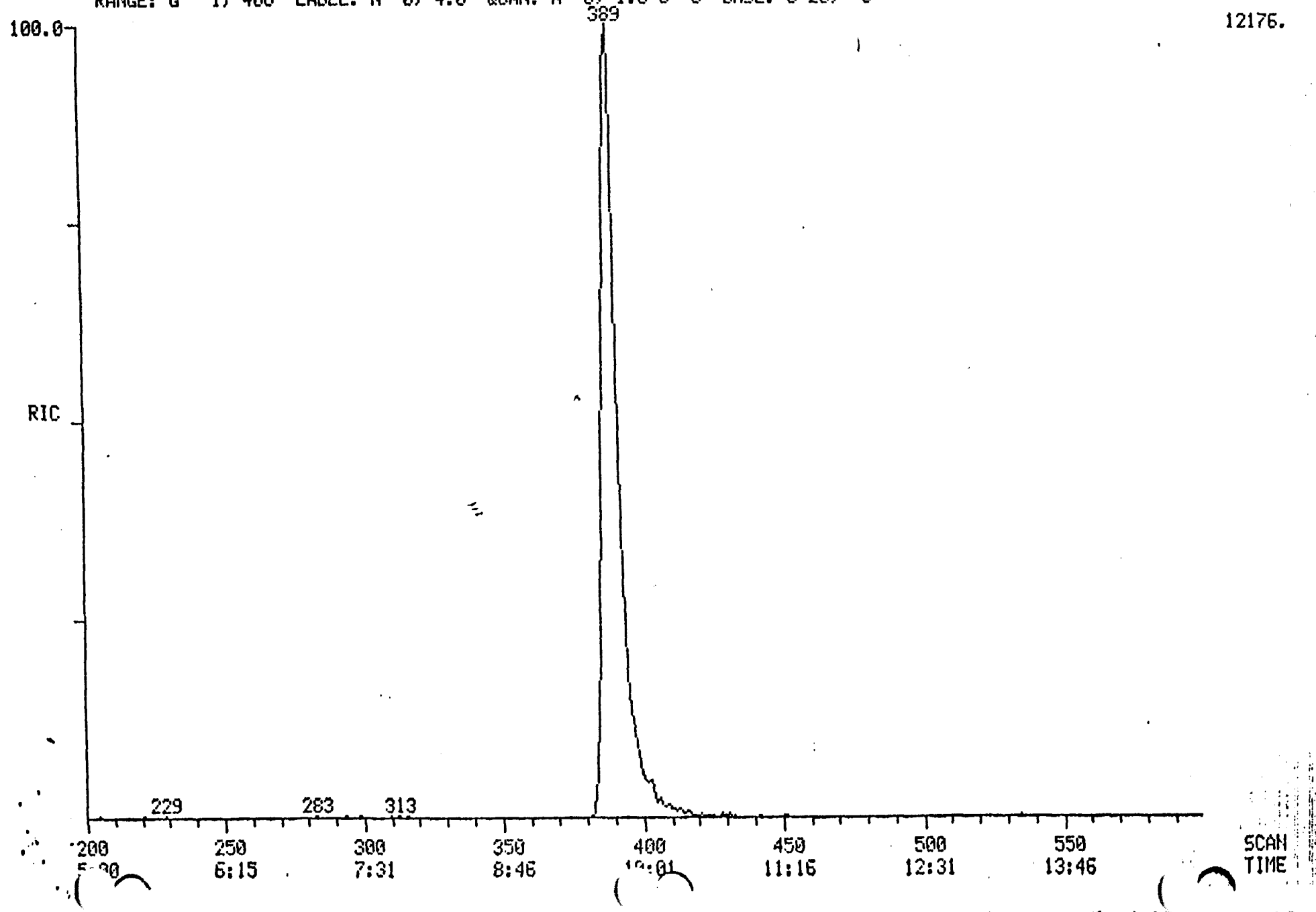
BASE M/Z: 95
RIC: 20640.



847520451

RIC
01/09/92 15:56:00
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 406 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: BF010992 #387 SCANS 200 TO 599
CALI: FC1231 #3



5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF011092 BFB Injection Date: 01/10/92

Instrument ID: INCOS-50 BFB Injection Time: 15:52

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.4
75	30.0 - 60.0% of mass 95	59.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.0 (0.0)
174	Greater than 50.0% of mass 95	52.1
175	5.0 - 9.0% of mass 174	3.0 (5.8)
176	Greater than 95.0%, but less than 101.0% of mass 174	52.0 (99.8)
177	5.0 - 9.0% of mass 176	2.7 (5.2)

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	METHOD BLK.	VOA BLK.	VB011092	01/10/92	16:03
02	VSTD 50	VOA CALCHK	VCK011092	"	16:39
03	Field	017015	V017015	"	17:15
04	TRIP	019003	V019003	"	17:50
05	Field	019002	V019002	"	18:25
06	MW4	019001	V019001	"	19:00
07	TRIP	020004	V020004	"	19:36
08	A1	017001	V017001	"	20:46
09	A2	017002	V017002	"	21:21
10	B1	017003	V017003	"	21:56
11	B2	017004	V017004	"	22:31
12	C1	017005	V017005	"	23:06
13	C2	017006	V017006	"	23:42
14	D1	017007	V017007	01/11/92	0:17
15	D2	017008	V017008	01/11/92	0:52
16	MW3	020002	V020002	01/11/92	1:28
17	MW2	020001	V020001	"	2:03
18	AT1	009001	V0090018	"	2:38
19					
20					
21					
22					

BROMOFLUOROBENZENE

Tuning Report
01/10/92 15:52:00 + 9:50
Instrument: FINN
#385 to #401 summed
Case Number:

Data: BF011092 # 393
Cali: FC1231 # 3
Analyst: FRK

Laboratory:

Base m/z: 95
RIC: 81920.
Acct. No.: NA

Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	4052.	21.4	15.0	40.0	95	21.4	PASS
75	11216.	59.3	30.0	60.0	95	59.3	PASS
95	18912.	100.0	100.0	---	---	100.0	PASS
96	1352.	7.1	5.0	9.0	95	7.1	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	9856.	52.1	50.0	---	95	52.1	PASS
175	567.	3.0	5.0	9.0	174	5.8	PASS
176	9840.	52.0	95.0	101.0	174	99.8	PASS
177	507.	2.7	5.0	9.0	176	5.2	PASS

Mass List / Data: BF011092 # 393 Base m/z: 95
01/10/92 15:52:00 + 9:50 Cali: FC1231 # 3 RIC: 81920.
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#385 to #401 summed

45 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

Mass	% RA	Inten.
45?	0.58	109.
47?	0.12	23.
49?	4.97	940.
50?	21.43	4052.
51?	6.84	1294.
55?	0.08	15.
56?	2.20	416.
57?	3.98	753.
60?	0.20	37.
61?	5.09	963.
62?	5.66	1070.
63?	4.35	822.
65?	0.09	17.
67?	0.08	16.
68?	11.15	2108.
69	12.03	2276.
70	0.59	111.
73	4.99	943.
74	20.90	3952.
75	59.31	11216.
76	4.85	917.
79	6.72	1270.
80	1.27	240.
81	7.16	1354.
82	1.13	214.
87	2.52	477.
88	3.14	594.
91	0.17	32.
92	2.56	485.
93	4.66	882.
94	13.75	2600.
95	100.00	18912.
96	7.15	1352.
104	0.12	23.
106	0.11	20.
117	0.42	80.
119	0.44	84.
141	1.26	239.
143	1.20	226.
174	52.12	9856.
175	3.00	567.
176	52.03	9840.
177	2.68	507.

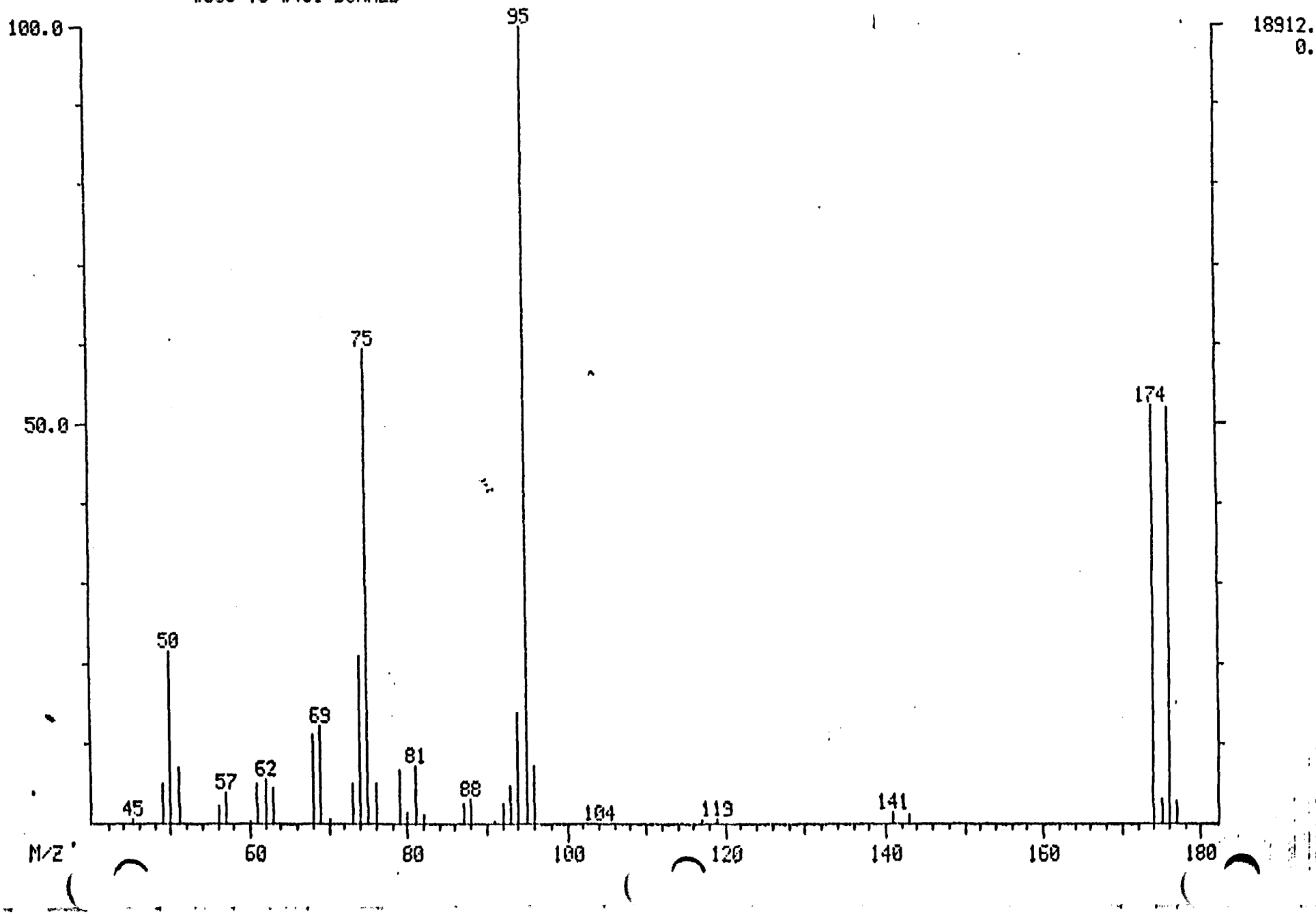
847520454

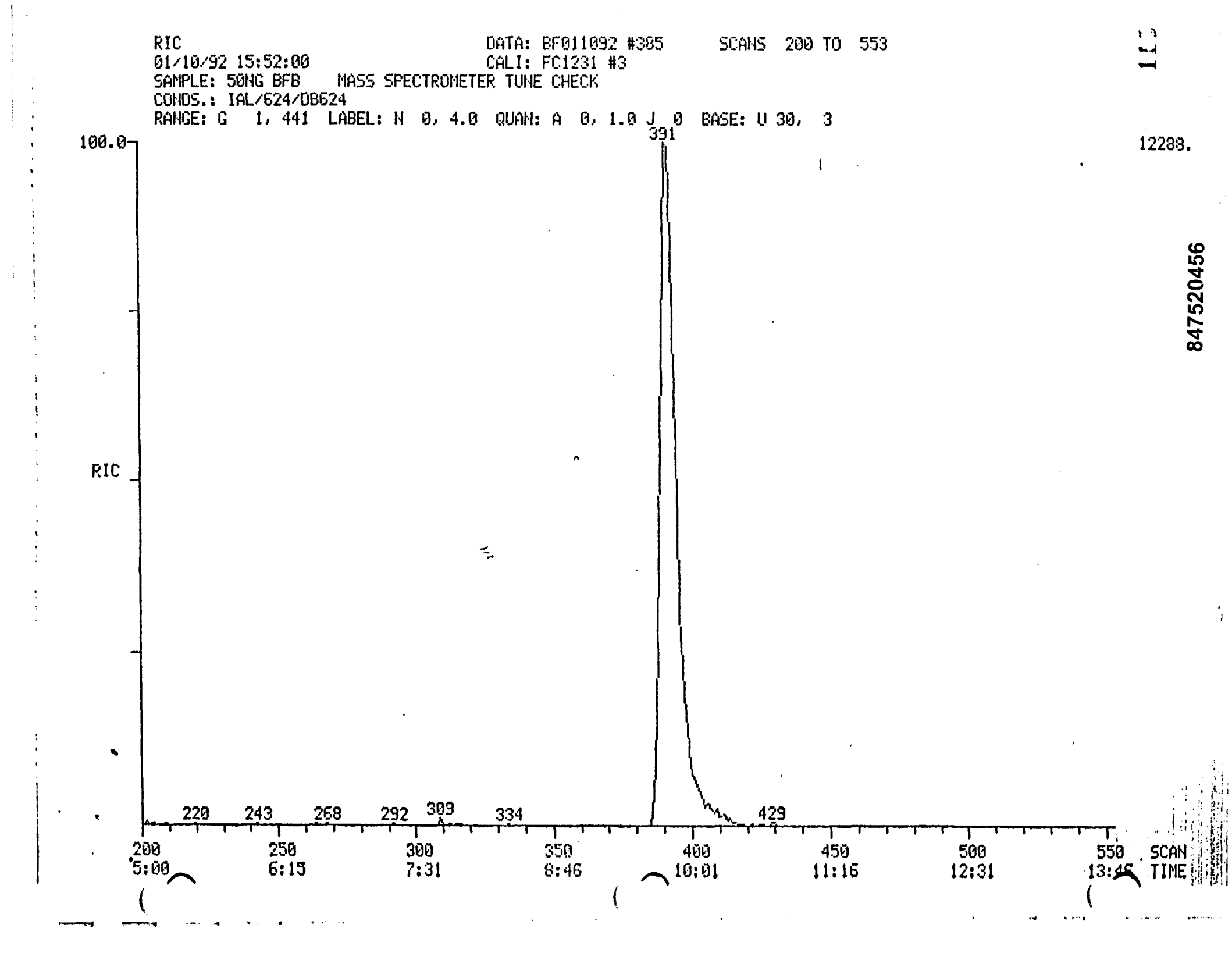
847520455

MASS SPECTRUM
01/10/92 15:52:00 + 9:50
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#385 TO #401 SUMMED

DATA: BF011092 #393
CALI: FC1231 #3

BASE M/Z: 95
RIC: 81920.




RIC
DATA: BF011092 #385 SCANS 200 TO 553
01/10/92 15:52:00
CALI: FC1231 #3
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 441 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 30, 3
100.0
12288.
391
RIC
220
243
268
292
309
334
429
200
5:00
250
6:15
300
7:31
350
8:46
400
10:01
450
11:16
500
12:31
550
13:45
SCAN
TIME
847520456

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF011392 BFB Injection Date: 01/13/92

Instrument ID: INCOS-50 BFB Injection Time: 13:18

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.5
75	30.0 - 60.0% of mass 95	57.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)
174	Greater than 50.0% of mass 95	52.5
175	5.0 - 9.0% of mass 174	4.6 (8.7)
176	Greater than 95.0%, but less than 101.0% of mass 174	51.8 (98.5)
177	5.0 - 9.0% of mass 176	3.9 (7.6)

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	METHOD BLK	VOA BLK	VB011392	01/13/92	14:09
02	VSTD 50	VOA CAL CHK	VCK011392	"	14:46
03	003002 S SPK	003002 MS	V003002S1	"	15:21
04	003002 S SPK DUP	003002 MSD	V003002S2	"	15:57
05	TRIP	022003	V022003	"	16:33
06	Field	022002	V022002	"	17:08
07	MW1	022001	V022001	"	17:43
08	C1	017005 RERUN	V017005A	"	18:19
09	D1	017007 "	V017007A	"	18:54
10	D2	017008 "	V017008A	"	19:29
11	E1	017009	V017009	"	20:04
12	E2	017010	V017010	"	20:39
13	F1	017011	V017011	"	21:14
14	F2	017012	V017012	"	21:49
15	G1	017013	V017013	"	22:25
16	G2	017014	V017014	"	23:00
17					
18					
19					
20					
21					
22					

BROMOFLUOROBENZENE

Tuning Report
01/13/92 13:18:00 + 9:41
Instrument: FINN
#381 to #394 summed - #394 to #402
Base Number:

Data: BF011392 # 387
Cali: FC1231 # 3
Analyst: FRK
Laboratory:

Base m/z: 95
RIC: 84352.
Acct. No.: NA
Contract:

			Ion Abundance Criteria				
m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
50	4096.	22.5	15.0	40.0	95	22.5	PASS
75	10544.	57.9	30.0	60.0	95	57.9	PASS
95	18208.	100.0	100.0	---	---	100.0	PASS
96	1590.	8.7	5.0	9.0	95	8.7	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	9568.	52.5	50.0	---	95	52.5	PASS
175	830.	4.6	5.0	9.0	174	8.7	PASS
176	9424.	51.8	95.0	101.0	174	98.5	PASS
177	715.	3.9	5.0	9.0	176	7.6	PASS

847520458

Mass List Data: BF011392 # 387 Base m/z: 95
01/13/92 13:18:00 + 9:41 Cali: FC1231 # 3 RIC: 84352.
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#381 to #394 summed - #394 to #402

45 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

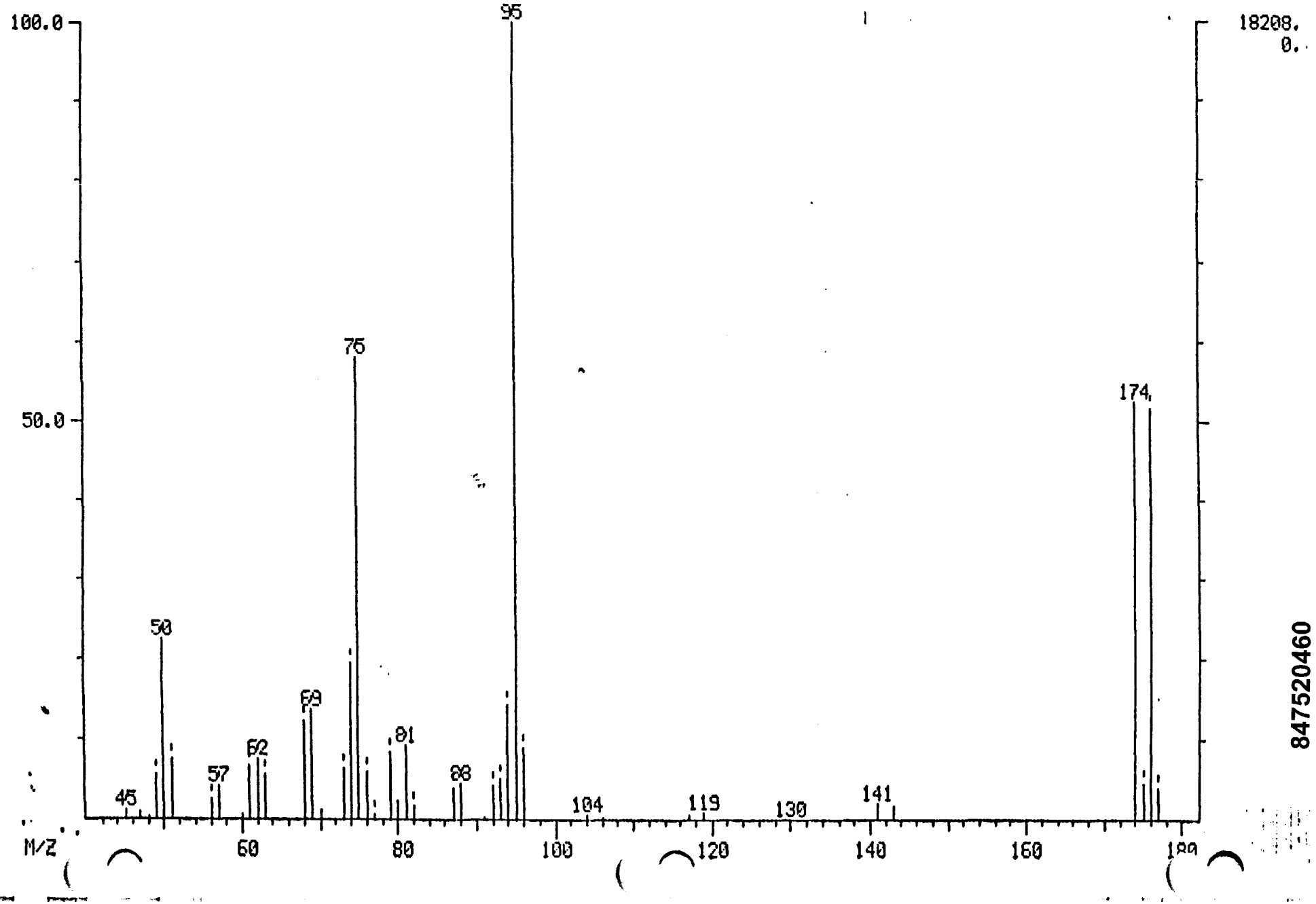
Mass		% RA	Inten.
45?	S	1.18	214.
47?		0.83	152.
48?		0.23	41.
49?	S	5.66	1030.
50?	S	22.50	4096.
51?	S	7.51	1368.
52?		0.09	16.
56?	S	2.53	461.
57?	S	4.18	762.
60?		0.68	124.
61?	S	6.54	1190.
62?	S	7.49	1364.
63?	S	5.39	982.
68?	S	12.04	2192.
69	S	13.66	2488.
70		1.18	214.
73	S	6.41	1168.
74	S	19.46	3544.
75	S	57.91	10544.
76	S	5.73	1044.
77	S	0.46	83.
79	S	8.25	1502.
80		2.33	424.
81	S	9.12	1660.
82	S	1.67	304.
83		0.09	17.
87	S	3.94	717.
88	S	4.48	815.
91		0.33	60.
92	S	4.04	735.
93	S	4.93	897.
94	S	14.10	2568.
95	S	100.00	18208.
96	S	8.73	1590.
104		0.68	124.
105		0.09	17.
106		0.19	34.
116		0.08	15.
117		0.68	124.
118		0.09	16.
119		0.77	141.
130		0.09	16.
141		1.94	353.
143		1.74	317.
174	S	52.55	9568.
175	S	4.56	830.
176	S	51.76	9424.
177	S	3.93	715.

847520459

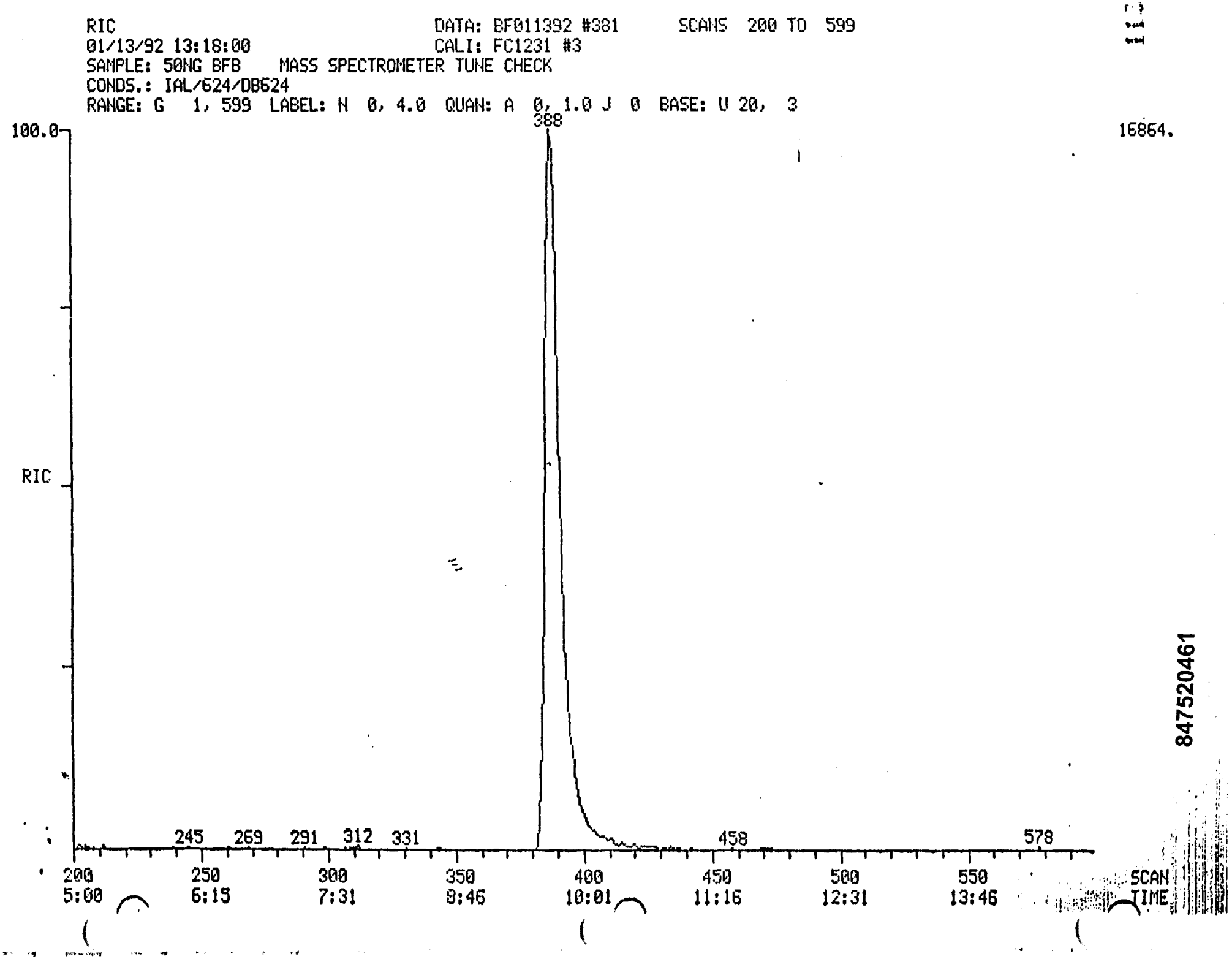
MASS SPECTRUM
01/13/92 13:18:00 + 9:41
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#381 TO #394 SUMMED - #394 TO #402

DATA: BF011392 #387
CALI: FC1231 #3

BASE M/Z: 95
RIC: 84352.



847520460


RIC
DATA: BF011392 #381 SCANS 200 TO 599
01/13/92 13:18:00
CALI: FC1231 #3
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 599 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
16864.
388
RIC
245
269
291
312
331
458
578
200
5:00
250
6:15
300
7:31
350
8:46
400
10:01
450
11:16
500
12:31
550
13:46
SCAN
TIME
847520461

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: IAL Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF012192A BFB Injection Date: 01/21/92

Instrument ID: INCOS-50 BFB Injection Time: 16:46

Matrix: (soil/water) NA Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.5
75	30.0 - 60.0% of mass 95	57.9
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	8.7
173	Less than 2.0% of mass 174	0.0 (0.0)
174	Greater than 50.0% of mass 95	55
175	5.0 - 9.0% of mass 174	3.8 (6.9)
176	Greater than 95.0%, but less than 101.0% of mass 174	55.3 (100.5)
177	5.0 - 9.0% of mass 176	4.9 (8.8)

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	METHOD BLK	VOA BLK	VB0 12192	01/21/92	17:14
02	VSTD 50	VOA CAL CHK	VCK 012192	"	17:50
03	S SPK	031010 MS	V031010 S_1	"	18:26
04	S SPK DUP	031010 MSD	V031010 S_2	"	19:01
05	B_6S_1 RERUN	031004A RERUN	V031004A	"	19:37
06	$S_{11}A$ RERUN	031039A "	V031039A	"	20:12
07	S_8B RERUN	031037B "	V031037B	"	20:48
08	MW, RERUN	025001A "	V025001A	"	21:23
09	MW4 "	024004A "	V024004A	"	21:58
10	C_1 "	017007A "	V017007B	"	22:33
11	E_2 "	017010A "	V017010A	"	23:08
12	F_1 "	017011A "	V017011A	"	23:43
13	F_2 "	017012A "	V017012A	01/22/92	00:18
14	G_2 "	017014B "	V017014B	"	0:54
15	S_8B "	031037C "	V031037C	"	1:29
16	$S_{11}A$ "	031039B "	V031039B	"	2:04
17					
18					
19					
20					
21					
22					

FORM V VOA 847520462 1/87

BROMOFLUOROBENZENE

Tuning Report
01/21/92 16:46:00 + 9:43
Instrument: FINN
#387 to #390 summed
Case Number:

Data: BF012192A # 388
Cali: FC1231 # 3
Analyst: FRK
Laboratory:

Base m/z: 95
RIC: 30560.
Acct. No.: NA
Contract:

Ion Abundance Criteria

m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
50	1336.	19.5	15.0	40.0	95	19.5	PASS
75	3972.	57.9	30.0	60.0	95	57.9	PASS
95	6856.	100.0	100.0	---	---	100.0	PASS
96	599.	8.7	5.0	9.0	95	8.7	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	3768.	55.0	50.0	---	95	55.0	PASS
175	260.	3.8	5.0	9.0	174	6.9	PASS
176	3788.	55.3	95.0	101.0	174	100.5	PASS
177	334.	4.9	5.0	9.0	176	8.8	PASS

Mass List Data: BF012192A # 388 Base m/z: 95
01/21/92 16:46:00 + 9:43 Cali: FC1231 # 3 RIC: 30560.
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#387 to #390 summed

45 0.00 0. Minima Min Inten: 0.
177 Maxima # 0

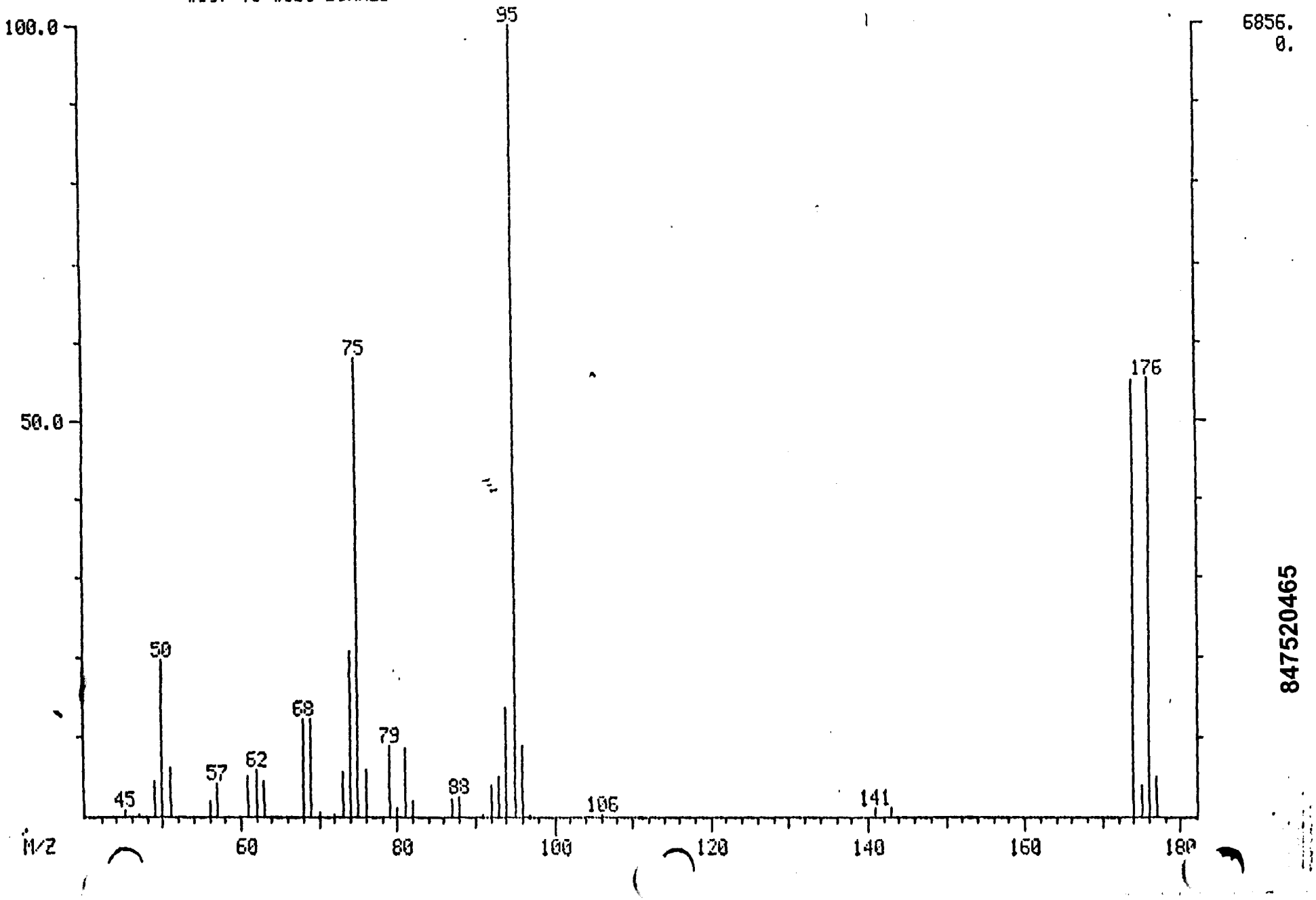
Mass	% RA	Inten.
45?	0.85	58.
47?	0.23	16.
49?	4.42	303.
50?	19.49	1336.
51?	5.95	408.
56?	1.87	128.
57?	4.03	276.
61?	4.87	334.
62?	5.73	393.
63?	4.46	306.
68?	12.27	841.
69	12.05	826.
70	0.64	44.
72	0.26	18.
73	5.44	373.
74	20.83	1428.
75	57.93	3972.
76	5.79	397.
79	8.72	598.
80	1.05	72.
81	8.59	589.
82	1.90	130.
87	2.30	158.
88	2.46	169.
91	0.31	21.
92	3.94	270.
93	4.99	342.
94	13.62	934.
95	100.00	6856.
96	8.74	599.
97	0.26	18.
106	0.22	15.
141	1.18	81.
143	1.18	81.
174	54.96	3768.
175	3.79	260.
176	55.25	3788.
177	4.87	334.

847520464

MASS SPECTRUM
01/21/92 16:46:00 + 9:43
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 102 DEG. C
#387 TO #390 SUMMED

DATA: BF012192A #388
CALI: FC1231 #3

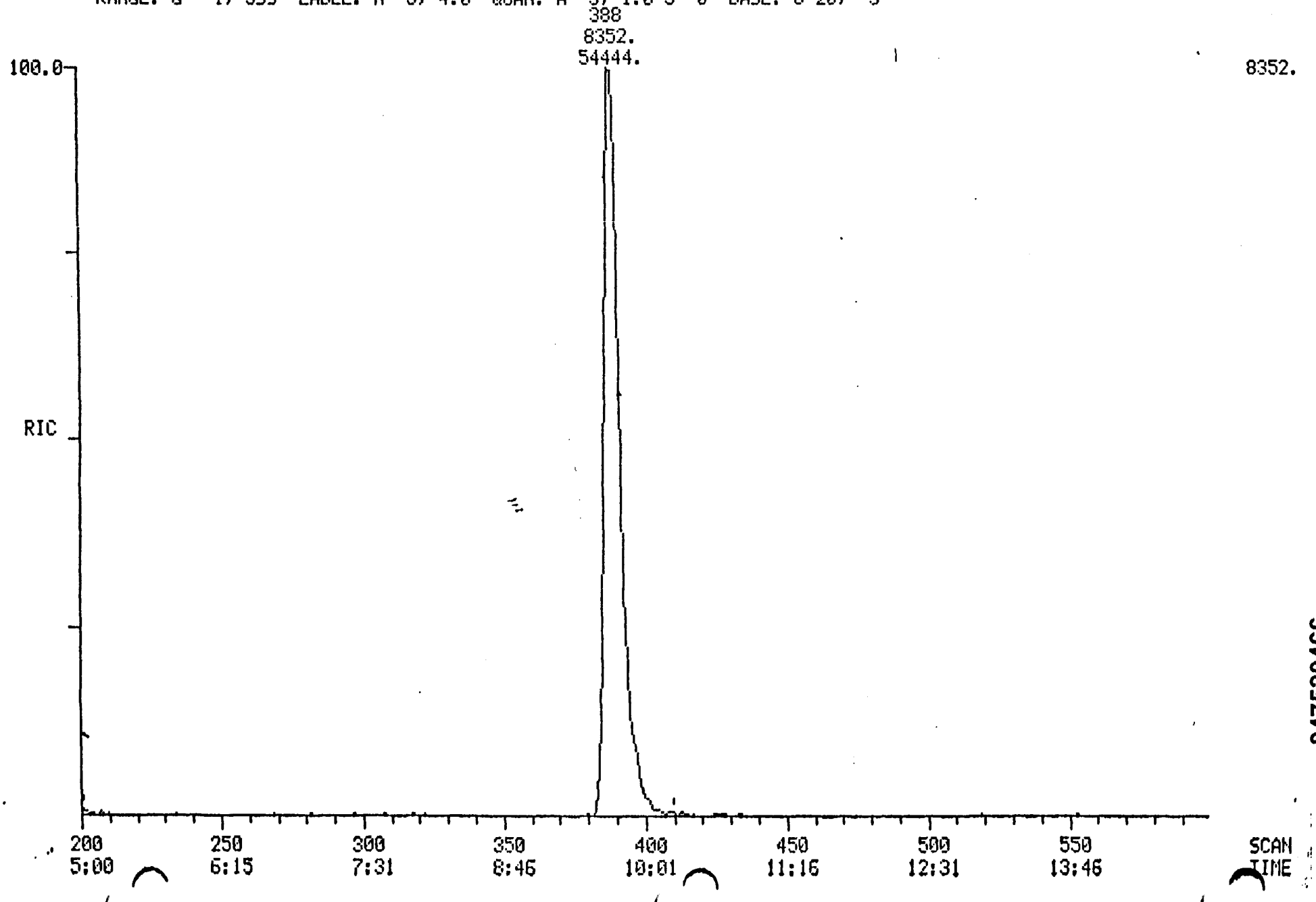
BASE M/Z: 95
RIC: 30560.



847520465

RIC
01/21/92 16:46:00
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
RANGE: G 1, 599 LABEL: N 3, 4.0 QUAN: A 3, 1.0 J 0 BASE: U 20, 3

DATA: BF012192A #387 SCANS 200 TO 599
CALI: FC1231 #3



847520466

Initial Calibration Data

Case No. NA — Contract Lab: IAL
Contract No. NA — Instrument Identifier: INCOS-5020
Calibration Date: 12/12/91
* = CCC, MAX %RSD = 30
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	RF 20PPB	RF 50PPB	RF 100PP	RF 150PP	RF 200PP	Mean RF	%RSD
CS15	1,2-DICHLOROETHANE-D4	1.128	1.179	0.824	0.678	1.005	0.963	21.783
CS05	TOLUENE-D8 *SS2*	0.805	0.778	1.003	0.977	1.003	0.913	12.268
CS10	4-BROMOFLOROBENZENE *S	0.654	0.639	0.655	0.704	0.744	0.679	6.440
C010	CHLOROMETHANE	0.813	0.579	0.569	0.687	0.799	0.689	16.825
C015	VINYL CHLORIDE	0.647	0.427	0.447	0.503	0.588	0.522	17.926
C020	BROMOMETHANE	1.005	0.721	1.330	0.985	1.246	1.057	22.724
C025	CHLOROETHANE	0.565	0.447	0.913	0.910	1.194	0.806	37.200
C030	1,1-DICHLOROETHENE	1.135	1.418	1.420	1.106	1.380	1.292	12.184
C035	METHYLENE CHLORIDE	1.358	1.697	1.558	1.190	1.378	1.436	13.610
C040	T-1,2-DICHLOROETHENE	0.903	1.192	1.081	0.879	0.992	1.010	12.814
C045	1,1-DICHLOROETHANE	1.219	1.709	1.590	1.206	1.423	1.429	15.553
C050	CHLOROFORM	1.699	1.810	1.596	1.457	1.573	1.627	8.230
C055	1,1,1-TRICHLOROETHANE	1.548	1.736	1.486	1.374	1.424	1.514	9.301
C060	CARBON TETRACHLORIDE	1.635	2.054	1.638	1.289	1.576	1.638	16.675
C110	BENZENE	0.830	0.916	0.782	0.836	0.874	0.848	5.940
C115	1,2-DICHLOROETHANE	0.464	0.578	0.378	0.386	0.483	0.458	17.832
C120	TRICHLOROETHENE	0.449	0.533	0.512	0.503	0.500	0.499	6.197
C125	1,2-DICHLOROPROPANE	0.373	0.535	0.429	0.411	0.467	0.443	13.939
C130	BROMODICHLOROMETHANE	0.583	0.851	0.783	0.781	0.914	0.782	15.895
C135	C-1,3-DICHLOROPROPENE	0.395	0.346	0.769	0.737	0.455	0.540	36.690
C140	TOLUENE	0.765	0.891	1.370	1.029	1.065	1.024	22.160
C145	T-1,3-DICHLOROPROPENE	0.162	0.228	0.253	0.266	0.287	0.239	20.169
C150	1,1,2-TRICHLOROETHANE	0.225	0.264	0.280	0.271	0.295	0.267	9.770
C155	TETRACHLOROETHENE	0.541	0.664	0.703	0.695	0.714	0.663	10.720
C160	DIBROMOCHLOROMETHANE	0.358	0.492	0.528	0.559	0.592	0.506	17.931
C210	CHLOROBENZENE	0.937	1.046	0.952	0.960	0.981	0.975	4.401
C215	ETHYL BENZENE	1.154	1.353	1.268	1.310	1.333	1.284	6.159
C220	M-XYLENE	2.101	2.523	2.443	2.632	2.747	2.489	9.856
C225	P-XYLENE	2.101	2.523	2.443	2.632	2.747	2.489	9.856
C230	O-XYLENE	1.115	1.299	1.226	1.278	1.326	1.249	6.666
C235	BROMOFORM	0.304	0.436	0.412	0.459	0.459	0.414	15.571
C240	1,1,2,2-TETRACHLOROETH	0.315	0.377	0.333	0.360	0.354	0.348	6.920
C245	1,3-DICHLOROBENZENE	0.944	1.123	1.056	1.128	1.087	1.068	7.042
C250	1,4-DICHLOROBENZENE	1.063	1.198	1.150	1.204	1.158	1.155	4.864
C255	1,2-DICHLOROBENZENE	0.996	1.145	1.093	1.127	1.099	1.092	5.298

Initial Calibration Data

Case No. NA Contract Lab: IAL
Contract No. NA Instrument Identifier: INCOS-5020
Calibration Date: 01/08/92
* = CCC, MAX %RSD = 30
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	RF 20PPB	RF 50PPB	RF 100PP	RF 150PP	RF 200PP	Mean RF	%RSD
CS15	1,2-DICHLOROETHANE-D4	1.650	1.569	2.604	1.939	2.125	1.977	20.992
CS05	TOLUENE-D8 *SS2*	0.579	0.669	0.595	0.837	0.849	0.706	18.357
CS10	4-BROMOFLOROBENZENE *S	0.705	0.814	0.768	0.890	0.884	0.812	9.651
C010	CHLOROMETHANE	0.755	0.753	0.946	0.750	0.772	0.795	10.667
C015	VINYL CHLORIDE	0.868	0.920	0.956	0.837	0.928	0.902	5.321
C020	BROMOMETHANE	1.529	1.858	2.436	2.150	2.598	2.114	20.434
C025	CHLOROETHANE	0.603	0.884	1.423	1.522	1.034	1.093	34.804
C030	1,1-DICHLOROETHENE	1.779	1.713	1.949	1.674	2.046	1.832	8.684
C035	METHYLENE CHLORIDE	0.633	1.432	1.456	1.042	1.332	1.179	29.417
C040	T-1,2-DICHLOROETHENE	1.117	1.203	1.438	1.060	1.381	1.240	13.268
C045	1,1-DICHLOROETHANE	2.061	1.792	2.172	1.772	2.144	1.988	9.698
C050	CHLOROFORM	3.481	2.882	3.730	2.984	3.107	3.237	11.021
C055	1,1,1-TRICHLOROETHANE	3.846	3.030	4.325	3.340	3.584	3.625	13.623
C060	CARBON TETRACHLORIDE	3.306	3.196	4.318	3.344	3.781	3.589	12.943
C110	BENZENE	0.837	0.717	0.757	0.925	0.835	0.814	9.875
C115	1,2-DICHLOROETHANE	0.502	0.416	0.485	0.556	0.483	0.489	10.232
C120	TRICHLOROETHENE	0.402	0.428	0.363	0.459	0.538	0.438	15.079
C125	1,2-DICHLOROPROPANE	0.332	0.373	0.297	0.356	0.488	0.369	19.565
C130	BROMODICHLOROMETHANE	0.588	0.833	0.662	1.002	1.346	0.886	34.171
C135	C-1,3-DICHLOROPROPENE	0.412	0.978	0.501	0.955	0.628	0.695	37.335
C140	TOLUENE	0.662	0.704	0.648	0.847	0.848	0.742	13.319
C145	T-1,3-DICHLOROPROPENE	0.043	0.074	0.064	0.099	0.093	0.074	30.600
C150	1,1,2-TRICHLOROETHANE	0.220	0.207	0.220	0.267	0.267	0.236	12.097
C155	TETRACHLOROETHENE	0.296	0.315	0.296	0.387	0.409	0.340	15.720
C160	DIBROMOCHLOROMETHANE	0.257	0.288	0.304	0.403	0.439	0.338	23.158
C210	CHLOROBENZENE	0.944	1.003	0.985	1.008	0.996	0.987	2.582
C215	ETHYL BENZENE	1.367	1.477	1.526	1.557	1.544	1.494	5.180
C220	M-XYLENE	2.534	2.797	2.871	3.094	3.185	2.896	8.883
C225	P-XYLENE	2.534	2.797	2.871	3.094	3.185	2.896	8.883
C230	O-XYLENE	1.312	1.413	1.432	1.543	1.556	1.451	6.953
C235	BROMOFORM	0.197	0.248	0.305	0.337	0.330	0.284	21.015
C240	1,1,2,2-TETRACHLOROETH	0.459	0.504	0.504	0.515	0.485	0.493	4.412
C245	1,3-DICHLOROBENZENE	0.771	0.821	0.853	0.947	0.940	0.867	8.788
C250	1,4-DICHLOROBENZENE	0.814	0.901	0.958	1.085	1.044	0.961	11.363
C255	1,2-DICHLOROBENZENE	0.875	0.867	0.902	0.978	0.953	0.915	5.313

Calibration Check

Case No. NA
Contract No. NA
Calibration Date: 01/08/92
Contract Lab: IAL
Instrument Identifier: INCOS-5020

Standard File: VCK011392=

Date: 01/13/92 Time: 14:46:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	1.977	1.539	22.154	
CS05	TOLUENE-D8 *SS2*	0.706	0.605	14.231	
CS10	4-BROMOFLOROBENZENE *S	0.812	0.700	13.799	
C010	CHLOROMETHANE	0.795	0.768	3.378	#
C015	VINYL CHLORIDE	0.902	0.950	5.309	*
C020	BROMOMETHANE	2.114	1.908	9.726	
C025	CHLOROETHANE	1.093	1.036	5.254	
C030	1,1-DICHLOROETHENE	1.832	1.858	1.422	*
C035	METHYLENE CHLORIDE	1.179	1.269	7.628	
C040	T-1,2-DICHLOROETHENE	1.240	1.215	2.003	
C045	1,1-DICHLOROETHANE	1.988	2.086	4.936	#
C050	CHLOROFORM	3.237	2.892	10.659	*
C055	1,1,1-TRICHLOROETHANE	3.625	3.166	12.657	
C060	CARBON TETRACHLORIDE	3.589	2.787	22.352	
C110	BENZENE	0.814	0.725	10.914	
C115	1,2-DICHLOROETHANE	0.489	0.418	14.368	
C120	TRICHLOROETHENE	0.438	0.453	3.396	
C125	1,2-DICHLOROPROPANE	0.369	0.403	9.054	*
C130	BROMODICHLOROMETHANE	0.886	0.864	2.492	
C135	C-1,3-DICHLOROPROPENE	0.695	0.969	39.373	
C140	TOLUENE	0.742	0.686	7.560	*
C145	T-1,3-DICHLOROPROPENE	0.074	0.067	9.902	
C150	1,1,2-TRICHLOROETHANE	0.236	0.227	3.883	
C155	TETRACHLOROETHENE	0.340	0.297	12.759	
C160	DIBROMOCHLOROMETHANE	0.338	0.273	19.344	
C210	CHLOROBENZENE	0.987	0.992	0.433	#
C215	ETHYL BENZENE	1.494	1.490	0.260	*
C220	M-XYLENE	2.896	2.738	5.456	
C225	P-XYLENE	2.896	2.738	5.456	
C230	O-XYLENE	1.451	1.429	1.531	
C235	BROMOFORM	0.284	0.255	10.109	#
C240	1,1,2,2-TETRACHLOROETH	0.493	0.478	3.053	#
C245	1,3-DICHLOROBENZENE	0.867	0.790	8.895	
C250	1,4-DICHLOROBENZENE	0.961	0.885	7.910	
C255	1,2-DICHLOROBENZENE	0.915	0.824	9.954	

847520469

Calibration Check

Case No. NA
Contract No. NA
Calibration Date: 01/08/92
Standard File: VCK011092=

Contract Lab: IAL
Instrument Identifier: INCOS-5020

Date: 01/10/92 Time: 16:39:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	1.977	1.867	5.601	
CS05	TOLUENE-D8 *SS2*	0.706	0.647	8.277	
CS10	4-BROMOFLOROBENZENE *S	0.812	0.710	12.612	
C010	CHLOROMETHANE	0.795	0.801	0.735	#
C015	VINYL CHLORIDE	0.902	0.967	7.189	*
C020	BROMOMETHANE	2.114	2.250	6.435	
C025	CHLOROETHANE	1.093	1.333	21.962	
C030	1,1-DICHLOROETHENE	1.832	1.945	6.154	*
C035	METHYLENE CHLORIDE	1.179	1.259	6.806	
C040	T-1,2-DICHLOROETHENE	1.240	1.161	6.381	
C045	1,1-DICHLOROETHANE	1.988	2.072	4.215	#
C050	CHLOROFORM	3.237	2.604	19.556	*
C055	1,1,1-TRICHLOROETHANE	3.625	3.102	14.418	
C060	CARBON TETRACHLORIDE	3.589	2.963	17.444	
C110	BENZENE	0.814	0.900	10.611	
C115	1,2-DICHLOROETHANE	0.489	0.540	10.509	
C120	TRICHLOROETHENE	0.438	0.576	31.489	
C125	1,2-DICHLOROPROPANE	0.369	0.364	1.273	*
C130	BROMODICHLOROMETHANE	0.886	0.863	2.646	
C135	C-1,3-DICHLOROPROPENE	0.695	0.444	36.093	
C140	TOLUENE	0.742	0.717	3.335	*
C145	T-1,3-DICHLOROPROPENE	0.074	0.069	6.949	
C150	1,1,2-TRICHLOROETHANE	0.236	0.220	6.893	
C155	TETRACHLOROETHENE	0.340	0.357	4.949	
C160	DIBROMOCHLOROMETHANE	0.338	0.279	17.635	
C210	CHLOROBENZENE	0.987	1.059	7.278	#
C215	ETHYL BENZENE	1.494	1.530	2.429	*
C220	M-XYLENE	2.896	2.891	0.183	
C225	P-XYLENE	2.896	2.891	0.183	
C230	O-XYLENE	1.451	1.461	0.698	
C235	BROMOFORM	0.284	0.261	7.950	#
C240	1,1,2,2-TETRACHLOROETH	0.493	0.450	8.780	#
C245	1,3-DICHLOROBENZENE	0.867	0.825	4.823	
C250	1,4-DICHLOROBENZENE	0.961	0.933	2.921	
C255	1,2-DICHLOROBENZENE	0.915	0.903	1.297	

847520470

Calibration Check

Case No. NA
Contract No. NA
Calibration Date: 12/12/91
Standard File: VCK010392=

Contract Lab: IAL
Instrument Identifier: INCOS-5020

Date: 01/03/92 Time: 17:05:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	0.963	1.787	85.570	
CS05	TOLUENE-D8 *SS2*	0.913	0.845	7.488	
CS10	4-BROMOFLOROBENZENE *S	0.679	0.860	26.644	
C010	CHLOROMETHANE	0.689	0.482	30.067	#
C015	VINYL CHLORIDE	0.522	0.493	5.586	*
C020	BROMOMETHANE	1.057	1.474	39.429	
C025	CHLOROETHANE	0.806	0.739	8.326	
C030	1,1-DICHLOROETHENE	1.292	1.385	7.249	*
C035	METHYLENE CHLORIDE	1.436	1.292	10.040	
C040	T-1,2-DICHLOROETHENE	1.010	0.967	4.254	
C045	1,1-DICHLOROETHANE	1.429	1.453	1.689	#
C050	CHLOROFORM	1.627	1.788	9.925	*
C055	1,1,1-TRICHLOROETHANE	1.514	1.513	0.015	
C060	CARBON TETRACHLORIDE	1.638	1.982	20.981	
C110	BENZENE	0.848	1.241	46.329	
C115	1,2-DICHLOROETHANE	0.458	0.789	72.429	
C120	TRICHLOROETHENE	0.499	0.476	4.658	
C125	1,2-DICHLOROPROPANE	0.443	0.371	16.339	*
C130	BROMODICHLOROMETHANE	0.782	1.042	33.250	
C135	C-1,3-DICHLOROPROPENE	0.540	0.791	46.356	
C140	TOLUENE	1.024	0.925	9.622	*
C145	T-1,3-DICHLOROPROPENE	0.239	0.251	5.074	
C150	1,1,2-TRICHLOROETHANE	0.267	0.302	13.249	
C155	TETRACHLOROETHENE	0.663	0.423	36.168	
C160	DIBROMOCHLOROMETHANE	0.506	0.406	19.700	
C210	CHLOROBENZENE	0.975	1.082	10.924	#
C215	ETHYL BENZENE	1.284	1.512	17.794	*
C220	M-XYLENE	2.489	2.895	16.300	
C225	P-XYLENE	2.489	2.895	16.300	
C230	O-XYLENE	1.249	1.431	14.583	
C235	BROMOFORM	0.414	0.260	37.174	#
C240	1,1,2,2-TETRACHLOROETH	0.348	0.427	22.887	#
C245	1,3-DICHLOROBENZENE	1.068	0.815	23.678	
C250	1,4-DICHLOROBENZENE	1.155	0.915	20.735	
C255	1,2-DICHLOROBENZENE	1.092	0.893	18.248	

847520471

Calibration Check

Case No. NA
Contract No. NA
Calibration Date: 01/08/92
Standard File: VCK010992=

Contract Lab: IAL
Instrument Identifier: INCOS-5020

Date: 01/09/92 Time: 17:17:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	1.977	1.943	1.726	
CS05	TOLUENE-D8 *SS2*	0.706	0.510	27.783	
CS10	4-BROMOFLOROBENZENE *S	0.812	0.699	14.001	
C010	CHLOROMETHANE	0.795	0.887	11.538	#
C015	VINYL CHLORIDE	0.902	1.041	15.429	*
C020	BROMOMETHANE	2.114	2.386	12.879	
C025	CHLOROETHANE	1.093	1.465	33.978	
C030	1,1-DICHLOROETHENE	1.832	2.176	18.774	*
C035	METHYLENE CHLORIDE	1.179	0.967	17.948	
C040	T-1,2-DICHLOROETHENE	1.240	1.387	11.857	
C045	1,1-DICHLOROETHANE	1.988	2.243	12.799	#
C050	CHLOROFORM	3.237	2.887	10.797	*
C055	1,1,1-TRICHLOROETHANE	3.625	3.399	6.245	
C060	CARBON TETRACHLORIDE	3.589	2.942	18.039	
C110	BENZENE	0.814	0.830	1.973	
C115	1,2-DICHLOROETHANE	0.489	0.490	0.259	
120	TRICHLOROETHENE	0.438	0.494	12.717	
C125	1,2-DICHLOROPROPANE	0.369	0.408	10.612	*
C130	BROMODICHLOROMETHANE	0.886	1.149	29.706	
C135	C-1,3-DICHLOROPROPENE	0.695	0.957	37.714	
C140	TOLUENE	0.742	0.824	11.055	*
C145	T-1,3-DICHLOROPROPENE	0.074	0.068	9.121	
C150	1,1,2-TRICHLOROETHANE	0.236	0.252	6.755	
C155	TETRACHLOROETHENE	0.340	0.369	8.377	
C160	DIBROMOCHLOROMETHANE	0.338	0.333	1.578	
C210	CHLOROBENZENE	0.987	1.043	5.679	#
C215	ETHYL BENZENE	1.494	1.544	3.367	*
C220	M-XYLENE	2.896	2.901	0.180	
C225	P-XYLENE	2.896	2.901	0.180	
C230	O-XYLENE	1.451	1.452	0.060	
C235	BROMOFORM	0.284	0.260	8.334	#
C240	1,1,2,2-TETRACHLOROETH	0.493	0.484	1.950	#
C245	1,3-DICHLOROBENZENE	0.867	0.817	5.721	
C250	1,4-DICHLOROBENZENE	0.961	0.906	5.721	
C255	1,2-DICHLOROBENZENE	0.915	0.884	3.348	

Calibration Check

Case No. NA
Contract No. NA
Calibration Date: 01/08/92
Standard File: VCK012192=

Contract Lab: IAL
Instrument Identifier: INCOS-5020

Date: 01/21/92 Time: 17:50:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	1.977	1.836	7.122	
CS05	TOLUENE-D8 *SS2*	0.706	0.601	14.890	
CS10	4-BROMOFLOROBENZENE *S	0.812	0.760	6.376	
C010	CHLOROMETHANE	0.795	0.784	1.350	#
C015	VINYL CHLORIDE	0.902	0.765	15.132	*
C020	BROMOMETHANE	2.114	2.277	7.736	
C025	CHLOROETHANE	1.093	1.160	6.116	
C030	1,1-DICHLOROETHENE	1.832	1.696	7.456	*
C035	METHYLENE CHLORIDE	1.179	0.775	34.234	
C040	T-1,2-DICHLOROETHENE	1.240	1.011	18.456	
C045	1,1-DICHLOROETHANE	1.988	2.062	3.719	#
C050	CHLOROFORM	3.237	2.818	12.926	*
C055	1,1,1-TRICHLOROETHANE	3.625	2.841	21.622	
C060	CARBON TETRACHLORIDE	3.589	2.652	26.121	
C110	BENZENE	0.814	0.865	6.208	
C115	1,2-DICHLOROETHANE	0.489	0.478	2.216	
C120	TRICHLOROETHENE	0.438	0.342	21.880	
C125	1,2-DICHLOROPROPANE	0.369	0.314	14.956	*
C130	BROMODICHLOROMETHANE	0.886	0.780	11.942	
C135	C-1,3-DICHLOROPROPENE	0.695	0.454	34.617	
C140	TOLUENE	0.742	0.712	3.983	*
C145	T-1,3-DICHLOROPROPENE	0.074	0.062	16.377	
C150	1,1,2-TRICHLOROETHANE	0.236	0.179	24.412	
C155	TETRACHLOROETHENE	0.340	0.324	4.752	
C160	DIBROMOCHLOROMETHANE	0.338	0.267	21.033	
C210	CHLOROBENZENE	0.987	1.144	15.812	#
C215	ETHYL BENZENE	1.494	1.637	9.571	*
C220	M-XYLENE	2.896	2.962	2.260	
C225	P-XYLENE	2.896	2.962	2.260	
C230	O-XYLENE	1.451	1.532	5.535	
C235	BROMOFORM	0.284	0.249	12.355	#
C240	1,1,2,2-TETRACHLOROETH	0.493	0.439	10.950	#
C245	1,3-DICHLOROBENZENE	0.867	0.928	7.119	
C250	1,4-DICHLOROBENZENE	0.961	1.001	4.197	
C255	1,2-DICHLOROBENZENE	0.915	0.969	5.906	

VOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: N/A

Lab code: NA Case No.: N/A SAS No.: NA SDG No.: NA

Lab File ID: VB011092 Lab Sample ID: 009, 017, 019, 020

Date Analyzed: 01/10/92 Time Analyzed: 16:03

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: INICOS-50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01:	VSTD 50	VOA CAL CHK	VCK011092	01/10/92
02:	Field	017015	V017015	"
03:	Trip	019003	V019003	"
04:	Field	019002	V019002	"
05:	MW4	019001	V019001	"
06:	TRIP	020004	V020004	"
07:	A_1	017001	V017001	"
08:	A_2	017002	V017002	"
09:	B_1	017003	V017003	"
10:	B_2	017004	V017004	"
11:	C_1	017005	V017005	"
12:	C_2	017006	V017006	"
13:	D_1	017007	V017007	01/11/92
14:	D_2	017008	V017008	"
15:	MW3	020002	V020002	"
16:	MW2	020001	V020001	"
17:	AT_1	009001B	V009001B	"
18:				
19:				
20:				
21:				
22:				
23:				
24:				
25:				
26:				
27:				
28:				
29:				
30:				

COMMENTS:

847520474

Quantitation Report File: VB011092

Data: VB011092.TI
01/10/92 16:03:00
Sample: VOA METHOD BLK
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	513	6:24	1	1.000	A BB	14565.	50.000 UG/L	19.29
2	114	745	9:17	2	1.000	A BB	76619.	50.000 UG/L	19.29
3	117	1256	15:40	3	1.000	A BB	43584.	50.000 UG/L	19.29
4	65	638	7:57	1	1.244	A BB	20613.	37.921 UG/L	14.63
5	98	1000	12:28	2	1.342	A BB	46150.	46.564 UG/L	17.96
6	95	1476	18:24	3	1.175	A BB	27760.	44.899 UG/L	17.32
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	63	815	10:10	2	1.094	A BB	30.	0.054 UG/L	0.02
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

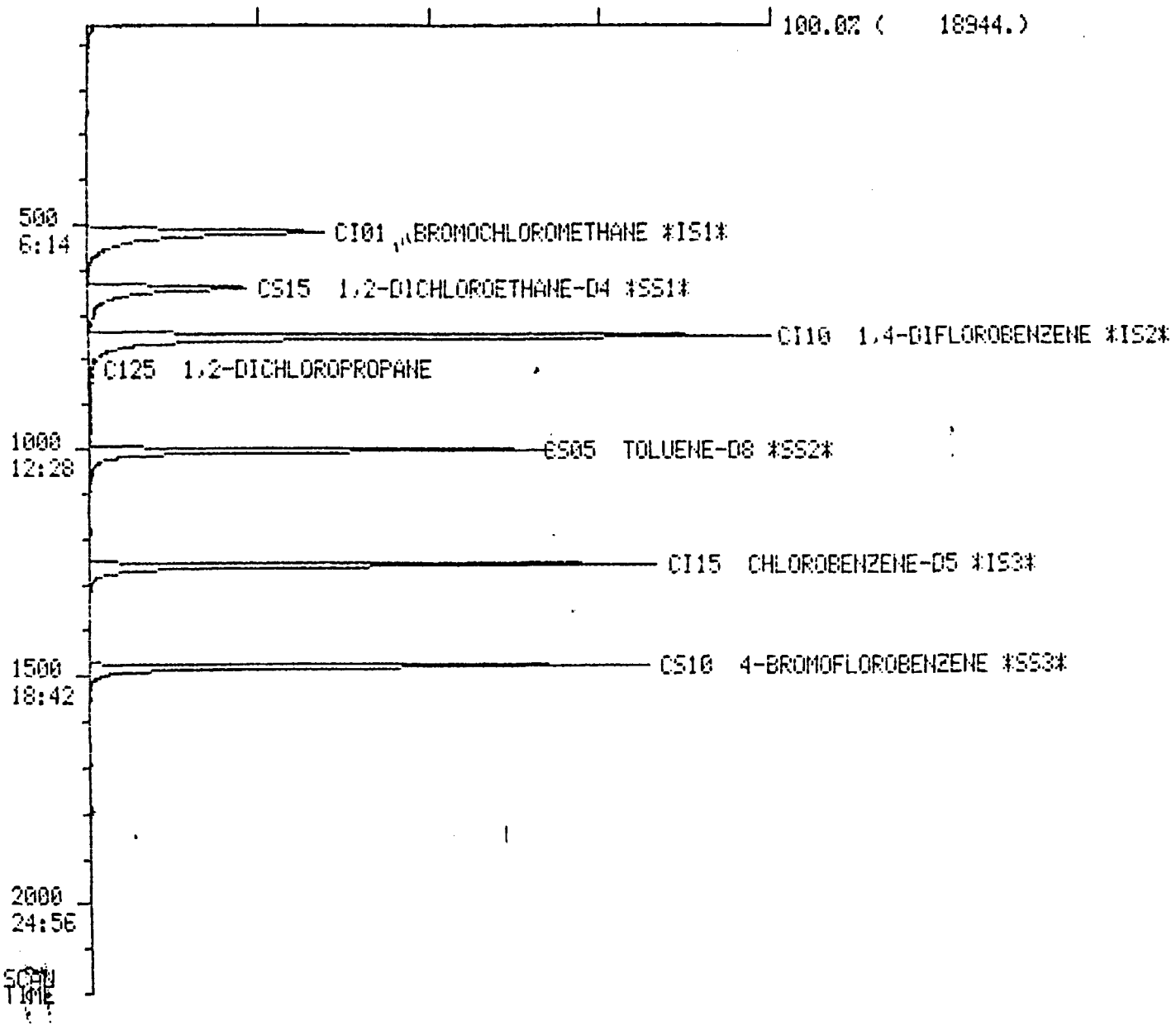
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	37.92	50.00	1.415	1.866	0.76
5	12:30	1.00	1.341	1.00	46.56	50.00	0.602	0.647	0.93
6	18:24	1.00	1.176	1.00	44.90	50.00	0.637	0.709	0.90
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.361						
12	3:04		0.480						
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09		0.873						
20	9:44		1.044						
21	10:10	1.00	1.090	1.00	0.05	50.00	0.000	0.364	0.00
22	10:59		1.178						
23	12:03		1.293						
24	12:39		1.357						
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06		1.029						
31	16:24		1.048						
32	16:24		1.048						
33	17:14		1.101						
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520477

DATA FROM FILE: VB011092 SCANS 60 TO 2200 ACQUIRED: 01/10/92 16:03:00
CALI: VB011092 #3

SAMPLE: VOA METHOD BLK
CONDS.: IAL/624/DB624



847520478

Lab name: INTEGRATED ANALTICAL LAB Contract: N/A

Lab code: NA Case No.: N/A SAS No.: NA SDG No.: NA

Lab File ID: VB011392 Lab Sample ID: 017, 022

Date Analyzed: 01/13/92 Time Analyzed: 14:09

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: INICOS-50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
				01/13/92
01:	VSTD 50	V6A CAL CHK	VCK 011392	
02:	003002S SPK	003002 MS	V003002 S1	
03:	003002S SPKDup	003002 MSD	V003002 S2	
04:	TRIP	022003	V022003	
05:	Field	022002	V022002	
06:	MW1	022001	V022001	
07:	C1	017005 ReRun	V017005 A	
08:	D1	017007 "	V017007 A	
09:	D2	017008 "	V017008 A	
10:	E1	017009	V017009	
11:	E2	017010	V017010	
12:	F	017011	V017011	
13:	F2	017012	V017012	
14:	G1	017013	V017013	
15:	G2	017014	V017014	
15:				
17:				
18:				
19:				
20:				
21:				
22:				
23:				
24:				
25:				
26:				
27:				
28:				
29:				
30:				

COMMENTS:

847520479

Quantitation Report File: VB011392

Data: VB011392.TI
01/13/92 14:09:00
Sample: VOA METHOD BLK
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

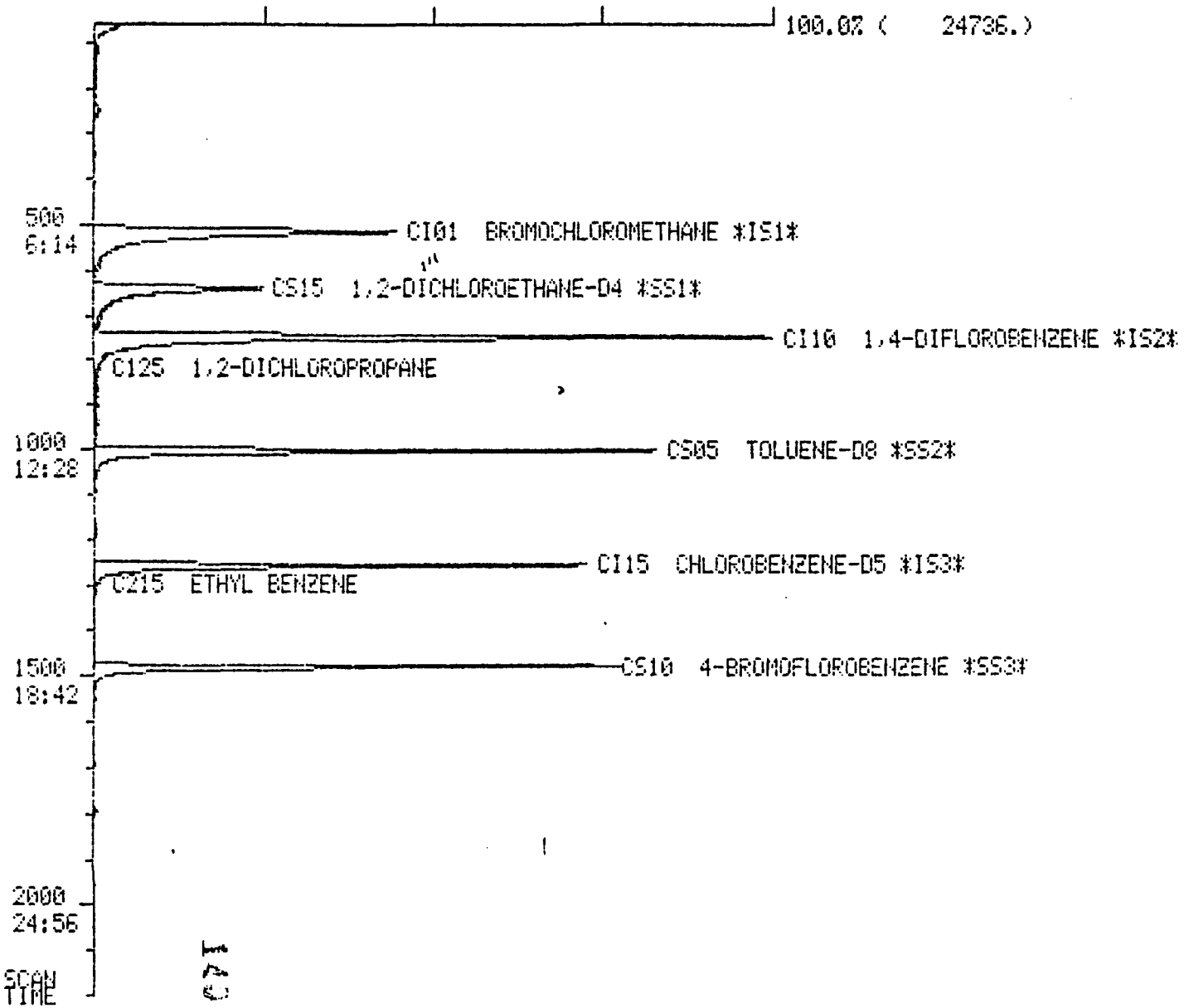
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	511	6:22	1	1.000	A BB	27019.	50.000 UG/L	17.78
2	114	744	9:17	2	1.000	A BB	112774.	50.000 UG/L	17.78
3	117	1254	15:38	3	1.000	A BB	53444.	50.000 UG/L	17.78
4	65	635	7:55	1	1.243	A BB	34492.	41.480 UG/L	14.75
5	98	999	12:27	2	1.343	A BB	73962	54.223 UG/L	19.29
6	95	1476	18:24	3	1.177	A BB	34788.	46.518 UG/L	16.55
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	63	813	10:08	2	1.093	A BB	151.	0.167 UG/L	0.06
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1292	16:07	3	1.030	A BV	689.	0.433 UG/L	0.15
31	91	1316	16:24	3	1.049	A BB	73.	0.025 UG/L	0.01
32	91	1316	16:24	3	1.049	A BB	73.	0.025 UG/L	0.01
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	41.48	50.00	1.277	1.539	0.83
5	12:30	1.00	1.343	1.00	54.22	50.00	0.656	0.605	1.08
6	18:24	1.00	1.177	1.00	46.52	50.00	0.651	0.700	0.93
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
0	1:26		0.225						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04		0.480						
13	3:29		0.547						
14	4:19		0.676						
5	6:52		1.076						
6	7:01		1.100						
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09	1.00	1.091	1.00	0.17	50.00	0.001	0.402	0.00
22	10:58		1.180						
23	12:01		1.292						
24	12:38		1.358						
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	0.43	50.00	0.013	1.490	0.01
31	16:24	1.00	1.049	1.00	0.02	50.00	0.001	2.738	0.00
32	16:24	1.00	1.049	1.00	0.02	50.00	0.001	2.738	0.00
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
0	5:13		0.791						
1	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

DATA FROM FILE: VB011392 SCANS 60 TO 2200 ACQUIRED: 01/13/92 14:09:00
CALI: VB011392 #3

SAMPLE: VOA METHOD BLK
CONDS.: IAL/624/DB624



847520483

VOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: N/A

Lab code: NA Case No.: N/A SAS No.: NA SDG No.: NA

Lab File ID: VB012192 Lab Sample ID: 017,031

Date Analyzed: 01/21/92 Time Analyzed: 17:14

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: INCOS-50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VST 50	VOA CAL CHK	VCK 012192	01/21/92
02	MAT SPK	031010 MS	VO 31010 S1	"
03	MAT SPK DUP	" 031010 MSD	VO31010 S2	"
04	B6S1 RERUN	031004A RERUN	VO31004 A	"
05	S11 A "	031039 A "	VO31039 A	"
06	S8 B "	031037 B "	VO31037 B	"
07	MW1 "	025001A "	~~VO~~ VO25001A	"
08	MW4 "	024004A "	VO24004 A	"
09	G "	017007B "	VO17007 B	"
10	E2 "	017010 A "	VO17010 A	"
11	F "	017011 A "	VO17011 A	"
12	F2 "	017012 A "	VO17012 A	01/22/92
13	G2 "	017014 B "	VO17014 B	"
14	S8 B "	031037C "	VO31037C	"
15	S11 A "	031039 B "	VO31039B	"
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

Quantitation Report File: VB012192

Data: VB012192.TI
01/21/92 17:14:00
Sample: VOA METHOD BLK
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520485

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	506	6:19	1	1.000	A*BB	9392.	50.000	UG/L	18.67
2	114	740	9:14	2	1.000	A BB	63516.	50.000	UG/L	18.67
3	117	1246	15:34	3	1.000	A BB	28707.	50.000	UG/L	18.67
4	65	628	7:50	1	1.241	A BB	18211.	52.804	UG/L	19.71
5	98	996	12:25	2	1.346	A BB	33889.	44.454	UG/L	16.60
6	95	1470	18:20	3	1.178	A BB	21652.	49.625	UG/L	18.53
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	238	2:58	1	0.470	A BB	276.	1.896	UG/L	0.71
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									

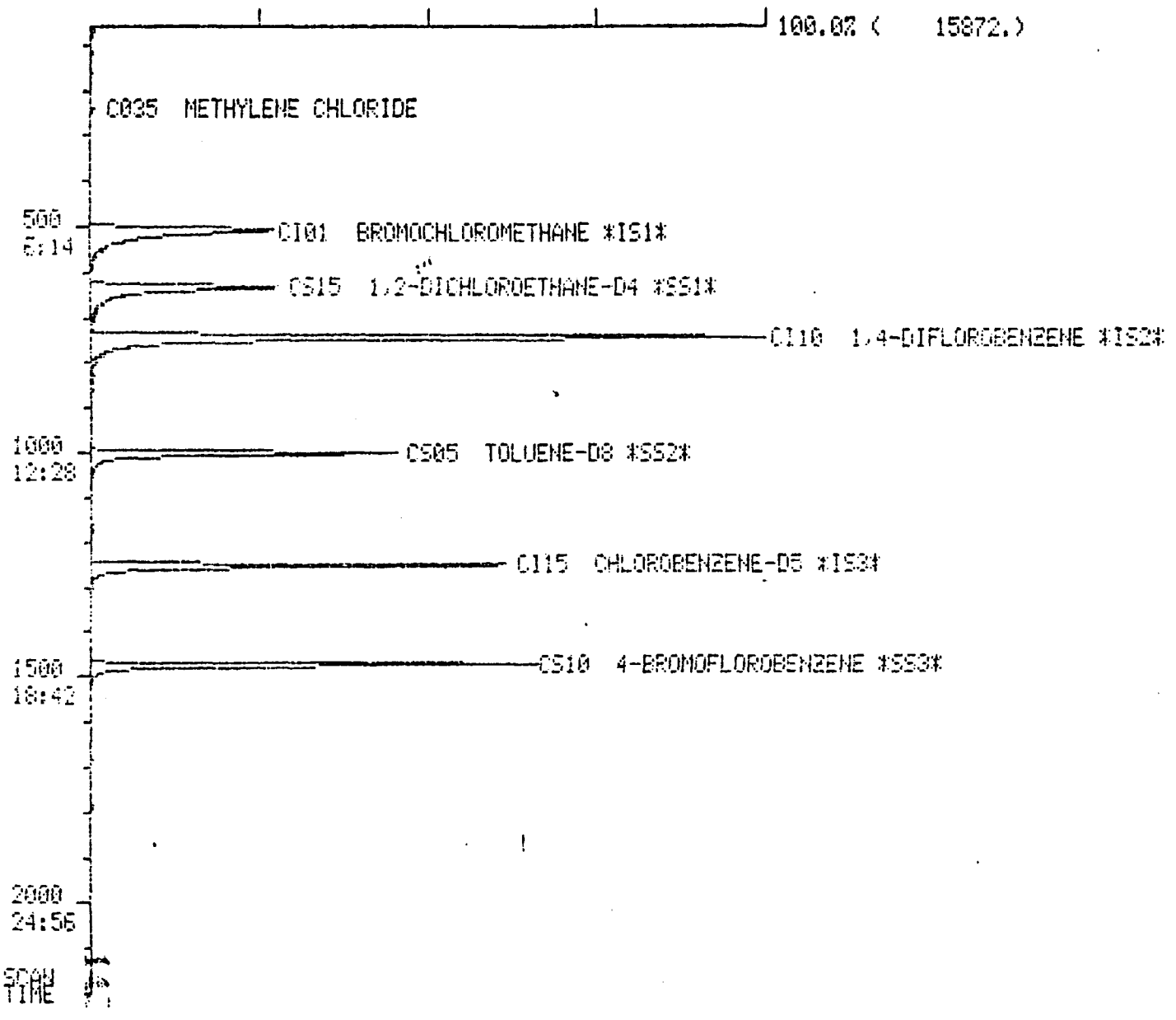
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:19	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:13	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:50	1.00	1.241	1.00	52.80	50.00	1.939	1.836	1.06
5	12:25	1.00	1.348	1.00	44.45	50.00	0.534	0.600	0.89
6	18:19	1.00	1.177	1.00	49.62	50.00	0.754	0.760	0.99
7	0:59		0.156						
8	1:05		0.172						
9	1:21		0.213						
10	1:26		0.227						

847520486

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:13		0.352						
12	2:59	1.00	0.472	1.00	1.90	50.00	0.029	0.775	0.04
13	3:26		0.543						
14	4:15		0.674						
15	6:47		1.075						
16	6:55		1.097						
17	7:20		1.162						
18	7:51		0.853						
19	8:02		0.871						
20	9:37		1.043						
21	10:04		1.092						
22	10:55		1.184						
23	11:57		1.296						
24	12:33		1.361						
25	13:17		1.442						
26	13:36		1.476						
27	13:41		1.486						
28	14:21		1.558						
29	15:36		1.002						
30	16:01		1.030						
31	16:19		1.049						
32	16:19		1.049						
33	17:09		1.102						
34	17:28		1.123						
35	18:54		1.215						
36	20:46		1.334						
37	21:00		1.349						
38	21:47		1.400						
39	3:35		0.569						
40	4:59		0.791						
41	3:46		0.597						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

DATA FROM FILE: VB012192 SCANS 60 TO 2200 ACQUIRED: 01/21/92 17:14:00
CALI: VB012192 #3

SAMPLE: VOA METHOD BLK
CONDS.: IAL/624/DB524



847520488

3D

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: INTEGRATED ANALYTICAL LAB Contract: _____

Lab code: _NA_ Case No. _006,008,009,017_ SAS No.: __NA__

Matrix Spike - EPA Sample No.: ____SBW0108S1/S2_____

COMPOUND	SPIKE ADDED (ug/L)	SAMPL CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	L
Phenol	100	0.0	21.5	21.5	1
2-Chlorophenol	100	0.0	76.1	76.1	2
1,4-Dichlorobenzene	100	0.0	66.5	66.5	3
N-Nitrosodi-n-prop. (1)	100	0.0	68.7	68.7	4
1,2,4-Trichlorobenzene	100	0.0	77.1	77.1	3
4-Chloro-3-methylphenol	100	0.0	78.0	78.0	2
Acenaphthene	100	0.0	90.6	90.6	4
4-Nitrophenol	100	0.0	15.9	15.9	1
2,4-Dinitrotoluene	100	0.0	90.1	90.1	2
Pentachlorophenol	100	0.0	104 *	104.1	
Pyrene	100	0.0	118	118.4	2

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD	QC LI RPD
Phenol	100	23.5	24	8.9	42
2-Chlorophenol	100	74.1	74	2.6	40
1,4-Dichlorobenzene	100	66.5	67	0.0	28
N-Nitrosodi-n-prop. (1)	100	70.8	71	3.0	38
1,2,4-Trichlorobenzene	100	79.5	80	3.0	28
4-Chloro-3-methylphenol	100	80.5	81	3.2	42
Acenaphthene	100	95.8	96	5.5	31
4-Nitrophenol	100	20.2	20	23.	50
2,4-Dinitrotoluene	100	94.7	95	4.9	38
Pentachlorophenol	100	109 *	109	4.6	50
Pyrene	100	127	127	7.0	31

(1) N-Nitrosodi-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: __0___ out of __11__ outside limits
spike recovery: __2__ out of __22__ outside limits

COMMENTS: _____

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: INTEGRATED ANALYTICAL LAB Contract: _____

Lab code: _NA_ Case No.: _009,017,034,037_ SAS No.: ___NA___ SDG No.: __NA__

Matrix Spike - EPA Sample No.: __SBS0117S1/S2___

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPL CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #
Phenol	N/A	N/A	N/A	NA
2-Chlorophenol	N/A	N/A	N/A	NA
1,4-Dichlorobenzene	100	0.0	80.9	80.9
N-Nitrosodi-n-prop. (1)	100	0.0	88.6	88.6
1,2,4-Trichlorobenzene	100	0.0	83.4	83.4
4-Chloro-3-methylphenol	N/A	N/A	N/A	NA
Acenaphthene	100	0.0	86.1	86.1
4-Nitrophenol	N/A	N/A	N/A	NA
2,4-Dinitrotoluene	100	0.0	64.0	64.0
Pentachlorophenol	N/A	N/A	N/A	NA
Pyrene	100	0.0	96.2	96.2

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LI RPD
Phenol	N/A	N/A	NA	NA	35
2-Chlorophenol	N/A	N/A	NA	NA	50
1,4-Dichlorobenzene	100	83.2	83	2.8	27
N-Nitrosodi-n-prop. (1)	100	88.2	88	0.4	38
1,2,4-Trichlorobenzene	100	94.7	95	12.	23
4-Chloro-3-methylphenol	N/A	N/A	NA	NA	33
Acenaphthene	100	94.8	95	9.6	19
4-Nitrophenol	N/A	N/A	NA	NA	50
2,4-Dinitrotoluene	100	68.1	68	6.2	47
Pentachlorophenol	N/A	N/A	NA	NA	47
Pyrene	100	107	107	10.	36

(1) N-Nitrosodi-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: __0___ out of __6__ outside limits
spike recovery: __0__ out of __12__ outside limits

COMMENTS: _____

_____

14

847520490

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab name: INTEGRATED ANALYTICAL LAB Contract_____

Lab code: ___NA___ Case No.: _____ SAS No.: ___NA___ SDG No.: __NA__

Lab File ID: DF0108 DFTPP Injectiom Date: 01/08/92

Instrument ID: F402I DFTPP Injection Time: 9:36

m/e	ION ABUNDANCE CRITERIA	% RELATIV ABUNDANC
51	30.0 - 60.0% of mass 198	55.12
68	Less than 2.0% of mass 69	0.00 (0.00
69	Mass 69 relative abundance	47.21
70	Less than 2.0% of mass 69	0.28 (0.60
127	40.0 - 60.0% of mass 198	43.43
197	Less than 1.0% of mass 198	0.00
198	Base peak, 100% relative abundance	100.00
199	5.0 to 9.0% of mass 198	6.08
275	10.0 -30.0% of mass 198	23.40
365	Greater than 1.00% of mass 198	1.96
441	Present, but less than mass 443	8.84
442	Greater than 40.0% of mass 198	69.19
443	17.0 - 23.0% of mass 442	12.98 (18.7

1-Value is % mass 69 2-value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD20	BNA CAL 1	SV20108	01/08/92	10:00
02	SSTD50	BNA CAL 2	SV50108		10:54
03	SSTD80	BNA CAL 3	SV80108		11:50
04	SSTD120	BNA CAL 4	SV120 0108		12:45
05	SSTD160	BNA CAL 5	SV160 0108		13:40
06	Field 1	902057	S902057		14:39
07	Field 2	902058	S902058		15:28
08	Method Blk	W. BNTR Blk	SBW0108		16:35
09	Field	017015	S017015		17:32
10	W. Blk BNA Spk	SBW0108MS	SBW0108S		18:20
11	Dup	SBW0108MSD	SBW0108SD		19:08
12	Method Blk	W. BNTR Blk	SBW0108A		19:56
13	S1	908001	S908001		20:44
14	001	900001	S900601A		21:32
15	Pt1Cl	006001	S006001A		22:20
16	Pt2Cl	008001	S008001A		23:08
17	001	900001	S900601B		23:56
18	Pt1Cl	006001	S006001B	01/09/92	0:43
19	Pt2Cl	008001	S008001B		1:31
20					
21					
22					

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FORM IV SV

847520491

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:	IAL	Contract:	
Inst ID:	FINN	Sens Date:	01/08/92	Sens Time:	9:36:00
Lab ID:	DFO10S	Cali Date:	01/08/92	Analyst:	JS

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 602	
51	30 to 60% of mass 198	55.12	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	47.21	
70	less than 2% of mass 69	0.28	(0.60) 1
127	40 TO 60% of mass 198	43.42	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.08	
275	10 TO 30% of mass 198	23.40	
365	greater than 1% of mass 198	1.96	
441	less than mass 442	8.84	
442	greater than 40% of mass 198	69.19	
443	17 TO 23% of mass 442	12.98	(18.76) 2

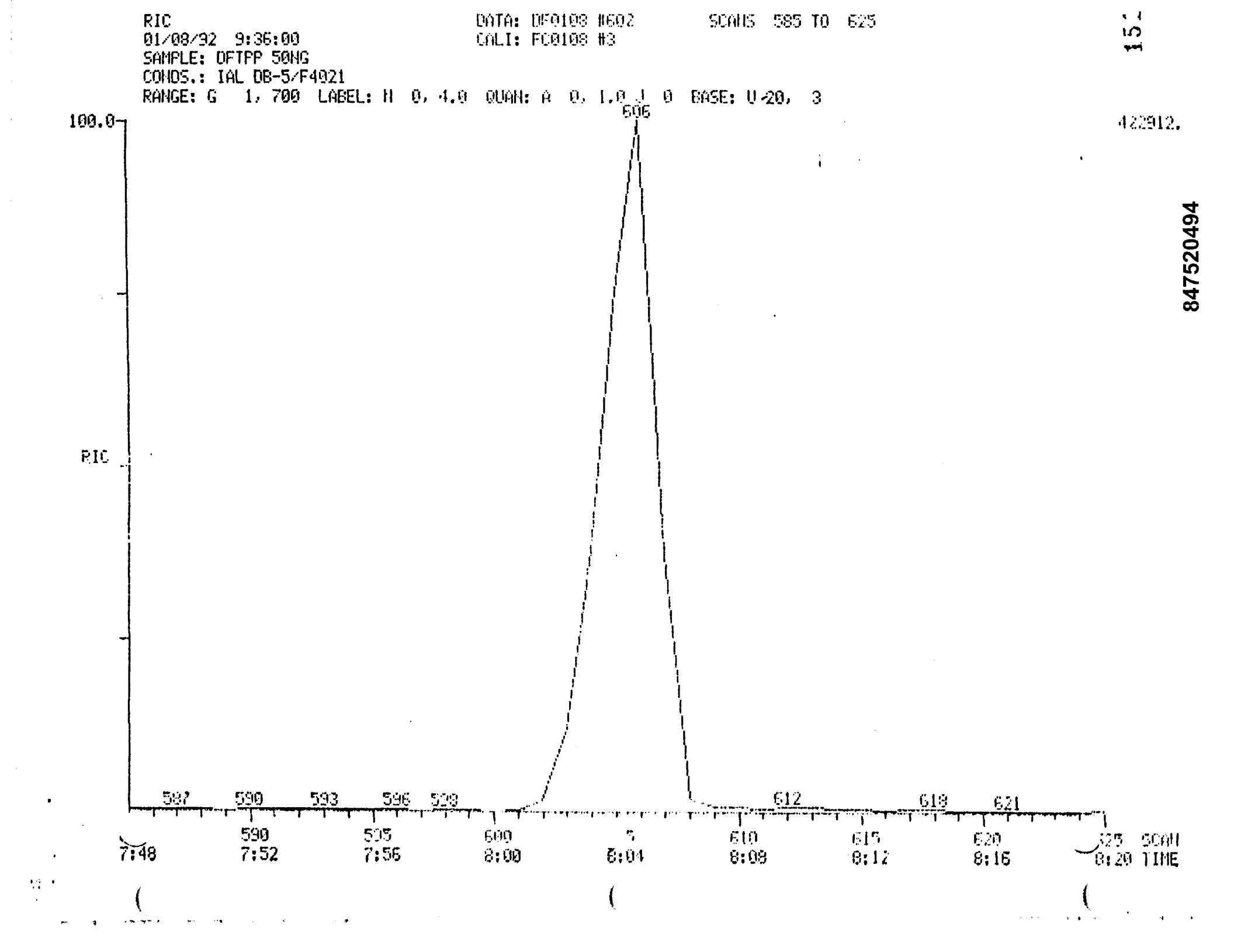
1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

Mass List Data: DF0108 # 604 Base m/z: 198
01/08/92 9:36:00 + 8:03 Cali: FC0108 # 3 RIC: 848896.
Sample: DFTPP 50NG
C(s.: IAL DB-5/F4021
#602 to #607 summed - #607 to #610 X1.00

47 0.00 0. Minima Min Inten: 763.
444 Maxima # 0

Mass		% RA	Inten.	Mass		% RA	Inten.
50?	S	14.16	15584.	179	S	2.51	2760.
51?	S	55.12	60672.	180	S	1.72	1896.
52?	S	2.78	3056.	181	S	0.77	850.
56?	S	1.68	1848.	185	S	1.21	1334.
57?	S	3.40	3740.	186	S	10.01	11024.
61?	S	0.82	904.	187	S	2.85	3132.
63?	S	1.99	2196.	189	S	0.74	812.
65?	S	1.16	1274.	192	S	1.14	1252.
69	S	47.21	51968.	193	S	0.84	930
74	S	4.07	4480.	196	S	3.97	4368.
75	S	6.45	7096.	198	S	100.00	110080.
77	S	55.81	61440	199	S	6.08	6688.
78	S	3.56	3920.	201	S	0.72	798.
79	S	2.79	3072.	204	S	2.48	2728.
80	S	2.17	2392.	205	S	4.04	4448.
81	S	3.03	3332.	206	S	18.78	20672.
82	S	0.76	836.	207	S	2.17	2388.
83	S	0.94	1032.	211	S	1.56	1722.
85	S	0.94	1036.	217	S	4.20	4624.
1	S	0.74	866	221	S	6.48	7128.
92	S	0.76	840	223		1.11	1220.
93	S	3.41	3756.	224	S	9.14	10064.
98	S	2.86	3144.	225	S	2.55	2808.
99	S	2.34	2580.	227	S	3.26	3592.
101	S	1.73	1900.	229	S	1.00	1102.
104	S	0.97	1066	244	S	9.42	10368.
105	S	0.96	1058.	245	S	0.79	872.
107	S	10.80	11888.	246	S	1.36	1500.
108	S	1.93	2128.	255	S	40.17	44224.
110	S	27.06	29792.	256	S	5.46	6008.
111	S	3.39	3728.	258	S	1.96	2156.
116	S	0.71	777	265	S	0.76	835.
117	S	5.19	5712.	271	S	0.70	775.
122	S	0.84	920.	273	S	1.68	1850.
123	S	0.99	1090.	274	S	3.88	4272.
127	S	43.43	47808	275	S	23.40	25760.
129	S	16.72	18400.	276	S	2.96	3256.
130	S	1.10	1214.	277	S	1.28	1408.
135	S	1.22	1340.	286	S	3.66	4028.
141	S	1.89	2080.	303		1.97	2164.
147	S	1.02	1128.	304		1.09	1192.
148	S	1.66	1824.	334		0.71	783.
155	S	1.00	1096	365		1.96	2156.
156	S	1.50	1652.	372		1.12	1234.
1	S	0.91	1003.	423	S	4.45	4904.
167	S	0.82	0980	424		0.78	859.
168	S	1.78	1956	441	S	8.84	9728.
174	S	0.71	780	442	S	69.19	76160.
175	S	1.37	1510.	443	S	12.96	14288.
177	S	0.75	825.	444		1.19	1314.

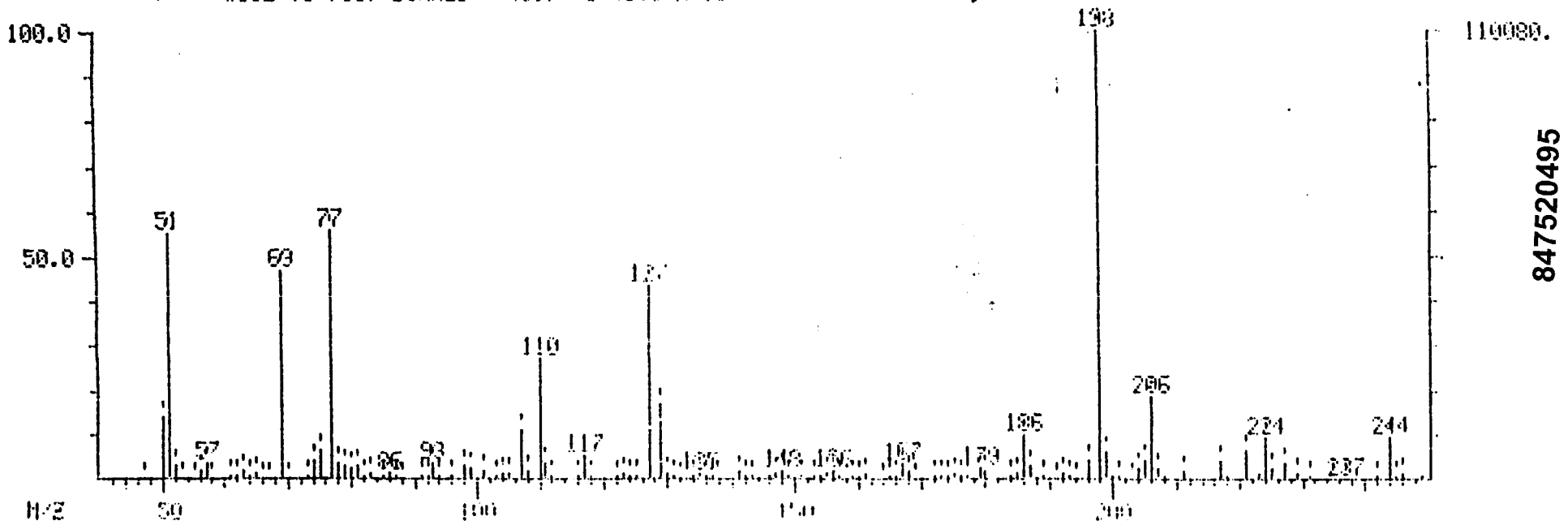
847520493

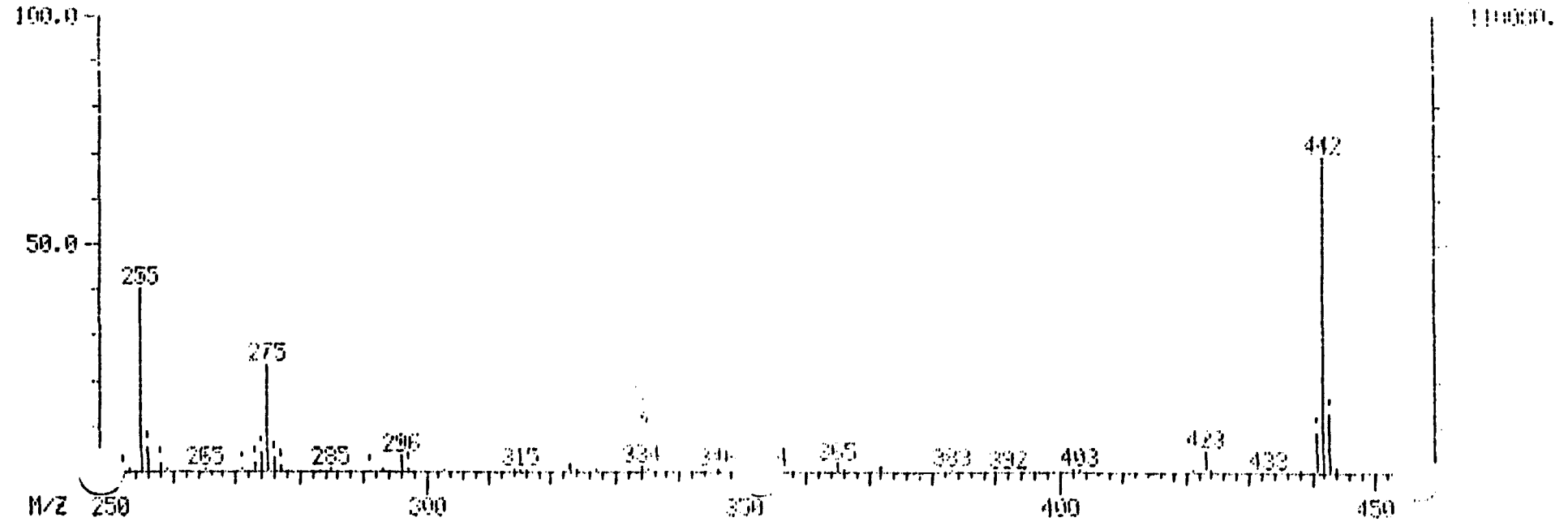

RIC
01/08/92 9:36:00
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
DATA: DF0108 #602
CALI: FC0108 #3
SCANS 585 TO 625
RANGE: G 1, 700 LABEL: H 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
422912.
RIC
506
587
590
593
596
599
612
618
621
590
595
600
610
615
620
625 SCAN
7:48
7:52
7:56
8:00
8:04
8:08
8:12
8:16
8:20 TIME
847520494

MASS SPECTRUM
01/08/92 9:36:00 + 8:03
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
#602 TO #607 SUMMED - #607 TO #610 X1.00

DATA: DFD108 #604
CALI: FC0108 #3

BASE M/Z: 198
RIC: 848896.





847520495

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab name: INTEGRATED ANALYTICAL LAB Contract_____

Lab code: ___NA___ Case No.: _____ SAS No.: ___NA___ SDG No.: __NA_

Lab File ID: D70117 DFTPP Injectiom Date: 01/17/9

Instrument ID: 7402J DFTPP Injection Time: 15:26

m/e	ION ABUNDANCE CRITERIA	% RELATI ABUNDAN
51	30.0 - 60.0% of mass 198	52.12
68	Less than 2.0% of mass 69	0.00 (0.0
69	Mass 69 relative abundance	45.71
70	Less than 2.0% of mass 69	0.00 (0.0
127	40.0 - 60.0% of mass 198	43.71
197	Less than 1.0% of mass 198	0.00
198	Base peak, 100% relative abundance	100.00
199	5.0 to 9.0% of mass 198	7.93
275	10.0 -30.0% of mass 198	21.86
365	Greater than 1.00% of mass 198	3.60
441	Present, but less than mass 443	10.06
442	Greater than 40.0% of mass 198	58.11
443	17.0 - 23.0% of mass 442	11.52 (19

1-Value is % mass 69 2-value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STAND

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZ
01	SSTD50	BNA CAL CHK	SCK0117	01/17/92	15:45
02	Method Blk	SOIL EXTR BLK	SB50117		16:39
03	SS	031005	5031005		17:32
04	S2-A	031022	5031022		18:20
05	S9-A	031036	5031036		19:08
06	BXS1	031009	5031009		19:56
07	BZS1	031005	5031005		20:4
08	S11-A	031039	5031039		21:3
09	S10-A	031038	5031038		22:21
10	S12-A	031040	5031040		23:01
11	E6C	902021	S902021		23:5
12	ECB	902016	S502016	01/18/92	0:40
13	C-2	017006	5017006		1:28
14	C1	009004	5009004		2:15
15	E7D	902026	S502026		3:03
16	SOIL BLK BNSPK	SB50117MS	SB50117S1		3:50
17	Dup	SB50117MSD	SB50117S2		4:37
18					
19					
20					
21					
22					

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FORM IV SV

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847520496

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:	IAL	Contract:	
Inst ID:	FINN	Sens Date:	01/17/92	Sens Time:	15:26:00
Lab ID:	DF0117	Cali Date:	01/08/92	Analyst:	JS

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 599	
51	30 to 60% of mass 198	52.12	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	45.71	
70	less than 2% of mass 69	0.00	(0.00) 1
127	40 TO 60% of mass 198	43.71	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	7.93	
275	10 TO 30% of mass 198	21.86	
365	greater than 1% of mass 198	3.60	
441	less than mass 443	10.06	
442	greater than 40% of mass 198	58.11	
443	17 TO 23% of mass 442	11.52	(19.82) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

847520497

Mass List
01/17/92 15:26:00 + 8:00
Sample: DFTPP 50NG
C(s.: IAL DB-5/F4021
#599 to #602 summed - #603 X1.00

Data: DF0117 # 600
Cali: S031010 # 3

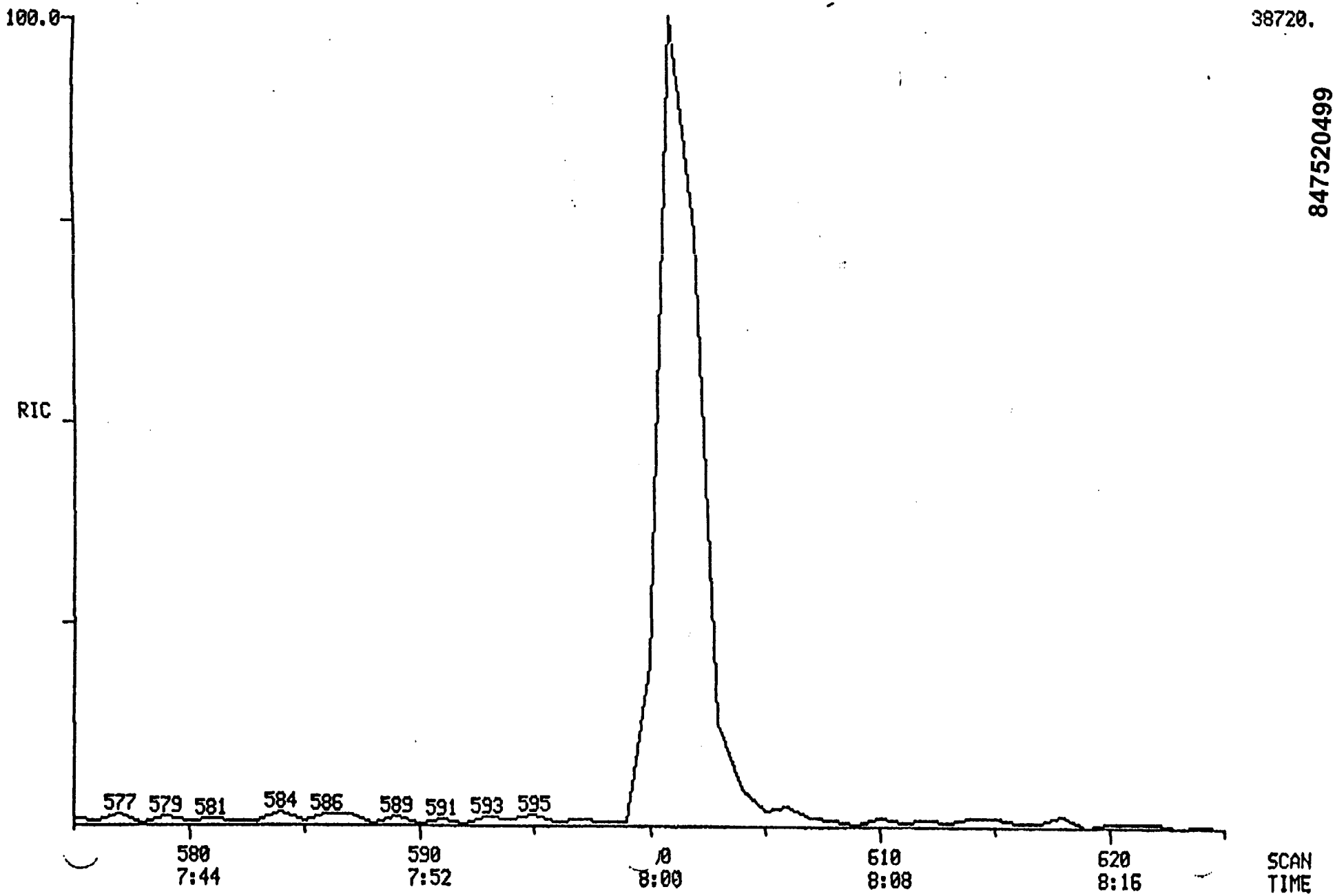
Base m/z: 198
RIC: 55616.

50		0.00	0.	Minima	Min Inten:		0.
443				Maxima	# 0		
Mass		% RA	Inten.	Mass		% RA	Inten.
50?	S	11.34	772.	217		7.02	478.
51?	S	52.12	3548.	221		12.71	865.
52?		6.13	417.	224		14.97	1019.
56?		3.61	246.	225		2.31	157.
57?		7.61	518.	227		5.14	350.
63?		4.26	290.	231		1.73	118.
65?		1.75	119.	244		12.78	870.
69	S	45.71	3112.	250		1.63	111.
74		7.58	516.	252		1.65	112.
75	S	4.58	312.	255	S	44.01	2996.
77	S	51.94	3536.	256		6.58	448.
78		5.86	399.	258		1.79	122.
79		5.74	391.	271		4.47	304.
80		4.63	315.	273		1.89	129.
86		3.79	258.	274		5.05	344.
93		9.12	621.	275	S	21.86	1488.
98		5.77	393.	276		2.56	174.
99		5.57	379.	296		7.64	520.
1		3.60	245.	323		1.75	119.
5		1.89	129.	354		1.70	116.
107	S	11.75	800.	365		3.60	245.
108		3.75	255.	366		2.44	166.
110	S	26.32	1792.	403		1.78	121.
111		5.79	394.	423		5.64	384.
117		11.52	784.	441?		10.06	685.
127	S	43.71	2976.	442?	S	58.11	3956.
128		3.10	211.	443?		11.52	784.
129	S	12.16	828.				
135		3.47	236.				
137		1.70	116.				
141		4.77	325.				
143		2.06	140.				
148		3.50	238.				
155		1.87	127.				
156		1.72	117.				
167		5.16	351.				
168		3.92	267.				
177		2.04	139.				
179		4.92	335.				
180		3.53	240.				
185		1.82	124.				
186	S	7.76	528.				
187		4.95	337.				
196		5.52	376.				
8	S	100.00	6808.				
199		7.93	540.				
204		4.88	332.				
205		5.89	401.				
206	S	19.68	1340.				
207		5.35	364.				

847520498

RIC
01/17/92 15:26:00
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
RANGE: G 1, 595 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: DF0117 #599 SCANS 575 TO 625
CALI: 5031010 #3

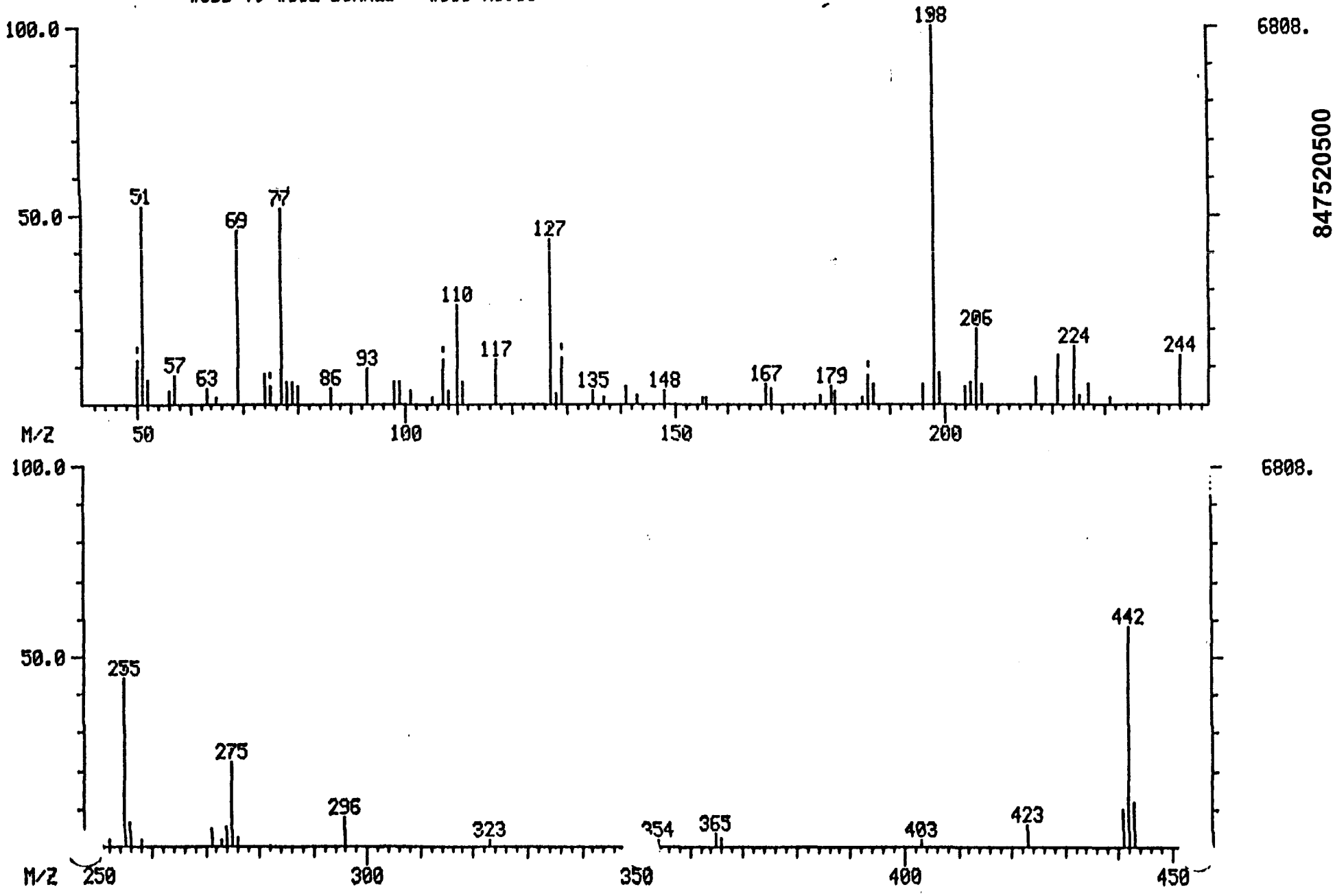


847520499

MASS SPECTRUM
01/17/92 15:26:00 + 8:00
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
#599 TO #602 SUMMED - #603 X1.00

DATA: DF0117 #600
CALI: 5031010 #3

BASE M/Z: 198
RIC: 55616.



847520500

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab name: INTEGRATED ANALYTICAL LAB Contract_____

Lab code: NA Case No.: _____ SAS No.: NA SDG No.: NA

Lab File ID: D7122 DFTPP Injectiom Date: 01/22/92

Instrument ID: 74021 DFTPP Injection Time: 15:25

m/e	ION ABUNDANCE CRITERIA	% RELATI ABUNDAN
51	30.0 - 60.0% of mass 198	55.24
68	Less than 2.0% of mass 69	0.00 (0.00
69	Mass 69 relative abundance	47.89
70	Less than 2.0% of mass 69	0.84 (1.7
127	40.0 - 60.0% of mass 198	43.63
197	Less than 1.0% of mass 198	0.00
198	Base peak, 100% relative abundance	100.00
199	5.0 to 9.0% of mass 198	7.04
275	10.0 -30.0% of mass 198	23.71
365	Greater than 1.00% of mass 198	2.45
441	Present, but less than mass 443	9.29
442	Greater than 40.0% of mass 198	67.48
443	17.0 - 23.0% of mass 442	12.8 (18.

1-Value is % mass 69 2-value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
01	SSTD50	BrA CAL CHK	SCK0122	01/22/92	15:44
02	Method BLK	Soil BETX Blk	SBS0122		16:44
03	518	031015	S031015		17:38
04	522	031019	S031019		18:26
05	526-A	031045	S031045		19:15
06	524-A	031043	S031043		20:03
07	527-A	031046	S031046		20:51
08	523-A	031042	S031042		21:38
09	520	031017	S031017		22:26
10	D-1	017007	S017007		23:14
11	G-2	017014	S017014	01/23/92	0:02
12	A-1	017003	S017003		0:49
13	D-2	017008	S017008		1:37
14	B-2	017004	S017004		2:25
15	C-1	017005	S017005		3:12
16	Soil BLK BrA Spk	SBS0122MS	SBS012251		4:00
17	Dup	SBS0122MSD	SBS012252		4:49
18	W. Blk BrA Spk	SBW012046	SBW012051		5:35
19	Dup	SBW0120MSD	SBW012052		6:23
20					
21					
22					

847520501

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:	IAL	Contract:	
Inst ID:	FINN	Sens Date:	01/22/92	Sens Time:	15:23:00
Lab ID:	DF0122	Cali Date:	01/08/92	Analyst:	JS

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 592	
51	30 to 60% of mass 198	55.24	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	47.89	
70	less than 2% of mass 69	0.84	(1.75) 1
127	40 TO 60% of mass 198	43.63	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	7.04	
275	10 TO 30% of mass 198	23.51	
365	greater than 1% of mass 198	2.45	
441	less than mass 443	9.29	
442	greater than 40% of mass 198	67.48	
443	17 TO 23% of mass 442	12.17	(18.03) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

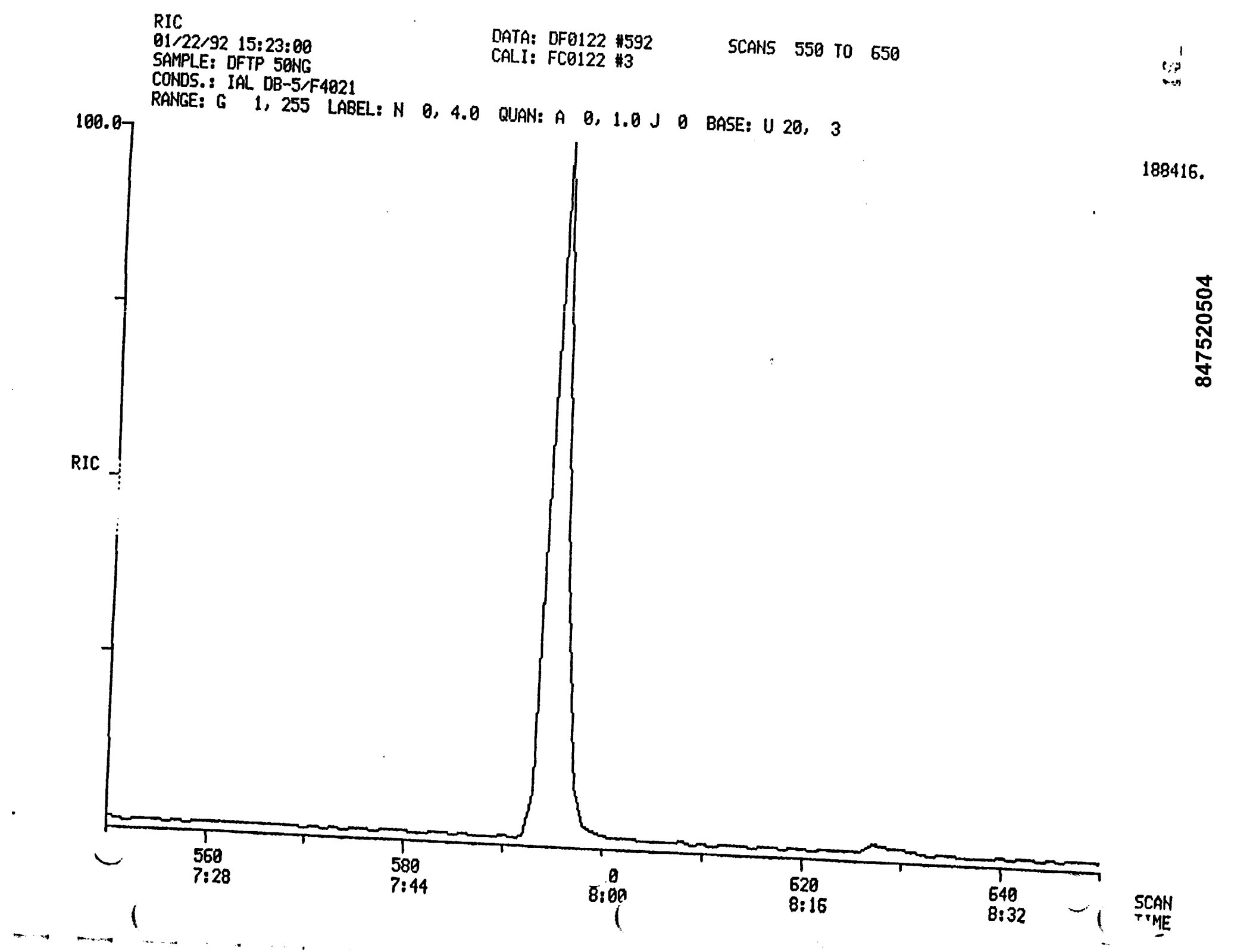
847520502

Mass List Data: DF0122 # 593 Base m/z: 198
01/22/92 15:23:00 + /:54 Cali: FC0122 # 3 RIC: 256000.
Sample: DFTP 50NG
C(s.: IAL DB-5/F4021
#592 to #595 summed - #597 X1.00

47 0.00 0. Minima Min Inten: 324.
444 Maxima # 0

Mass		% RA	Inten.	Maxima Mass		% RA	Inten.
50?	S	13.10	4280.	167	S	2.58	842.
51?	S	55.24	18048.	175		1.64	536.
52?	S	2.22	724.	177		1.04	339.
56?	S	1.29	422.	179	S	1.75	572.
57?	S	3.42	1116.	180		2.05	670.
61?		1.09	355.	181		1.07	348.
63?	S	1.55	506.	185		1.65	538.
65?		1.92	627.	186	S	9.78	3196.
69	S	47.89	15648.	187		3.23	1056.
74	S	4.05	1324.	192		1.09	356.
75	S	5.74	1876.	193		1.18	384.
76		2.49	815.	196	S	2.99	976.
77	S	53.48	17472.	198	S	100.00	32672.
78	S	3.05	998.	199		7.04	2300.
79	S	2.18	712.	201		1.02	333.
80		3.02	986.	204		3.05	997.
81	S	3.40	1110.	205		4.66	1522.
82		1.38	450.	206	S	17.04	5568.
85		1.28	418.	207	S	2.60	850.
91		1.30	424.	211		1.35	442.
92		1.18	384.	217		4.88	1594.
93	S	3.36	1098.	221	S	6.04	1972.
98	S	2.72	890.	223		1.38	452.
99	S	1.97	644.	224	S	9.04	2952.
101		2.34	763.	225		2.83	923.
103		1.19	388.	227		4.02	1314.
104		1.44	470.	229		1.51	492.
105		1.43	466.	242		1.01	331.
107	S	10.75	3512.	244	S	8.20	2680.
108		2.47	808.	245		1.34	437.
110	S	28.31	9248.	246		1.27	415.
111	S	2.98	974.	255	S	39.23	12816.
116		1.01	330.	256		5.98	1954.
117	S	4.82	1576.	258		2.27	742.
122		1.17	383.	271		1.05	342.
123		1.55	507.	273		1.87	610.
125		1.03	336.	274		3.85	1258.
127	S	43.63	14256.	275	S	23.51	7680.
128		1.42	464.	276		2.85	931.
129	S	15.13	4944.	277		1.45	473.
130		1.49	488.	296		4.41	1440.
135		1.66	542.	323		2.11	689.
137		1.20	391.	334		1.30	426.
141		2.69	878.	365		2.45	801.
2		1.00	327.	372		1.10	361.
147		1.32	431.	423		4.98	1628.
148		2.16	705.	441?		9.29	3036.
155		1.29	423.	442?	S	67.48	22048.
156		1.92	626.	443?		12.17	3976.
161		1.34	438.	444?		1.15	377.

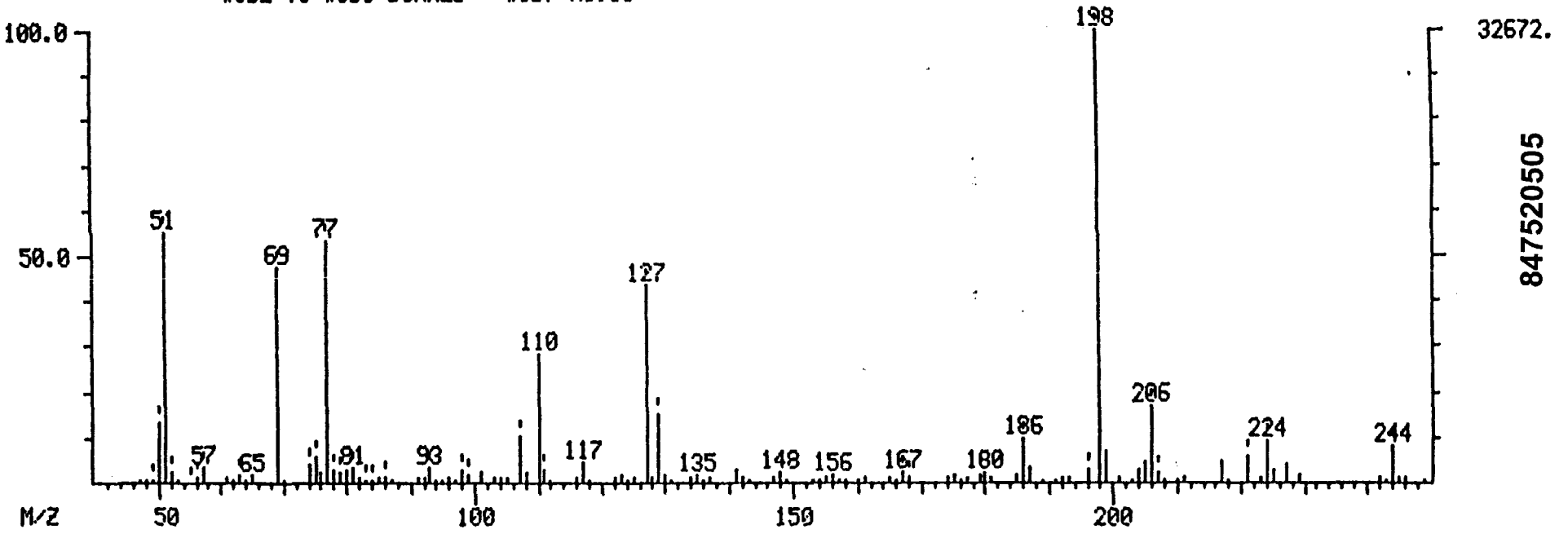
847520503

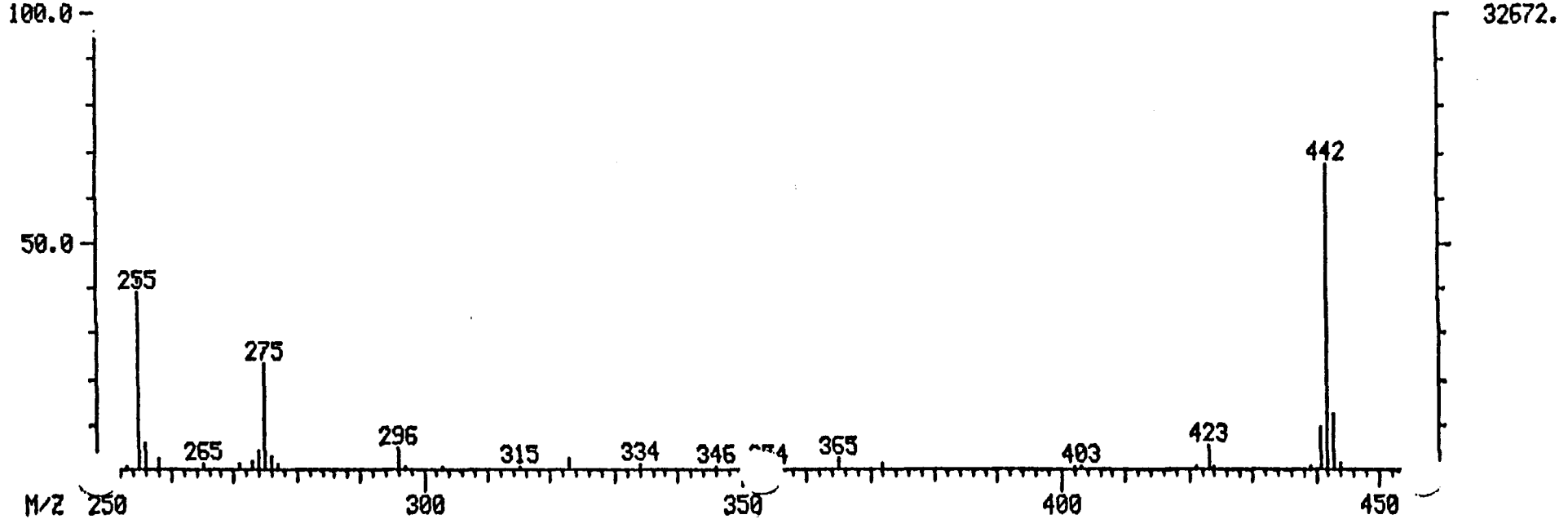

RIC
01/22/92 15:23:00
SAMPLE: DFTP 50NG
CONDS.: IAL DB-5/F4021
RANGE: G 1, 255 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: DF0122 #592
CALI: FC0122 #3
SCANS 550 TO 650
100.0
188416.
847520504
RIC
560
7:28
580
7:44
0
8:00
620
8:16
640
8:32
SCAN
TIME

MASS SPECTRUM
01/22/92 15:23:00 + 7:54
SAMPLE: DFTP 50NG
CONDS.: IAL DB-5/F4021
#592 TO #595 SUMMED - #597 X1.00

DATA: DF0122 #593
CALI: FC0122 #3

BASE M/Z: 198
RIC: 256000.





847520505

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab name: INTEGRATED ANALYTICAL LAB Contract: _____

Lab code: NA Case No.: _____ SAS No.: NA SDG No.: NA

Lab File ID: D70123 DFTPP Injection Date: 01/23/92

Instrument ID: 74021 DFTPP Injection Time: 15:24

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	53.80
68	Less than 2.0% of mass 69	0.00 (0.00
69	Mass 69 relative abundance	45.60
70	Less than 2.0% of mass 69	0.00 (0.00
127	40.0 - 60.0% of mass 198	52.01
197	Less than 1.0% of mass 198	0.00
198	Base peak, 100% relative abundance	100.00
199	5.0 to 9.0% of mass 198	7.79
275	10.0 -30.0% of mass 198	25.45
365	Greater than 1.00% of mass 198	5.25
441	Present, but less than mass 443	9.54
442	Greater than 40.0% of mass 198	64.08
443	17.0 - 23.0% of mass 442	11.55 (18.0

1-Value is % mass 69 2-value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDAR

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	BnA CAL CHK	SCK0123	01/23/92	15:44
02	S23-A	03/042 (Re)	SCS1042		16:38
03	S3	034003	SCS4003		17:33
04	S2	034002	SCS4002		18:21
05	S1	034001	SCS4001		19:09
06	W1	035005	SCS5005		19:56
07	W3	035007	SCS5007		20:44
08	B-1	017003 (Re)	SCS7003A		21:32
09	A-2	017002	SCS7002		22:19
10	E-1	017009	SCS7009		23:07
11	E-2	017010	SCS7010		23:54
12	E-1	017011	SCS7011	01/24/92	0:42
13	E-2	017012	SCS7012		1:30
14	G-1	017013	SCS7013		2:17
15	A-1	017001	SCS7001		3:05
16					
17					
18					
19					
20					
21					
22					

Page __ of __

FORM IV SV

847520506

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory: IAL		Contract:	
Inst ID:	FINN	Sens Date: 01/23/92		Sens Time:	15:24:00
Lab ID:	DF0123	Cali Date: 01/08/92		Analyst:	JS

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 592	
51	30 to 60% of mass 198	53.80	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	45.60	
70	less than 2% of mass 69	0.00	(0.00) 1
127	40 TO 60% of mass 198	52.01	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	7.79	
275	10 TO 30% of mass 198	25.45	
365	greater than 1% of mass 198	5.25	
441	less than mass 443	9.54	
442	greater than 40% of mass 198	64.08	
443	17 TO 23% of mass 442	11.55	(18.02) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

847520507

Mass List Data: DF0123 # 593 Base m/z: 198
01/23/92 15:24:00 + 7:54 Cali: FC0123 # 3 RIC: 46976.
Sample: DFTPP 50NG
C(s.: IAL DB-5/F4021
#592 to #595 summed - #596 to #597 X1.00

50 0.00 0. Minima Min Inten: 0.
443 Maxima # 0

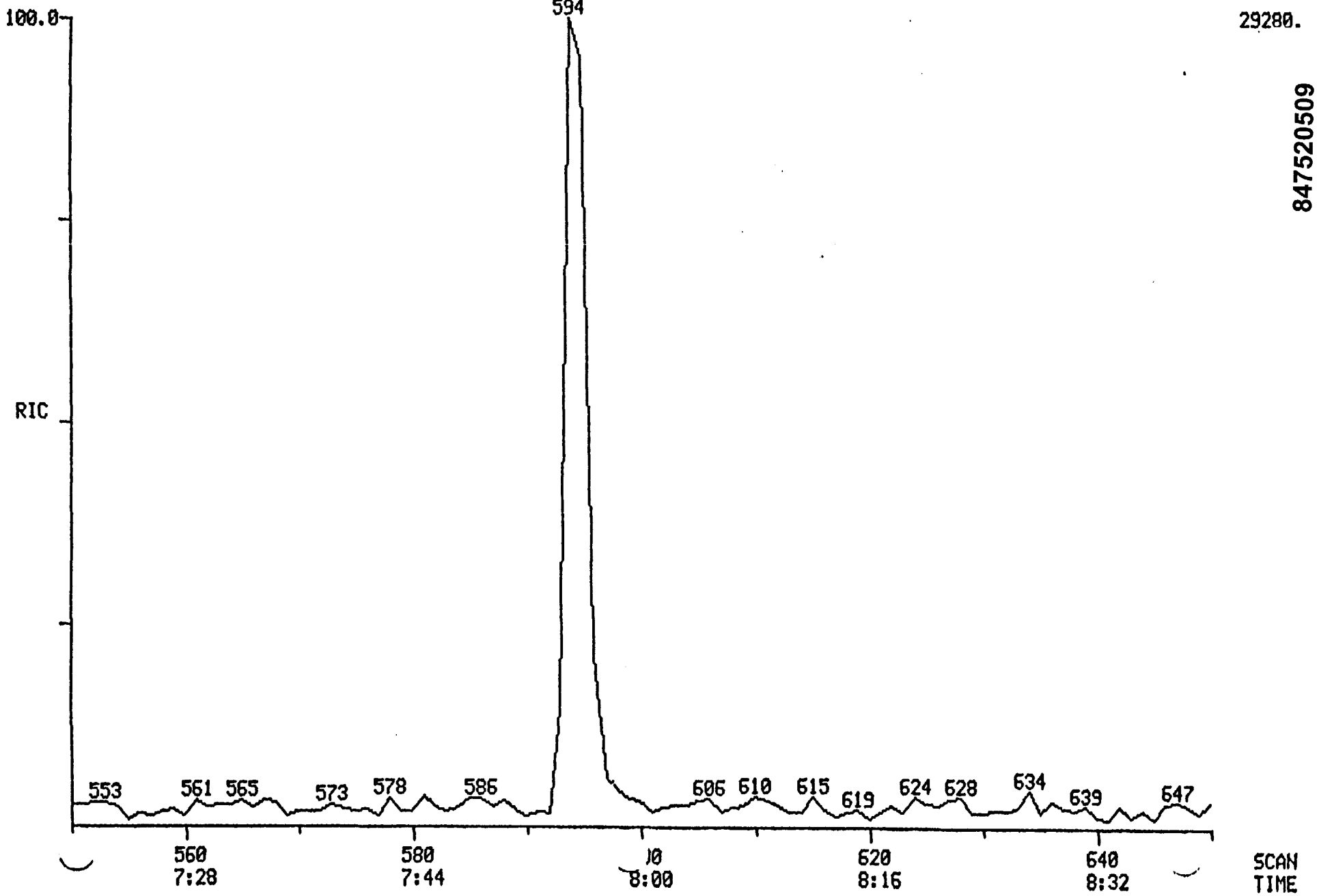
Mass		% RA	Inten.	Mass		% RA	Inten.
50?	S	14.31	768.	206	S	22.47	1206.
51?	S	53.80	2888.	207	S	1.40	75.
52?		6.58	353.	217		8.27	444.
55?		2.44	131.	221		8.03	431.
56?		2.33	125.	224		15.31	822.
57?	S	2.40	129.	225		5.25	282.
63?		4.99	268.	227		7.45	400.
65?		2.61	140.	244		14.88	799.
69	S	45.60	2448.	246		3.02	162.
74	S	4.14	222.	255	S	44.71	2400.
75	S	7.08	380.	256		7.64	410.
76		3.37	181.	258		2.44	131.
77	S	53.35	2864.	271		7.21	387.
78		7.21	387.	273		2.09	112.
79		7.21	387.	274		5.40	290.
80		5.37	288.	275	S	25.45	1366.
81		5.98	321.	276		3.09	166.
84	S	0.45	24.	277		2.14	115.
?6	S	5.91	317.	293		2.20	118.
98		2.07	111.	296		7.08	380.
98		8.90	478.	321		2.16	116.
107	S	15.28	820.	323		3.35	180.
108		4.43	238.	350		2.38	128.
110	S	30.77	1652.	365		5.25	282.
111		5.51	296.	368		2.22	119.
114		2.07	111.	423		6.37	342.
117	S	6.22	334.	441?		9.54	512.
127	S	52.01	2792.	442?		64.08	3440.
128		5.37	288.	443?		11.55	620.
129	S	16.69	896.				
135		2.46	132.				
141		5.14	276.				
143		2.38	128.				
144		2.57	138.				
148		5.03	270.				
162		2.31	124.				
167		7.58	407.				
168	S	2.81	151.				
170		2.46	132.				
171		2.33	125.				
179		3.32	178.				
180		2.76	148.				
184		2.40	129.				
186	S	11.89	638.				
7		5.46	293.				
196		5.98	321.				
198	S	100.00	5368.				
199		7.79	418.				
204		5.01	269.				
205		7.17	385.				

847520508

RIC
01/23/92 15:24:00
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
RANGE: G 1, 700 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: DF0123 #1
CALI: FC0123 #3

SCANS 550 TO 650

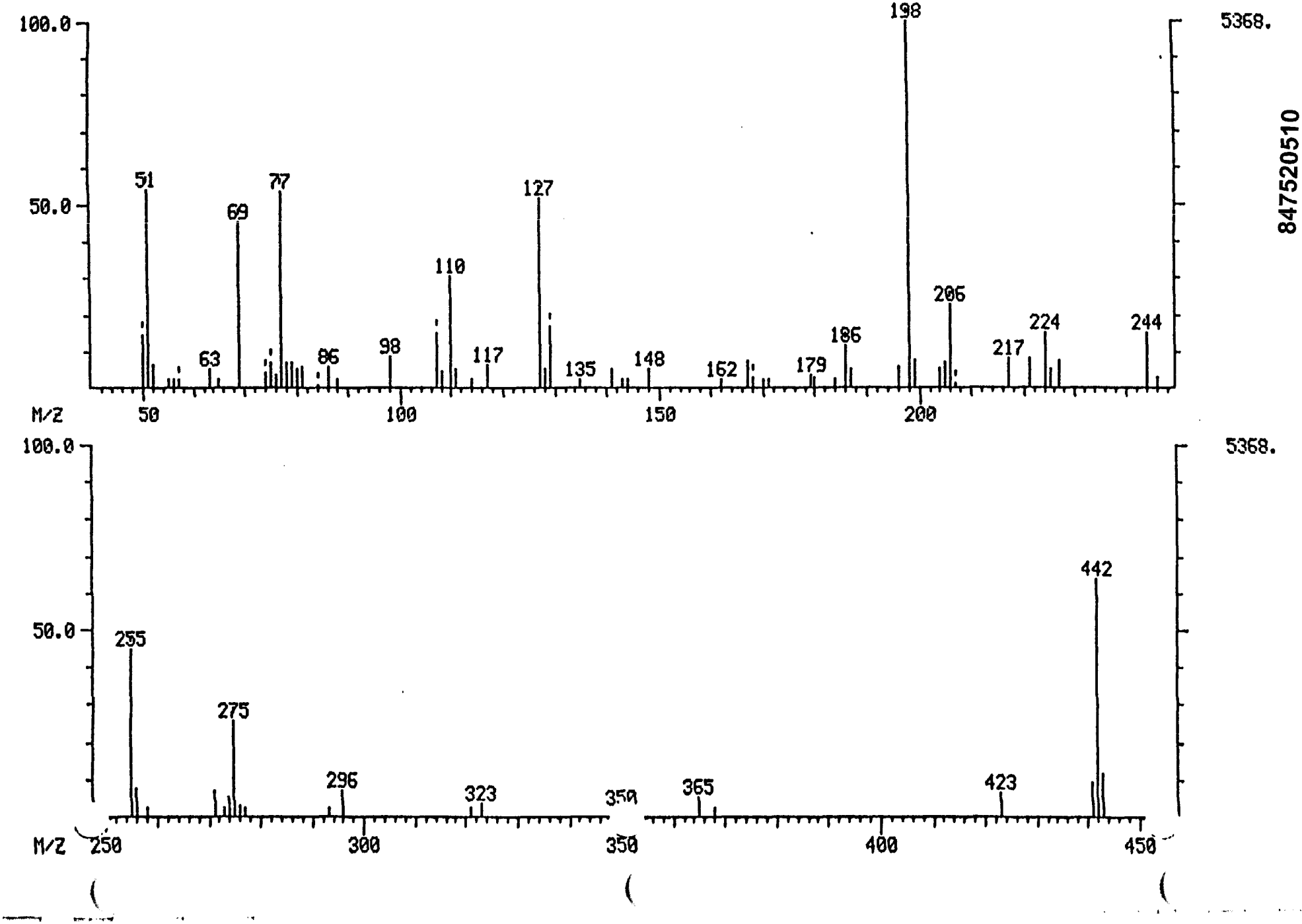


847520509

MASS SPECTRUM
01/23/92 15:24:00 + 7:54
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
#592 TO #595 SUMMED - #596 TO #597 X1.00

DATA: DF0123 #593
CALI: FC0123 #3

BASE M/Z: 198
RIC: 46976.



847520510

5B

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab name: INTEGRATED ANALYTICAL LAB Contract _____

Lab code: NA Case No.: _____ SAS No.: NA SDG No.: NA

Lab File ID: D70124A DFTPP Injection Date: 01/24/92

Instrument ID: 7402/ DFTPP Injection Time: 1542

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	52.66
68	Less than 2.0% of mass 69	6.00 (0.00)
69	Mass 69 relative abundance	45.86
70	Less than 2.0% of mass 69	0.00 (0.00)
127	40.0 - 60.0% of mass 198	44.16
197	Less than 1.0% of mass 198	0.00
198	Base peak, 100% relative abundance	100.00
199	5.0 to 9.0% of mass 198	7.82
275	10.0 -30.0% of mass 198	29.55
365	Greater than 1.00% of mass 198	3.25
441	Present, but less than mass 443	9.58
442	Greater than 40.0% of mass 198	64.72
443	17.0 - 23.0% of mass 442	13.11 (20.

1-Value is % mass 69 2-value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDA

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZE
01	SSTD50	BNA CAC CHK	SCK0124	01/24/92	16:05
02	Method BLK	SOIL EXTR BLK	SB50124		17:15
03	51	034001 (Re)	5034001		18:03
04	517	037004	5037004		18:51
05	EIC	902003	S902003		19:38
06	E8C	902029	S902029		20:26
07	BH-A	037005	5037005		21:14
08	S28-A	037006	5037006		22:01
09	TP4-A	059001	5059001		22:49
10	TP4-B	059002	5059002		23:37
11	TP4-C	059003	5059003	01/25/92	0:26
12	TP4-D	059004	5059004		1:12
13	A-1	017001 (Re)	5017001		1:59
14	SOIL BLK BN SPK	SB50124MS	SB50124S1		2:47
15	Dup	SB50124MSD	SB50124S2		3:34
16					
17					
18					
19					
20					
21					
22					

847520511

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:	IAL	Contract:	
Inst ID:	FINN	Sens Date:	01/24/92	Sens Time:	15:42:00
Lab ID:	DF0124A	Cali Date:	01/08/92	Analyst:	JS

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 590	
51	30 to 60% of mass 198	52.66	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	45.86	
70	less than 2% of mass 69	0.00	(0.00) 1
127	40 TO 60% of mass 198	44.16	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	7.82	
275	10 TO 30% of mass 198	29.55	
365	greater than 1% of mass 198	3.25	
441	less than mass 443	9.58	
442	greater than 40% of mass 198	64.72	
43	17 TO 23% of mass 442	13.11	(20.26) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

847520512

Mass List Data: DF0124A # 591 Base m/z: 198
01/24/92 15:42:00 + 7:53 Cali: S017011 # 3 RIC: 45440.
Sample: DFTPP 50NG
Conds.: IAL DB-5/F4021
#590 to #592 summed - #589 to #590 - #592 to #594 X1.00

47 0.00 0. Minima Min Inten: 0.
443 Maxima # 0

Mass		% RA	Inten.	Mass		% RA	Inten.
47?	S	0.65	35.	186	S	11.11	601.
49?	S	1.79	97.	187	S	4.64	251.
50?	S	13.66	739.	189	S	0.89	48.
51?	S	52.66	2848.	196	S	5.27	285.
52?	S	4.25	230.	198	S	100.00	5408.
56?	S	4.42	239.	199	S	7.82	423.
57?	S	4.51	244.	204	S	4.68	253.
63?	S	1.39	75.	205	S	6.05	327.
65?	S	1.33	72.	206	S	22.08	1194.
69	S	45.86	2480.	207	S	5.10	276.
74	S	5.84	316.	211		2.09	113.
75	S	7.36	398.	217	S	8.30	449.
76	S	1.52	82.	221	S	7.30	395.
77	S	51.04	2760.	224	S	10.93	591.
78	S	5.47	296.	225	S	4.16	225.
79	S	4.64	251.	227	S	5.71	309.
80	S	3.75	203.	229	S	3.42	185.
81	S	4.86	263.	244	S	11.82	639.
1	S	0.83	45.	255	S	47.63	2576.
93	S	5.12	277.	256	S	7.34	397.
96	S	0.89	48.	258	S	4.79	259.
98	S	5.79	313.	265		2.13	115.
99	S	4.64	251.	271	S	3.37	182.
101	S	3.86	209.	273	S	3.59	194.
107	S	12.43	672.	274	S	1.02	55.
108	S	3.31	179.	275	S	29.55	1598.
110	S	25.74	1392.	276	S	4.36	236.
111	S	4.86	263.	277		2.11	114.
117	S	8.43	456.	293	S	0.96	52.
122	S	0.87	47.	296	S	6.18	334.
123	S	0.83	45.	323	S	3.35	181.
127	S	44.16	2388.	354		2.07	112.
128	S	4.81	260.	365		3.25	176.
129	S	15.79	854.	372		2.14	116.
130	S	0.81	44.	383		2.16	117.
135	S	1.33	72.	423	S	6.92	374.
137	S	1.07	58.	441?	S	9.58	518.
141	S	3.48	188.	442?	S	64.72	3500.
143		2.63	142.	443?	S	13.11	709.
147	S	1.00	54.				
148	S	3.33	180.				
150		2.26	122.				
155	S	1.00	54.				
156	S	0.92	50.				
167	S	6.21	336.				
168	S	4.96	268.				
175	S	0.89	48.				
177	S	0.94	51.				
179	S	4.73	256.				
180	S	0.89	48.				

RIC
01/24/92 15:42:00
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
RANGE: G 1, 700 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

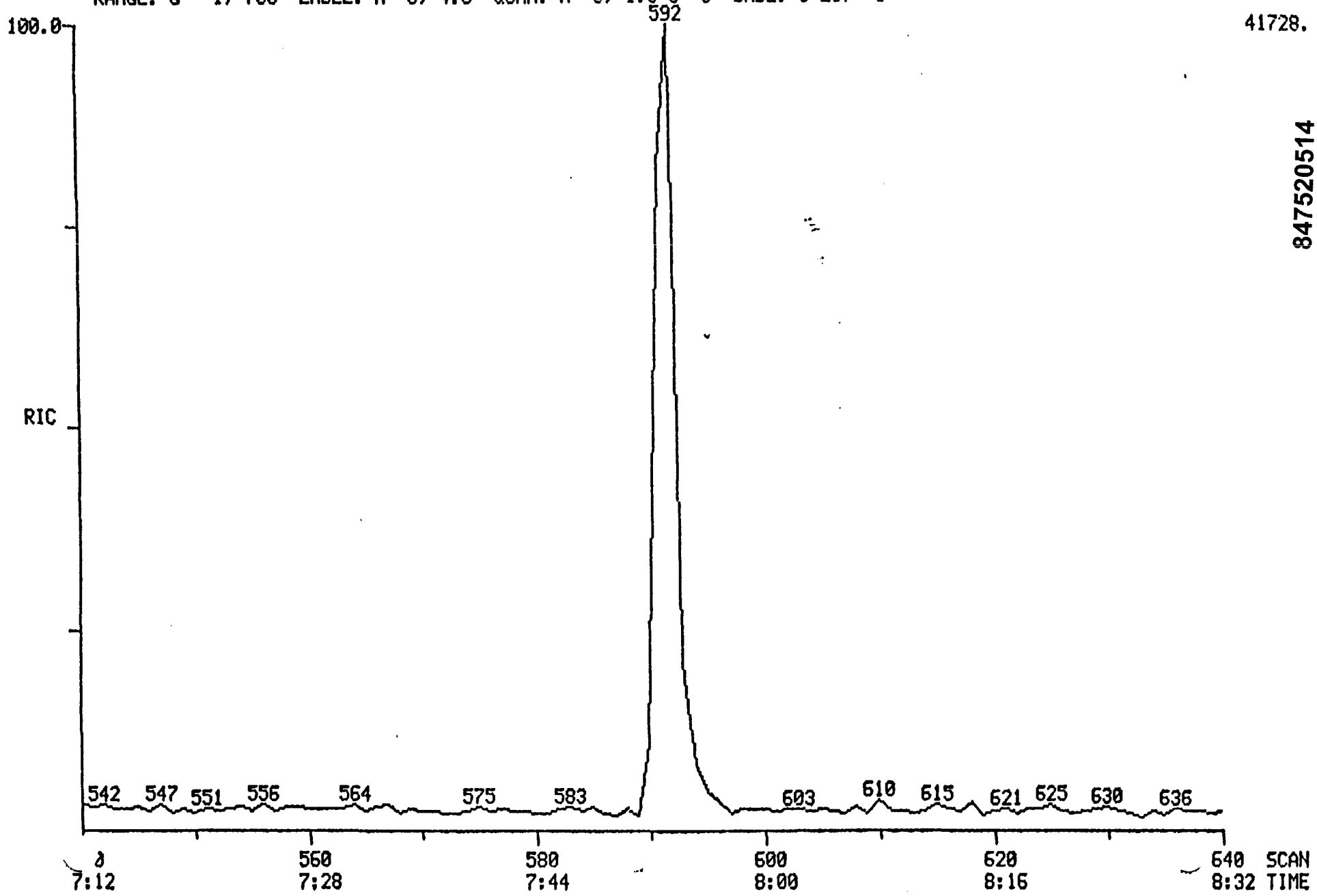
DATA: DF0124A #590
CALI: S017011 #3

SCANS 540 TO 640

17

41728.

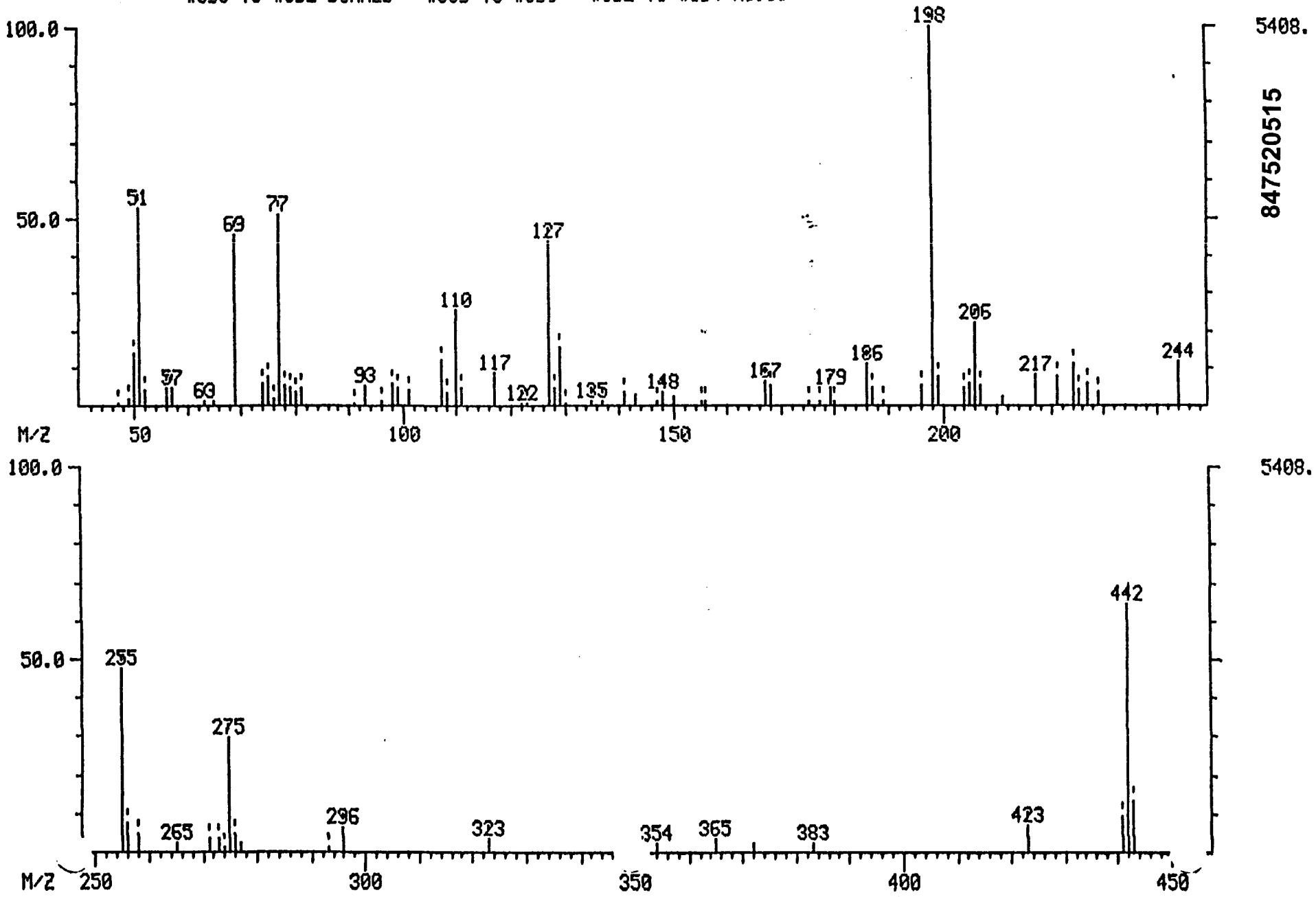
847520514



MASS SPECTRUM
01/24/92 15:42:00 + 7:53
SAMPLE: DFTPP 50NG
CONDS.: IAL DB-5/F4021
#590 TO #592 SUMMED - #589 TO #590 - #592 TO #594 X1.00

DATA: DF0124A #591
CALI: S017011 #3

BASE M/Z: 198
RIC: 45440.



INITIAL CALIBRATION DATA

Case No: ---------- Instrument ID: F4021

Contractor: INTEGRATED ANALYTICAL LABS Calibration Date: 01/08/92 PAGE 1/2

Contract No: ----------

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 30.0%

Laboratory ID: Compound	SV20 RF 20.00	SV50 RF 50.00	SV80 RF 80.00	SV120 RF 120.00	SV160 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Nitrobenzene-D5 *SS1*	0.528	0.583	0.554	0.590	0.543	0.865	0.560	2.357		
2-Fluorobiphenyl *SS2*	1.325	1.436	1.426	1.474	1.374	0.883	1.407	5.197		
Terphenyl-D14 *SS3*	1.395	1.075	1.317	1.420	1.256	0.893	1.293	12.329		
2-Fluorophenol *SS4*	0.759	0.941	0.739	0.691	0.666	0.665	0.739	6.072		
Phenol-d5 *SS5*	1.070	1.099	0.998	0.935	0.948	0.920	1.010	6.501		
2,4,6-Tribromophenol *SS6*	0.124	0.144	0.134	0.141	0.136	1.490	0.136	0.688		
Aniline	1.219	1.156	1.206	1.134	1.163	0.916	1.176	3.188		
Phenol	1.203	1.213	1.095	1.047	1.015	0.924	1.170	8.046	*	
Bis(2-chloroethyl)ether	1.067	1.020	0.909	0.840	0.795	0.939	0.926	10.350		
2-Chlorophenol	0.784	0.786	0.709	0.683	0.657	0.947	0.724	5.261		
1,3-Dichlorobenzene	0.956	0.889	0.797	0.744	0.695	0.989	0.816	9.499		
1,4-Dichlorobenzene	1.005	0.909	0.829	0.767	0.720	1.006	0.846	10.164	*	
Benzyl alcohol	0.598	0.651	0.625	0.615	0.621	1.059	0.622	1.718		
1,2-Dichlorobenzene	0.954	0.830	0.754	0.688	0.647	1.064	0.775	10.905		
2-Methylphenol	0.414	0.466	0.452	0.448	0.456	1.107	0.447	1.765		
Bis(2-chloroisopropyl)ether	1.534	1.355	1.216	1.135	1.098	1.113	1.268	15.976		
4-Methylphenol	0.962	0.973	0.903	0.893	0.330	1.159	0.932	3.145		
N-nitrosodi-n-propylamine	0.712	0.757	0.718	0.708	0.711	1.162	0.721	1.819		**
Hexachloroethane	0.400	0.332	0.299	0.289	0.271	1.164	0.318	4.546		
Nitrobenzene	0.536	0.539	0.513	0.503	0.523	0.835	0.523	1.360		
Isophorone	0.807	0.892	0.867	0.859	0.920	0.895	0.869	3.762		
2-Nitrophenol	0.134	0.172	0.181	0.192	0.202	0.912	0.176	2.340	*	
2,4-Dimethylphenol	0.266	0.326	0.327	0.339	0.347	0.936	0.321	2.859		
Bis(2-chloroethoxy)methane	0.505	0.552	0.541	0.552	0.566	0.960	0.543	2.068		
2,4-Dichlorophenol	0.252	0.281	0.273	0.276	0.285	0.973	0.273	1.146	*	
1,2,4-Trichlorobenzene	0.316	0.315	0.304	0.298	0.306	0.919	0.308	0.682		
Naphthalene	1.118	1.143	1.101	1.066	1.041	1.006	1.094	3.638		
4-Chloroaniline	0.333	0.395	0.410	0.415	0.431	1.030	0.397	3.391		
Hexachlorobutadiene	0.157	0.150	0.146	0.143	0.147	1.059	0.149	0.476	*	
4-Chloro-3-methylphenol	0.239	0.284	0.280	0.292	0.303	1.167	0.290	2.177	*	
2-Methylnaphthalene	0.544	0.669	0.658	0.672	0.684	1.186	0.645	5.137		
Hexachlorocyclopentadiene	0.269	0.280	0.297	0.303	0.316	0.852	0.310	1.667		**
2,4,6-Trichlorophenol	0.270	0.310	0.314	0.323	0.329	0.867	0.319	2.070	*	
2,4,5-Trichlorophenol	0.316	0.323	0.336	0.344	0.331	0.873	0.330	0.978		
2-Chloronaphthalene	1.268	1.232	1.226	1.218	1.249	0.902	1.239	1.788		
2-Nitroaniline	0.268	0.361	0.379	0.393	0.392	0.923	0.359	4.675		
Acenaphthalene	1.817	1.907	1.909	1.974	1.958	0.971	1.913	5.480		

$\overline{RF}$ _ Average Response Factor

%RSD_ Percent Relative Deviation

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520516

INITIAL CALIBRATION DATA

Case No: _____ Instrument ID: F4021

Contractor: INTEGRATED ANALYTICAL LABS Calibration Date: 01/08/92 PAGE 2/2

Contract No: _____

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 30.0%

Laboratory ID:	SV20	SV50	SV80	SV120	SV160					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	RRT	RF	% RSD	CCC	SPCC
Dimethyl phthalate	1.115	1.300	1.276	1.263	1.239	0.970	1.239	6.487		
3-Nitroaniline	0.485	0.543	0.542	0.526	0.504	1.001	0.520	2.249		
2,6-Dinitrotoluene	0.274	0.298	0.297	0.309	0.316	0.979	0.299	1.427		
Acenaphthene	1.189	1.211	1.193	1.195	1.200	1.006	1.198	0.758	*	
2,4-Dinitrophenol	0.040	0.093	0.121	0.137	0.143	1.019	0.124	1.936		**
Dibenzofuran	1.588	1.733	1.668	1.677	1.664	1.033	1.666	4.626		
4-Nitrophenol	0.183	0.234	0.237	0.241	0.213	1.040	0.222	2.159		**
2,4-Dinitrotoluene	0.348	0.380	0.369	0.363	0.334	1.049	0.359	1.614		
Fluorene	1.224	1.291	1.174	1.266	1.247	1.100	1.240	3.984		
Diethyl phthalate	1.090	1.199	1.096	1.205	1.025	1.104	1.123	6.917		
4-chlorophenyl-phenylether	0.623	0.626	0.546	0.620	0.621	1.106	0.607	3.067		
4-Nitroaniline	0.166	0.207	0.208	0.220	0.192	1.115	0.199	1.856		
2-Methyl-4,6-dinitrophenol	0.049	0.114	0.107	0.123	0.119	0.884	0.116	0.597		
N-nitrosodiphenylamine	0.435	0.604	0.510	0.563	0.559	0.892	0.534	5.787	*	
1,2-Diphenyl hydrazine	1.322	1.538	1.199	1.383	1.400	0.893	1.368	11.030		
4-Bromophenyl-phenylether	0.184	0.212	0.203	0.235	0.245	0.940	0.216	2.196		
Hexachlorobenzene	0.226	0.237	0.223	0.252	0.261	0.958	0.240	1.469		
Pentachlorophenol	0.096	0.112	0.108	0.125	0.135	0.985	0.115	1.356	*	
Phenanthrene	1.080	1.129	1.044	1.097	1.140	1.004	1.098	3.454		
Anthracene	1.033	1.070	1.018	1.059	1.029	1.010	1.042	1.931		
Di-n-butyl phthalate	0.826	1.095	1.033	1.141	1.162	1.109	1.051	12.108		
Fluoranthene	0.920	0.952	0.888	0.937	0.980	1.180	0.935	3.083	*	
Benzidine	0.097	0.027	0.071	0.075	0.140	0.865	0.082	3.683		
Pyrene	1.791	1.435	1.559	1.553	1.458	1.458	1.559	12.605		
Butyl benzyl phthalate	0.325	0.397	0.452	0.527	0.553	0.953	0.451	8.363		
Benzo(a)anthracene	1.069	1.177	1.170	1.196	1.175	0.998	1.157	4.507		
3,3-Dichlorobenzidine	0.183	0.258	0.270	0.297	0.316	1.001	0.265	4.566		
Chrysene	0.833	1.131	1.084	1.137	1.144	1.003	1.066	11.829		
Bis(2-ethylhexyl) phthalate	0.471	0.606	0.687	0.771	0.820	1.020	0.671	12.384		
Di-n-octyl phthalate	1.612	1.717	1.474	1.684	1.803	0.947	1.625	11.059	*	
Benzo(b)fluoranthene	1.221	1.450	1.320	1.338	1.366	0.969	1.369	7.394		
Benzo(k)fluoranthene	1.375	1.326	1.332	1.355	1.335	0.971	1.337	1.089		
Benzo(a)pyrene	1.233	1.219	1.197	1.233	1.262	0.995	1.228	2.357	*	
Indeno(1,2,3-cd)pyrene	1.273	1.226	1.385	1.190	1.234	1.108	1.262	6.710		
Benzo(a,h)anthracene	1.077	1.075	1.246	1.079	1.138	1.112	1.123	6.589		
Benzo(ghi)perylene	1.196	1.150	1.358	1.197	1.244	1.140	1.229	7.102		

$\overline{RF}$ _ Average Response Factor

%RSD_ Percent Relative Deviation

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

CALIBRATION CHECK

Case No: _____ Page 1/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/17/92 File ID: SCK0117

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Nitrobenzene-D5 *SS1*	0.560	0.573	2.395		
2-Fluorobiphenyl *SS2*	1.407	1.425	1.279		
Terphenyl-D14 *SS3*	1.293	1.221	5.539		
2-Fluorophenol *SS4*	0.739	0.758	2.543		
Phenol-d5 *SS5*	1.010	1.059	4.851		
2,4,6-Tribromophenol *SS6*	0.136	0.159	17.084		
Aniline	1.176	1.039	11.620		
Phenol	1.170	1.198	2.364	*	
Bis(2-chloroethyl)ether	0.926	1.008	8.832		
2-Chlorophenol	0.724	0.816	12.738		
1,3-Dichlorobenzene	0.916	0.869	5.469		
1,4-Dichlorobenzene	0.846	0.913	7.920	*	
Benzyl alcohol	0.622	0.614	1.286		
1,2-Dichlorobenzene	0.775	0.860	11.025		
2-Methylphenol	0.447	0.441	1.396		
Bis(2-chloroisopropyl)ether	1.268	1.392	9.814		
4-Methylphenol	0.932	0.881	5.492		
N-nitrosodi-n-propylamine	0.721	0.724	0.388		**
Hexachloroethane	0.318	0.340	6.851		
Nitrobenzene	0.523	0.505	3.405		
Isophorone	0.869	0.923	6.214		
2-Nitrophenol	0.176	0.180	2.157	*	
2,4-Dimethylphenol	0.321	0.328	2.181		
Bis(2-chloroethoxy)methane	0.543	0.548	0.884		
2,4-Dichlorophenol	0.273	0.257	5.999	*	
1,2,4-Trichlorobenzene	0.308	0.319	3.639		
Naphthalene	1.094	1.116	2.030		
4-Chloroaniline	0.397	0.368	7.258		
Hexachlorobutadiene	0.149	0.150	0.942	*	
4-Chloro-3-methylphenol	0.290	0.277	4.400	*	
2-Methylnaphthalene	0.645	0.645	0.062		
Hexachlorocyclopentadiene	0.310	0.247	20.194		**
2,4,6-Trichlorophenol	0.319	0.291	8.777	*	
2,4,5-Trichlorophenol	0.330	0.353	6.970		
2-Chloronaphthalene	1.239	1.266	2.212		
2-Nitroaniline	0.359	0.331	7.697		
Acenaphthalene	1.913	1.944	1.620		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520518

CALIBRATION CHECK

Case No: Page 2/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/17/92 File ID: SCK0117

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Dimethyl phthalate	1.239	1.257	1.486		
3-Nitroaniline	0.520	0.545	4.808		
2,6-Dinitrotoluene	0.299	0.297	0.602		
Acenaphthene	1.198	1.226	2.371	*	
2,4-Dinitrophenol	0.124	0.123	0.405		**
Dibenzofuran	1.666	1.750	5.042		
4-Nitrophenol	0.222	0.298	34.477		**
2,4-Dinitrotoluene	0.359	0.382	6.466		
Fluorene	1.240	1.327	6.982		
Diethyl phthalate	1.123	1.236	10.062		
4-chlorophenyl-phenylether	0.607	0.616	1.449		
4-Nitroaniline	0.199	0.211	6.244		
2-Methyl-4,6-dinitrophenol	0.116	0.107	7.559		
N-nitrosodiphenylamine	0.534	0.490	8.274	*	
1,2-Diphenyl hydrazine	1.488	1.233	17.137		
4-Bromophenyl-phenylether	0.216	0.206	4.541		
Hexachlorobenzene	0.240	0.242	0.917		
Pentachlorophenol	0.115	0.115	0.174	*	
Phenanthrene	1.098	1.086	1.093		
Anthracene	1.042	1.057	1.478		
Di-n-butyl phthalate	1.051	1.136	8.046		
Fluoranthene	0.935	1.073	14.759	*	
Benzidine	0.082	0.015	81.707		
Pyrene	1.559	1.383	11.301		
Butyl benzyl phthalate	0.451	0.309	31.455		
Benzo(a)anthracene	1.157	1.181	2.039		
3,3-Dichlorobenzidine	0.265	0.228	13.897		
Chrysene	1.066	1.142	7.150		
Bis(2-ethylhexyl) phthalate	0.671	0.486	27.571		
Di-n-octyl phthalate	1.625	1.444	11.138	*	
Benzo(b)fluoranthene	1.369	1.435	4.859		
Benzo(k)fluoranthene	1.337	1.533	14.660		
Benzo(a)pyrene	1.228	1.227	0.061	*	
Indeno(1,2,3-cd)pyrene	1.262	0.962	23.748		
Benzo(a,h)anthracene	1.123	0.883	21.371		
Benzo(ghi)perylene	1.229	0.970	21.074		
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$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520519

CALIBRATION CHECK

Case No: _____ Page 1/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/22/92 File ID: SCK0122

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Nitrobenzene-D5 *SS1*	0.560	0.598	6.862		
2-Fluorobiphenyl *SS2*	1.407	1.405	0.142		
Terphenyl-D14 *SS3*	1.293	1.395	7.922		
2-Fluorophenol *SS4*	0.739	0.748	1.190		
Phenol-d5 *SS5*	1.010	1.106	9.505		
2,4,6-Tribromophenol *SS6*	0.136	0.153	12.666		
Aniline	1.176	1.191	1.310		
Phenol	1.170	1.273	8.772	*	
Bis(2-chloroethyl)ether	0.926	1.044	12.719		
2-Chlorophenol	0.724	0.815	12.600		
1,3-Dichlorobenzene	0.816	0.880	7.917		
1,4-Dichlorobenzene	0.846	0.901	6.501	*	
Benzyl alcohol	0.622	0.631	1.447		
1,2-Dichlorobenzene	0.775	0.835	7.798		
2-Methylphenol	0.447	0.468	4.651		
Bis(2-chloroisopropyl)ether	1.268	1.306	3.029		
4-Methylphenol	0.932	0.906	2.811		
N-nitrosodi-n-propylamine	0.721	0.826	14.531		**
Hexachloroethane	0.318	0.342	7.480		
Nitrobenzene	0.523	0.524	0.230		
Isophorone	0.869	0.931	7.135		
2-Nitrophenol	0.176	0.190	7.832	*	
2,4-Dimethylphenol	0.321	0.319	0.623		
Bis(2-chloroethoxy)methane	0.543	0.584	7.511		
2,4-Dichlorophenol	0.273	0.257	5.999	*	
1,2,4-Trichlorobenzene	0.308	0.315	2.339		
Naphthalene	1.094	1.104	0.933		
4-Chloroaniline	0.397	0.385	2.974		
Hexachlorobutadiene	0.149	0.138	7.133	*	
4-Chloro-3-methylphenol	0.290	0.292	0.777	*	
2-Methylnaphthalene	0.645	0.661	2.417		
Hexachlorocyclopentadiene	0.310	0.258	16.640		**
2,4,6-Trichlorophenol	0.319	0.281	11.912	*	
2,4,5-Trichlorophenol	0.330	0.297	10.000		
2-Chloronaphthalene	1.239	1.245	0.517		
2-Nitroaniline	0.359	0.387	7.920		
Acenaphthalene	1.913	1.909	0.209		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520520

CALIBRATION CHECK

Case No: _____ Page 2/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/22/92 File ID: SCK0122

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Dimethyl phthalate	1.239	1.205	2.713		
3-Nitroaniline	0.520	0.616	18.462		
2,6-Dinitrotoluene	0.299	0.330	10.442		
Acenaphthene	1.198	1.243	3.791	*	
2,4-Dinitrophenol	0.124	0.100	19.028		**
Dibenzofuran	1.666	1.677	0.660		
4-Nitrophenol	0.222	0.286	29.061		**
2,4-Dinitrotoluene	0.359	0.412	14.827		
Fluorene	1.240	1.247	0.532		
Diethyl phthalate	1.123	1.192	6.144		
4-chlorophenyl-phenylether	0.607	0.623	2.602		
4-Nitroaniline	0.199	0.275	38.469		
2-Methyl-4,6-dinitrophenol	0.116	0.093	19.654		
N-nitrosodiphenylamine	0.534	0.518	3.033	*	
1,2-Diphenyl hydrazine	1.488	1.348	9.409		
4-Bromophenyl-phenylether	0.216	0.203	5.931		
Hexachlorobenzene	0.240	0.210	12.427		
Pentachlorophenol	0.115	0.106	7.986	*	
Phenanthrene	1.098	1.053	4.098		
Anthracene	1.042	1.061	1.863		
Di-n-butyl phthalate	1.051	1.178	12.041		
Fluoranthene	0.935	0.900	3.743	*	
Benzidine	0.082	0.012	85.366		
Pyrene	1.559	1.671	7.170		
Butyl benzyl phthalate	0.451	0.344	23.691		
Benzo(a)anthracene	1.157	1.192	2.989		
3,3-Dichlorobenzidine	0.265	0.208	21.450		
Chrysene	1.066	1.172	9.964		
Bis(2-ethylhexyl) phthalate	0.671	0.499	25.633		
Di-n-octyl phthalate	1.625	1.300	20.000	*	
Benzo(b)fluoranthene	1.369	1.332	2.667		
Benzo(k)fluoranthene	1.337	1.508	12.790		
Benzo(a)pyrene	1.228	1.213	1.201	*	
Indeno(1,2,3-cd)pyrene	1.262	0.889	29.534		
Benzo(a,h)anthracene	1.123	0.833	25.824		
Benzo(ghi)perylene	1.229	0.928	24.491		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520521

CALIBRATION CHECK

Case No: _____ Page 1/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/23/92 File ID: SCK0123

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Nitrobenzene-D5 *SS1*	0.560	0.598	6.862		
2-Fluorobiphenyl *SS2*	1.407	1.496	6.326		
Terphenyl-D14 *SS3*	1.293	1.326	2.584		
2-Fluorophenol *SS4*	0.739	0.593	19.778		
Phenol-d5 *SS5*	1.010	0.968	4.158		
2,4,6-Tribromophenol *SS6*	0.136	0.137	0.884		
Aniline	1.176	0.841	28.462		
Phenol	1.170	1.091	6.779	*	
Bis(2-chloroethyl)ether	0.926	0.990	6.888		
2-Chlorophenol	0.724	0.750	3.620		
1,3-Dichlorobenzene	0.816	0.867	6.224		
1,4-Dichlorobenzene	0.846	0.961	13.593	*	
Benzyl alcohol	0.622	0.472	24.116		
1,2-Dichlorobenzene	0.775	0.897	15.802		
2-Methylphenol	0.447	0.345	22.853		
Bis(2-chloroisopropyl)ether	1.268	1.323	4.370		
4-Methylphenol	0.932	0.760	18.472		
N-nitrosodi-n-propylamine	0.721	0.679	5.851		**
Hexachloroethane	0.318	0.388	21.936		
Nitrobenzene	0.523	0.540	3.290		
Isophorone	0.869	0.760	12.543		
2-Nitrophenol	0.176	0.145	17.707	*	
2,4-Dimethylphenol	0.321	0.245	23.676		
Bis(2-chloroethoxy)methane	0.543	0.499	8.137		
2,4-Dichlorophenol	0.273	0.253	7.462	*	
1,2,4-Trichlorobenzene	0.308	0.314	2.014		
Naphthalene	1.094	1.111	1.572		
4-Chloroaniline	0.397	0.312	21.371		
Hexachlorobutadiene	0.149	0.155	4.307	*	
4-Chloro-3-methylphenol	0.290	0.301	3.883	*	
2-Methylnaphthalene	0.645	0.625	3.161		
Hexachlorocyclopentadiene	0.310	0.229	26.010		**
2,4,6-Trichlorophenol	0.319	0.272	14.734	*	
2,4,5-Trichlorophenol	0.330	0.327	0.909		
2-Chloronaphthalene	1.239	1.309	5.684		
2-Nitroaniline	0.359	0.319	11.043		
Acenaphthalene	1.913	1.896	0.889		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520522

CALIBRATION CHECK

Case No: _____ Page 2/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/23/92 File ID: SCK0123

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Dimethyl phthalate	1.239	1.276	3.020		
3-Nitroaniline	0.520	0.500	3.846		
2,6-Dinitrotoluene	0.299	0.322	7.764		
Acenaphthene	1.198	1.265	5.628	*	
2,4-Dinitrophenol	0.124	0.067	45.749		**
Dibenzofuran	1.666	1.796	7.803		
4-Nitrophenol	0.222	0.247	11.462		**
2,4-Dinitrotoluene	0.359	0.378	5.351		
Fluorene	1.240	1.275	2.789		
Diethyl phthalate	1.123	1.153	2.671		
4-chlorophenyl-phenylether	0.607	0.653	7.543		
4-Nitroaniline	0.199	0.178	10.373		
2-Methyl-4,6-dinitrophenol	0.116	0.088	23.974		
N-nitrosodiphenylamine	0.534	0.459	14.077	*	
1,2-Diphenyl hydrazine	1.488	1.581	6.250		
4-Bromophenyl-phenylether	0.216	0.230	6.580		
Hexachlorobenzene	0.240	0.266	10.926		
Pentachlorophenol	0.115	0.097	15.799	*	
Phenanthrene	1.098	1.110	1.093		
Anthracene	1.042	1.046	0.422		
Di-n-butyl phthalate	1.051	0.799	24.006		
Fluoranthene	0.935	0.896	4.171	*	
Benzidine	0.082	0.001	98.780		
Pyrene	1.559	1.567	0.500		
Butyl benzyl phthalate	0.451	0.243	46.096		
Benzo(a)anthracene	1.157	0.991	14.377		
3,3-Dichlorobenzidine	0.265	0.180	32.024		
Chrysene	1.066	1.162	9.026		
Bis(2-ethylhexyl) phthalate	0.671	0.739	10.134		
Di-n-octyl phthalate	1.625	1.310	19.385	*	
Benzo(b)fluoranthene	1.369	1.381	0.913		
Benzo(k)fluoranthene	1.337	1.579	18.100		
Benzo(a)pyrene	1.228	1.253	2.057	*	
Indeno(1,2,3-cd)pyrene	1.262	1.521	20.561		
Benzo(a,h)anthracene	1.123	1.132	0.801		
Benzo(ghi)perylene	1.229	1.440	17.168		
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$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520523

CALIBRATION CHECK

Case No: _____ Page 1/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/24/92 File ID: SCK0124

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Nitrobenzene-D5 *SS1*	0.560	0.579	3.467		
2-Fluorobiphenyl *SS2*	1.407	1.473	4.691		
Terphenyl-D14 *SS3*	1.293	1.362	5.369		
2-Fluorophenol *SS4*	0.739	0.614	16.937		
Phenol-d5 *SS5*	1.010	0.942	6.733		
2,4,6-Tribromophenol *SS6*	0.136	0.138	1.620		
Aniline	1.176	0.793	32.545		
Phenol	1.170	1.050	10.282	*	
Bis(2-chloroethyl)ether	0.926	1.013	9.372		
2-Chlorophenol	0.724	0.729	0.718		
1,3-Dichlorobenzene	0.816	0.808	1.005		
1,4-Dichlorobenzene	0.846	0.841	0.591	*	
Benzyl alcohol	0.622	0.429	31.029		
1,2-Dichlorobenzene	0.775	0.857	10.638		
2-Methylphenol	0.447	0.321	28.220		
Bis(2-chloroisopropyl)ether	1.268	1.315	3.739		
4-Methylphenol	0.932	0.698	25.123		
N-nitrosodi-n-propylamine	0.721	0.634	12.091		**
Hexachloroethane	0.318	0.358	12.508		
Nitrobenzene	0.523	0.535	2.334		
Isophorone	0.869	0.781	10.127		
2-Nitrophenol	0.176	0.143	18.842	*	
2,4-Dimethylphenol	0.321	0.259	19.315		
Bis(2-chloroethoxy)methane	0.543	0.509	6.296		
2,4-Dichlorophenol	0.273	0.216	20.995	*	
1,2,4-Trichlorobenzene	0.308	0.321	4.288		
Naphthalene	1.094	1.103	0.841		
4-Chloroaniline	0.397	0.304	23.387		
Hexachlorobutadiene	0.149	0.157	5.653	*	
4-Chloro-3-methylphenol	0.290	0.222	23.382	*	
2-Methylnaphthalene	0.645	0.629	2.541		
Hexachlorocyclopentadiene	0.310	0.254	17.932		**
2,4,6-Trichlorophenol	0.319	0.297	6.997	*	
2,4,5-Trichlorophenol	0.330	0.307	6.970		
2-Chloronaphthalene	1.239	1.285	3.746		
2-Nitroaniline	0.359	0.301	16.062		
Acenaphthalene	1.913	1.912	0.052		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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CALIBRATION CHECK

Page 2/2

Contractor: INTEGRATED ANALYTICAL LABS Instrument ID: F4021

Calibration check date: 01/24/92 File ID: SCK0124

Minimum $\overline{RF}$ for SPCC is 0.050 Maximum % RSD for ccc is 25.0%

Compound	$\overline{RF(I)}$	RF(C)	% D	CCC	SPCC
Dimethyl phthalate	1.239	1.270	2.535		
3-Nitroaniline	0.520	0.465	10.577		
2,6-Dinitrotoluene	0.299	0.309	3.414		
Acenaphthene	1.198	1.276	6.546	*	
2,4-Dinitrophenol	0.124	0.074	40.081		**
Dibenzofuran	1.666	1.730	3.842		
4-Nitrophenol	0.222	0.227	2.437		**
2,4-Dinitrotoluene	0.359	0.374	4.236		
Fluorene	1.240	1.296	4.482		
Diethyl phthalate	1.123	1.184	5.432		
4-Chlorophenyl-phenylether	0.607	0.651	7.213		
4-Nitroaniline	0.199	0.152	23.464		
2-Methyl-4,6-dinitrophenol	0.116	0.091	21.382		
N-nitrosodiphenylamine	0.534	0.523	2.097	*	
1,2-Diphenyl hydrazine	1.488	1.589	6.788		
4-Bromophenyl-phenylether	0.216	0.231	7.044		
Hexachlorobenzene	0.240	0.263	9.675		
Pentachlorophenol	0.115	0.108	6.250	*	
Phenanthrene	1.098	1.089	0.820		
Anthracene	1.042	1.030	1.114		
Di-n-butyl phthalate	1.051	0.851	19.060		
Fluoranthene	0.935	0.896	4.171	*	
Benzidine	0.082	0.001	98.780		
Pyrene	1.559	1.620	3.899		
Butyl benzyl phthalate	0.451	0.262	41.881		
Benzo(a)anthracene	1.157	1.070	7.551		
3,3-Dichlorobenzidine	0.265	0.159	39.955		
Chrysene	1.066	0.406	61.907		
Bis(2-ethylhexyl) phthalate	0.671	0.606	9.687		
Di-n-octyl phthalate	1.625	1.306	19.631	*	
Benzo(b)fluoranthene	1.369	1.236	9.682		
Benzo(k)fluoranthene	1.337	1.488	11.294		
Benzo(a)pyrene	1.228	1.273	3.686	*	
Indeno(1,2,3-cd)pyrene	1.262	1.200	4.883		
Benzo(a,h)anthracene	1.123	1.096	2.404		
Benzo(ghi)perylene	1.229	1.283	4.394		

$\overline{RF(I)}$ _ Average Response Factor from Initial Calibration.

RF(C) _ Response Factor from current verification check standard.

% D - 100*(RF(I)-RF(C))/RF(I)

CCC _ Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

847520525

SEMIVOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: _____

Lab code: NA Case No.: _____ SAS No.: NA SDG No.: NA

Lab File ID: SBW0108 Lab Sample ID: 006,008,009,01

Date Extracted: 01/08/92 Extraction: (SepF/Cont/Sonc): Cont

Date Analyzed: 01/08/92 Time Analyzed: 1635

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: F4021

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	Field	017015	S017015	01/08/92
02	N.BK BrA spk	SBW0108MS	SBW0108S1	↓
03	Dup	SBW0108MSD	SBW0108S2	↓
04	Pt1C1	006001	S006001A	↓
05	Pt2C1	008001	S008001A	↓
06	Pt1C1	006001	S006001B	01/09/92
07	Pt2C1	008001	S008001B	↓
08	Pt1C1	006001	S006001A1	↓
09	↓	006001	S006001A2	↓
10	Pt2C1	008001	S008001A1	↓
11	Field	009005	S009005	01/10/92
12	↓	007004	S007004	↓
13	MW4	019001	S019001	↓
14	Field	019002	S019002	↓
15				
16				
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26				
27				
28				
29				
30				

COMMENTS: _____

847520526

Quantitation Report File: SBW0108

Data: SBW0108.TI
/08/92 16:35.00
ample: W EXTR BLK (006,008,009,017) 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.037
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520527

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	607	8:06	1	1.000	A BB	31448.	40.000 NG	4.74
2	136	869	11:35	2	1.000	A BB	69509.	40.000 NG	4.74
3	164	1279	17:03	3	1.000	A BB	33581.	40.000 NG	4.74
4	188	1627	21:42	4	1.000	A BB	45783.	40.000 NG	4.74
5	240	2267	30:14	5	1.000	A BB	25471.	40.000 NG	4.74
6	264	2591	34:33	6	1.000	A BB	17276.	40.000 NG	4.74
7	82	722	9:38	2	0.831	A BB	82195.	81.126 NG	9.61
8	172	1129	15:03	3	0.883	A BV	90904.	75.388 NG	8.93
9	244	2026	27:01	5	0.894	A BB	88408.	129.109 NG	15.29
10	112	406	5:25	1	0.869	A BB	55154.	83.414 NG	9.88
11	99	558	7:26	1	0.919	A BB	36061.	41.746 NG	4.94
12	62	1470	19:36	3	1.149	A BB	21973.	182.132 NG	21.57
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520528

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:07	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:37	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	17:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:14	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:31	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:38	1.00	0.830	1.00	61.13	50.00	0.946	0.583	1.62
8	15:04	1.00	0.883	1.00	75.39	50.00	2.166	1.436	1.51
9	27:00	1.00	0.893	1.00	129.11	50.00	2 777	1.075	2.58
10	5:25	1.00	0.667	1.00	83.41	50.00	1.403	0.841	1.67
11	7:28	1.00	0.920	1.00	41.75	50.00	0.917	1.099	0.83
12	19:36	1.00	1.148	1.00	182.13	50.00	0.523	0.144	3.64
13	7:26		0.915						
14	7:30		0.923						
15	7:37		0.938						
16	7:41		0.946						
17	8:01		0.987						
18	8:10		1.005						
19	8:35		1.057						
20	8:37		1.061						
21	8:34		1.056						
22	9:02		1.112						
23	9:24		1.158						
24	9:24		1.158						
25	9:26		1.161						
26	9:42		0.835						
27	10:23		0.894						
28	10:35		0.912						
29	10:52		0.936						
30	11:08		0.959						
31	11:18		0 974						
32	11:32		0.993						
33	11:41		1.006						
34	11:58		1.030						
35	12:18		1.060						
36	13:34		1.169						
37	13:46		1.186						
38	14:32		0.852						
39	14:48		0.867						
40	14:54		0.873						
41	15:15		0.894						
42	15:45		0.923						
43	16:34		0.970						
44	16:33		0.970						
45	17:05		1.001						
46	16:42		0.978						
47	17:10		1.006						
48	17:23		1.019						
49	17:41		1.036						
50	17:47		1.042						

847520529

Quantitation Report File: SBW0108

Data: SBW0108.TI
01/08/92 16:35:00
ample: W EXTR BLK (006,008,009,017) 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.037
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								
64	149	1803	24:02	4	1	108	A BB	9741.	7.774 N	0.92

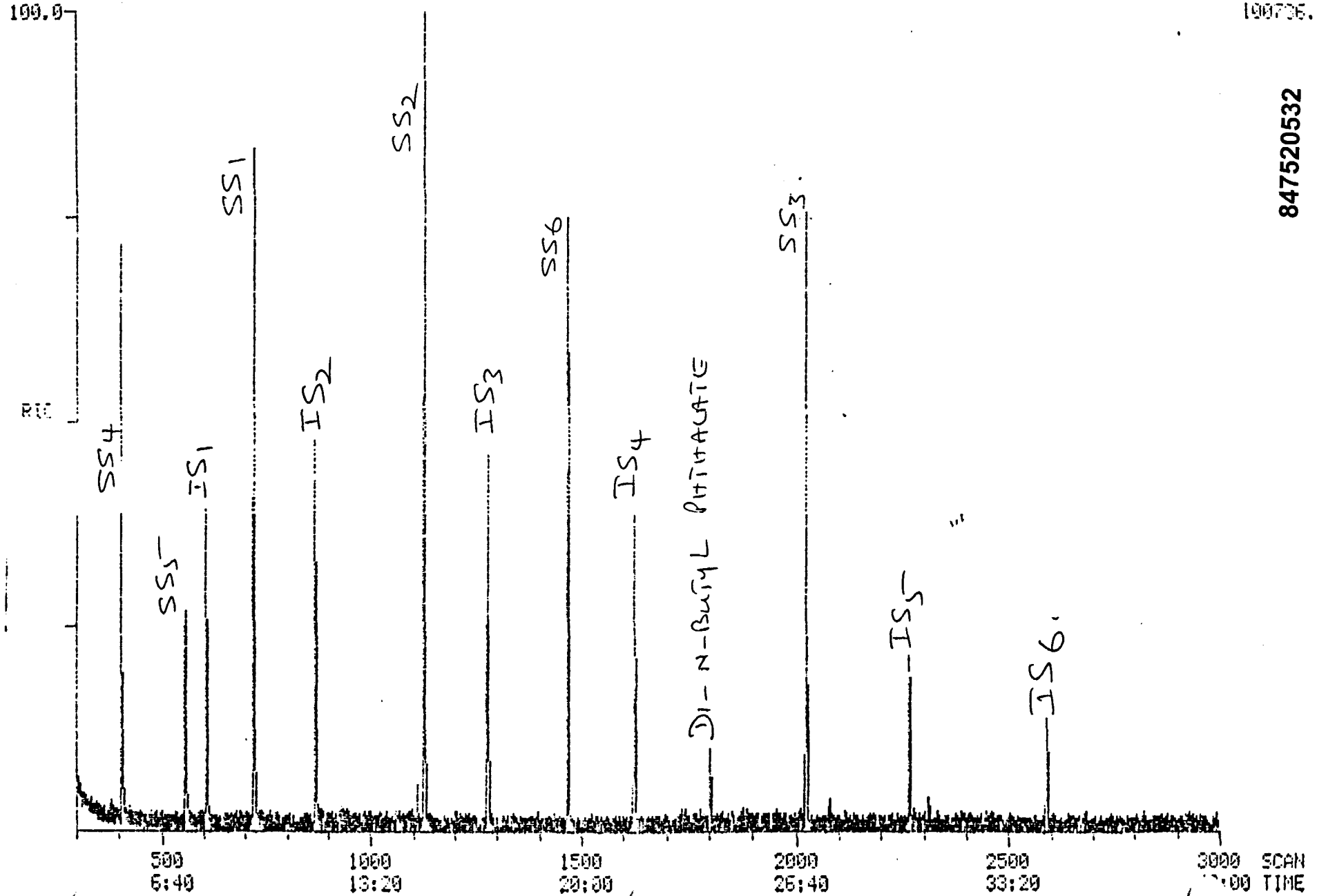
18

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	149	2159	28:47	5	0.952	A BB	497.	1.964 NG	0.23
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	149	2313	30:50	5	1.020	A BB	749.	1.942 NG	0.23
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:54		1.048						
52	18:46		1.100						
53	18:50		1.104						
54	18:53		1.106						
55	19:02		1.116						
56	19:11		0.884						
57	19:18		0.889						
58	19:22		0.893						
59	20:24		0.940						
60	20:47		0.958						
61	21:23		0.985						
62	21:47		1.004						
63	21:55		1.010						
64	24:04	1.00	1.109	1.00	7.77	50.00	0.170	1.095	0.16
65	25:36		1.179						
66	26:09		0.865						
67	26:17		0.869						
68	28:48	1.00	0.952	1.00	1.96	50.00	0.016	0.397	0.04
69	30:10		0.998						
70	30:15		1.000						
71	30:19		1.003						
72	30:50	1.00	1.020	1.00	1.94	50.00	0.024	0.606	0.04
73	32:42		0.947						
74	33:28		0.969						
75	33:33		0.972						
76	34:22		0.995						
77	38:13		1.107						
78	38:20		1.110						
79	39:17		1.138						

847520531

RIC DATA: SBW0108 #1 SCANS 300 TO 3000
01/08/92 16:35:00 CALI: SBW0108 #3
SAMPLE: W EXTR BLK (005,008,009,017) 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



847520532

SEMIVOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: _____

Lab code: NA Case No.: _____ SAS No.: NA SDG No.: NA

Lab File ID: SB50117 Lab Sample ID: 017,009,034,

Date Extracted: 01/17/92 Extraction: (SepF/Cont/Sonic) Sa

Date Analyzed: 01/17/92 Time Analyzed: 16:3

Matrix: (soil/water): S Level: (low/med) L

Instrument ID: F4021

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SS	034005	5034005	01/17/92
02	C2	017006	5017006	01/18/92
03	L1	009004	5009004	
04	SOIL BLK BS/SPK	SB50117MS	SB50117S1	
05	Dup	SB50117MSD	SB50117S2	
06	L1	009004 (Re)	5009004A	01/20/92
07	D-1	017007	5017007	01/22/92
08	G-2	017014	5017014	01/23/92
09	B-1	017003	5017003	
10	D-2	017008	5017008	
11	B-2	017004	5017004	
12	C-1	017005	5017005	
13	B-1	017003 (Re)	5017003A	01/23/92
14	A-2	017002	5017002	
15	E-1	017009	5017009	
16	E-2	017010	5017010	
17	F-1	017011	5017011	01/24/92
18	F-2	017012	5017012	
19	G-1	017013	5017013	
20	A-1	017001	5017001	
21	A-1	017001 (Re)	5017001A	01/25/92
22	B13-A	037005	5037005	01/24/92
23	S28-A	037006	5037006	
24				
25				
26				
27				
28				
29				
30				

COMMENTS: _____

847520533

Quantitation Report File: SBS0117

Data: SBS0117.TI
01/17/92 16:39:00
Sample: SOIL EXTR BLK (009,017,034,037) 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.040
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520534

No	Name	
48	C260	2,4-DINITROPHENOL
49	C265	DIBENZOFURAN
50	C270	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	605	8:04	1	1.000	A BB	26827.	40.000 NG	8.93
2	136	868	11:34	2	1.000	A BB	59425.	40.000 NG	8.93
3	164	1277	17:02	3	1.000	A BV	34119.	40.000 NG	8.93
4	188	1624	21:39	4	1.000	A BB	44357.	40.000 NG	8.93
5	240	2264	30:11	5	1.000	A BB	38771.	40.000 NG	8.93
6	264	2586	34:29	6	1.000	A BB	31442.	40.000 NG	8.93
7	82	719	9:35	2	0.828	A BB	59885.	67.404 NG	15.05
8	172	1126	15:01	3	0.882	A BB	87929.	71.700 NG	16.01
9	244	2022	26:58	5	0.893	A BV	91913.	67.724 NG	15.12
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	45	672	8:58	1	1.111	A BB	588.	0.670 NG	0.15
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520535

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:58	1.01	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:33	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	17:02	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:41	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:12	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:32	1.01	0.826	1.00	67.40	50.00	0.806	0.598	1.35
8	15:02	1.00	0.882	1.00	71.70	50.00	2.062	1.438	1.43
9	26:58	1.00	0.893	1.00	67.72	50.00	1.897	1.400	1.35
10	5:08		0.645						
11	7:18		0.916						
12	19:34		1.149						
13	7:15		0.911						
14	7:19		0.920						
15	7:26		0.935						
16	7:31		0.945						
17	7:52		0.988						
18	8:00		1.005						
19	8:26		1.060						
20	8:29		1.065						
21	8:26		1.060						
22	8:54	1.01	1.117	0.99	0.67	50.00	0.018	1.309	0.01
23	9:18		1.168						
24	9:17		1.166						
25	9:19		1.171						
26	9:35		0.830						
27	10:18		0.891						
28	10:30		0.910						
29	10:48		0.935						
30	11:03		0.957						
31	11:14		0.973						
32	11:28		0.993						
33	11:37		1.006						
34	11:54		1.031						
35	12:15		1.061						
36	13:33		1.173						
37	13:45		1.191						
38	14:30		0.851						
39	14:46		0.867						
40	14:54		0.874						
41	15:14		0.894						
42	15:43		0.923						
43	16:32		0.970						
44	16:30		0.969						
45	17:02		1.000						
46	16:39		0.977						
47	17:08		1.005						
48	17:23		1.020						
49	17:39		1.036						
50	17:47		1.044						

Quantitation Report File: SBS0117

Data: SBS0117.TI
01/17/92 16:39:00
Sample: SOIL EXTR BLK (009,017,034,037) 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.040
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref#	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								
64	149	1801	24:01	4	1.109	A BB	727.	0.543 NG	0.12

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

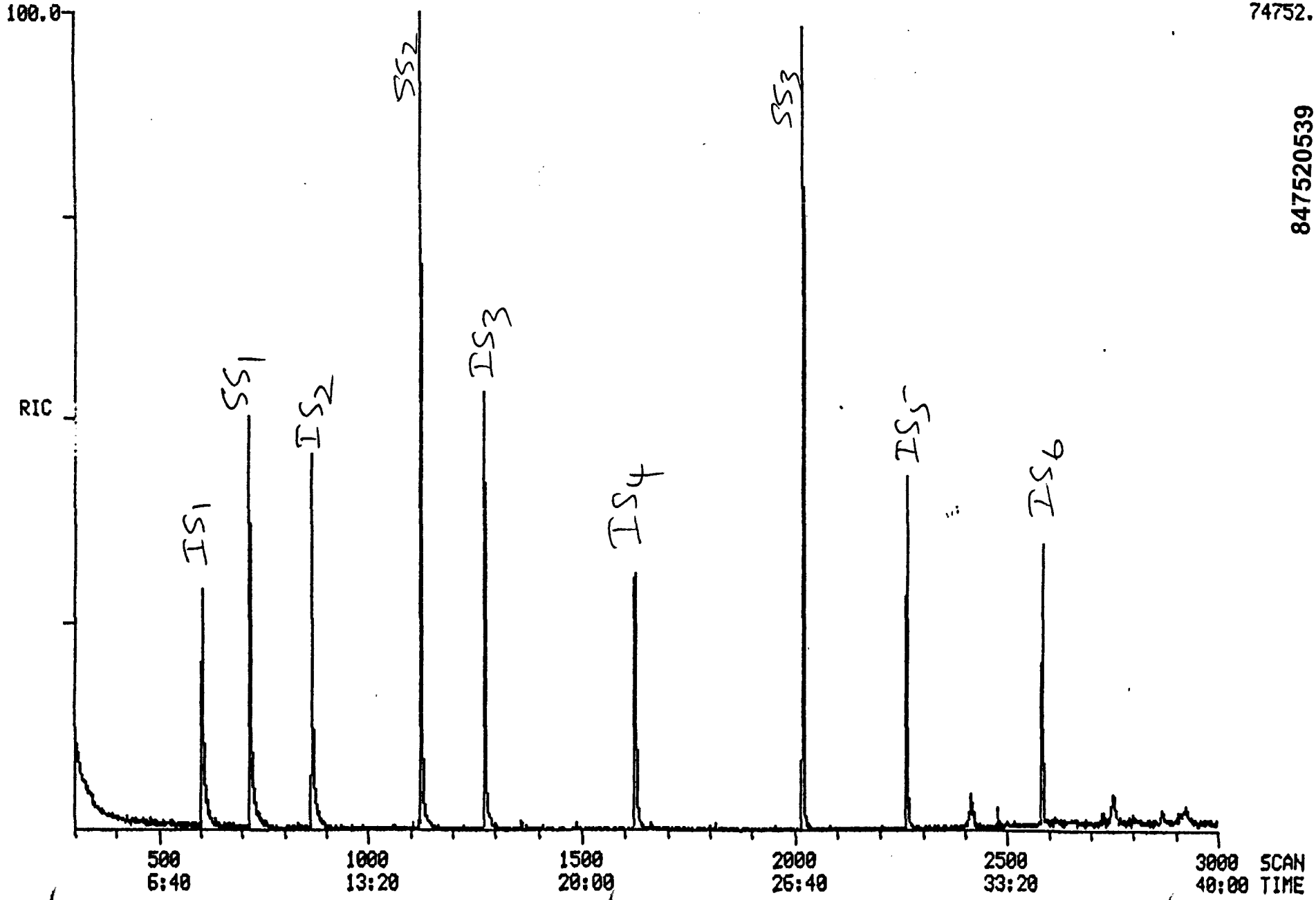
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:52		1.049						
52	18:45		1.100						
53	18:47		1.103						
54	18:50		1.106						
55	18:59		1.114						
56	19:10		0.884						
57	19:16		0.889						
58	19:20		0.892						
59	20:22		0.939						
60	20:45		0.957						
61	21:22		0.986						
62	21:46		1.004						
63	21:54		1.010						
64	24:02	1.00	1.108	1.00	0.54	50.00	0.013	1.208	0.01
65	25:34		1.180						
66	26:08		0.865						
67	26:15		0.869						
68	28:46		0.952						
69	30:10		0.999						
70	30:14		1.001						
71	30:18		1.003						
72	30:48		1.020						
73	32:40		0.947						
74	33:27		0.969						
75	33:31		0.971						
76	34:21		0.995						
77	38:13		1.107						
78	38:18		1.110						
79	39:15		1.138						

847520538

RIC
01/17/92 16:39:00
SAMPLE: SOIL EXTR BLK (009,017,034,037) 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: SBS0117 #1
CALI: SBS0117 #3

SCANS 300 TO 3000



847520539

Quantitation Report File: V017001

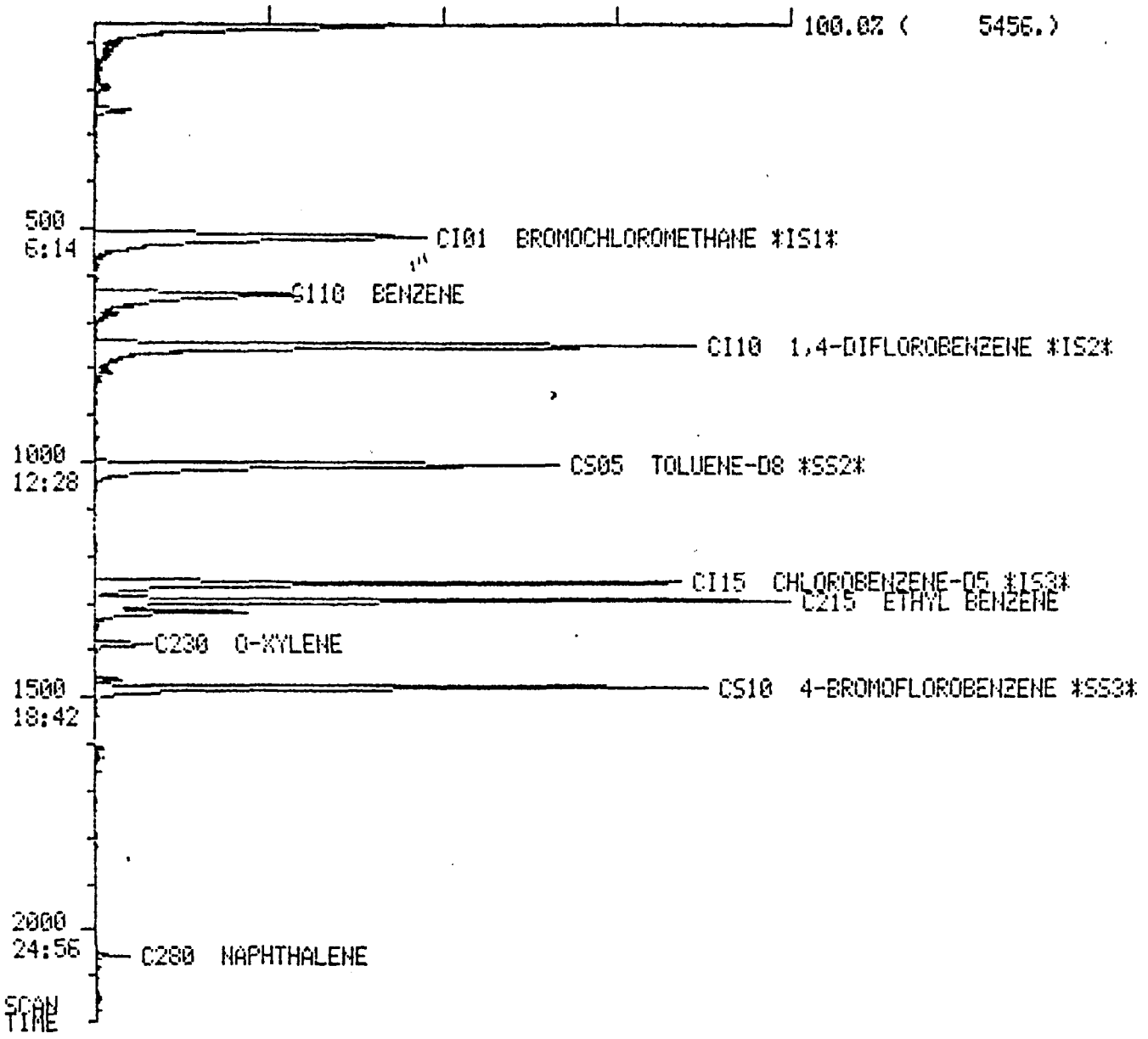
Data: V017001.TI
01/10/92 20:46:00
Sample: 017001 V0+15/E A1 S DIL 1/5
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C285	PYRIDINE

847520540

DATA FROM FILE: V017001 SCANS 60 TO 2200 ACQUIRED: 01/10/92 20:46:00
CALI: V017001 #3
SAMPLE: 017001 V0+15/E A1 S DIL 1/5
CONDS.: 1AL/624/DB624



84752541

SAMPLING RESULTS REPORT
April 1, 1992

ELAN CHEMICAL CORP.
268 DOREMUS AVE
NEWARK, NEW JERSEY
EWMA CASE #91025

Volume II of II

Prepared By:
Environmental Waste Management Associates
1235A Route 23, P.O. Box 648
Wayne, New Jersey 07474

847520542

APPENDIX 3 CONT.

LABORATORY ANALYTICAL RESULTS

Quantitation Report File: V017002

Data: V017002.TI
01/10/92 21:21:00
Sample: 017002 V0+15/E A2 S DIL 1/10
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	514	6:25	1	1.000	A BV	9940.	50.000	UG/L	18.04
2	114	747	9:19	2	1.000	A BB	53190.	50.000	UG/L	18.04
3	117	1255	15:39	3	1.000	A BB	26181.	50.000	UG/L	18.04
4	65	639	7:58	1	1.243	A BB	16654.	44.896	UG/L	16.20
5	98	1004	12:31	2	1.344	A BB	28382.	41.250	UG/L	14.88
6	95	1478	18:26	3	1.178	A BB	19010.	51.184	UG/L	18.47
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1013	12:38	2	1.356	A*BB	285.	0.374	UG/L	0.13
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1293	16:07	3	1.030	A BB	8424.	10.517	UG/L	3.79
31	91	1317	16:25	3	1.049	A BB	2267.	1.498	UG/L	0.54
32	91	1317	16:25	3	1.049	A BB	2267.	1.498	UG/L	0.54
33	91	1383	17:15	3	1.102	A BB	1824.	2.385	UG/L	0.86
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									

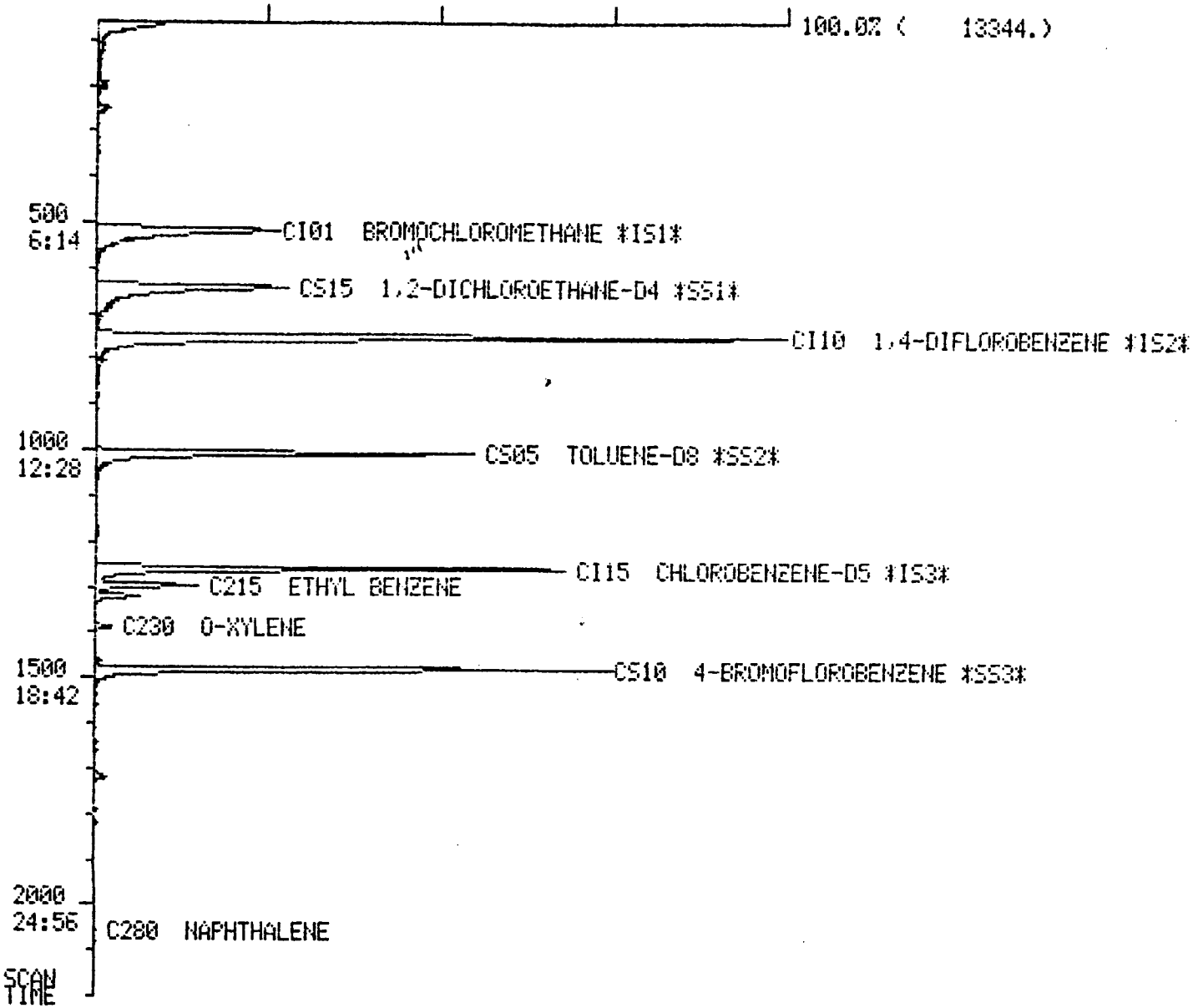
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	44.90	50.00	1.676	1.866	0.90
5	12:30	1.00	1.341	1.00	41.25	50.00	0.534	0.647	0.83
6	18:24	1.00	1.176	1.00	51.18	50.00	0.726	0.709	1.02
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						
11	2:18		0.361						

847520545

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	3:04		0.480						
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09		0.873						
20	9:44		1.044						
21	10:10		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	0.37	50.00	0.005	0.717	0.01
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	10.52	50.00	0.322	1.530	0.21
31	16:24	1.00	1.048	1.00	1.50	50.00	0.087	2.890	0.03
32	16:24	1.00	1.048	1.00	1.50	50.00	0.087	2.890	0.03
33	17:14	1.00	1.101	1.00	2.38	50.00	0.070	1.461	0.05
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	12:43		1.342						

847520546

DATA FROM FILE: V017002 SCANS 60 TO 2200 ACQUIRED: 01/10/92 21:21:00
CALI: V017002 #3
SAMPLE: 017002 V0+15/E A2 S DIL 1/10
CONDS.: IAL/624/DB624



847520547

Quantitation Report File: V017003

Data: V017003.TI
01/10/92 21:56:00
Sample: 017003 VO+15/E B-1 S 5G
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C285	PYRIDINE

847520548

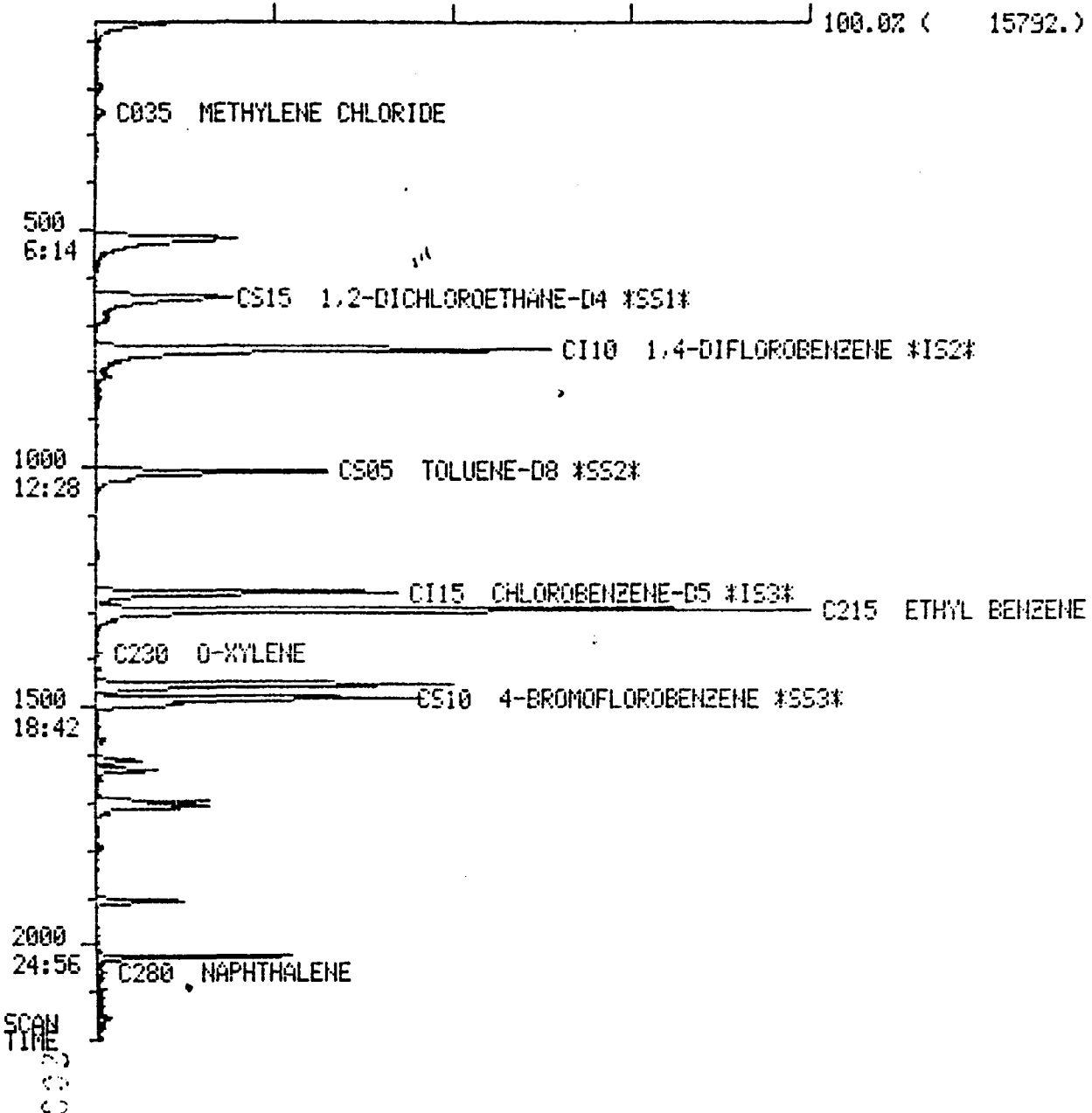
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	517	6:27	1	1.000	A BB	8593.	50.000 UG/L	14.10
2	114	747	9:19	2	1.000	A BB	41275.	50.000 UG/L	14.10
3	117	1256	15:40	3	1.000	A BB	19671.	50.000 UG/L	14.10
4	65	638	7:57	1	1.234	A BB	12580.	39.227 UG/L	11.06
5	98	1005	12:32	2	1.345	A BB	22912.	42.912 UG/L	12.10
6	95	1476	18:24	3	1.175	A BB	14441.	51.749 UG/L	14.59
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	248	3:06	1	0.480	A BV	654.	3.023 UG/L	0.85
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	78	639	7:58	2	0.855	A BB	46.	0.062 UG/L	0.02
19	62	654	8:09	2	0.876	A BB	618.	X 1.388 UG/L VL	0.39
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1017	12:41	2	1.361	A BV	855.	X 1.445 UG/L VL	0.41
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1293	16:07	3	1.029	A BB	56949.	94.626 UG/L	26.68
31	NOT FOUND								
32	NOT FOUND								
33	91	1383	17:15	3	1.101	A BB	643.	X 1.119 UG/L VL	0.32
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	0.99	39.23	50.00	1.464	1.866	0.78
5	12:30	1.00	1.341	1.00	42.91	50.00	0.555	0.647	0.86
6	18:24	1.00	1.176	1.00	51.75	50.00	0.734	0.709	1.03
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						
11	2:18		0.361						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	3:04	1.01	0.480	1.00	3.02	50.00	0.076	1.259	0.06
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58	1.00	0.854	1.00	0.06	50.00	0.001	0.900	0.00
19	8:09	1.00	0.873	1.00	1.39	50.00	0.015	0.539	0.03
20	9:44		1.044						
21	10:10		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	1.45	50.00	0.021	0.717	0.03
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	94.63	50.00	2.895	1.530	1.89
31	16:24		1.048						
32	16:24		1.048						
33	17:14	1.00	1.101	1.00	1.12	50.00	0.033	1.461	0.02
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	12:43		1.342						

847520550

DATA FROM FILE: V017003 SCANS 60 TO 2200 ACQUIRED: 01/10/92 21:56:00
CALI: V017003 #3
SAMPLE: 017003 VO+15/E B-1 S 5G
CONDS.: IAL/624/DB624



847520551

Quantitation Report File: JJRT01

Data: V017003.TI
01/10/92 21:56:00
Sample: 017003 V0+15/E B-1 S 5G
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1256	15:40	2	0.971	A BB	56469.	42.150 X1.19	13.35
2	RIC	1293	16:07	2	1.000	A BB	133970.	100.000	31.67
3	RIC (C)	1448	18:03	2	1.120	A BB	75752.	56.544 67.2	17.91
4	RIC	1477	18:25	2	1.142	A BV	60898.	45.456	14.40
5	RIC (E)	1488	18:33	2	1.151	A VB	14738.	11.001 13.1	3.48
6	RIC (A)	1628	20:18	2	1.259	A BB	10264.	7.661 9.2	2.43
7	RIC (B)	1693	21:07	2	1.309	A BV	17086.	12.754 15.2	4.04
8	RIC (F)	1704	21:15	2	1.318	A VB	14721.	10.989 13.1	3.48
9	RIC (D)	1904	23:44	2	1.473	A BB	14661.	10.943 13.1	3.47
10	RIC (G)	2021	25:12	2	1.563	A BB	24411.	18.221 21.7	5.77

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1					42.15		0.422		
2					100.00		1.000		
3					56.54		0.565		
4					45.46		0.455		
5					11.00		0.110		
6					7.66		0.077		
7					12.75		0.128		
8					10.99		0.110		
9					10.94		0.109		
10					18.22		0.182		

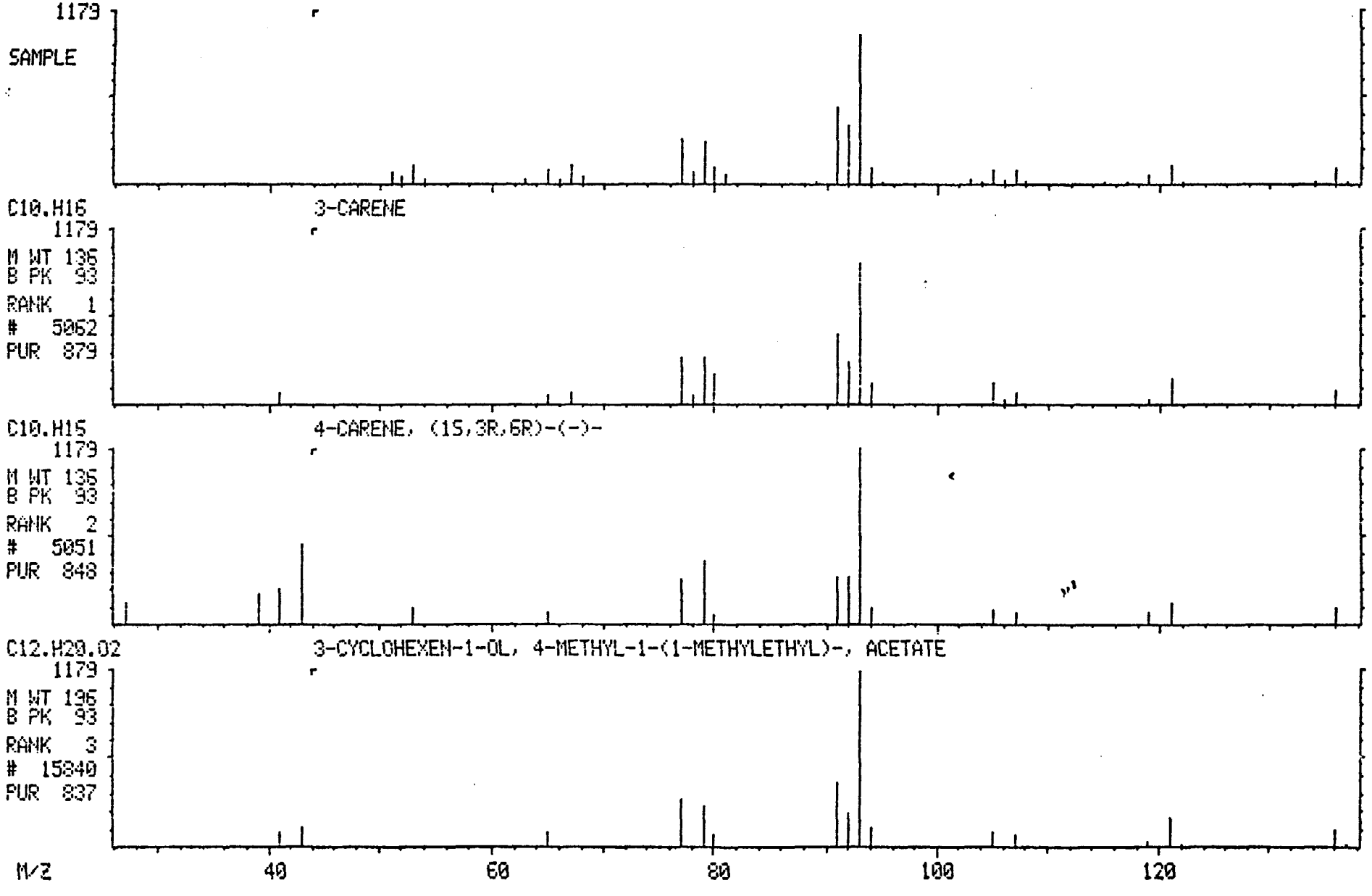
847520552

01/10/92 21:56:00 + 18:03
SAMPLE: 017003 VO+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

CALI: V017003 # 3

RIC: 5344.

847520553

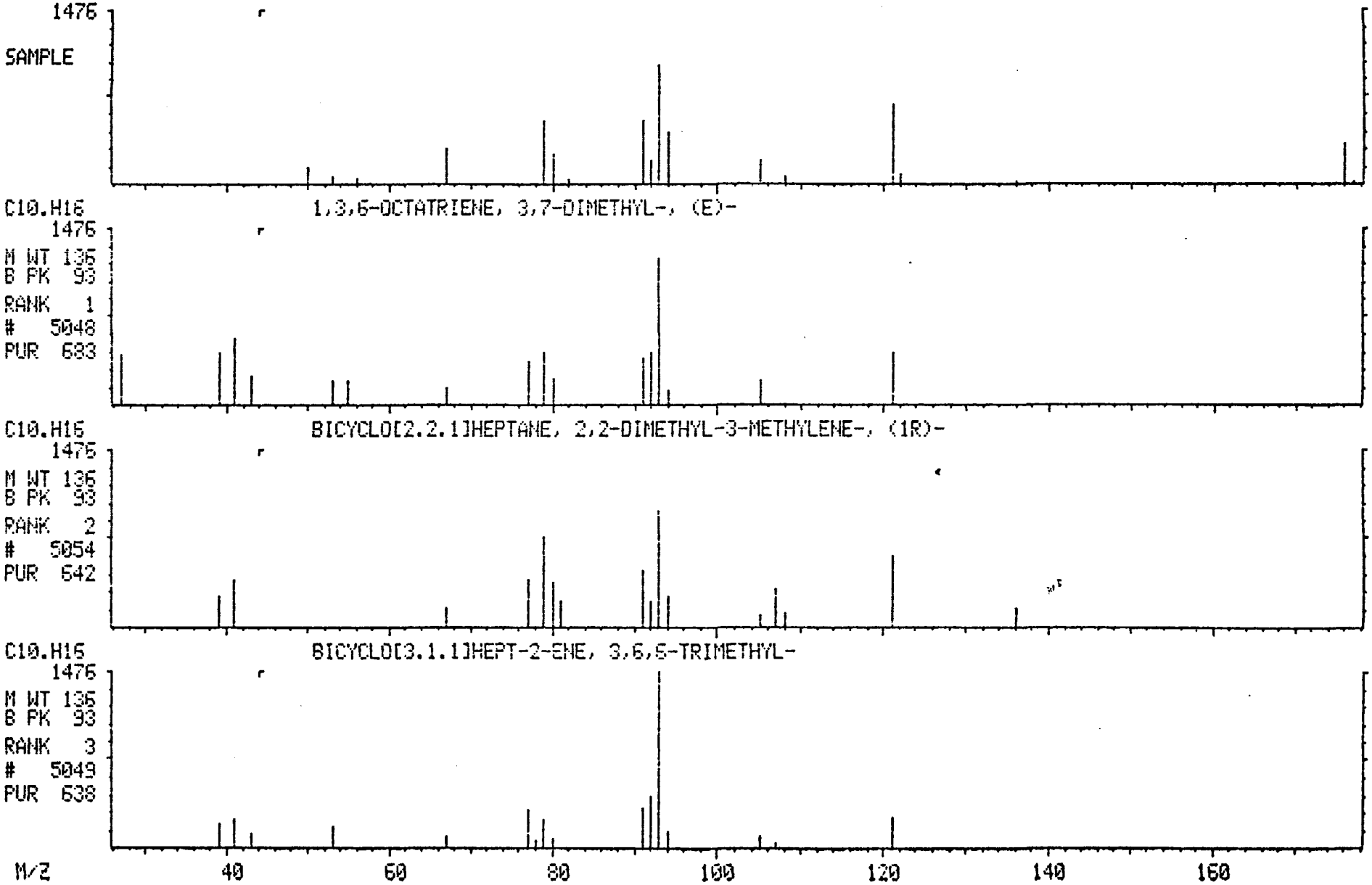


MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 21:56:00 + 18:33
SAMPLE: 017003 V0+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017003 #1488
CALI: V017003 # 3

BASE M/Z: 93
RIC: 714.

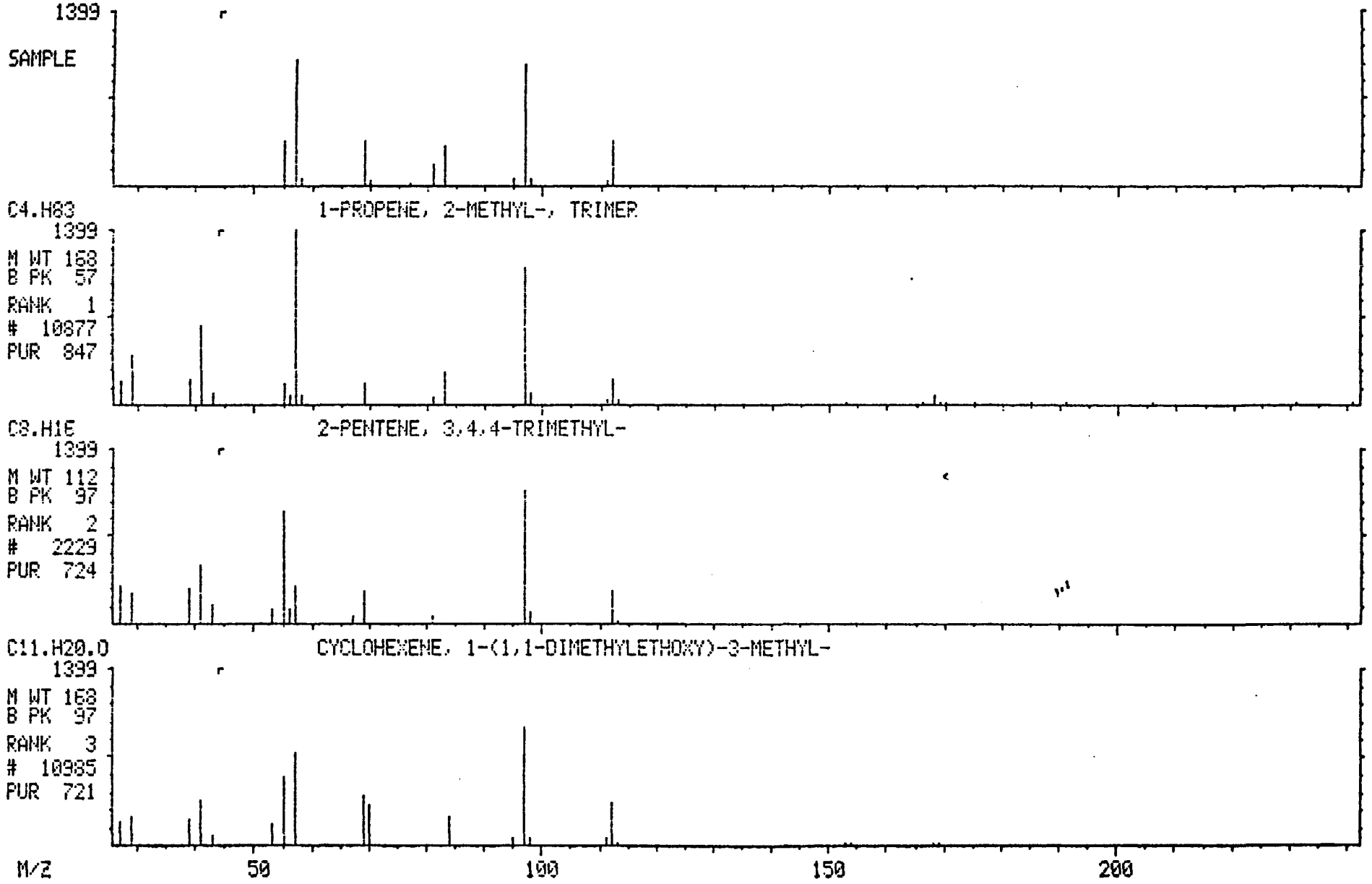
847520554



MID LIBRARY SEARCH (LIBRARYMB)
01/10/92 21:56:00 + 20:18
SAMPLE: 017003 VO+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 158 2N 0T)

DATA: V017003 #1628
CALI: V017003 # 3

BASE M/Z: 57
RIC: 911.



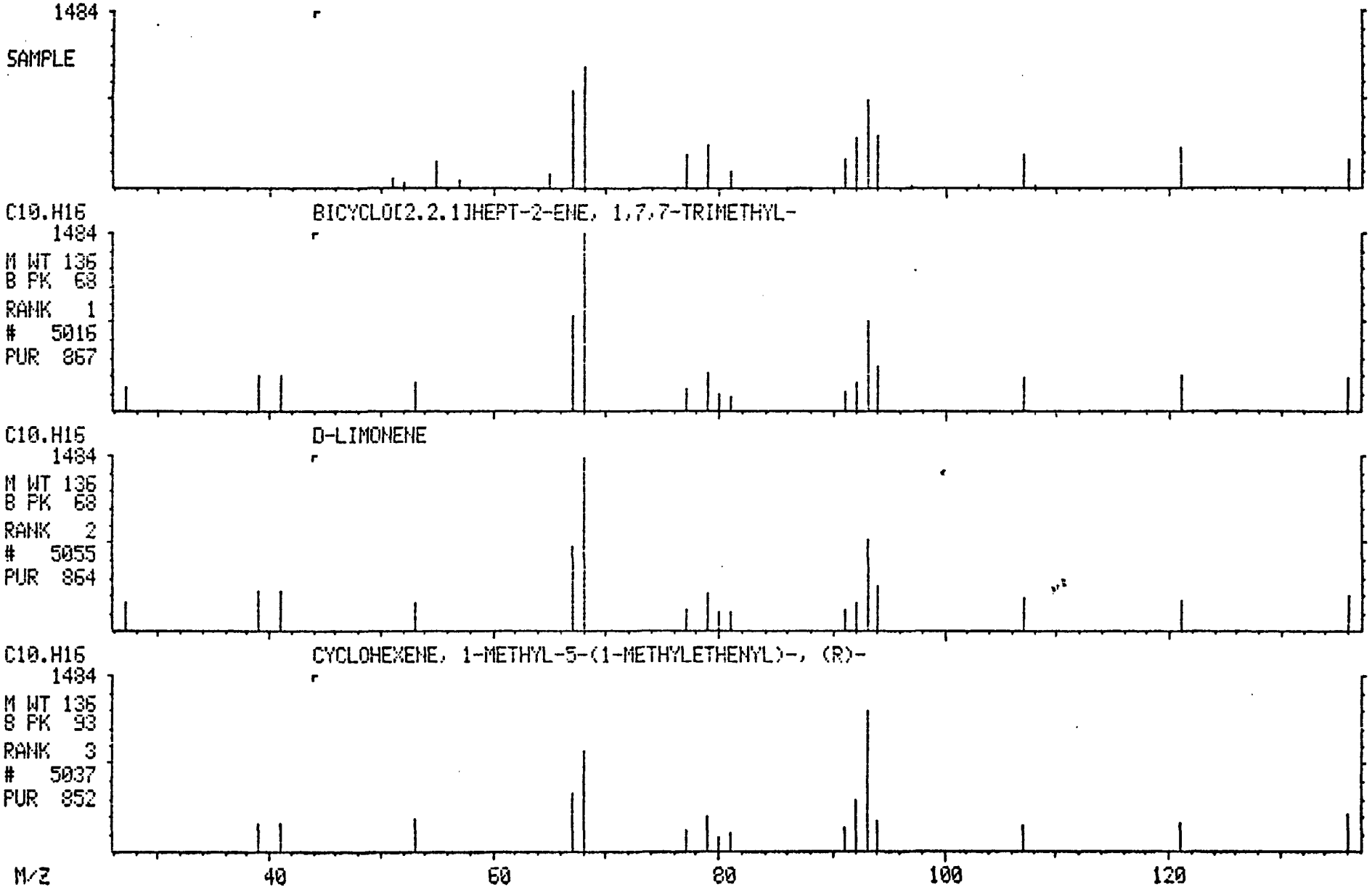
847520555

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 21:56:00 + 21:07
SAMPLE: 017003 VO+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017003 #1693
CALI: V017003 # 3

BASE M/Z: 68
RIC: 1608.

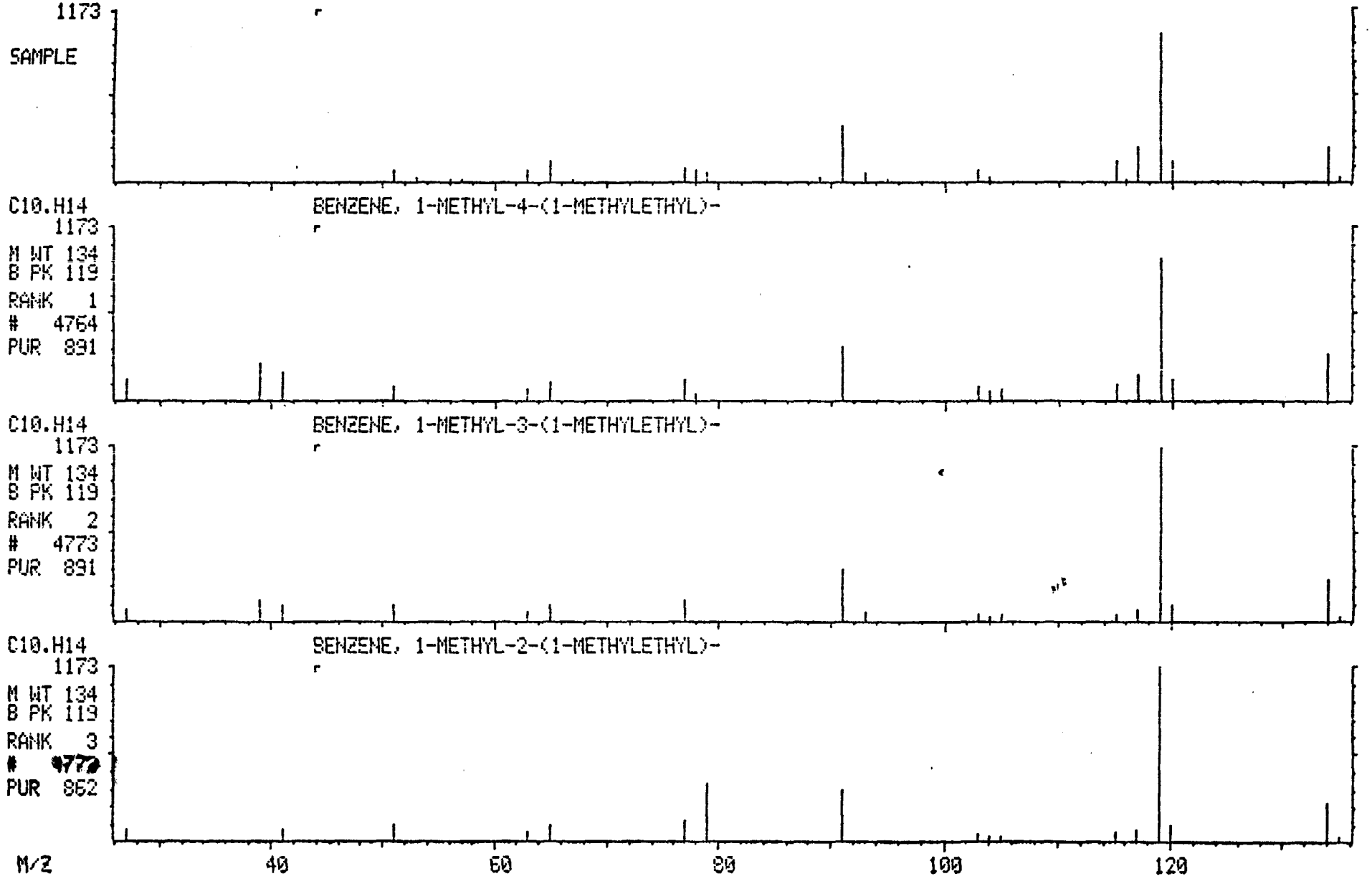
847520556



MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 21:56:00 + 21:15
SAMPLE: 017003 V0+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017003 #1704
CALI: V017003 # 3

BASE M/Z: 119
RIC: 1790.



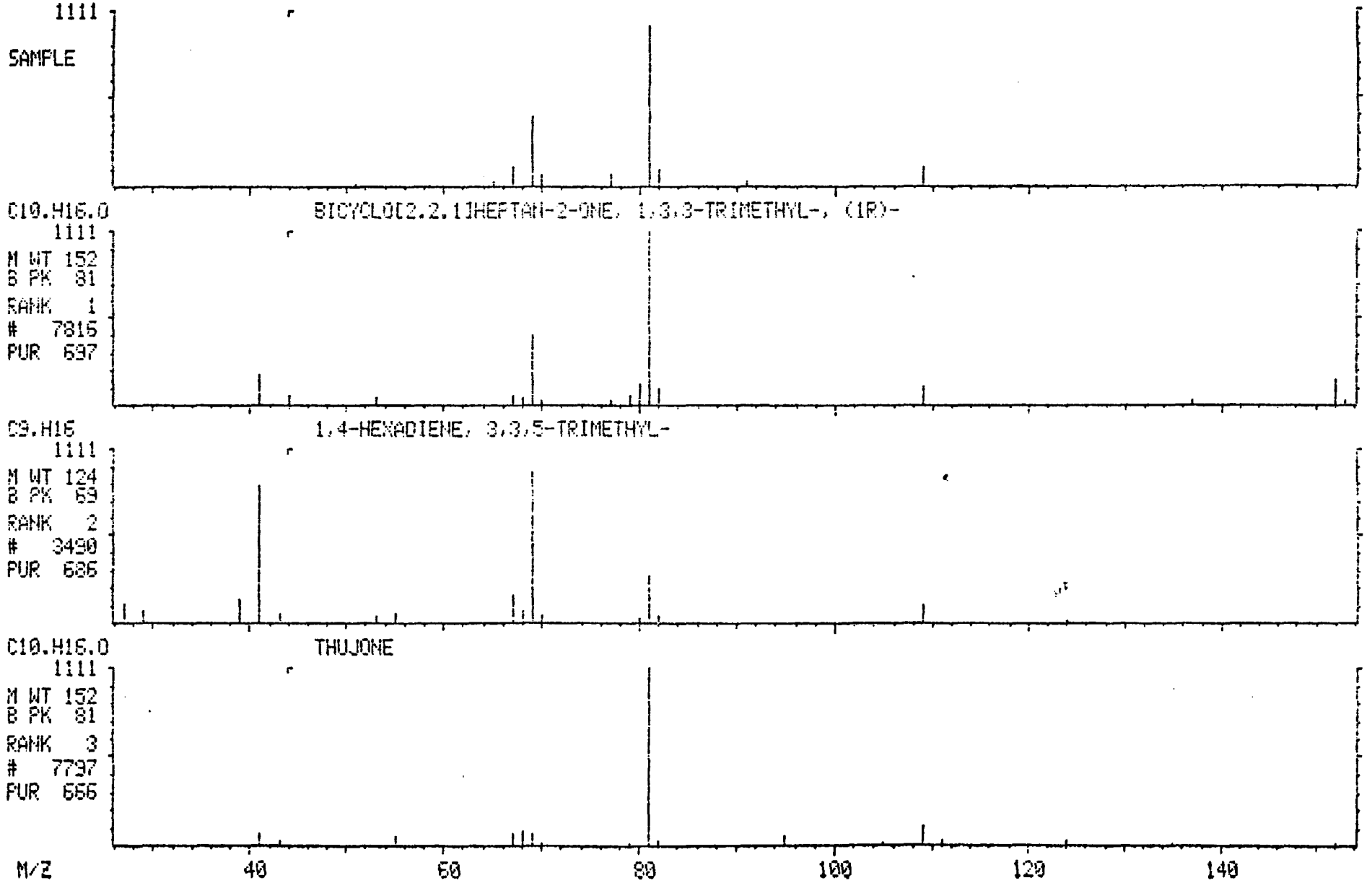
847520557

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 21:56:00 + 23:44
SAMPLE: 017003 V0+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017003 #1904
CALI: V017003 # 3

BASE M/Z: 81
RIC: 1082.

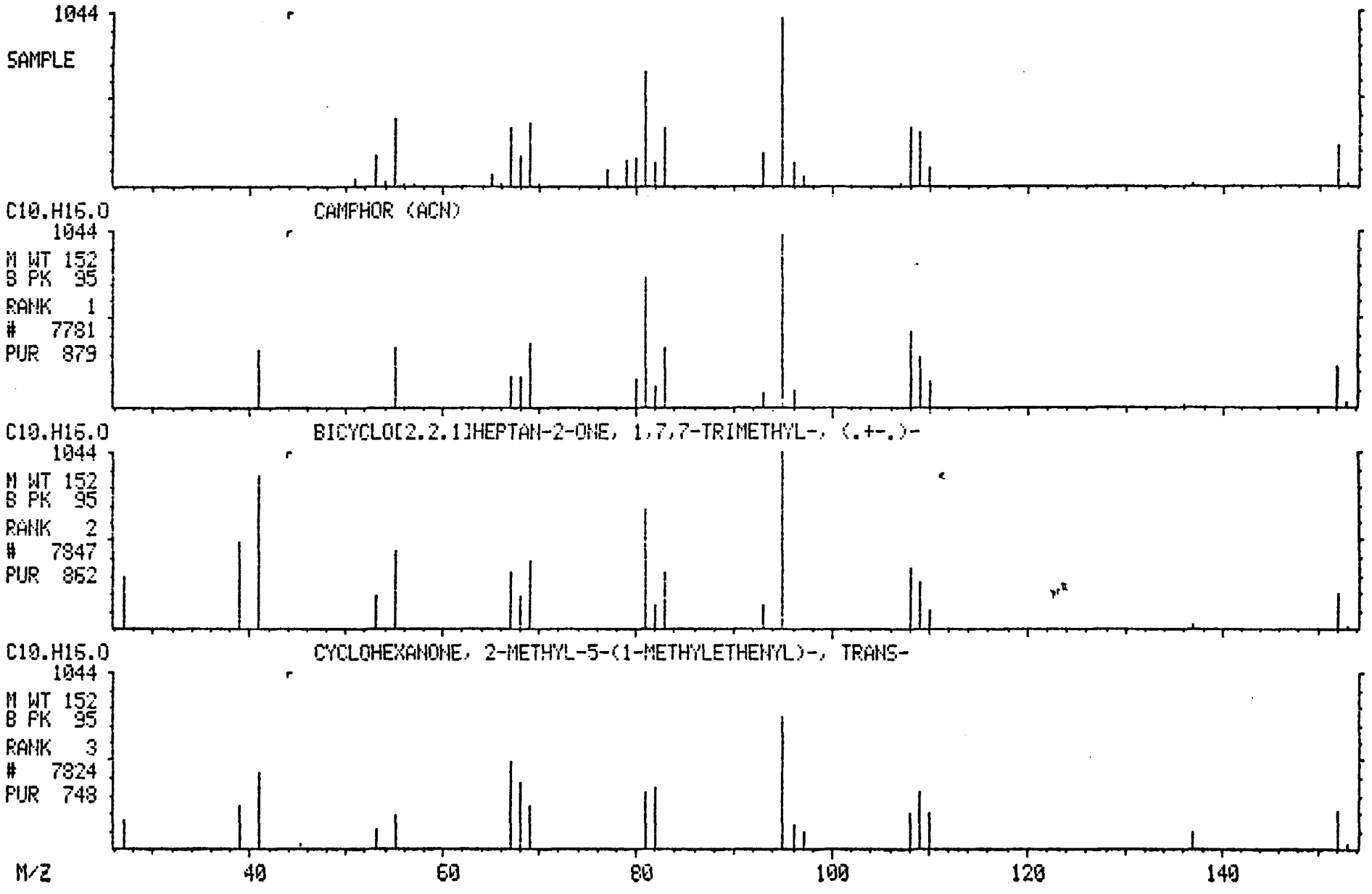
847520558



MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 21:56:00 + 25:12
SAMPLE: 017003 V0+15/E B-1 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017003 #2021
CALI: V017003 # 3

BASE M/Z: 95
RIC: 3900.



847520559

Data: V017004.TI
01/10/92 22:31:00
Sample: 017004 VO+15/E B2 S 50
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C285	PYRIDINE

847520560

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	516	6:26	1	1.000	A BB	12075.	50.000 UG/L	16.24
2	114	747	9:19	2	1.000	A BB	48797.	50.000 UG/L	16.24
3	117	1255	15:39	3	1.000	A BB	23271.	50.000 UG/L	16.24
4	65	640	7:59	1	1.240	A BB	17557.	38.958 UG/L	12.65
5	98	1003	12:30	2	1.343	A BB	34121.	54.056 UG/L	17.56
6	95	1478	18:26	3	1.178	A BB	14389.	43.587 UG/L	14.16
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	246	3:04	1	0.477	A*BV	1424.	4.685 UG/L	1.52
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	62	652	8:08	2	0.873	A BV	330.	0.627 UG/L	0.20
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1012	12:37	2	1.355	A BB	1844.	2.637 UG/L	0.86
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1292	16:07	3	1.029	A BB	25143.	35.316 UG/L	11.47
31	NOT FOUND								
32	NOT FOUND								
33	91	1384	17:15	3	1.103	A BB	261.	0.384 UG/L	0.12
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								

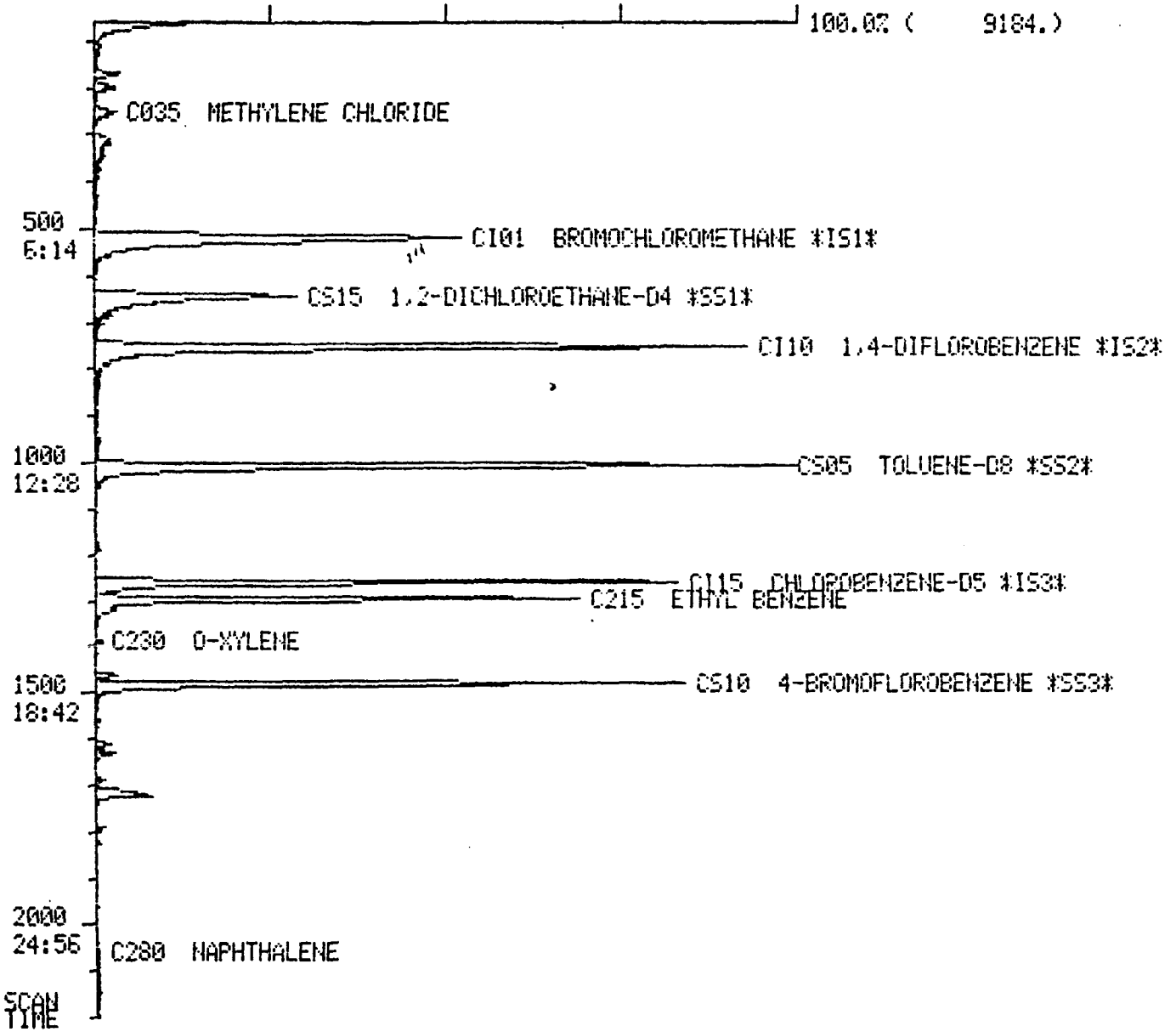
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	38.96	50.00	1.454	1.866	0.78
5	12:30	1.00	1.341	1.00	54.06	50.00	0.699	0.647	1.08
6	18:24	1.00	1.176	1.00	43.59	50.00	0.618	0.709	0.87
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						
11	2:18		0.361						

847520561

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	3:04	1.00	0.480	0.99	4.68	50.00	0.118	1.259	0.09
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09	1.00	0.873	1.00	0.63	50.00	0.007	0.539	0.01
20	9:44		1.044						
21	10:10		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	2.64	50.00	0.038	0.717	0.05
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	35.32	50.00	1.080	1.530	0.71
31	16:24		1.048						
32	16:24		1.048						
33	17:14	1.00	1.101	1.00	0.38	50.00	0.011	1.461	0.01
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	12:43		1.342						

847520562

DATA FROM FILE: V017004 SCANS 60 TO 2200 ACQUIRED: 01/10/92 22:31:00
CALI: V017004 #3
SAMPLE: 017004 VO+15/E B2 S 5G
CONDS.: IAL/624/DB624



847520563

Quantitation Report File: JJRT01

Data: V017004.TI
01/10/92 22:31:00
Sample: 017004 V0+15/E B2 S 50
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1255	15:39	1	1.000	A BB	67067.	100.000 x0.5	34.26
2	RIC	1292	16:07	1	1.029	A BB	54670.	81.515	27.93
3	RIC	1478	18:26	1	1.178	A BB	65730.	98.006	33.58
4	RIC	1719	21:26	1	1.370	A BB	8284.	12.352 6.2	4.23

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1			100.00		1.000		
2			81.52		0.815		
3			98.01		0.980		
4			12.35		0.124		

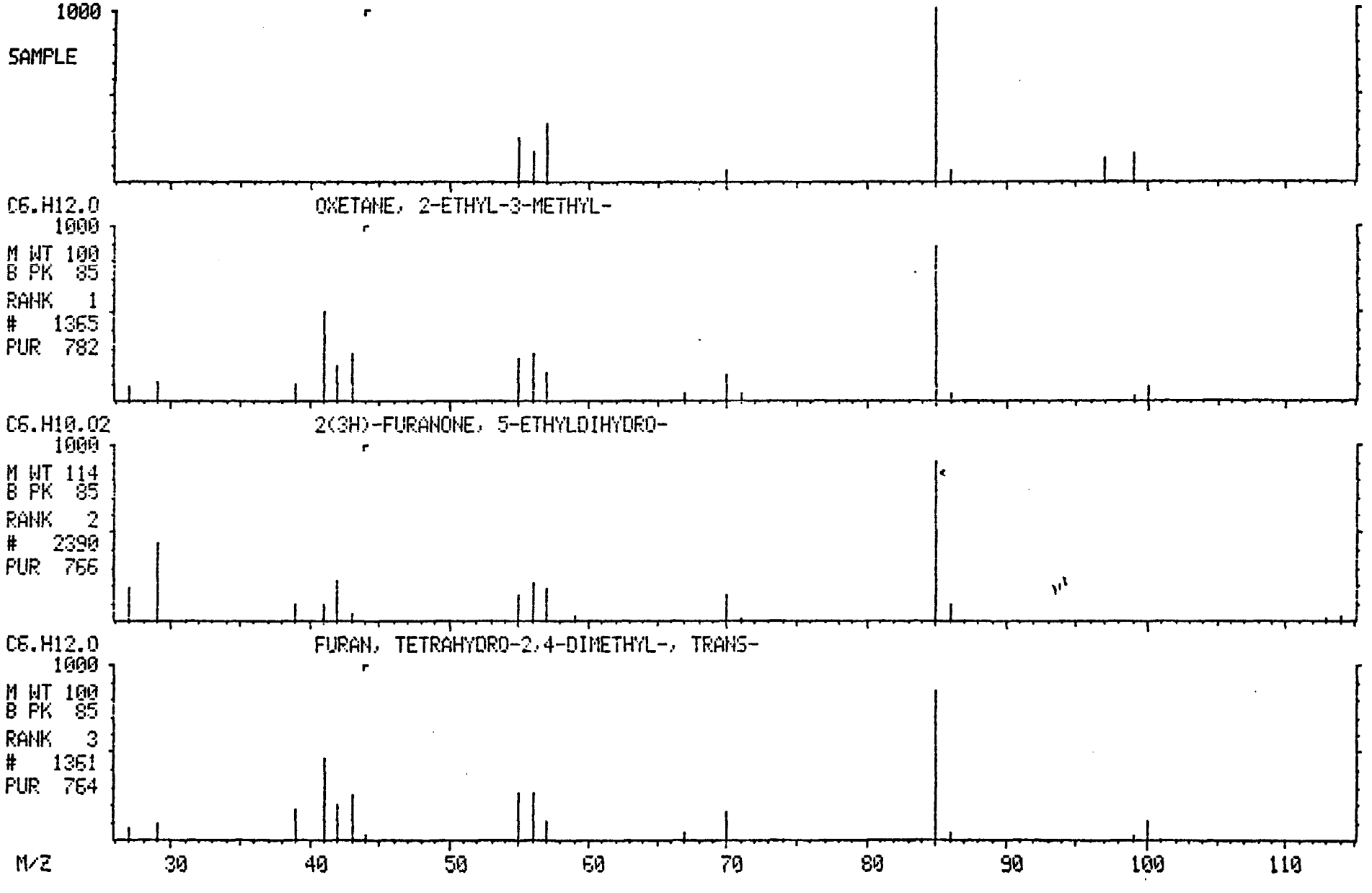
847520564

MIU LIBRARY SEARCH (LIBRARYNB)
01/10/92 22:31:00 + 21:26
SAMPLE: 017004 V0+15/E B2 S 5G
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017004 #1713
CALI: V017004 # 3

BASE M/Z: 85
RIC: 424.

847520565



Quantitation Report File: V017005

Data: V017005.TI
01/10/92 23:06:00
Sample: 017005 V0+15/E C1 S DIL 1/2
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C275	METHYL ETHYL KETONE (MEK)
42	C285	PYRIDINE

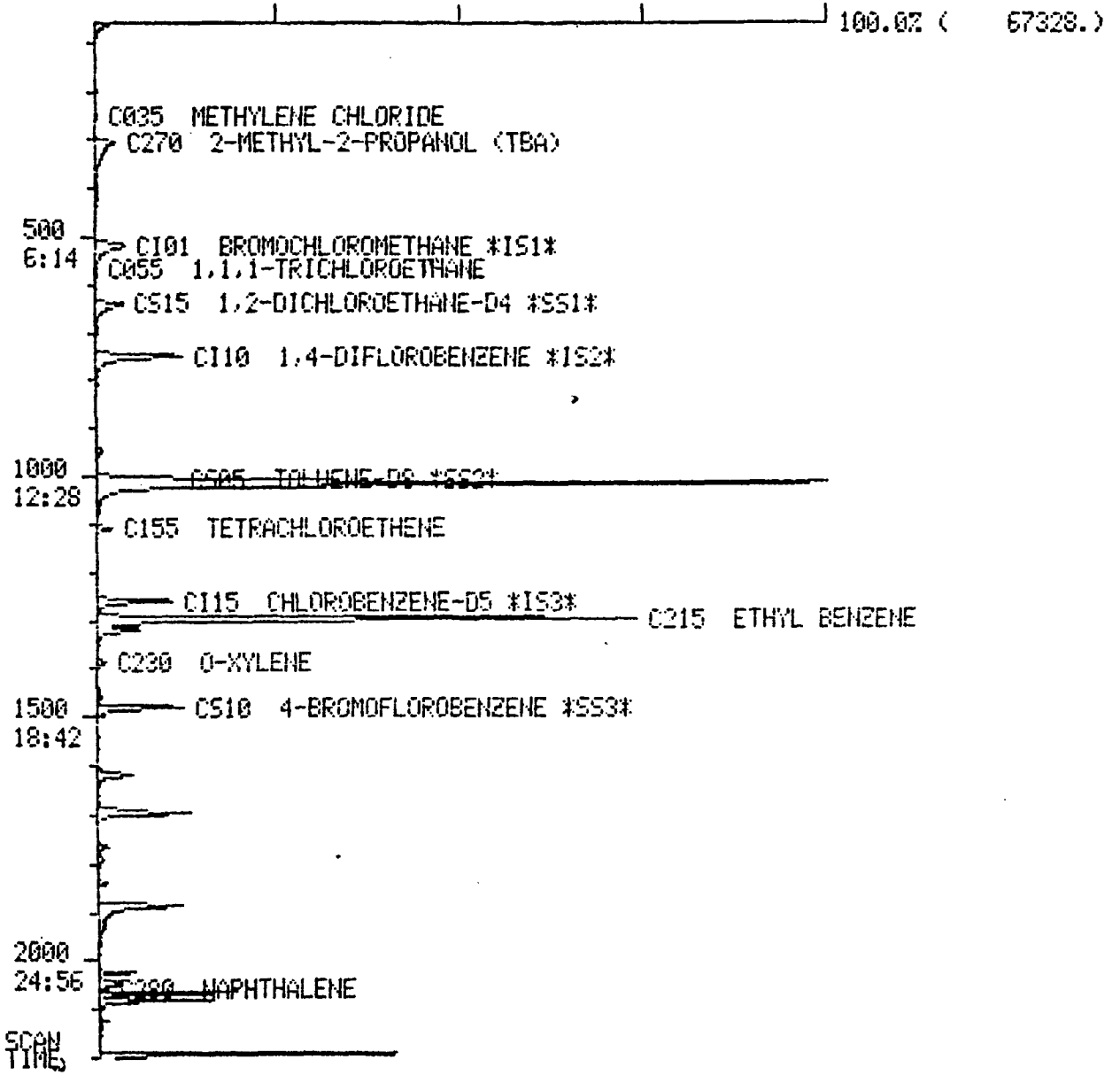
847520566

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	512	6:23	1	1.000	A BB	6629.	50.000	UG/L	4.59
2	114	745	9:17	2	1.000	A BB	32572.	50.000	UG/L	4.59
3	117	1255	15:39	3	1.000	A BB	20990.	50.000	UG/L	4.59
4	65	635	7:55	1	1.240	A BB	10749.	43.448	UG/L	3.99
5	98	1000	12:28	2	1.342	A BB	23105.	54.837	UG/L	5.04
6	95	1476	18:24	3	1.176	A BB	15214.	51.094	UG/L	4.69
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	247	3:05	1	0.482	A BV	711.	4.258	UG/L	0.39
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	97	563	7:01	1	1.100	A VB	1232.	X 2.996	UG/L	0.28
17	NOT FOUND									
18	NOT FOUND									
19	62	651	8:07	2	0.874	A BV	786.	X 2.237	UG/L	0.21
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1011	12:36	2	1.357	A BB	241649.	517.637	UG/L	47.55
25	NOT FOUND									
26	NOT FOUND									
27	166	1106	13:47	2	1.485	A BB	1836.	7.900	UG/L	0.73
28	NOT FOUND									
29	NOT FOUND									
30	91	1292	16:07	3	1.029	A BB	177027.	275.668	UG/L	25.32
31	91	1316	16:24	3	1.049	A BB	8018.	6.608	UG/L	0.61
32	91	1316	16:24	3	1.049	A BB	8018.	6.608	UG/L	0.61
33	91	1382	17:14	3	1.101	A BB	2943.	4.799	UG/L	0.44
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	43.45	50.00	1.622	1.866	0.87
5	12:30	1.00	1.341	1.00	54.84	50.00	0.709	0.647	1.10
6	18:24	1.00	1.176	1.00	51.09	50.00	0.725	0.709	1.02
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						
11	2:18		0.361						
12	3:04	1.00	0.480	1.01	4.26	50.00	0.107	1.259	0.09

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01	1.00	1.097	1.00	3.00	50.00	0.186	3.102	0.06
17	7:27		1.164						
18	7:58		0.854						
19	8:09	1.00	0.873	1.00	2.24	50.00	0.024	0.539	0.04
20	9:44		1.044						
21	10:10		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	517.64	50.00	7.419	0.717	10.35
25	13:24		1.437						
26	13:42		1.469						
27	13:49	1.00	1.481	1.00	7.90	50.00	0.056	0.357	0.16
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	275.67	50.00	8.434	1.530	5.51
31	16:24	1.00	1.048	1.00	6.61	50.00	0.382	2.890	0.13
32	16:24	1.00	1.048	1.00	6.61	50.00	0.382	2.890	0.13
33	17:14	1.00	1.101	1.00	4.80	50.00	0.140	1.461	0.10
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	6:11		0.974						
42	12:43		1.342						

DATA FROM FILE: V017005 SCANS 60 TO 2200 ACQUIRED: 01/10/92 23:06:00
CALI: V017005 #3
SAMPLE: 017005 VO+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624



847520569

Quantitation Report File: JJRT01

Data: V017005.TI
01/10/92 23:06:00
Sample: 017005 V0+15/E C1 S DIL 1/2
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	302	3:46	5	0.299	A BB	22992.	3.675	1.26
2	RIC	513	6:24	5	0.507	A BB	37365.	5.972	2.04
3	RIC	635	7:55	5	0.628	A BB	25473.	4.071	1.39
4	RIC	745	9:17	5	0.737	A BB	83820.	13.396	4.58
5	RIC	1011	12:36	5	1.000	A BB	625684.	100.000	34.18
6	RIC	1255	15:39	5	1.241	A BB	56991.	9.109	3.11
7	RIC	1292	16:07	5	1.278	A BB	406426.	64.957	22.20
8	RIC	1316	16:24	5	1.302	A BB	23530.	3.761	1.29
9	RIC	1476	18:24	5	1.460	A BB	72559.	11.597	3.96
10	RIC	1615	20:08	5	1.597	A BB	23718.	3.791	1.30
11	RIC	1692	21:06	5	1.674	A BB	78174.	12.494	4.27
12	RIC	1882	23:28	5	1.862	A BB	81387.	13.008	4.45
13	RIC	2020	25:11	5	1.998	A BB	19167.	3.063	1.05
14	RIC	2044	25:29	5	2.022	A BB	22884.	3.657	1.25
15	RIC	2062	25:43	5	2.040	A BB	61146.	9.773	3.34
16	RIC	2078	25:55	5	2.055	A BB	51545.	8.238	2.82
17	RIC	2188	27:17	5	2.164	A BB	137818.	22.027	7.53

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1					3.67		0.037		
2					5.97		0.060		
3					4.07		0.041		
4					13.40		0.134		
5					100.00		1.000		

847520570

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L) Ratio
6			9. 11		0. 091	
7			64. 96		0. 650	
8			3. 76		0. 038	
9			11. 60		0. 116	
10			3. 79		0. 038	
11			12. 49		0. 125	
12			13. 01		0. 130	
13			3. 06		0. 031	
14			3. 66		0. 037	
15			9. 77		0. 098	
16			8. 24		0. 082	
17			22. 03		0. 220	

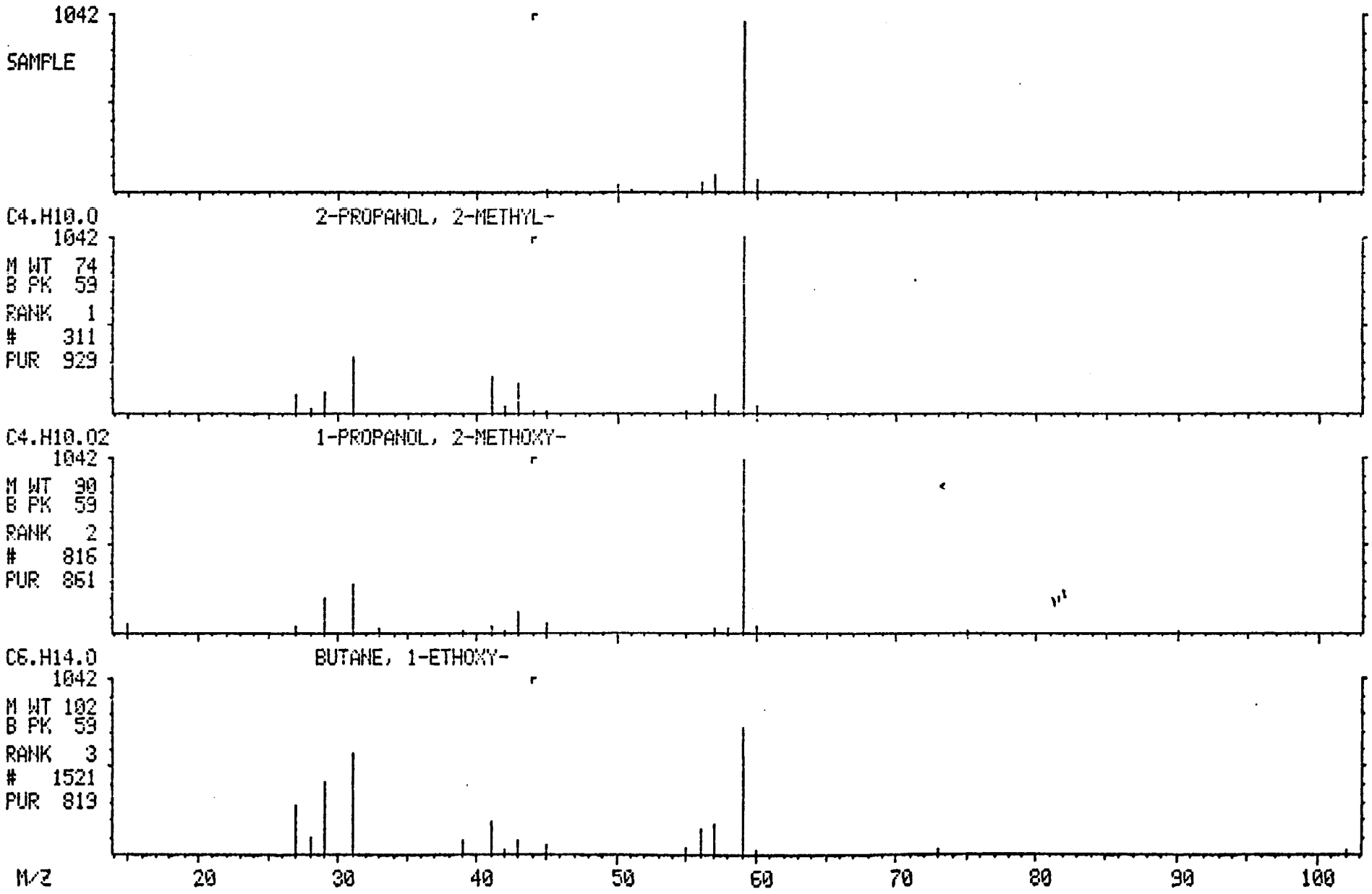
847520571

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 3:46
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 # 302
CALI: V017005 # 3

BASE M/Z: 59
RIC: 1036.

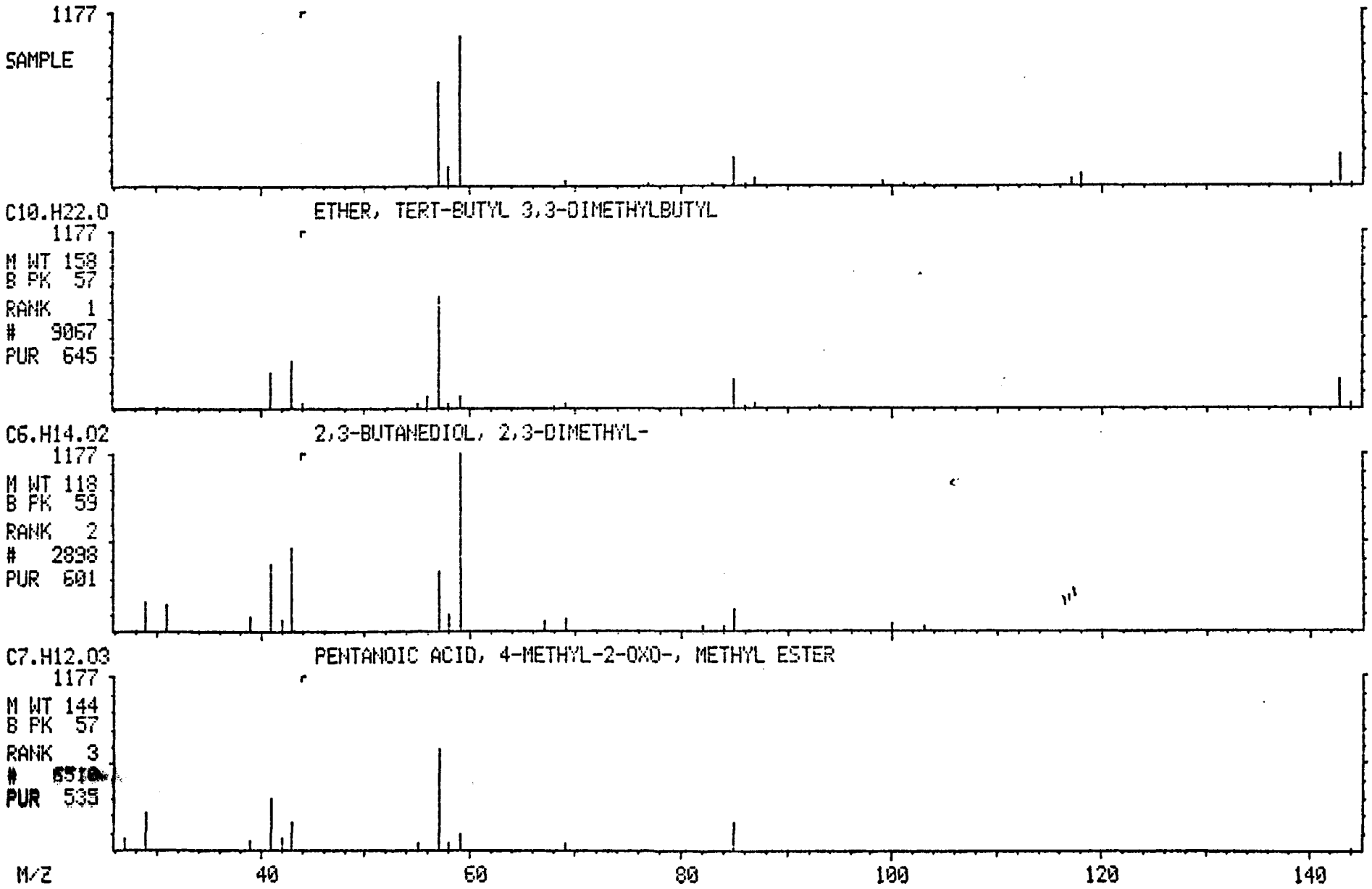
847520572



MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 20:08
SAMPLE: 017005 VO+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #1615 BASE M/Z: 55
CALI: V017005 # 3 RIC: 2116.

847520573



MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 21:06
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #1692
CALI: V017005 # 3

BASE M/Z: 68
RIC: 6256.

23.

847520574

1767

SAMPLE

C10.H16 LIMONENE

1767

M WT 136
B PK 68
RANK 1
5014
PUR 820

C10.H16 CYCLOHEXENE, 4-ETHENYL-1,4-DIMETHYL-

1767

M WT 136
B PK 68
RANK 2
5038
PUR 815

C10.H16 CYCLOHEXENE, 1-METHYL-4-(1-METHYLETHENYL)-, (.+-.)-

1767

M WT 136
B PK 68
RANK 3
5059
PUR 810

M/Z 40 60 80 100 120 140

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 23:28
SAMPLE: 017005 VO+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #1662
CALI: V017005 # 3

BASE M/Z: 105
RIC: 5272.

847520575

1179

SAMPLE

C8.H8.O ETHANONE, 1-PHENYL-

1179

M WT 120
B PK 105
RANK 1
3082
PUR 941

C11.H14.O 1-BUTANONE, 3-METHYL-1-PHENYL-

1179

M WT 162
B PK 105
RANK 2
9817
PUR 817

C8.H7.O.CL ETHANONE, 2-CHLORO-1-PHENYL-

1179

M WT 154
B PK 105
RANK 3
8453
PUR 786

M/Z 40 60 80 100 120 140 160

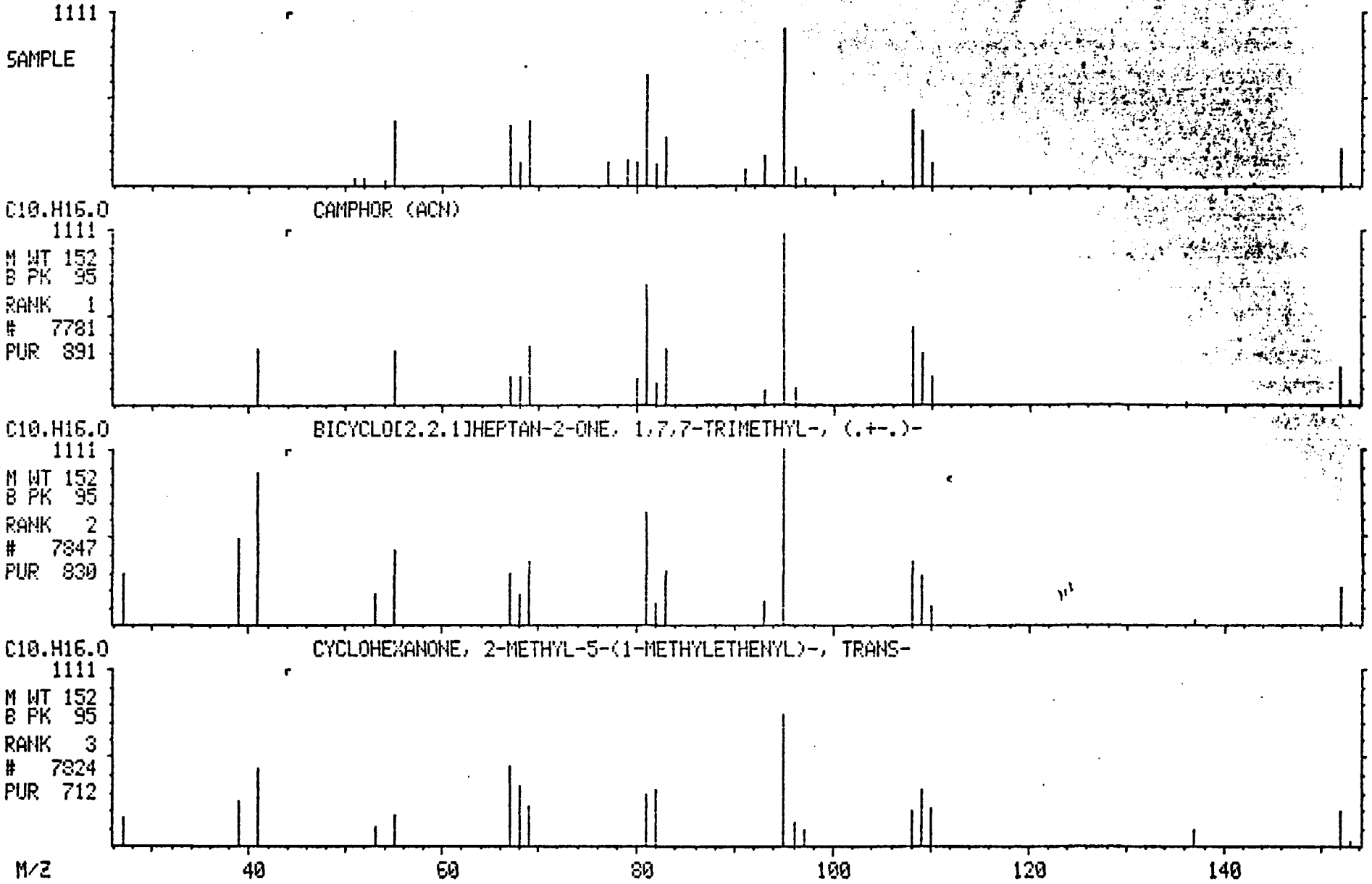
MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 25:11
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #2020
CALI: V017005 # 3

BASE M/Z: 95
RIC: 3100.

233

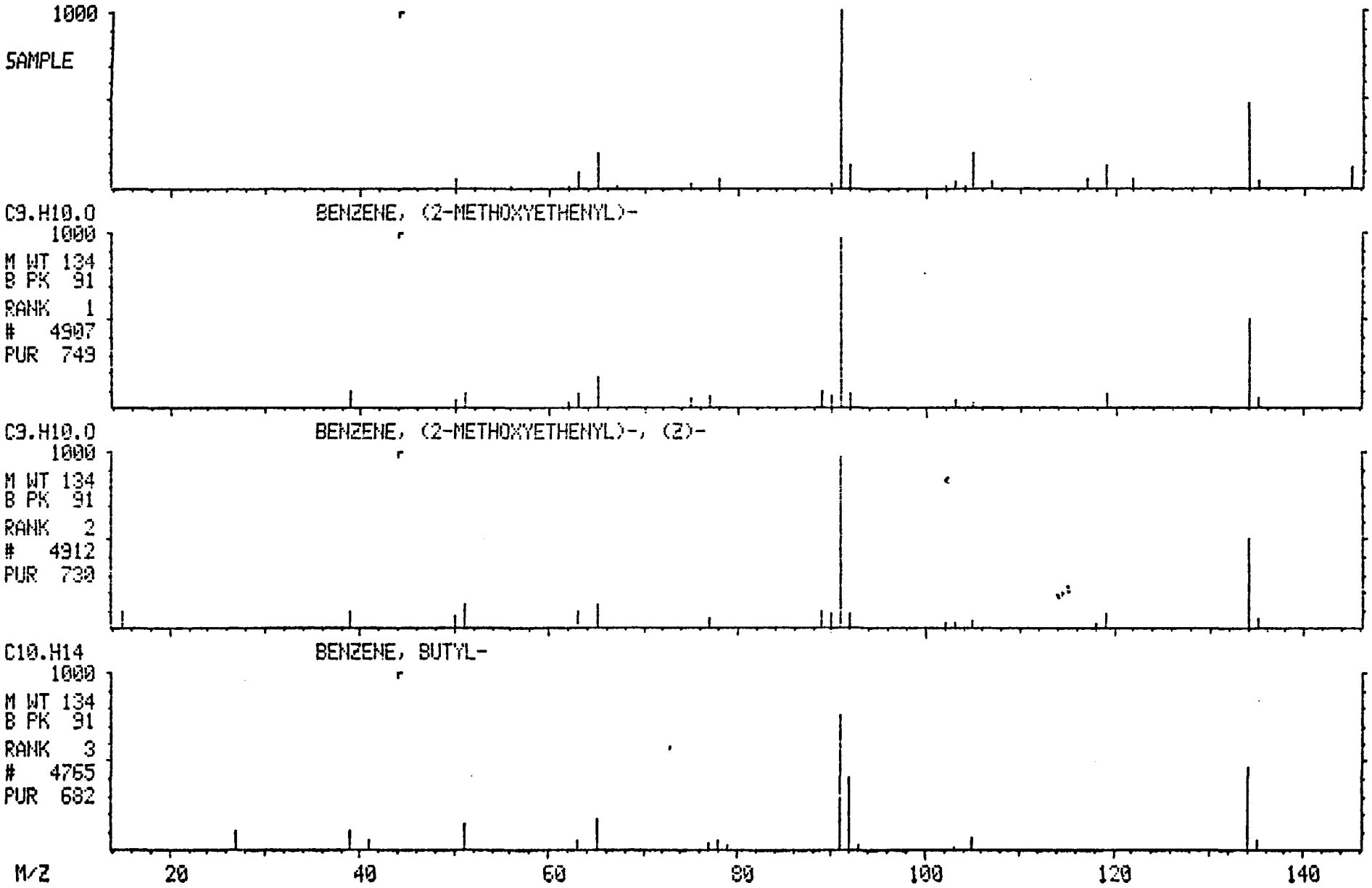
847520576



MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 25:29
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #2044
CALI: V017005 # 3

BASE M/Z: 91
RIC: 1424.

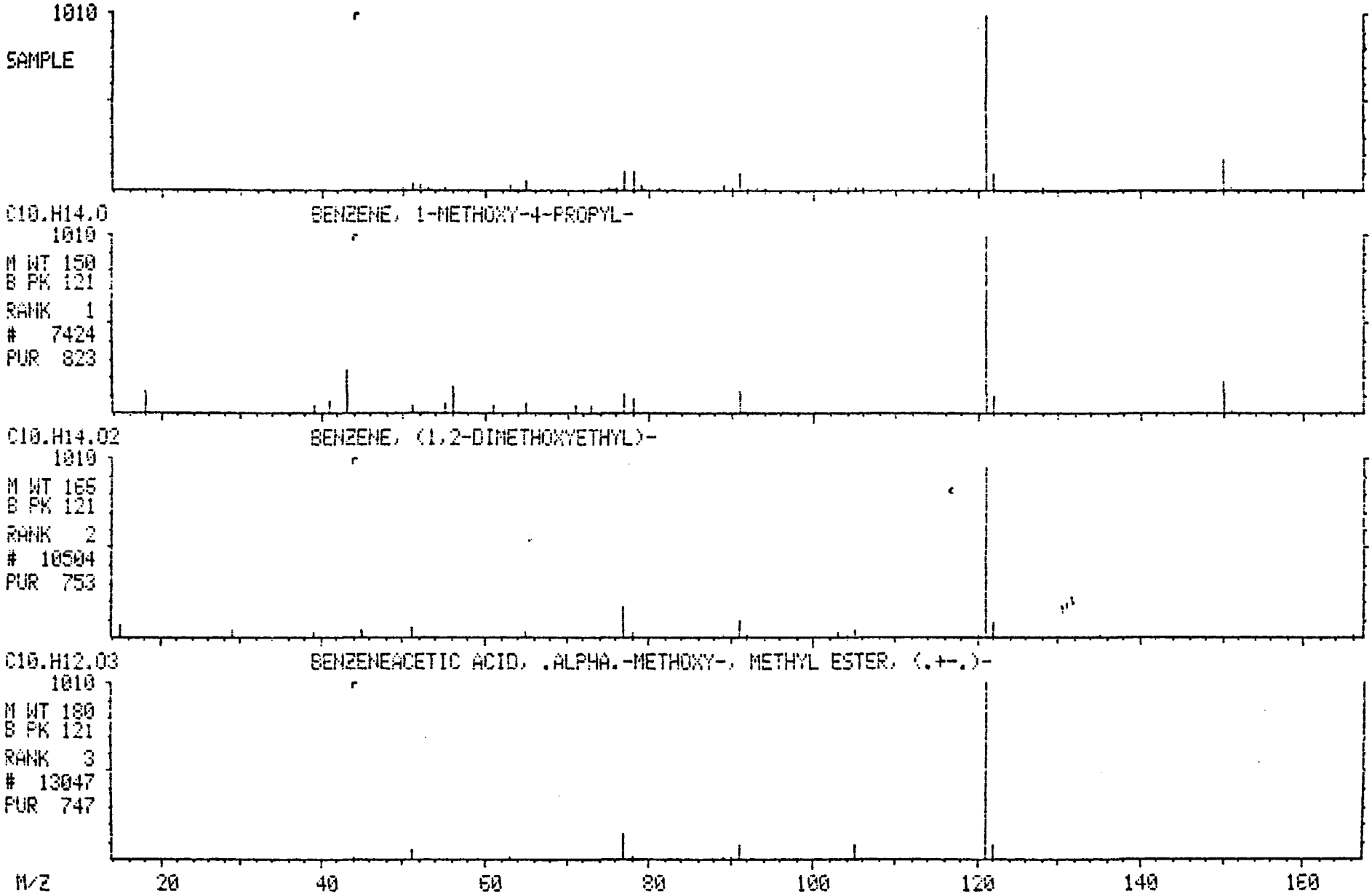


847520577

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 25:43
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #2062
CALI: V017005 # 3

BASE M/Z: 121
RIC: 11472.

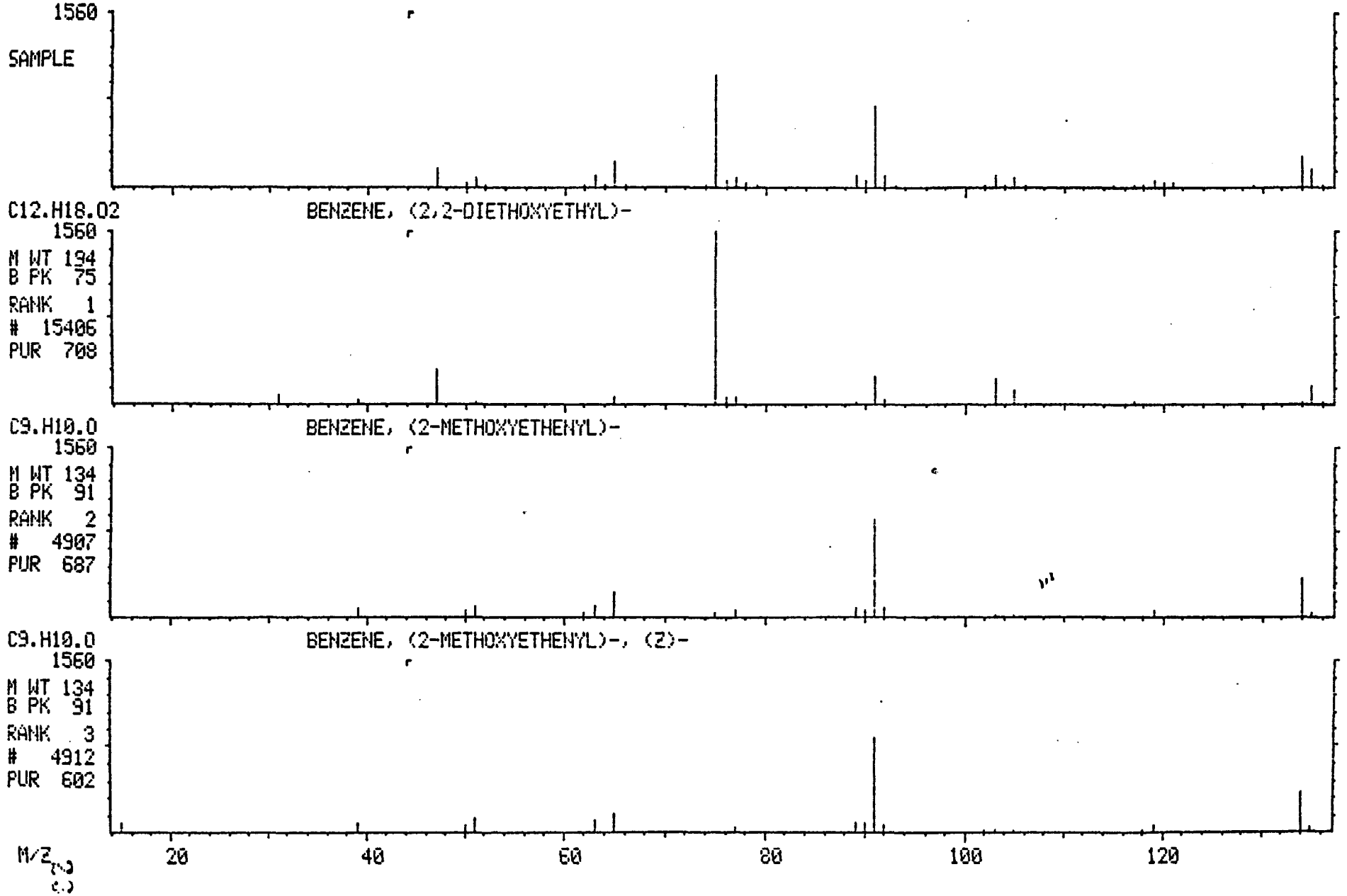


847520578

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 25:55
SAMPLE: 017005 V0+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #2078
CALI: V017005 # 3

BASE M/Z: 75
RIC: 9296.

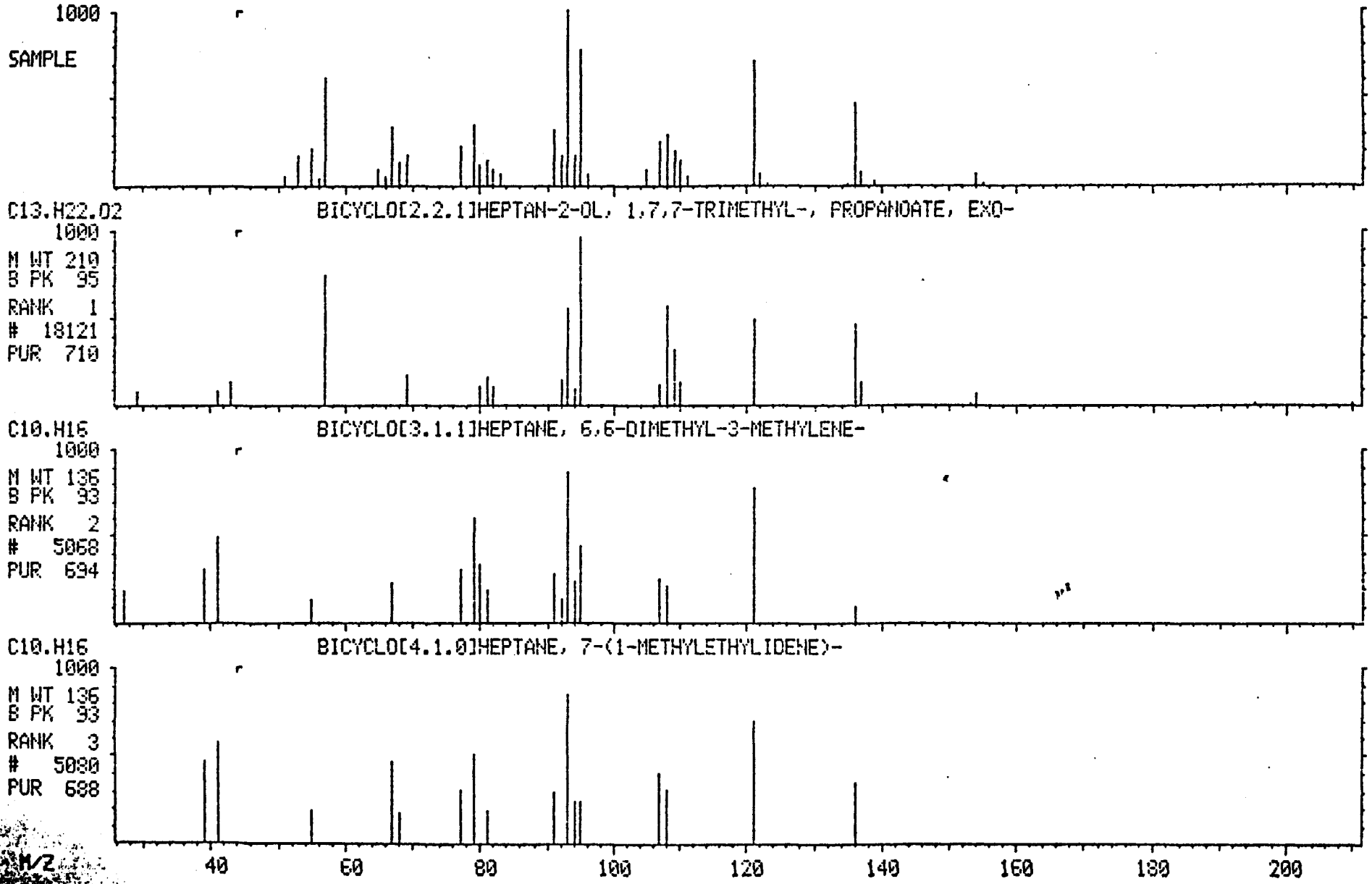


847520579

MID LIBRARY SEARCH (LIBRARYNB)
01/10/92 23:06:00 + 27:17
SAMPLE: 017005 VO+15/E C1 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017005 #2186
CALI: V017005 # 3

BASE M/Z: 93
RIC: 23520.



847520580

Quantitation Report File: V017005A

Data: V017005A.TI
01/13/92 18:19:00
Sample: 017005 V0+15/E C1 S DIL 1/250 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	514	6:25	1	1.000	A BV	14089.	50.000	UG/L	17.32
2	114	747	9:19	2	1.000	A BB	60752.	50.000	UG/L	17.32
3	117	1255	15:39	3	1.000	A BB	34947.	50.000	UG/L	17.32
4	65	638	7:57	1	1 241	A BB	23521.	54.246	UG/L	18.80
5	98	1003	12:30	2	1.343	A BB	33427.	45.490	UG/L	15.76
6	95	1476	18:24	3	1.176	A BB	24047.	49.174	UG/L	17.04
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	247	3:05	1	0.481	A BB	84.	0.235	UG/L	0.08
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1013	12:38	2	1.356	A BB	4664.	5.602	UG/L	1.94
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1292	16:07	3	1.029	A BB	5793.	5.564	UG/L	1.93
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
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41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									

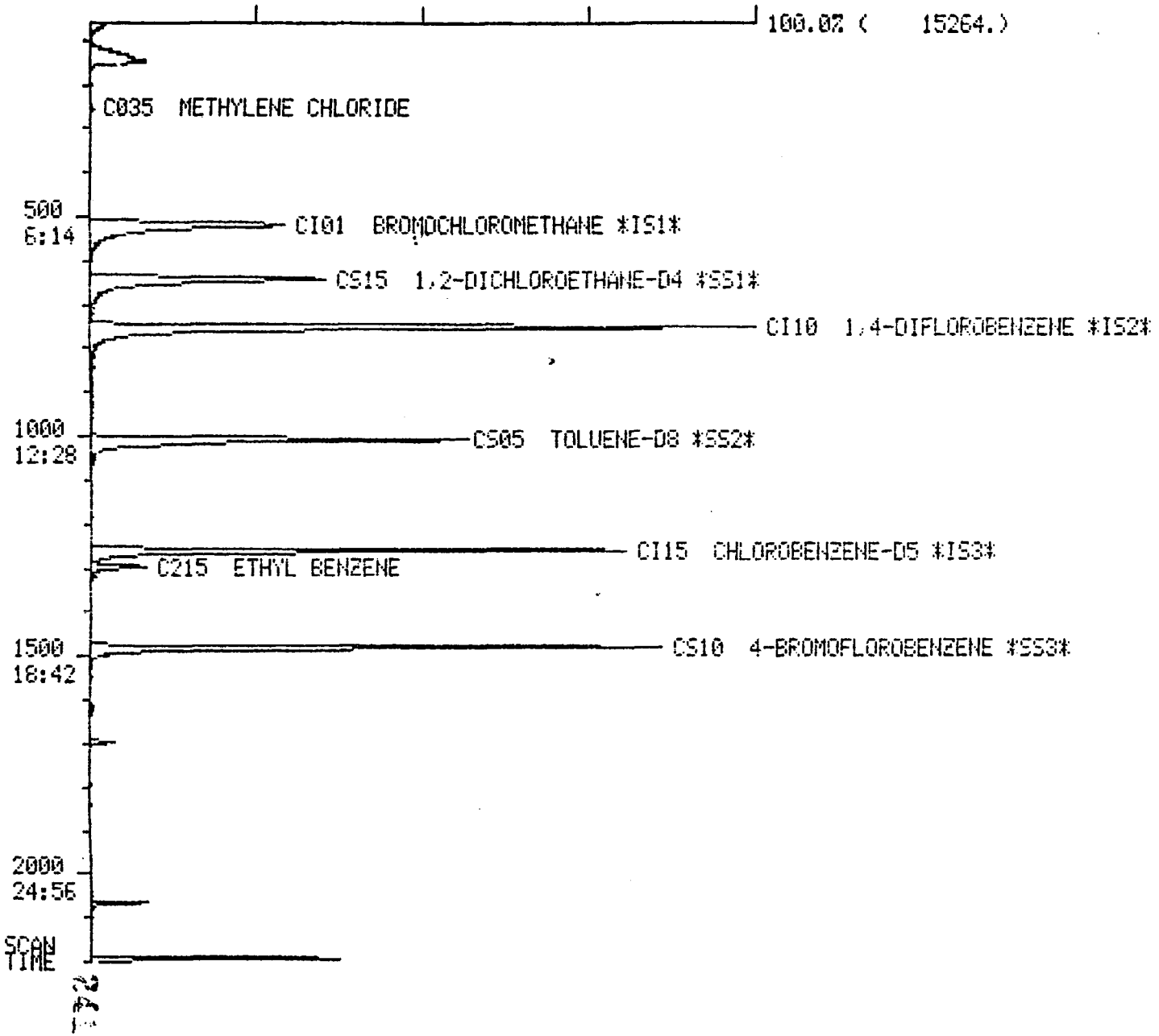
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	54.25	50.00	1.669	1.539	1.08
5	12:30	1.00	1.343	1.00	45.49	50.00	0.550	0.605	0.91
6	18:24	1.00	1.177	1.00	49.17	50.00	0.688	0.700	0.98
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520582

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	0.24	50.00	0.006	1.268	0.00
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01		1.100						
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	5.60	50.00	0.077	0.685	0.11
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	5.56	50.00	0.166	1.490	0.11
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520583

DATA FROM FILE: V017005A SCANS 60 TO 2200 ACQUIRED: 01/13/92 18:19:00
CALI: V017005A #3
SAMPLE: 017005 V0+15/E C1 5 DIL 1/250 RERUN
CONDS.: IAL/624/DB624



847520584

Quantitation Report File: V017006

Data: V017006.TI
01/10/92 23:42:00
Sample: 017006 VO+15/E C2 S DIL 1/2
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

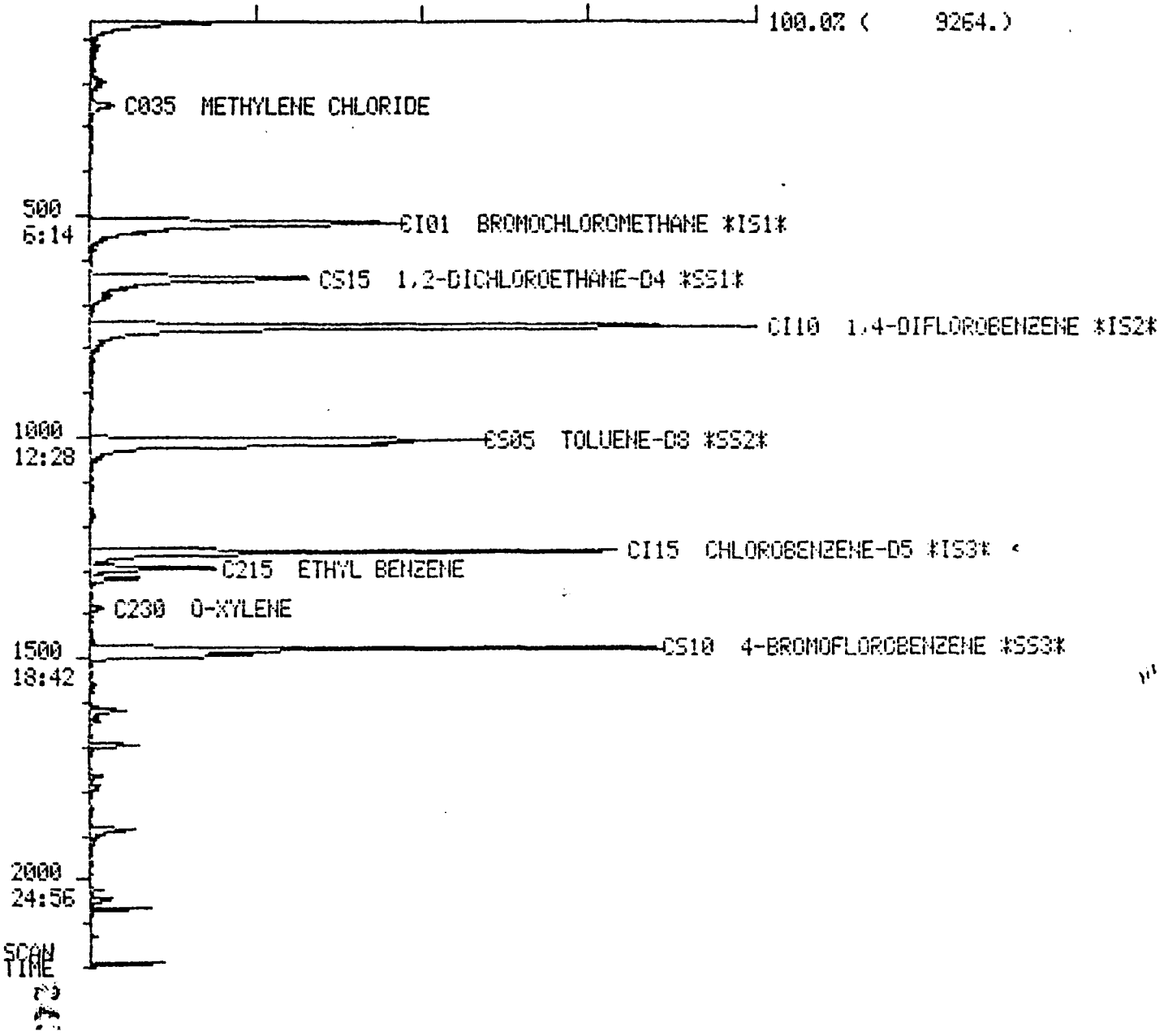
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	512	6:23	1	1.000	A BB	9291.	50.000 UG/L	16.97
2	114	746	9:18	2	1.000	A BB	37423.	50.000 UG/L	16.97
3	117	1253	15:37	3	1.000	A BB	21496.	50.000 UG/L	16.97
4	65	639	7:58	1	1.248	A BB	13856.	39.960 UG/L	13.56
5	98	1001	12:29	2	1.342	A BB	22713.	46.918 UG/L	15.92
6	95	1474	18:23	3	1.176	A BB	15435.	50.616 UG/L	17.18
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	249	3:06	1	0.486	A VV	356.	1.522 UG/L	0.52
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	62	652	8:08	2	0.874	A BB	33.	0.082 UG/L	0.03
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1013	12:38	2	1.358	A BB	13315.	24.825 UG/L	8.43
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1291	16:06	3	1.030	A BB	7158.	10.885 UG/L	3.69
31	NOT FOUND								
32	91	1313	16:22	3	1.048	A BB	1831.	1.473 UG/L	0.50
33	91	1381	17:13	3	1.102	A BB	1111.	1.769 UG/L	0.60
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.01	39.96	50.00	1.491	1.866	0.80
5	12:30	1.00	1.341	1.00	46.92	50.00	0.607	0.647	0.94
6	18:24	1.00	1.176	1.00	50.62	50.00	0.718	0.709	1.01
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.361						
12	3:04	1.01	0.480	1.01	1.52	50.00	0.038	1.259	0.03
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09	1.00	0.873	1.00	0.08	50.00	0.001	0.539	0.00
20	9:44		1.044						
21	10:10		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	24.82	50.00	0.356	0.717	0.50
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	10.88	50.00	0.333	1.530	0.22
31	16:24		1.048						
32	16:24	1.00	1.048	1.00	1.47	50.00	0.085	2.890	0.03
33	17:14	1.00	1.101	1.00	1.77	50.00	0.052	1.461	0.04
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520587

DATA FROM FILE: V017006 SCANS 60 TO 2200 ACQUIRED: 01/10/92 23:42:00
CALI: V017006 #3
SAMPLE: 017006 VO+15/E C2 S DIL 1/2
CONDS.: IAL/624/DB624



847520588

Quantitation Report File: V017007A

Data: V017007A.TI
01/13/92 18:54:00
Sample: 017007 V0+15/E D1 S DIL 1/1000 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	513	6:24	1	1.000	A BB	9514.	50.000	UG/L	7.63
2	114	746	9:18	2	1.000	A BB	53481.	50.000	UG/L	7.63
3	117	1258	15:41	3	1.000	A BB	33926.	50.000	UG/L	7.63
4	65	637	7:57	1	1.242	A BB	11521.	39.350	UG/L	6.01
5	98	1002	12:30	2	1.343	A BB	35442.	54.791	UG/L	8.37
6	95	1478	18:26	3	1.175	A BB	23771.	50.074	UG/L	7.65
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	247	3:05	1	0.481	A VV	628.	2.603	UG/L	0.40
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	97	562	7:00	1	1.096	A VV	735.	1.220	UG/L	0.19
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1014	12:39	2	1.359	A BB	155.	0.211	UG/L	0.03
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1293	16:07	3	1.028	A BB	390951.	386.820	UG/L	59.06
31	NOT FOUND									
32	NOT FOUND									
33	91	1383	17:15	3	1.099	A BV	179.	0.184	UG/L	0.03
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									

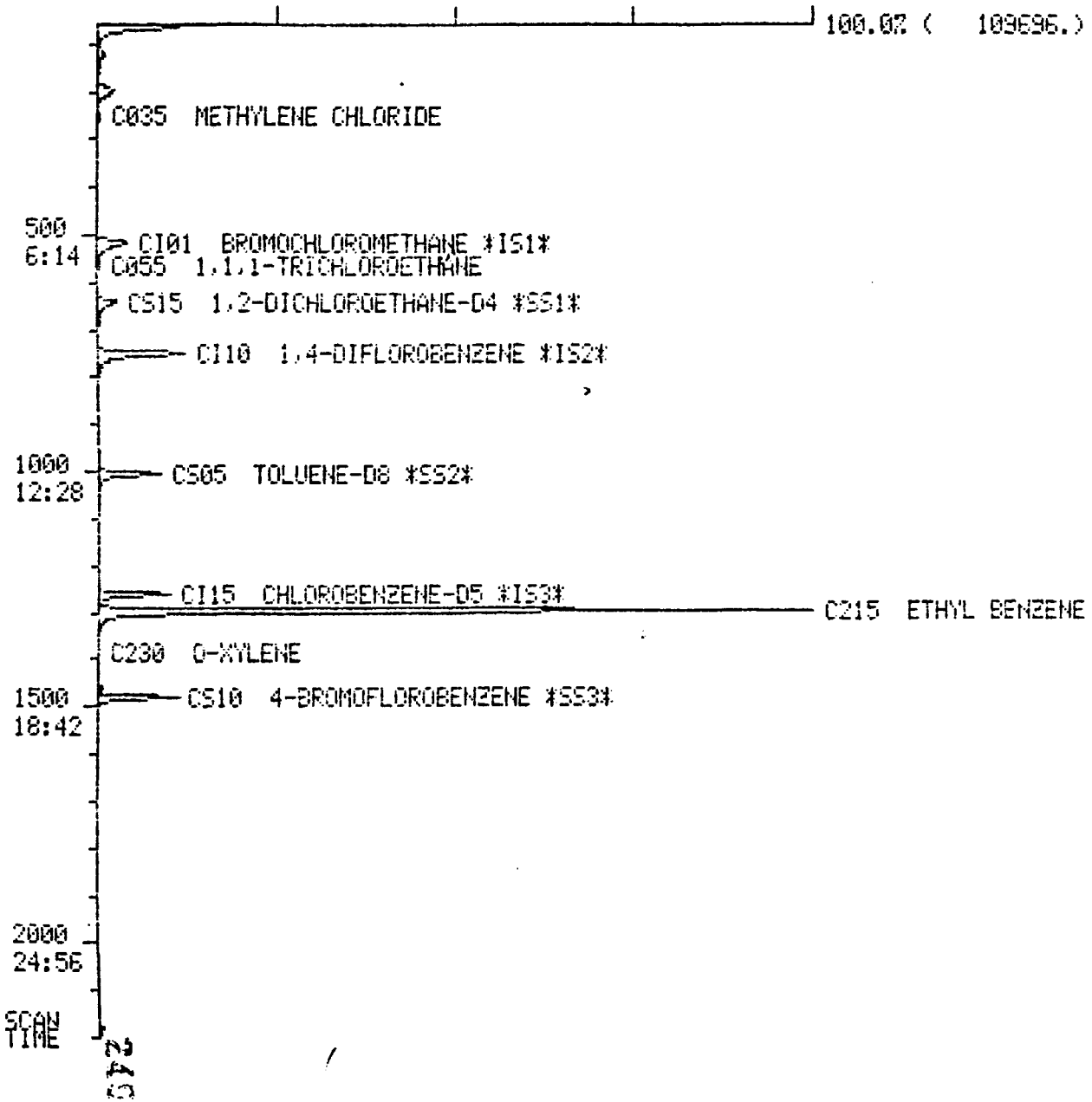
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	39.35	50.00	1.211	1.539	0.79
5	12:30	1.00	1.343	1.00	54.79	50.00	0.663	0.605	1.10
6	18:24	1.00	1.177	1.00	50.07	50.00	0.701	0.700	1.00
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520590

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	2.60	50.00	0.066	1.268	0.05
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.00	1.100	1.00	1.22	50.00	0.077	3.166	0.02
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	0.21	50.00	0.003	0.685	0.00
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	386.82	50.00	11.524	1.490	7.74
31	16:24		1.049						
32	16:24		1.049						
33	17:14	1.00	1.102	1.00	0.18	50.00	0.005	1.428	0.00
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520591

DATA FROM FILE: V017007A SCANS 60 TO 2200 ACQUIRED: 01/13/92 18:54:00
CALI: V017007A #3
SAMPLE: 017007 V0+15/E D1 S DIL 1/1000 RERUN
CONDS.: IAL/624/DB624



847520592

Quantitation Report File: JJRT01

Data: V017007A.TI
01/13/92 18:54:00
Sample: 017007 V0+15/E D1 S DIL 1/1000 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	X64	0:48	8	0.049	A BB	15088.	1.696	1.01
2	RIC	195	2:26	8	0.151	A BB	38152.	4.288	2.56
3	RIC	513	6:24	8	0.397	A BB	59459.	6.682 X7.49	4.00
4	RIC	637	7:57	8	0.493	A BB	33306.	3.743	2.24
5	RIC	746	9:18	8	0.577	A BB	143342.	16.109	9.64
6	RIC	1002	12:30	8	0.775	A BB	91343.	10.266	6.14
7	RIC	1257	15:40	8	0.972	A BB	103379.	11.618	6.95
8	RIC	1293	16:07	8	1.000	A BB	889804.	100.000	59.81
9	RIC	1459	18:11	8	1.128	A BB	4217.	0.474	0.28
10	RIC	1477	18:25	8	1.142	A BB	105494.	11.856	7.09
11	RIC	2178	27:09	8	1.684	A BB	4070.	0.457	0.27

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1			1.70		0.017		
2			4.29		0.043		
3			6.68		0.067		
4			3.74		0.037		
5			16.11		0.161		
6			10.27		0.103		
7			11.62		0.116		
8			100.00		1.000		
9			0.47		0.005		
10			11.86		0.119		
11			0.46		0.005		

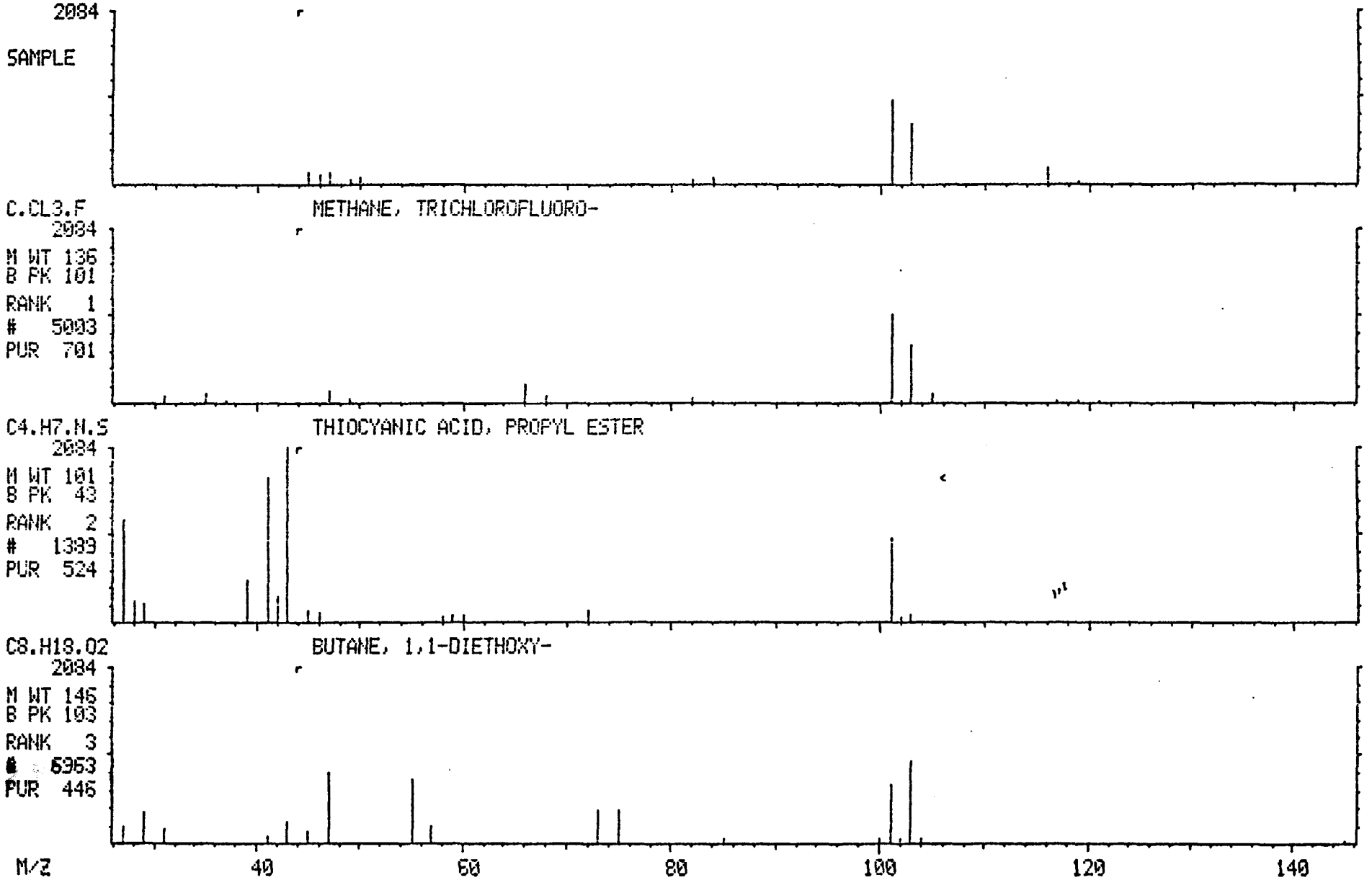
MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 18:54:00 + 2:26
SAMPLE: 017007 V0+15/E D1 5 DIL 1/1000 RERUN
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017007A # 195
CALI: V017007A # 3

BASE M/Z: 101
RIC: 612.

25

847520594



Quantitation Report File: V017007B

Data: V017007B.TI
01/21/92 22:33:00
Sample: 017007 V0+15/E C1 S DIL 1/10K RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520595

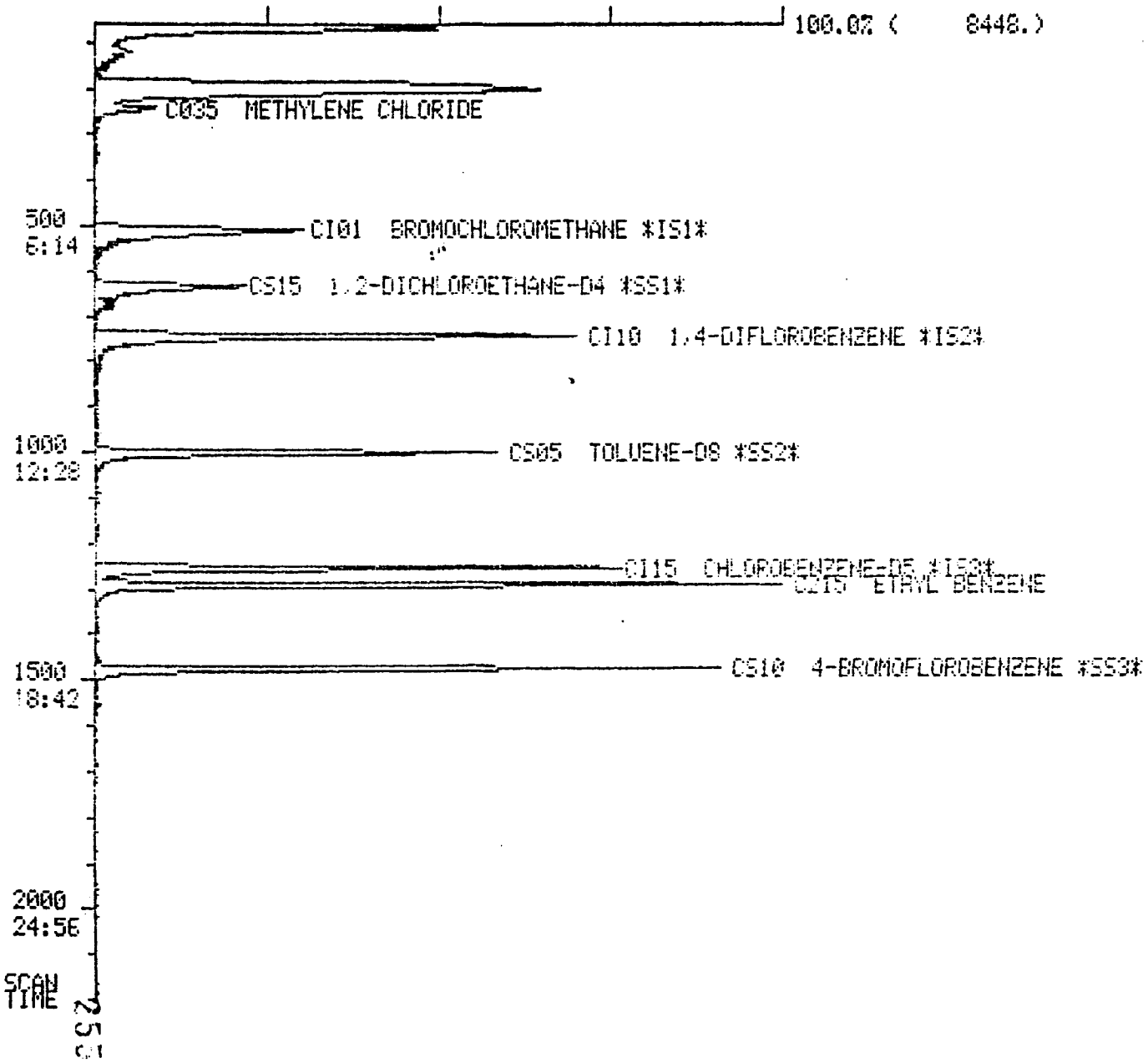
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	504	6:17	1	1.000	A BB	5644.	50.000 UG/L	16.23
2	114	739	9:13	2	1.000	A BB	28423.	50.000 UG/L	16.23
3	117	1249	15:34	3	1.000	A BB	20368.	50.000 UG/L	16.23
4	65	628	7:50	1	1.246	A BB	7521.	36.289 UG/L	11.78
5	98	996	12:25	2	1.348	A BB	19443.	56.995 UG/L	18.50
6	95	1471	18:20	3	1.178	A BB	13589.	43.897 UG/L	14.25
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	240	3:00	1	0.476	A BB	2145.	24.525 UG/L	7.96
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1006	12:33	2	1.361	A BB	39.	0.096 UG/L	0.03
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1286	16:02	3	1.030	A BB	31987.	47.953 UG/L	15.56
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:19	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:13	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:50	1.00	1.241	1.00	36.29	50.00	1.333	1.836	0.73
5	12:25	1.00	1.348	1.00	57.00	50.00	0.684	0.600	1.14
6	18:19	1.00	1.177	1.00	43.90	50.00	0.667	0.760	0.88
7	0:59		0.156						
8	1:05		0.172						
9	1:21		0.213						
10	1:26		0.227						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:13		0.352						
12	2:59	1.00	0.472	1.01	24.52	50.00	0.380	0.775	0.49
13	3:26		0.543						
14	4:15		0.674						
15	6:47		1.075						
16	6:55		1.097						
17	7:20		1.162						
18	7:51		0.853						
19	8:02		0.871						
20	9:37		1.043						
21	10:04		1.092						
22	10:55		1.184						
23	11:57		1.296						
24	12:33	1.00	1.361	1.00	0.10	50.00	0.001	0.712	0.00
25	13:17		1.442						
26	13:36		1.476						
27	13:41		1.486						
28	14:21		1.558						
29	15:36		1.002						
30	16:01	1.00	1.030	1.00	47.95	50.00	1.569	1.636	0.96
31	16:19		1.049						
32	16:19		1.049						
33	17:09		1.102						
34	17:28		1.123						
35	18:54		1.215						
36	20:46		1.334						
37	21:00		1.349						
38	21:47		1.400						
39	3:35		0.569						
40	4:59		0.791						
41	3:46		0.597						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520597

DATA FROM FILE: V017007B SCANS 60 TO 2200 ACQUIRED: 01/21/92 22:33:00
CALI: V017007B #3
SAMPLE: 017007 V0+15/E C1 5 DIL 1/10K RERUN
CONDS.: IAL/624/DB624



847520598

Quantitation Report File: V017008

Data: V017008.TI
01/11/92 0:52:00
Sample: 017008 VO+15/E D2 S DIL 1/2
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C275	METHYL ETHYL KETONE (MEK)
42	C285	PYRIDINE

847520599

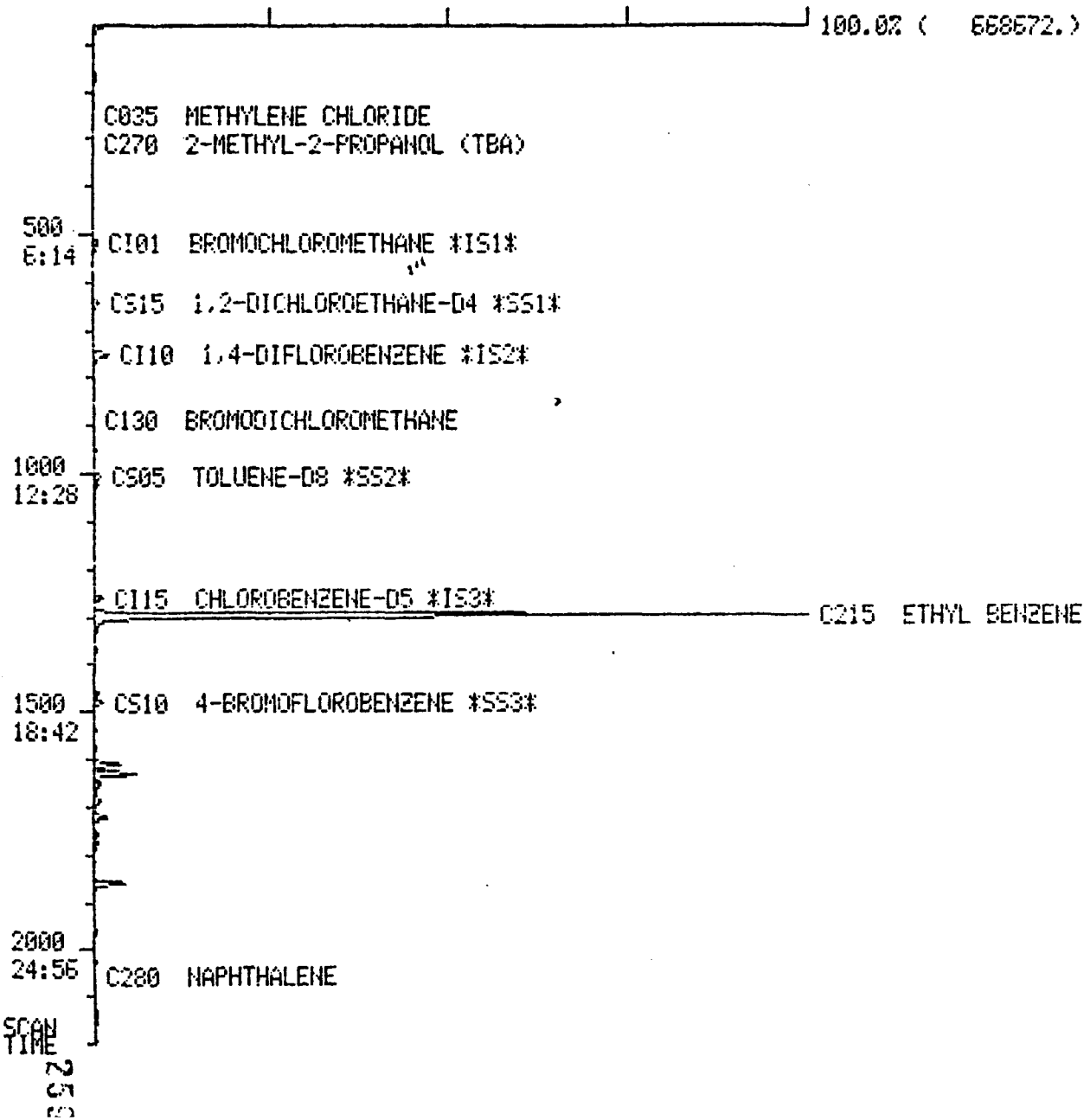
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	516	6:26	1	1.000	A BB	11856.	50.000 UG/L	1.67
2	114	748	9:20	2	1.000	A BB	58799.	50.000 UG/L	1.67
3	117	1255	15:39	3	1.000	A BB	24464.	50.000 UG/L	1.67
4	65	639	7:58	1	1.238	A BB	25672.	58.020 UG/L	1.94
5	98	1002	12:30	2	1.340	A BB	34900.	45.885 UG/L	1.53
6	95	1477	18:25	3	1.177	A BB	15324.	44.156 UG/L	1.47
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	249	3:06	1	0.483	A BB	2540.	8.511 UG/L	0.28
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	62	654	8:09	2	0.874	A BV	249.	0.393 UG/L	0.01
20	NOT FOUND								
21	NOT FOUND								
22	83	884	11:01	2	1.182	A BV	644.	0.635 UG/L	0.02
23	NOT FOUND								
24	91	1013	12:38	2	1.354	A BB	1580.	1.875 UG/L	0.06
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1293	16:07	3	1.030	A BB	2027340.	2708.690 UG/L	90.41
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	58.02	50.00	2.165	1.866	1.16
5	12:30	1.00	1.341	1.00	45.88	50.00	0.594	0.647	0.92
6	18:24	1.00	1.176	1.00	44.16	50.00	0.626	0.709	0.88
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						
11	2:18		0.361						
12	3:04	1.01	0.480	1.01	8.51	50.00	0.214	1.259	0.17

847520600

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09	1.00	0.873	1.00	0.39	50.00	0.004	0.539	0.01
20	9:44		1.044						
21	10:10		1.090						
22	10:59	1.00	1.178	1.00	0.64	50.00	0.011	0.862	0.01
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	1.87	50.00	0.027	0.717	0.04
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06	1.00	1.029	1.00	2708.69	50.00	82.870	1.530	54.17
31	16:24		1.048						
32	16:24		1.048						
33	17:14		1.101						
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	6:11		0.974						
42	12:43		1.342						

DATA FROM FILE: V017008 SCANS 60 TO 2200 ACQUIRED: 01/11/92 0:52:00
CALI: V017008 #3
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624



847520602

Quantitation Report File: JJRT01

Data: V017008.TI
01/11/92 0:52:00
Sample: 017008 VO+15/E D2 S DIL 1/2
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	166	2:04	9	0.128	A BB	26175	0.553	0.40
2	RIC	516	6:26	9	0.399	A BB	68181	1.440	1.05
3	RIC	639	7:58	9	0.494	A BB	73521	1.553	1.14
4	RIC	748	9:20	9	0.578	A BB	155656	3.286	2.40
5	RIC	944	11:46	9	0.730	A BB	16265	0.344	0.25
6	RIC	1003	12:30	9	0.776	A BV	69919	1.477	1.08
7	RIC	1019	12:42	9	0.788	A VB	26082	0.551	0.40
8	RIC	1256	15:40	9	0.971	A BB	66108	1.396	1.02
9	RIC	1293	16:07	9	1.000	A BB	4733960	100.000	73.13
10	RIC	1458	18:11	9	1.128	A BV	30072	0.635	0.46
11	RIC	1476	18:24	9	1.142	A VB	65007	1.373	1.00
12	RIC	1607	20:02	9	1.243	A BV	238677	5.029	3.68
13	RIC	1627	20:17	9	1.258	A VB	355152	7.502	5.49
14	RIC	1648	20:33	9	1.275	A BB	51759	1.093	0.80
15	RIC	1683	20:59	9	1.302	A BB	68043	1.437	1.05
16	RIC	1718	21:25	9	1.329	A BB	108814	2.299	1.68
17	RIC	1756	21:54	9	1.358	A BV	29478	0.623	0.46
18	RIC	1773	22:06	9	1.371	A VB	38464	0.813	0.59
19	RIC	1857	23:09	9	1.436	A BB	252782	5.340	3.90

847520603

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L) Ratio
1			0. 55		0. 006	
2			1. 44		0. 014	
3			1. 55		0. 016	
4			3. 29		0. 033	
5			0. 34		0. 003	
6			1. 48		0. 015	
7			0. 55		0. 006	
8			1. 40		0. 014	
9			100. 00		1. 000	
10			0. 64		0. 006	
11			1. 37		0. 014	
12			5. 03		0. 050	
13			7. 50		0. 075	
14			1. 09		0. 011	
15			1. 44		0. 014	
16			2. 30		0. 023	
17			0. 62		0. 006	
18			0. 81		0. 008	
19			5. 34		0. 053	

847520604

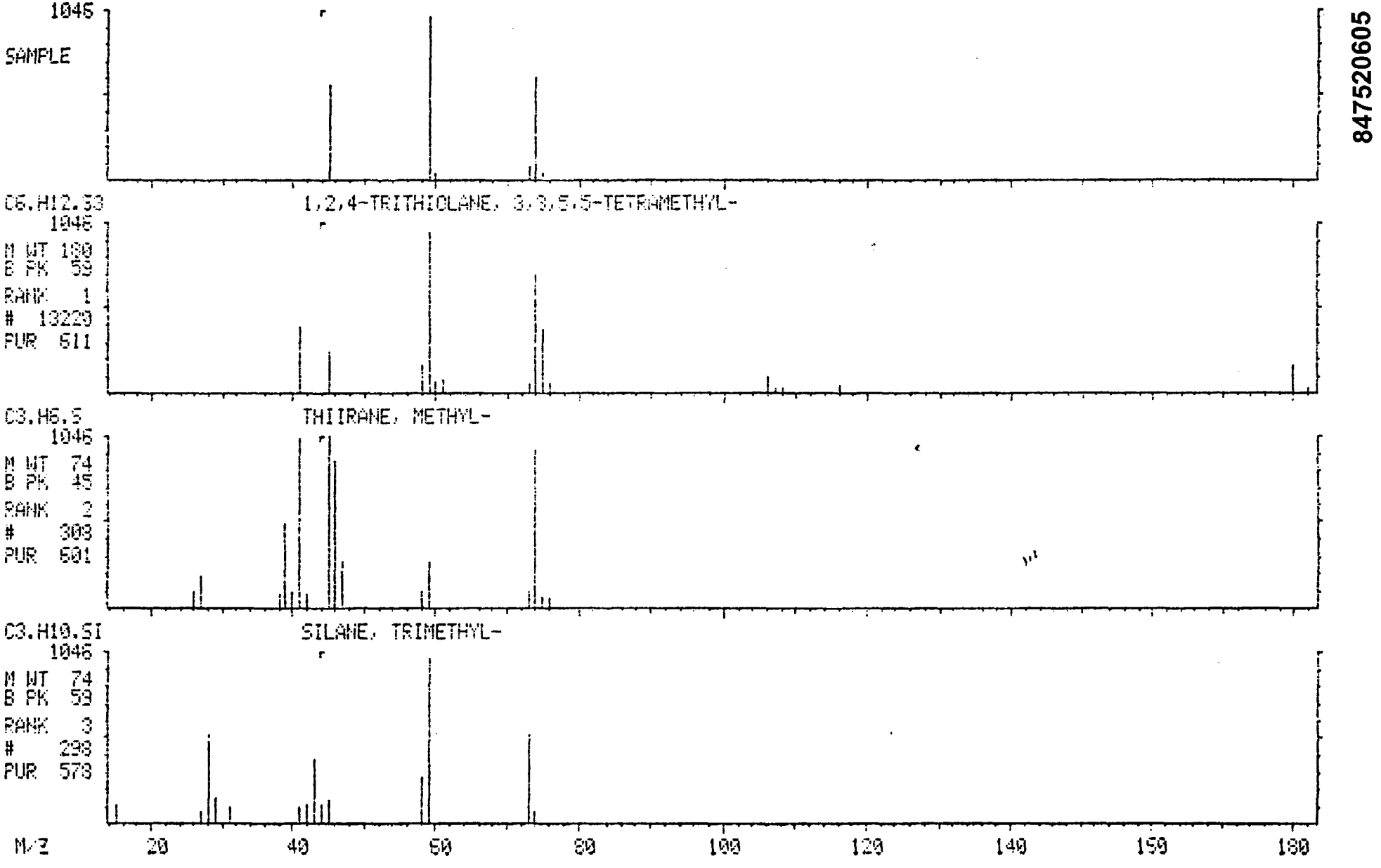
MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 2:04
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 # 166
CALI: V017008 # 3

BASE M/Z: 59
RIC: 2128.

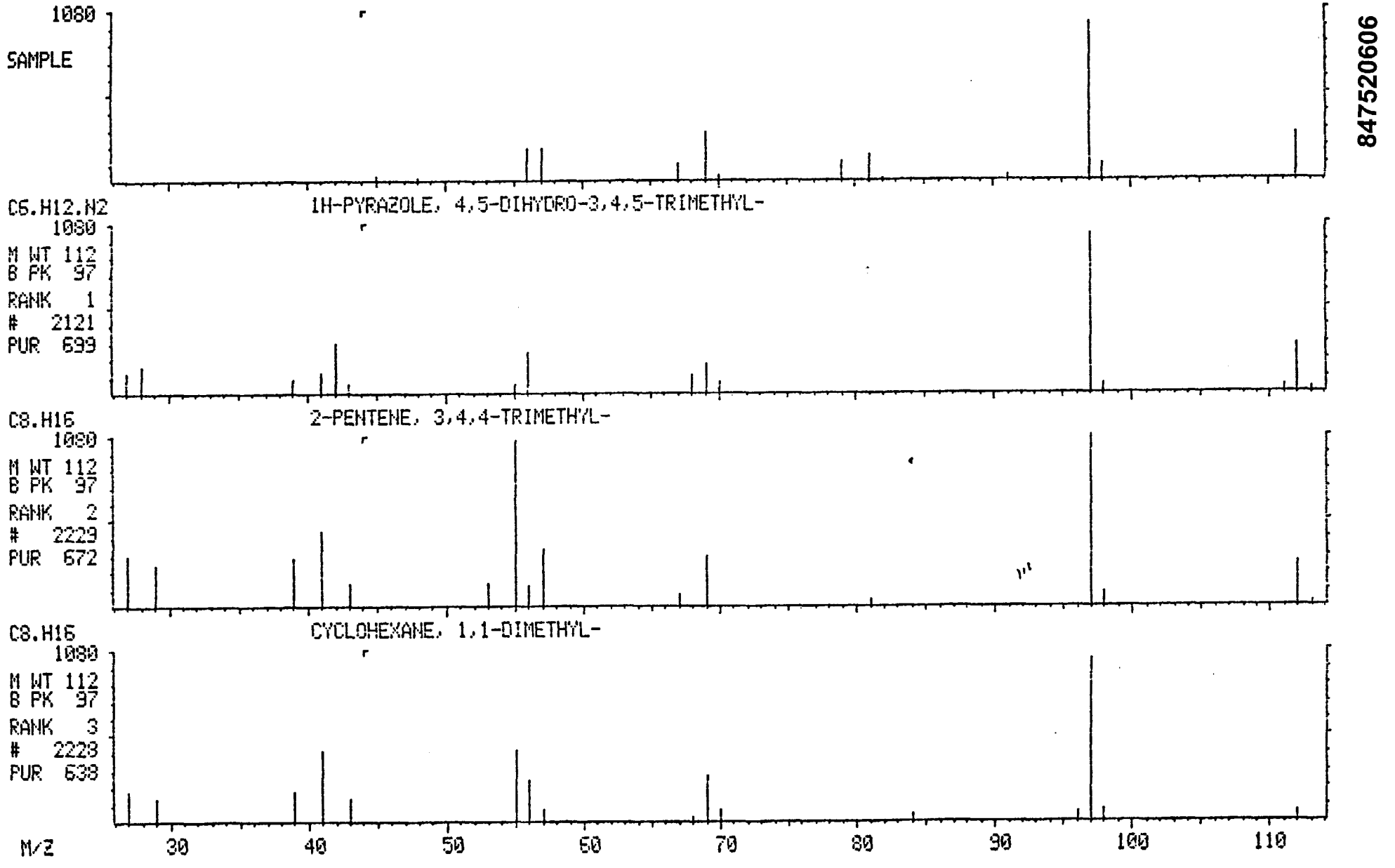
263

847520605



MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 11:46
SAMPLE: 017008 VO+15/E D2 S OIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 # 3
CALI: V017008 # 3
RIC: 784.



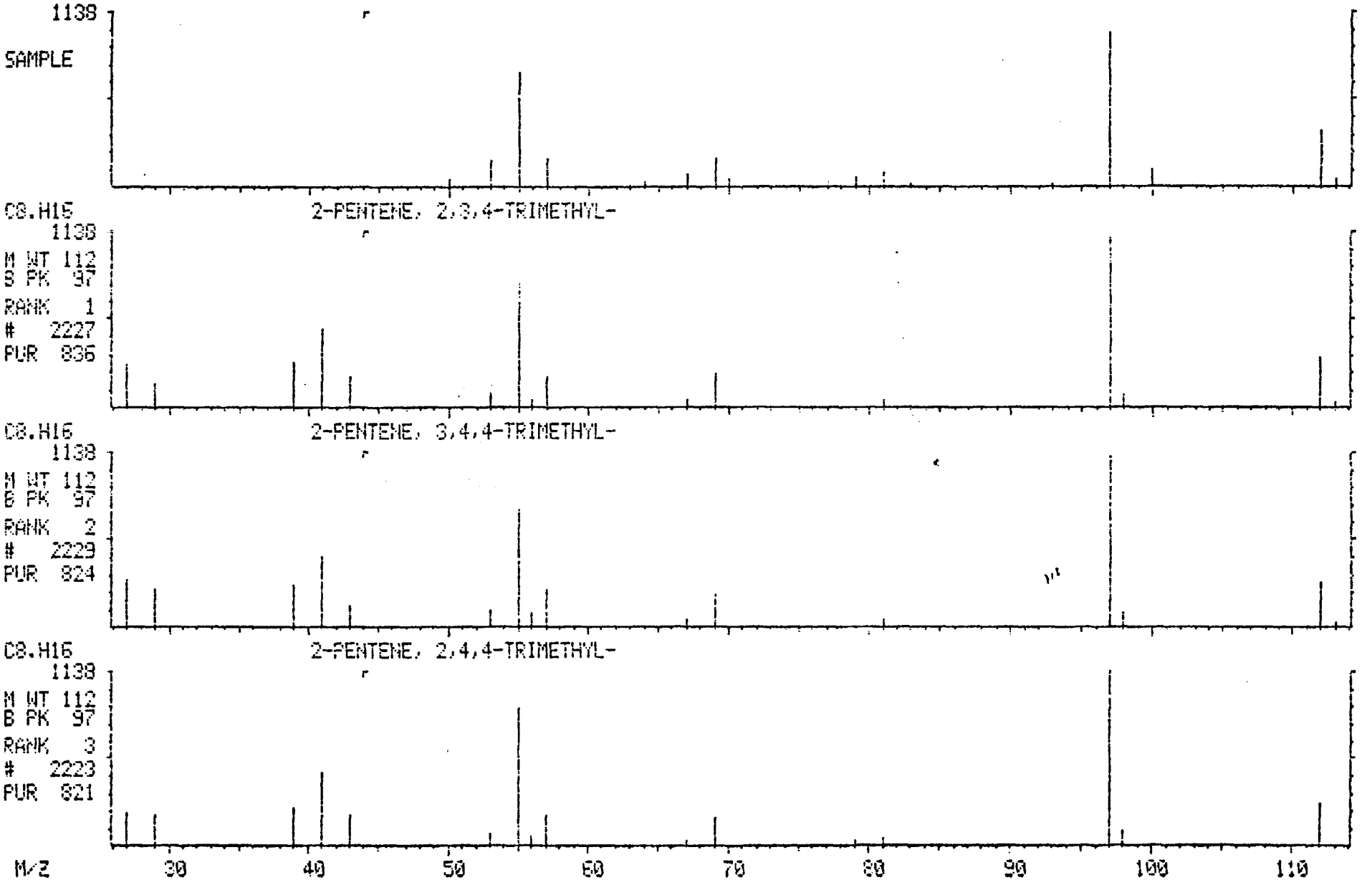
847520606

MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 12:42
SAMPLE: 017008 V0+15/E D2 5 DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1019
CALI: V017008 # 3

BASE M/Z: 97
RIC: 1638.

847520607



MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 18:11
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1458
CALI: V017008 # 3

BASE M/Z: 105
RIC: 2564.

847520608

1145

SAMPLE

C9.H12 BENZENE, (1-METHYLETHYL)-

1145

M WT 120
B PK 105
RANK 1
3091
PUR 914

C9.H12 BENZENE, 1-ETHYL-2-METHYL-

1145

M WT 120
B PK 105
RANK 2
3095
PUR 852

C9.H12 BENZENE, 1-ETHYL-4-METHYL-

1145

M WT 120
B PK 105
RANK 3
3097
PUR 845

M/Z 30 40 50 60 70 80 90 100 110 120

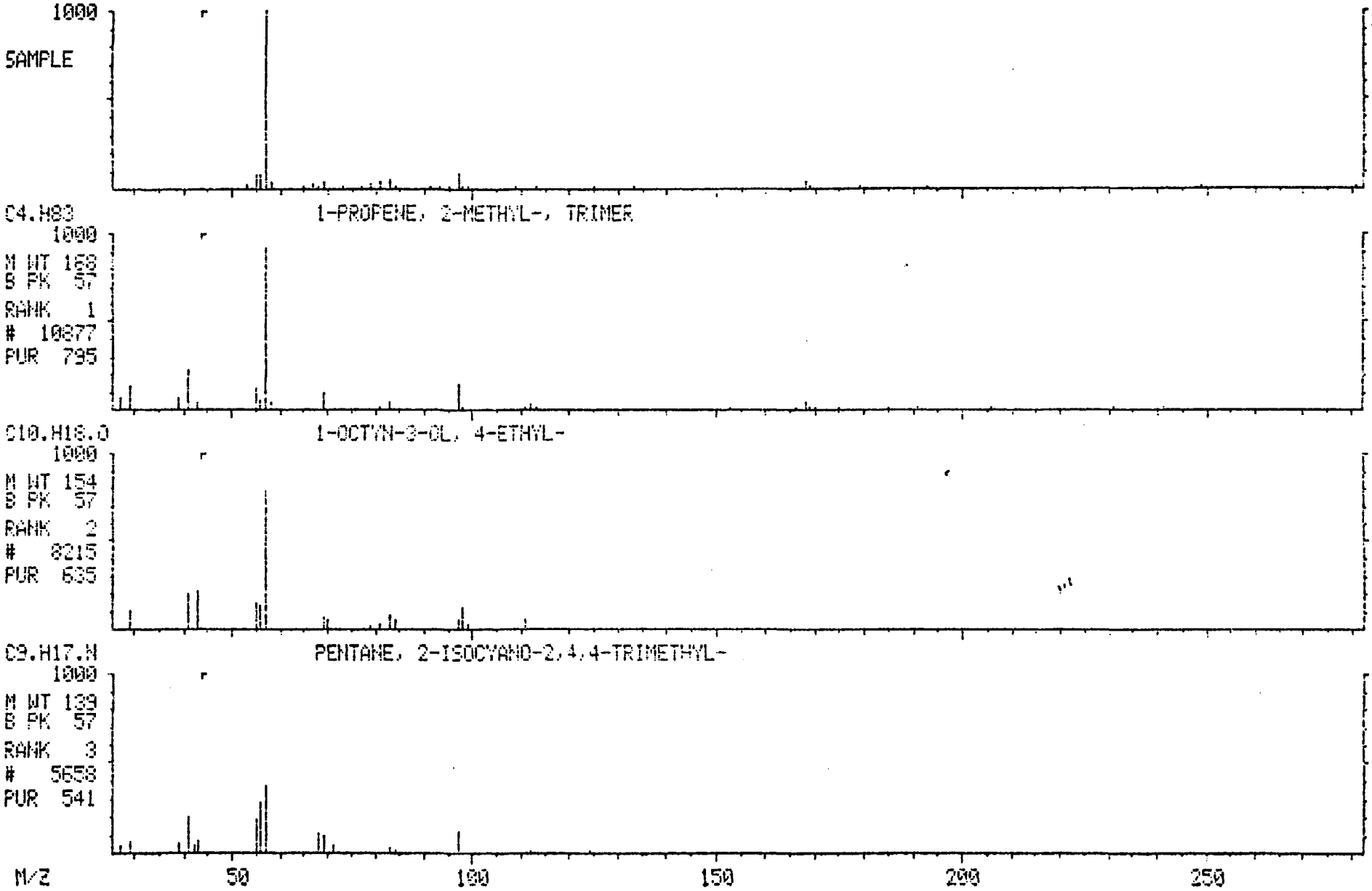
MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 20:02
SAMPLE: 017008 V0+15/E 02 S OIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1507
CALI: V017008 # 3

BASE M/Z: 57
RIC: 17344.

263

847520609

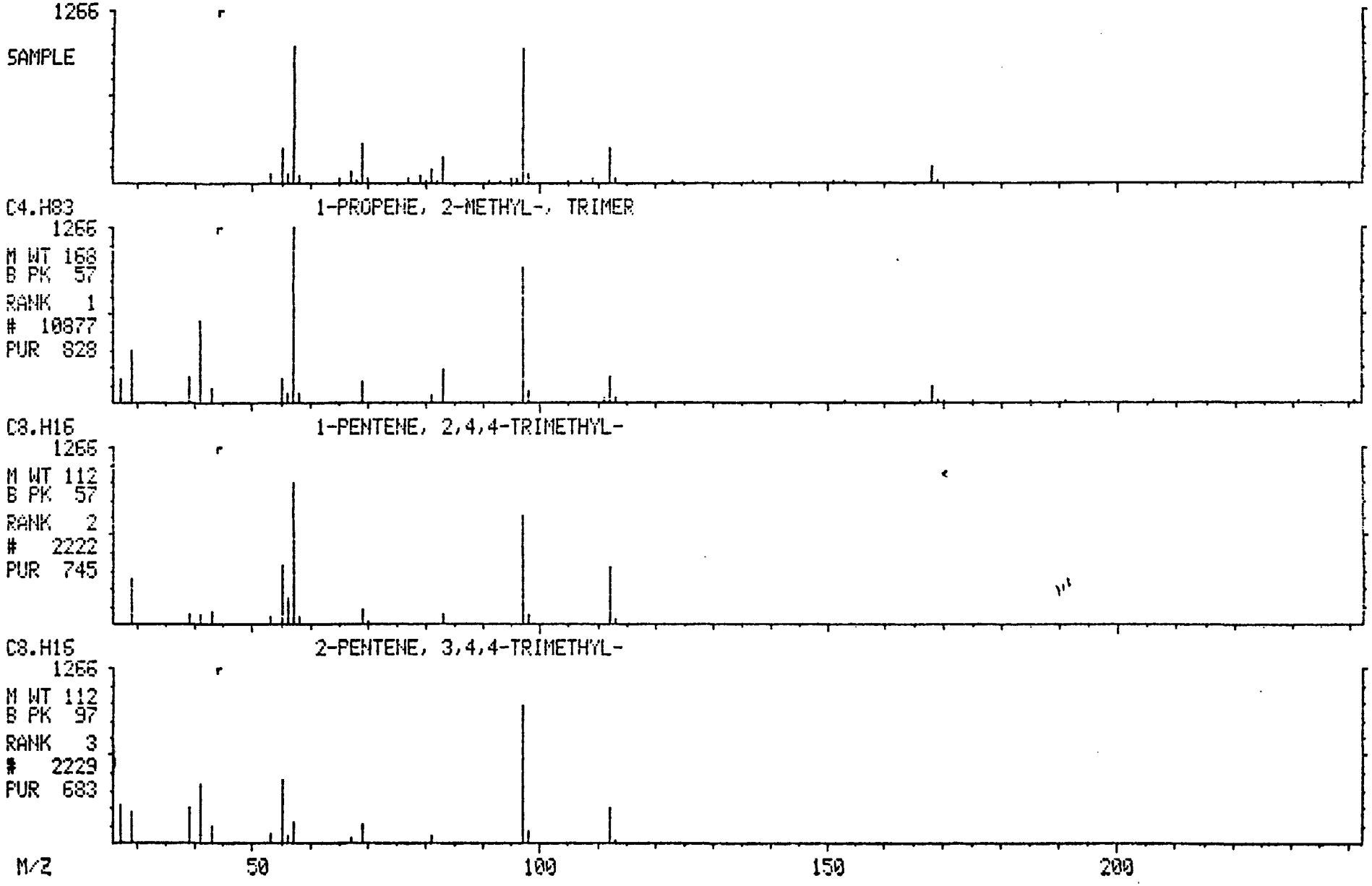


MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 20:17
SAMPLE: 017008 V0+15/E D2 S OIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1627
CALI: V017008 # 3

BASE M/Z: 57
RIC: 27680.

847520610



MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 20:33
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1548
CALI: V017008 # 3

BASE M/Z: 69
RIC: 2372.

847520611

1485

SAMPLE

C10.H20 CYCLOHEXANE, 1,1,3,5-TETRAMETHYL-, CIS-

1485

M WT 140
B PK 69
RANK 1
5709
PUR 637

C13.H34.ZN ZINC, BIS(2-(1,1-DIMETHYLETHYL)-3,3-DIMETHYLCYCLOPROPYL]-, [1.ALPHA.,

1485

M WT 314
B PK 69
RANK 2
30510
PUR 625

C13.H26 CYCLOPENTANE, 1,2-DIBUTYL-

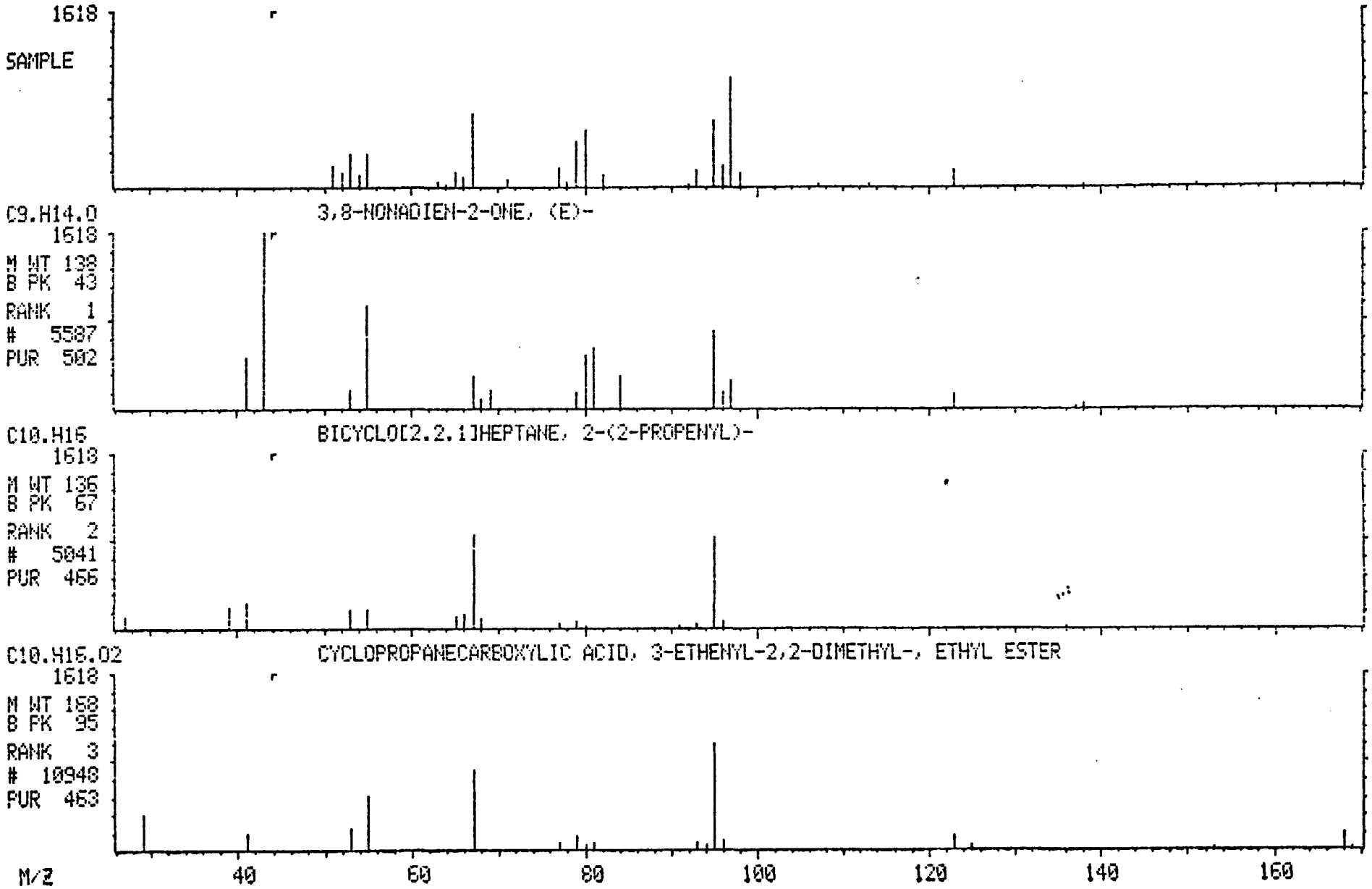
1485

M WT 182
B PK 69
RANK 3
13535
PUR 566

M/Z 50 100 150 200 250 300

MID LIBRARY SEARCH (LIBRARY)
01/11/92 0:52:00 + 20:59
SAMPLE: 017008 V0+15/E 02 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

CALI: V017008 # 3 RIC: 3620.



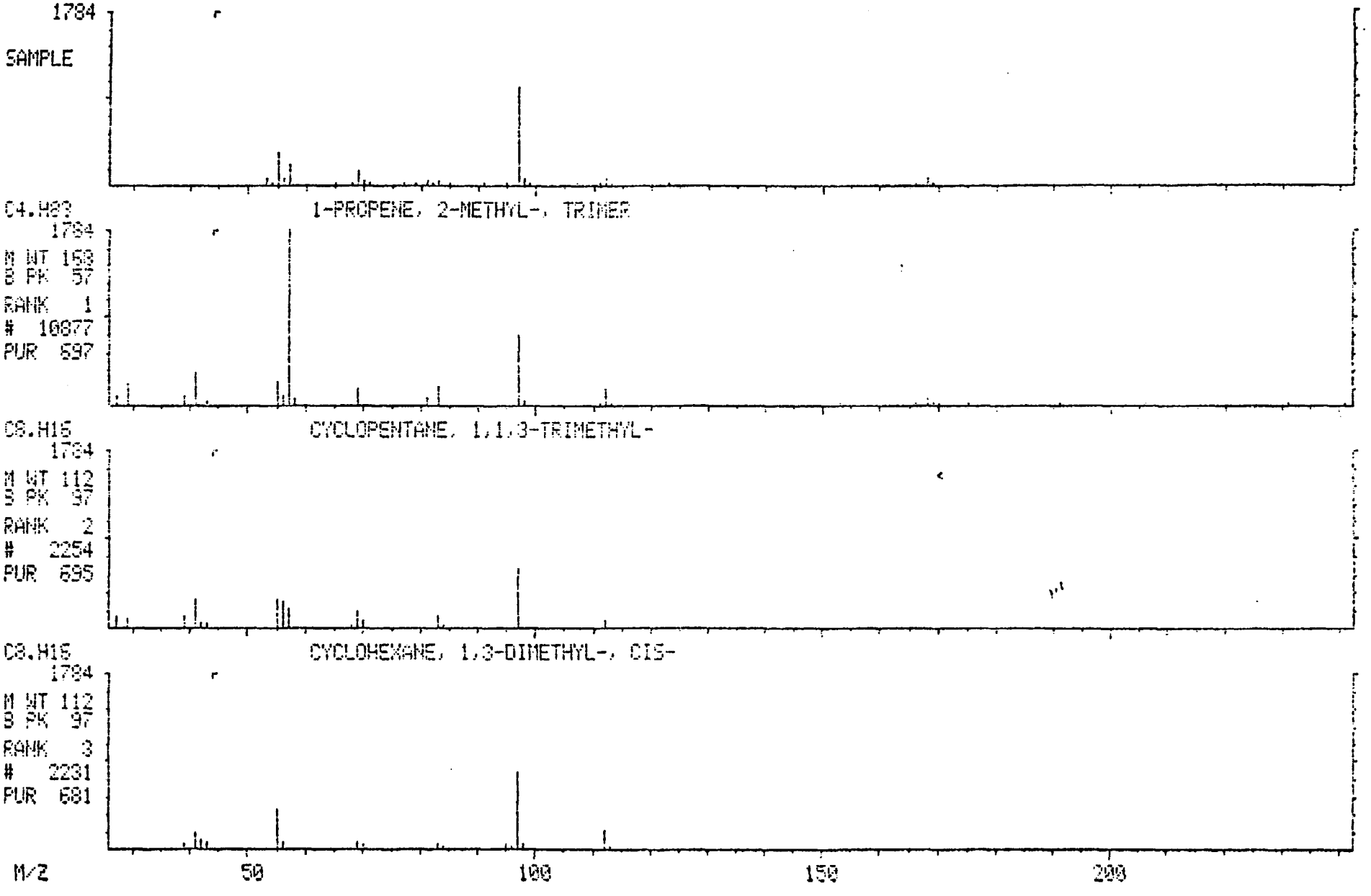
847520612

MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 21:25
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1718
CALI: V017008 # 3

BASE M/Z: 97
RIC: 8256.

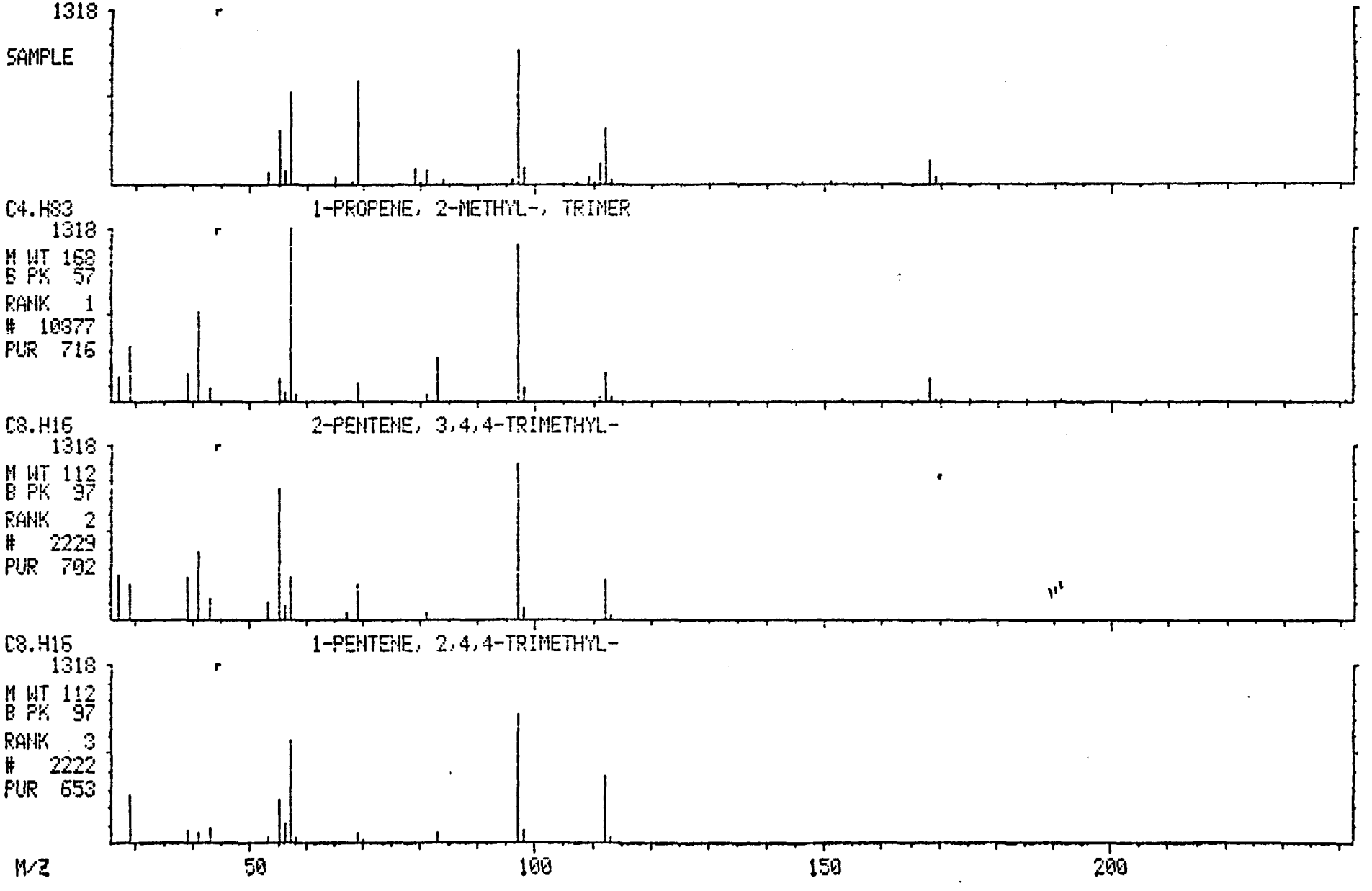
847520613



MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 21:54
SAMPLE: 017008 VO+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1738
CALI: V017008 # 3

BASE TYPE: 2.
RIC: 2572.



847520614

MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 22:06
SAMPLE: 017008 V0+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017008 #1773
CALI: V017008 # 3

BASE M/Z: 97
RIC: 2340.

847520615

1225

SAMPLE

C11.H20.O CYCLOHEXENE, 1-(1,1-DIMETHYLETHOXY)-3-METHYL-

1225

M WT 168
B PK 97
RANK 1
10985
PUR 559

C4.H8 1-PROPENE, 2-METHYL-, TRIMER

1225

M WT 168
B PK 97
RANK 2
10877
PUR 653

C8.H16 1-PENTENE, 2,4,4-TRIMETHYL-

1225

M WT 112
B PK 97
RANK 3
2222
PUR 605

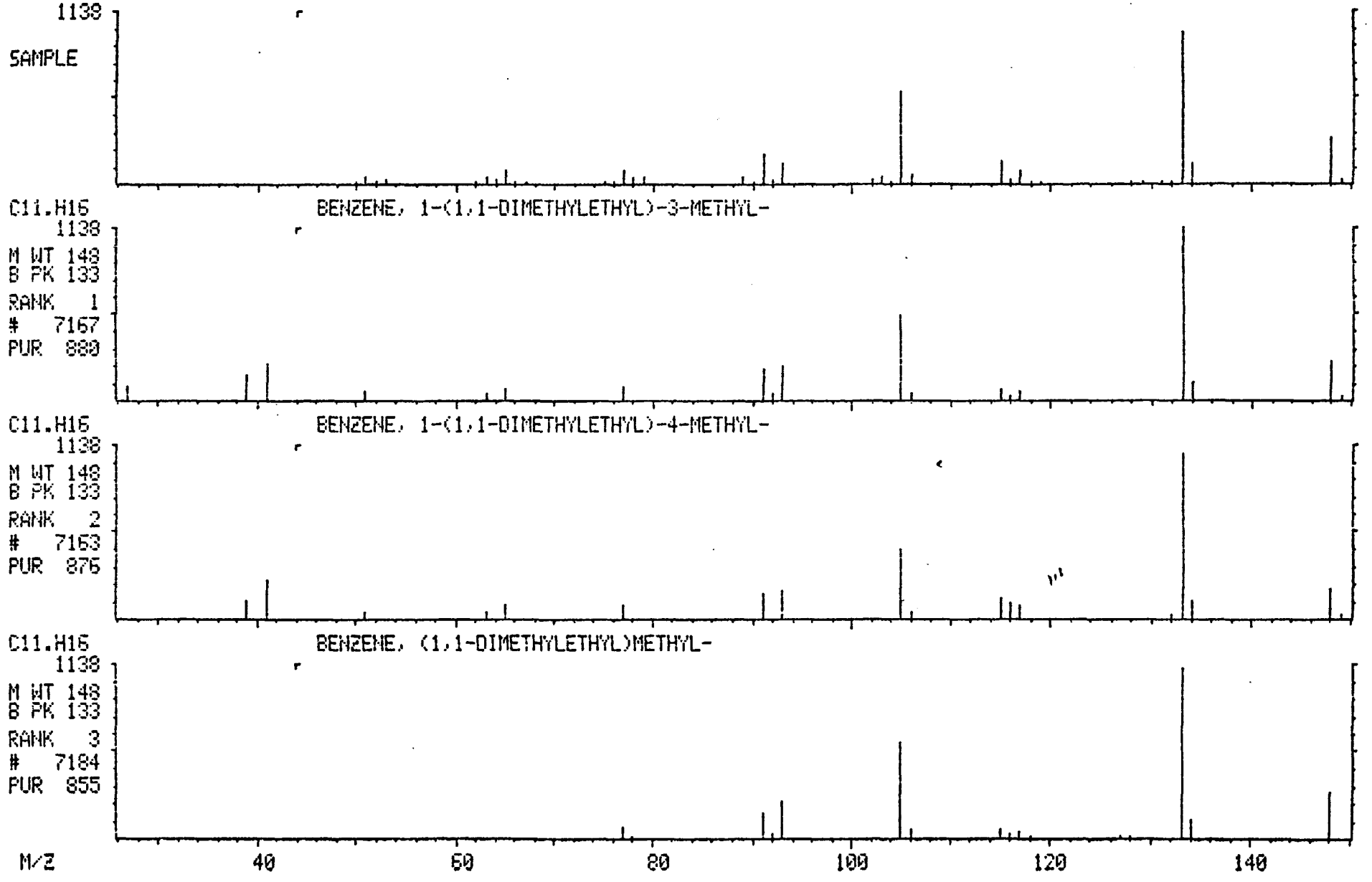
M/Z 50 100 150 200

MID LIBRARY SEARCH (LIBRARYNB)
01/11/92 0:52:00 + 23:09
SAMPLE: 017008 VO+15/E D2 S DIL 1/2
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: 017008 #1857
CALI: V017008 # 3

BASE M/Z: 133
RIC: 23200.

847520616



Quantitation Report File: V017008A

Data: V017008A.TI
01/13/92 19:29:00
Sample: 017008 V0+15/E D2 S DIL 1/100 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520617

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	514	6:25	1	1.000	A BB	6607.	50.000 UG/L	16.21
2	114	745	9:17	2	1.000	A BB	30239.	50.000 UG/L	16.21
3	117	1253	15:37	3	1.000	A BB	21028.	50.000 UG/L	16.21
4	65	637	7:57	1	1.239	A BB	8640.	42.490 UG/L	13.78
5	98	1000	12:28	2	1.342	A BB	20141.	55.066 UG/L	17.86
6	95	1474	18:23	3	1.176	A BB	14817.	50.357 UG/L	16.33
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	247	3:05	1	0.481	A BV	1609.	9.599 UG/L	3.11
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	561	7:00	1	1.091	A BV	624.	1.492 UG/L	0.48
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1290	16:05	3	1.030	A BB	27656.	44.149 UG/L	14.32
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

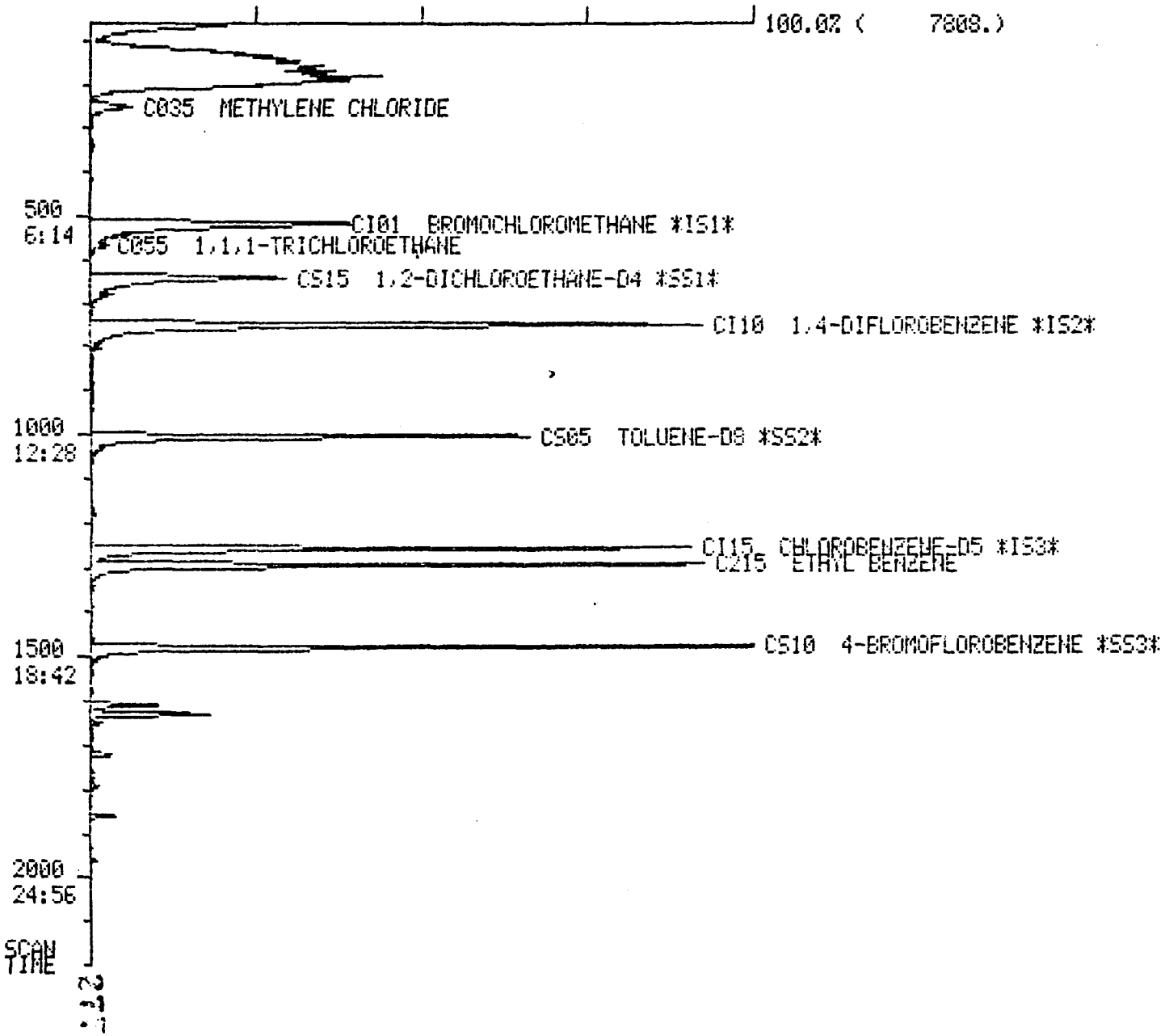
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	42.49	50.00	1.308	1.539	0.85
5	12:30	1.00	1.343	1.00	55.07	50.00	0.666	0.605	1.10
6	18:24	1.00	1.177	1.00	50.36	50.00	0.705	0.700	1.01
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520618

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	9.60	50.00	0.243	1.268	0.19
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.00	1.100	0.99	1.49	50.00	0.094	3.166	0.03
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38		1.358						
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	44.15	50.00	1.315	1.490	0.88
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520619

DATA FROM FILE: V017008A SCANS 60 TO 2200 ACQUIRED: 01/13/92 19:29:00
CALI: V017008A #3
SAMPLE: 017008 V0+15/E D2 S DIL 1/100 RERUN
CONDS.: IAL/624/DB624



847520620

Quantitation Report File: V017009

Data: V017009.TI
01/13/92 20:04:00
Sample: 017009 V0+15/E E1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLORDETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLORDETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C285	PYRIDINE

847520621

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	511	6:22	1	1.000	A BB	9171.	50.000 UG/L	11.90
2	114	746	9:18	2	1.000	A BB	42258.	50.000 UG/L	11.90
3	117	1254	15:38	3	1.000	A BB	24353.	50.000 UG/L	11.90
4	65	637	7:57	1	1.247	A BB	11680.	41.384 UG/L	9.85
5	98	1002	12:30	2	1.343	A BB	27142.	53.102 UG/L	12.64
6	95	1477	18:25	3	1.178	A BB	17302.	50.774 UG/L	12.08
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	247	3:05	1	0.483	A BV	1739.	7.475 UG/L	1.78
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	562	7:00	1	1.100	A BB	1136.	1.956 UG/L	0.47
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1014	12:39	2	1.359	A BB	713.	1.231 UG/L	0.29
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1292	16:07	3	1.030	A BB	104007.	143.362 UG/L	34.11
31	NOT FOUND								
32	NOT FOUND								
33	91	1385	17:16	3	1.104	A BB	30.	0.043 UG/L	0.01
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								

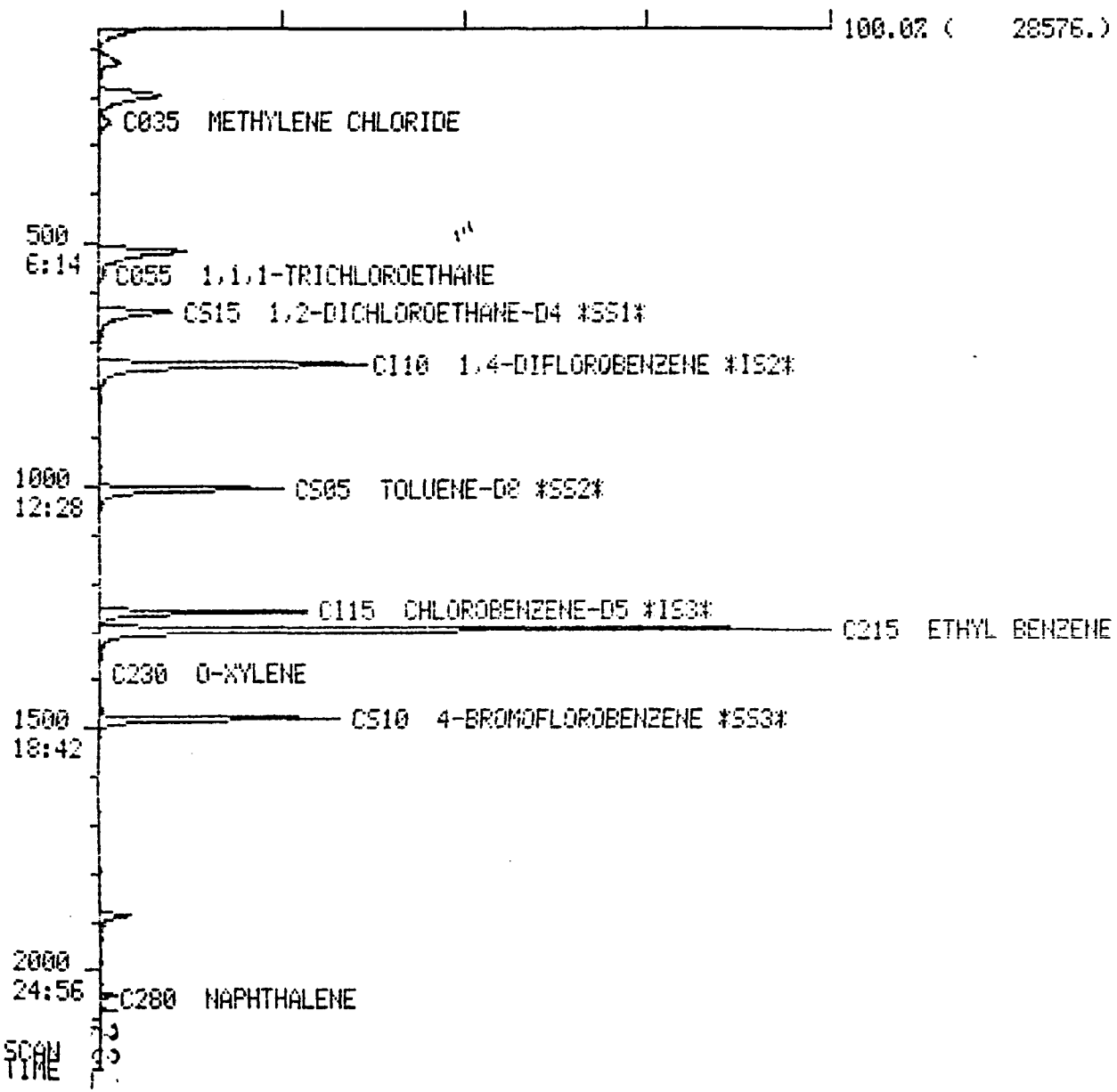
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	41.38	50.00	1.274	1.539	0.83
5	12:30	1.00	1.343	1.00	53.10	50.00	0.642	0.605	1.06
6	18:24	1.00	1.177	1.00	50.77	50.00	0.710	0.700	1.02
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						
11	2:18		0.359						

847520622

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	3:04	1.00	0.480	1.01	7.48	50.00	0.190	1.268	0.15
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.00	1.100	1.00	1.96	50.00	0.124	3.166	0.04
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	1.23	50.00	0.017	0.685	0.02
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	143.36	50.00	4.271	1.490	2.87
31	16:24		1.049						
32	16:24		1.049						
33	17:14	1.00	1.102	1.00	0.04	50.00	0.001	1.428	0.00
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	12:43		1.342						

847520623

DATA FROM FILE: V017009 SCANS 60 TO 2200 ACQUIRED: 01/13/92 20:04:00
CALI: V017009 #3
SAMPLE: 017009 V0+15/E E1 S DIL 1/500
CONDS.: IAL/624/DB624



847520624

Quantitation Report File: JURT01

Data: V017009.TI
01/13/92 20:04:00
Sample: 017009 V0+15/E E1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	195	2:26	7	0.151	A BB	30163.	12.404 37.3	4.33
2	RIC	514	6:25	7	0.398	A BB	40470.	16.642 83.01	5.81
3	RIC	637	7:57	7	0.493	A BB	29998.	12.336	4.31
4	RIC	745	9:17	7	0.577	A BB	114013.	46.885	16.38
5	RIC	1002	12:30	7	0.776	A BB	67684.	27.833	9.72
6	RIC	1255	15:39	7	0.971	A BB	73585.	30.260 16.52	10.57
7	RIC	1292	16:07	7	1.000	A BB	243175.	100.000	34.93
8	RIC	1476	18:24	7	1.142	A BB	79190.	32.565	11.38
9	RIC	1884	23:29	7	1.458	A BB	11829.	4.865 80.9	1.70
10	RIC	2046	25:31	7	1.584	A BB	3783.	1.556	0.54
11	RIC	2077	25:54	7	1.608	A BB	2194.	0.902	0.32

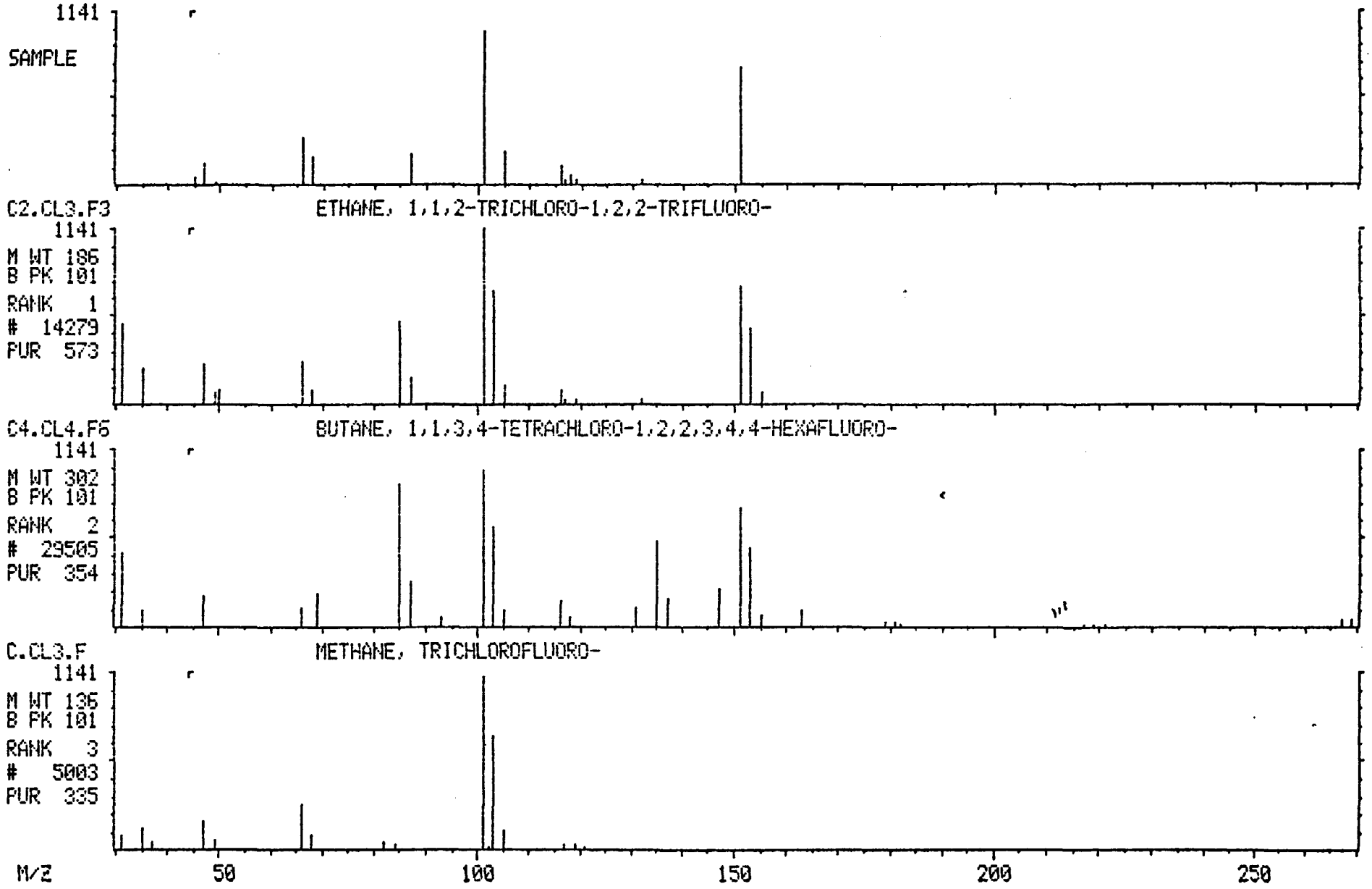
No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L) Ratio
1			12.40		0.124	
2			16.64		0.166	
3			12.34		0.123	
4			46.89		0.469	
5			27.83		0.278	
6			30.26		0.303	
7			100.00		1.000	
8			32.57		0.326	
9			4.86		0.049	
10			1.56		0.016	
11			0.90		0.009	

01/13/92 20:04:00 + 2:26 CALI: V017009 # 3 RIC: 696.

SAMPLE: 017009 VO+15/E E1 S DIL 1/500

CONDS.: IAL/624/DB624

ENHANCED (S 15B 2N 0T)



847520626

Quantitation Report File: V017010

Data: V017010.TI
01/13/92 20:39:00
Sample: 017010 V0+15/E E2 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

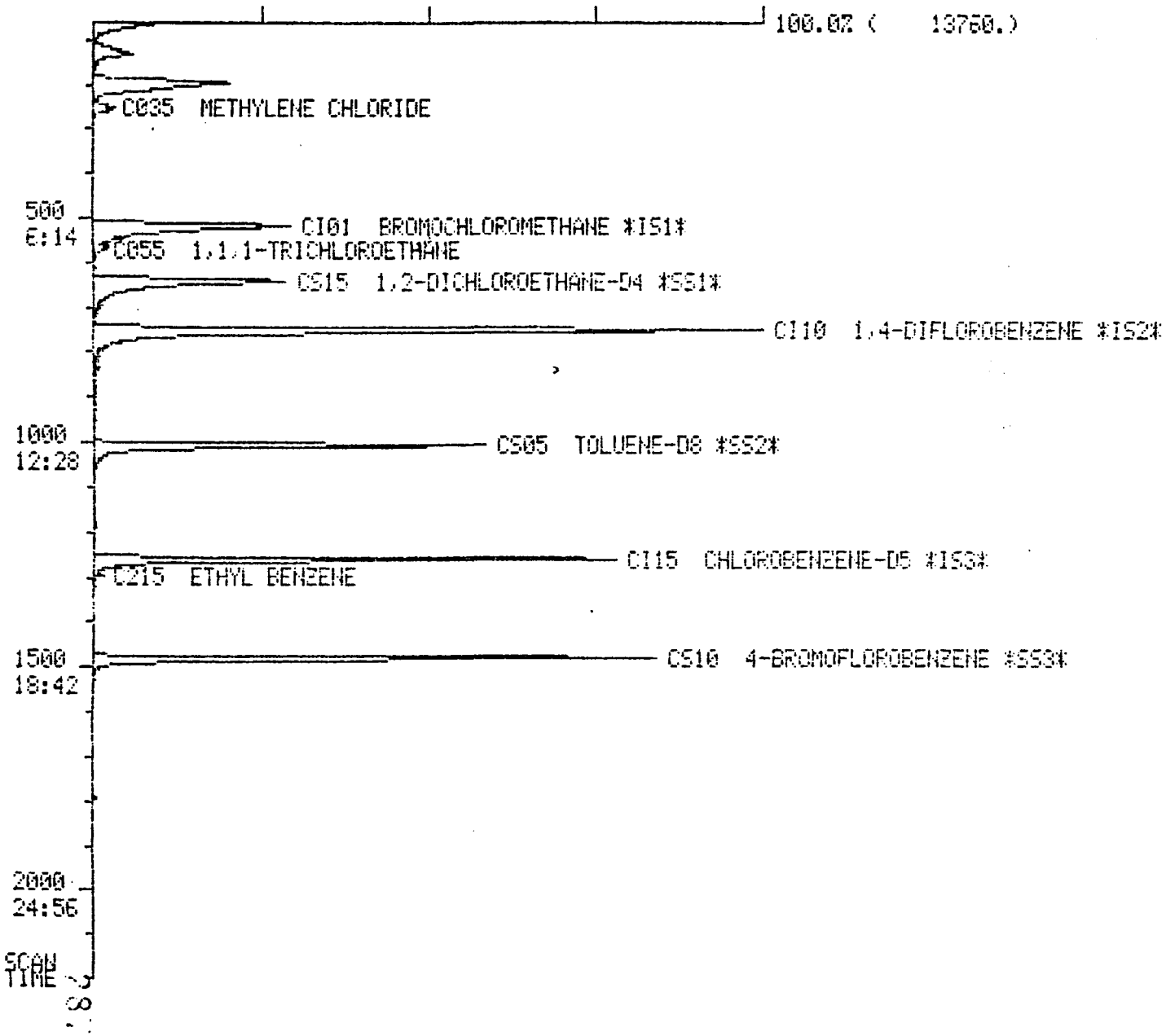
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	514	6:25	1	1.000	A BB	10570.	50.000 UG/L	18.05
2	114	747	9:19	2	1.000	A BB	54299.	50.000 UG/L	18.05
3	117	1255	15:39	3	1.000	A BB	29644.	50.000 UG/L	18.05
4	65	639	7:58	1	1.243	A BB	16723.	51.411 UG/L	18.56
5	98	1003	12:30	2	1.343	A BB	30613.	46.612 UG/L	16.83
6	95	1476	18:24	3	1.176	A BB	21771.	52.482 UG/L	18.95
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	246	3:04	1	0.479	A BV	958.	3.574 UG/L	1.29
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	566	7:03	1	1.101	A VB	449.	0.672 UG/L	0.24
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1015	12:39	2	1.359	A BB	50.	0.067 UG/L	0.02
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1291	16:06	3	1.029	A BV	271.	0.307 UG/L	0.11
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	51.41	50.00	1.582	1.539	1.03
5	12:30	1.00	1.343	1.00	46.61	50.00	0.564	0.605	0.93
6	18:24	1.00	1.177	1.00	52.48	50.00	0.734	0.700	1.05
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	3.57	50.00	0.091	1.268	0.07
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.01	1.100	1.00	0.67	50.00	0.043	3.166	0.01
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	0.07	50.00	0.001	0.685	0.00
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	0.31	50.00	0.009	1.490	0.01
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520629

DATA FROM FILE: V017010 SCANS 60 TO 2200 ACQUIRED: 01/13/92 20:39:00
CALI: V017010 #3
SAMPLE: 017010 V0+15/E E2 S DIL 1/500
CONDS.: IAL/624/DB624



84752063O

Quantitation Report File: V017010A

Data: V017010A.TI
01/21/92 23:08:00
Sample: 017010 V0+15/E E2 S DIL 1/10 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520631

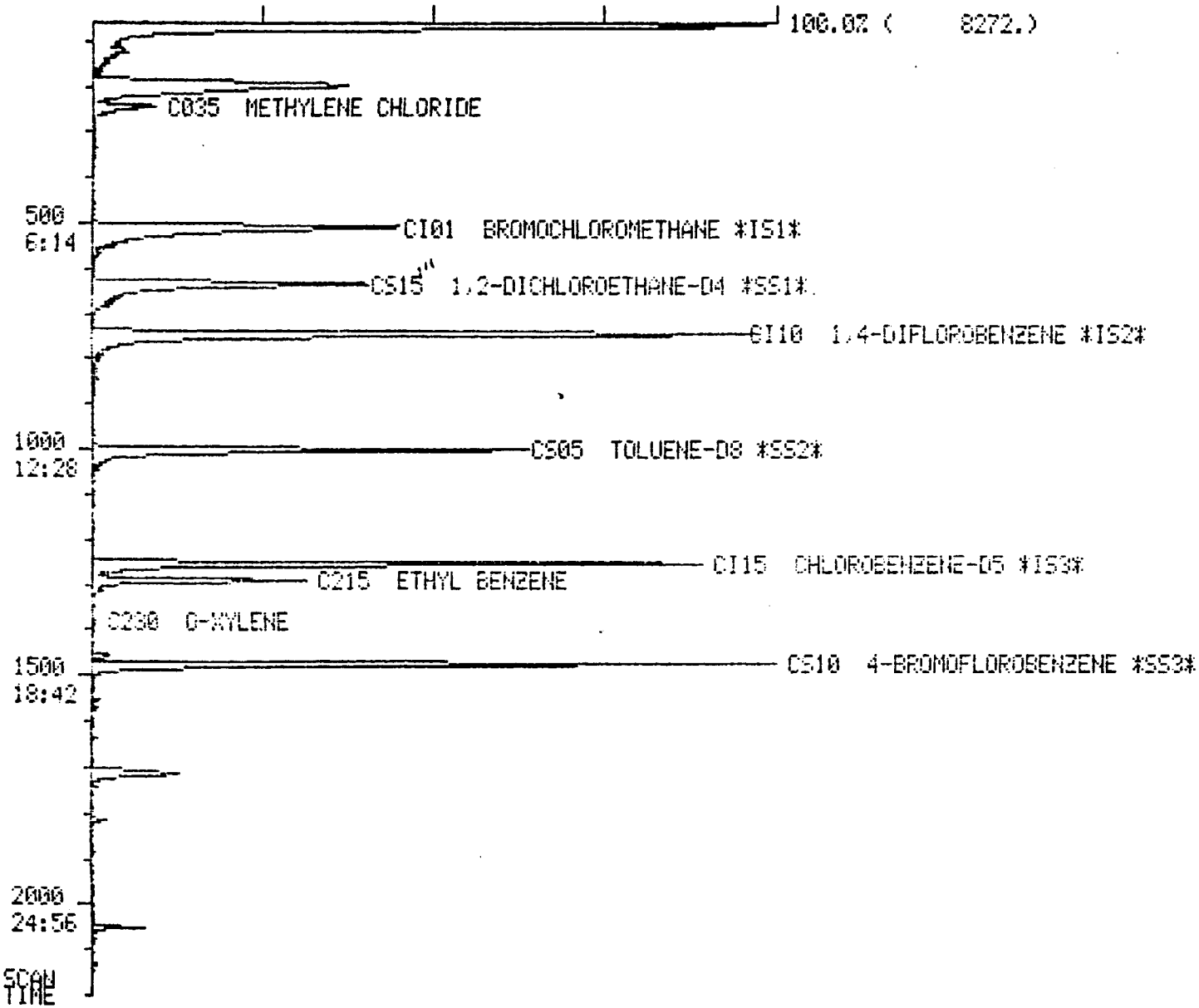
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	506	6:19	1	1.000	A BV	7838.	50.000	UG/L	17.70
2	114	742	9:15	2	1.000	A BB	35348.	50.000	UG/L	17.70
3	117	1249	15:34	3	1.000	A BB	21879.	50.000	UG/L	17.70
4	65	632	7:53	1	1.249	A BB	11653.	40.487	UG/L	14.34
5	98	997	12:26	2	1.344	A BB	20167.	47.511	UG/L	16.82
6	95	1472	18:21	3	1.179	A BB	14634.	44.009	UG/L	15.58
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	239	2:59	1	0.472	A BV	2795.	23.011	UG/L	8.15
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1007	12:33	2	1.357	A BV	658.	1.308	UG/L	0.46
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1287	16:03	3	1.030	A BB	10359.	14.467	UG/L	5.1
31	NOT FOUND									
32	NOT FOUND									
33	91	1377	17:10	3	1.102	A BB	94.	0.140	UG/L	0.0
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Rati
1	6:19	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.
2	9:13	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.
3	15:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1
4	7:50	1.01	1.241	1.01	40.49	50.00	1.487	1.836	0
5	12:25	1.00	1.348	1.00	47.51	50.00	0.570	0.600	0
6	18:19	1.00	1.177	1.00	44.01	50.00	0.669	0.760	0
7	0:59		0.156						
8	1:05		0.172						
9	1:21		0.213						
10	1:26		0.227						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:13		0.352						
12	2:59	1.00	0.472	1.00	23.01	50.00	0.357	0.775	0.46
13	3:26		0.543						
14	4:15		0.674						
15	6:47		1.075						
16	6:55		1.097						
17	7:20		1.162						
18	7:51		0.853						
19	8:02		0.871						
20	9:37		1.043						
21	10:04		1.092						
22	10:55		1.184						
23	11:57		1.296						
24	12:33	1.00	1.361	1.00	1.31	50.00	0.019	0.712	0.03
25	13:17		1.442						
26	13:36		1.476						
27	13:41		1.486						
28	14:21		1.558						
29	15:36		1.002						
30	16:01	1.00	1.030	1.00	14.47	50.00	0.473	1.636	0.29
31	16:19		1.049						
32	16:19		1.049						
33	17:09	1.00	1.102	1.00	0.14	50.00	0.004	1.531	0.00
34	17:28		1.123						
35	18:54		1.215						
36	20:46		1.334						
37	21:00		1.349						
38	21:47		1.400						
39	3:35		0.569						
40	4:59		0.791						
41	3:46		0.597						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520633

DATA FROM FILE: V017010A SCANS 60 TO 2200 ACQUIRED: 01/21/92 23:08:00
CALI: V017010A #3
SAMPLE: 017010 V0+15/E E2 S DIL 1/10 RERUN
CONDS.: IAL/624/DB624



84752634

Quantitation Report File: JJRT01

Data: V017010A.TI
01/21/92 23:08:00
Sample: 017010 V0+15/E E2 S DIL. 1/10 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
~~1~~	~~RIC~~	~~67~~	~~0:50~~	~~5~~	~~0.090~~	~~A BB~~	~~26134.~~	~~29.551~~	5.66
2	RIC	195	2:26	5	0.263	A BB	41078.	46.449 / 46.4	8.89
3	RIC	505	6:18	5	0.682	A BB	44284.	50.075 ×1.0	9.59
4	RIC	631	7:52	5	0.852	A BB	38577.	43.621	8.35
5	RIC	741	9:14	5	1.000	A BB	88437.	100.000	19.15
6	RIC	998	12:27	5	1.347	A BB	52741.	59.637	11.42
7	RIC	1249	15:34	5	1.686	A BB	64240.	72.640 ×0.69	13.91
8	RIC	1287	16:03	5	1.737	A BB	22536.	25.483	4.88
9	RIC	1472	18:21	5	1.987	A BB	68883.	77.890	14.91
10	RIC	1711	21:20	5	2.309	A BB	12568.	14.211 / 9.8	2.72
~~11~~	~~RIC~~	~~2047~~	~~25:31~~	~~5~~	~~2.762~~	~~A BB~~	~~2436.~~	~~2.755~~	0.53

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1					29.55		0.296		
2					46.45		0.464		
3					50.07		0.501		
4					43.62		0.436		
5					100.00		1.000		
6					59.64		0.596		
7					72.64		0.726		
8					25.48		0.255		
9					77.89		0.779		
10					14.21		0.142		
11					2.75		0.028		

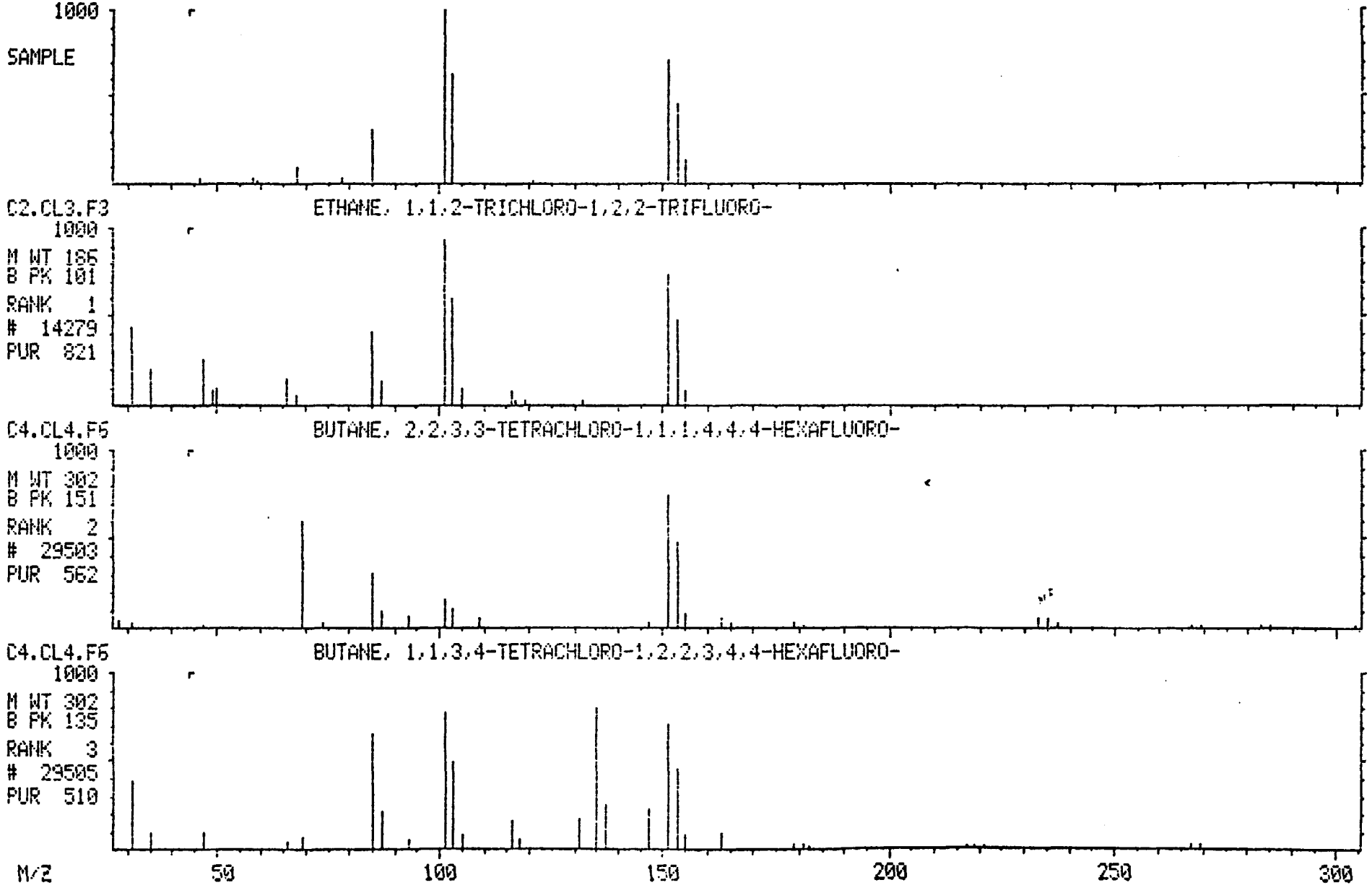
847520635

MID LIBRARY SEARCH (LIBRARYNB)
01/21/92 23:08:00 + 2:26
SAMPLE: 017010 V0+15/E E2 S DIL 1/10 RERUN
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017010A # 195
CALI: V017010A # 3

BASE M/Z: 101
RIC: 1066.

847520636

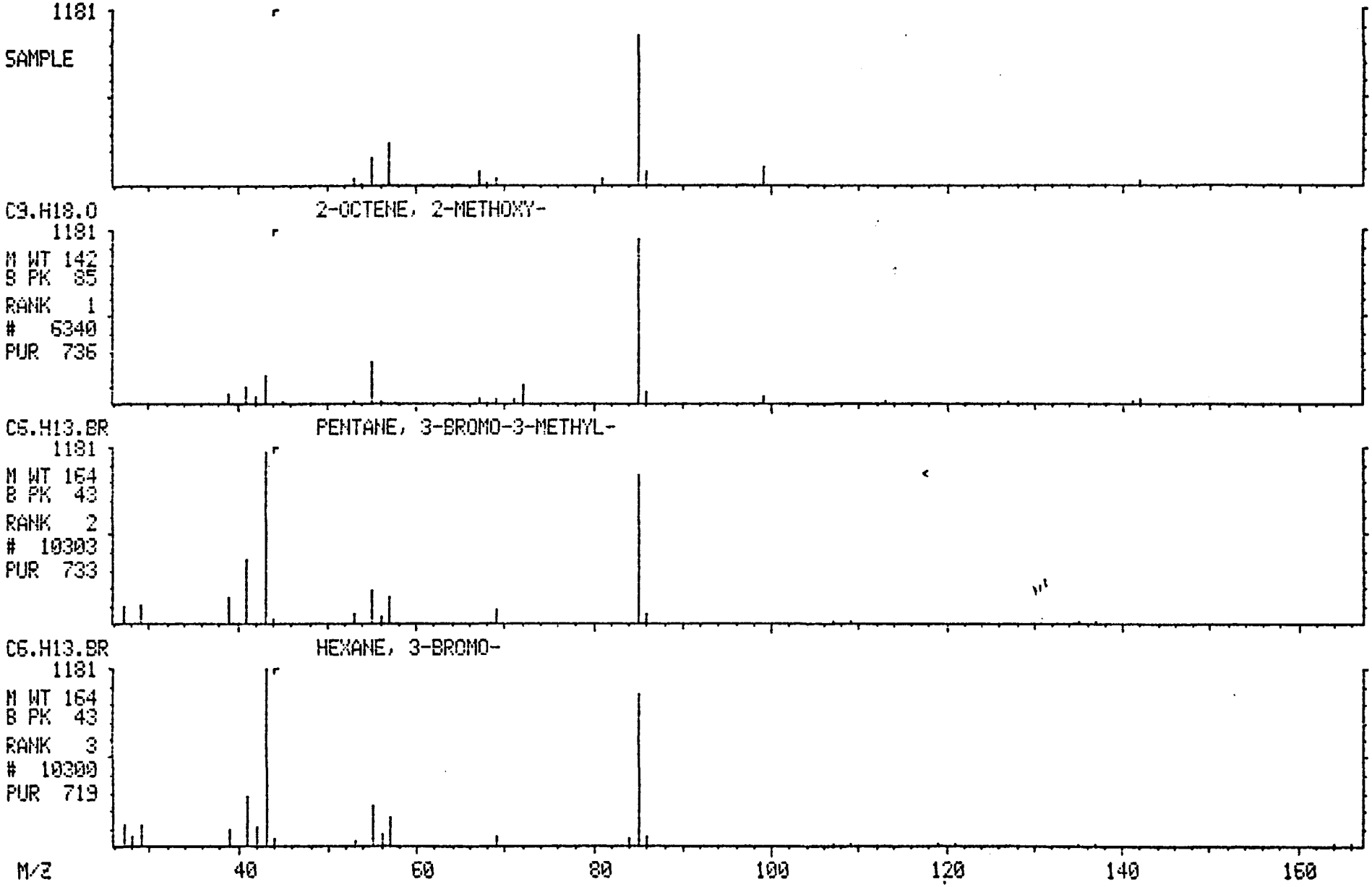


MID LIBRARY SEARCH (LIBRARYNB)
01/21/92 23:08:00 + 21:20
SAMPLE: 017010 V0+15/E E2 S DIL 1/10 RERUN
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017010A #1711
CALI: V017010A # 3

BASE M/Z: 85
RIC: 690.

847520637



Quantitation Report File: V017011

Data: V017011.TI
01/13/92 21:14:00
Sample: 017011 V0+15/E F1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	515	6:25	1	1.000	A BB	7500.	50.000	UG/L	18.15
2	114	744	9:17	2	1.000	A BB	35428.	50.000	UG/L	18.15
3	117	1254	15:38	3	1.000	A BV	26174.	50.000	UG/L	18.15
4	65	638	7:57	1	1.239	A BB	11080.	48.006	UG/L	17.43
5	98	1001	12:29	2	1.345	A BB	21359.	49.844	UG/L	18.10
6	95	1476	18:24	3	1.177	A BB	18220.	49.748	UG/L	18.06
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	247	3:05	1	0.480	A BV	1209.	6.354	UG/L	2.31
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	97	562	7:00	1	1.091	A BB	409.	0.861	UG/L	0.31
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1012	12:37	2	1.360	A BB	3001.	6.181	UG/L	2.24
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1290	16:05	3	1.029	A BB	2602.	3.337	UG/L	1.21
31	91	1314	16:23	3	1.048	A BB	74.	0.052	UG/L	0.02
32	91	1314	16:23	3	1.048	A BB	74.	0.052	UG/L	0.02
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									

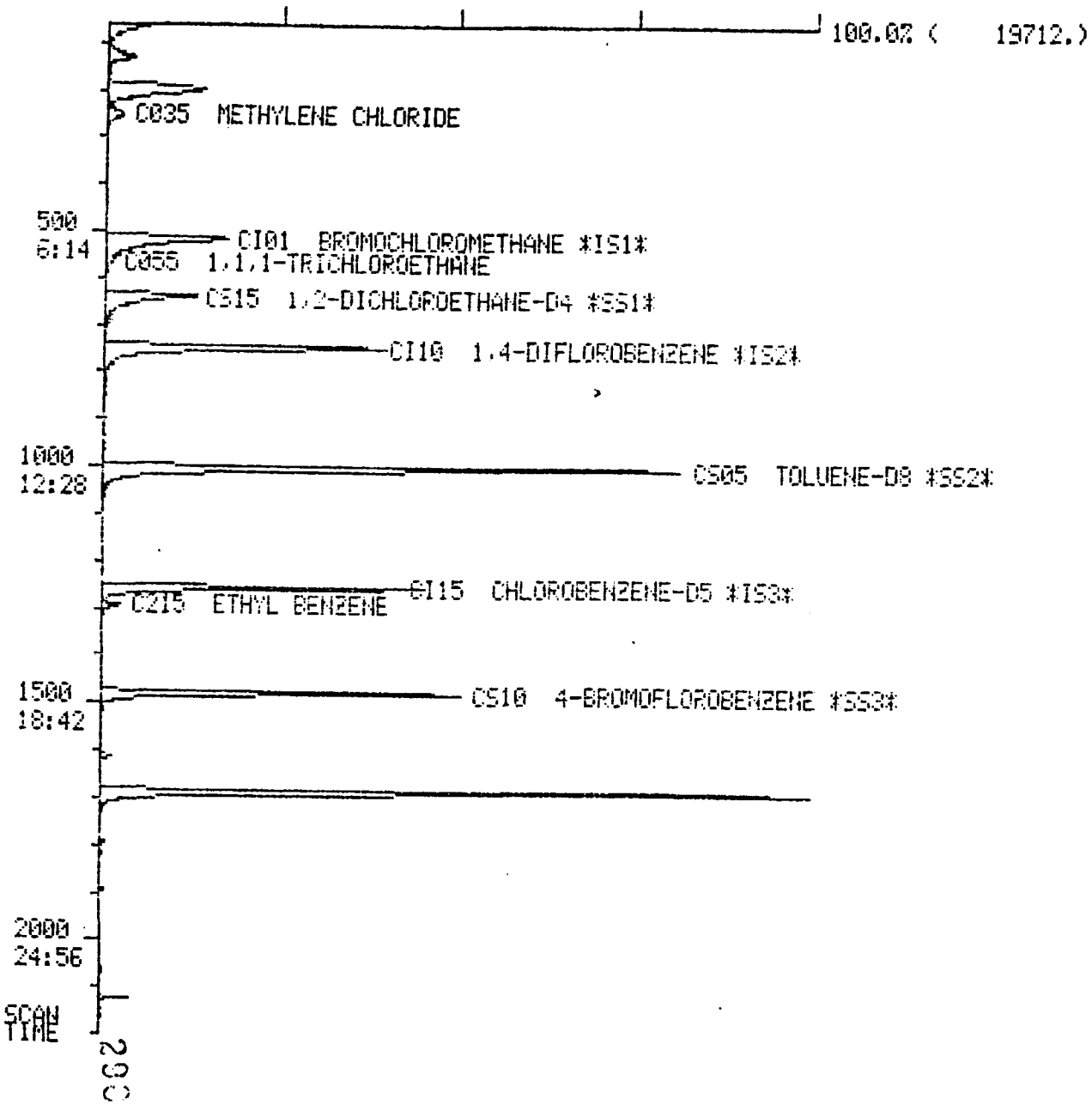
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	48.01	50.00	1.477	1.539	0.96
5	12:30	1.00	1.343	1.00	49.84	50.00	0.603	0.605	1.00
6	18:24	1.00	1.177	1.00	49.75	50.00	0.696	0.700	0.99
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520639

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	6.35	50.00	0.161	1.268	0.13
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.00	1.100	0.99	0.86	50.00	0.055	3.166	0.02
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	6.18	50.00	0.085	0.685	0.12
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	3.34	50.00	0.099	1.490	0.07
31	16:24	1.00	1.049	1.00	0.05	50.00	0.003	2.738	0.00
32	16:24	1.00	1.049	1.00	0.05	50.00	0.003	2.738	0.00
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520640

DATA FROM FILE: V017011 SCANS 60 TO 2200 ACQUIRED: 01/13/92 21:14:00
CALI: V017011 #3
SAMPLE: 017011 V0+15/E F1 S DIL 1/500
CONDS.: IAL/624/DB624



847520641

Quantitation Report File: JJRT01

Data: V017011.TI
01/13/92 21:14:00
Sample: 017011 V0+15/E F1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	196	2:27	9	0.116	A BB	40321.	23.319 42.4	5.69
2	RIC	514	6:25	9	0.305	A BB	47553.	27.501 x1.82	6.71
3	RIC	636	7:56	9	0.378	A BB	33950.	19.634	4.79
4	RIC	746	9:18	9	0.443	A BB	86113.	49.801	12.15
5	RIC	1001	12:29	9	0.594	A BB	157389.	91.022	22.20
6	RIC	1253	15:37	9	0.744	A BB	77984.	45.100 /.11	11.00
7	RIC	1290	16:05	9	0.766	A BB	3974.	2.298	0.56
8	RIC	1476	18:24	9	0.876	A BB	85768.	49.602	12.10
9	RIC	1684	21:00	9	1.000	A BB	172913.	100.000 ///	24.39
10	RIC	2119	26:25	9	1.258	A BB	2938.	1.699	0.41

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1			23.32		0.233		
2			27.50		0.275		
3			19.63		0.196		
4			49.80		0.498		
5			91.02		0.910		
6			45.10		0.451		
7			2.30		0.023		
8			49.60		0.496		
9			100.00		1.000		
10			1.70		0.017		

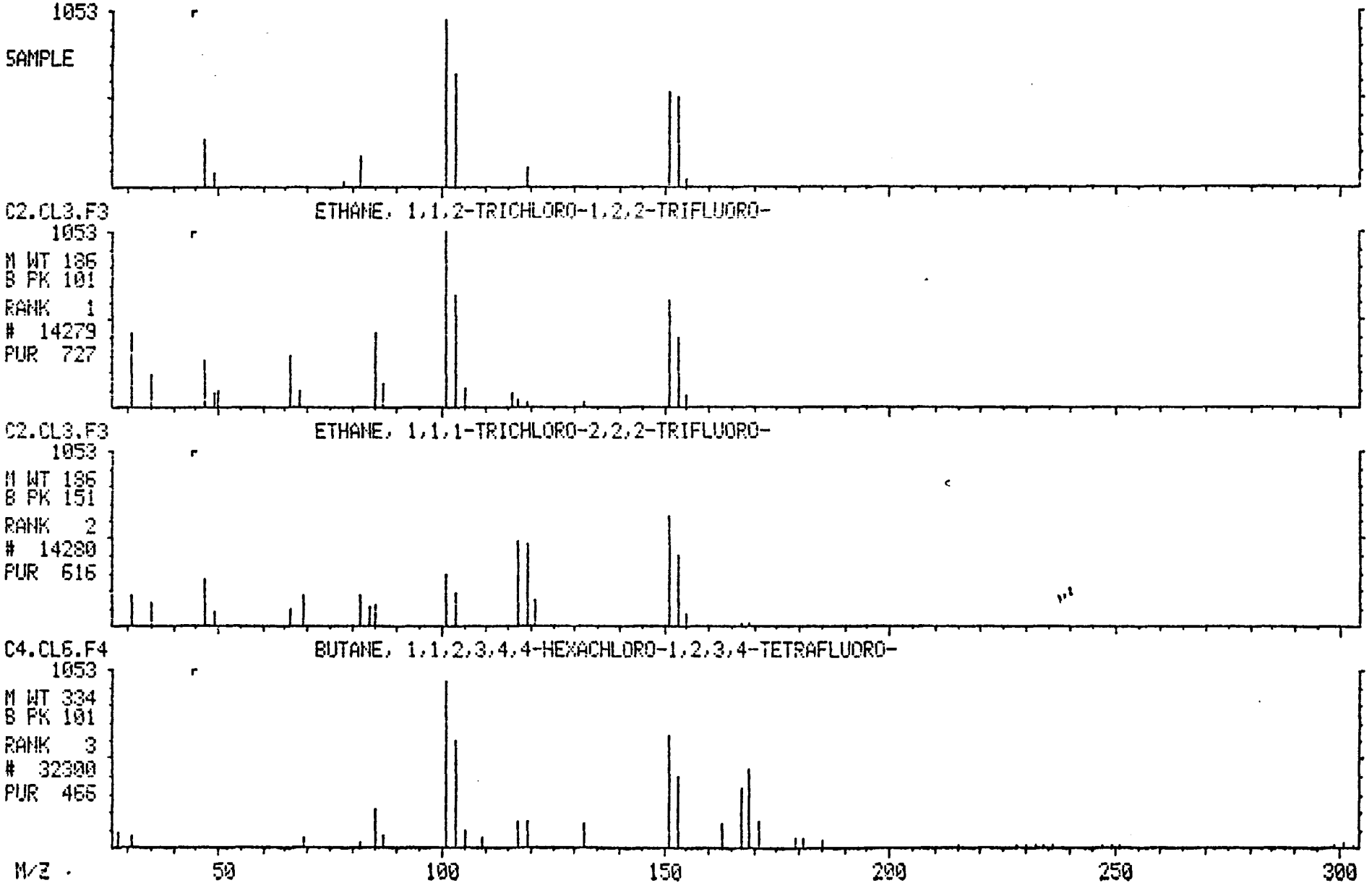
847520642

MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 21:14:00 + 2:27
SAMPLE: 017011 VO+15/E F1 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017011 # 196
CALI: V017011 # 3

BASE M/Z: 101
RIC: 752.

847520643



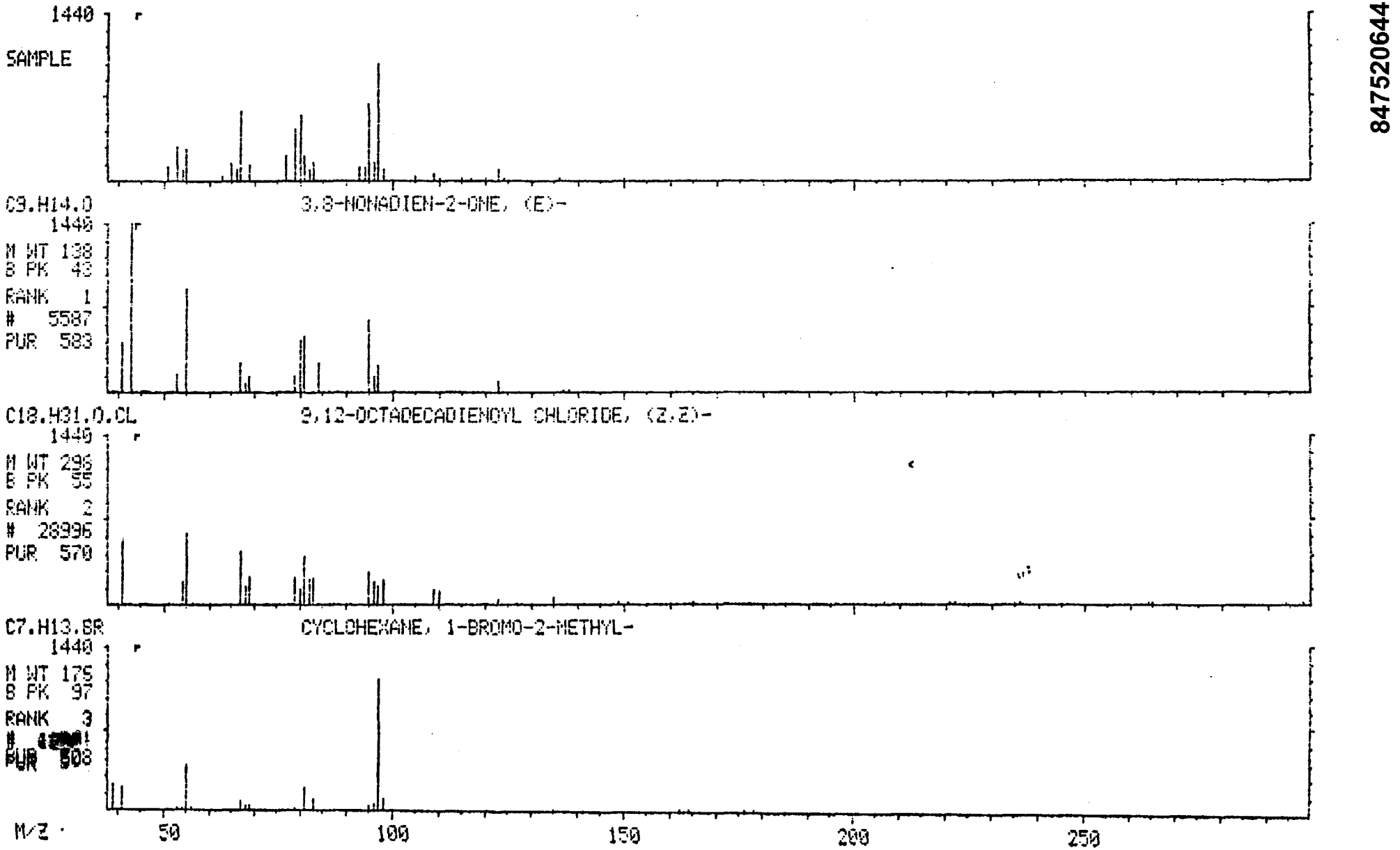
MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 21:14:00 + 21:00
SAMPLE: 017011 V0+15/E F1 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017011 #1684
CALI: V017011 # 3

BASE M/Z: 97
RIC: 13120.

30

847520644



NIU LIBRARY SEARCH (LIBRARY18)
01/13/92 20:04:00 + 23:29
SAMPLE: 017009 V0+15/E E1 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017009 #1884
CALI: V017009 # 3

BASE M/Z: 105
RIC: 556.

30

847520645

1006

SAMPLE

C8.H8.0 ETHANONE, 1-PHENYL-

1005

M WT 120
B PK 105
RANK 1
3082
PUR 792

C11.H14.0 1-PENTANONE, 1-PHENYL-

1006

M WT 162
B PK 105
RANK 2
9822
PUR 618

C10.H12.0 CYCLOBUTANOL, 1-PHENYL-

1006

M WT 148
B PK 120
RANK 3
7133
PUR 613

M/Z 40 60 80 100 120 140 160

Quantitation Report File: V017012

Data: V017012.TI
01/13/92 21:49:00
Sample: 017012 V0+15/E F2 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520646

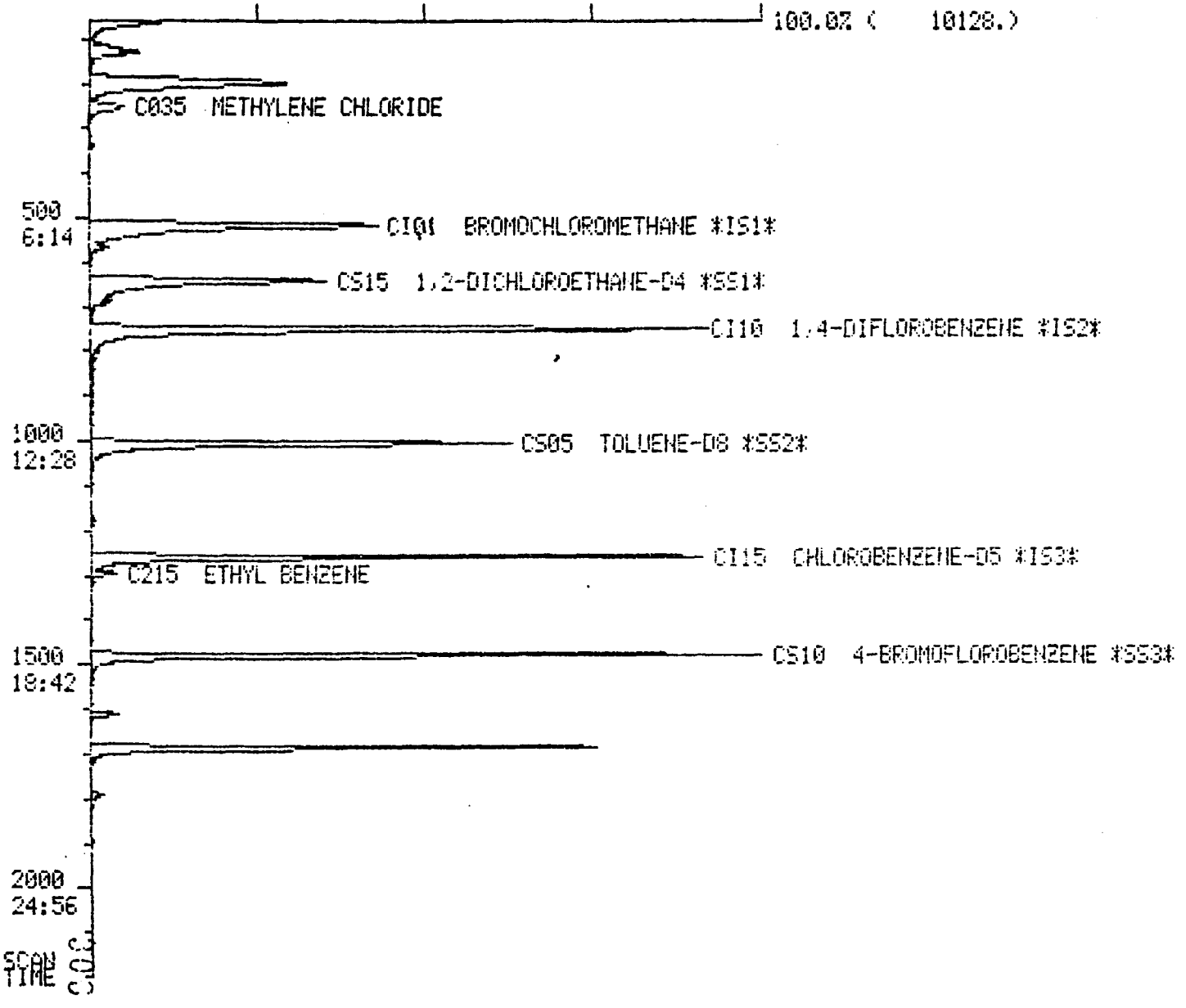
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	516	6:26	1	1.000	A BB	10013.	50.000 UG/L	17.94
2	114	747	9:19	2	1.000	A BB	39088.	50.000 UG/L	17.94
3	117	1255	15:39	3	1.000	A BB	25953.	50.000 UG/L	17.94
4	65	637	7:57	1	1.234	A BB	13746.	44.608 UG/L	16.00
5	98	1001	12:29	2	1.340	A BB	25755.	54.475 UG/L	19.54
6	95	1476	18:24	3	1.176	A BB	17648.	48.596 UG/L	17.43
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	247	3:05	1	0.479	A BV	1311.	5.163 UG/L	1.85
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1012	12:37	2	1.355	A BB	2267.	4.231 UG/L	1.52
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1291	16:06	3	1.029	A BB	1811.	2.342 UG/L	0.84
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	0.99	44.61	50.00	1.373	1.539	0.89
5	12:30	1.00	1.343	1.00	54.48	50.00	0.659	0.605	1.09
6	18:24	1.00	1.177	1.00	48.60	50.00	0.680	0.700	0.97
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520647

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	1.00	5.16	50.00	0.131	1.268	0.10
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01		1.100						
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38	1.00	1.358	1.00	4.23	50.00	0.058	0.685	0.08
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	2.34	50.00	0.070	1.490	0.05
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

DATA FROM FILE: V017012 SCANS 60 TO 2200 ACQUIRED: 01/13/92 21:49:00
CALI: V017012 #3
SAMPLE: 017012 V0+15/E F2 S DIL 1/500
CONDS.: IAL/624/DB624



847520649

Quantitation Report File: JJRT01

Data: V017012.TI
01/13/92 21:49:00
Sample: 017012 V0+15/E F2 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

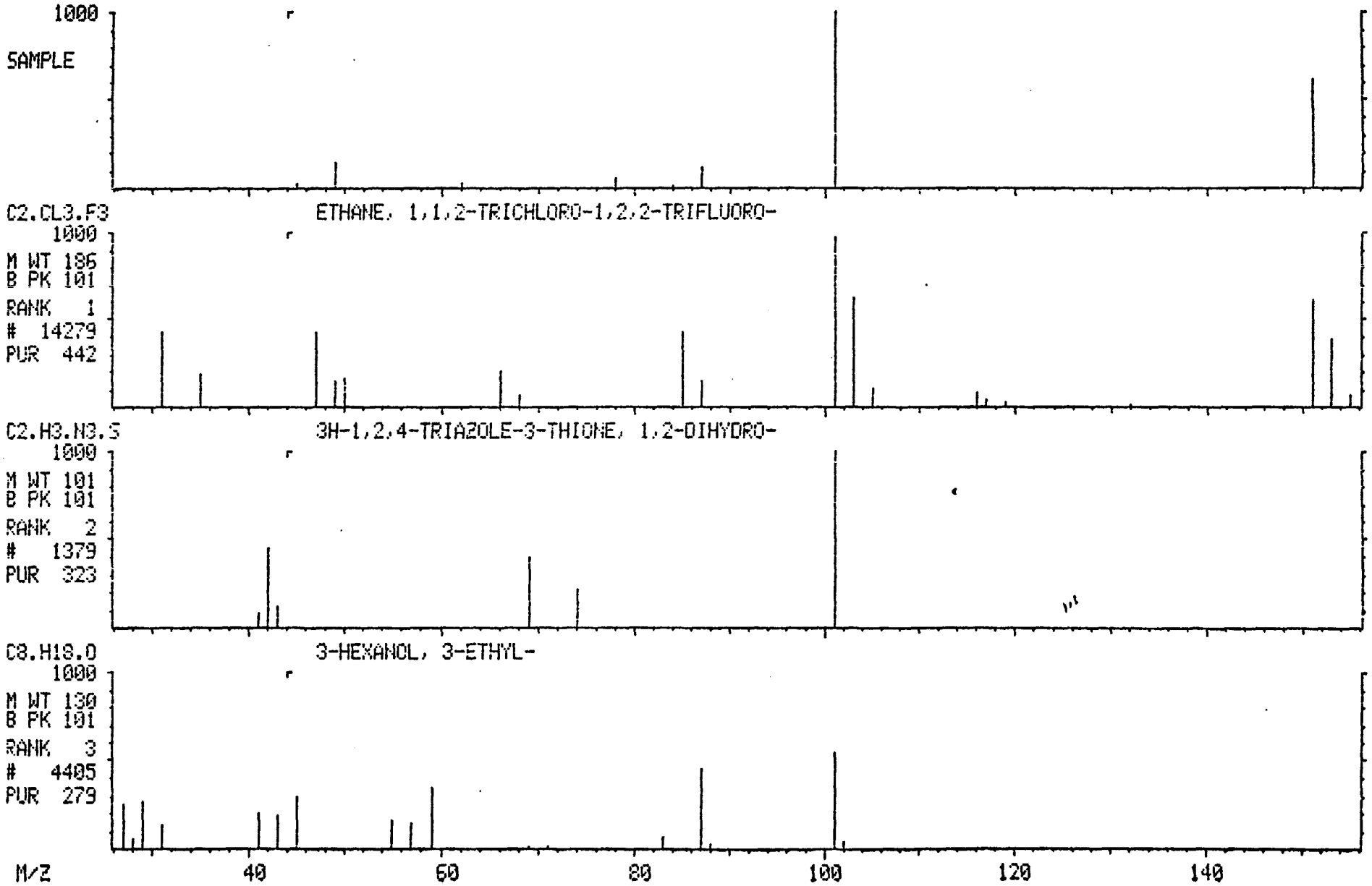
No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	195	2:26	4	0.261	A BB	46154.	45.622 45.1	8.42
2	RIC	512	6:23	4	0.684	A BB	51181.	50.590 x0.99	9.33
3	RIC	637	7:57	4	0.852	A BB	44068.	43.560	8.04
4	RIC	748	9:20	4	1.000	A BB	101167.	100.000	18.45
5	RIC	1003	12:30	4	1.341	A BB	63953.	63.215	11.66
6	RIC	1255	15:39	4	1.678	A BB	80515.	79.586 x0.63	14.68
7	RIC	1291	16:06	4	1.726	A BV	1239.	1.224	0.23
8	RIC	1294	16:08	4	1.730	A VB	1181.	1.168	0.22
9	RIC	1476	18:24	4	1.973	A BB	84846.	83.867	15.47
10	RIC	1608	20:03	4	2.150	A BB	3047.	3.012	0.56
11	RIC	1684	21:00	4	2.251	A BB	71062.	70.242 44.1	12.96

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1					45.62		0.456		
2					50.59		0.506		
3					43.56		0.436		
4					100.00		1.000		
5					63.22		0.632		
6					79.59		0.796		
7					1.22		0.012		
8					1.17		0.012		
9					83.87		0.839		
10					3.01		0.030		
11					70.24		0.702		

01/13/92 21:49:00 + 2:26
SAMPLE: 017012 VO+15/E F2 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

CALI: V017012 # 3 RIC: 675.



303

847520651

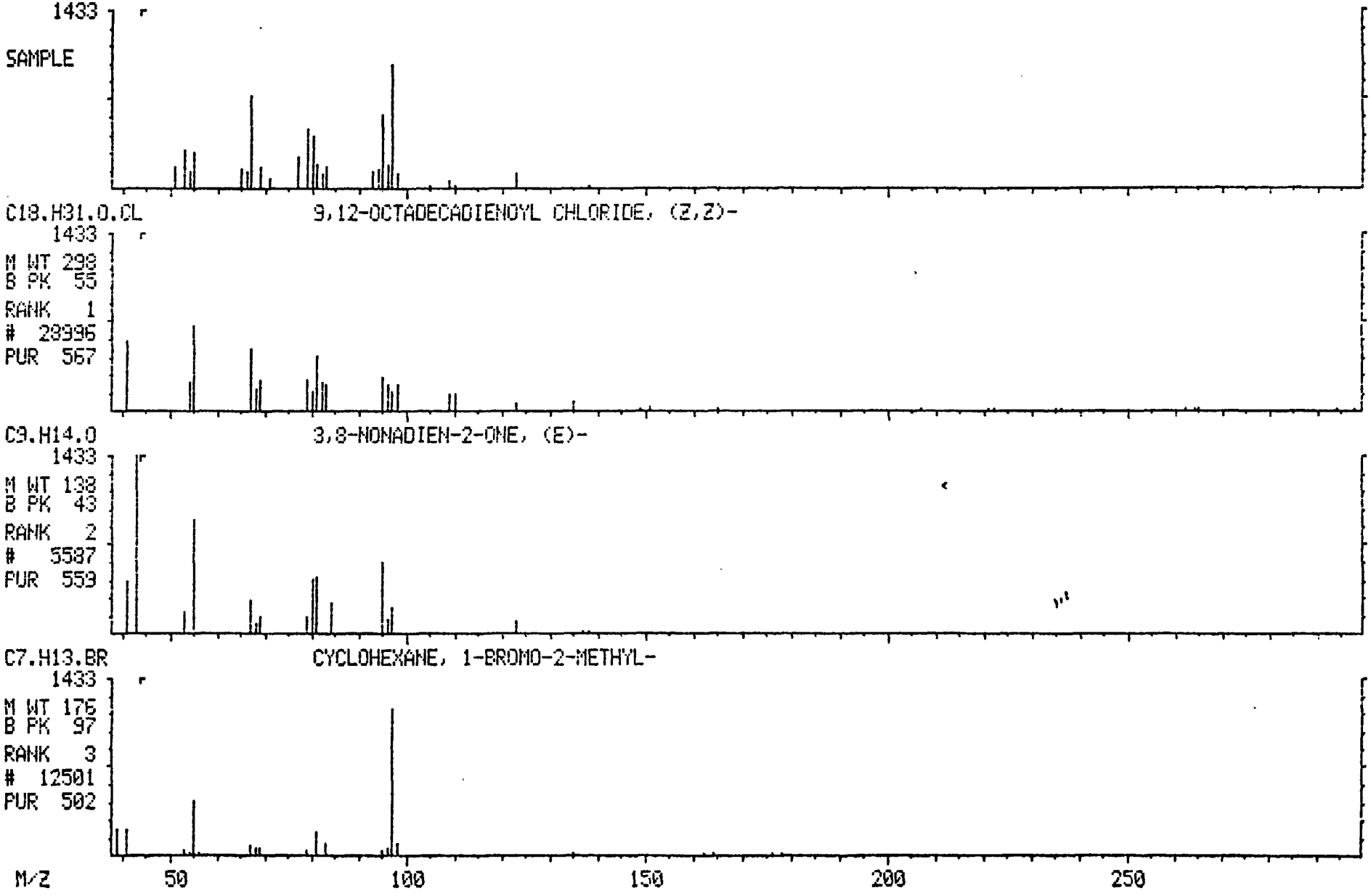
MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 21:49:00 + 21:00
SAMPLE: 017012 V0+15/E F2 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017012 #1684
CALI: V017012 # 3

BASE M/Z: 97
RIC: 4968.

30

847520652



Quantitation Report File: V017013

Data: V017013.TI
01/13/92 22:25:00
Sample: 017013 V0+15/E G1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLORDETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520653

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	515	6:25	1	1.000	A BB	7880.	50.000 UG/L	12.37
2	114	748	9:20	2	1.000	A BB	31226.	50.000 UG/L	12.37
3	117	1258	15:41	3	1.000	A BB	22815.	50.000 UG/L	12.37
4	65	638	7:57	1	1.239	A BB	10990.	45.318 UG/L	11.21
5	98	1001	12:29	2	1.338	A BB	21895.	57.972 UG/L	14.34
6	95	1478	18:26	3	1.175	A BB	15791.	49.462 UG/L	12.24
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	246	3:04	1	0.478	A VB	2222.	11.114 UG/L	2.75
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	566	7:03	1	1.099	A VV	267.	0.535 UG/L	0.13
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1294	16:08	3	1.029	A BB	87184.	128.272 UG/L	31.73
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

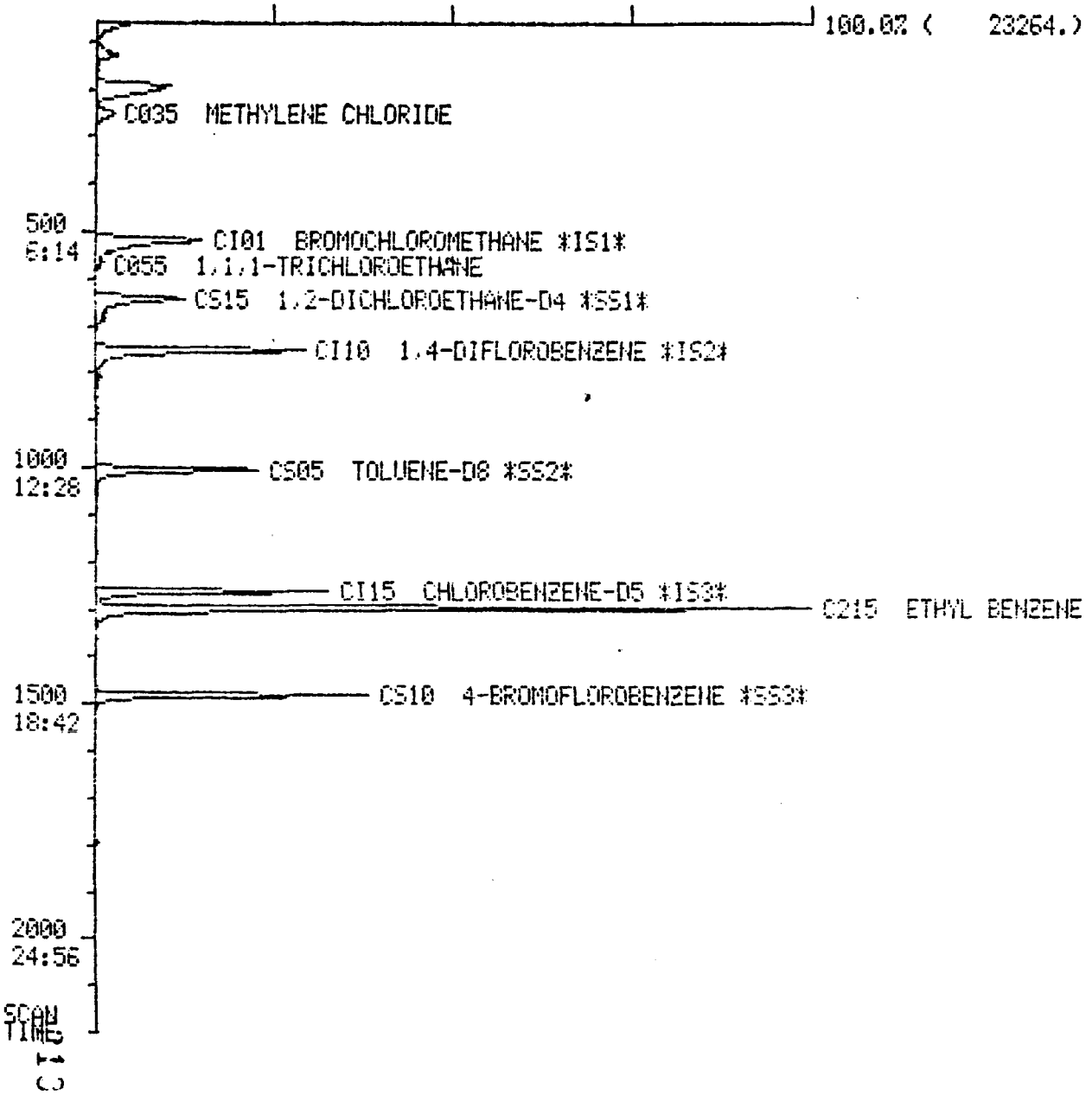
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	1.00	45.32	50.00	1.395	1.539	0.91
5	12:30	1.00	1.343	1.00	57.97	50.00	0.701	0.605	1.16
6	18:24	1.00	1.177	1.00	49.46	50.00	0.692	0.700	0.99
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

847520654

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04	1.00	0.480	0.99	11.11	50.00	0.282	1.268	0.22
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.01	1.100	1.00	0.54	50.00	0.034	3.166	0.01
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38		1.358						
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06	1.00	1.030	1.00	128.27	50.00	3.821	1.490	2.57
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520655

DATA FROM FILE: V017013 SCANS 60 TO 2200 ACQUIRED: 01/13/92 22:25:00
CALI: V017013 #3
SAMPLE: 017013 VO+15/E G1 S DIL 1/500
CONDS.: IAL/624/DB624



847520656

Quantitation Report File: JJRTO1

Data: VO17013.TI
01/13/92 22:25:00
Sample: 017013 VO+15/E G1 S DIL 1/500
Conds.: IAL/624/DB624
Formula: [redacted] Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	188	2:21	5	0.252	A BV	20435.	27.831 25.5	8.45
2	RIC	196	2:27	5	0.262	A VB	16394.	22.328 20.4	6.78
3	RIC	515	6:25	5	0.689	A BB	40096.	54.606 X0.92	16.59
4	RIC	639	7:58	5	0.855	A BB	36425.	49.607	15.07
5	RIC	747	9:19	5	1.000	A BB	73427.	100.000	30.38
6	RIC	1001	12:29	5	1.340	A BB	54950.	74.837	22.73

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1					27.83		0.278		
2					22.33		0.223		
3					54.61		0.546		
4					49.61		0.496		
5					100.00		1.000		
6					74.84		0.748		

31

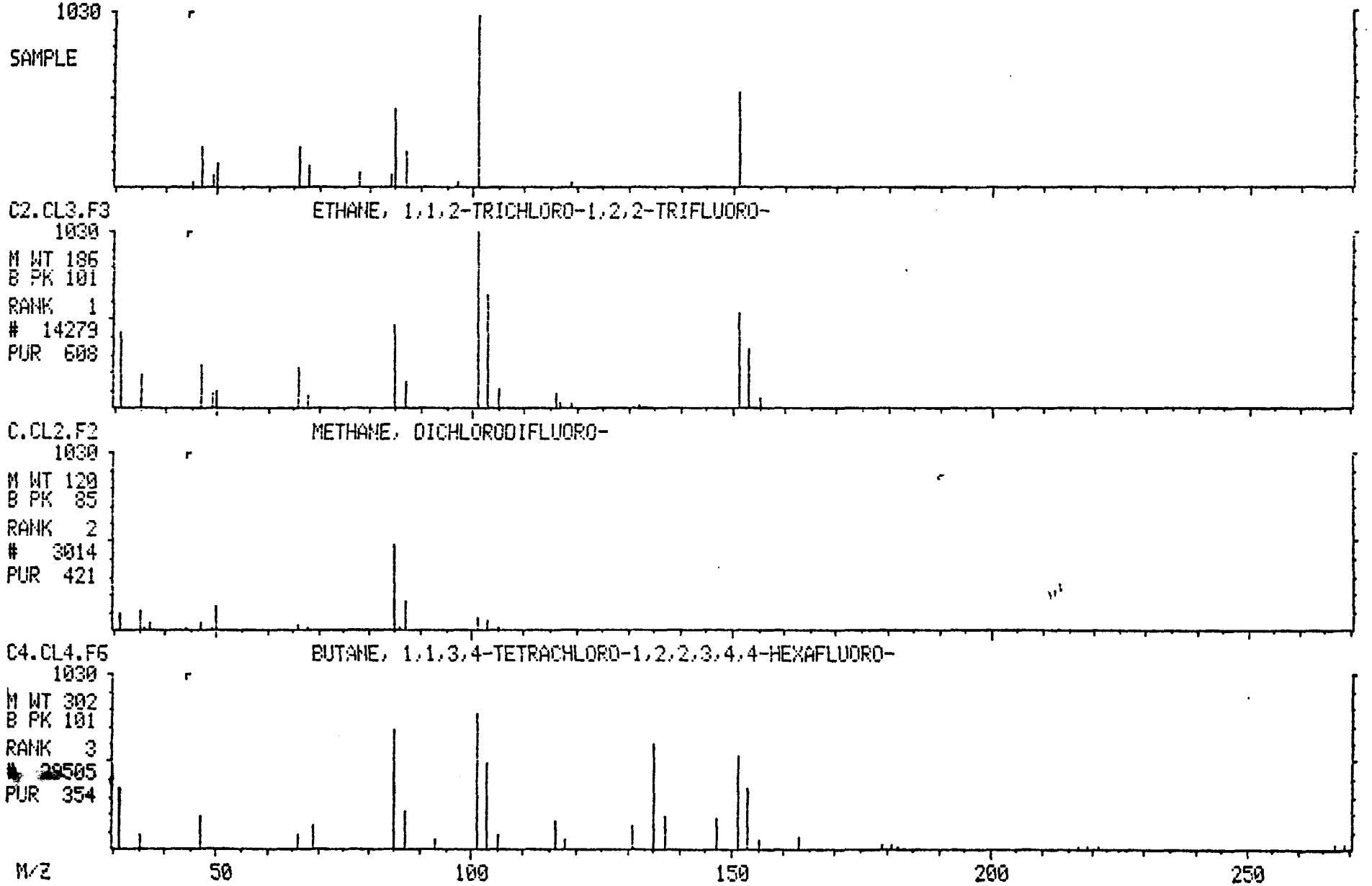
847520657

MID LIBRARY SEARCH (LIBRARY8)
01/13/92 22:25:00 + 2:21
SAMPLE: 017013 VO+15/E G1 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017013 # 188
CALI: V017013 # 3

BASE M/Z: 101
RIC: 799.

315



847520658

MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 22:25:00 + 2:27
SAMPLE: 017013 V0+15/E G1 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017013 # 196
CALI: V017013 # 3

BASE M/Z: 101
RIC: 604.

847520659

1389

SAMPLE

C.CL3.F METHANE, TRICHLOROFLUORO-

1389

M WT 136
B PK 101
RANK 1
5003
PUR 664

FREON

1389

B PK 85
RANK 2
42200
PUR 498

C.CL2.F2 METHANE, DICHLORODIFLUORO-

1389

M WT 120
B PK 85
RANK 3
3014
PUR 451

M/Z 40 60 80 100 120 140

Quantitation Report File: V017014

Data: V017014.TI
01/13/92 23:00:00
Sample: 017014 V0+15/E G2 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

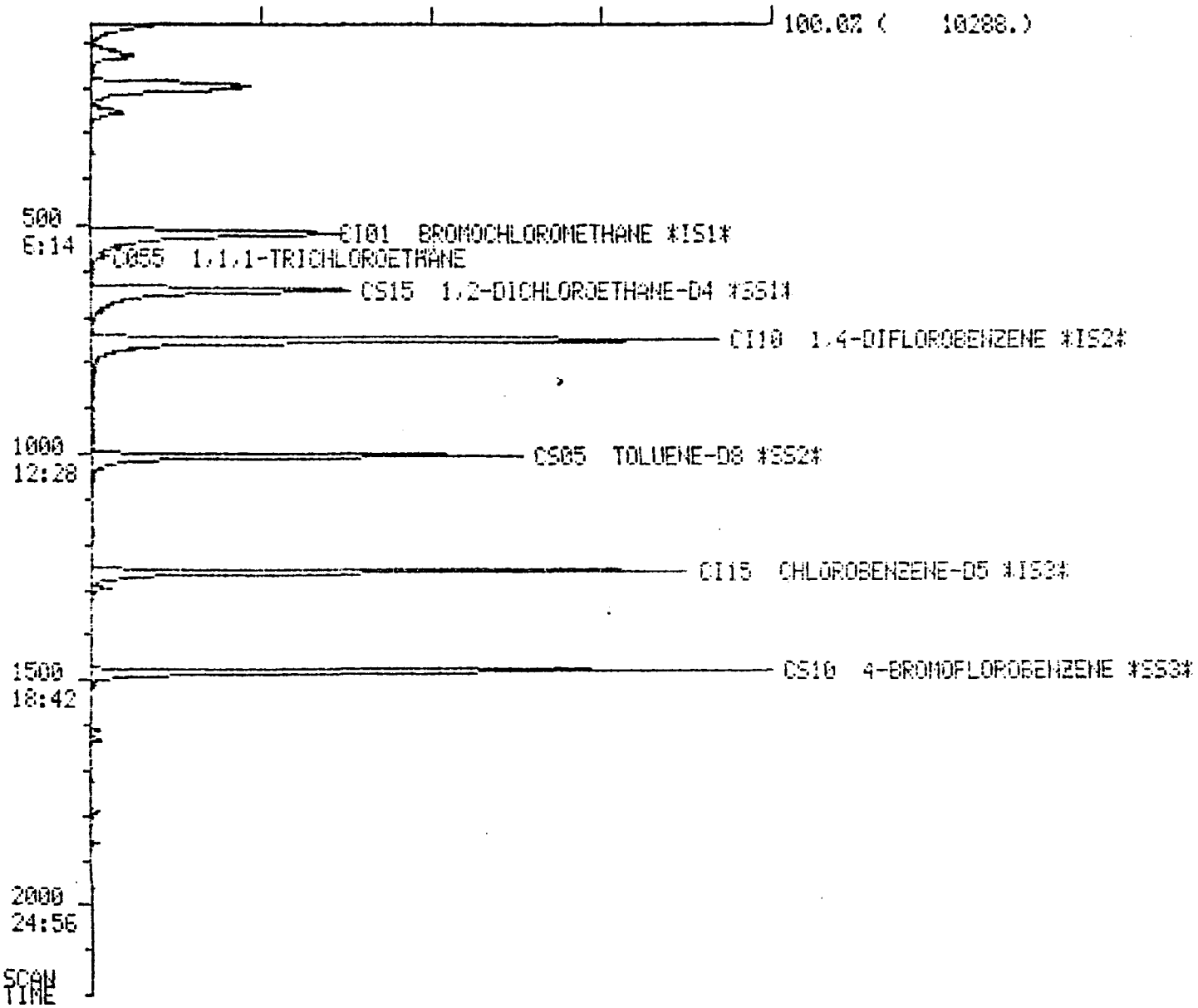
No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	515	6:25	1	1.000	A BV	12000.	50.000 UG/L	18.08
2	114	746	9:18	2	1.000	A BB	39038.	50.000 UG/L	18.08
3	117	1256	15:40	3	1.000	A BB	25037.	50.000 UG/L	18.08
4	65	637	7:57	1	1.237	A BB	17475.	47.320 UG/L	17.11
5	98	1001	12:29	2	1.342	A BB	24360.	51.590 UG/L	18.66
6	95	1477	18:25	3	1.176	A BB	18790.	53.633 UG/L	19.40
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	566	7:03	1	1.099	A VB	568.	0.748 UG/L	0.27
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:23	1.01	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:18	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:38	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.244	0.99	47.32	50.00	1.456	1.539	0.95
5	12:30	1.00	1.343	1.00	51.59	50.00	0.624	0.605	1.03
6	18:24	1.00	1.177	1.00	53.63	50.00	0.750	0.700	1.07
7	1:01		0.160						
8	1:08		0.178						
9	1:23		0.217						
10	1:26		0.225						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:18		0.359						
12	3:04		0.480						
13	3:29		0.547						
14	4:19		0.676						
15	6:52		1.076						
16	7:01	1.01	1.100	1.00	0.75	50.00	0.047	3.166	0.01
17	7:27		1.166						
18	7:57		0.855						
19	8:09		0.875						
20	9:42		1.043						
21	10:09		1.091						
22	10:58		1.180						
23	12:01		1.292						
24	12:38		1.358						
25	13:22		1.437						
26	13:41		1.472						
27	13:47		1.481						
28	14:26		1.551						
29	15:41		1.003						
30	16:06		1.030						
31	16:24		1.049						
32	16:24		1.049						
33	17:14		1.102						
34	17:33		1.122						
35	18:59		1.215						
36	20:50		1.333						
37	21:05		1.348						
38	21:52		1.399						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

DATA FROM FILE: V017014 SCANS 60 TO 2200 ACQUIRED: 01/13/92 23:00:00
CALI: V017014 #3
SAMPLE: 017014 V0+15/E G2 S DIL 1/500
CONDS.: IAL/624/DB624



847520663

Quantitation Report File: JJRT01

Data: V017014.TI
01/13/92 23:00:00
Sample: 017014 VO+15/E G2 S DIL 1/500
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	191	2:23	5	0.256	A BV	20109.	20.120	6.91
2	RIC	196	2:27	5	0.263	A VB	18737.	18.747	6.44
3	RIC	514	6:25	5	0.689	A BB	43293.	43.317	14.88
4	RIC	637	7:57	5	0.854	A BB	45505.	45.530	15.65
5	RIC	746	9:18	5	1.000	A BB	99945.	100.000	34.36
6	RIC	1001	12:29	5	1.342	A BB	63263.	63.298	21.75

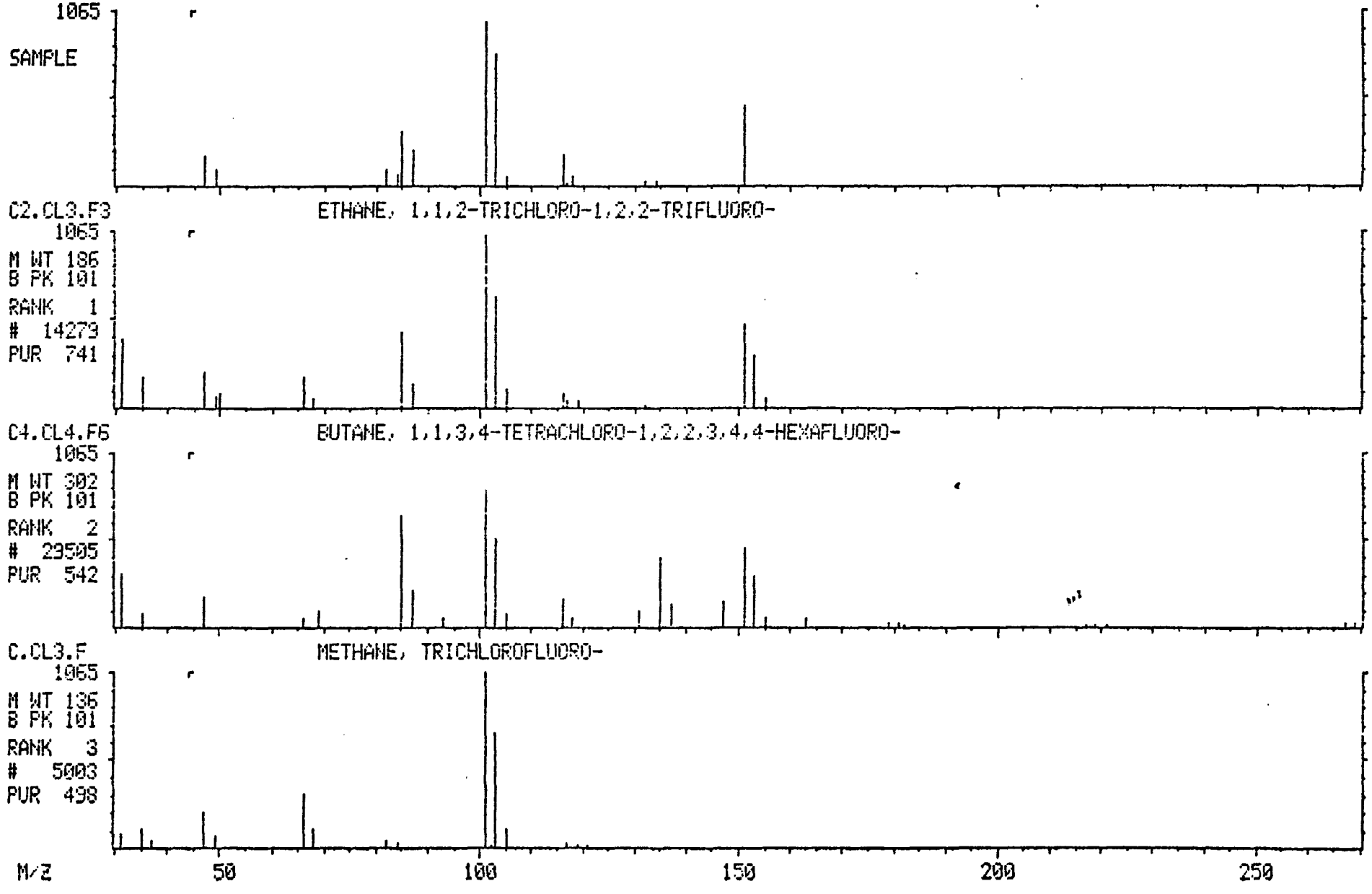
No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1			20.12		0.201		
2			18.75		0.187		
3			43.32		0.433		
4			45.53		0.455		
5			100.00		1.000		
6			63.30		0.633		

847520664

MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 23:00:00 + 2:23
SAMPLE: 017014 VO+15/E G2 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017014 # 191
CALI: V017014 # 3

BASE M/Z: 101
RIC: 752.



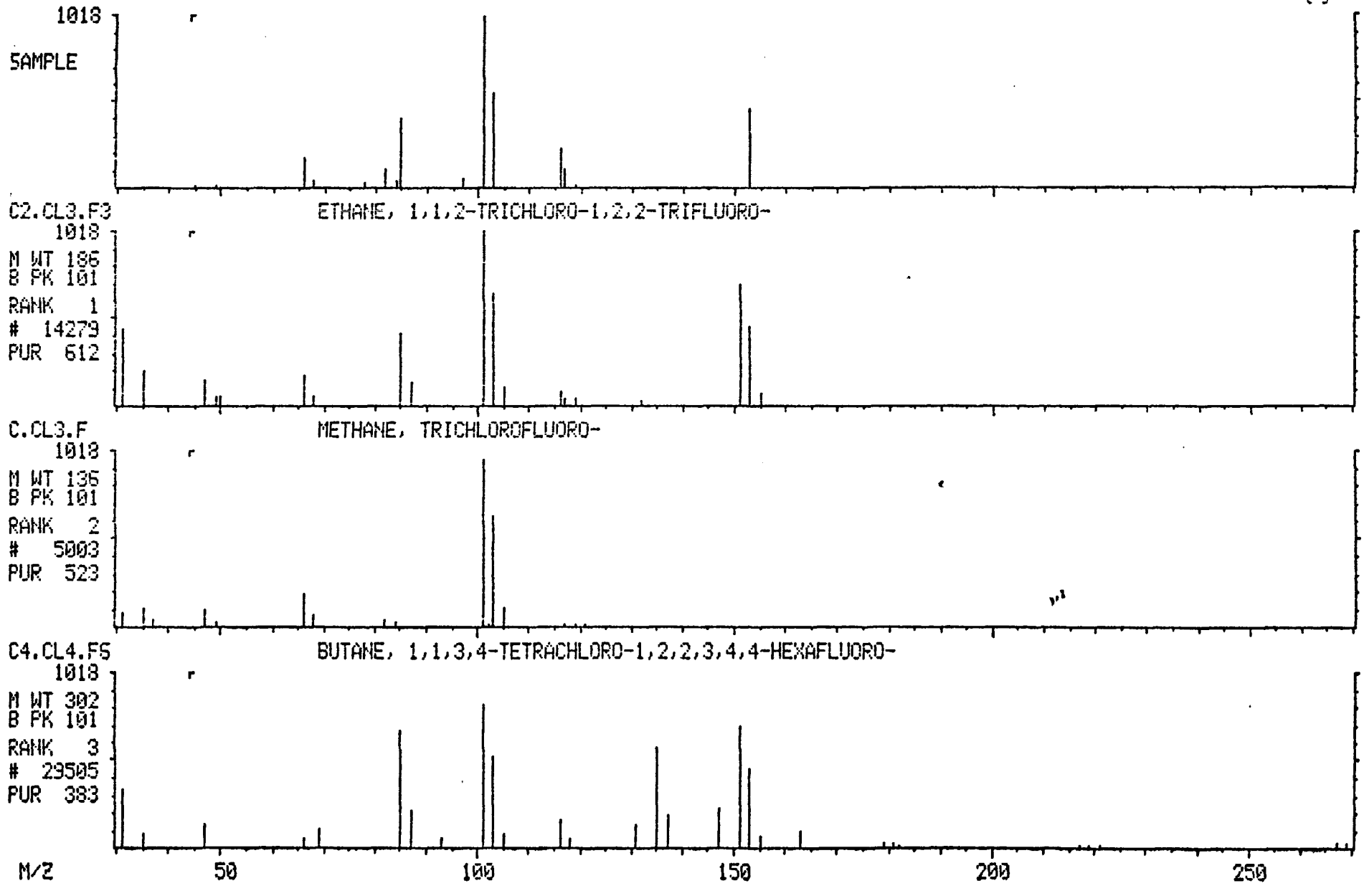
847520665

MID LIBRARY SEARCH (LIBRARYNB)
01/13/92 23:00:00 + 2:27
SAMPLE: 017014 V0+15/E G2 S DIL 1/500
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V017014 # 196
CALI: V017014 # 3

BASE M/Z: 101
RIC: 657.

847520666



Quantitation Report File: V017014B

Data: V017014B.TI
01/22/92 0:54:00
Sample: 017014 V0+15/E G2 S 5G RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520667

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	503	6:16	1	1.000	A BB	3448.	50.000 UG/L	23.51
2	114	736	9:11	2	1.000	A BB	37500.	50.000 UG/L	23.51
3	117	1246	15:32	3	1.000	A BB	17519.	50.000 UG/L	23.51
4	65	625	7:48	1	1.243	A BB	5602.	44.246 UG/L	20.81
5	98	996	12:25	2	1.353	A BB	18914.	42.023 UG/L	19.76
6	95	1468	18:18	3	1.178	A BB	11850.	44.506 UG/L	20.93
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	242	3:01	1	0.481	A VB	319.	5.970 UG/L	2.81
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1005	12:32	2	1.365	A BB	32.	0.060 UG/L	0.03
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	91	1284	16:01	3	1.030	A BB	2717.	4.739 UG/L	2.23
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

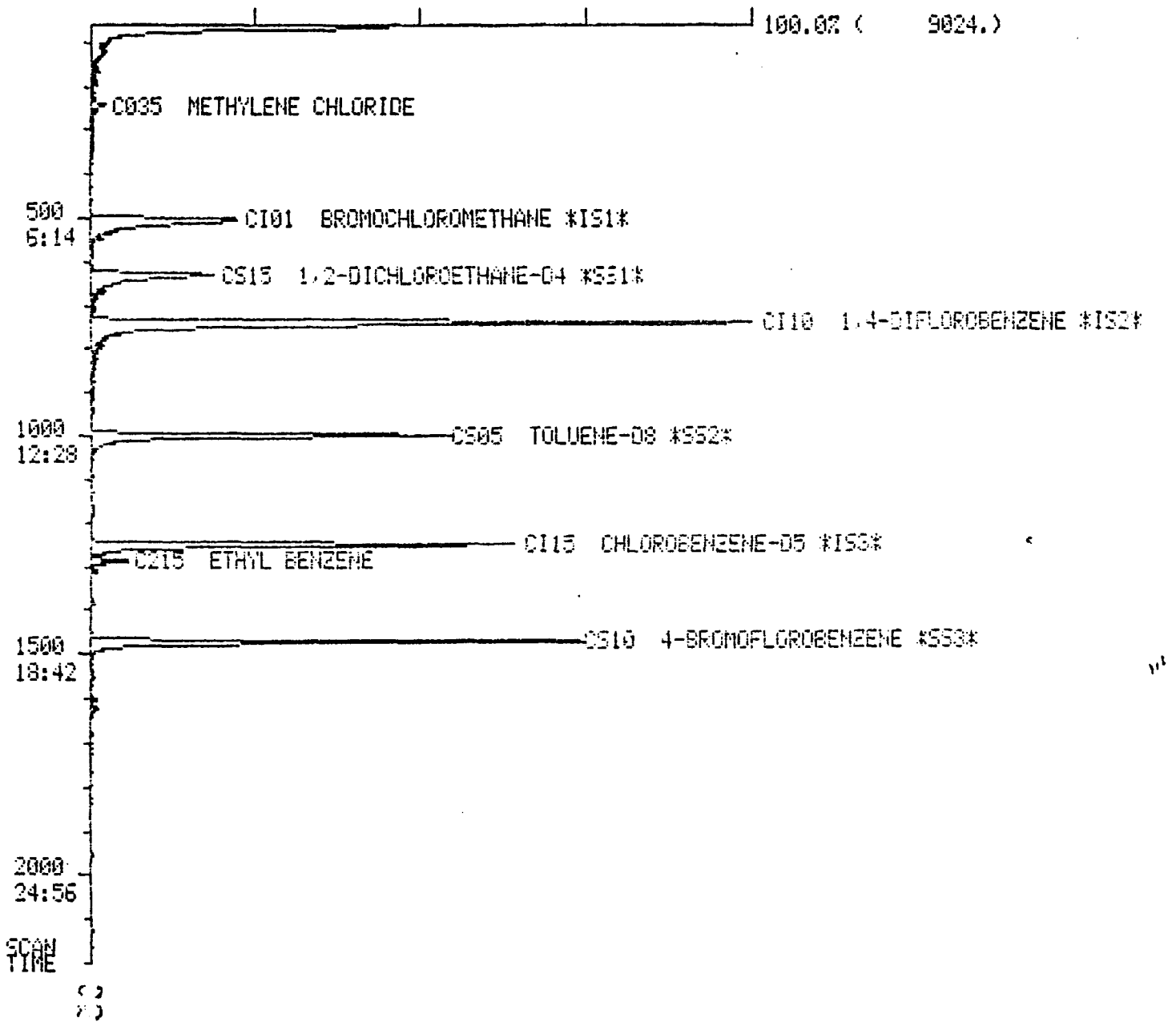
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:19	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:13	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:50	1.00	1.241	1.00	44.25	50.00	1.625	1.836	0.88
5	12:25	1.00	1.348	1.00	42.02	50.00	0.504	0.600	0.84
6	18:19	1.00	1.177	1.00	44.51	50.00	0.676	0.760	0.89
7	0:59		0.156						
8	1:05		0.172						
9	1:21		0.213						
10	1:26		0.227						

847520668

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:13		0.352						
12	2:59	1.01	0.472	1.02	5.97	50.00	0.093	0.775	0.12
13	3:26		0.543						
14	4:15		0.674						
15	6:47		1.075						
16	6:55		1.097						
17	7:20		1.162						
18	7:51		0.853						
19	8:02		0.871						
20	9:37		1.043						
21	10:04		1.092						
22	10:55		1.184						
23	11:57		1.296						
24	12:33	1.00	1.361	1.00	0.06	50.00	0.001	0.712	0.00
25	13:17		1.442						
26	13:36		1.476						
27	13:41		1.486						
28	14:21		1.558						
29	15:36		1.002						
30	16:01	1.00	1.030	1.00	4.74	50.00	0.155	1.636	0.09
31	16:19		1.049						
32	16:19		1.049						
33	17:09		1.102						
34	17:28		1.123						
35	18:54		1.215						
36	20:46		1.334						
37	21:00		1.349						
38	21:47		1.400						
39	3:35		0.569						
40	4:59		0.791						
41	3:46		0.597						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520669

DATA FROM FILE: V017014B SCANS 60 TO 2200 ACQUIRED: 01/22/92 0:54:00
CALI: V017014B #3
SAMPLE: 017014 V0+15/E G2 S 5G RERUN
CONDS.: IAL/624/DB624



847520670

Quantitation Report File: V017015

Data: V017015.TI
01/10/92 17:15:00
ample: 017015 V0+15/E F W 5ML
onds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE

847520671

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	515	6:25	1	1.000	A BB	12139.	50.000 UG/L	18.55
2	114	746	9:18	2	1.000	A BB	70929.	50.000 UG/L	18.55
3	117	1254	15:38	3	1.000	A BB	37721.	50.000 UG/L	18.55
4	65	639	7:58	1	1.241	A BB	19256.	42.503 UG/L	15.77
5	98	1002	12:30	2	1.343	A BB	49923.	54.412 UG/L	20.19
6	95	1477	18:25	3	1.178	A BB	24692.	46.144 UG/L	17.12
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1014	12:39	2	1.359	A BB	306.	0.301 UG/L	0.11
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	91	1314	16:23	3	1.048	A BB	129.	0.059 UG/L	0.02
32	91	1314	16:23	3	1.048	A BB	129.	0.059 UG/L	0.02
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								

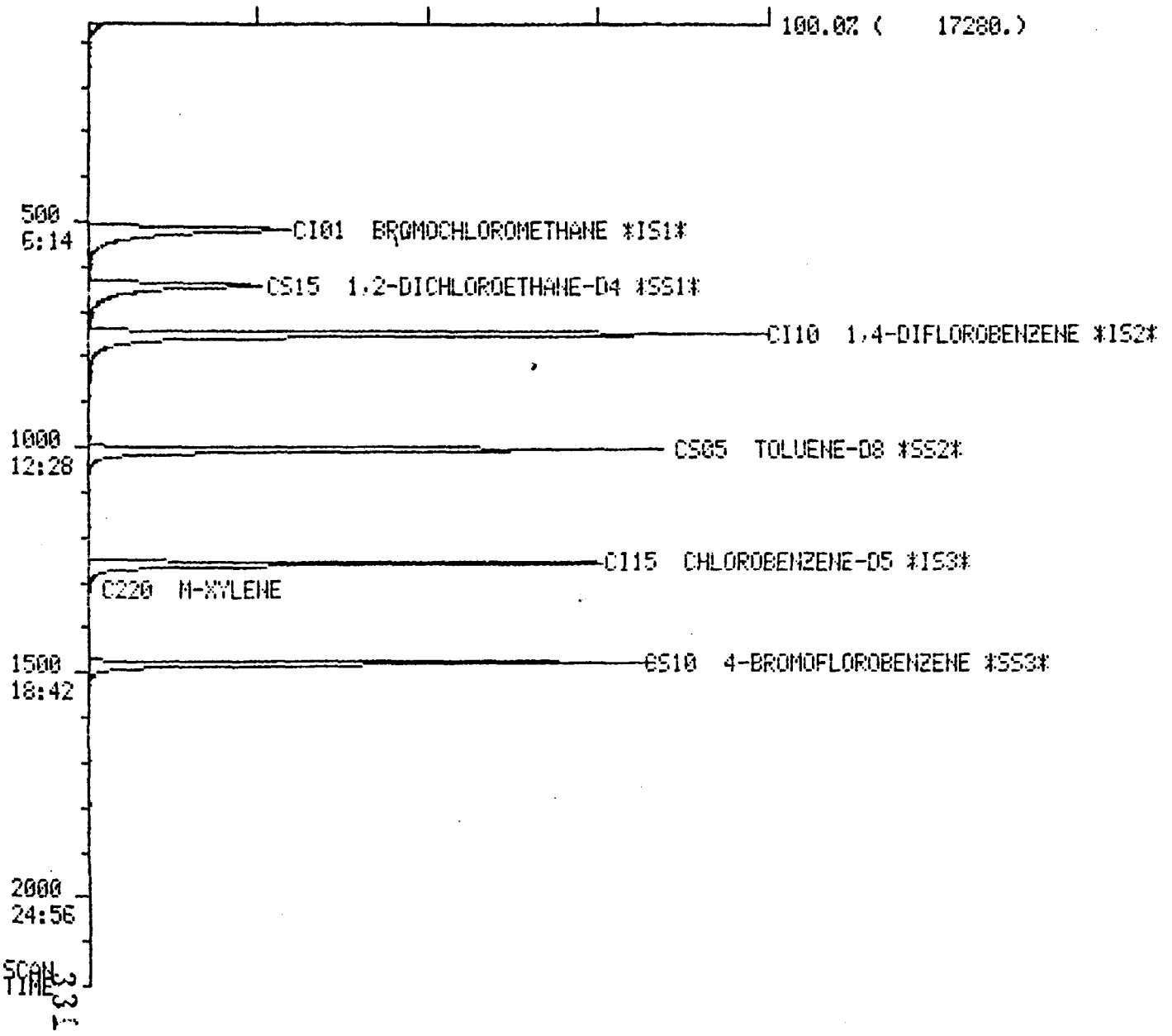
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:24	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:20	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:39	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	7:57	1.00	1.242	1.00	42.50	50.00	1.586	1.866	0.85
5	12:30	1.00	1.341	1.00	54.41	50.00	0.704	0.647	1.09
6	18:24	1.00	1.176	1.00	46.14	50.00	0.655	0.709	0.92
7	1:01		0.158						
8	1:07		0.173						
9	1:23		0.216						
10	1:29		0.232						

847520672

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
11	2:1[illegible]		0.361						
12	3:0[illegible]		0.480						
13	3:29		0.546						
14	4:18		0.673						
15	6:53		1.076						
16	7:01		1.097						
17	7:27		1.164						
18	7:58		0.854						
19	8:09		0.873						
20	9:44		1.044						
21	10:1[illegible]		1.090						
22	10:59		1.178						
23	12:03		1.293						
24	12:39	1.00	1.357	1.00	0.30	50.00	0.004	0.717	0.01
25	13:24		1.437						
26	13:42		1.469						
27	13:49		1.481						
28	14:26		1.548						
29	15:41		1.002						
30	16:06		1.029						
31	16:24	1.00	1.048	1.00	0.06	50.00	0.003	2.890	0.00
32	16:24	1.00	1.048	1.00	0.06	50.00	0.003	2.890	0.00
33	17:14		1.101						
34	17:33		1.121						
35	18:59		1.213						
36	20:51		1.332						
37	21:04		1.347						
38	21:52		1.398						
39	3:41		0.575						
40	5:13		0.791						
41	3:50		0.598						
42	6:11		0.974						
43	26:21		1.678						
44	12:43		1.342						

847520673

DATA FROM FILE: V017015 SCANS 60 TO 2200 ACQUIRED: 01/10/92 17:15:00
CALI: V017015 #3
SAMPLE: 017015 V0+15/E F W SML
CONDS.: IAL/624/DB624



847520674

Quantitation Report File: S017001A

ata: S017001A.TI
1/25/92 1:59:00
Sample: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.043
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520675

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	584	7:47	1	1.000	A BB	12321.	40.000 NG	8.83
2	136	851	11:21	2	1.000	A BB	22217.	40.000 NG	8.83
3	164	1261	16:49	3	1.000	A BB	15756.	40.000 NG	8.83
4	188	1608	21:26	4	1.000	A BV	28182.	40.000 NG	8.83
5	240	2246	29:57	5	1.000	A BV	33918.	40.000 NG	8.83
6	264	2567	34:14	6	1.000	A BB	21472.	40.000 NG	8.83
7	82	710	9:28	2	0.834	A BB	597.	1.855 NG	0.41
8	172	1112	14:50	3	0.882	A BV	1124.	1.938 NG	0.43
9	244	2004	26:43	5	0.892	A BV	6379.	5.523 NG	1.22
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	854	11:23	2	1.004	A BB	437.	0.713 NG	0.16
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	153	1267	16:54	3	1.005	A BB	775.	1.542 NG	0.34
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520676

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:54	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:25	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:51	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	29:59	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:16	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:26	1.00	0.826	1.01	1.85	50.00	0.021	0.579	0.04
8	14:51	1.00	0.881	1.00	1.94	50.00	0.057	1.473	0.04
9	26:46	1.00	0.892	1.00	5.52	50.00	0.150	1.362	0.11
10	5:10		0.655						
11	7:15		0.919						
12	19:23		1.150						
13	7:13		0.914						
14	7:17		0.922						
15	7:23		0.936						
16	7:28		0.946						
17	7:47		0.986						
18	7:56		1.005						
19	8:22		1.061						
20	8:24		1.064						
21	8:22		1.061						
22	8:49		1.117						
23	9:12		1.166						
	9:11		1.164						
	9:13		1.167						
26	9:29		0.831						
27	10:10		0.891						
28	10:24		0.911						
29	10:41		0.936						
30	10:56		0.958						
31	11:07		0.974						
32	11:20		0.993						
33	11:28	0.99	1.005	1.00	0.71	50.00	0.016	1.103	0.01
34	11:47		1.033						
35	12:06		1.061						
36	13:24		1.174						
37	13:35		1.190						
38	14:20		0.850						
39	14:37		0.867						
40	14:45		0.875						
41	15:04		0.894						
42	15:34		0.923						
43	16:21		0.970						
44	16:21		0.970						
45	16:54		1.002						
46	16:30		0.979						
47	16:58	1.00	1.006	1.00	1.54	50.00	0.039	1.276	0.03
48	17:14		1.022						
49	17:29		1.037						
50	17:39		1.047						

Quantitation Report File: S017001A

ata: S017001A.TI
01/25/92 1:59:00
Sample: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.043
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1613	21:30	4	1.003	A BV	20589.	26.836 NG	5.92
63	178	1625	21:40	4	1.011	A VB	5486.	7.557 NG	1.67
64	149	1785	23:48	4	1.110	A BB	403.	0.672 NG	0.15

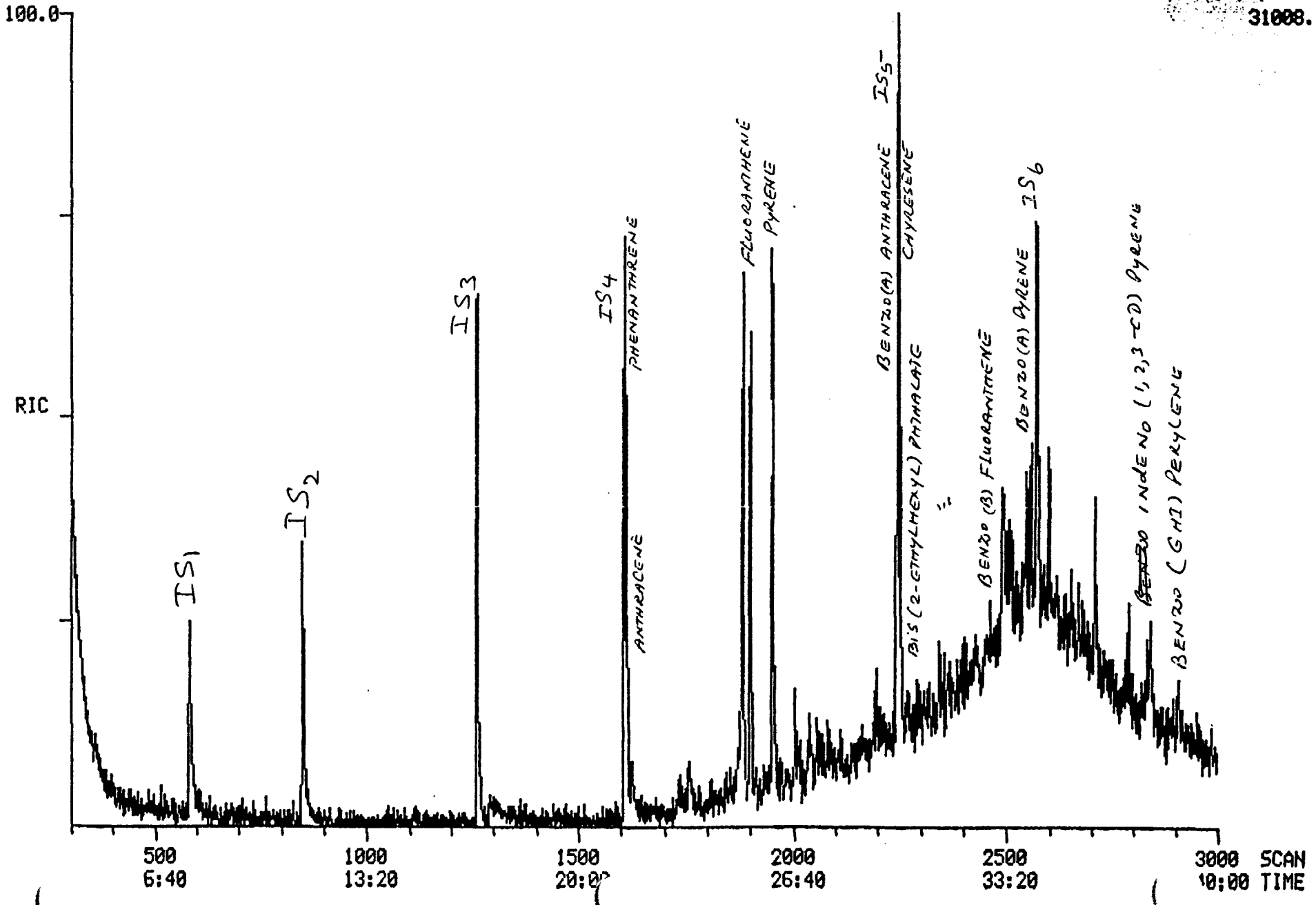
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1899	25:19	4	1.181	A BB	30772.	48.746	NG	10.76
66	NOT FOUND									
67	202	1950	26:00	5	0.868	A BV	32123.	23.386	NG	5.16
68	NOT FOUND									
69	228	2242	29:54	5	0.998	A BV	12510.	13.794	NG	3.04
70	NOT FOUND									
71	228	2252	30:02	5	1.003	A VB	11245.	11.955	NG	2.64
72	149	2291	30:33	5	1.020	A BB	1042.	3.030	NG	0.67
73	149	2428	32:22	6	0.946	A BB	239.	0.497	NG	0.11
74	252	2489	33:11	6	0.970	A BB	15404.	23.221	NG	5.13
75	252	2489	33:11	6	0.970	A BB	15404.	19.290	NG	4.26
76	252	2555	34:04	6	0.995	A VB	7588.	11.101	NG	2.45
77	276	2833	37:46	6	1.104	A BB	4275.	6.638	NG	1.47
78	NOT FOUND									
79	276	2908	38:46	6	1.133	A BB	3610.	5.241	NG	1.16

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:43		1.051						
52	18:34		1.101						
53	18:38		1.105						
54	18:40		1.108						
55	18:50		1.118						
56	18:59		0.884						
57	19:06		0.889						
58	19:10		0.892						
59	20:10		0.939						
60	20:34		0.957						
61	21:10		0.986						
62	21:34	1.00	1.004	1.00	26.84	50.00	0.584	1.089	0.54
63	21:42	1.00	1.010	1.00	7.56	50.00	0.156	1.030	0.15
64	23:50	1.00	1.110	1.00	0.67	50.00	0.011	0.851	0.01
65	25:22	1.00	1.181	1.00	48.75	50.00	0.874	0.896	0.97
66	26:02		0.865						
67	26:02	1.00	0.868	1.00	23.39	50.00	0.758	1.620	0.47
68	28:34		0.952						
69	29:57	1.00	0.999	1.00	13.79	50.00	0.295	1.070	0.28
70	30:01		1.001						
71	30:04	1.00	1.003	1.00	11.96	50.00	0.265	1.109	0.24
72	30:36	1.00	1.020	1.00	3.03	50.00	0.025	0.406	0.06
73	32:28	1.00	0.947	1.00	0.50	50.00	0.009	0.896	0.01
74	33:14	1.00	0.970	1.00	23.22	50.00	0.574	1.236	0.46
75	33:18	1.00	0.972	1.00	19.29	50.00	0.574	1.488	0.39
76	34:06	1.00	0.995	1.00	11.10	50.00	0.283	1.273	0.22
77	37:50	1.00	1.104	1.00	6.64	50.00	0.159	1.200	0.13
78	37:57		1.107						
79	38:51	1.00	1.134	1.00	5.24	50.00	0.135	1.283	0.10

847520679

847520680

RIC DATA: S017001A #1 SCANS 300 TO 3000
01/25/92 1:59:00 CALI: S017001A #3
SAMPLE: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



Quantitation Report File: SSRT01

ata: S017001A.TI
1/25/92 1:59:00
Sample: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.043
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN

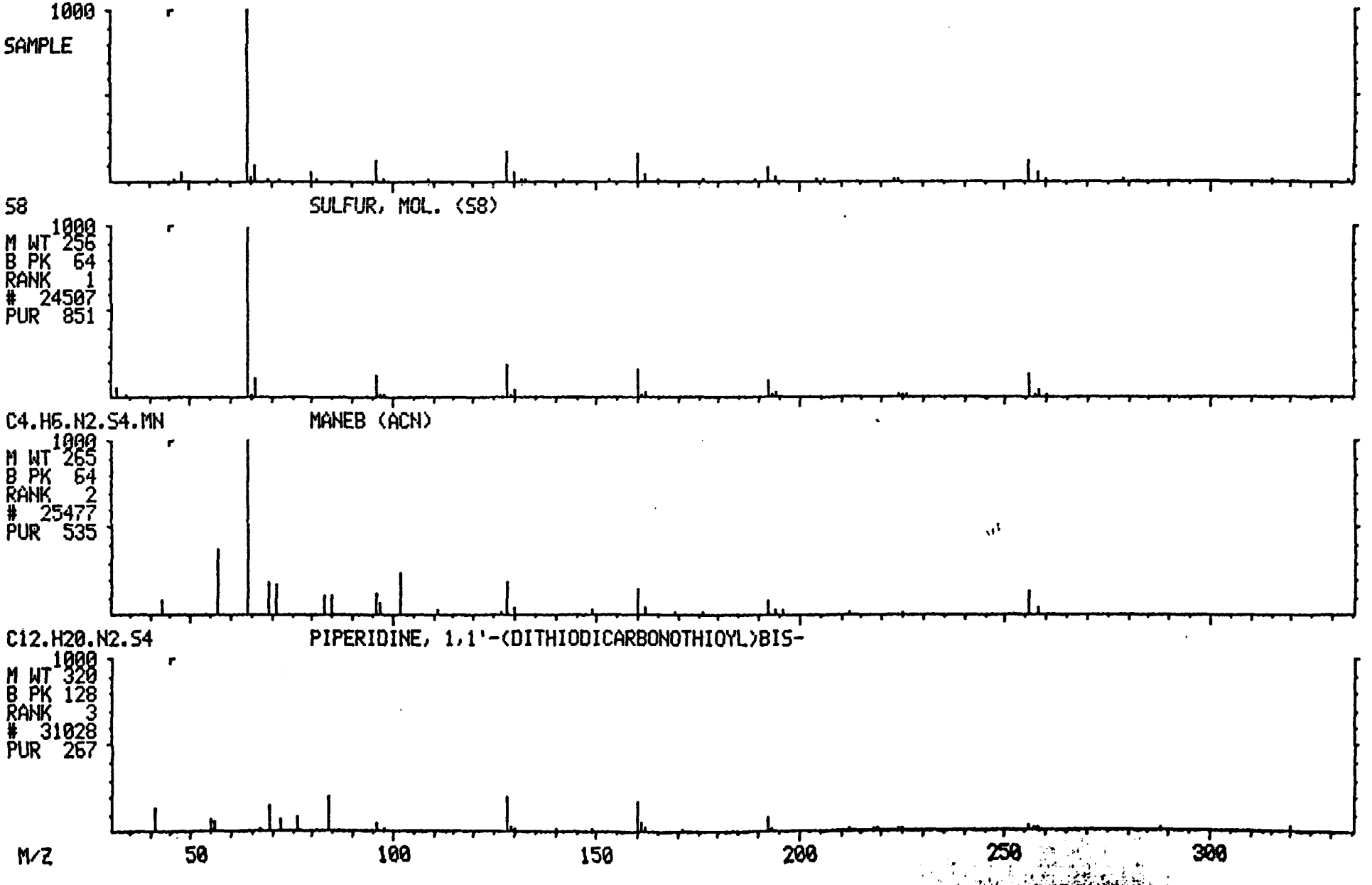
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1609	21:27	6	0.716	A BV	75401.	54.320	9.04
2	RIC	1613	21:30	6	0.718	A VB	51037.	36.768	6.12
3	RIC	1883	25:06	6	0.838	A BB	92157.	66.391 -48.9	11.05
4	RIC	1899	25:19	6	0.846	A BB	74658.	53.785	8.95
5	RIC	1950	26:00	6	0.868	A BB	90809.	65.420	10.89
6	RIC	2246	29:57	6	1.000	A BV	138809.	100.000	16.65
7	RIC	2252	30:02	6	1.003	A VB	32993.	23.768	3.96
8	RIC	2489	33:11	6	1.108	A BB	95088.	68.503	11.40
9	RIC	2545	33:56	6	1.133	A BB	35280.	25.416 -14.8	4.23
10	RIC	2555	34:04	6	1.138	A BB	24248.	17.469	2.91
11	RIC	2567	34:14	6	1.143	A BB	95064.	68.485	11.40
12	RIC	2597	34:38	6	1.156	A BB	28308.	20.393 -11.9	3.39

847520681

847520682

LIBRARY SEARCH
01/25/92 1:59:00 + 25:06
SAMPLE: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

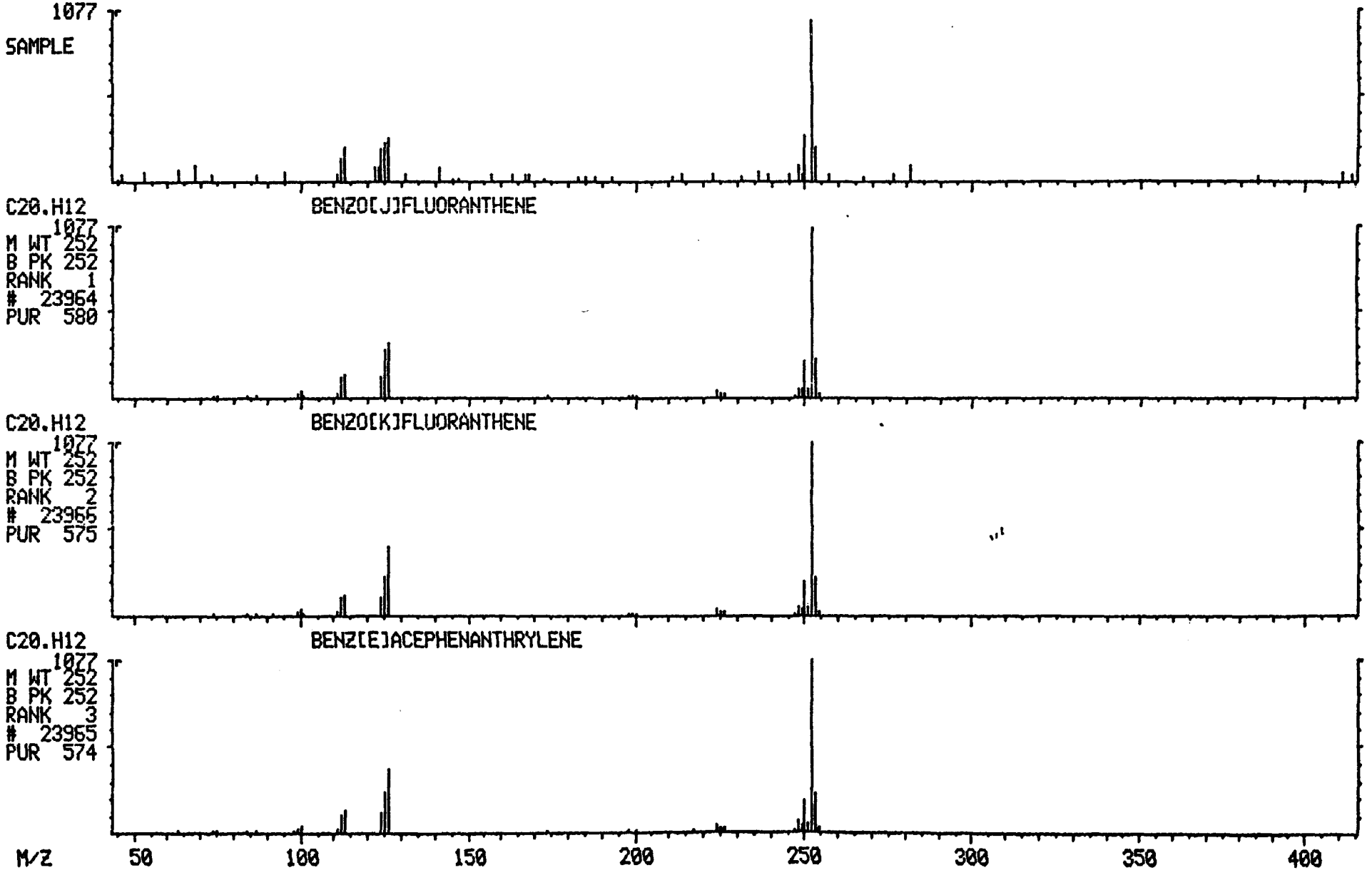
DATA: S017001A #1883 BASE M/Z: 64
CALI: S017001A # 3 RIC: 17951.



847520683

LIBRARY SEARCH
01/25/92 1:59:00 + 33:56
SAMPLE: 017001 BN+15/E A-1 RE DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017001A #2545 BASE M/Z: 252
CALI: S017001A # 3 RIC: 5343.



Quantitation Report File: S017002

ata: S017002.TE
01/23/92 22:19:00
Sample: 027002 BN+15/E A-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

No	Name
8	C260 2,4-DINITROPHENOL
9	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	589	7:51	1	1.000	A BB	25758.	40.000 NG	16.49
2	136	858	11:26	2	1.000	A BB	56611.	40.000 NG	16.49
3	164	1269	16:55	3	1.000	A BB	28975.	40.000 NG	16.49
4	188	1618	21:34	4	1.000	A BB	37574.	40.000 NG	16.49
5	240	2256	30:05	5	1.000	A BV	30981.	40.000 NG	16.49
6	264	2578	34:22	6	1.000	A BV	20470.	40.000 NG	16.49
7	NOT FOUND								
8	NOT FOUND								
9	244	2014	26:51	5	0.893	A BB	1398.	1.110 NG	0.46
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	45	651	8:41	1	1.105	A VB	669.	0.708 NG	0.29
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520685

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29		0.826						
8	14:56		0.882						
9	26:52	1.00	0.893	1.00	1.11	50.00	0.036	1.627	0.02
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51	0.98	1.116	0.99	0.71	50.00	0.021	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32		1.005						
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520686

847520687

uantitation Report File: S017002

:a: S017002.TI
1/23/92 22:19:00
ample: 027002 BN+15/E A-2 DIL 1/20 S 1UL
onds.: IAL DB-5/F4021
ormula: Instrument: FINN Weight: 0.042
ubmitted by: JB Analyst: JS Acct. No.:

MOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
esp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1622	21:38	4	1.002	A BB	304.	0.303 NG	0.12
63	NOT FOUND								
64	149	1794	23:55	4	1.109	A BB	262.	0.238 NG	0.10

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	228	2262	30:10	5	1.003	A BB	468.	0.524 NG	0.22
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	0.30	50.00	0.006	1.068	0.01
63	21:48		1.011						
64	23:56	1.00	1.109	1.00	0.24	50.00	0.006	1.171	0.00
65	25:27		1.180						
66	26:02		0.865						
67	26:09		0.869						
68	28:40		0.953						
69	30:02		0.998						
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	0.52	50.00	0.012	1.153	0.01
72	30:42		1.020						
73	32:34		0.948						
74	33:20		0.970						
75	33:24		0.972						
76	34:13		0.995						
77	38:00		1.106						
78	38:06		1.109						
79	39:02		1.136						

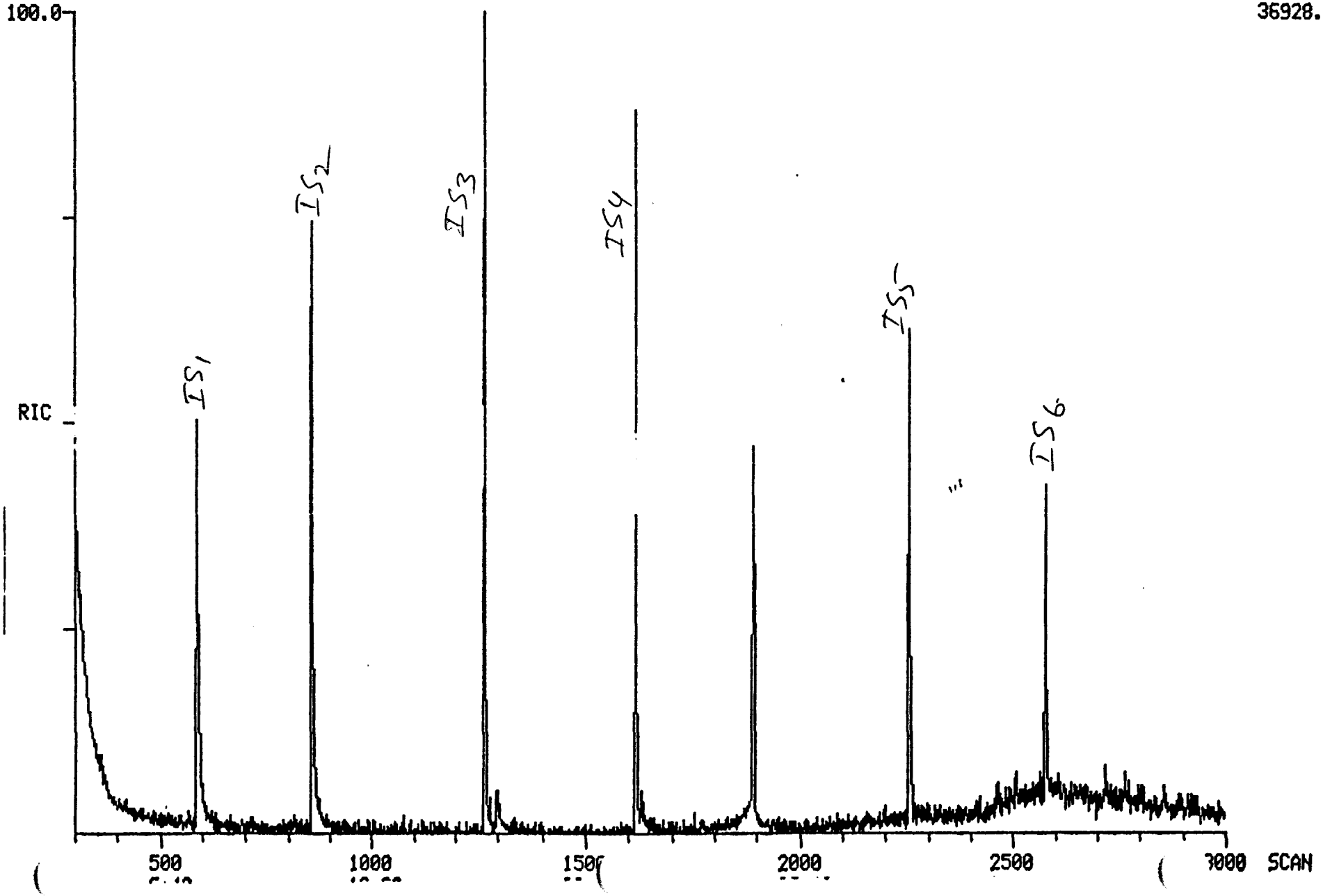
847520688

847520689

RIC
01/23/92 22:19:00
SAMPLE: 027002 BN+15/E A-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017002 #1
CALI: S017002 #3

SCANS 300 TO 3000



Quantitation Report File: SSRT01

ata: S017002.TI
)1/23/92 22:19:00
Sample: 027002 BN+15/E A-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1269	16:55	1	1.000	A BB	141146.	100.000	27.65
2	RIC	1298	17:18	1	1.023	A BB	12131.	8.595	2.38
3	RIC	1618	21:34	1	1.275	A BB	114296.	80.977	22.39
4	RIC	1893	25:14	1	1.492	A BB	86196.	61.069	16.89
5	RIC	2256	30:05	1	1.778	A BB	94983.	67.294	18.61
6	RIC	2578	34:22	1	2.032	A BB	61648.	43.677	12.08

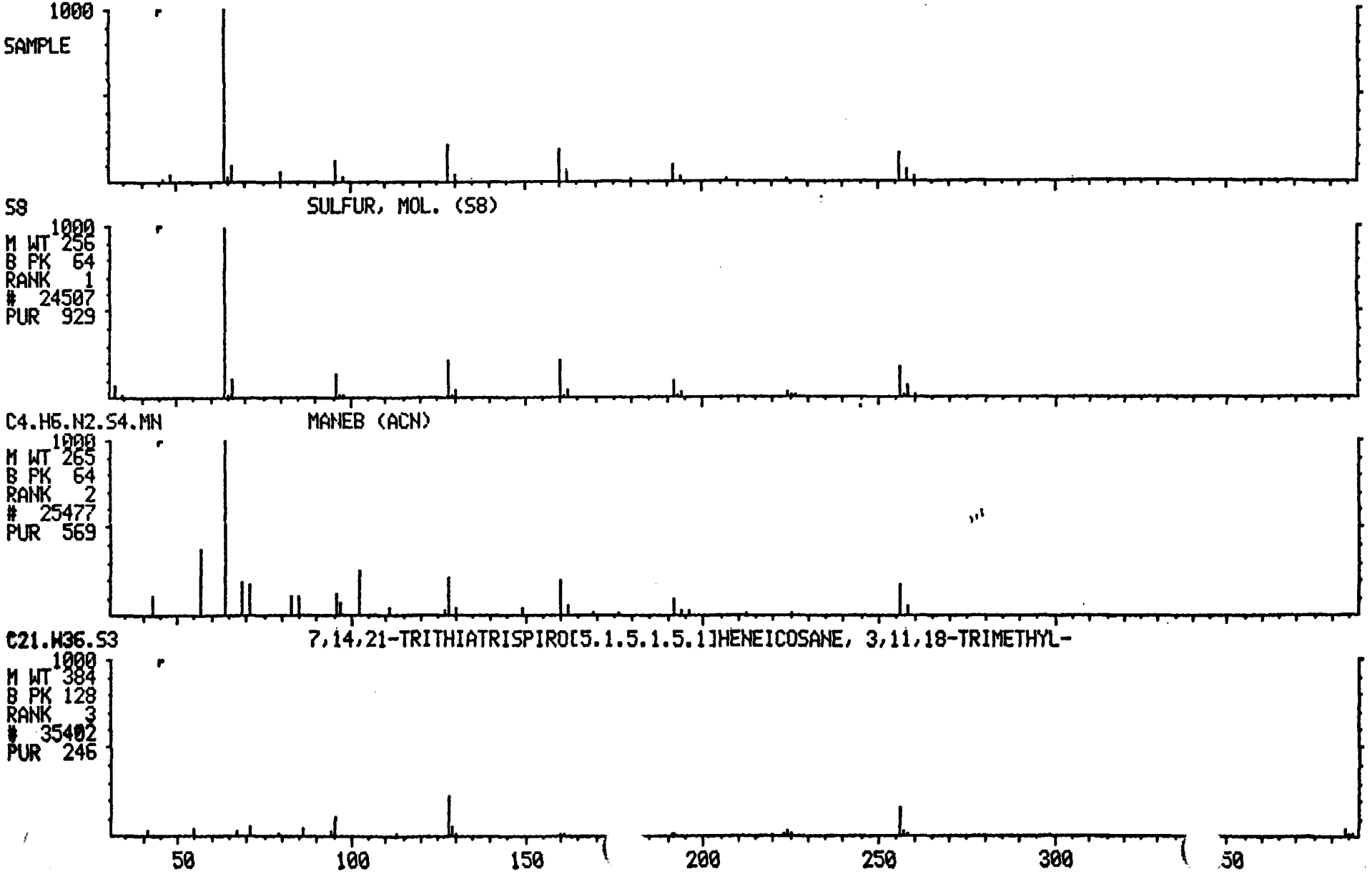
847520690

847520691

LIBRARY SEARCH
01/23/92 22:19:00 + 25:14
SAMPLE: 027002 BN+15/E A-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017002 #1893
CALI: S017002 # 3

BASE M/Z: 64
RIC: 16319.



Quantitation Report File: S017003A

Data: S017003A.TI
01/23/92 21:32:00
Sample: 017003 BN+15/E B-1 RE STR. S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520692

No	Name
18	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	589	7:51	1	1.000	A BV	25862.	40.000	NG	5.62
2	136	858	11:26	2	1.000	A BB	48573.	40.000	NG	5.62
3	164	1270	16:56	3	1.000	A BB	22875.	40.000	NG	5.62
4	188	1618	21:34	4	1.000	A BV	33634.	40.000	NG	5.62
5	240	2258	30:06	5	1.000	A BB	32334.	40.000	NG	5.62
6	264	2580	34:24	6	1.000	A BB	20305.	40.000	NG	5.62
7	82	707	9:26	2	0.824	A BB	39330.	56.543	NG	7.95
8	172	1119	14:55	3	0.881	A BB	57434.	69.861	NG	9.82
9	244	2015	26:52	5	0.892	A VV	64580.	49.118	NG	6.91
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	45	663	8:50	1	1.126	A BB	274.	0.289	NG	0.04
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	107	803	10:42	2	0.936	A BB	223.	0.558	NG	0.08
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	128	863	11:30	2	1.006	A BB	2384.	1.744	NG	0.25
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	153	1276	17:01	3	1.005	A BB	1797.	2.602	NG	0.37
48	NOT FOUND									
49	168	1317	17:34	3	1.037	A BB	1542.	1.624	NG	0.23
50	NOT FOUND									

847520693

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	0.99	0.826	1.00	56.54	50.00	0.648	0.573	1.13
8	14:56	1.00	0.882	1.00	69.86	50.00	2.009	1.438	1.40
9	26:52	1.00	0.893	1.00	49.12	50.00	1.598	1.627	0.98
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51	1.00	1.116	1.01	0.29	50.00	0.008	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44	1.00	0.935	1.00	0.56	50.00	0.004	0.329	0.01
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	1.74	50.00	0.039	1.125	0.03
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03	1.00	1.007	1.00	2.60	50.00	0.063	1.207	0.05
48	17:17		1.020						
49	17:34	1.00	1.037	1.00	1.62	50.00	0.054	1.660	0.03
50	17:42		1.045						

847520695

Quantitation Report File: S017003A

ta: S017003A.TI
1/23/92 21:32:00
Sample: 017003 BN+15/E B-1 RE STR. S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	166	1398	18:38	3	1.101	A BB	1334.	1.765 NG	0.25
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1623	21:38	4	1.003	A BV	38866.	43.277 NG	6.08
63	178	1634	21:47	4	1.010	A VV	9351.	10.738 NG	1.51
64	149	1795	23:56	4	1.109	A BB	2453.	2.491 NG	0.35

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1910	25:28	4	1.180	A VB	52266.	67.992	NG	9.56
66	NOT FOUND									
67	202	1961	26:09	5	0.868	A BB	56425.	35.846	NG	5.04
68	149	2149	28:39	5	0.952	A BB	303.	0.964	NG	0.14
69	228	2254	30:03	5	0.998	A BV	21673.	22.458	NG	3.16
70	NOT FOUND									
71	228	2263	30:10	5	1.002	A VB	22000.	23.602	NG	3.32
72	149	2302	30:42	5	1.019	A VV	5512.	12.907	NG	1.81
73	NOT FOUND									
74	252	2501	33:21	6	0.969	A BV	11971.	16.460	NG	2.31
75	252	2505	33:24	6	0.971	A VB	9820.	13.564	NG	1.91
76	252	2567	34:14	6	0.995	A BB	11440.	17.518	NG	2.46
77	276	2851	38:01	6	1.105	A BV	5445.	8.530	NG	1.20
78	278	2859	38:07	6	1.108	A BB	1717.	3.006	NG	0.42
79	276	2927	39:02	6	1.134	A BB	5563.	8.057	NG	1.13

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39	1.00	1.102	1.00	1.77	50.00	0.047	1.322	0.04
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	43.28	50.00	0.924	1.068	0.87
63	21:48	1.00	1.011	1.00	10.74	50.00	0.222	1.036	0.21
64	23:56	1.00	1.109	1.00	2.49	50.00	0.058	1.171	0.05
65	25:27	1.00	1.180	1.00	67.99	50.00	1.243	0.914	1.36
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	35.85	50.00	1.396	1.947	0.72
68	28:40	1.00	0.953	1.00	0.96	50.00	0.007	0.389	0.02
69	30:02	1.00	0.998	1.00	22.46	50.00	0.536	1.194	0.45
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	23.60	50.00	0.544	1.153	0.47
72	30:42	1.00	1.020	1.00	12.91	50.00	0.136	0.528	0.26
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	16.46	50.00	0.472	1.433	0.33
75	33:24	1.00	0.972	1.00	13.56	50.00	0.387	1.426	0.27
76	34:13	1.00	0.995	1.00	17.52	50.00	0.451	1.286	0.35
77	38:00	1.00	1.106	1.00	8.53	50.00	0.215	1.257	0.17
78	38:06	1.00	1.109	1.00	3.01	50.00	0.068	1.125	0.06
79	39:02	1.00	1.136	1.00	8.06	50.00	0.219	1.360	0.16

847520696

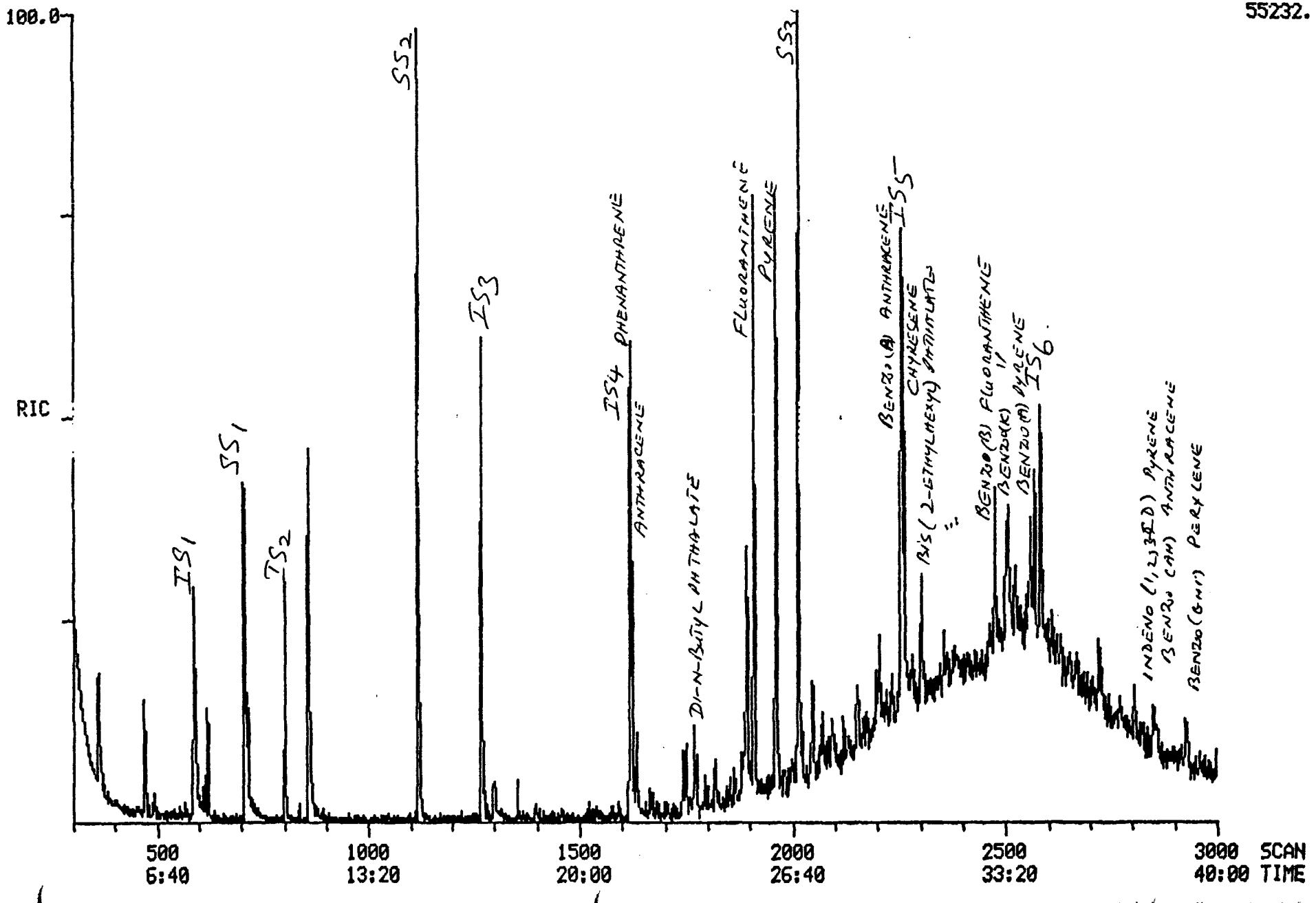
847520697

RIC
01/23/92 21:32:00
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017003A #1
CALI: S017003A #3

SCANS 300 TO 3000

55232.



847520698

Quantitation Report File: SSRT01

Data: S017003A.TI
01/23/92 21:32:00
Sample: 017003 BN+15/E B-1 RE STR. S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN
21	UNKNOWN
22	UNKNOWN
23	UNKNOWN
24	UNKNOWN
25	UNKNOWN

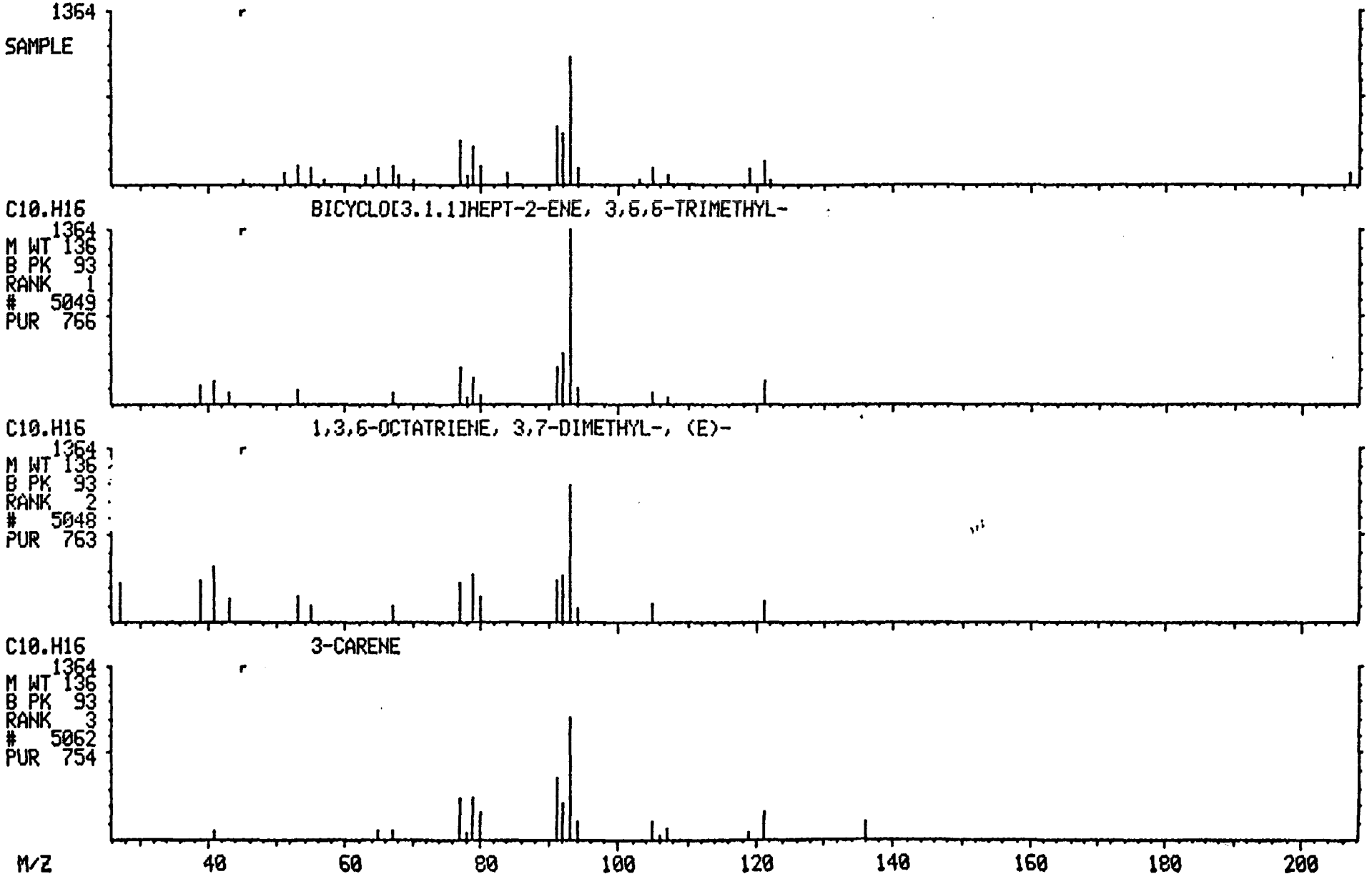
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	361 VIC	4:49	16	0.179	A BB	38120.	20.107 — ethyl(?)	1.82
2	RIC	470	6:16	16	0.233	A BB	34038.	17.954 — 15.6	1.62
3	RIC	589	7:51	16	0.292	A BB	87370.	46.084	4.16
4	RIC	621	8:17	16	0.308	A BB	21993.	11.600 — 10.1	1.05
5	RIC	707	9:26	16	0.351	A BV	104101.	54.909	4.96
6	RIC	715	9:32	16	0.355	A VB	31087.	16.397 — 14.2	1.48
7	RIC	803	10:42	16	0.398	A BB	38479.	20.296 — 13.9	1.83
8	RIC	858	11:26	16	0.426	A BB	110842.	58.465	5.28
9	RIC	1119	14:55	16	0.555	A BB	181549.	95.760	8.65
10	RIC	1270	16:56	16	0.630	A BB	118168.	62.329	5.63
11	RIC	1618	21:34	16	0.803	A BV	96355.	50.823	4.59
12	RIC	1623	21:38	16	0.805	A VB	94846.	50.027	4.52
13	RIC	1894	25:15	16	0.939	A BB	79092.	41.718 — 32.8	3.77
14	RIC	1910	25:28	16	0.947	A BB	126936.	66.954	6.05
15	RIC	1962	26:10	16	0.973	A BB	172411.	90.940	8.21
16	RIC	2016	26:53	16	1.000	A BB	189588.	100.000	9.03
17	RIC	2258	30:06	16	1.120	A BV	172912.	91.204	8.24
18	RIC	2263	30:10	16	1.123	A VB	71552.	37.741	3.41

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
9	RIC	2303	30:42	16	1.142	A BB	36616.	19.313	1.74
20	RIC	2475	33:00	16	1.228	A BB	47504.	25.056-25.8	2.26
21	RIC	2501	33:21	16	1.241	A BV	37885.	19.983	1.81
22	RIC	2505	33:24	16	1.243	A VB	38931.	20.534	1.85
23	RIC	2556	34:05	16	1.268	A BV	58240.	30.719-31.6	2.77
24	RIC	2567	34:14	16	1.273	A VB	36496.	19.250	1.74
25	RIC	2580	34:24	16	1.280	A BB	73776.	38.914	3.52

847520700

LIBRARY SEARCH
01/23/92 21:32:00 + 6:16
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

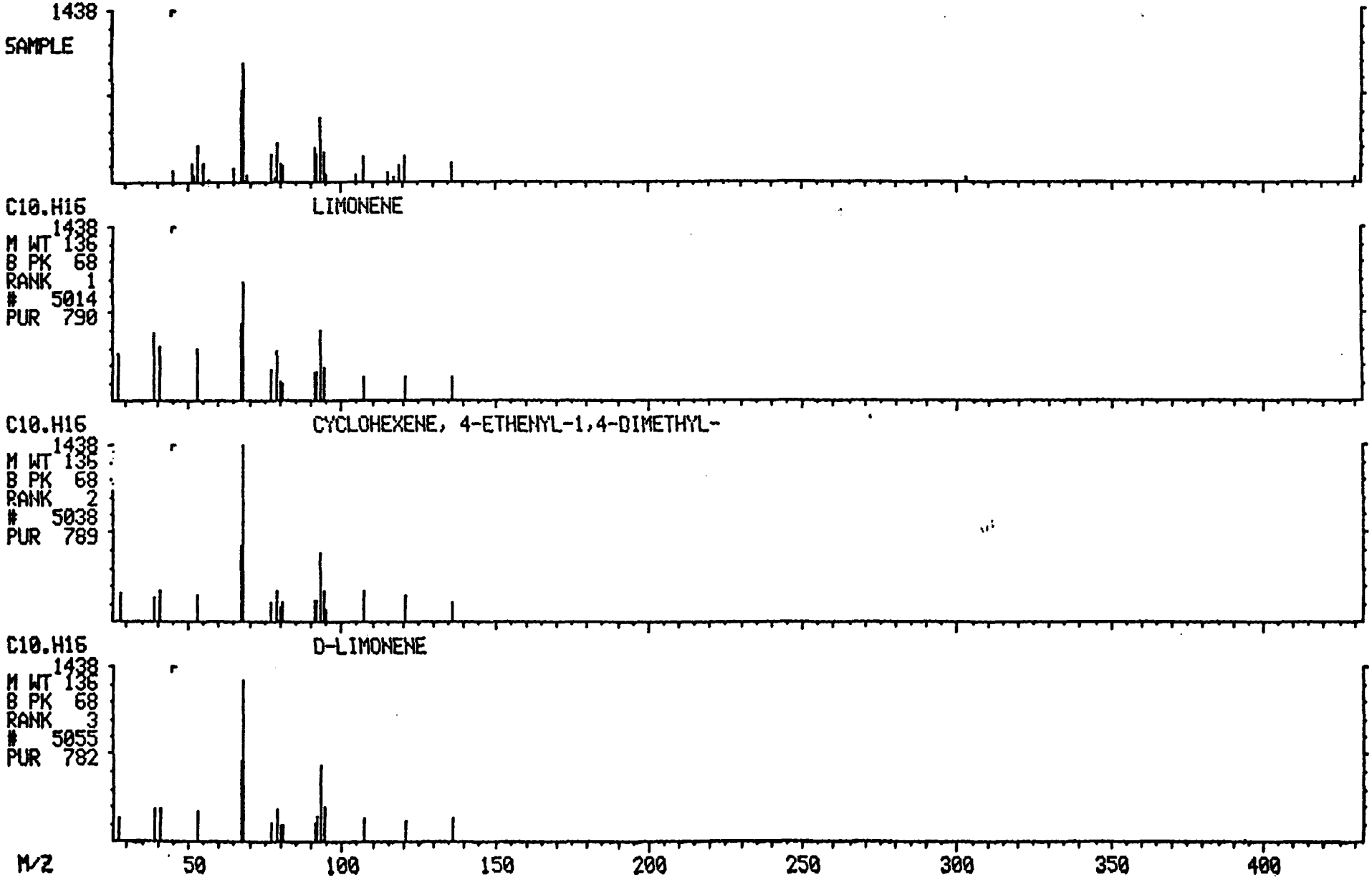
DATA: S017003A # 470 BASE M/Z: 93
CALI: S017003A # 3 RIC: 6663.



8475207O1

LIBRARY SEARCH
01/23/92 21:32:00 + 8:17
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017003A # 621 BASE M/Z: 68
CALI: S017003A # 3 RIC: 6743.

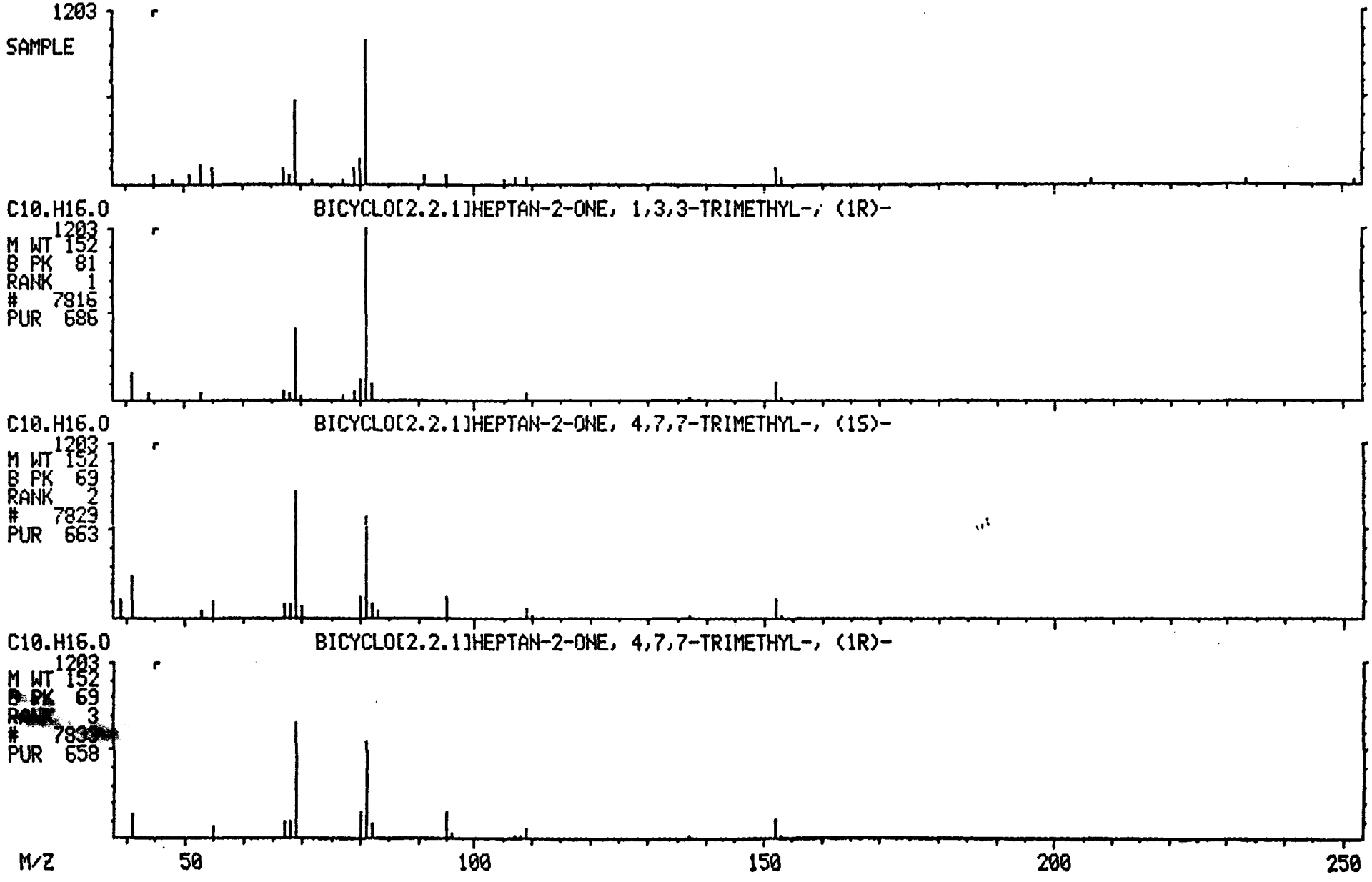


8475207O2

LIBRARY SEARCH
01/23/92 21:32:00 + 9:32
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: 5017003A # 715
CALI: 5017003A # 3

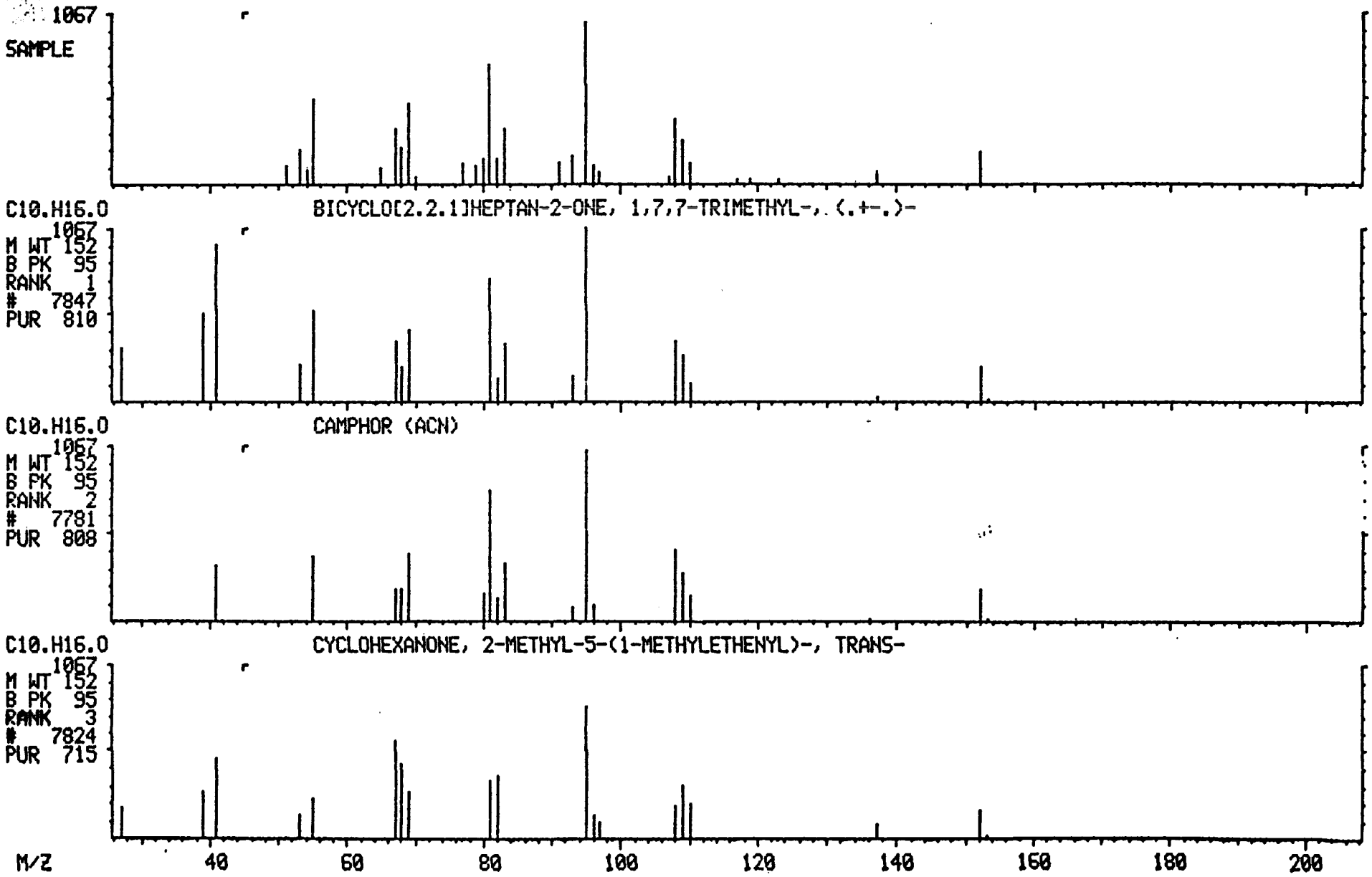
BASE M/Z: 81
RIC: 4487.



847520703

LIBRARY SEARCH
01/23/92 21:32:00 + 10:42
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017003A # 803 BASE M/Z: 95
CALI: S017003A # 3 RIC: 13951.



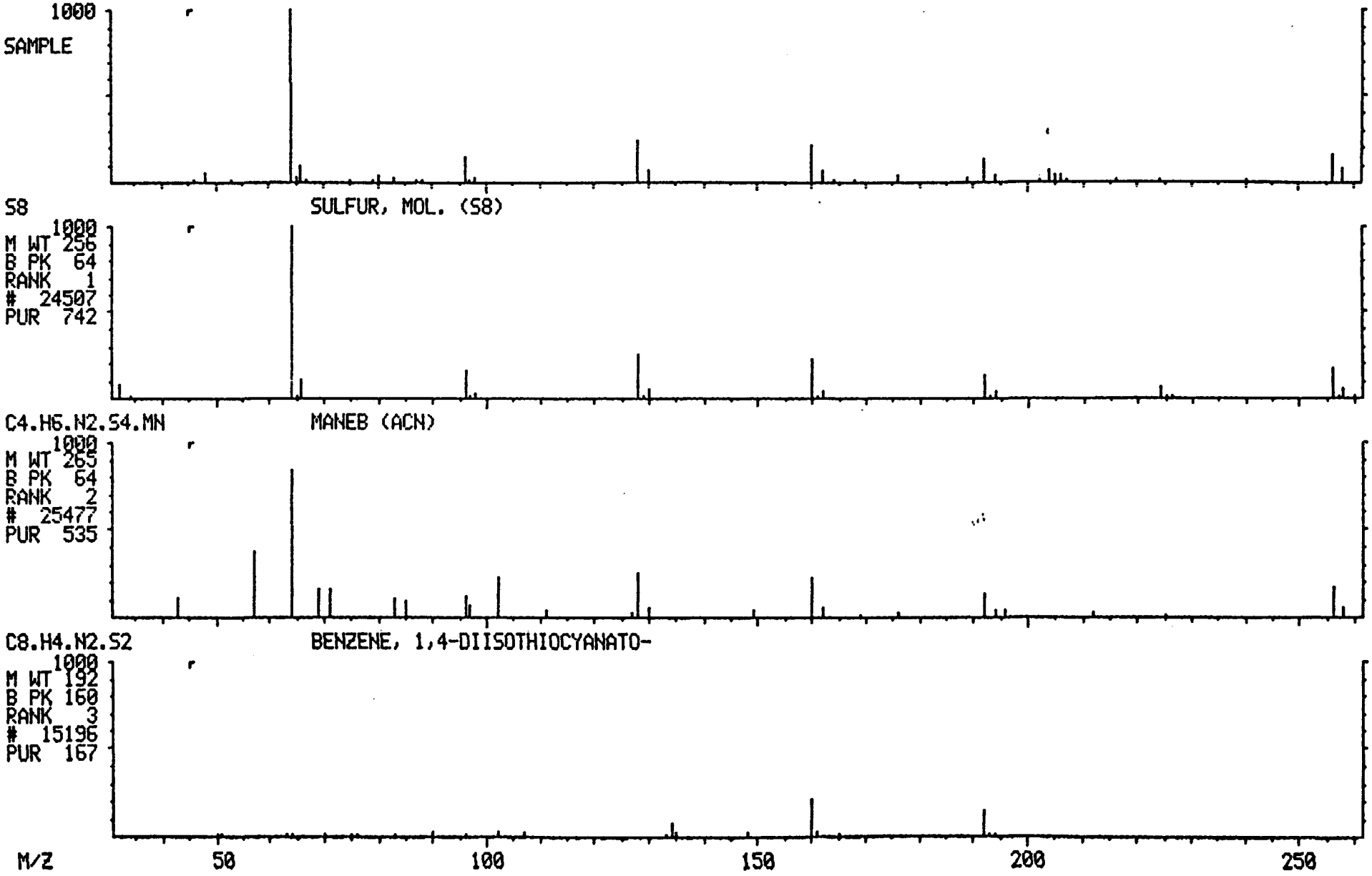
847520704

LIBRARY SEARCH
01/23/92 21:32:00 + 25:15
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017003A #1894
CALI: S017003A # 3

BASE M/Z: 64
RIC: 14735.

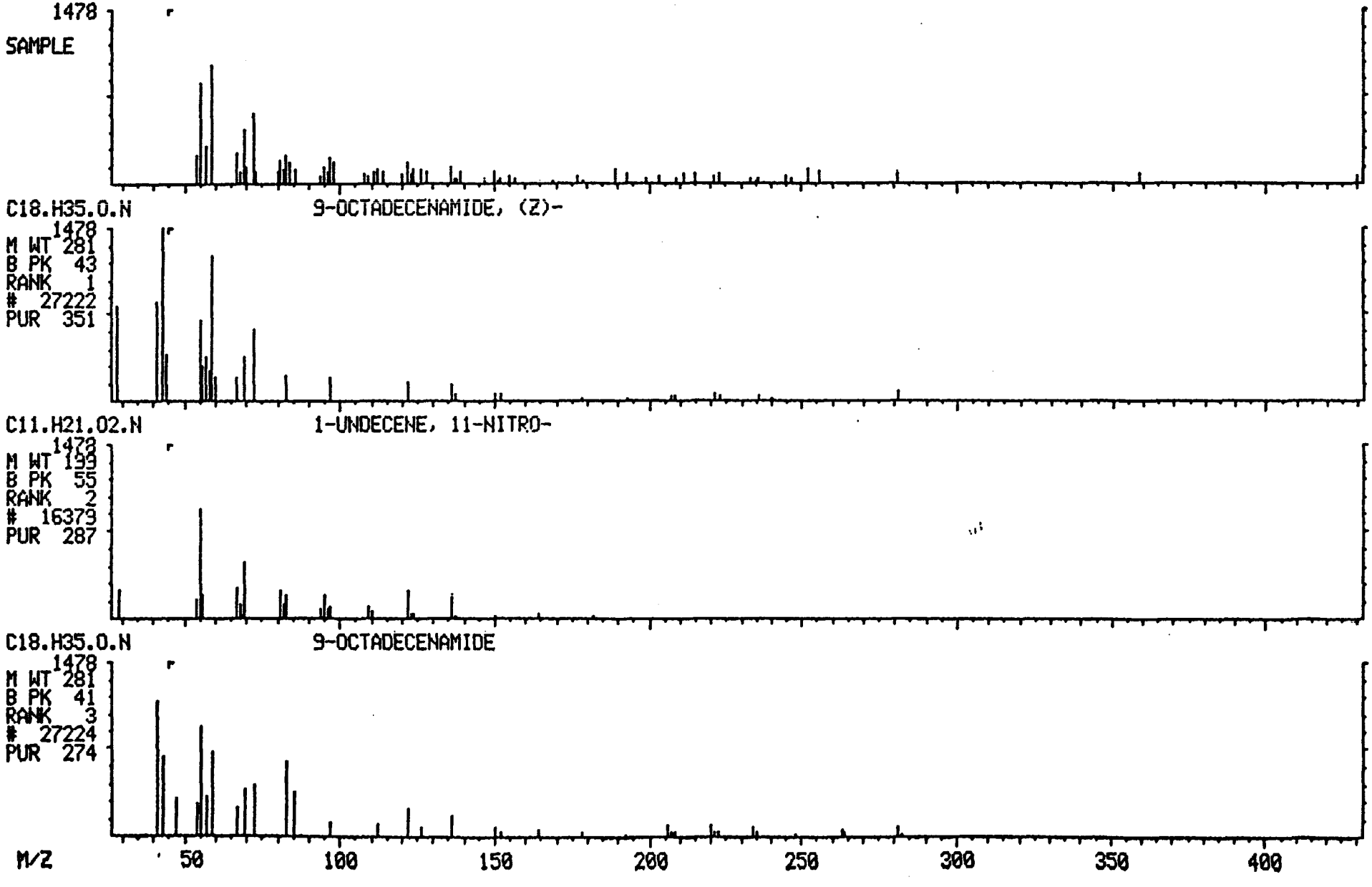
361



8475207705

LIBRARY SEARCH
01/23/92 21:32:00 + 33:00
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017003A #2475 BASE M/Z: 59
CALI: S017003A # 3 RIC: 9439.

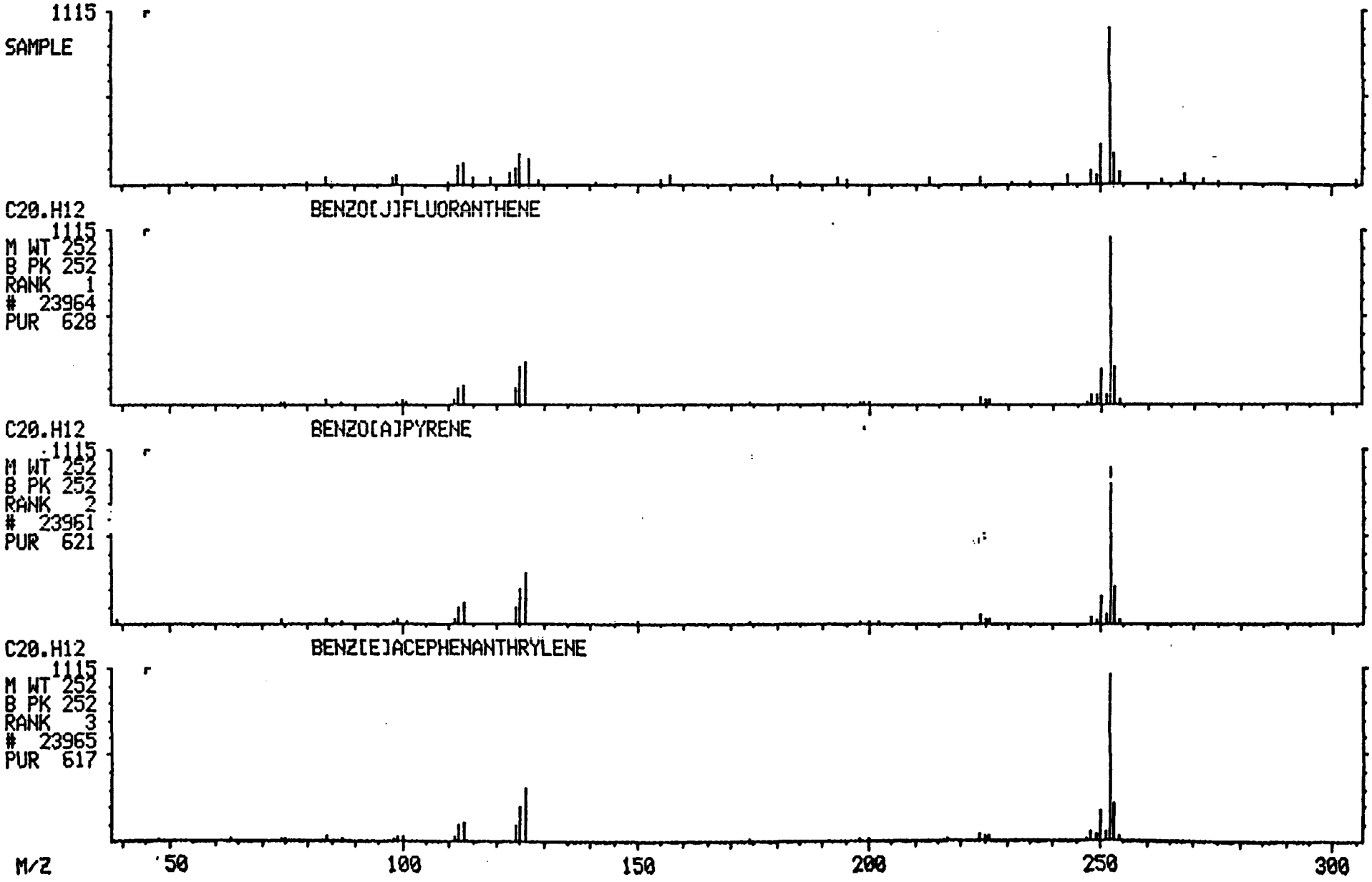


847520706

LIBRARY SEARCH
01/23/92 21:32:00 + 34:05
SAMPLE: 017003 BN+15/E B-1 RE STR. S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017003A #2556
CALI: S017003A # 3

BASE M/Z: 252
RIC: 6655.



Quantitation Report File: S017004

ta: S017004.TI
/23/92 2:25:00
Sample: 017004 BN+15/E B-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520707

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	590	7:52	1	1.000	A BB	27304.	40.000 NG	16.57
2	136	858	11:26	2	1.000	A BB	56202.	40.000 NG	16.57
3	164	1268	16:54	3	1.000	A BV	27756.	40.000 NG	16.57
4	188	1616	21:33	4	1.000	A BB	44092.	40.000 NG	16.57
5	240	2256	30:05	5	1.000	A BV	36071.	40.000 NG	16.57
6	264	2577	34:22	6	1.000	A BV	23730.	40.000 NG	16.57
7	NOT FOUND								
8	NOT FOUND								
9	244	2014	26:51	5	0.893	A BB	1693.	1.154 NG	0.48
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
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26	NOT FOUND								
27	NOT FOUND								
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30	NOT FOUND								
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34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520708

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29		0.826						
8	14:56		0.882						
9	26:52	1.00	0.893	1.00	1.15	50.00	0.038	1.627	0.02
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51		1.116						
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32		1.005						
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520709

Quantitation Report File: S017004

Data: S017004.TI
01/23/92 2:25:00
Sample: 017004 BN+15/E B-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								
64	NOT FOUND								

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	149	2301	30:41	5	1.020	A BB	235.	0.493 NG	0.20
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39		1.004						
63	21:48		1.011						
64	23:56		1.109						
65	25:27		1.180						
66	26:02		0.865						
67	26:09		0.869						
68	28:40		0.953						
69	30:02		0.998						
70	30:07		1.001						
71	30:10		1.003						
72	30:42	1.00	1.020	1.00	0.49	50.00	0.005	0.528	0.01
73	32:34		0.948						
74	33:20		0.970						
75	33:24		0.972						
76	34:13		0.995						
77	38:00		1.106						
78	38:06		1.109						
79	39:02		1.136						

847520711

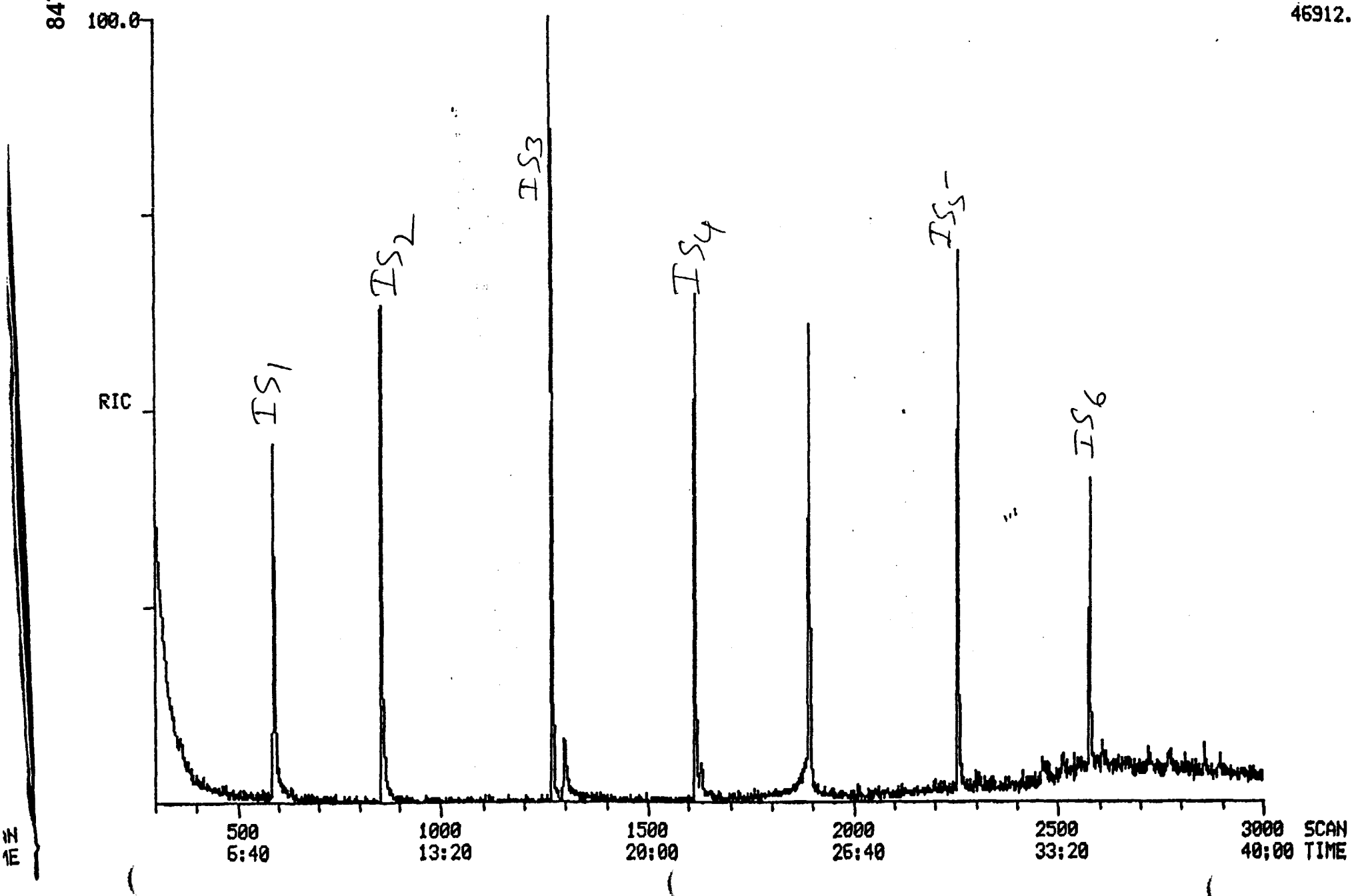
847520712

RIC
01/23/92 2:25:00
SAMPLE: 017004 BN+15/E B-2 DIL 1/20 5 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017004 #1
CALI: S017004 #3

SCANS 300 TO 3000

46912.



Quantitation Report File: SSRT01

Data: S017004.TI
01/23/92 2:25:00
Sample: 017004 BN+15/E B-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1268	16:54	1	1.000	A BB	148809.	100.000	24.32
2	RIC	1616	21:33	1	1.274	A BB	136583.	91.784	22.32
3	RIC	1893	25:14	1	1.493	A BB	134342.	90.278 -393	21.96
4	RIC	2256	30:05	1	1.779	A BB	118489.	79.625	19.37
5	RIC	2577	34:22	1	2.032	A BB	73604.	49.462	12.03

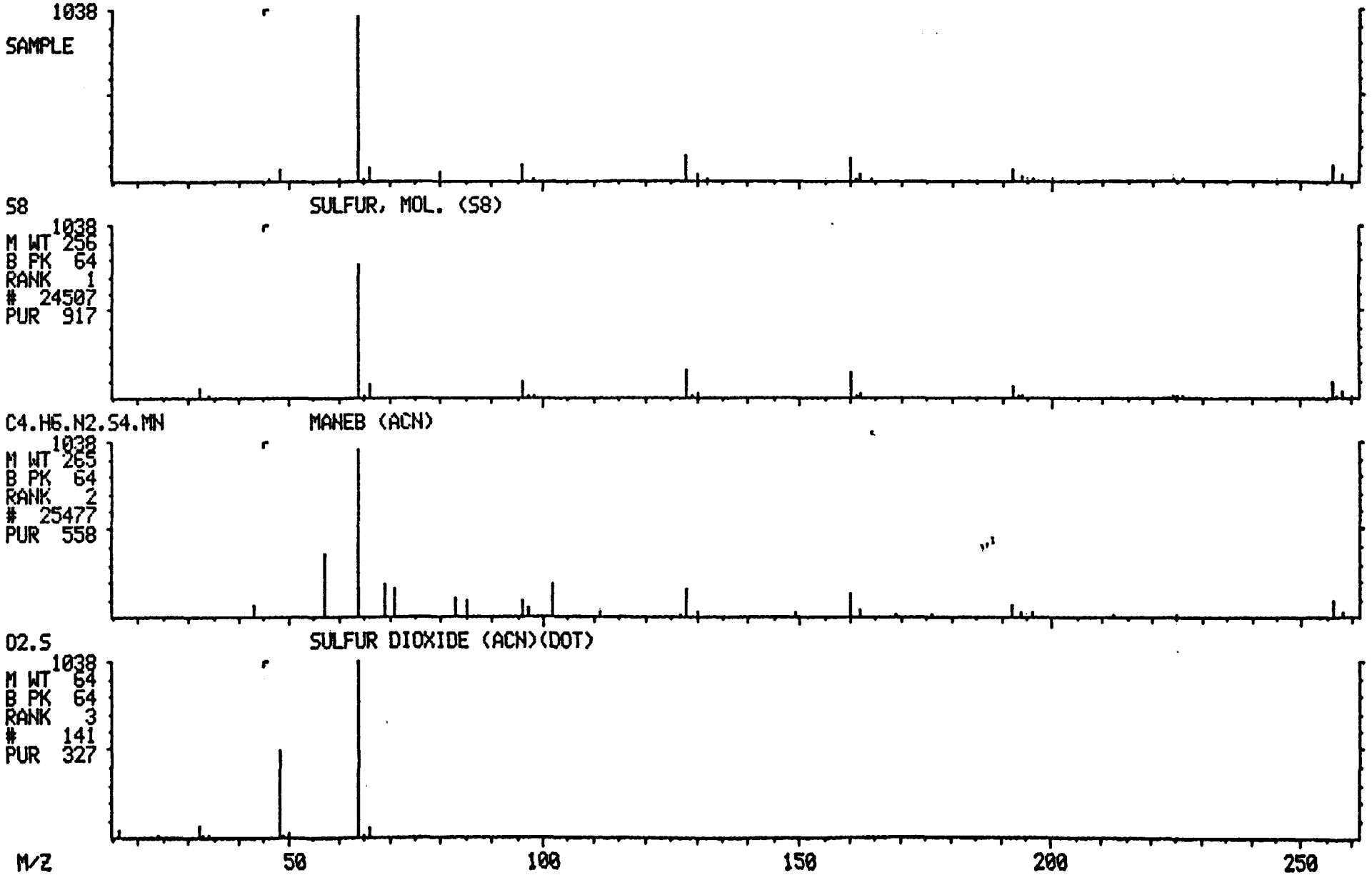
847520713

8475207 14

LIBRARY SEARCH
01/23/92 2:25:00 + 25:14
SAMPLE: 017004 BN+15/E B-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017004 #1893
CALI: S017004 # 3

BASE M/Z: 64
RIC: 24735.



Quantitation Report File: S017005

Data: S017005.TI
01/23/92 3:12:00
Sample: 017005 BN+15/E C-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	591	7:53	1	1.000	A BB	29305.	40.000 NG	14.55
2	136	859	11:27	2	1.000	A BB	67904.	40.000 NG	14.55
3	164	1270	16:56	3	1.000	A BB	31033.	40.000 NG	14.55
4	188	1618	21:34	4	1.000	A BV	50866.	40.000 NG	14.55
5	240	2257	30:06	5	1.000	A BB	41443.	40.000 NG	14.55
6	264	2579	34:23	6	1.000	A BV	23493.	40.000 NG	14.55
7	82	713	9:30	2	0.830	A BV	1816.	1.868 NG	0.68
8	172	1120	14:56	3	0.882	A BB	2679.	2.402 NG	0.87
9	244	2014	26:51	5	0.892	A BB	3747.	2.224 NG	0.81
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	862	11:30	2	1.003	A BB	408.	0.214 NG	0.08
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520716

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	1.00	0.826	1.01	1.87	50.00	0.021	0.573	0.04
8	14:56	1.00	0.882	1.00	2.40	50.00	0.069	1.438	0.05
9	26:52	1.00	0.893	1.00	2.22	50.00	0.072	1.627	0.04
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51		1.116						
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.21	50.00	0.005	1.125	0.00
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

Quantitation Report File: S017005 847520718

Data: S017005.TI
01/23/92 3:12:00
Sample: 017005 BN+15/E C-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C275 2,4-DINITROTOLUENE
52	C280 FLUORENE
53	C285 DIETHYL PHTHALATE
54	C290 4-CHLOROPHENYL-PHENYLETHER
55	C295 4-NITROANILINE
56	C310 2-METHYL-4,6-DINITROPHENOL
57	C315 N-NITROSODIPHENYLAMINE
58	C320 1,2-DIPHENYL HYDRAZINE
59	C325 4-BROMOPHENYL-PHENYLETHER
60	C330 HEXACHLOROBENZENE
61	C335 PENTACHLOROPHENOL
62	C340 PHENANTHRENE
63	C345 ANTHRACENE
64	C350 DI-N-BUTYL PHTHALATE
65	C355 FLUORANTHENE
66	C410 BENZIDINE
67	C415 PYRENE
68	C420 BUTYL BENZYL PHTHALATE
69	C425 BENZO(A)ANTHRACENE
70	C430 3,3-DICHLOROBENZIDINE
71	C435 CHRYSENE
72	C440 BIS(2-ETHYLHEXYL) PHTHALATE
73	C510 DI-N-OCTYL PHTHALATE
74	C515 BENZO(B)FLUORANTHENE
75	C520 BENZO(K)FLUORANTHENE
76	C525 BENZO(A)PYRENE
77	C530 INDENO(1,2,3-CD)PYRENE
78	C535 BENZO(A,H)ANTHRACENE
79	C540 BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1623	21:38	4	1.003	A BB	5091.	3.748 NG	1.36
63	178	1623	21:38	4	1.003	A BB	5091.	3.866 NG	1.41
64	NOT FOUND								

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	202	1909	25:27	4	1.180	A BB	5829.	5.014 NG	1.82
66	NOT FOUND								
67	202	1961	26:09	5	0.869	A BB	5383.	2.668 NG	0.97
68	NOT FOUND								
69	228	2253	30:02	5	0.998	A BV	2840.	2.296 NG	0.84
70	NOT FOUND								
71	228	2262	30:10	5	1.002	A VB	3161.	2.646 NG	0.96
72	149	2302	30:42	5	1.020	A BB	473.	0.864 NG	0.31
73	NOT FOUND								
74	252	2500	33:20	6	0.969	A BB	3652.	4.340 NG	1.58
75	NOT FOUND								
76	252	2566	34:13	6	0.995	A BB	1874.	2.480 NG	0.90
77	276	2849	37:59	6	1.105	A BB	414.	0.561 NG	0.20
78	NOT FOUND								
79	NOT FOUND								

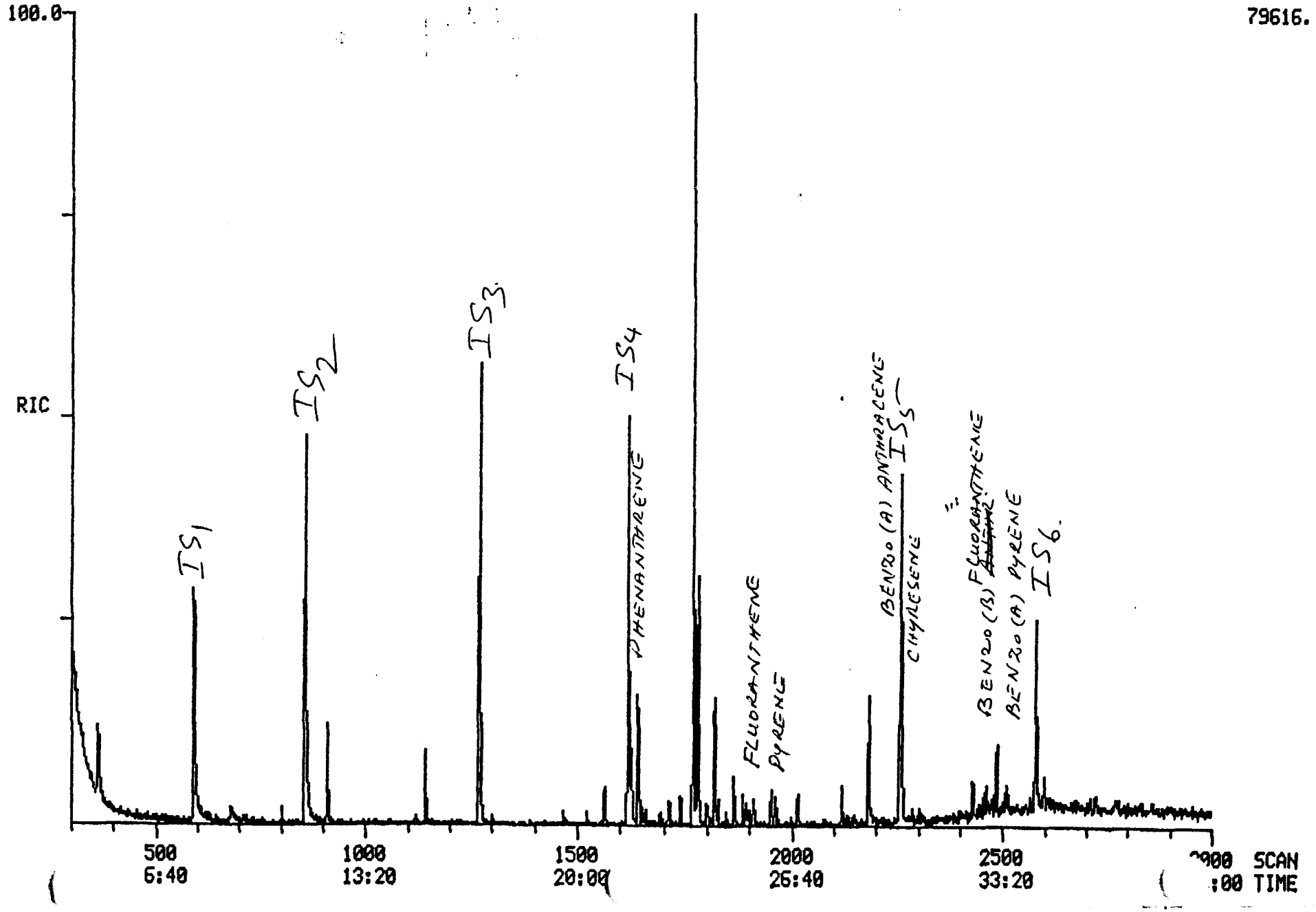
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	3.75	50.00	0.080	1.068	0.07
63	21:48	0.99	1.011	0.99	3.87	50.00	0.080	1.036	0.08
64	23:56		1.109						
65	25:27	1.00	1.180	1.00	5.01	50.00	0.092	0.914	0.10
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	2.67	50.00	0.104	1.947	0.05
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	2.30	50.00	0.055	1.194	0.05
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	2.65	50.00	0.061	1.153	0.05
72	30:42	1.00	1.020	1.00	0.86	50.00	0.009	0.528	0.02
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	4.34	50.00	0.124	1.433	0.09
75	33:24		0.972						
76	34:13	1.00	0.995	1.00	2.48	50.00	0.064	1.286	0.05
77	38:00	1.00	1.106	1.00	0.56	50.00	0.014	1.257	0.01
78	38:06		1.109						
79	39:02		1.136						

8475207 20

RIC
01/23/92 3:12:00
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017005 #1
CALI: S017005 #3

SCANS 300 TO 3000



Quantitation Report File: SSRTO1

Data: S017005.TI
01/23/92 3:12:00
Sample: 017005 BN+15/E C-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	363	4:50	11	0.205	A BB	35000.	14.479	2.36
2	RIC	591	7:53	11	0.334	A BB	113227.	46.841	7.65
3	RIC	859	11:27	11	0.486	A BB	160843.	66.540	10.86
4	RIC	911	12:09	11	0.515	A BB	28476.	11.780	1.92
5	RIC	1143	15:14	11	0.646	A BB	14628.	6.051	0.99
6	RIC	1270	16:56	11	0.718	A BB	163346.	67.575	11.03
7	RIC	1565	20:52	11	0.885	A BB	11611.	4.803	0.78
8	RIC	1618	21:34	11	0.915	A BV	154745.	64.017	10.45
9	RIC	1627	21:42	11	0.920	A VB	19180.	7.934	1.30
10	RIC	1641	21:53	11	0.928	A BB	42056.	17.398	2.84
11	RIC	1769	23:35	11	1.000	A BV	241725.	100.000	16.32
12	RIC	1779	23:43	11	1.006	A VB	77131.	31.909	5.21
13	RIC	1818	24:14	11	1.028	A BB	49480.	20.470	3.34
14	RIC	1863	24:50	11	1.053	A BB	15324.	6.339	1.03
15	RIC	1951	26:01	11	1.103	A BB	22222.	9.193	1.50
16	RIC	2183	29:06	11	1.234	A BB	42106.	17.419	2.84
17	RIC	2257	30:06	11	1.276	A BB	147701.	61.103	9.97
18	RIC	2430	32:24	11	1.374	A BB	16843.	6.968	1.14
19	RIC	2486	33:09	11	1.405	A BB	24899.	10.301	1.68
20	RIC	2579	34:23	11	1.458	A BB	100288.	41.488	6.77

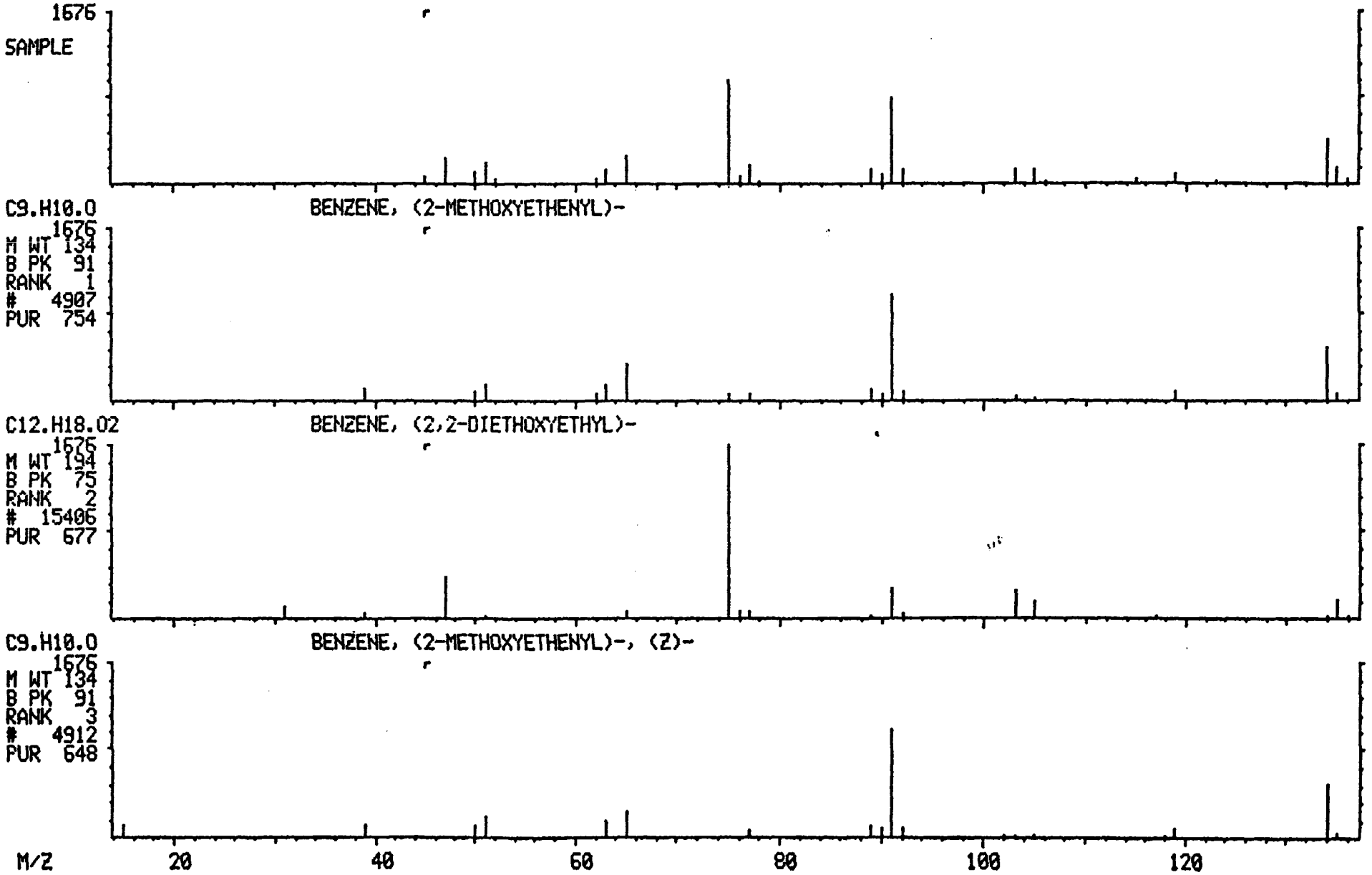
847520721

847520722

LIBRARY SEARCH
01/23/92 3:12:00 + 12:09
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 # 911
CALI: S017005 # 3

BASE M/Z: 75
RIC: 8271.

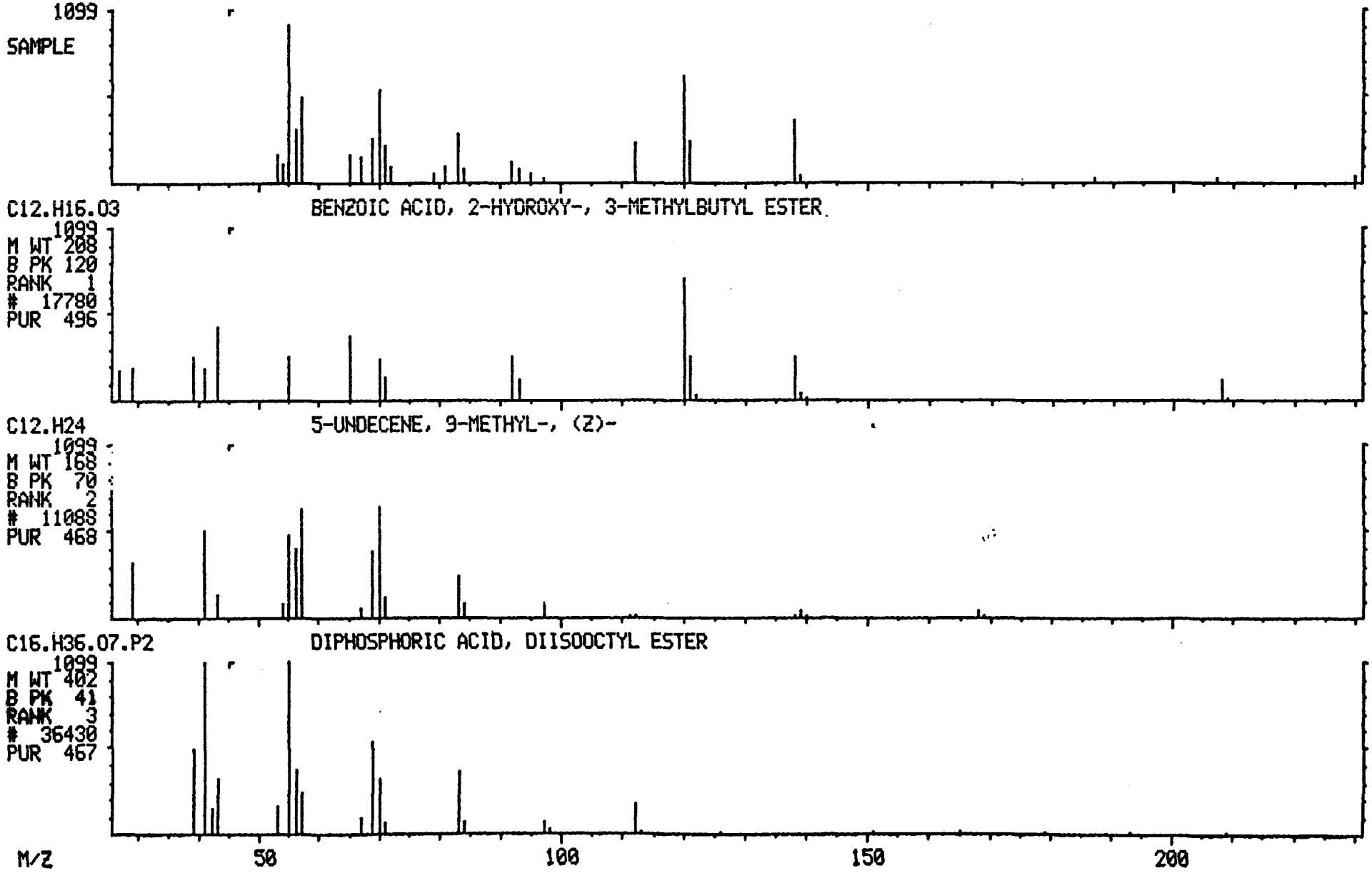


8475207 23

LIBRARY SEARCH
01/23/92 3:12:00 + 21:53
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #1641
CALI: S017005 # 3

BASE M/Z: 55
RIC: 10207.

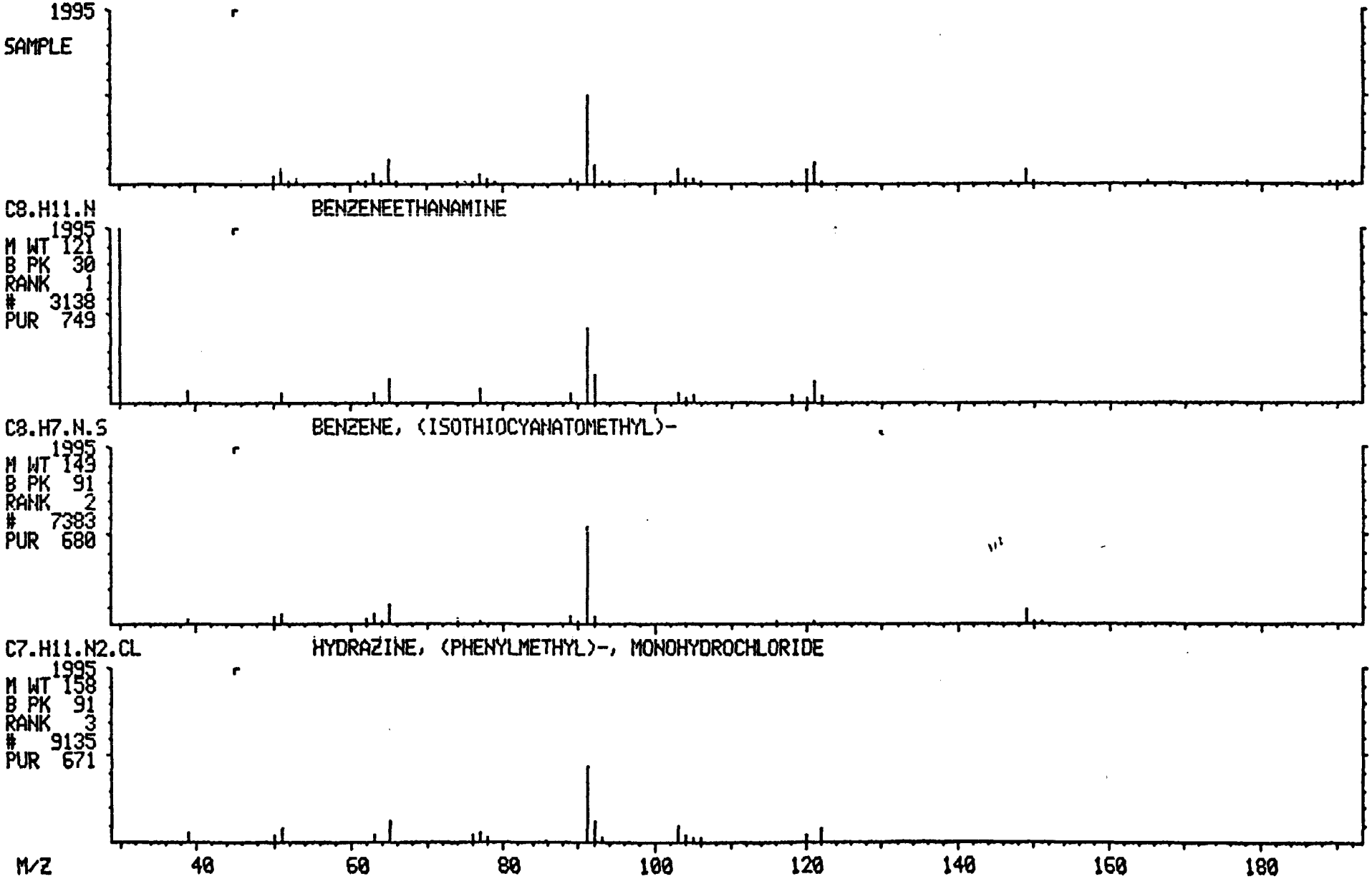


847520724

LIBRARY SEARCH
01/23/92 3:12:00 + 23:35
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #1769
CALI: S017005 # 3

BASE M/Z: 91
RIC: 70015.

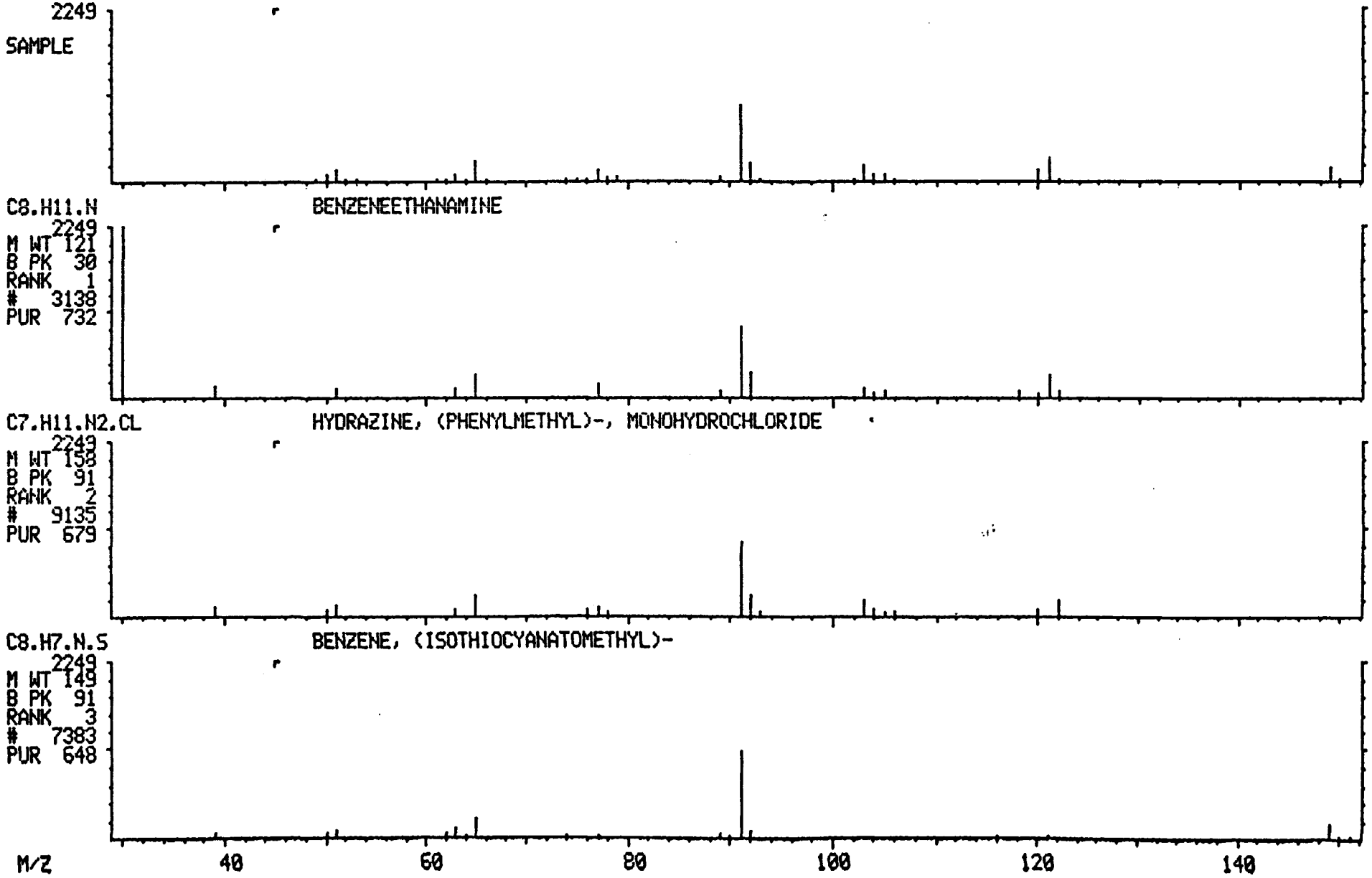


8475207 25

LIBRARY SEARCH
01/23/92 3:12:00 + 23:43
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #1779
CALI: S017005 # 3

BASE M/Z: 91
RIC: 21023.



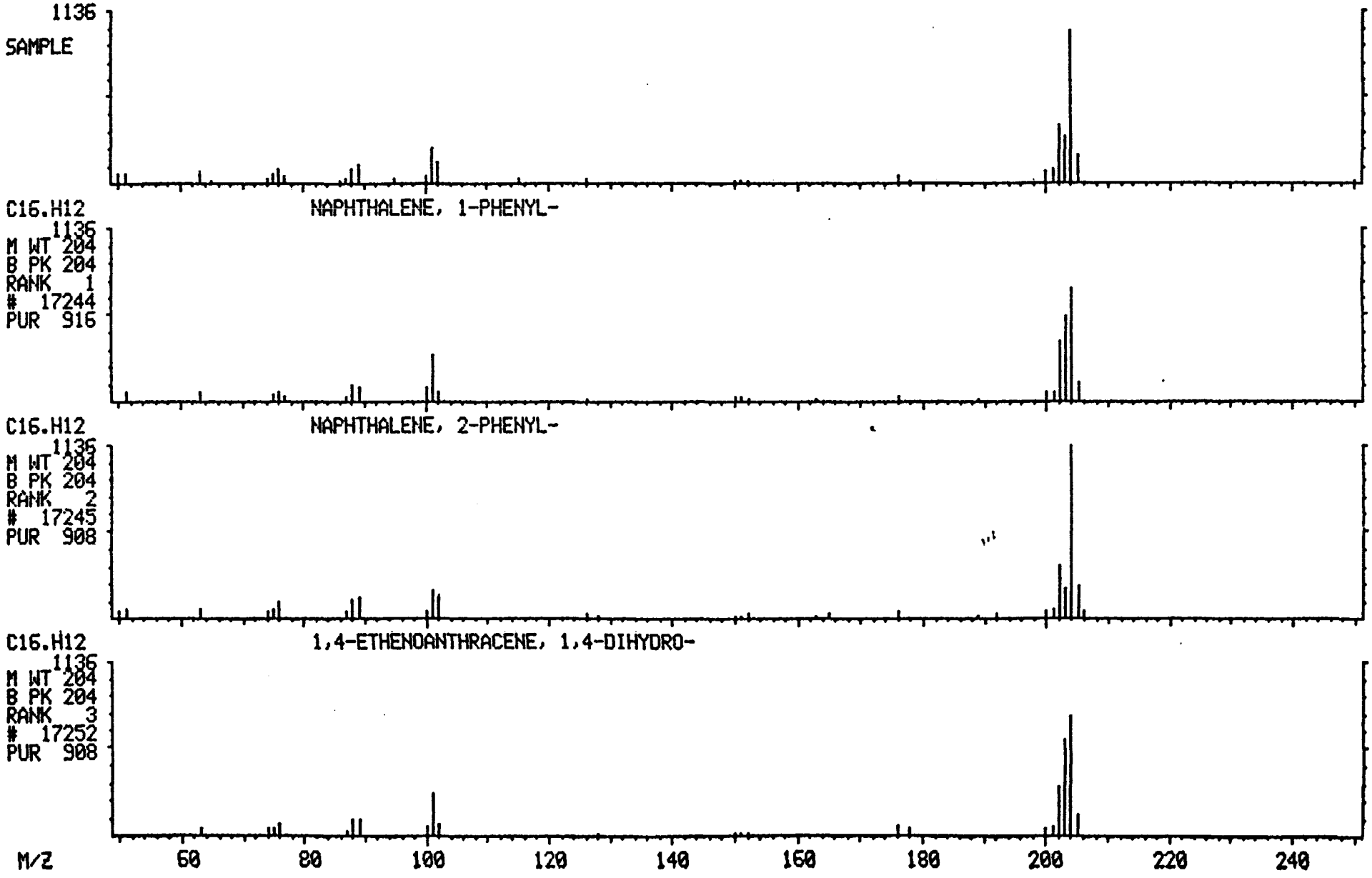
8475207 26

LIBRARY SEARCH
01/23/92 3:12:00 + 24:14
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #1818
CALI: S017005 # 3

BASE M/Z: 204
RIC: 10591.

333

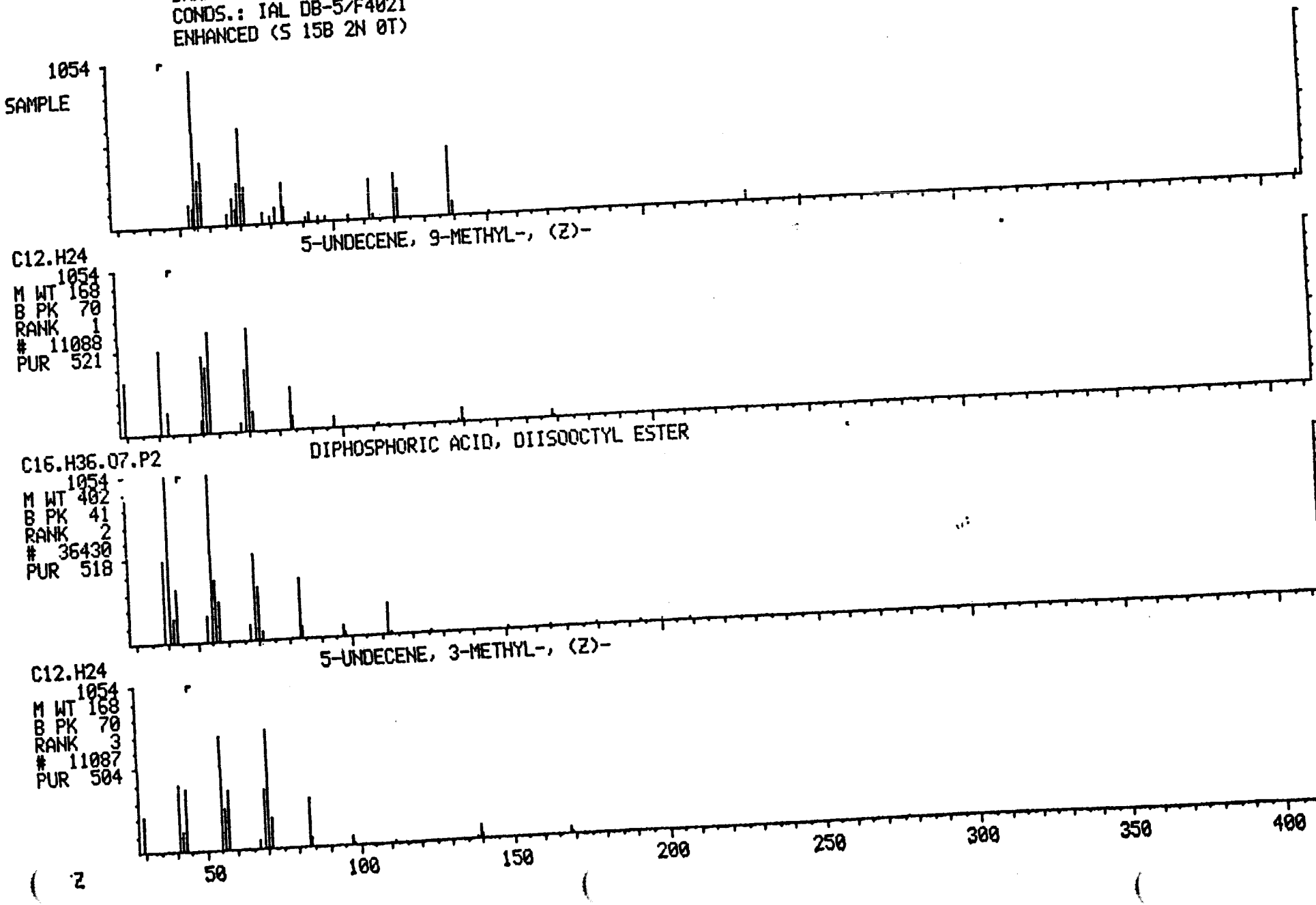


847520727

LIBRARY SEARCH
01/23/92 3:12:00 + 29:06
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #2183
CALI: S017005 # 3

BASE M/Z: 55
RIC: 11039.



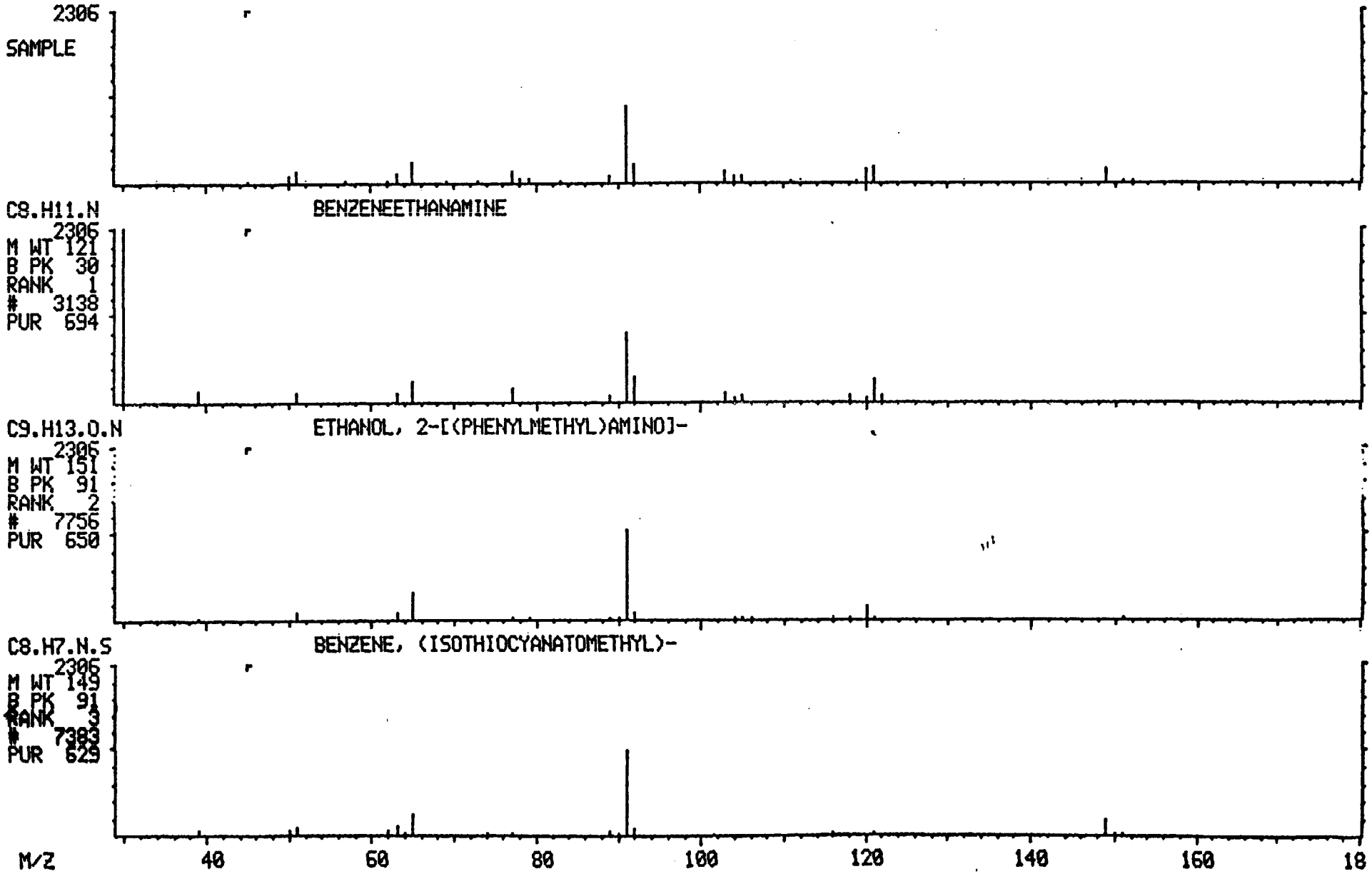
8475207 28

LIBRARY SEARCH
01/23/92 3:12:00 + 33:09
SAMPLE: 017005 BN+15/E C-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017005 #2486
CALI: S017005 # 3

BASE M/Z: 91
RIC: 6735.

385



Quantitation Report File: S017006

Data: S017006.TI
01/18/92 1:28:00
Sample: 017006 BN+15/E C-2 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	594	7:55	1	1.000	A BB	30931.	40.000 NG	5.57
2	136	862	11:30	2	1.000	A BB	75684.	40.000 NG	5.57
3	164	1274	16:59	3	1.000	A BV	40548.	40.000 NG	5.57
4	188	1623	21:38	4	1.000	A BV	62134.	40.000 NG	5.57
5	240	2263	30:10	5	1.000	A BB	52035.	40.000 NG	5.57
6	264	2585	34:28	6	1.000	A BB	30621.	40.000 NG	5.57
7	82	711	9:29	2	0.825	A BB	61332.	54.202 NG	7.55
8	172	1123	14:58	3	0.881	A BB	89183.	61.192 NG	8.52
9	244	2020	26:56	5	0.893	A VB	101492.	55.720 NG	7.76
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	117	698	9:18	1	1.175	A BB	226.	0.864 NG	0.12
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	867	11:34	2	1.006	A BB	978.	0.455 NG	0.06
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	152	1236	16:29	3	0.970	A BB	3673.	1.896 NG	0.26
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	153	1280	17:04	3	1.005	A BB	1994.	1.612 NG	0.22
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:58	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:33	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	17:02	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:41	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:12	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:30	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:32	0.99	0.826	1.00	54.20	50.00	0.648	0.598	1.08
8	15:02	1.00	0.882	1.00	61.19	50.00	1.760	1.438	1.22
9	26:58	1.00	0.893	1.00	55.72	50.00	1.560	1.400	1.11
10	5:08		0.645						
11	7:18		0.916						
12	19:34		1.149						
13	7:15		0.911						
14	7:19		0.920						
15	7:26		0.935						
16	7:31		0.945						
17	7:52		0.988						
18	8:00		1.005						
19	8:26		1.060						
20	8:29		1.065						
21	8:26		1.060						
22	8:54		1.117						
23	9:18		1.168						
24	9:17		1.166						
25	9:19	1.00	1.171	1.00	0.86	50.00	0.006	0.338	0.02
26	9:35		0.830						
27	10:18		0.891						
28	10:30		0.910						
29	10:48		0.935						
30	11:03		0.957						
31	11:14		0.973						
32	11:28		0.993						
33	11:37	1.00	1.006	1.00	0.45	50.00	0.010	1.137	0.01
34	11:54		1.031						
35	12:15		1.061						
36	13:33		1.173						
37	13:45		1.191						
38	14:30		0.851						
39	14:46		0.867						
40	14:54		0.874						
41	15:14		0.894						
42	15:43		0.923						
43	16:32	1.00	0.970	1.00	1.90	50.00	0.072	1.911	0.04
44	16:30		0.969						
45	17:02		1.000						
46	16:39		0.977						
47	17:08	1.00	1.005	1.00	1.61	50.00	0.039	1.220	0.03
48	17:23		1.020						
49	17:39		1.036						
50	17:47		1.044						

847520731

Quantitation Report File: S017006

ta: S017006.TI
)1/18/92 1:28:00
Sample: 017006 BN+15/E C-2 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	166	1402	18:42	3	1.100	A BB	1563.	1.174 NG	0.16
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	248	1527	20:22	4	0.941	A BB	593.	1.793 NG	0.25
60	NOT FOUND								
61	NOT FOUND								
62	178	1628	21:42	4	1.003	A BV	33608.	19.905 NG	2.77
63	178	1639	21:51	4	1.010	A VB	8915.	5.490 NG	0.76
64	149	1799	23:59	4	1.108	A BB	80460.	42.869 NG	5.97

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1915	25:32	4	1.180	A VB	77838.	55.281	NG ok	7.70
66	NOT FOUND									
67	202	1966	26:13	5	0.869	A BB	72025.	33.014	NG ok	4.60
68	149	2154	28:43	5	0.952	A BB	578.	0.917	NG ok	0.13
69	228	2259	30:07	5	0.998	A VV	35271.	22.344	NG	3.11
70	252	2263	30:10	5	1.000	A VV	406.	1.280	NG	0.18
71	228	2268	30:14	5	1.002	A VB	32753.	22.588	NG ok	3.15
72	149	2307	30:46	5	1.019	A BB	1521.	1.628	NG	0.23
73	149	2446	32:37	6	0.946	A BB	253.	0.228	NG ok	0.03
74	252	2505	33:24	6	0.969	A BV	28107.	28.092	NG ok	3.91
75	252	2509	33:27	6	0.971	A VB	15406.	16.190	NG ok	2.25
76	252	2572	34:18	6	0.995	A VB	21747.	24.311	NG ok	3.39
77	276	2858	38:06	6	1.106	A BB	12002.	10.852	NG ok	1.51
78	278	2866	38:13	6	1.109	A VV	3261.	3.980	NG ok	0.55
79	276	2936	39:09	6	1.136	A BB	9505.	10.242	NG ok	1.43

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:52		1.049						
52	18:45	1.00	1.100	1.00	1.17	50.00	0.031	1.313	0.02
53	18:47		1.103						
54	18:50		1.106						
55	18:59		1.114						
56	19:10		0.884						
57	19:16		0.889						
58	19:20		0.892						
59	20:22	1.00	0.939	1.00	1.79	50.00	0.008	0.213	0.04
60	20:45		0.957						
61	21:22		0.986						
62	21:46	1.00	1.004	1.00	19.91	50.00	0.433	1.087	0.40
63	21:54	1.00	1.010	1.00	5.49	50.00	0.115	1.045	0.11
64	24:02	1.00	1.108	1.00	42.87	50.00	1.036	1.208	0.86
65	25:34	1.00	1.180	1.00	55.28	50.00	1.002	0.906	1.11
66	26:08		0.865						
67	26:15	1.00	0.869	1.00	33.01	50.00	1.107	1.677	0.66
68	28:46	1.00	0.952	1.00	0.92	50.00	0.009	0.485	0.02
69	30:10	1.00	0.999	1.00	22.34	50.00	0.542	1.213	0.45
70	30:14	1.00	1.001	1.00	1.28	50.00	0.006	0.244	0.03
71	30:18	1.00	1.003	1.00	22.59	50.00	0.504	1.115	0.45
72	30:48	1.00	1.020	1.00	1.63	50.00	0.023	0.718	0.03
73	32:40	1.00	0.947	1.00	0.23	50.00	0.007	1.448	0.00
74	33:27	1.00	0.969	1.00	28.09	50.00	0.734	1.307	0.56
75	33:31	1.00	0.971	1.00	16.19	50.00	0.402	1.243	0.32
76	34:21	1.00	0.995	1.00	24.31	50.00	0.568	1.169	0.49
77	38:13	1.00	1.107	1.00	10.85	50.00	0.314	1.445	0.22
78	38:18	1.00	1.110	1.00	3.98	50.00	0.085	1.070	0.08
79	39:15	1.00	1.138	1.00	10.24	50.00	0.248	1.212	0.20

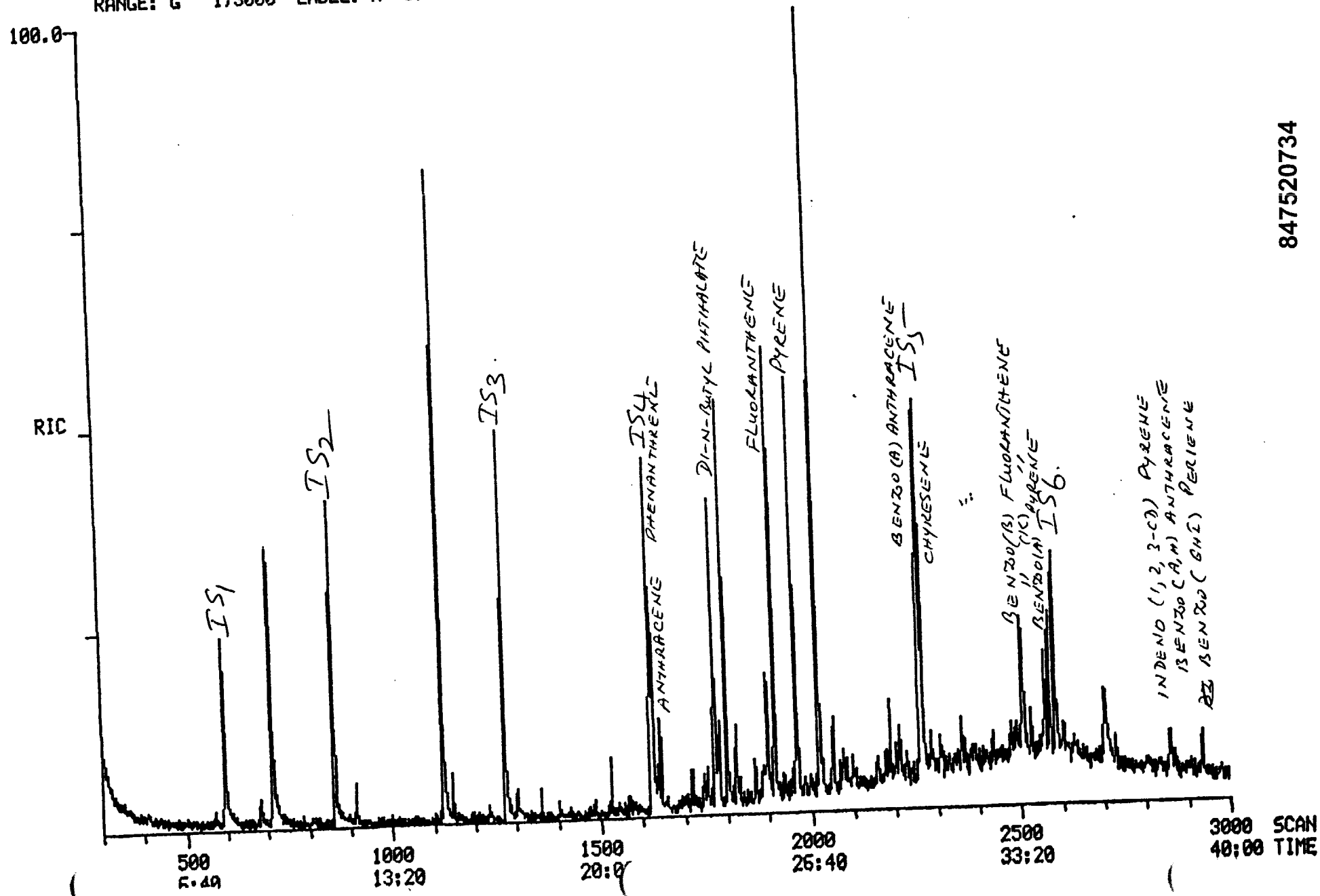
847520733

RIC
01/18/92 1:28:00
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017006 #1
CALI: S017006 #3

SCANS 300 TO 3000

105728.



847520734

Quantitation Report File: SSRT01

Data: S017006.TI
01/18/92 1:28:00
Sample: 017006 BN+15/E C-2 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN
21	UNKNOWN
22	UNKNOWN
23	UNKNOWN
24	UNKNOWN
25	UNKNOWN
26	UNKNOWN
27	UNKNOWN
28	UNKNOWN
29	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	594	7:55	20	0.294	A BB	144487.	42.657	3.98
2	RIC	682	9:06	20	0.338	A BB	19213.	5.672	0.53
3	RIC	711	9:29	20	0.352	A BB	178192.	52.608	4.90
4	RIC	862	11:30	20	0.427	A BB	171489.	50.629	4.72
5	RIC	914	12:11	20	0.452	A BB	17239.	5.090	0.47
6	RIC	1123	14:58	20	0.556	A BB	287670.	84.930	7.92
7	RIC	1147	15:18	20	0.568	A BB	12292.	3.629	0.34
8	RIC	1274	16:59	20	0.631	A BB	203539.	60.091	5.60
9	RIC	1303	17:22	20	0.645	A BB	22534.	6.653	0.62
10	RIC	1623	21:38	20	0.803	A BV	162422.	47.952	4.47
11	RIC	1628	21:42	20	0.806	A VV	136465.	40.289	3.76
12	RIC	1645	21:56	20	0.814	A VB	31584.	9.325	0.87
13	RIC	1773	23:38	20	0.878	A BV	148456.	43.829	4.09
14	RIC	1783	23:46	20	0.883	A VB	46276.	13.662	1.27

847520735

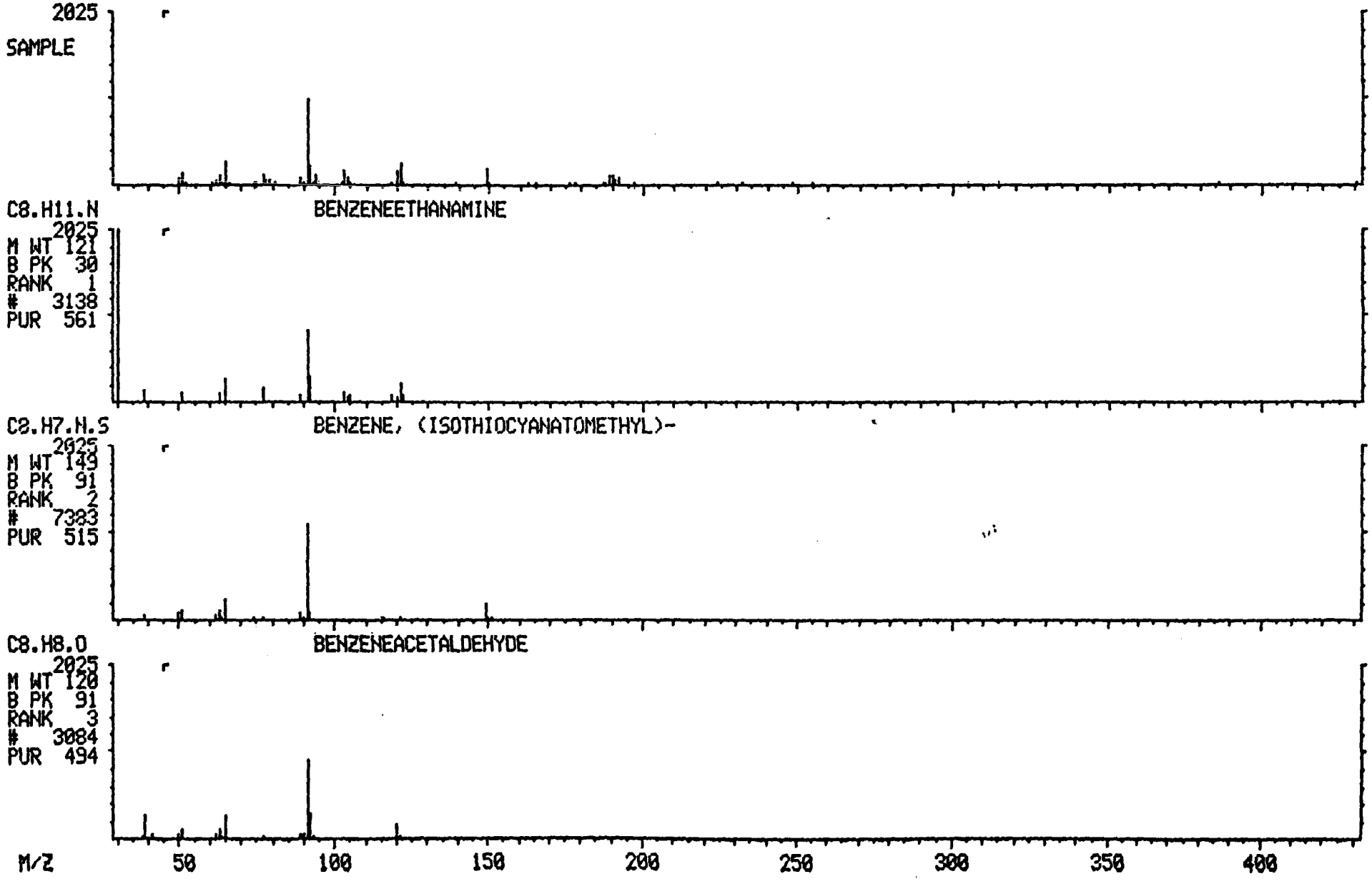
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
15	RIC	1799	23:59	20	0.891	A BB	169700.	50.101	4.67
16	RIC	4 1823	24:18	20	0.902	A BB	49118.	14.501 -12.1	1.35
17	RIC	5 1898	25:18	20	0.940	A BB	104624.	30.888 -25.7	2.88
18	RIC	1915	25:32	20	0.948	A BB	209785.	61.935	5.77
19	RIC	1966	26:13	20	0.973	A BB	219706.	64.864	6.05
20	RIC	2020	26:56	20	1.000	A BB	338716.	100.000	9.32
21	RIC	6 2053	27:22	20	1.016	A BB	44864.	13.245 -11.0	1.23
22	RIC	2187	29:10	20	1.083	A BB	31576.	9.322	0.87
23	RIC	(MP) 2263	30:10	20	1.120	A BV	299765.	88.500	8.25
24	RIC	2268	30:14	20	1.123	A VB	103537.	30.567	2.85
25	RIC	2506	33:25	20	1.241	A BB	138252.	40.816	3.80
26	RIC	7 2561	34:09	20	1.268	A BB	69628.	20.556 -33.1	1.92
27	RIC	2572	34:18	20	1.273	A BB	69764.	20.597	1.92
28	RIC	8 2585	34:28	20	1.280	A BB	120648.	35.619	3.32
29	RIC	8 2704	36:03	20	1.339	A BB	82216.	24.273 -47.3	2.26

847520737

LIBRARY SEARCH
01/18/92 1:28:00 + 23:38
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #1773
CALI: S017006 # 3

BASE M/Z: 91
RIC: 35263.

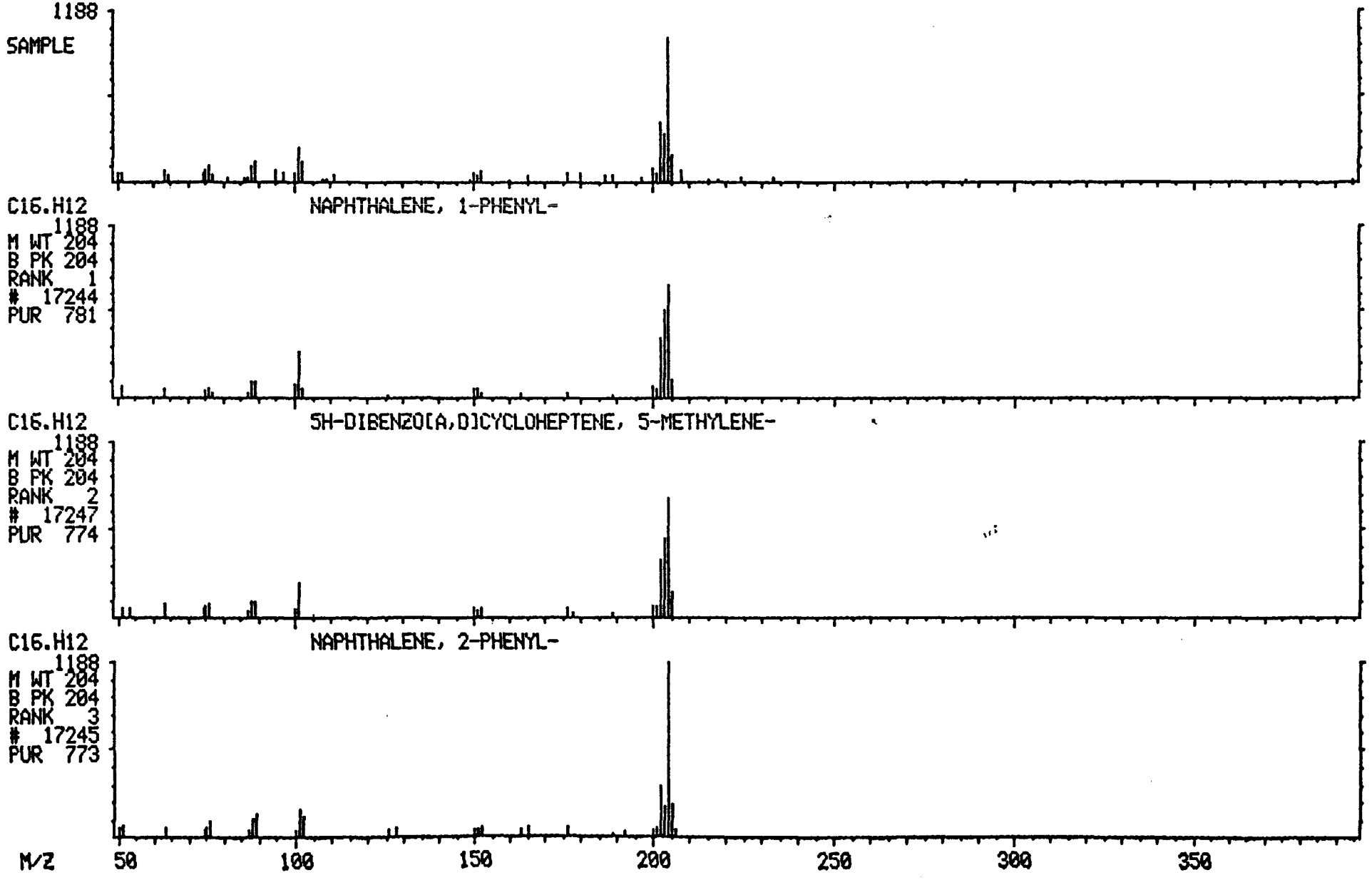


847520738

LIBRARY SEARCH
01/18/92 1:28:00 + 24:18
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #1823
CALI: S017006 # 3

BASE M/Z: 204
RIC: 10191.

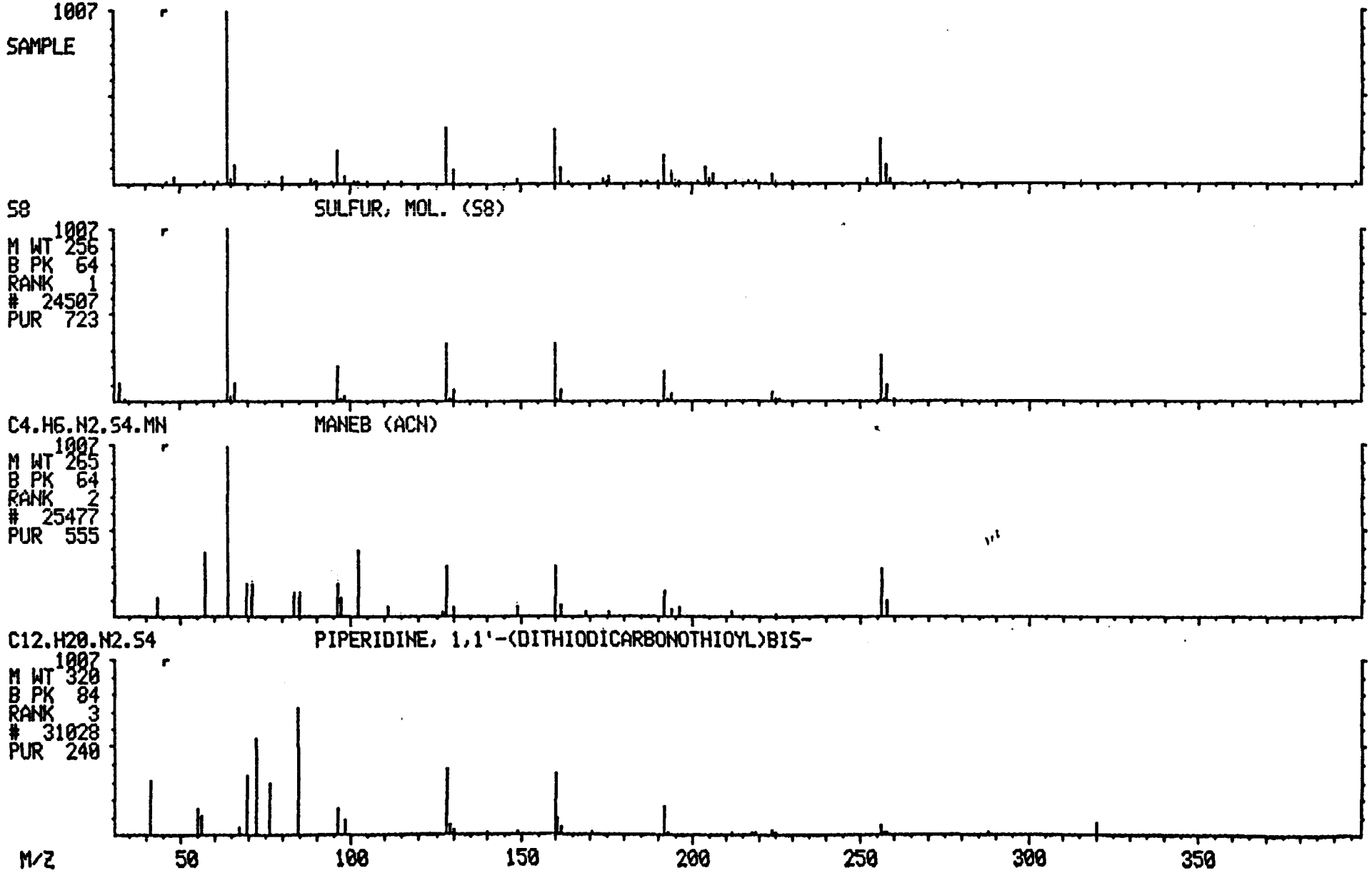


8475207 39

LIBRARY SEARCH
01/18/92 1:28:00 + 25:18
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #1898
CALI: S017006 # 3

BASE M/Z: 64
RIC: 15567.

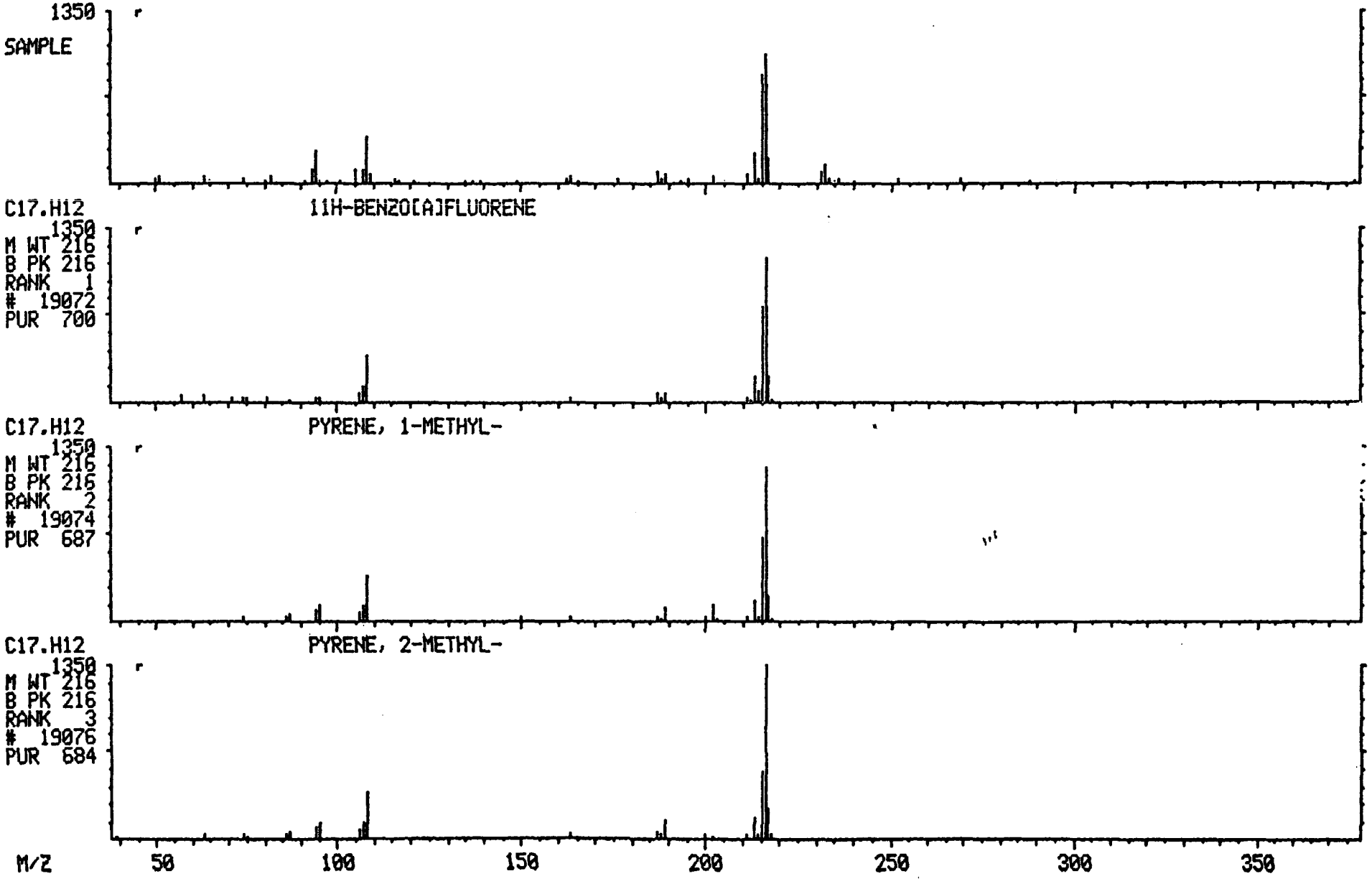


847520740

LIBRARY SEARCH
01/18/92 1:28:00 + 27:22
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #2053
CALI: S017006 # 3

BASE M/Z: 216
RIC: 9455.

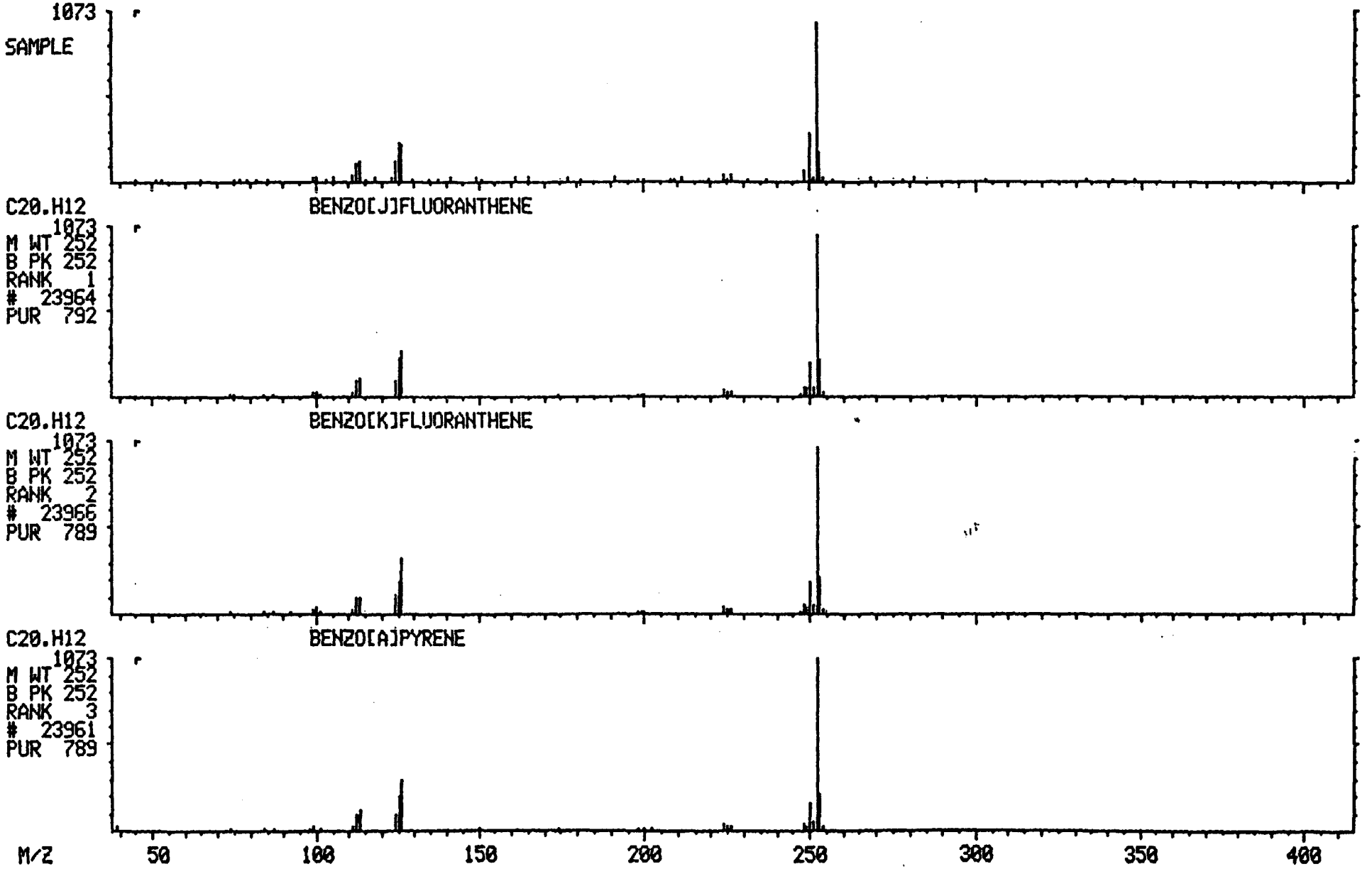


847520741

LIBRARY SEARCH
01/18/92 1:28:00 + 34:09
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #2561
CALI: S017006 # 3

BASE M/Z: 252
RIC: 13231.

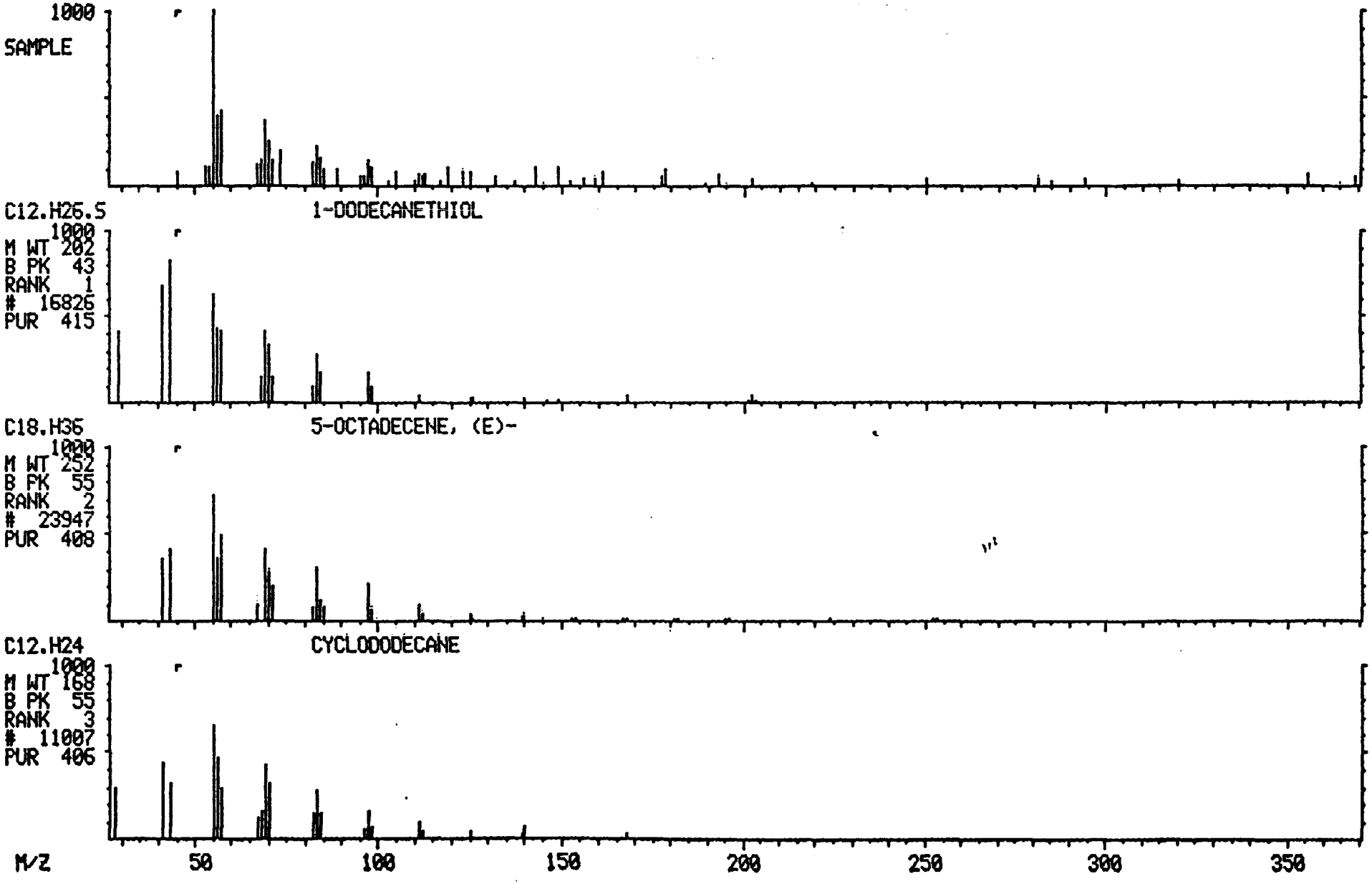


8475207 42

LIBRARY SEARCH
01/18/92 1:28:00 + 36:03
SAMPLE: 017006 BN+15/E C-2 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017006 #2704
CALI: S017006 # 3

BASE M/Z: 55
RIC: 8319.



Quantitation Report File: S017007

ata: S017007.TI
1/22/92 23:14:00
Sample: 017007 BN+15/E D-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520743

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	588	7:50	1	1.000	A BB	30160.	40.000 NG	15.71
2	136	857	11:26	2	1.000	A BB	70267.	40.000 NG	15.71
3	164	1268	16:54	3	1.000	A BB	35416.	40.000 NG	15.71
4	188	1616	21:33	4	1.000	A BB	54095.	40.000 NG	15.71
5	240	2256	30:05	5	1.000	A BB	49672.	40.000 NG	15.71
6	264	2577	34:22	6	1.000	A BV	33237.	40.000 NG	15.71
7	NOT FOUND								
8	172	1119	14:55	3	0.882	A BB	1328.	1.043 NG	0.41
9	244	2013	26:50	5	0.892	A BB	1610.	0.797 NG	0.31
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	861	11:29	2	1.005	A BB	430.	0.218 NG	0.09
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520744

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29		0.826						
8	14:56	1.00	0.882	1.00	1.04	50.00	0.030	1.438	0.02
9	26:52	1.00	0.893	1.00	0.80	50.00	0.026	1.627	0.02
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51		1.116						
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.22	50.00	0.005	1.125	0.00
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

Quantitation Report File: S017007

Data: S017007.TI
01/22/92 23:14:00
Sample: 017007 BN+15/E D-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

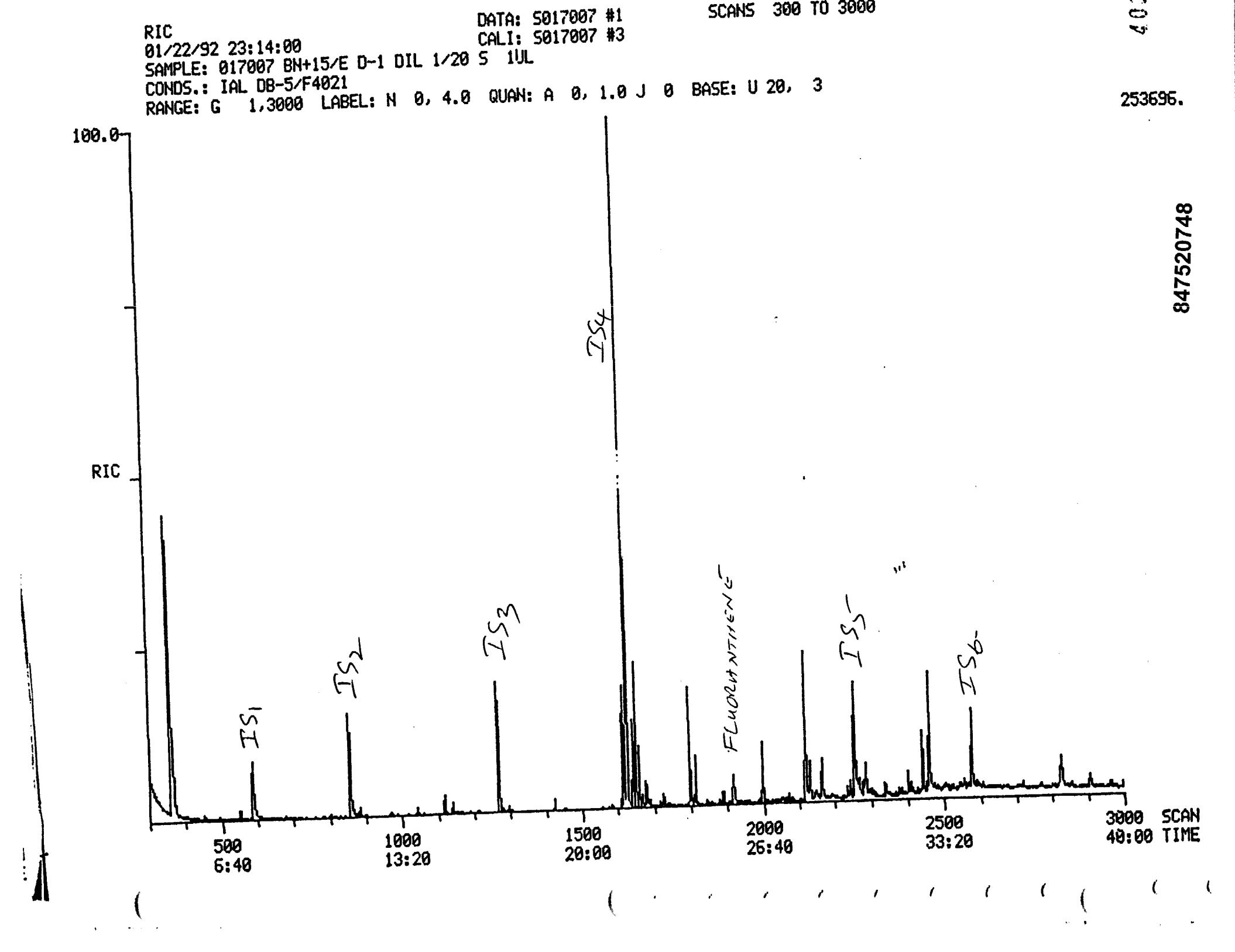
No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1622	21:38	4	1.004	A BB	2290.	1.585 NG	0.62
63	NOT FOUND								
64	149	1793	23:54	4	1.110	A BB	437.	0.276 NG	0.11

847520746

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	202	1908	25:26	4	1.181	A BB	2846.	2.302 NG	0.90
66	NOT FOUND								
67	202	1959	26:07	5	0.868	A BB	2730.	1.129 NG	0.44
68	NOT FOUND								
69	228	2261	30:09	5	1.002	A BB	2480.	1.673 NG	0.66
70	NOT FOUND								
71	228	2261	30:09	5	1.002	A BB	2480.	1.732 NG	0.68
72	NOT FOUND								
73	NOT FOUND								
74	252	2498	33:18	6	0.969	A BV	1387.	1.165 NG	0.46
75	252	2498	33:18	6	0.969	A BV	1387.	1.170 NG	0.46
76	252	2554	34:03	6	0.991	A BB	1621.	1.516 NG	0.60
77	276	2847	37:58	6	1.105	A BB	233.	0.223 NG	0.09
78	NOT FOUND								
79	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	1.59	50.00	0.034	1.068	0.03
63	21:48		1.011						
64	23:56	1.00	1.109	1.00	0.28	50.00	0.006	1.171	0.01
65	25:27	1.00	1.180	1.00	2.30	50.00	0.042	0.914	0.05
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	1.13	50.00	0.044	1.947	0.02
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	1.67	50.00	0.040	1.194	0.03
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	1.73	50.00	0.040	1.153	0.03
72	30:42		1.020						
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	1.17	50.00	0.033	1.433	0.02
75	33:24	1.00	0.972	1.00	1.17	50.00	0.033	1.426	0.02
76	34:13	1.00	0.995	1.00	1.52	50.00	0.039	1.286	0.03
77	38:00	1.00	1.106	1.00	0.22	50.00	0.006	1.257	0.00
78	38:06		1.109						
79	39:02		1.136						


RIC
01/22/92 23:14:00
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: S017007 #1
CALI: S017007 #3
SCANS 300 TO 3000
253696.
847520748
100.0
RIC
IS1
IS2
IS3
IS4
FLUORANTHENE
IS5
IS6
500
6:40
1000
13:20
1500
20:00
2000
26:40
2500
33:20
3000 SCAN
40:00 TIME

Quantitation Report File: SSRT01

Data: S017007.TI
01/22/92 23:14:00
Sample: 017007 BN+15/E D-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
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27	UNKNOWN
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29	UNKNOWN
30	UNKNOWN
31	UNKNOWN
32	UNKNOWN
33	UNKNOWN
34	UNKNOWN
35	UNKNOWN
36	UNKNOWN
37	UNKNOWN
38	UNKNOWN
39	UNKNOWN
40	UNKNOWN
41	UNKNOWN

847520749

ethyl CB.

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	360	4:48	6	0.221	A BB	562128.	87.817	9.44
2	RIC	588	7:50	6	0.361	A BB	124074.	19.383	2.08
3	RIC	857	11:26	6	0.527	A BB	162627.	25.406	2.73
4	RIC	1268	16:54	6	0.779	A BB	179656.	28.066	3.02
5	RIC	1616	21:33	6	0.993	A BV	169067.	26.412	2.84
6	RIC	1627	21:42	6	1.000	A VB	640111.	100.000	10.75
7	RIC	1643	21:54	6	1.010	A BB	87482.	13.667	1.47
8	RIC	1652	22:02	6	1.015	A BB	134319.	20.984	2.25
9	RIC	1660	22:08	6	1.020	A BB	55510.	8.672	0.93
10	RIC	1799	23:59	6	1.106	A BV	140495.	21.949	2.36
11	RIC	1815	24:12	6	1.116	A VB	61365.	9.587	1.03
12	RIC	1918	25:34	6	1.179	A BB	63959.	9.992	1.07
13	RIC	2000	26:40	6	1.229	A BB	65342.	10.208	1.10
14	RIC	2120	28:16	6	1.303	A BV	181304.	28.324	3.04
15	RIC	2132	28:26	6	1.310	A VB	40514.	6.329	0.68
16	RIC	2166	28:53	6	1.331	A BB	58230.	9.097	0.98
17	RIC	2256	30:05	6	1.387	A BV	162034.	25.313	2.72
18	RIC	2260	30:08	6	1.389	A VB	71240.	11.129	1.20
19	RIC	2287	30:30	6	1.406	A BB	88450.	13.818	1.48
20	RIC	2442	32:34	6	1.501	A BB	70302.	10.983	1.18
21	RIC	2462	32:50	6	1.513	A BB	160535.	25.079	2.69
22	RIC	2577	34:22	6	1.584	A BB	143107.	22.357	2.40
23	RIC	2826	37:41	6	1.737	A BB	70932.	11.081	1.19
24	RIC	1616	21:33	6	0.993	A BV	169067.	26.412	2.84
25	RIC	1627	21:42	6	1.000	A VB	640111.	100.000	10.75
26	RIC	1643	21:54	6	1.010	A BB	87482.	13.667	1.47
27	RIC	1652	22:02	6	1.015	A BB	134319.	20.984	2.25
28	RIC	1660	22:08	6	1.020	A BB	55510.	8.672	0.93
29	RIC	1799	23:59	6	1.106	A BV	140495.	21.949	2.36
30	RIC	1815	24:12	6	1.116	A VB	61365.	9.587	1.03
31	RIC	1918	25:34	6	1.179	A BB	63959.	9.992	1.07
32	RIC	2000	26:40	6	1.229	A BB	65342.	10.208	1.10
33	RIC	2120	28:16	6	1.303	A BV	181304.	28.324	3.04
34	RIC	2132	28:26	6	1.310	A VB	40514.	6.329	0.68
35	RIC	2166	28:53	6	1.331	A BB	58230.	9.097	0.98
36	RIC	2256	30:05	6	1.387	A BB	233274.	36.443	3.92
37	RIC	2287	30:30	6	1.406	A BB	88450.	13.818	1.48
38	RIC	2442	32:34	6	1.501	A BB	70302.	10.983	1.18
39	RIC	2462	32:50	6	1.513	A BB	160535.	25.079	2.69
40	RIC	2577	34:22	6	1.584	A BB	143107.	22.357	2.40
41	RIC	2826	37:41	6	1.737	A BB	70932.	11.081	1.19

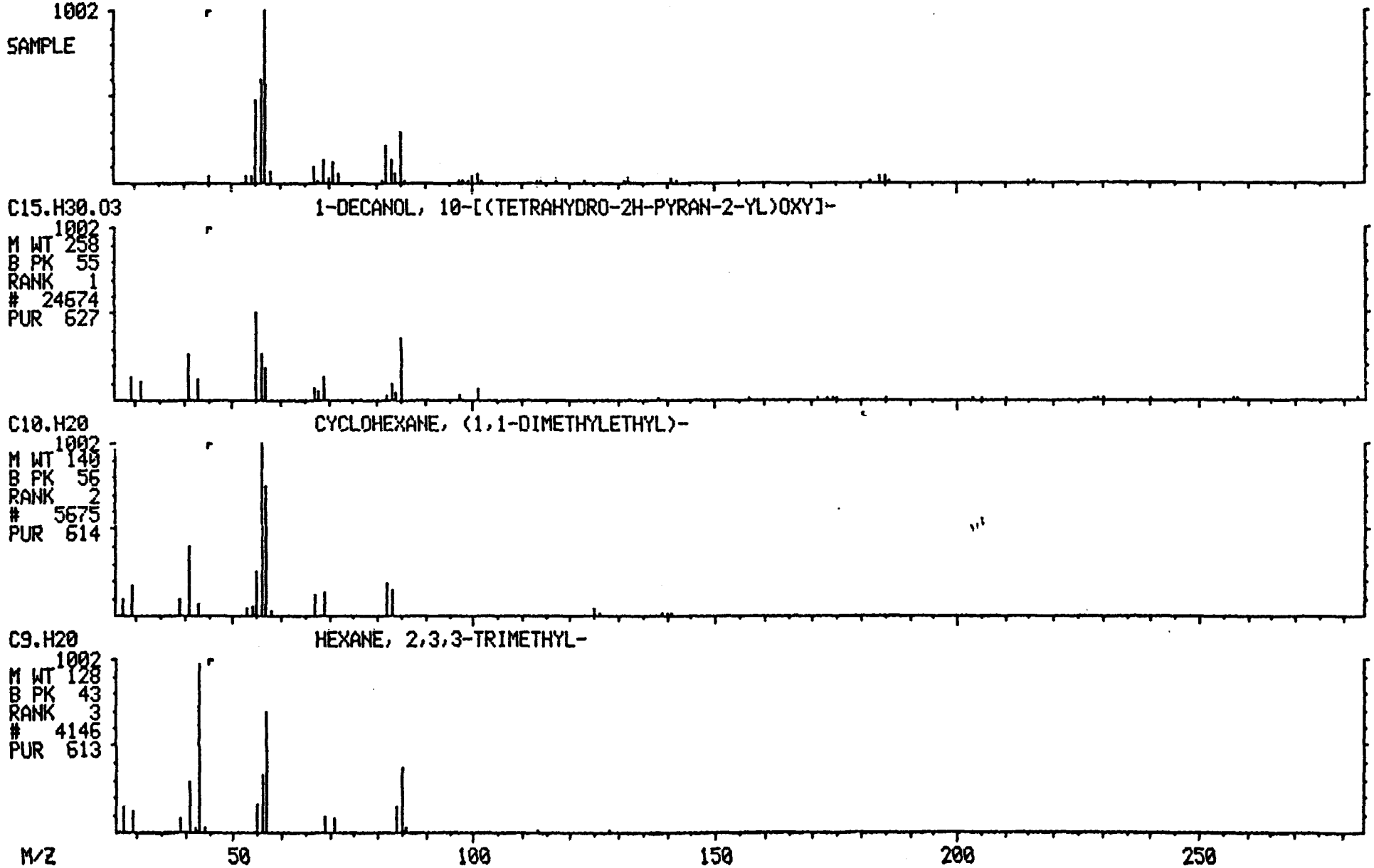
847520750

8475207S1

LIBRARY SEARCH
01/22/92 23:14:00 + 21:42
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1627
CALI: S017007 # 3

BASE M/Z: 57
RIC: 215039.

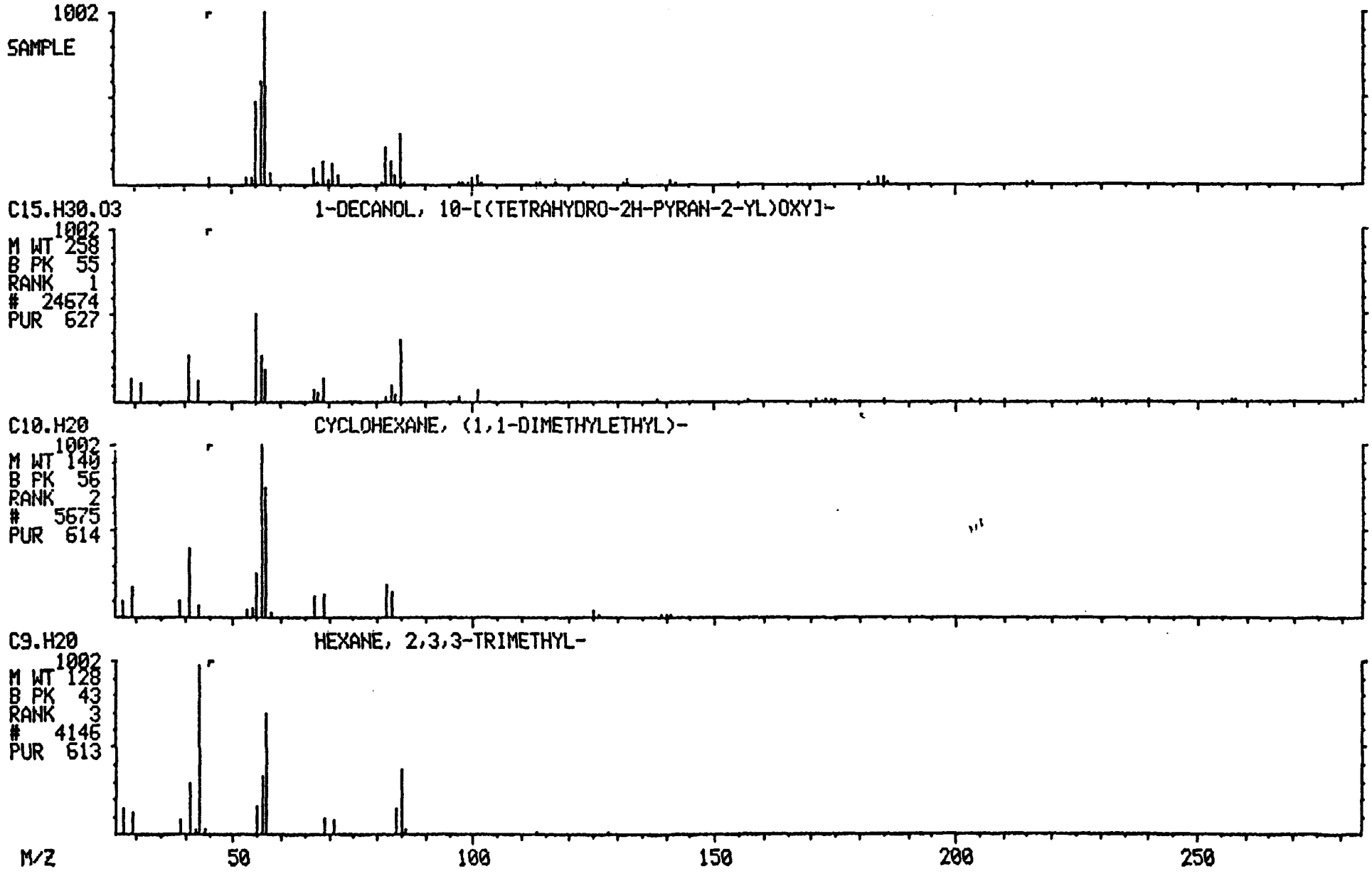


8475207 52

LIBRARY SEARCH
01/22/92 23:14:00 + 21:42
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1627
CALI: S017007 # 3

BASE M/Z: 57
RIC: 215039.

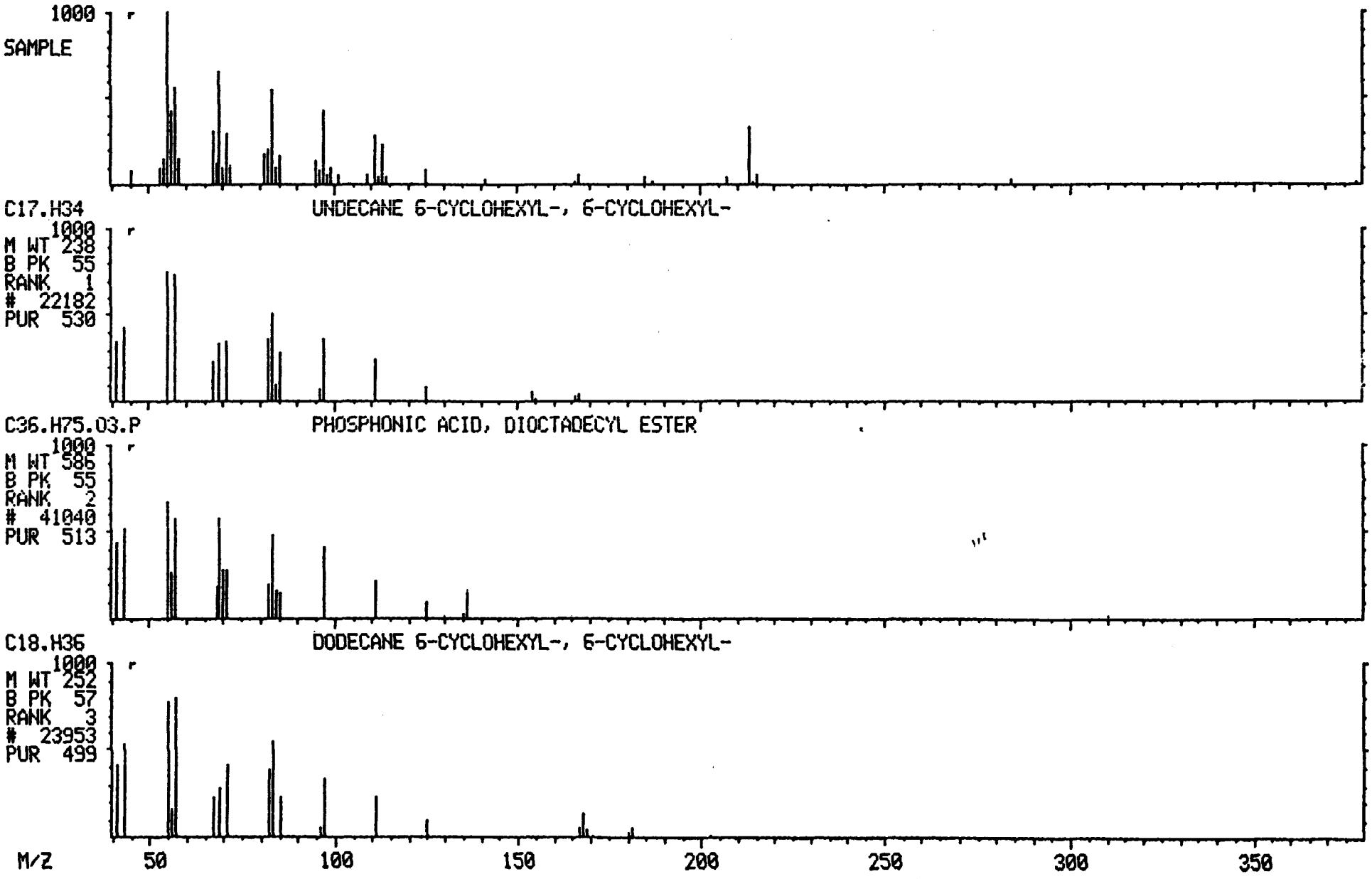


8475207753

LIBRARY SEARCH
01/22/92 23:14:00 + 21:54
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1643
CALI: S017007 # 3

BASE M/Z: 55
RIC: 27007.

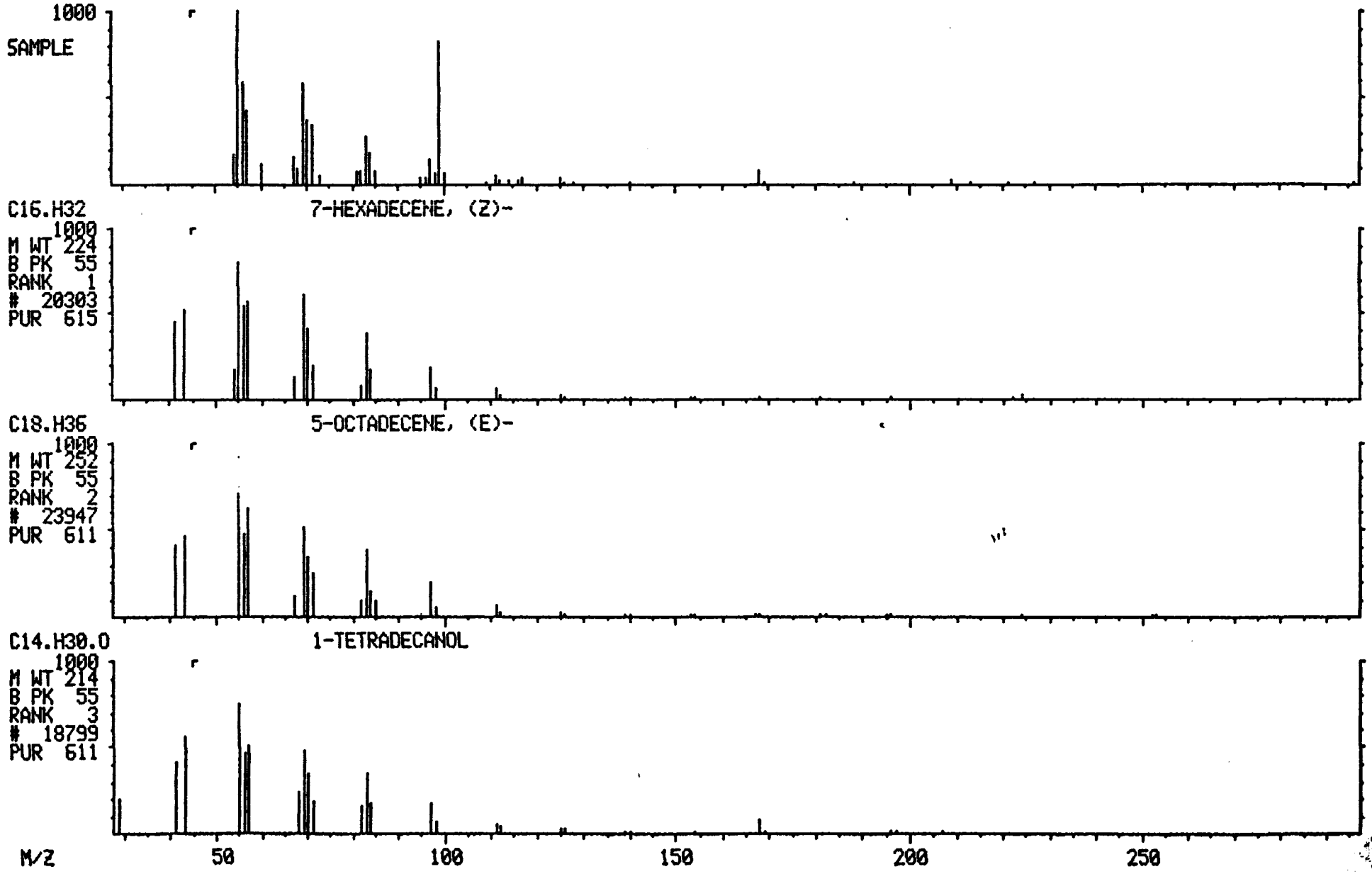


847520754

LIBRARY SEARCH
01/22/92 23:14:00 + 22:02
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1652
CALI: S017007 # 3

BASE M/Z: 55
RIC: 41663.



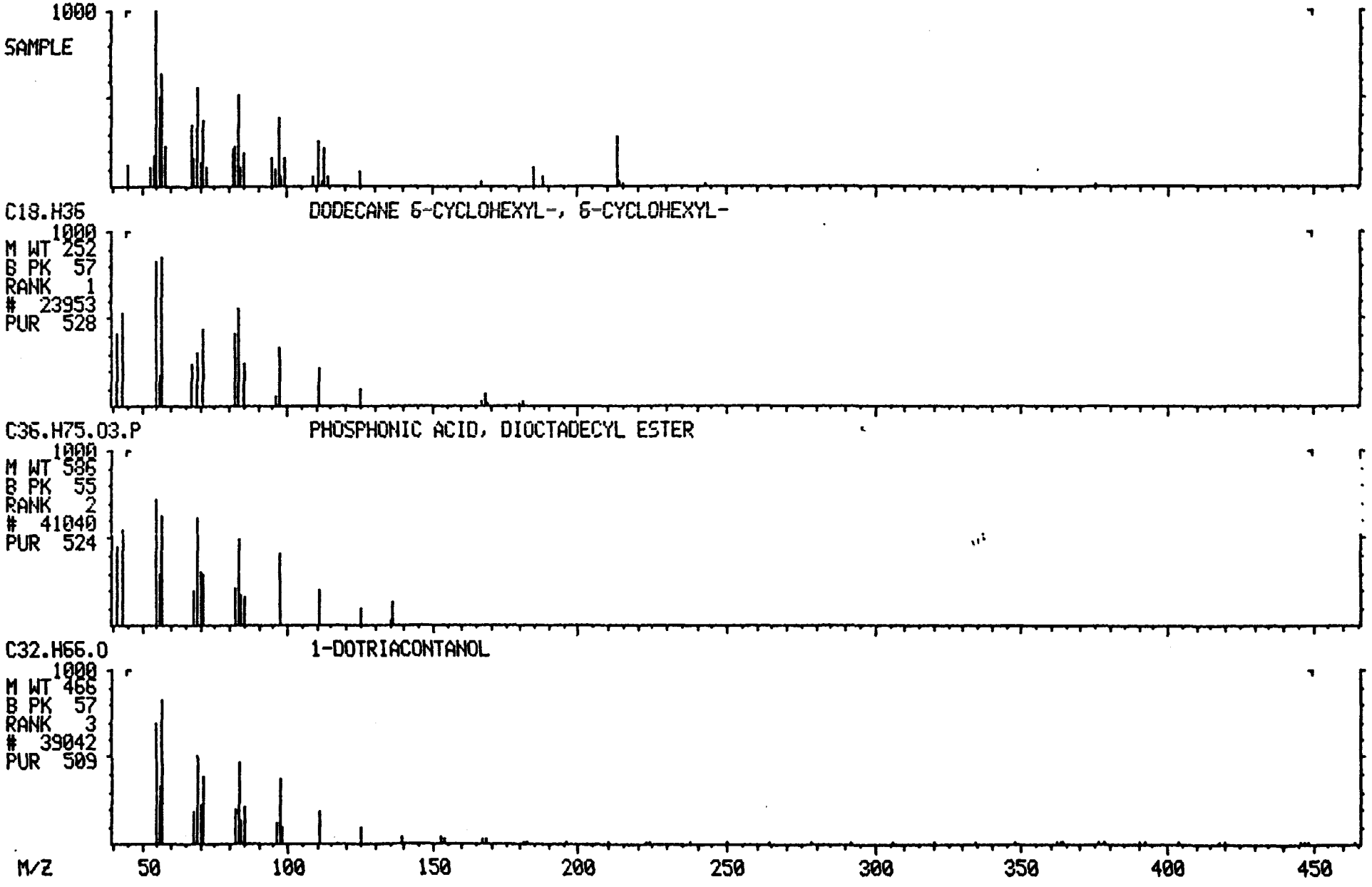
847520755

LIBRARY SEARCH
01/22/92 23:14:00 + 22:08
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1660
CALI: S017007 # 3

BASE M/Z: 55
RIC: 18815.

414

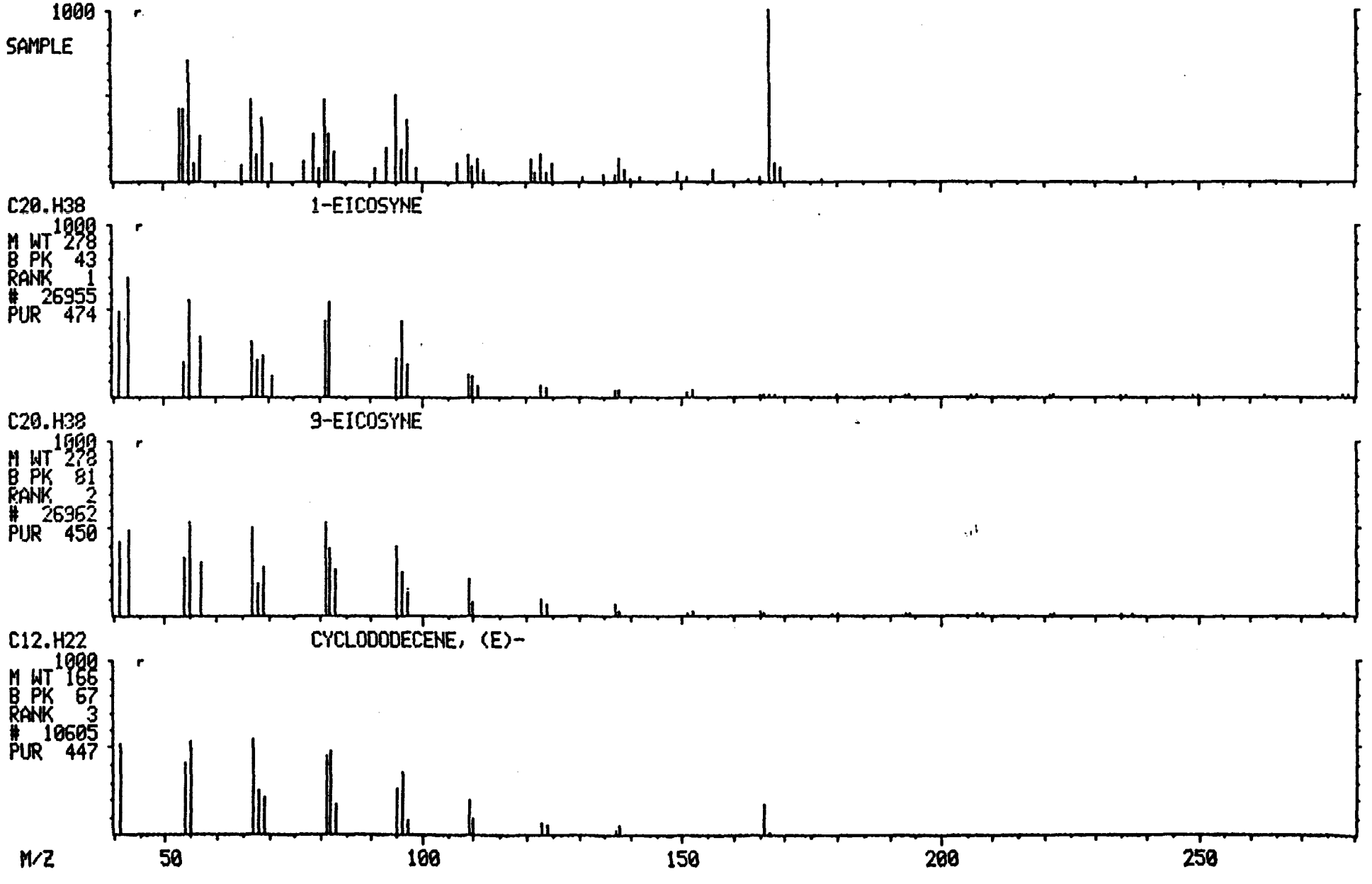


847520756

LIBRARY SEARCH
01/22/92 23:14:00 + 23:59
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1799
CALI: S017007 # 3

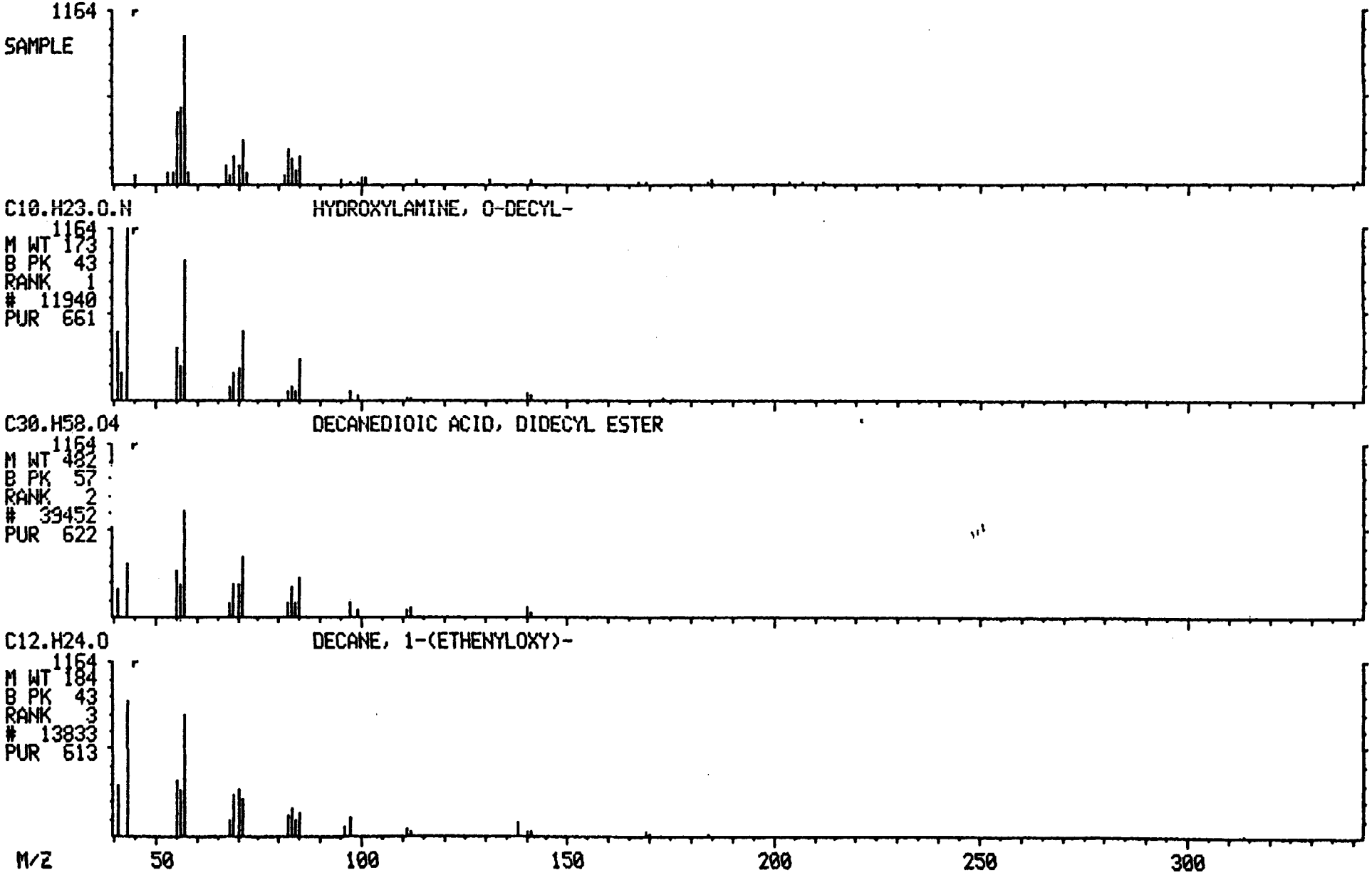
BASE M/Z: 167
RIC: 36287.



8475207757

LIBRARY SEARCH
01/22/92 23:14:00 + 24:12
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1815 BASE M/Z: 57
CALI: S017007 # 3 RIC: 15503.

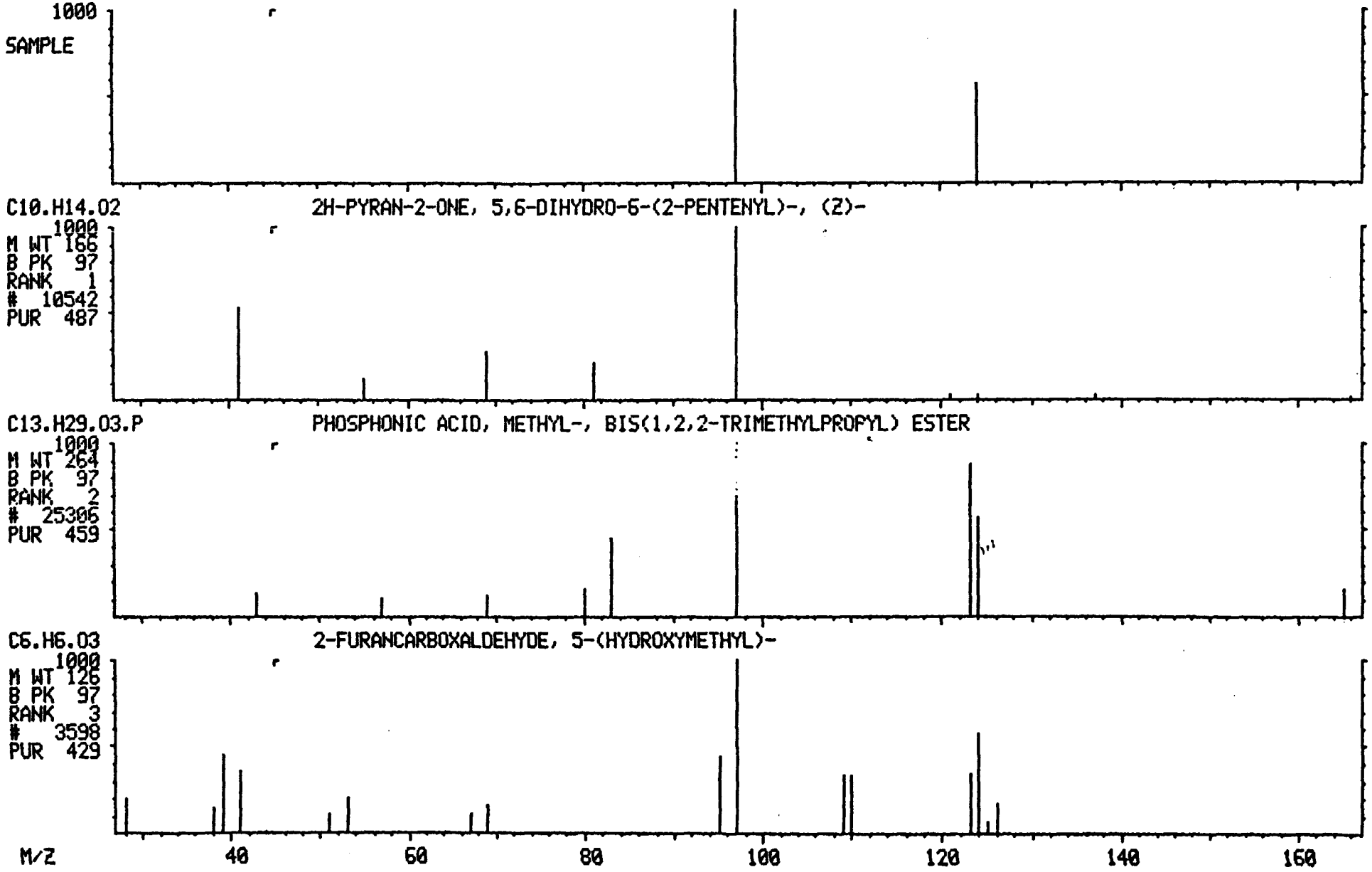


847520758

LIBRARY SEARCH
01/22/92 23:14:00 + 24:14
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #1818
CALI: S017007 # 3

BASE M/Z: 97
RIC: 159.

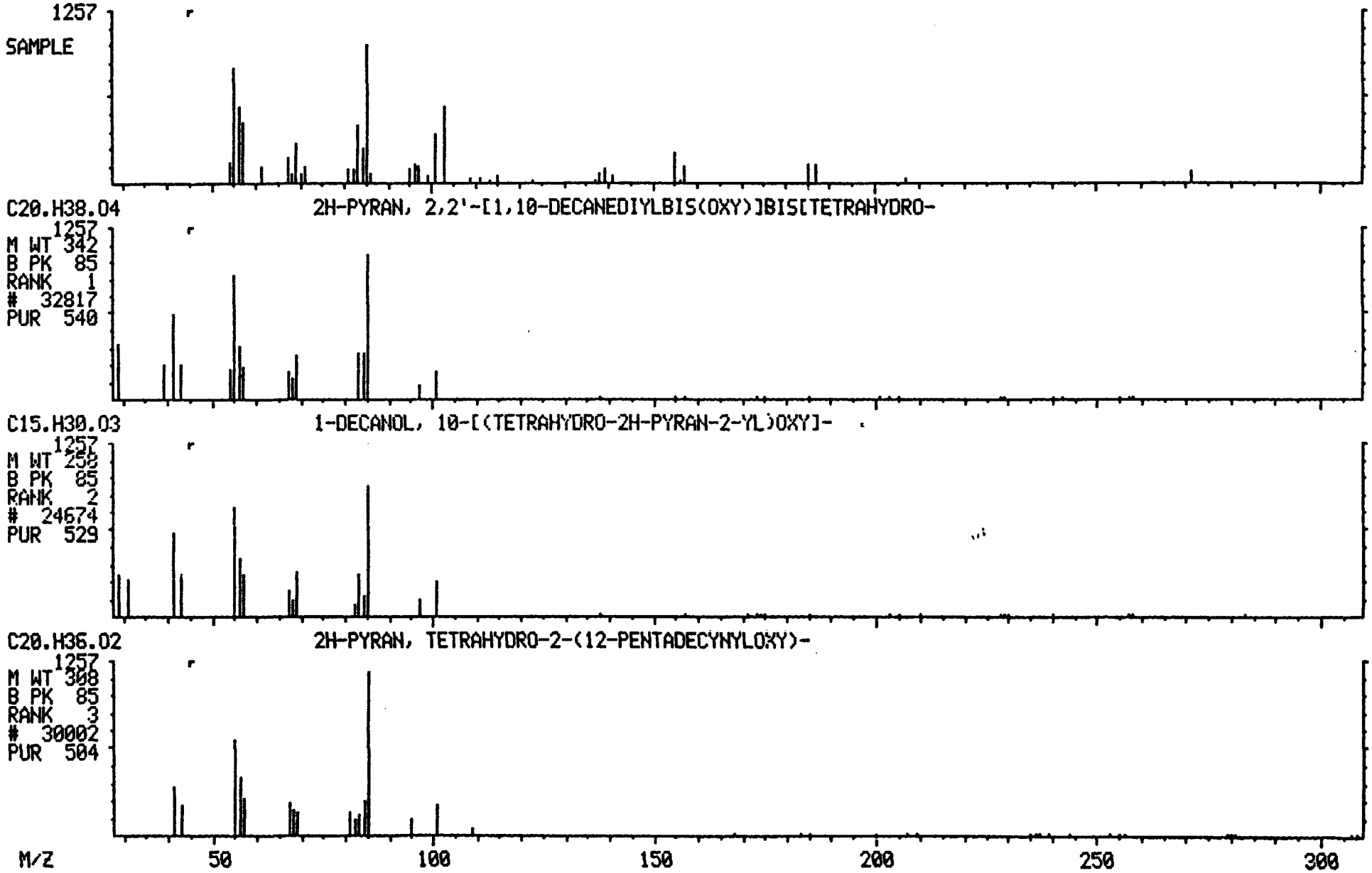


847520759

LIBRARY SEARCH
01/22/92 23:14:00 + 26:40
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2000
CALI: S017007 # 3

BASE M/Z: 85
RIC: 18655.

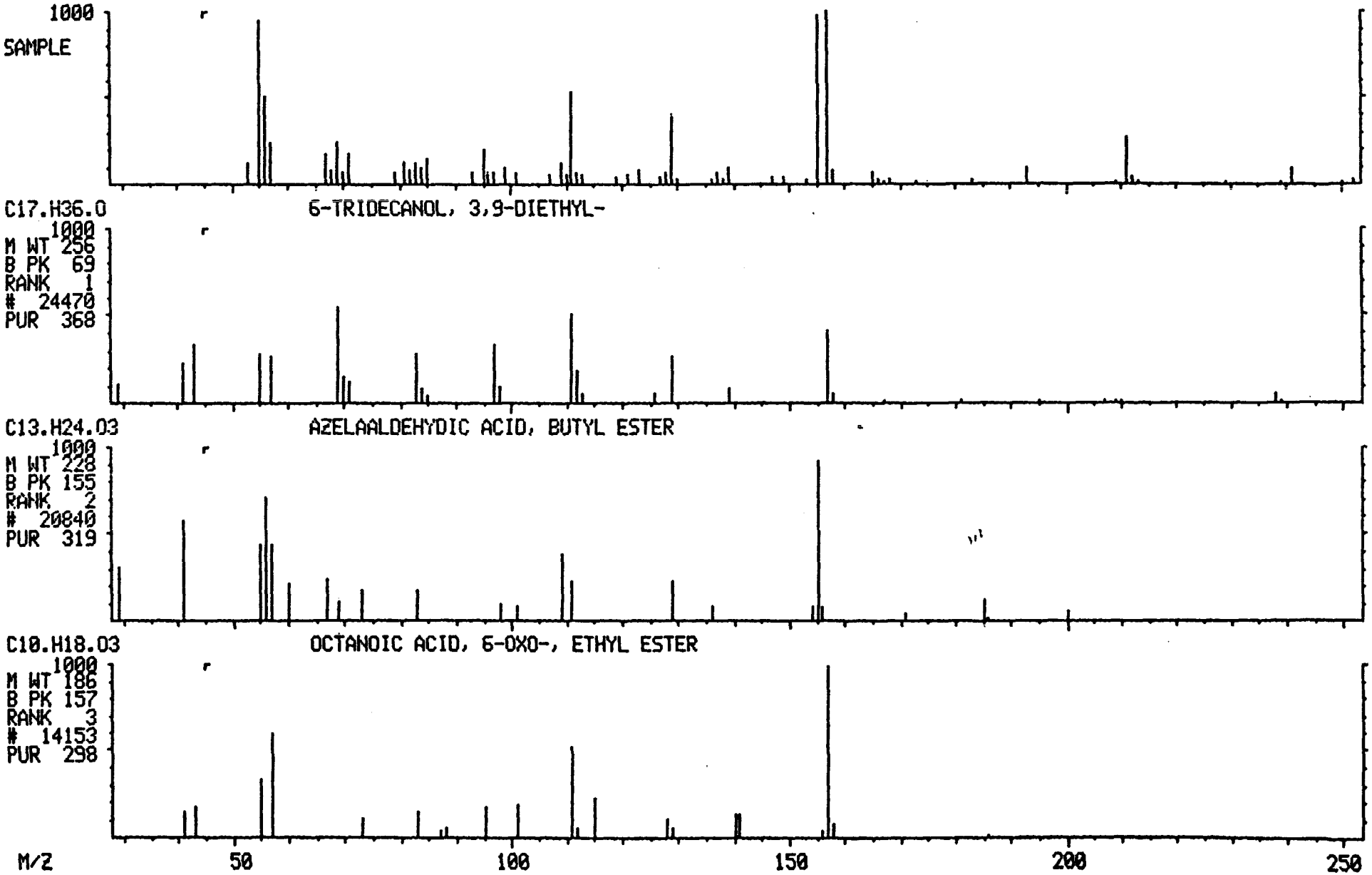


847520760

LIBRARY SEARCH
01/22/92 23:14:00 + 28:16
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2120
CALI: S017007 # 3

BASE M/Z: 157
RIC: 42047.

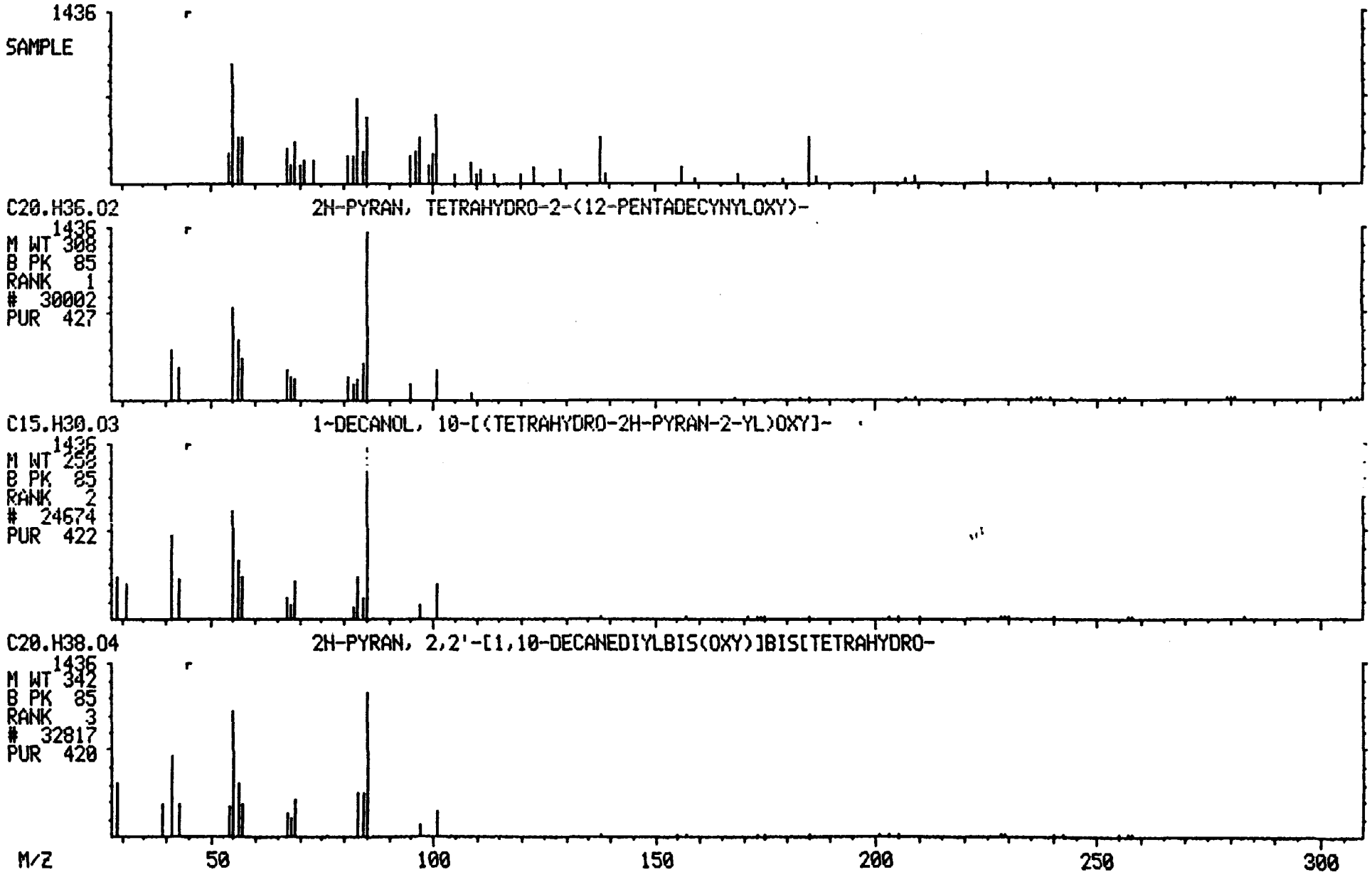


847520761

LIBRARY SEARCH
01/22/92 23:14:00 + 28:53
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 5 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2166
CALI: S017007 # 3

BASE M/Z: 55
RIC: 11919.



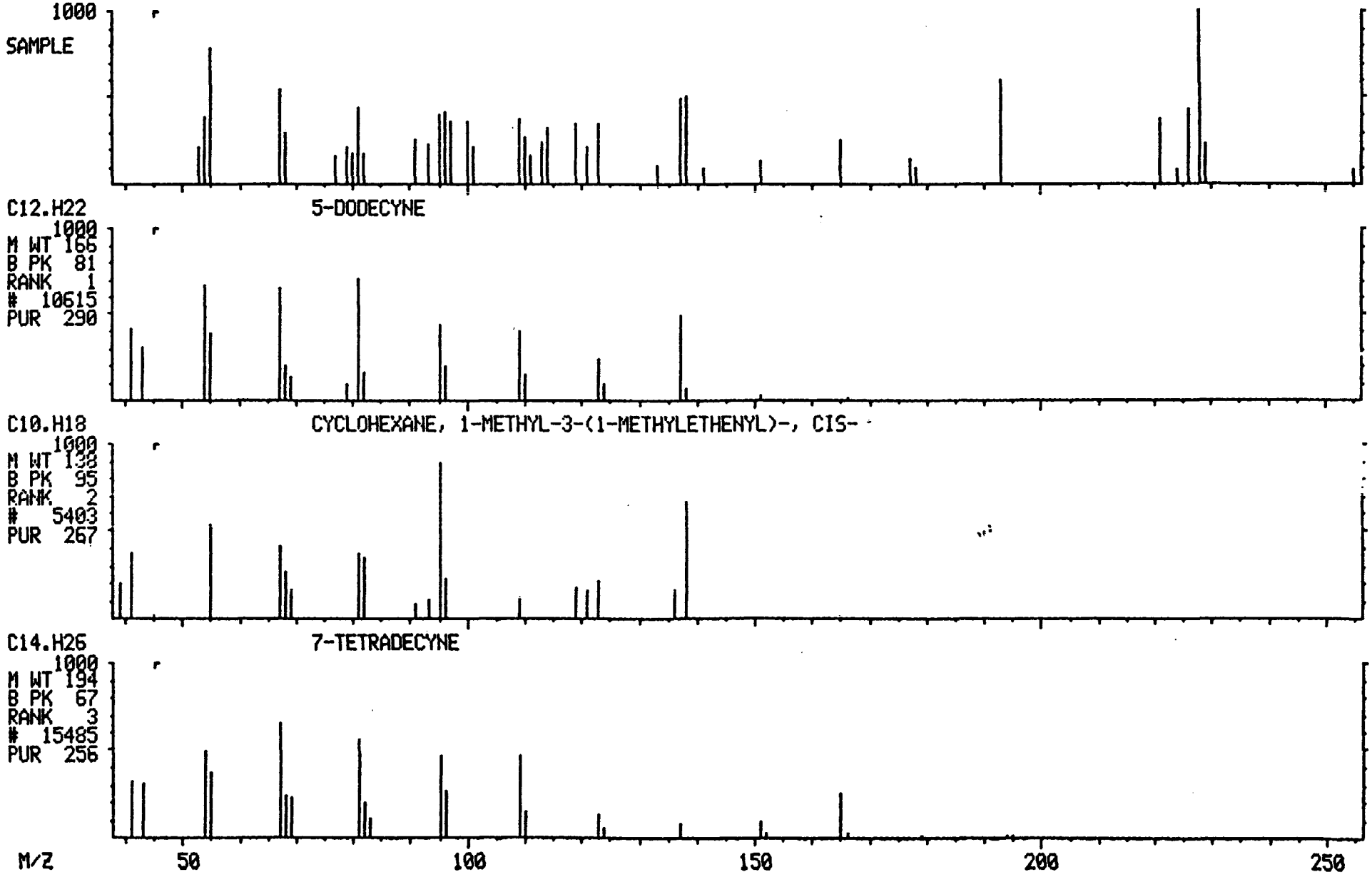
847520762

LIBRARY SEARCH
01/22/92 23:14:00 + 30:08
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 5 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2260
CALI: S017007 # 3

BASE M/Z: 228
RIC: 5615.

421

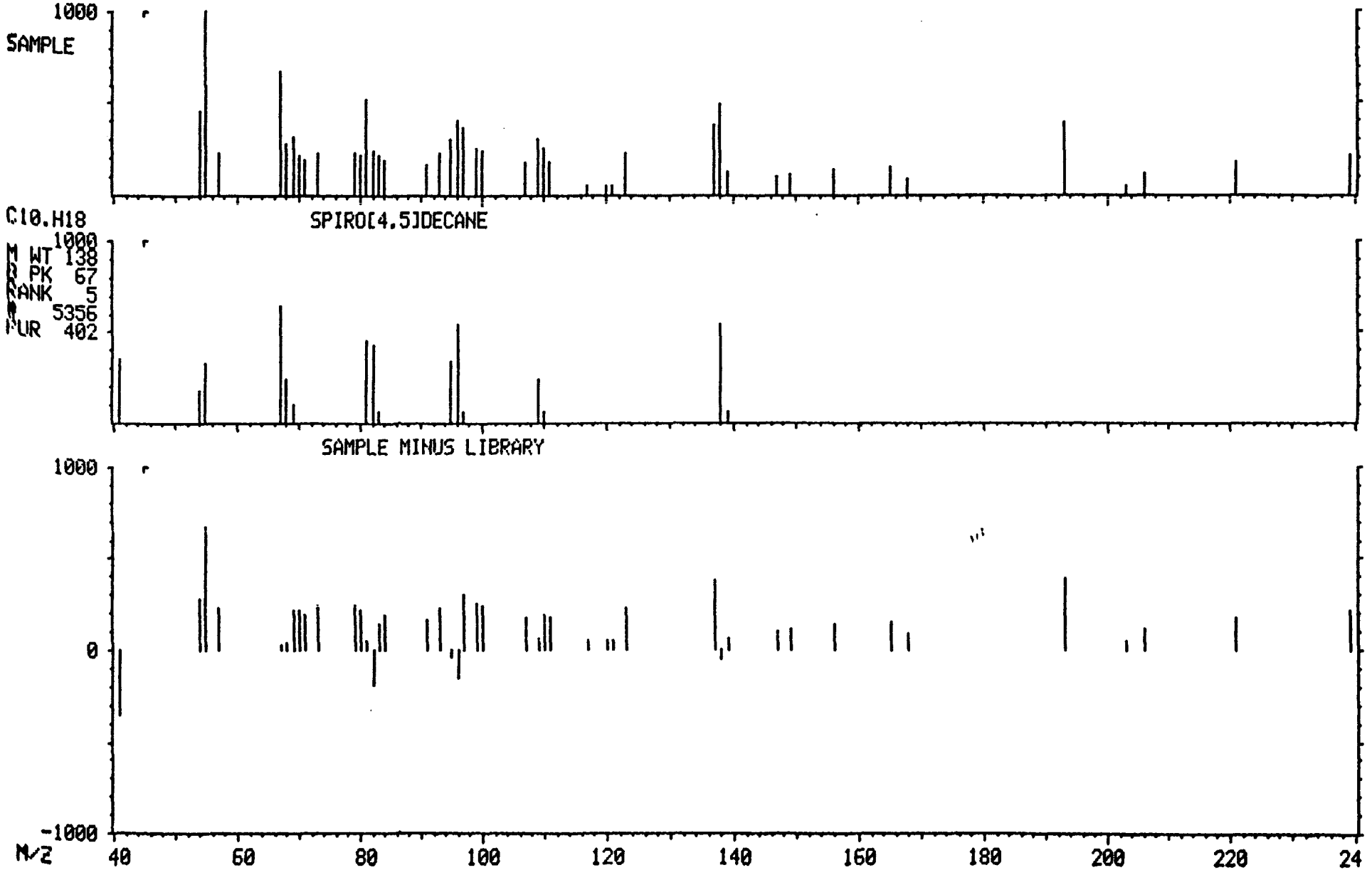


847520763

LIBRARY SEARCH
01/22/92 23:14:00 + 30:30
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2287
CALI: S017007 # 3

BASE M/Z: 55
RIC: 8415.

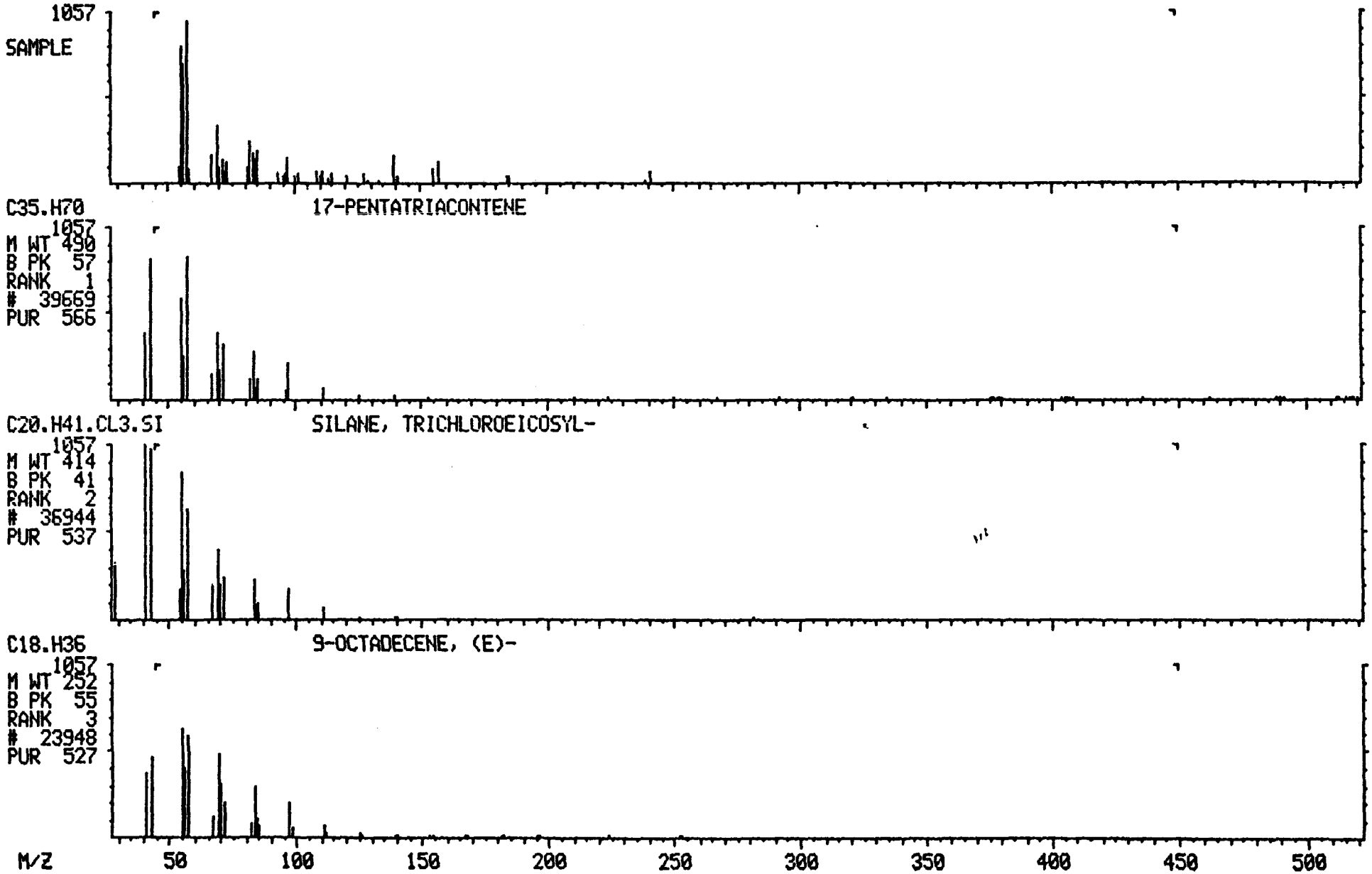


847520764

LIBRARY SEARCH
01/22/92 23:14:00 + 32:34
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2442
CALI: S017007 # 3

BASE M/Z: 57
RIC: 18207.

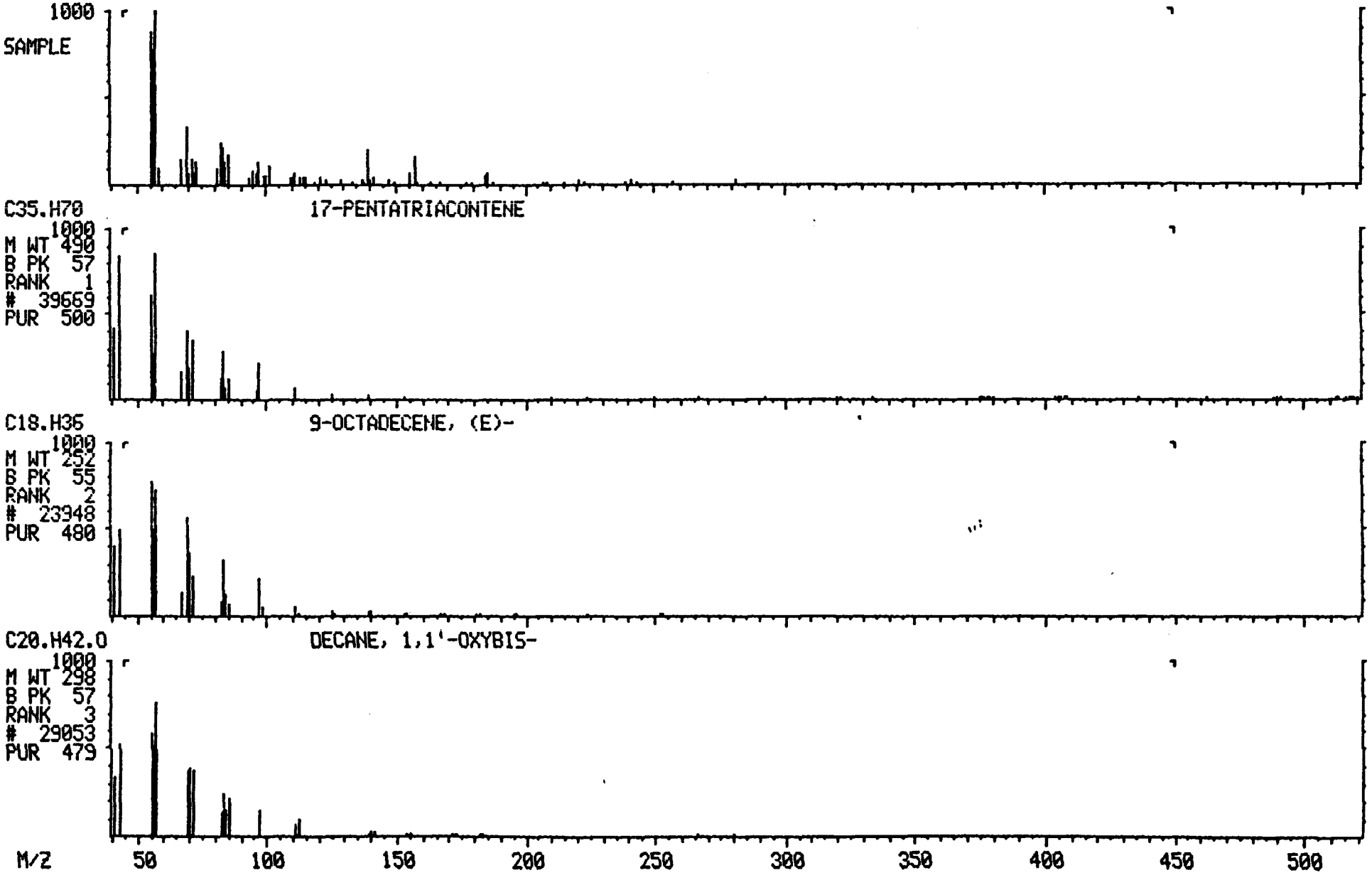


8475207 65

LIBRARY SEARCH
01/22/92 23:14:00 + 32:50
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2462
CALI: S017007 # 3

BASE M/Z: 57
RIC: 36159.

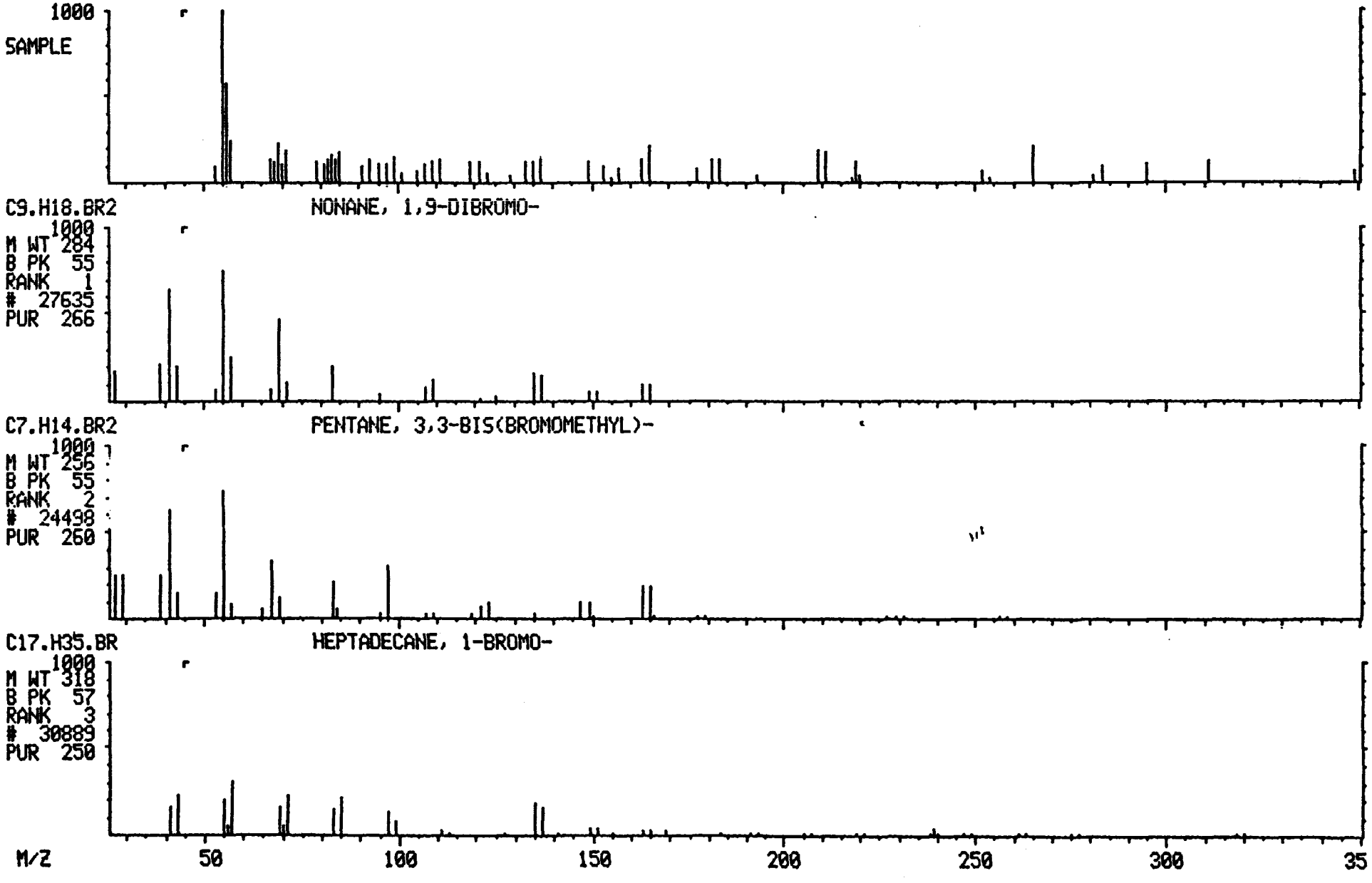


8475207766

LIBRARY SEARCH
01/22/92 23:14:00 + 37:41
SAMPLE: 017007 BN+15/E D-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017007 #2826
CALI: S017007 # 3

BASE M/Z: 55
RIC: 9439.



Quantitation Report File: S017008

ta: S017008.TI
./23/92 1:37:00
Sample: 017008 BN+15/E D-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	590	7:52	1	1.000	A BB	24005.	40.000	NG	9.99
2	136	858	11:26	2	1.000	A BB	53630.	40.000	NG	9.99
3	164	1269	16:55	3	1.000	A BB	26869.	40.000	NG	9.99
4	188	1618	21:34	4	1.000	A BB	48630.	40.000	NG	9.99
5	240	2256	30:05	5	1.000	A BB	30484.	40.000	NG	9.99
6	264	2578	34:22	6	1.000	A BB	16850.	40.000	NG	9.99
7	NOT FOUND									
8	172	1120	14:56	3	0.883	A BV	1239.	1.283	NG	0.32
9	244	2014	26:51	5	0.893	A BB	2549.	2.056	NG	0.51
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	128	862	11:30	2	1.005	A BB	1121.	0.743	NG	0.19
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	153	1276	17:01	3	1.006	A BB	994.	1.226	NG	0.31
8	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

847520768

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29		0.826						
8	14:56	1.00	0.882	1.00	1.28	50.00	0.037	1.438	0.03
9	26:52	1.00	0.893	1.00	2.06	50.00	0.067	1.627	0.04
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51		1.116						
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.74	50.00	0.017	1.125	0.01
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03	1.00	1.007	1.00	1.23	50.00	0.030	1.207	0.02
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520769

Quantitation Report File: S017008 847520770

ta: S017008.TI
/23/92 1:37:00
Sample: 017008 BN+15/E D-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	NOT FOUND									
52	NOT FOUND									
53	NOT FOUND									
54	NOT FOUND									
55	NOT FOUND									
56	NOT FOUND									
57	NOT FOUND									
58	NOT FOUND									
59	NOT FOUND									
60	NOT FOUND									
61	NOT FOUND									
62	178	1622	21:38	4	1.002	A BV	44770.	34.479	NG	8.61
63	178	1634	21:47	4	1.010	A VB	7922.	6.292	NG	1.57
64	149	1794	23:55	4	1.109	A BB	1171.	0.822	NG	0.21

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
5	202	1909	25:27	4	1.180	A BB	39347.	35.402	NG	8.84
6	NOT FOUND									
67	202	1960	26:08	5	0.869	A BB	29652.	19.981	NG	4.99
68	NOT FOUND									
69	228	2252	30:02	5	0.998	A BV	9855.	10.832	NG	2.70
70	NOT FOUND									
71	228	2262	30:10	5	1.003	A VB	11212.	12.758	NG	3.19
72	NOT FOUND									
73	NOT FOUND									
74	NOT FOUND									
75	252	2502	33:22	6	0.971	A BB	11816.	19.667	NG	4.91
76	252	2565	34:12	6	0.995	A VB	5489.	10.129	NG	2.53
77	276	2847	37:58	6	1.104	A BB	2237.	4.223	NG	1.05
78	278	2856	38:05	6	1.108	A BB	413.	0.871	NG	0.22
79	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
0	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	34.48	50.00	0.736	1.068	0.69
63	21:48	1.00	1.011	1.00	6.29	50.00	0.130	1.036	0.13
64	23:56	1.00	1.109	1.00	0.82	50.00	0.019	1.171	0.02
65	25:27	1.00	1.180	1.00	35.40	50.00	0.647	0.914	0.71
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	19.98	50.00	0.778	1.947	0.40
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	10.83	50.00	0.259	1.194	0.22
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	12.76	50.00	0.294	1.153	0.26
72	30:42		1.020						
73	32:34		0.948						
74	33:20		0.970						
75	33:24	1.00	0.972	1.00	19.67	50.00	0.561	1.426	0.39
76	34:13	1.00	0.995	1.00	10.13	50.00	0.261	1.286	0.20
77	38:00	1.00	1.106	1.00	4.22	50.00	0.106	1.257	0.08
78	38:06	1.00	1.109	1.00	0.87	50.00	0.020	1.125	0.02
79	39:02		1.136						

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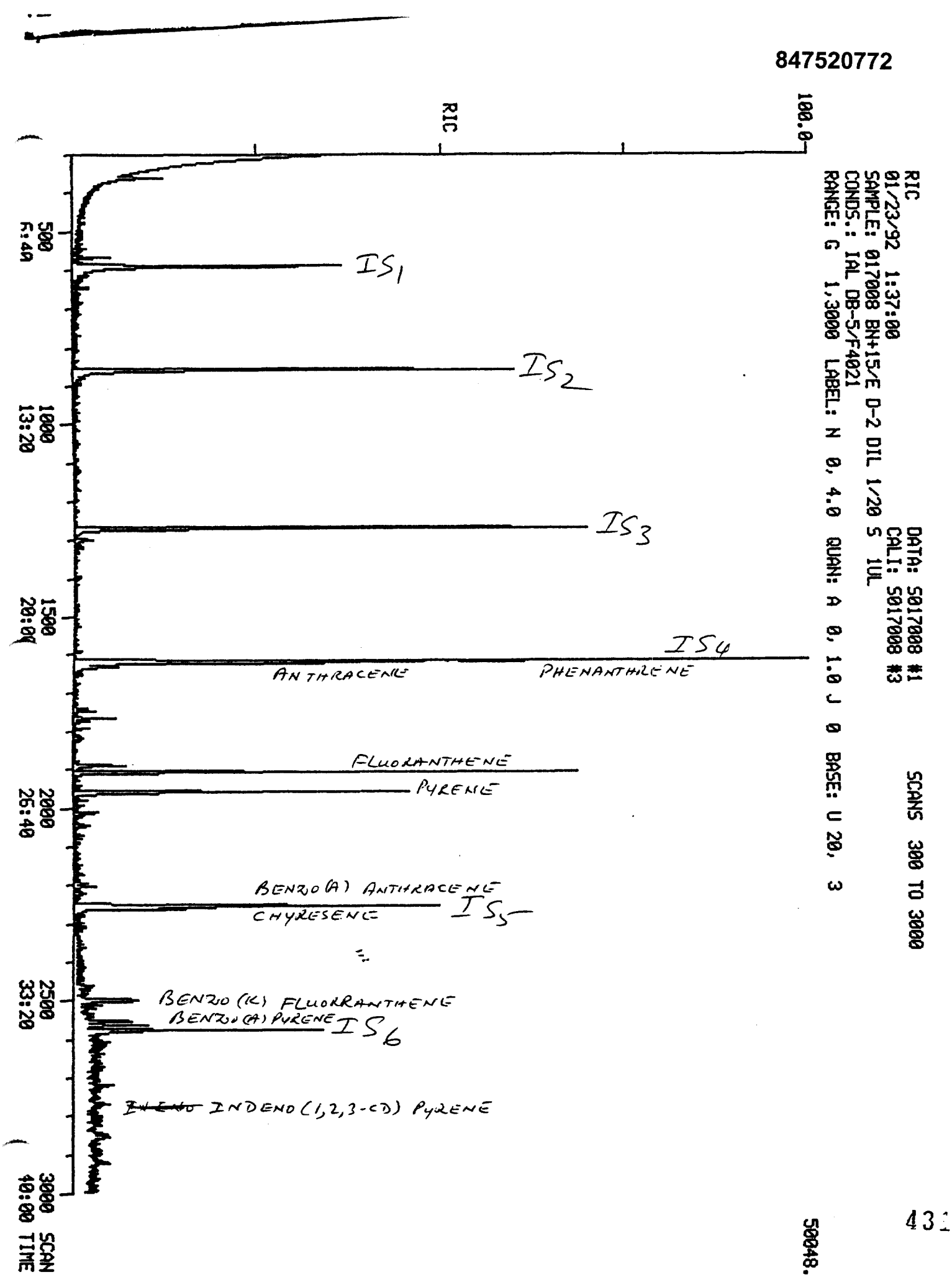

RIC
100.0
RIC
01/23/92 1:37:00
SAMPLE: 017008 BN+15/E D-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: S017008 #1
CALI: S017008 #3
SCANS 300 TO 3000
500
6:40
1000
13:20
1500
20:00
2000
26:40
2500
33:20
3000
40:00 TIME
SCAN
IS1
IS2
IS3
IS4
ANTHRACENE
PHENANTHRENE
FLUORANTHENE
PYRENE
BENZO(A) ANTHRACENE
CHYRESENE
IS5
BENZO(K) FLUORANTHENE
BENZO(A) PYRENE
IS6
INDENO(1,2,3-CD) PYRENE
50048.

Quantitation Report File: SSRT01

Data: S017008.TI
1/23/92 1:37:00
Sample: 017008 BN+15/E D-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN

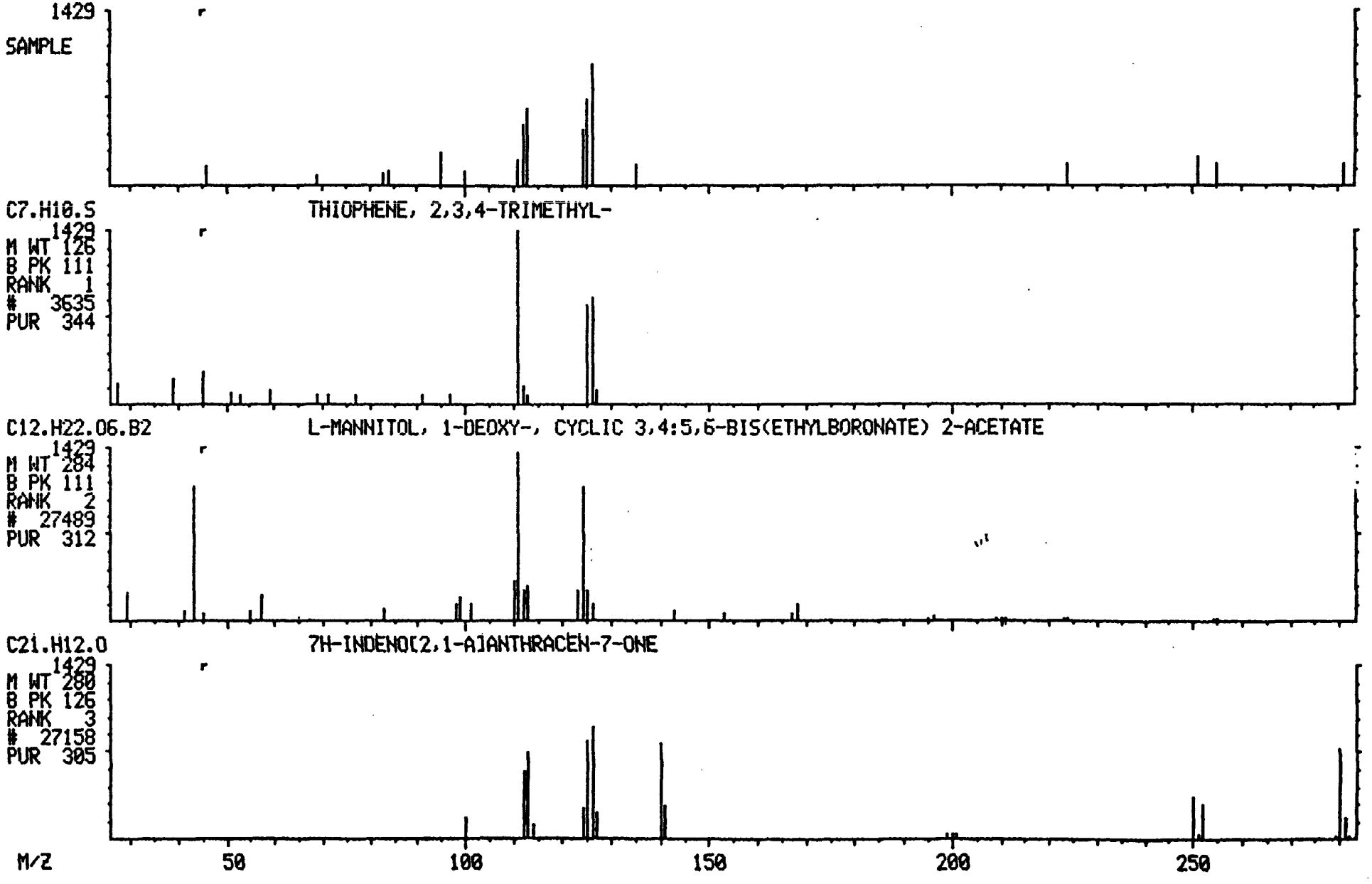
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	590	7:52	5	0.364	A BB	110301.	73.066	10.14
2	RIC	858	11:26	5	0.529	A BB	118916.	78.773	10.93
3	RIC	1269	16:55	5	0.782	A BB	145908.	96.653	13.41
4	RIC	1618	21:34	5	0.998	A BV	133466.	88.410	12.27
5	RIC	1622	21:38	5	1.000	A VB	150961.	100.000	13.88
6	RIC	1909	25:27	5	1.177	A BB	98181.	65.037	9.02
7	RIC	1960	26:08	5	1.208	A BB	86620.	57.379	7.96
8	RIC	2256	30:05	5	1.391	A BV	117417.	77.779	10.79
9	RIC	2262	30:10	5	1.395	A VB	27865.	18.458	2.56
10	RIC	2500	33:20	5	1.541	A BB	33682.	22.312	3.10
11	RIC	2578	34:22	5	1.589	A BB	64636.	42.817	5.94

847520774

LIBRARY SEARCH
01/23/92 1:37:00 + 33:20
SAMPLE: 017008 BN+15/E D-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017008 #2500
CALI: S017008 # 3

BASE M/Z: 126
RIC: 1893.



Quantitation Report File: S017009

ata: S017009.TI
1/23/92 23:07:00
Sample: 017009 BN+15/E E-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520775

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	589	7:51	1	1.000	A BB	35114.	40.000 NG	13.27
2	136	858	11:26	2	1.000	A BB	60774.	40.000 NG	13.27
3	164	1270	16:56	3	1.000	A BB	29445.	40.000 NG	13.27
4	188	1620	21:36	4	1.000	A BB	48440.	40.000 NG	13.27
5	240	2257	30:06	5	1.000	A BB	37627.	40.000 NG	13.27
6	264	2579	34:23	6	1.000	A BB	24008.	40.000 NG	13.27
7	82	707	9:26	2	0.824	A BB	2161.	2.483 NG	0.82
8	172	1120	14:56	3	0.882	A BB	1805.	1.706 NG	0.57
9	244	2014	26:51	5	0.892	A BB	2968.	1.940 NG	0.64
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	45	662	8:50	1	1.124	A BB	506.	0.393 NG	0.13
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	863	11:30	2	1.006	A BB	1359.	0.795 NG	0.26
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

847520776

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	0.99	0.826	1.00	2.48	50.00	0.028	0.573	0.05
8	14:56	1.00	0.882	1.00	1.71	50.00	0.049	1.438	0.03
9	26:52	1.00	0.893	1.00	1.94	50.00	0.063	1.627	0.04
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51	1.00	1.116	1.01	0.39	50.00	0.012	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.79	50.00	0.018	1.125	0.02
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520778

Quantitation Report File: S017009

ata: S017009.TI
01/23/92 23:07:00
Sample: 017009 BN+15/E E-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

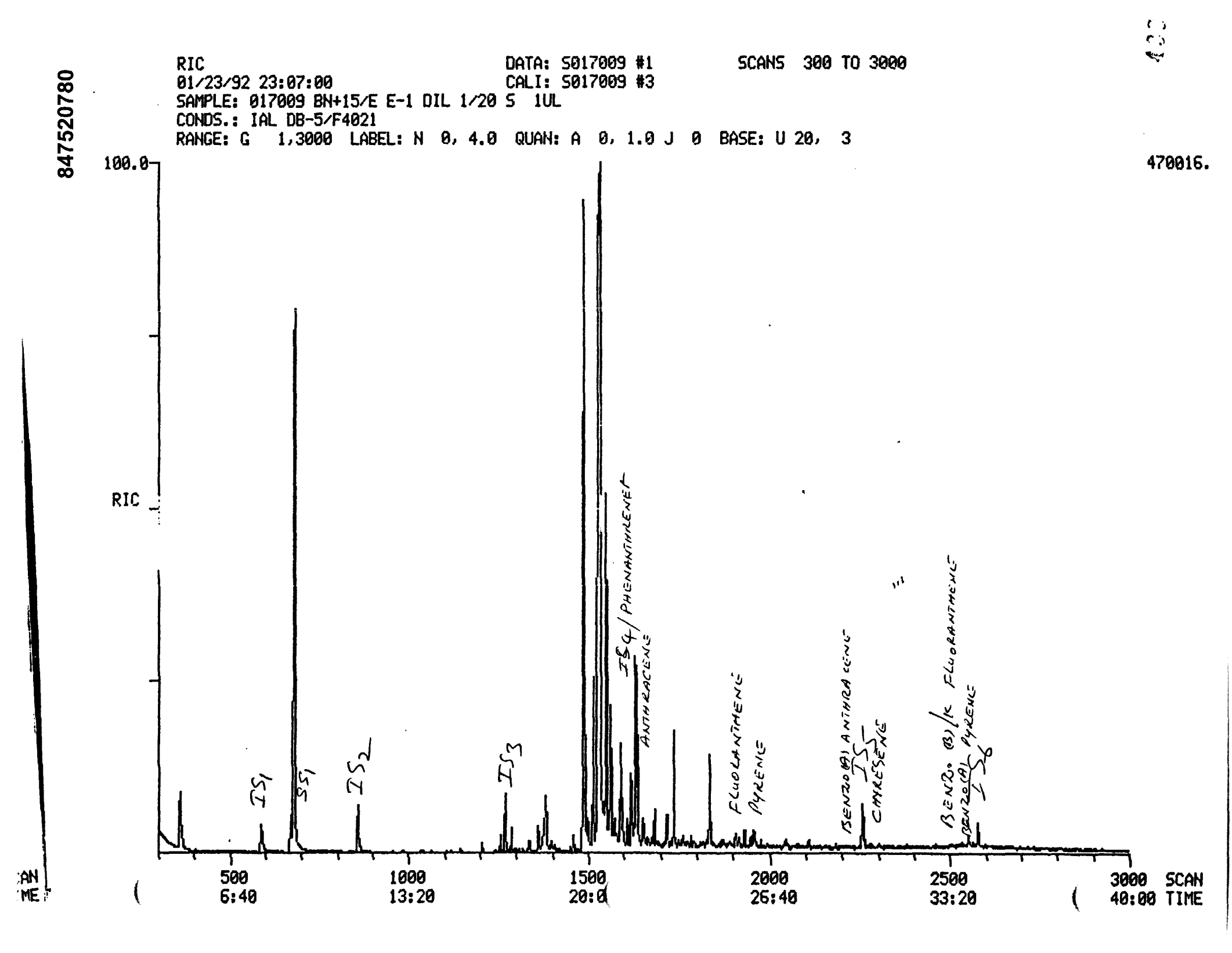
AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	149	1404	18:43	3	1.106	A BB	507.	0.540 NG	0.18
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	77	1440	19:12	4	0.889	A BB	250.	0.152 NG	0.05
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1626	21:41	4	1.004	A BV	7463.	5.770 NG	1.91
63	178	1626	21:41	4	1.004	A BV	7463.	5.950 NG	1.97
64	149	1794	23:55	4	1.107	A BB	2435.	1.717 NG	0.57

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1910	25:28	4	1.179	A BB	10817.	9.771	NG	3.24
66	NOT FOUND									
67	202	1961	26:09	5	0.869	A BB	10583.	5.777	NG	1.92
68	NOT FOUND									
69	228	2253	30:02	5	0.998	A BV	4608.	4.103	NG	1.36
70	NOT FOUND									
71	228	2262	30:10	5	1.002	A VB	4796.	4.421	NG	1.47
72	149	2302	30:42	5	1.020	A BB	1468.	2.954	NG	0.98
73	NOT FOUND									
74	252	2500	33:20	6	0.969	A BV	3445.	4.006	NG	1.33
75	252	2504	33:23	6	0.971	A VB	2205.	2.576	NG	0.85
76	252	2566	34:13	6	0.995	A BB	2974.	3.852	NG	1.28
77	276	2849	37:59	6	1.105	A BB	1208.	1.601	NG	0.53
78	NOT FOUND									
79	276	2926	39:01	6	1.135	A BB	916.	1.122	NG	0.37

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42	1.00	1.105	1.00	0.54	50.00	0.014	1.276	0.01
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15	1.00	0.892	1.00	0.15	50.00	0.004	1.360	0.00
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	5.77	50.00	0.123	1.068	0.12
63	21:48	0.99	1.011	0.99	5.95	50.00	0.123	1.036	0.12
64	23:56	1.00	1.109	1.00	1.72	50.00	0.040	1.171	0.03
65	25:27	1.00	1.180	1.00	9.77	50.00	0.179	0.914	0.20
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	5.78	50.00	0.225	1.947	0.12
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	4.10	50.00	0.098	1.194	0.08
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	4.42	50.00	0.102	1.153	0.09
72	30:42	1.00	1.020	1.00	2.95	50.00	0.031	0.528	0.06
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	4.01	50.00	0.115	1.433	0.08
75	33:24	1.00	0.972	1.00	2.58	50.00	0.073	1.426	0.05
76	34:13	1.00	0.995	1.00	3.85	50.00	0.099	1.286	0.08
77	38:00	1.00	1.106	1.00	1.60	50.00	0.040	1.257	0.03
78	38:06		1.109						
79	39:02	1.00	1.136	1.00	1.12	50.00	0.031	1.360	0.02


RIC
01/23/92 23:07:00
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: S017009 #1
CALI: S017009 #3
SCANS 300 TO 3000
847520780
100.0
470016.
RIC
IS1
SS1
IS2
IS3
IS4/PHENANTHRENE
ANTHRACENE
FLUORANTHENE
PYRENE
BENZO(A)ANTHRACENE
IS5
CHRYSENE
BENZO. (B)/K FLUORANTHENE
BENZO(A) PYRENE
IS6
500
6:40
1000
13:20
1500
20:0
2000
26:40
2500
33:20
3000 SCAN
40:00 TIME

Quantitation Report File: SSRT01

ata: S017009.TI
J1/23/92 23:07:00
Sample: 017009 BN+15/E E-1 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN
21	UNKNOWN
22	UNKNOWN
23	UNKNOWN
24	UNKNOWN
25	UNKNOWN
26	UNKNOWN
27	UNKNOWN
28	UNKNOWN
29	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	361 VTC	4:49	15	0.235	A BB	198979.	4.295	1.51
2	RIC	590	7:52	15	0.384	A BB	125970.	2.719	0.96
3	RIC	672	8:58	15	0.438	A BV	124131.	2.679	0.94
4	RIC	682	9:06	15	0.444	A VB	1527640.	32.975	11.63
5	RIC	858	11:26	15	0.559	A BB	149436.	3.226	1.14
6	RIC	1258	16:46	15	0.820	A BB	43821.	0.946	0.33
7	RIC	1270	16:56	15	0.827	A BV	141937.	3.064	1.08
8	RIC	1287	17:10	15	0.838	A VB	51660.	1.115	0.39
9	RIC	1338	17:50	15	0.872	A BB	44537.	0.961	0.34
10	RIC	1361	18:09	15	0.887	A BV	72368.	1.562	0.55
11	RIC	1384	18:27	15	0.902	A VB	268188.	5.789	2.04
12	RIC	1490	19:52	15	0.971	A BV	2013720.	43.467	15.33
13	RIC	1500	20:00	15	0.977	A VB	67440.	1.456	0.51
14	RIC	1515	20:12	15	0.987	A BB	341848.	7.379	2.60

Pk	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
5	RIC8	1535	20:28	15	1.000	A BV	4632730.	100.000 -769	35.27
16	RIC 9	1551	20:41	15	1.010	A VB	637408.	13.759 -109	4.85
17	RIC 10	1564	20:51	15	1.019	A BB	285872.	6.171 -47.7	2.18
18	RIC 11	1592	21:14	15	1.037	A BB	311936.	6.733 -515	2.37
19	RIC	1611	21:29	15	1.050	A BB	44064.	0.951	0.34
20	RIC	1620	21:36	15	1.055	A BV	242083.	5.225	1.84
21	RIC 12	1632	21:46	15	1.063	A VB	873584.	18.857 -145	6.65
22	RIC	1653	22:02	15	1.077	A BB	89568.	1.933	0.68
23	RIC 13	1685	22:28	15	1.098	A BB	101122.	2.183 -16.9	0.77
24	RIC	1719	22:55	15	1.120	A BB	86762.	1.873	0.66
25	RIC 14	1738	23:10	15	1.132	A BB	207872.	4.487 -346	1.58
26	RIC 15	1837	24:30	15	1.197	A BB	209632.	4.525 -346	1.60
27	RIC	1932	25:46	15	1.259	A BB	43058.	0.929	0.33
28	RIC	2257	30:06	15	1.470	A BB	135536.	2.926	1.03
29	RIC	2579	34:23	15	1.680	A BB	63848.	1.378	0.49

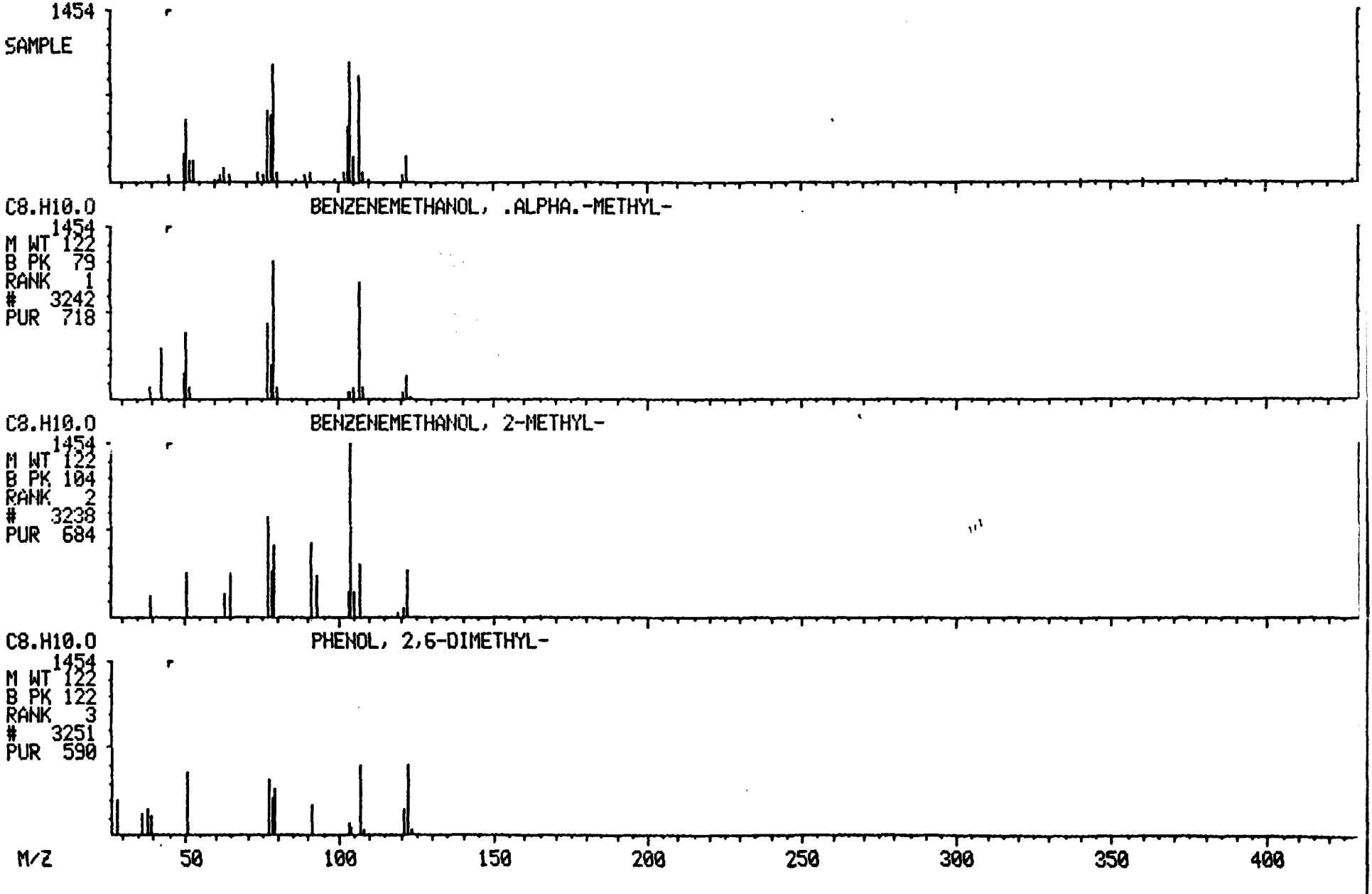
847520782

847520783

LIBRARY SEARCH
01/23/92 23:07:00 + 8:58
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 # 672
CALI: S017009 # 3

BASE M/Z: 104
RIC: 19871.



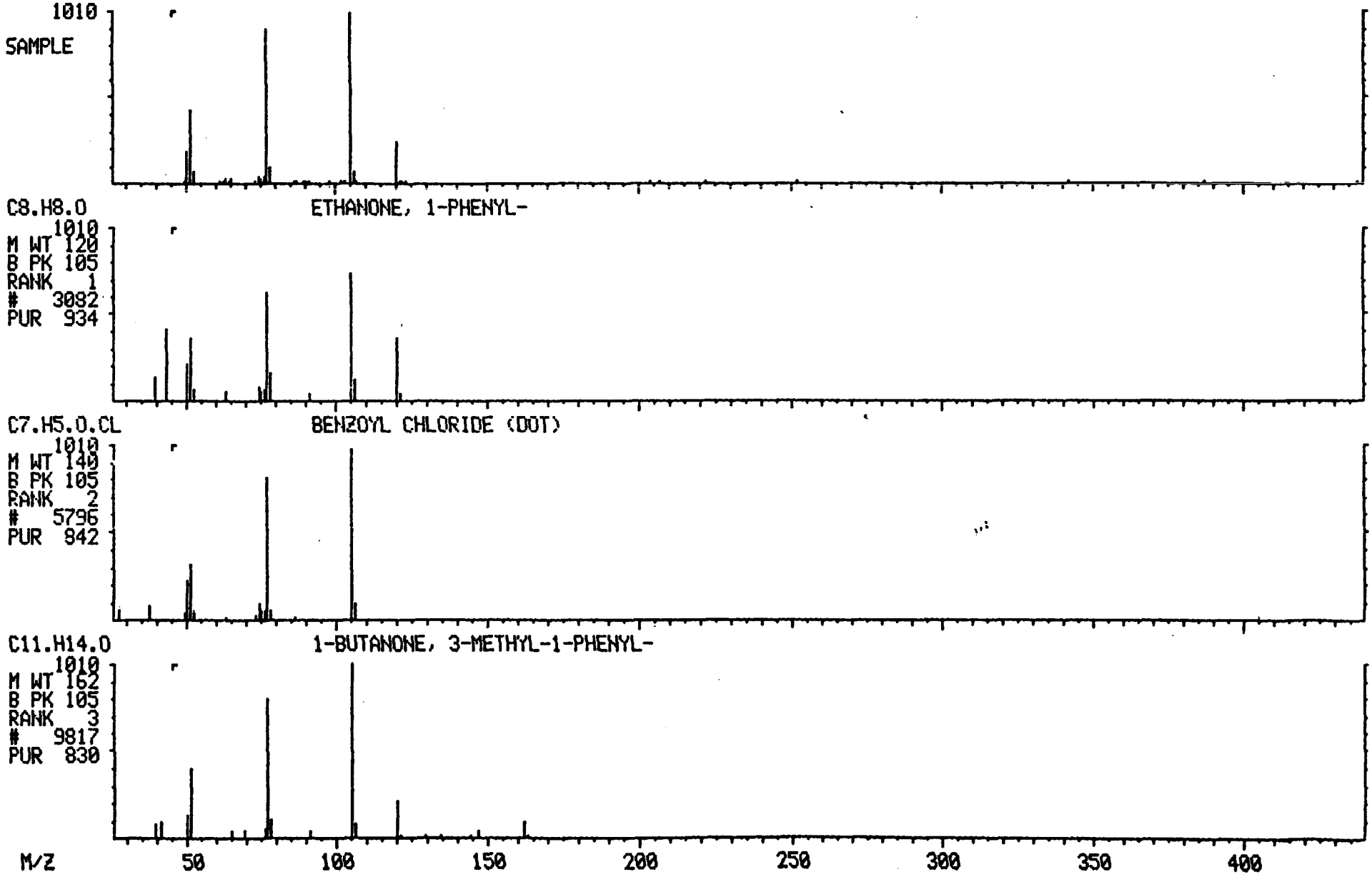
8475207 84

LIBRARY SEARCH
01/23/92 23:07:00 + 9:06
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: 5017009 # 682
CALI: 5017009 # 3

BASE M/Z: 105
RIC: 279039.

443

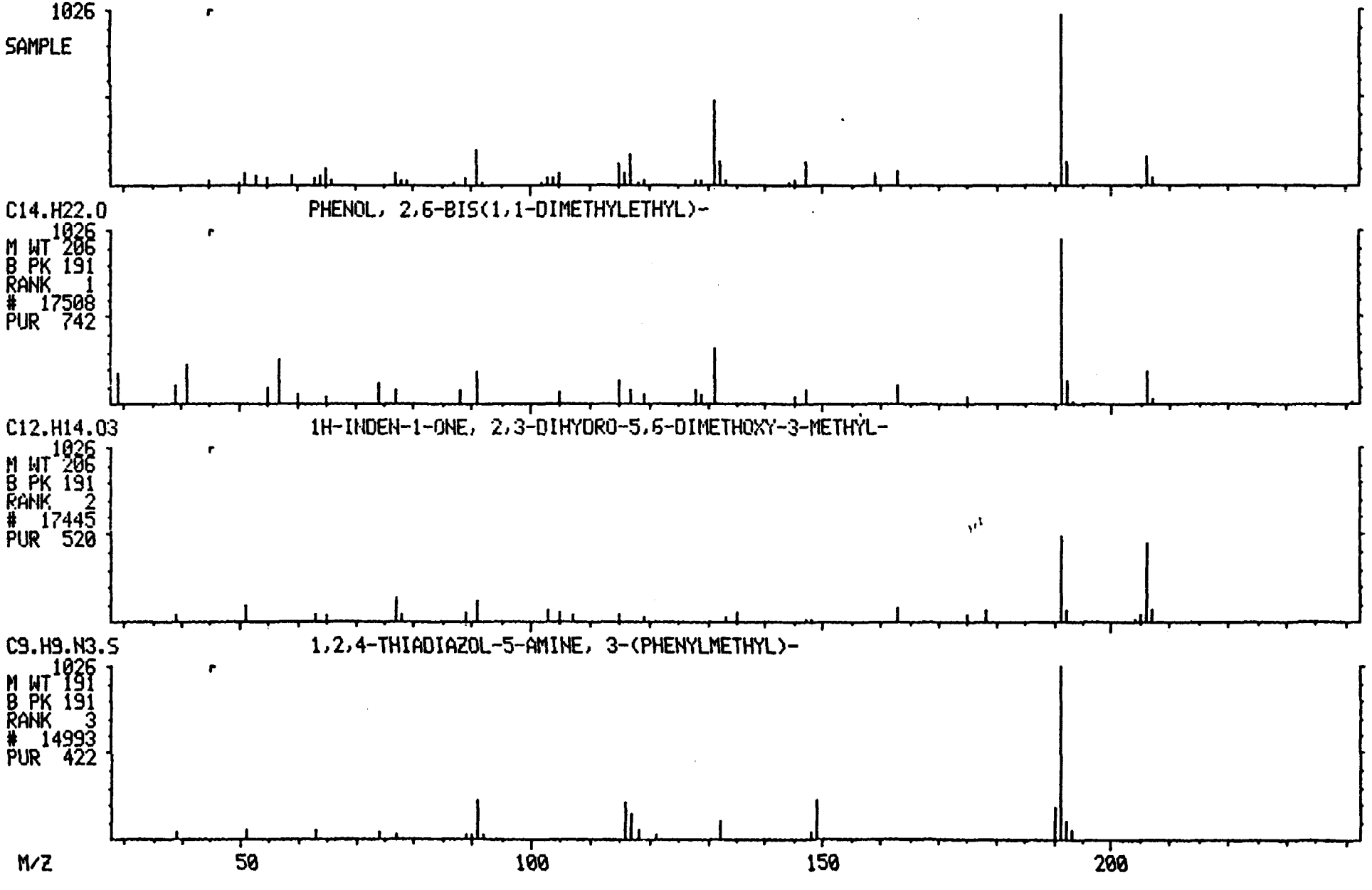


847520785

LIBRARY SEARCH
01/23/92 23:07:00 + 17:10
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

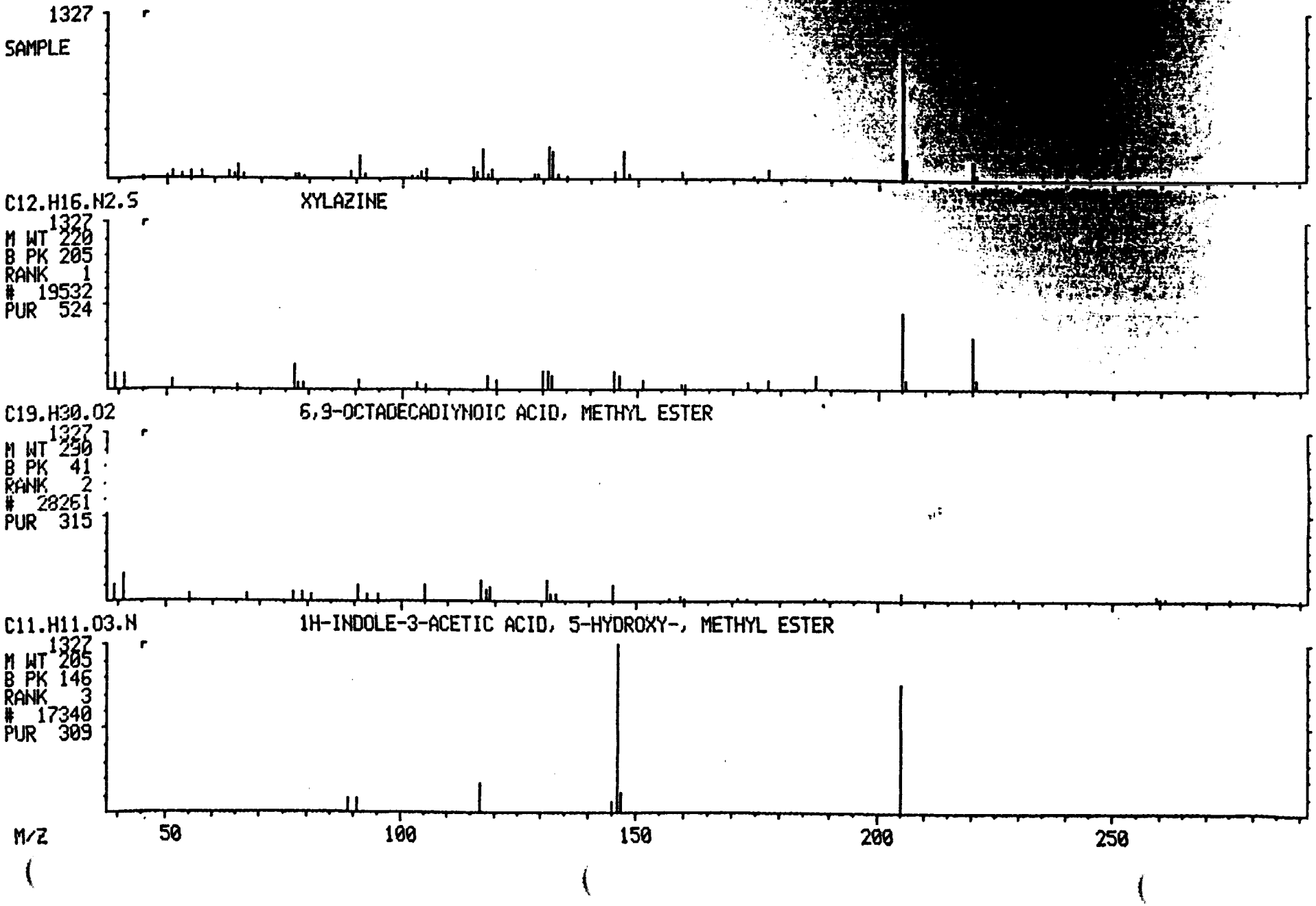
DATA: S017009 #1287
CALI: S017009 # 3

BASE M/Z: 191
RIC: 14287.



847520786

LIBRARY SEARCH
01/23/92 23:07:00 + 18:09
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

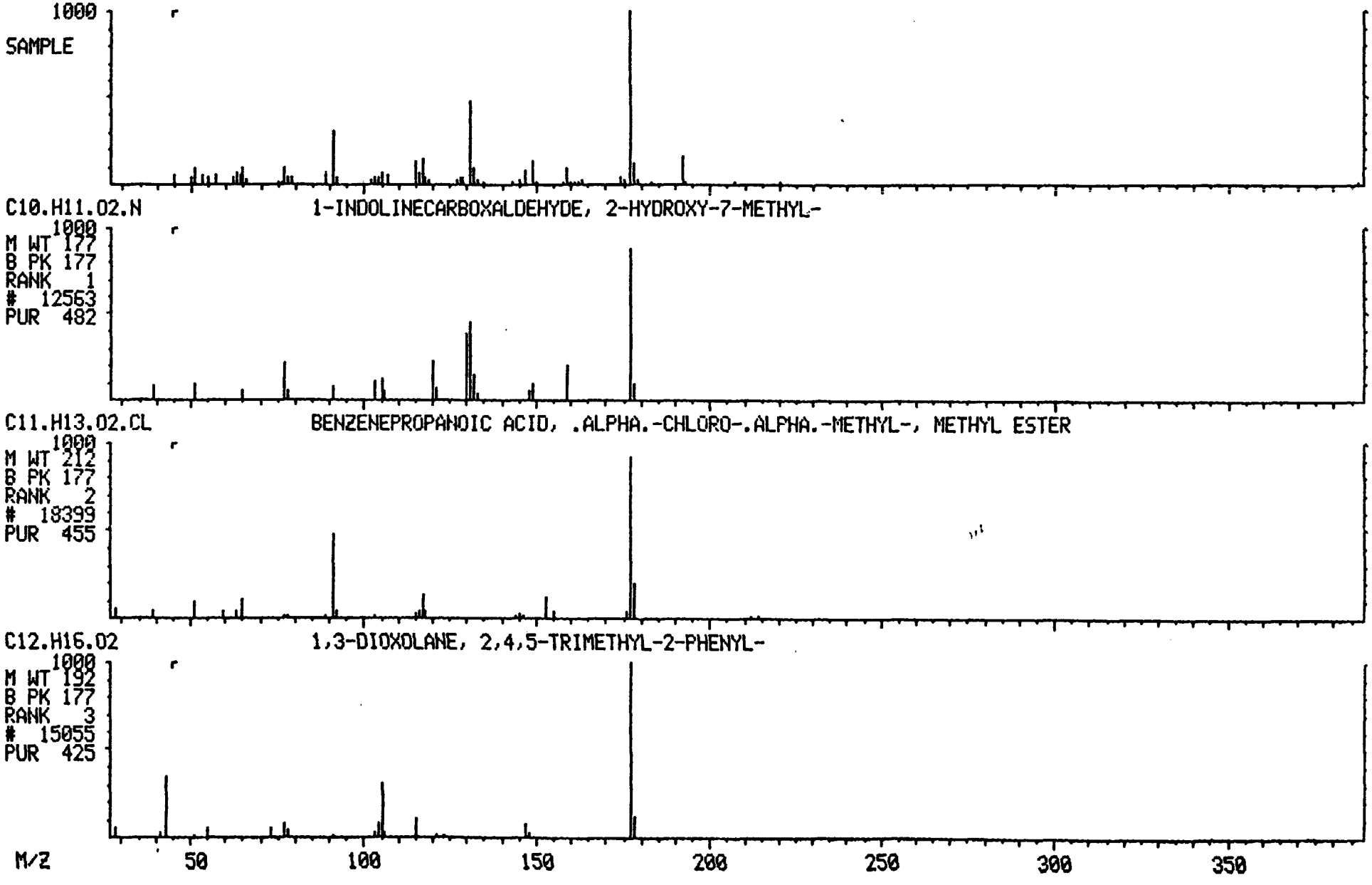


847520787

LIBRARY SEARCH
01/23/92 23:07:00 + 18:27
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1384
CALI: S017009 # 3

BASE M/Z: 177
RIC: 22527.

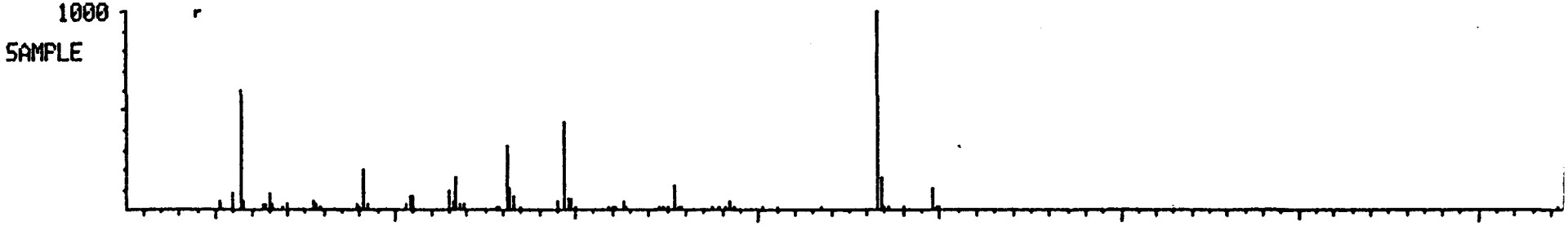


847520788

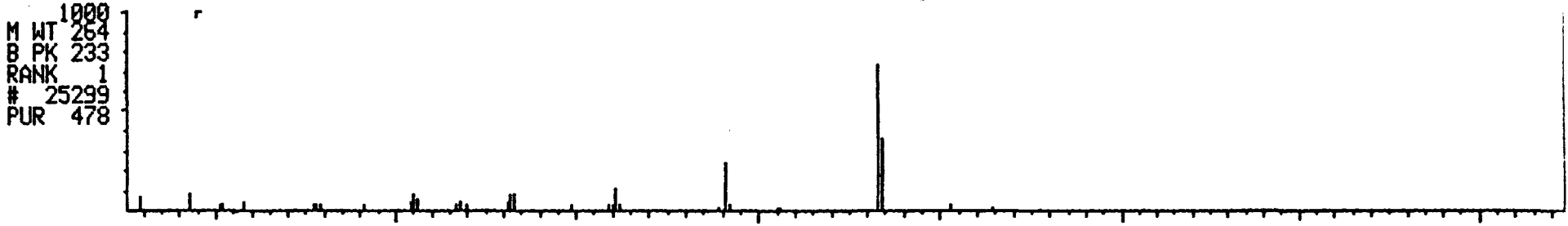
LIBRARY SEARCH
01/23/92 23:07:00 + 19:52
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1490
CALI: S017009 # 3

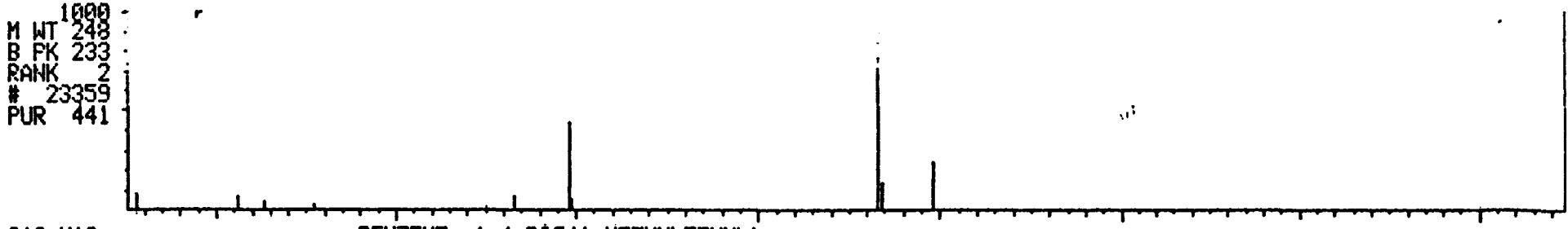
BASE M/Z: 233
RIC: 324607.



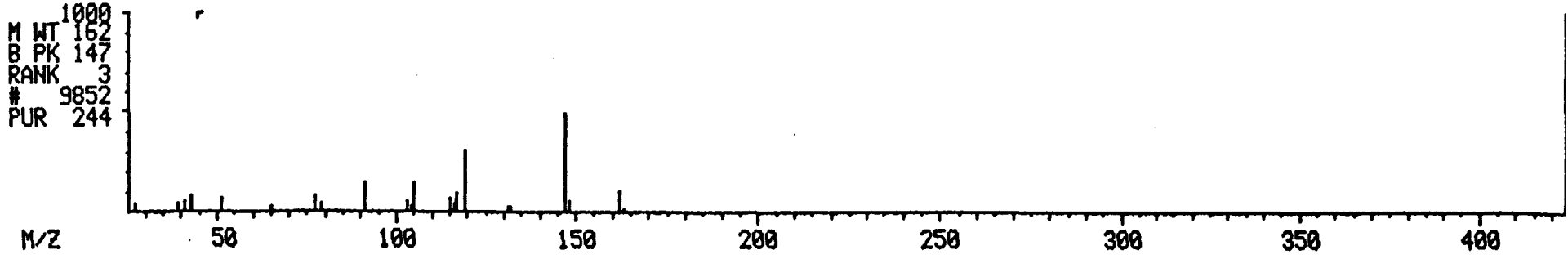
C13.H16.04.N2 PROLINE, 2-(HYDROXYMETHYL)-5-OXO-3-(3-PYRIDYL)-, ETHYL ESTER



C13.H16.03.N2 2,4-IMIDAZOLIDINEDIONE, 5-(4-METHOXYPHENYL)-1,3,5-TRIMETHYL-



C12.H18 BENZENE, 1,4-BIS(1-METHYLETHYL)-

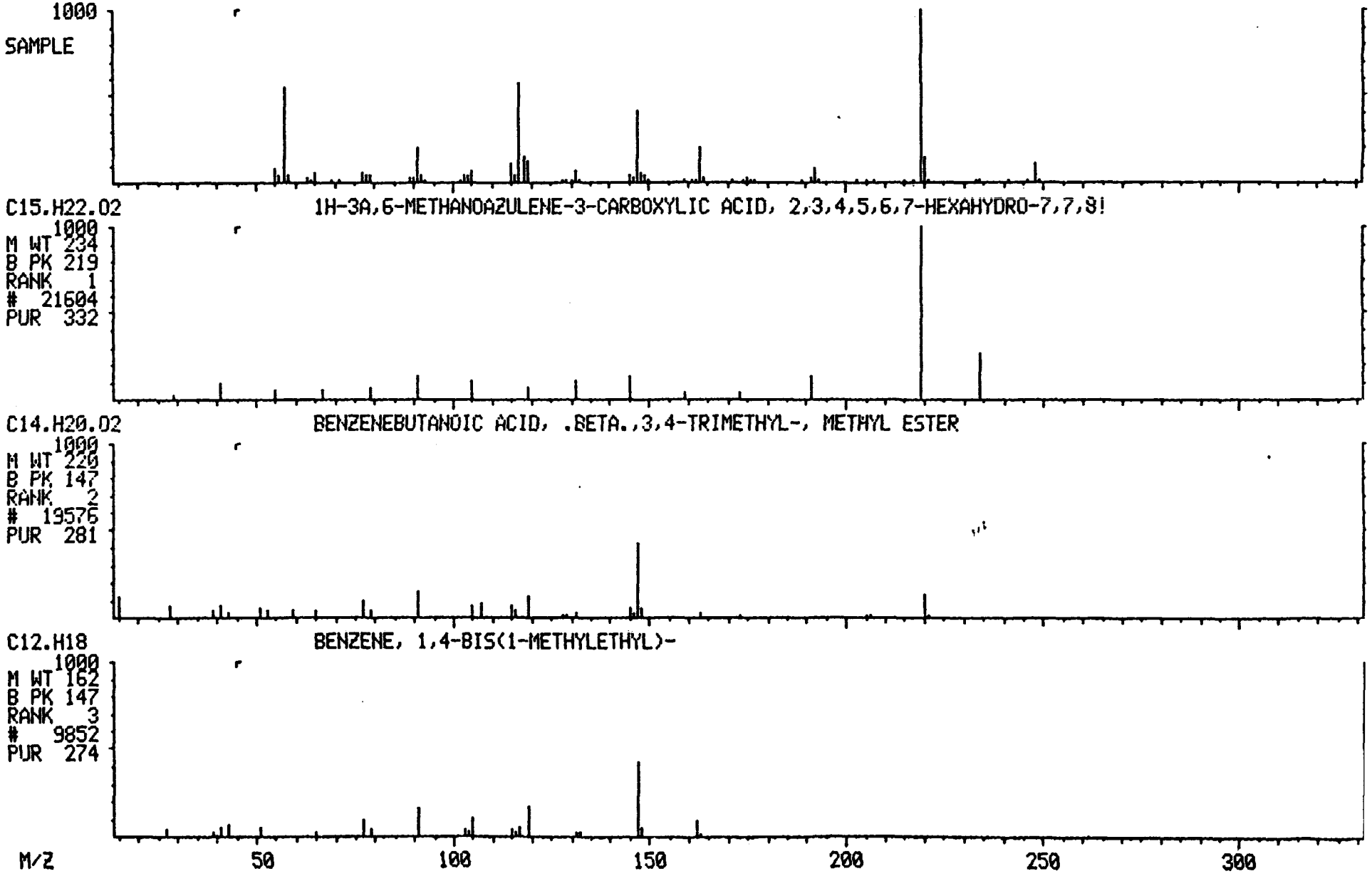


847520789

LIBRARY SEARCH
01/23/92 23:07:00 + 20:12
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1515
CALI: S017009 # 3

BASE M/Z: 219
RIC: 96127.

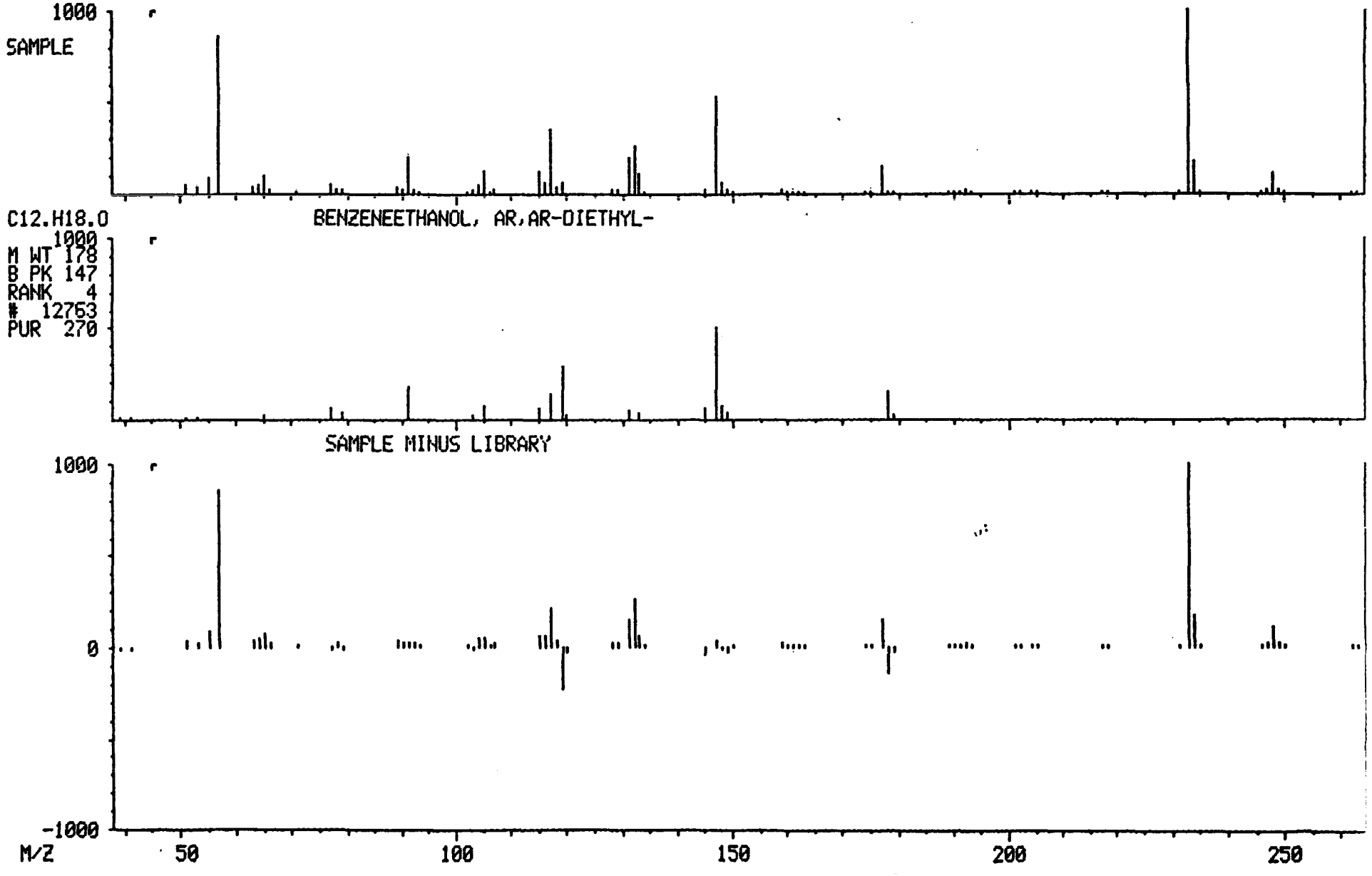


8475207 90

LIBRARY SEARCH
01/23/92 23:07:00 + 20:28
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1535
CALI: S017009 # 3

BASE M/Z: 233
RIC: 238335.

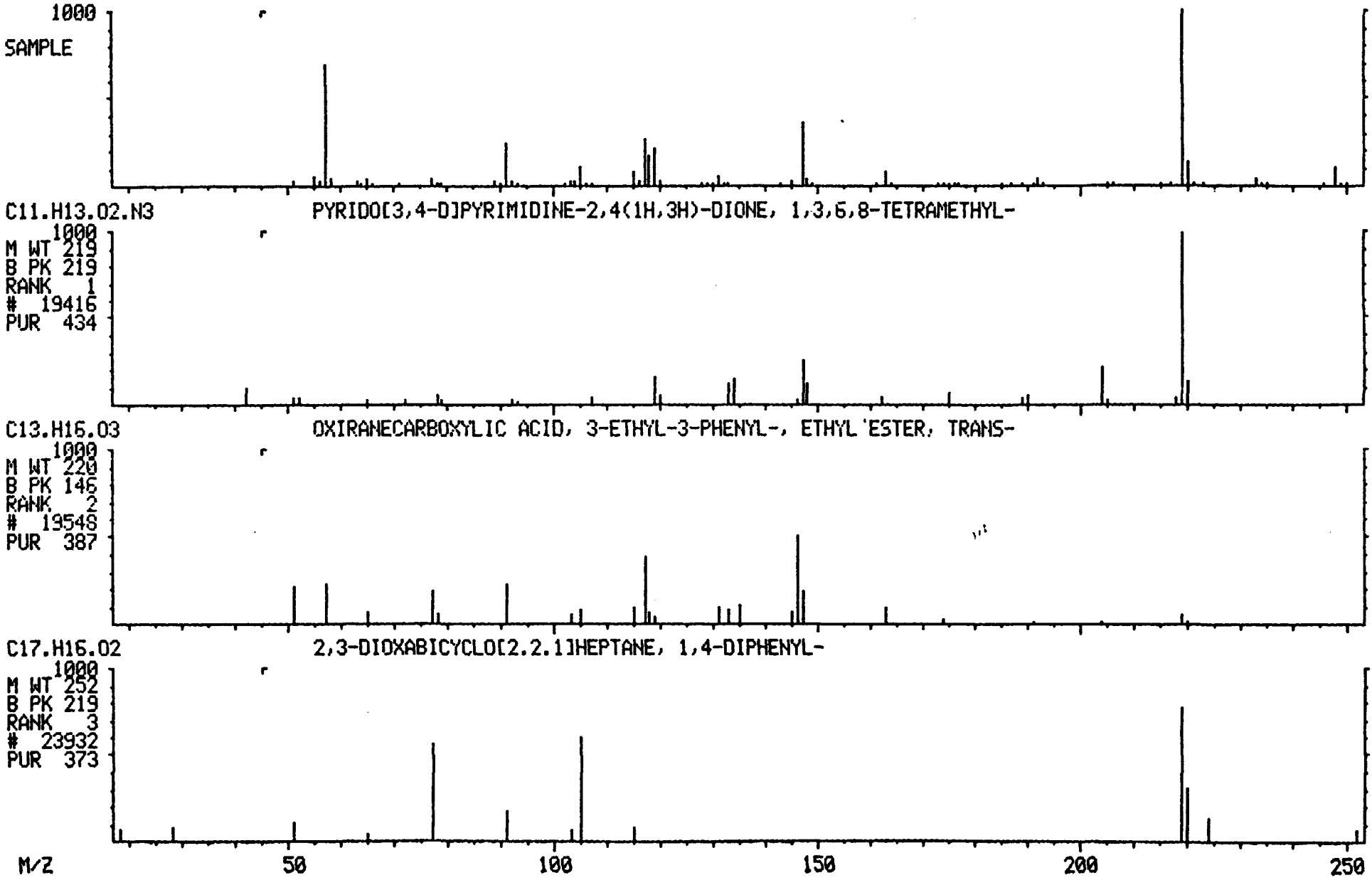


847520791

LIBRARY SEARCH
01/23/92 23:07:00 + 20:41
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1551
CALI: S017009 # 3

BASE M/Z: 219
RIC: 188927.

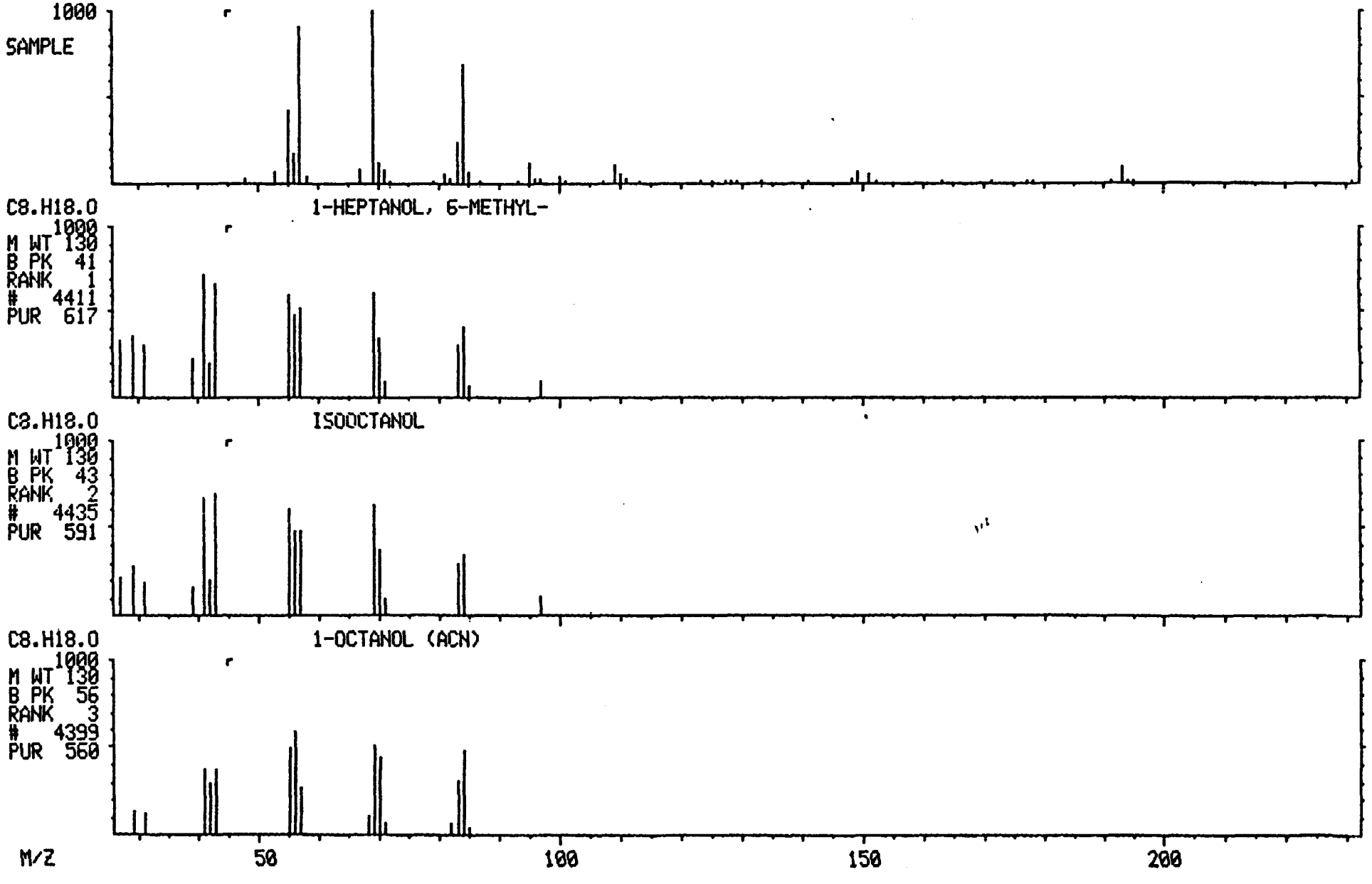


8475207 92

LIBRARY SEARCH
01/23/92 23:07:00 + 20:51
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1564
CALI: S017009 # 3

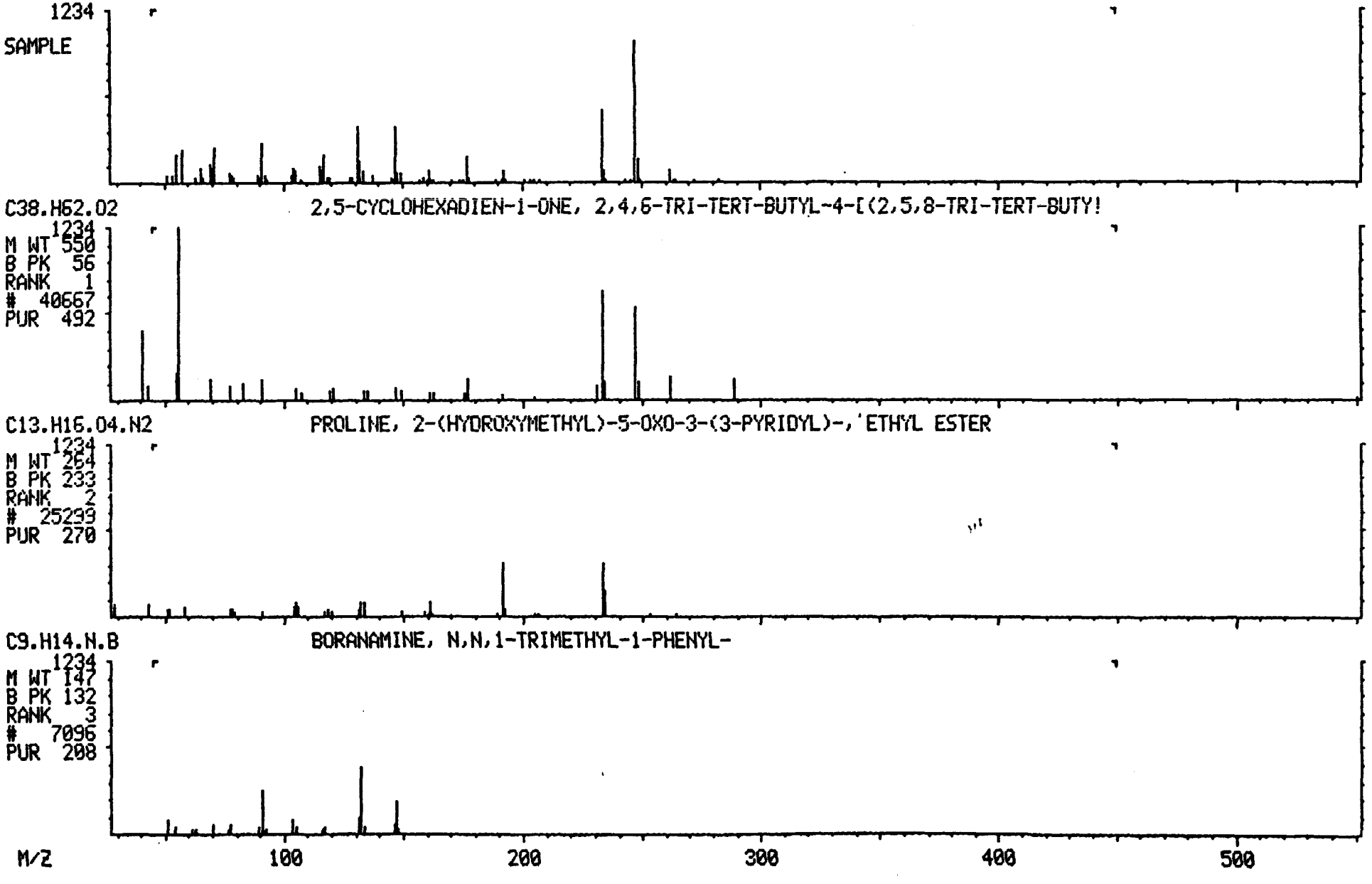
BASE M/Z: 69
RIC: 71679.



847520793

LIBRARY SEARCH
01/23/92 23:07:00 + 21:14
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1592 BASE M/Z: 247
CALI: S017009 # 3 RIC: 58303.

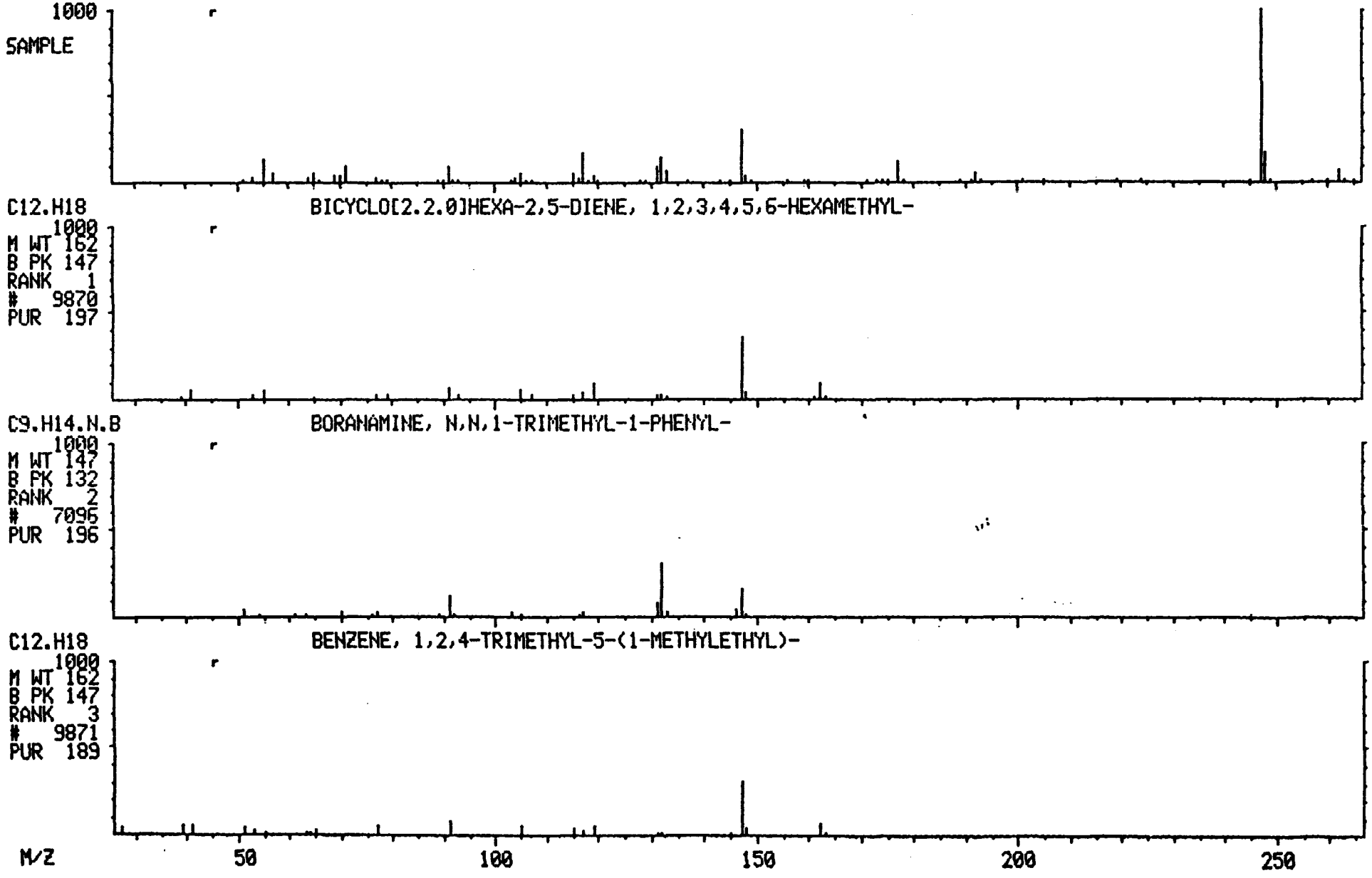


847520794

LIBRARY SEARCH
01/23/92 23:07:00 + 21:46
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1632
CALI: S017009 # 3

BASE M/Z: 247
RIC: 103295.

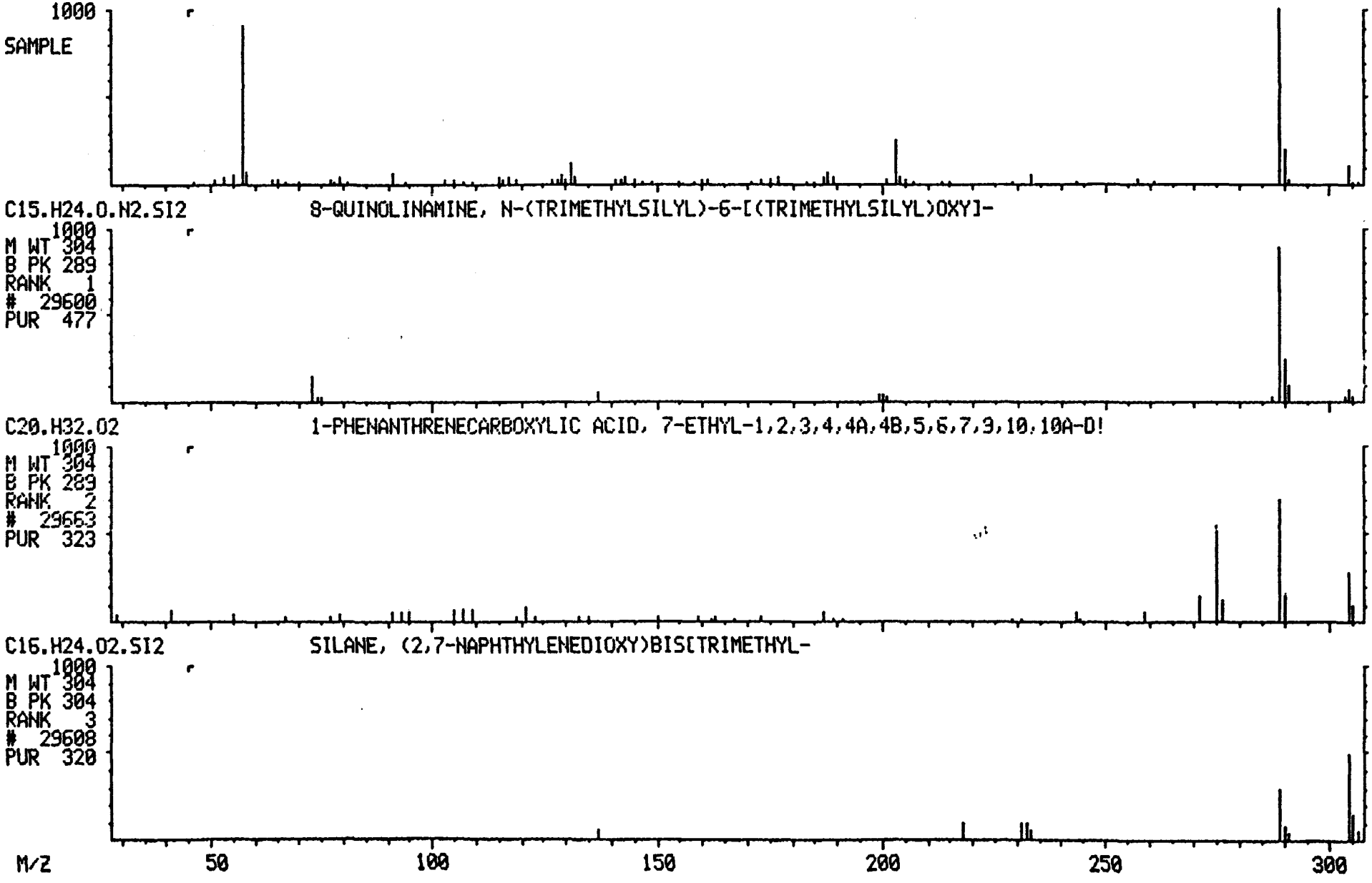


8475207795

LIBRARY SEARCH
01/23/92 23:07:00 + 22:28
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: 5017009 #1685
CALI: 5017009 # 3

BASE M/Z: 289
RIC: 21055.



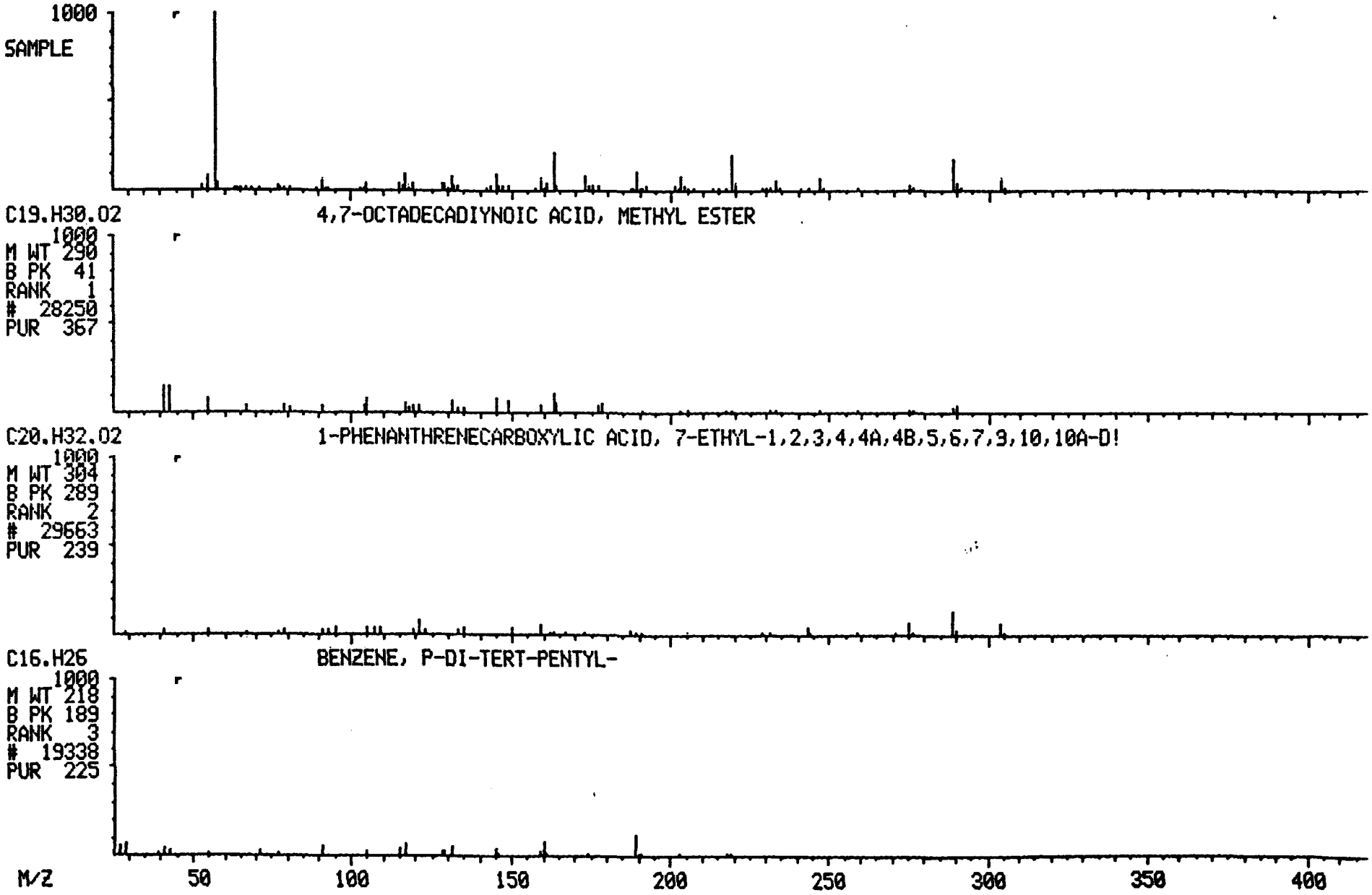
8475207 96

LIBRARY SEARCH
01/23/92 23:07:00 + 23:10
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1738
CALI: S017009 # 3

BASE M/Z: 57
RIC: 63807.

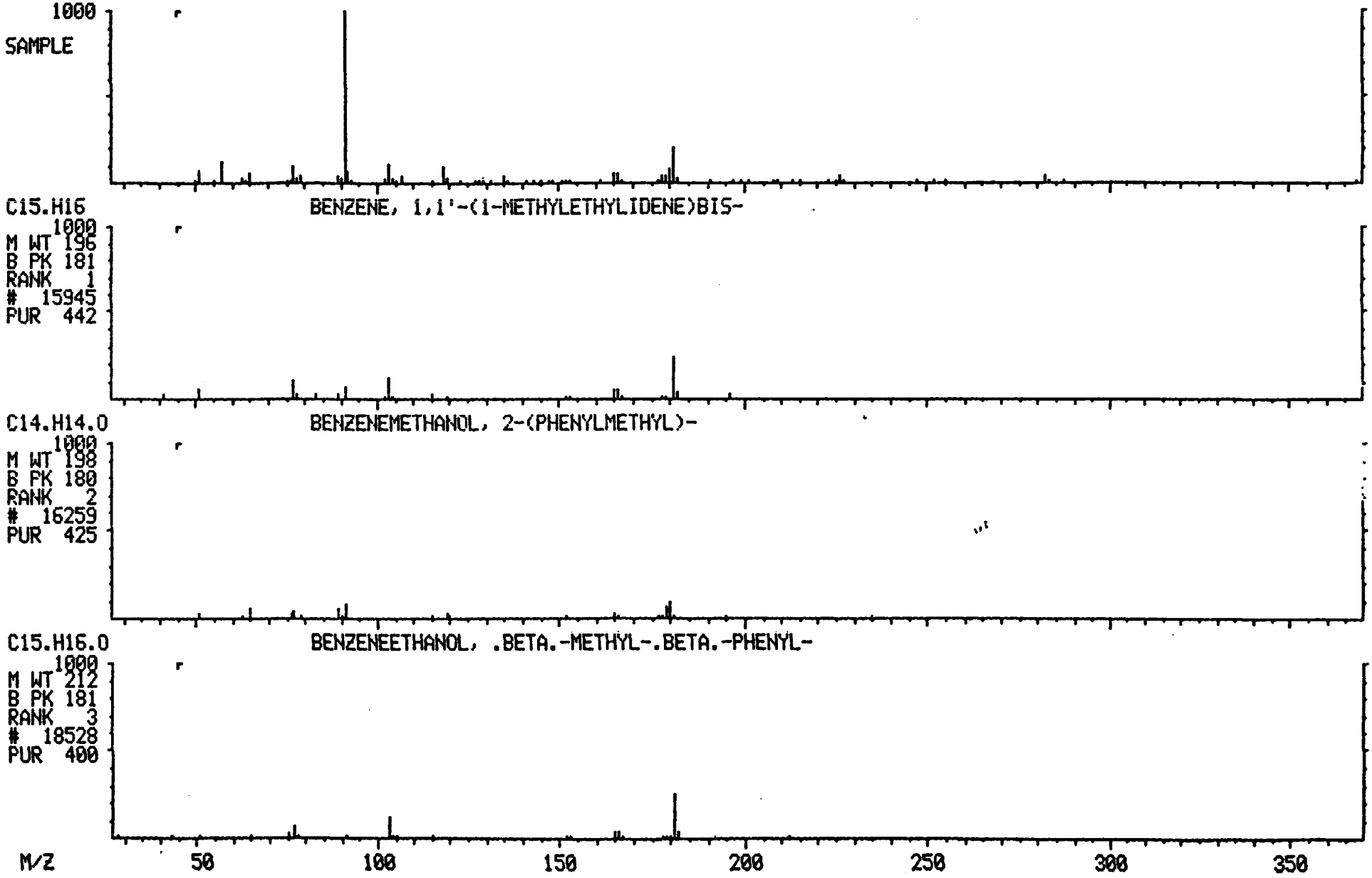
453



847520797

LIBRARY SEARCH
01/23/92 23:07:00 + 24:30
SAMPLE: 017009 BN+15/E E-1 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017009 #1837 BASE M/Z: 91
CALI: S017009 # 3 RIC: 51391.



Quantitation Report File: S017010

Data: S017010.TI
01/23/92 23:54:00
Sample: 017010 BN+15/E E-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-DI2 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE

847520798

47 - C255 ACENAPHTHENE

No	Name
3	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	590	7:52	1	1.000	A BB	26117.	40.000	NG	16.41
2	136	858	11:26	2	1.000	A BB	53855.	40.000	NG	16.41
3	164	1269	16:55	3	1.000	A BV	29086.	40.000	NG	16.41
4	188	1618	21:34	4	1.000	A BV	43742.	40.000	NG	16.41
5	240	2256	30:05	5	1.000	A BV	34396.	40.000	NG	16.41
6	264	2578	34:22	6	1.000	A BB	22099.	40.000	NG	16.41
7	NOT FOUND									
8	NOT FOUND									
9	244	2014	26:51	5	0.893	A BB	2589.	1.851	NG	0.76
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
1	NOT FOUND									
2	45	681	9:05	1	1.154	A VB	284.	0.296	NG	0.12
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
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33	NOT FOUND									
34	NOT FOUND									
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36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

847520799

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29		0.826						
8	14:56		0.882						
9	26:52	1.00	0.893	1.00	1.85	50.00	0.060	1.627	0.04
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51	1.03	1.116	1.03	0.30	50.00	0.009	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32		1.005						
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

Quantitation Report File: S017010

Data: S017010.TI
../23/92 23:54:00
Sample: 017010 BN+15/E E-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

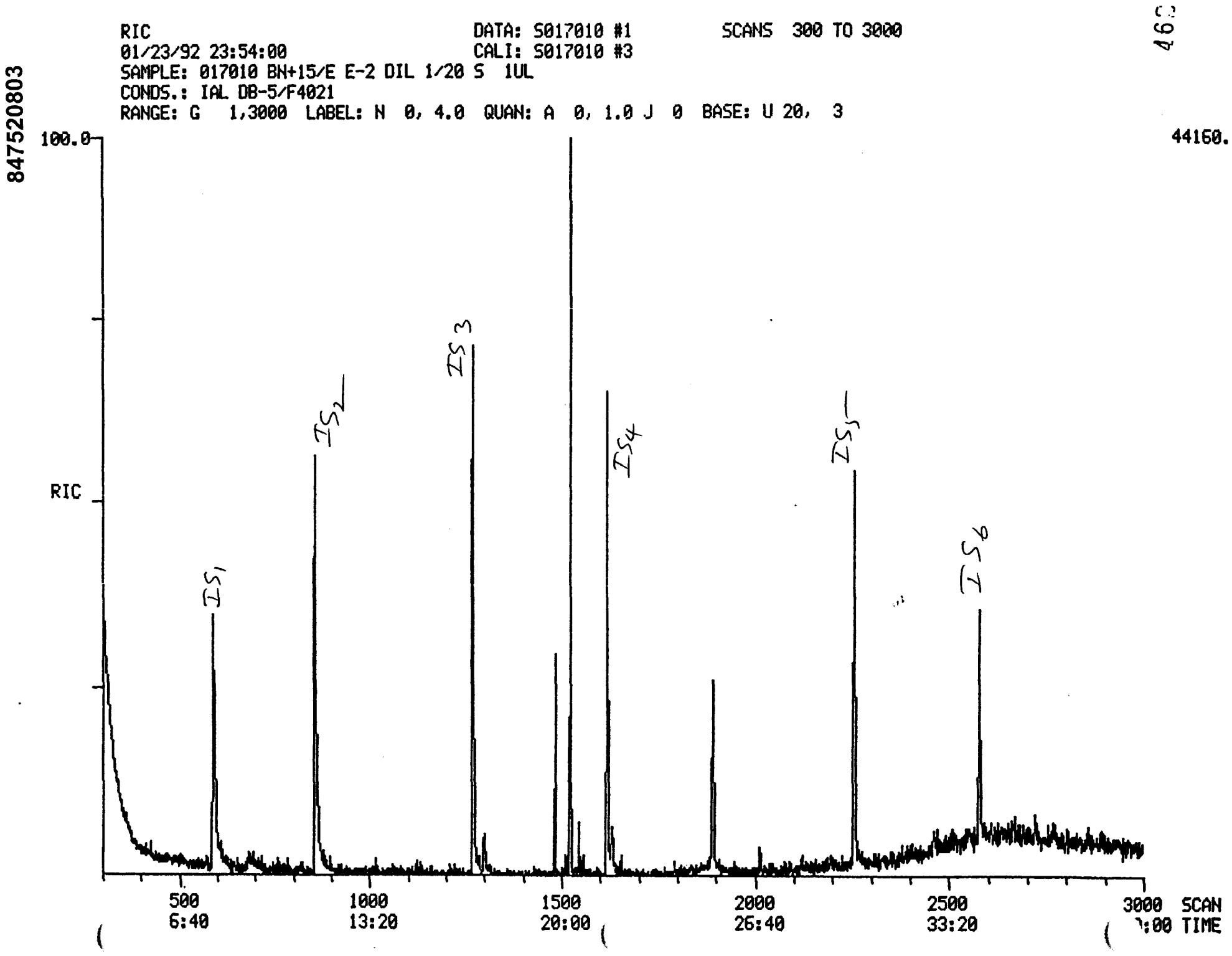
AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
[illegible]	C355	FLUORANTHENE
[illegible]	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
	NOT FOUND								
61	NOT FOUND								
62	178	1622	21:38	4	1.002	A BB	281.	0.241 NG	0.10
63	NOT FOUND								
64	149	1794	23:55	4	1.109	A BB	1321.	1.031 NG	0.42

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	149	2301	30:41	5	1.020	A BB	248.	0.546 NG	0.22
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	0.24	50.00	0.005	1.068	0.00
63	21:48		1.011						
64	23:56	1.00	1.109	1.00	1.03	50.00	0.024	1.171	0.02
65	25:27		1.180						
66	26:02		0.865						
67	26:09		0.869						
68	28:40		0.953						
69	30:02		0.998						
70	30:07		1.001						
71	30:10		1.003						
72	30:42	1.00	1.020	1.00	0.55	50.00	0.006	0.528	0.01
73	32:34		0.948						
74	33:20		0.970						
75	33:24		0.972						
76	34:13		0.995						
77	38:00		1.106						
78	38:06		1.109						
79	39:02		1.136						


RIC
01/23/92 23:54:00
SAMPLE: 017010 BN+15/E E-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: S017010 #1
CALI: S017010 #3
SCANS 300 TO 3000
847520803
100.0
44160.
RIC
IS1
IS2
IS3
IS4
IS5
IS6
500
6:40
1000
13:20
1500
20:00
2000
26:40
2500
33:20
3000
SCAN
TIME

Quantitation Report File: SSRT01

Data: S017010.TI
/23/92 23:54:00
Sample: 017010 BN+15/E E-2 DIL 1/20 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	1269	16:55	1	1.000	A BB	133901.	100.000	21.47
2	RIC	1484	19:47	1	1.169	A BB	31332.	23.399-9.7	5.02
3	RIC	1523	20:18	1	1.200	A BB	103450.	77.259-31.2	16.58
4	RIC	1618	21:34	1	1.275	A BB	132560.	98.999	21.25
5	RIC	1893	25:14	1	1.492	A BB	54000.	40.328-16.3	8.66
6	RIC	2256	30:05	1	1.778	A BB	102453.	76.514	16.42
7	RIC	2578	34:22	1	2.032	A BB	66093.	49.360	10.60

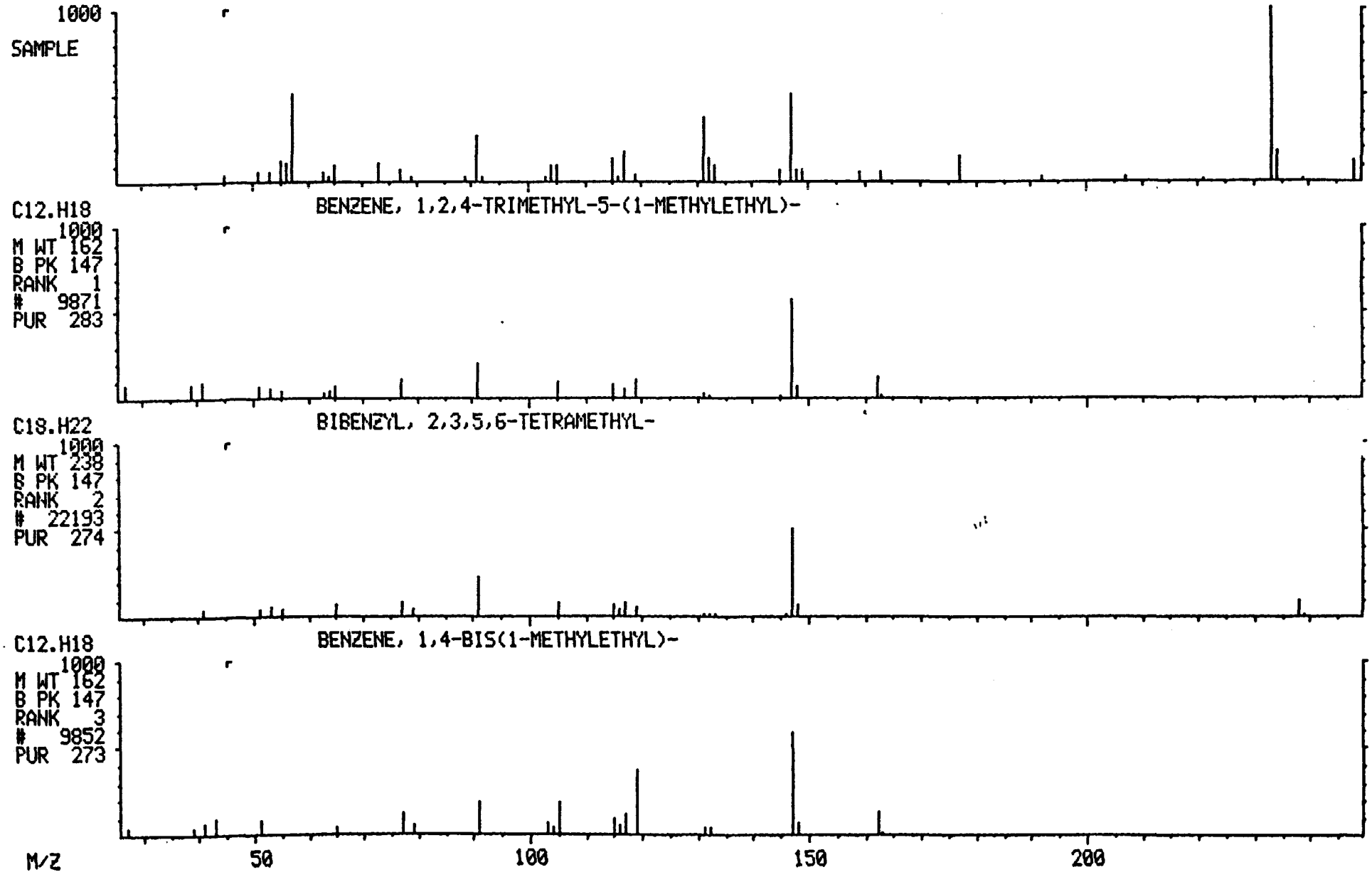
847520804

847520805

LIBRARY SEARCH
01/23/92 23:54:00 + 19:47
SAMPLE: 017010 BN+15/E E-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017010 #1484
CALI: S017010 # 3

BASE M/Z: 233
RIC: 10991.

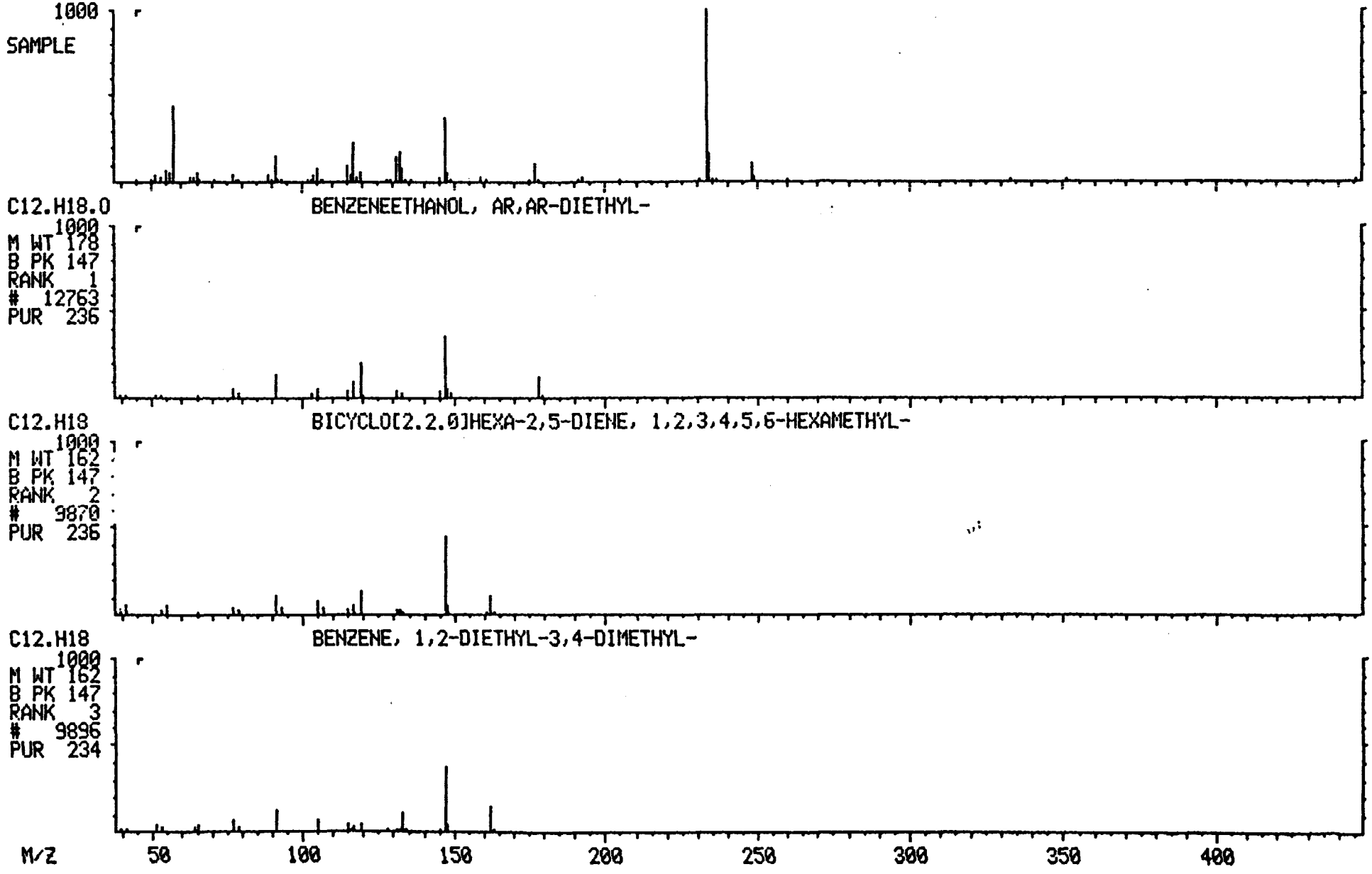


847520806

LIBRARY SEARCH
01/23/92 23:54:00 + 20:18
SAMPLE: 017010 BN+15/E E-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017010 #1523
CALI: S017010 # 3

BASE M/Z: 233
RIC: 36671.

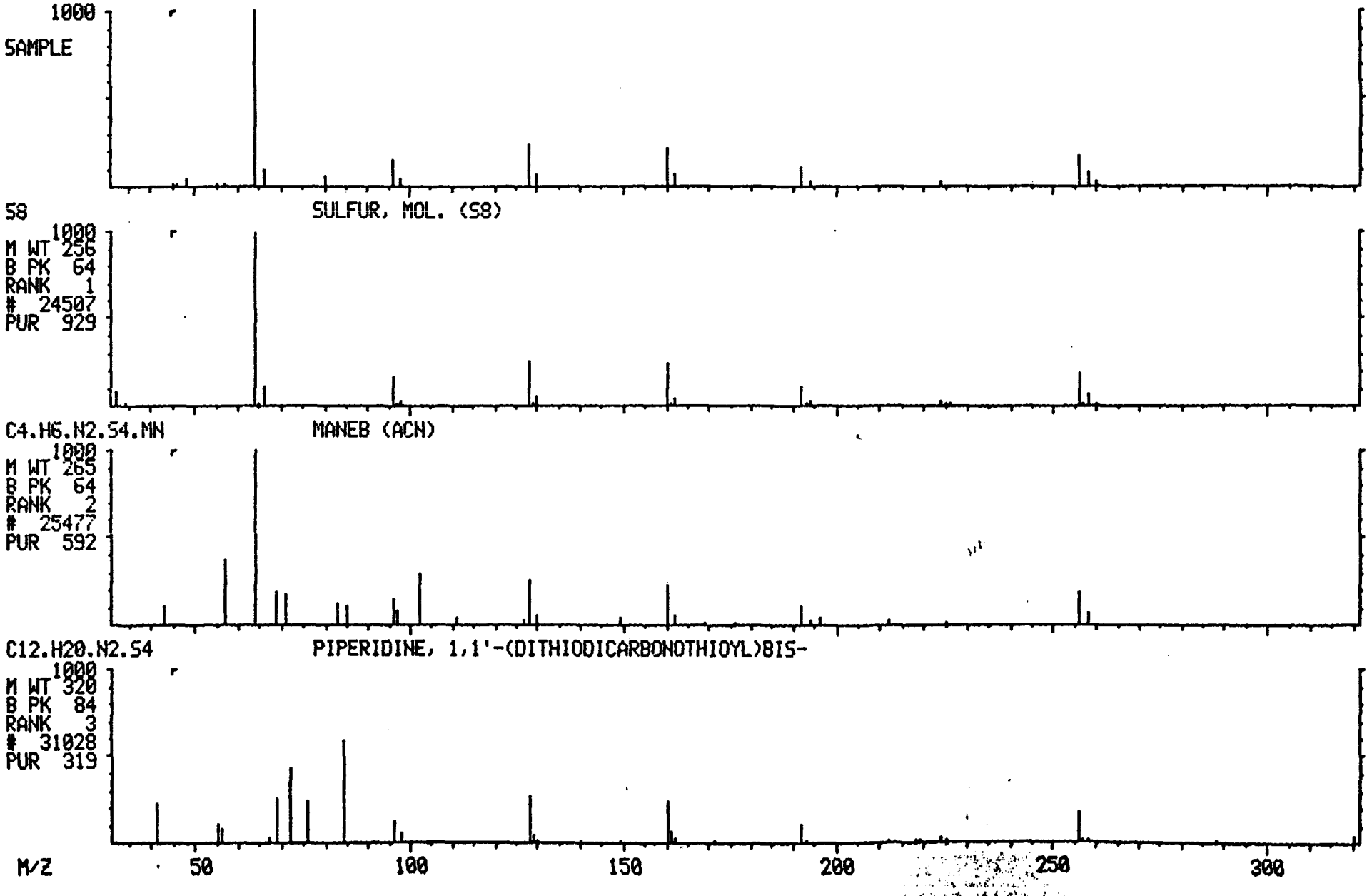


847520807

LIBRARY SEARCH
01/23/92 23:54:00 + 25:14
SAMPLE: 017010 BN+15/E E-2 DIL 1/20 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017010 #1893
CALI: S017010 # 3

BASE M/Z: 64
RIC: 10319.



Quantitation Report File: S017011

Data: S017011.TI
'24/92 0:42:00
Sample: 017011 BN+15/E F-1 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
7	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
2	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	590	7:52	1	1.000	A BV	26688.	40.000	NG	7.85
2	136	859	11:27	2	1.000	A BB	52063.	40.000	NG	7.85
3	164	1270	16:56	3	1.000	A BB	27079.	40.000	NG	7.85
4	188	1618	21:34	4	1.000	A BV	40911.	40.000	NG	7.85
5	240	2257	30:06	5	1.000	A BB	35176.	40.000	NG	7.85
6	264	2578	34:22	6	1.000	A BV	20073.	40.000	NG	7.85
7	82	710	9:28	2	0.827	A BV	3133.	4.202	NG	0.82
8	172	1120	14:56	3	0.882	A BB	5372.	5.520	NG	1.08
9	244	2014	26:51	5	0.892	A BB	6854.	4.792	NG	0.94
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	93	558	7:26	1	0.946	A BB	17285.	23.905	NG	4.69
14	NOT FOUND									
15	93	558	7:26	1	0.946	A BB	17285.	25.486	NG	5.00
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	79	632	8:26	1	1.071	A BV	13395.	31.490	NG	6.18
20	NOT FOUND									
21	108	632	8:26	1	1.071	A BB	272.	0.872	NG	0.17
22	45	668	8:54	1	1.132	A BB	249.	0.254	NG	0.05
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	128	863	11:30	2	1.005	A BB	833.	0.569	NG	0.11
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	153	1277	17:02	3	1.006	A BB	1807.	2.211	NG	0.43
48	NOT FOUND									
49	168	1319	17:35	3	1.039	A BB	1636.	1.456	NG	0.29
50	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	1.00	0.826	1.00	4.20	50.00	0.048	0.573	0.08
8	14:56	1.00	0.882	1.00	5.52	50.00	0.159	1.438	0.11
9	26:52	1.00	0.893	1.00	4.79	50.00	0.156	1.627	0.10
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14	1.03	0.911	1.04	23.91	50.00	0.518	1.084	0.48
14	7:18		0.921						
15	7:26	1.00	0.936	1.01	25.49	50.00	0.518	1.017	0.51
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25	1.00	1.061	1.01	31.49	50.00	0.402	0.638	0.63
20	8:26		1.064						
21	8:24	1.00	1.059	1.01	0.87	50.00	0.008	0.467	0.02
22	8:51	1.01	1.116	1.01	0.25	50.00	0.007	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.57	50.00	0.013	1.125	0.01
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03	1.00	1.007	1.00	2.21	50.00	0.053	1.207	0.04
48	17:17		1.020						
49	17:34	1.00	1.037	1.00	1.46	50.00	0.048	1.660	0.03
50	17:42		1.045						

847520810

847520811

Quantitation Report File: S017011

ta: S017011.TI
/24/92 0:42:00
Sample: 017011 BN+15/E F-1 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
6	C410	BENZIDINE
7	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	165	1332	17:46	3	1.049	A BB	919.	X 3.864	NG ok	0.76
52	166	1398	18:38	3	1.101	A BB	2108.	2.356	NG	0.46
53	NOT FOUND									
54	NOT FOUND									
55	NOT FOUND									
56	NOT FOUND									
57	NOT FOUND									
58	NOT FOUND									
59	NOT FOUND									
0	NOT FOUND									
1	NOT FOUND									
62	178	1623	21:38	4	1.003	A BV	38534.	35.275	NG ok	6.92
63	178	1634	21:47	4	1.010	A VV	10879.	10.270	NG ok	2.02
64	149	1794	23:55	4	1.109	A BB	1876.	1.566	NG	0.31

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1910	25:28	4	1.180	A BV	31772.	33.980	NG ok	6.67
66	NOT FOUND									
67	202	1961	26:09	5	0.869	A BV	32121.	18.757	NG ok	3.68
68	NOT FOUND									
69	228	2253	30:02	5	0.998	A BV	12106.	11.531	NG ok	2.26
70	NOT FOUND									
71	228	2263	30:10	5	1.003	A VB	11733.	11.570	NG ok	2.27
72	149	2302	30:42	5	1.020	A BB	963.	2.073	NG ok	0.41
73	149	2444	32:35	6	0.948	A BB	517.	0.793	NG ok	0.16
74	252	2500	33:20	6	0.970	A BB	11872.	16.512	NG	3.24
75	NOT FOUND									
76	252	2566	34:13	6	0.995	A VV	7004.	10.850	NG ok	2.13
77	276	2850	38:00	6	1.106	A BB	2885.	4.572	NG ok	0.90
78	278	2858	38:06	6	1.109	A BB	403.	0.714	NG	0.14
79	276	2926	39:01	6	1.135	A BB	2954.	4.328	NG ok	0.85

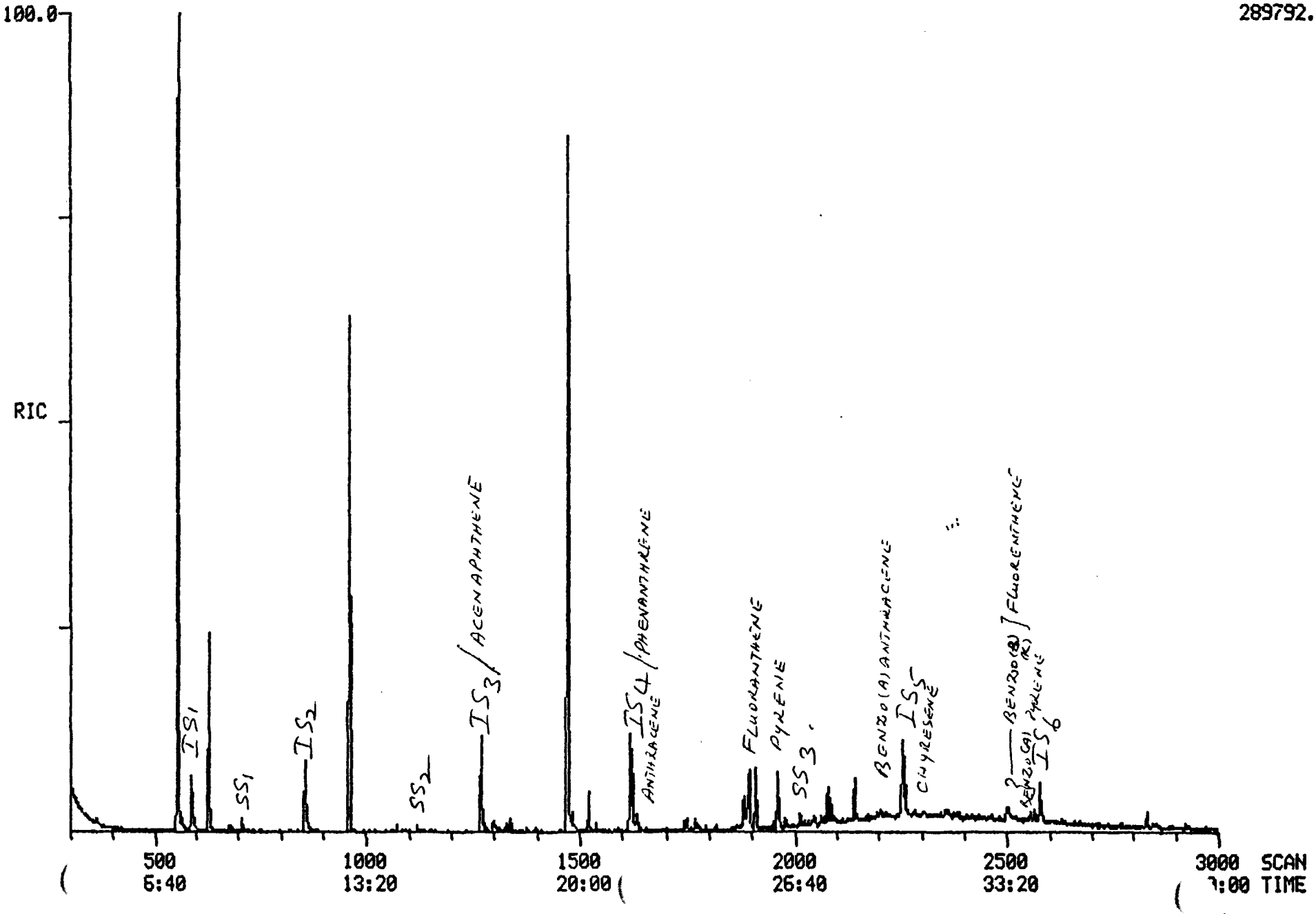
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47	1.00	1.050	1.00	3.86	50.00	0.027	0.351	0.08
52	18:39	1.00	1.102	1.00	2.36	50.00	0.062	1.322	0.05
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	35.28	50.00	0.754	1.068	0.71
63	21:48	1.00	1.011	1.00	10.27	50.00	0.213	1.036	0.21
64	23:56	1.00	1.109	1.00	1.57	50.00	0.037	1.171	0.03
65	25:27	1.00	1.180	1.00	33.98	50.00	0.621	0.914	0.68
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	18.76	50.00	0.731	1.947	0.38
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	11.53	50.00	0.275	1.194	0.23
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	11.57	50.00	0.267	1.153	0.23
72	30:42	1.00	1.020	1.00	2.07	50.00	0.022	0.528	0.04
73	32:34	1.00	0.948	1.00	0.79	50.00	0.021	1.300	0.02
74	33:20	1.00	0.970	1.00	16.51	50.00	0.473	1.433	0.33
75	33:24		0.972						
76	34:13	1.00	0.995	1.00	10.85	50.00	0.279	1.286	0.22
77	38:00	1.00	1.106	1.00	4.57	50.00	0.115	1.257	0.09
78	38:06	1.00	1.109	1.00	0.71	50.00	0.016	1.125	0.01
79	39:02	1.00	1.136	1.00	4.33	50.00	0.118	1.360	0.09

847520813

RIC
01/24/92 0:42:00
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017011 #1
CALI: S017011 #3

SCANS 300 TO 3000



Quantitation Report File: SSRT01

Data: S017011.TI
1/24/92 0:42:00
Sample: 017011 BN+15/E F-1 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN
21	UNKNOWN
22	UNKNOWN

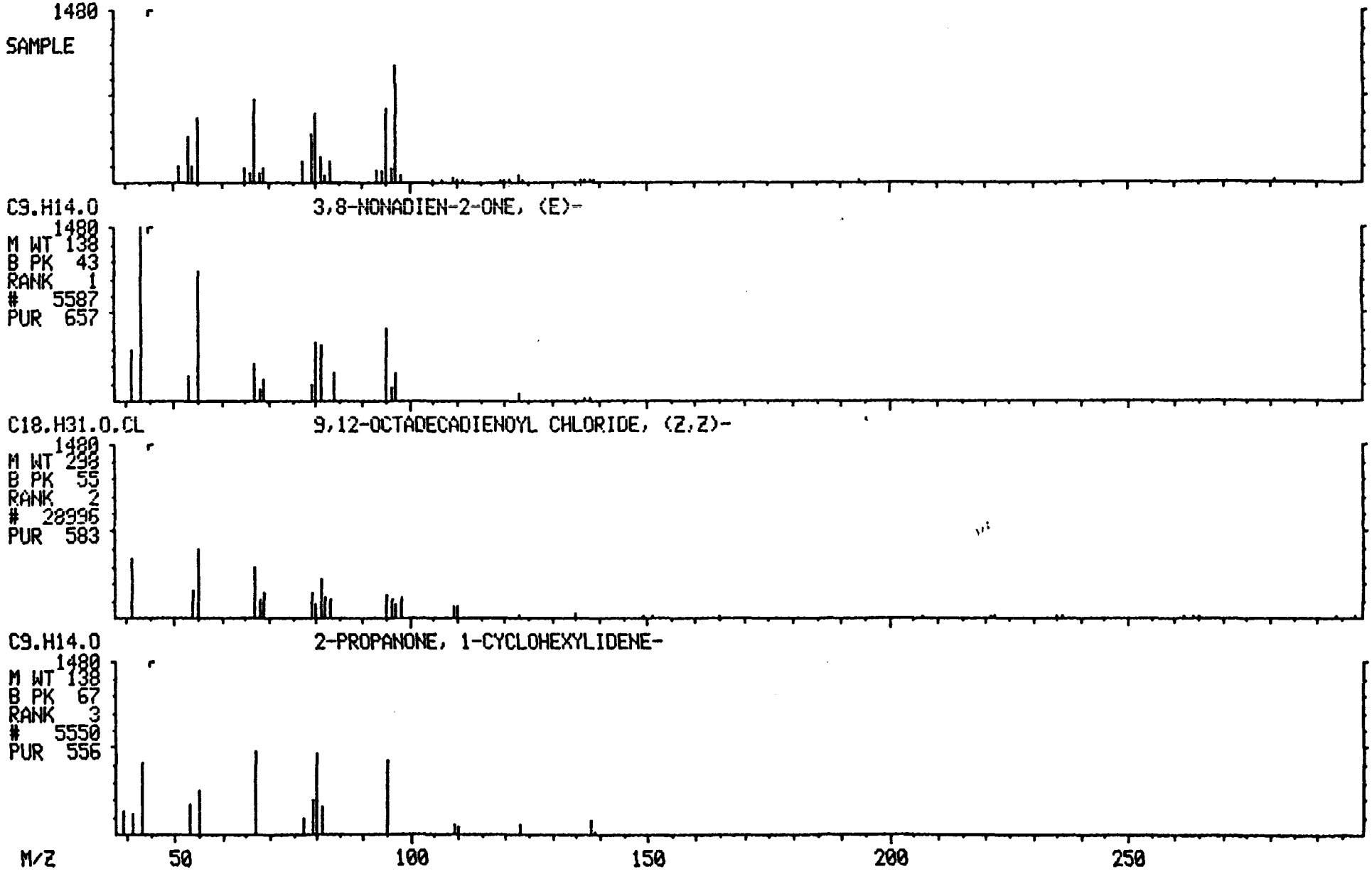
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	558	7:26	1	1.000	A BB	1073740.	100.000	26.29
2	RIC	590	7:52	1	1.057	A BB	98338.	9.158	2.41
3	RIC	632	8:26	1	1.133	A BB	194323.	18.098	4.76
4	RIC	710	9:28	1	1.272	A BB	21576.	2.009	0.53
5	RIC	859	11:27	1	1.539	A BB	122414.	11.401	3.00
6	RIC	963	12:50	1	1.726	A BB	572322.	53.301	14.01
7	RIC	1270	16:56	1	2.276	A BB	136817.	12.742	3.35
8	RIC	1474	19:39	1	2.642	A BV	819760.	76.346	20.07
9	RIC	1484	19:47	1	2.659	A VB	18503.	1.723	0.45
10	RIC	1523	20:18	1	2.729	A BB	34285.	3.193	0.84
11	RIC	1618	21:34	1	2.900	A BV	117607.	10.953	2.88
12	RIC	1623	21:38	1	2.909	A VV	107320.	9.995	2.63
13	RIC	1635	21:48	1	2.930	A VB	37693.	3.510	0.92
14	RIC	1882	25:06	1	3.373	A BV	38939.	3.626	0.95
15	RIC	1895	25:16	1	3.396	A VB	102237.	9.522	2.50
16	RIC	1910	25:28	1	3.423	A BB	75866.	7.065	1.86
17	RIC	1961	26:09	1	3.514	A BB	90032.	8.385	2.20
18	RIC	2079	27:43	1	3.726	A BB	101788.	9.480	2.49
19	RIC	2143	28:34	1	3.841	A BB	47578.	4.431	1.16
20	RIC	2258	30:06	1	4.047	A BV	143385.	13.354	3.51
21	RIC	2263	30:10	1	4.056	A VB	40311.	3.754	0.99

847520815

LIBRARY SEARCH
01/24/92 0:42:00 + 7:26
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 # 558
CALI: S017011 # 3

BASE M/Z: 97
RIC: 245503.



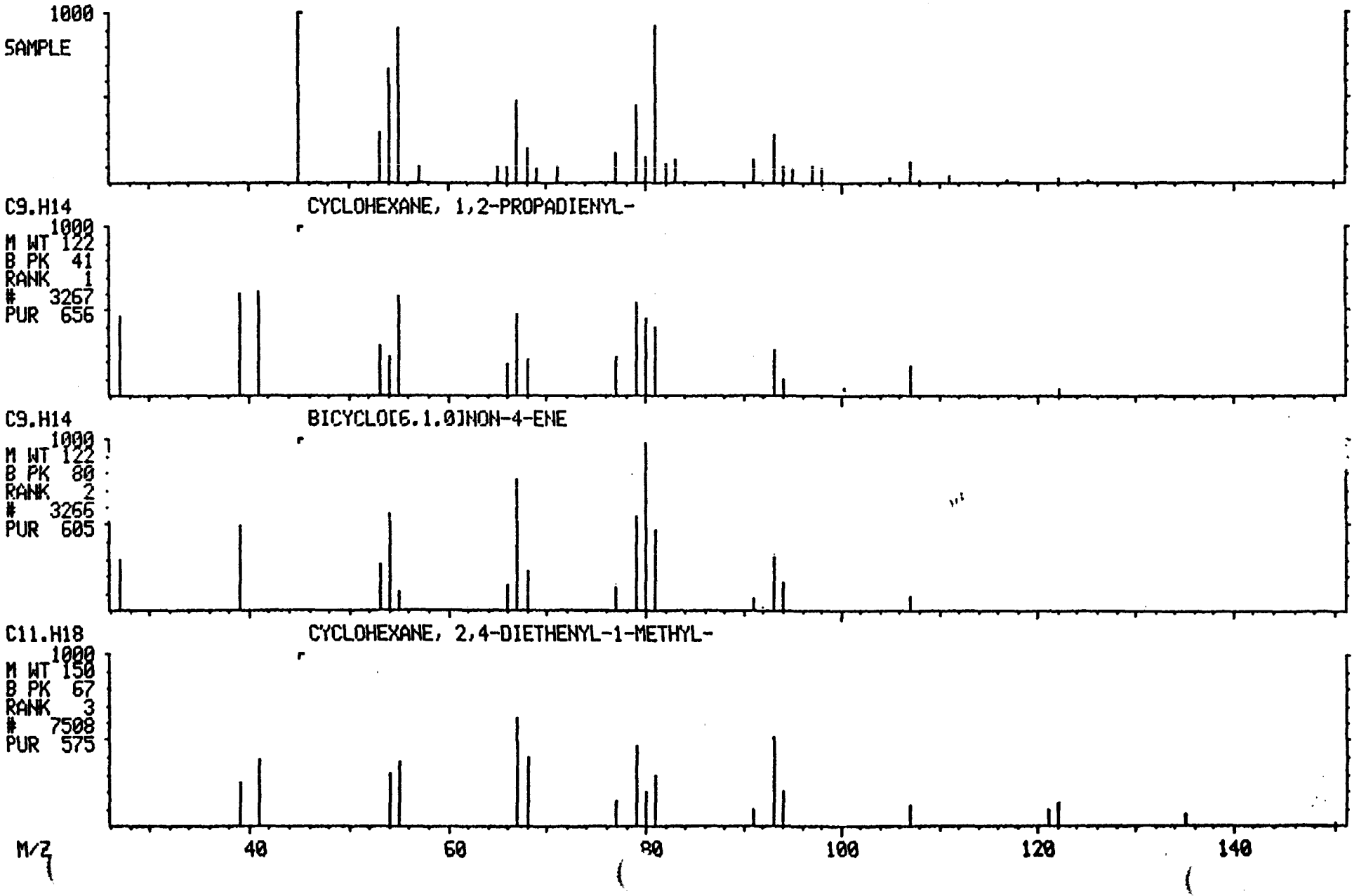
847520816

475

LIBRARY SEARCH
01/24/92 0:42:00 + 8:26
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 # 632
CALI: S017011 # 3

BASE M/Z: 45
RIC: 56319.

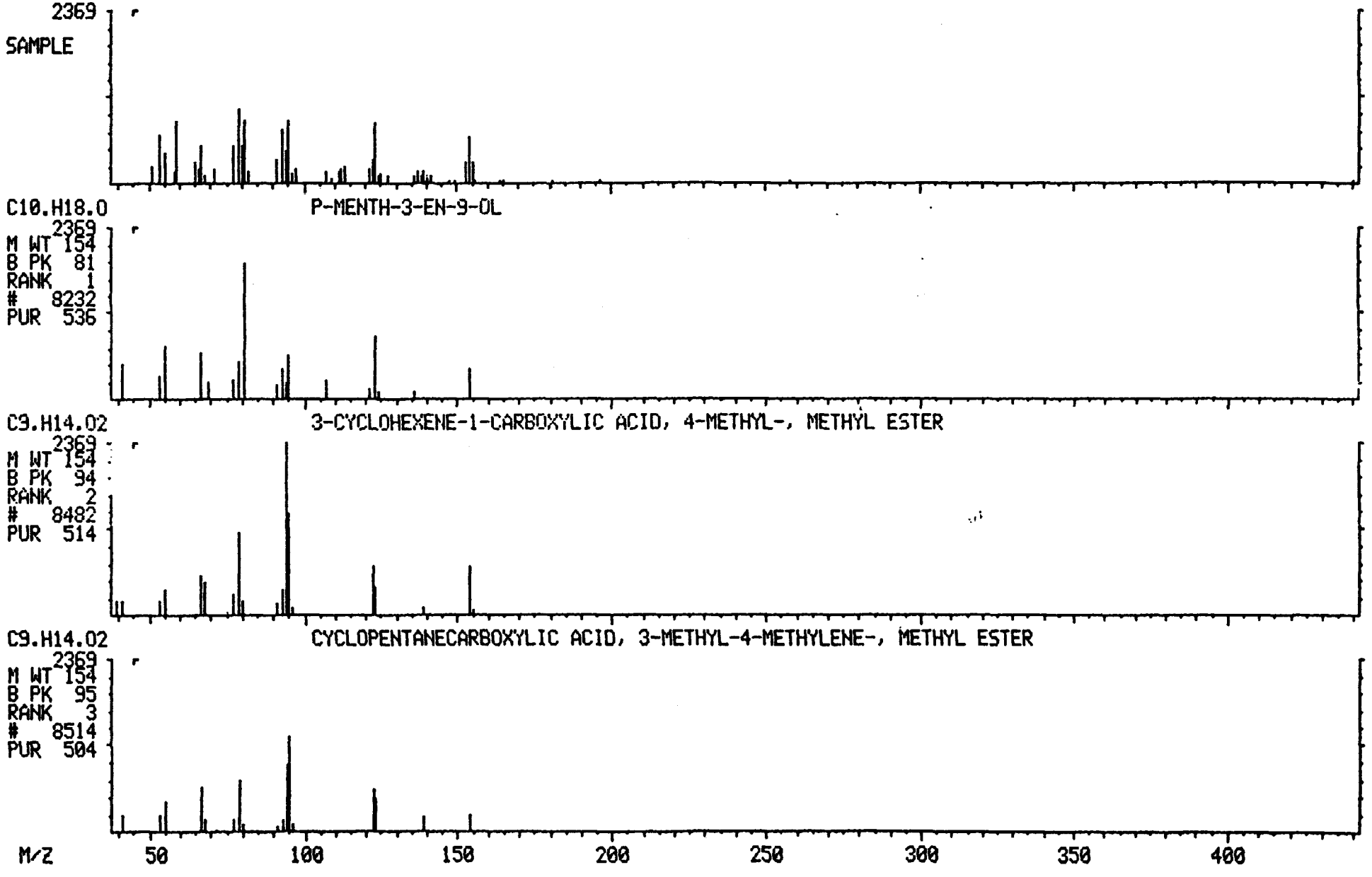


847520817

LIBRARY SEARCH
01/24/92 0:42:00 + 12:50
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 # 963
CALI: S017011 # 3

BASE M/Z: 79
RIC: 156415.

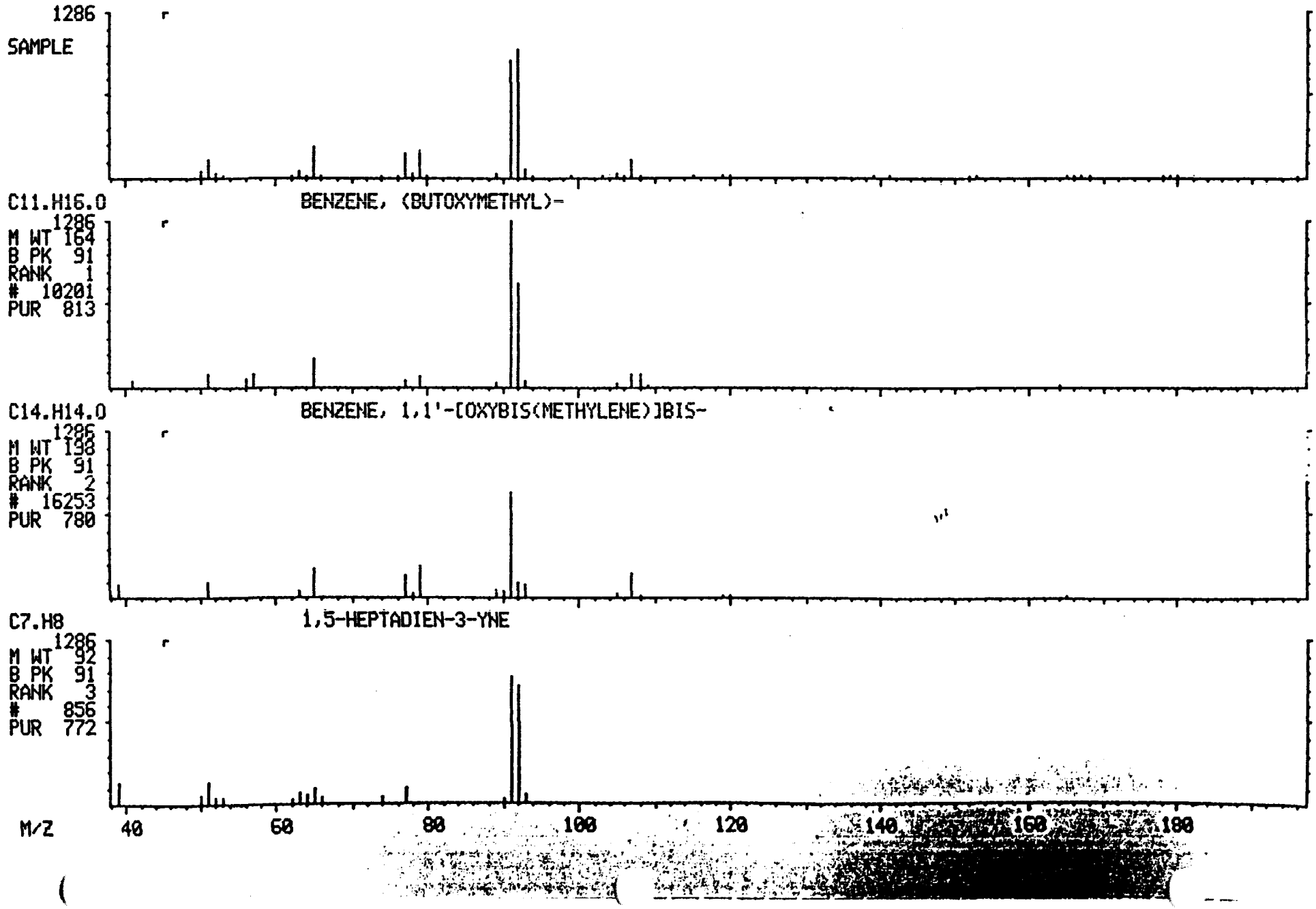


847520818

LIBRARY SEARCH
01/24/92 0:42:00 + 19:39
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 #1474
CALI: S017011 # 3

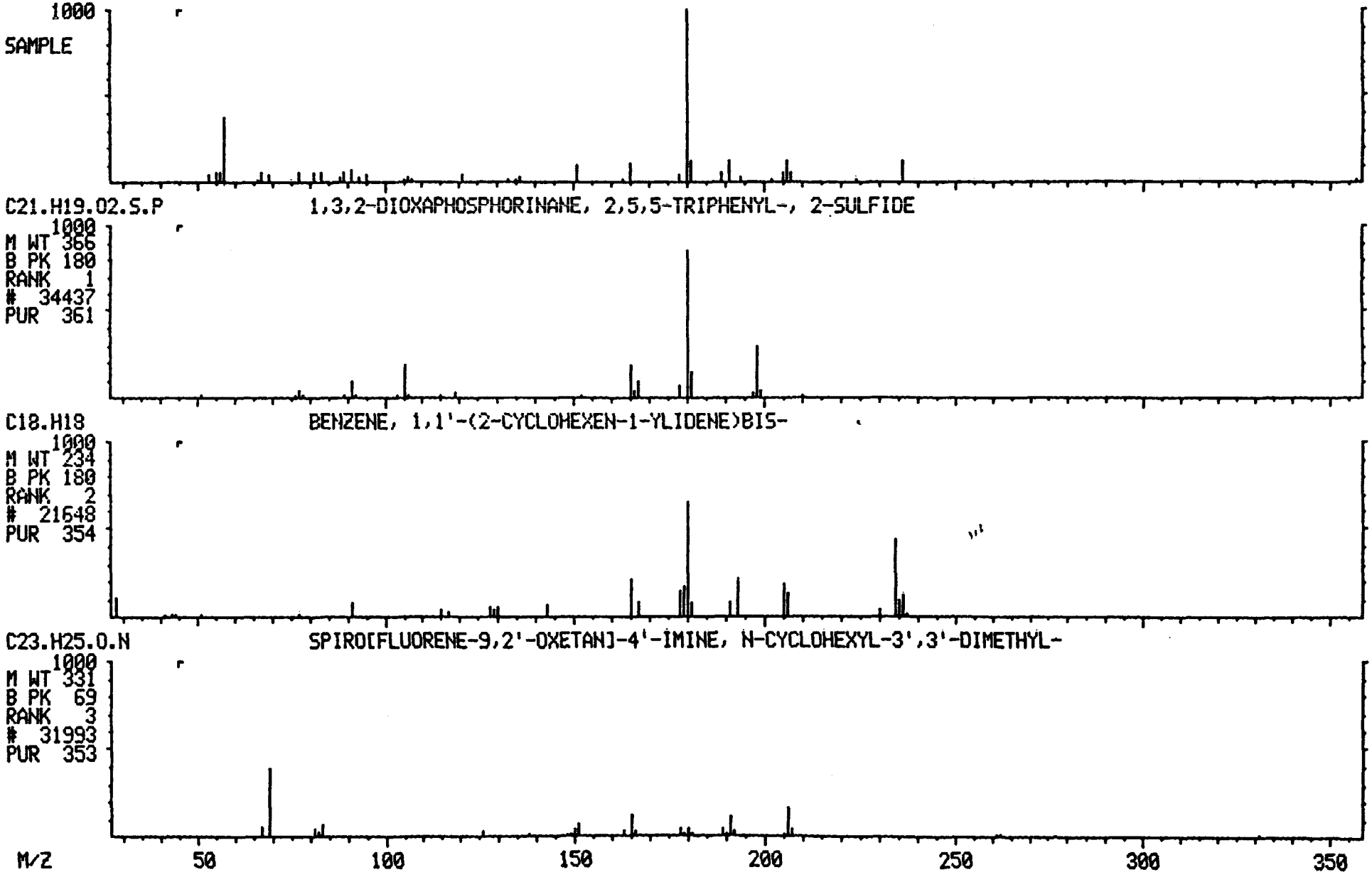
BASE M/Z: 92
RIC: 214783.



847520819

LIBRARY SEARCH
01/24/92 0:42:00 + 25:06
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 #1882 BASE M/Z: 180
CALI: S017011 # 3 RIC: 8959.

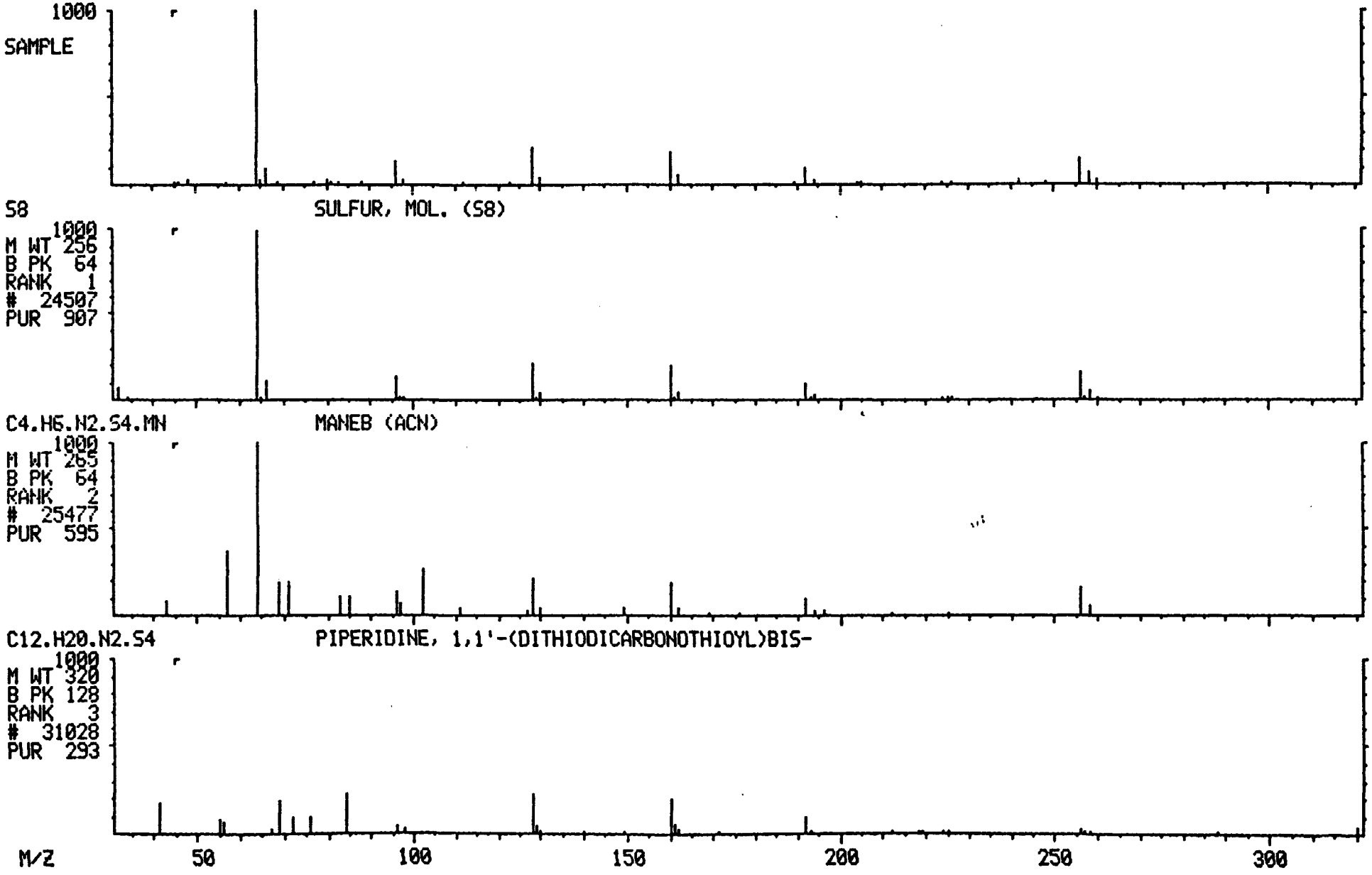


847520820

LIBRARY SEARCH
01/24/92 0:42:00 + 25:16
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 #1895
CALI: S017011 # 3

BASE M/Z: 64
RIC: 19359.

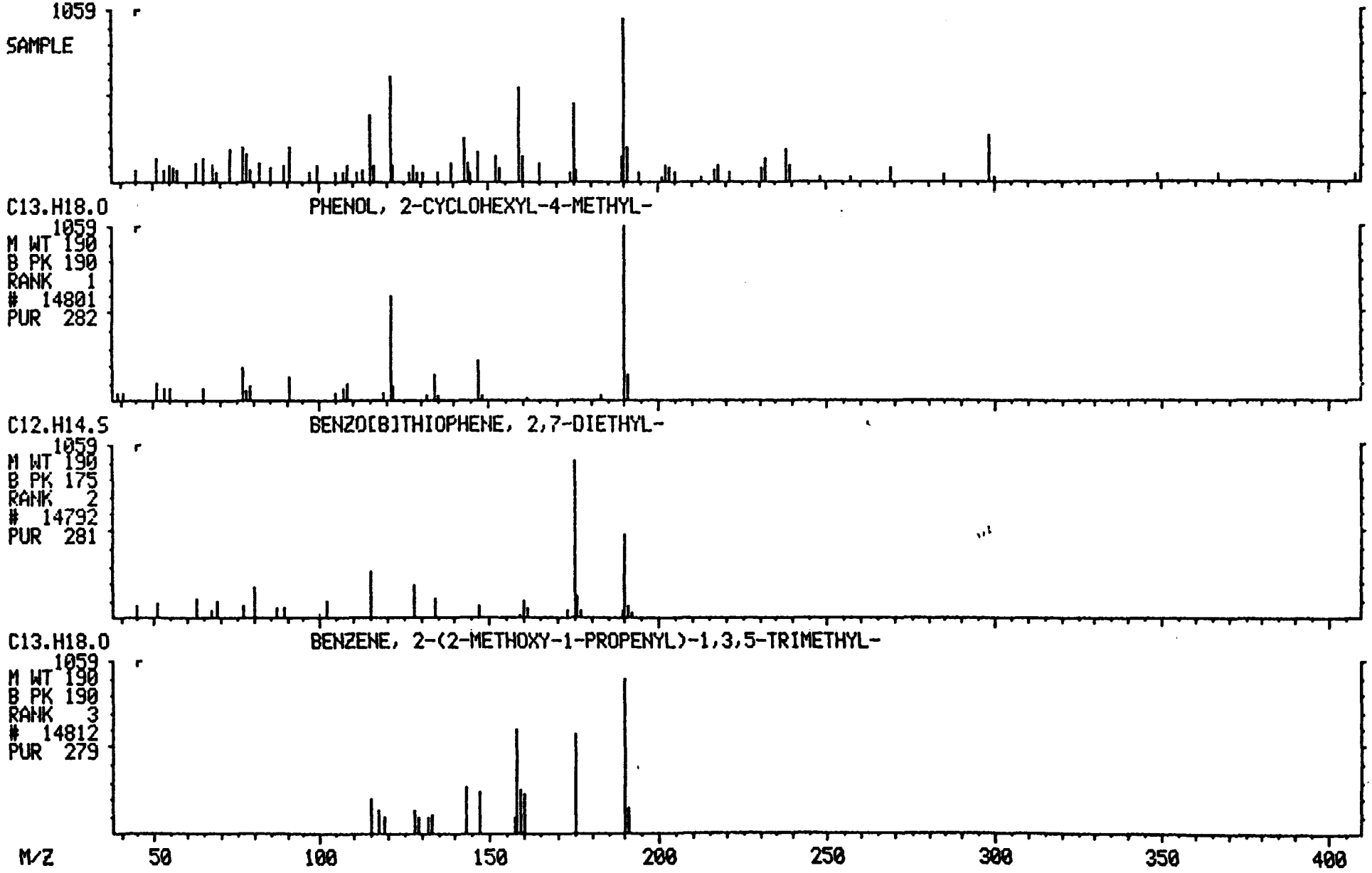


847520821

LIBRARY SEARCH
01/24/92 0:42:00 + 27:43
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 #2079
CALI: S017011 # 3

BASE M/Z: 190
RIC: 10687.

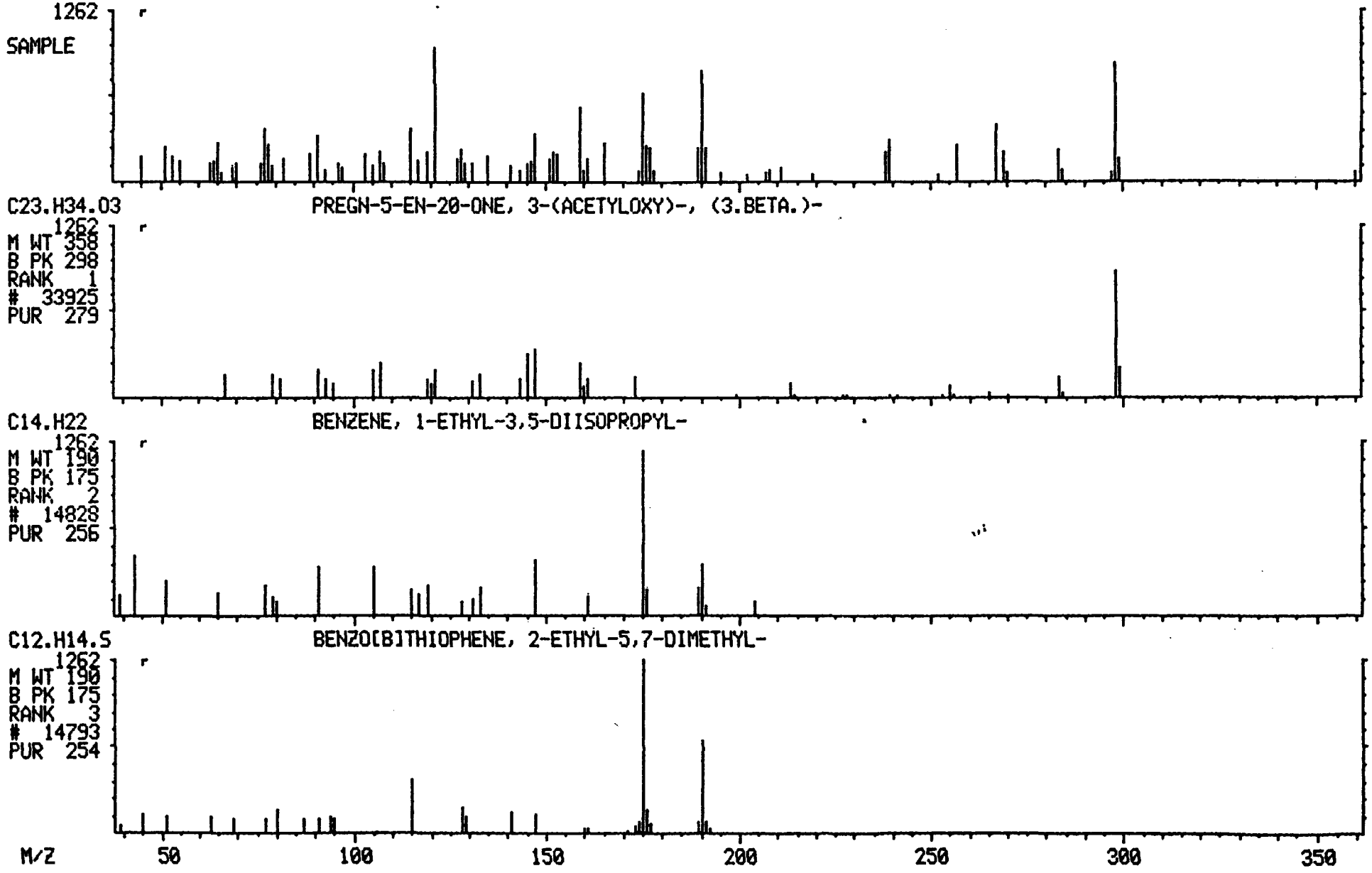


847520822

LIBRARY SEARCH
01/24/92 0:42:00 + 28:34
SAMPLE: 017011 BN+15/E F-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017011 #2143
CALI: S017011 # 3

BASE M/Z: 121
RIC: 12511.



Quantitation Report File: S017012

Data: S017012.TI
1/24/92 1:30:00
Sample: 017012 BN+15/E F-2 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520823

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	591	7:53	1	1.000	A BB	24561.	40.000	NG	14.18
2	136	858	11:26	2	1.000	A BB	53358.	40.000	NG	14.18
3	164	1269	16:55	3	1.000	A BB	28145.	40.000	NG	14.18
4	188	1617	21:34	4	1.000	A BB	40637.	40.000	NG	14.18
5	240	2256	30:05	5	1.000	A BV	34034.	40.000	NG	14.18
6	264	2578	34:22	6	1.000	A BB	21063.	40.000	NG	14.18
7	82	713	9:30	2	0.831	A BB	1311.	1.716	NG	0.61
8	172	1120	14:56	3	0.883	A BV	2560.	2.531	NG	0.90
9	244	2014	26:51	5	0.893	A BB	3764.	2.720	NG	0.96
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	93	555	7:24	1	0.939	A BB	3481.	X 5.231	NG X	1.85
14	NOT FOUND									
15	93	561	7:29	1	0.949	A BB	240.	0.385	NG	0.14
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	79	631	8:25	1	1.068	A BB	2943.	7.518	NG X	2.67
20	NOT FOUND									
21	NOT FOUND									
22	45	667	8:54	1	1.129	A BB	1439.	1.597	NG	0.57
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
49	NOT FOUND									
	NOT FOUND									
50	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	1.00	0.826	1.01	1.72	50.00	0.020	0.573	0.03
8	14:56	1.00	0.882	1.00	2.53	50.00	0.073	1.438	0.05
9	26:52	1.00	0.893	1.00	2.72	50.00	0.088	1.627	0.05
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14	1.02	0.911	1.03	5.23	50.00	0.113	1.084	0.10
14	7:18		0.921						
15	7:26	1.01	0.936	1.01	0.38	50.00	0.008	1.017	0.01
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25	1.00	1.061	1.01	7.52	50.00	0.096	0.638	0.15
20	8:26		1.064						
21	8:24		1.059						
22	8:51	1.00	1.116	1.01	1.60	50.00	0.047	1.467	0.03
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32		1.005						
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520825

Quantitation Report File: S017012

Data: S017012.TI
'24/92 1:30:00
Sample: 017012 BN+15/E F-2 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
6	C410	BENZIDINE
7	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
1	NOT FOUND								
62	178	1622	21:38	4	1.003	A BB	3357.	3.094 NG	1.10
63	178	1622	21:38	4	1.003	A BB	3357.	3.191 NG	1.13
64	NOT FOUND								

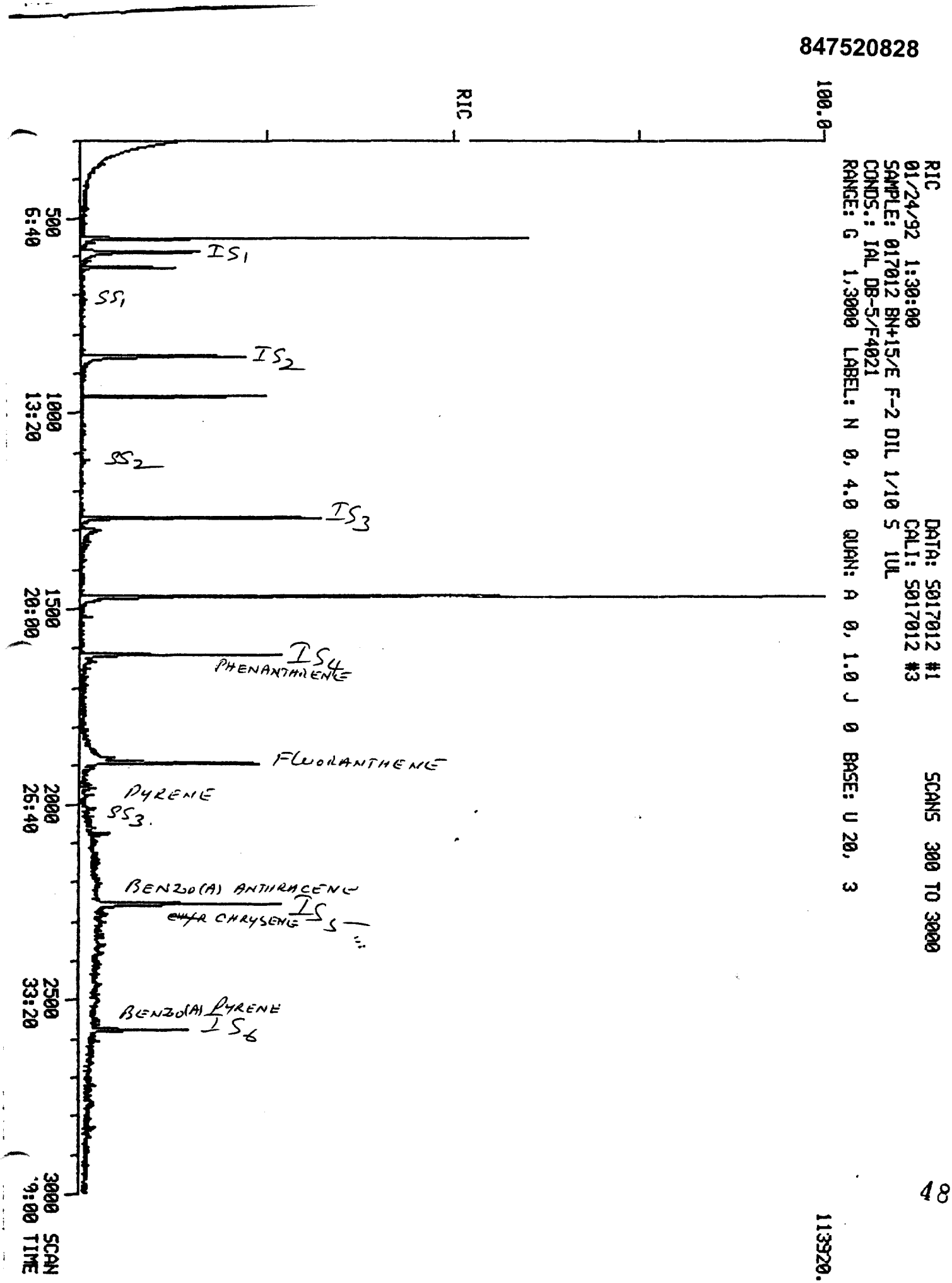
485

847520826

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
65	202	1909	25:27	4	1.181	A BB	3928.	4.229	NG	1.50
66	NOT FOUND									
67	202	1960	26:08	5	0.869	A BB	3648.	2.202	NG	0.78
68	NOT FOUND									
69	228	2253	30:02	5	0.999	A BV	2301.	2.265	NG	0.80
70	NOT FOUND									
71	228	2253	30:02	5	0.999	A BV	2301.	2.345	NG	0.83
72	149	2301	30:41	5	1.020	A BB	426.	0.948	NG	0.34
73	NOT FOUND									
74	NOT FOUND									
75	NOT FOUND									
76	252	2565	34:12	6	0.995	A BB	1586.	2.341	NG OK	0.83
77	NOT FOUND									
78	NOT FOUND									
79	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	3.09	50.00	0.066	1.068	0.06
63	21:48	0.99	1.011	0.99	3.19	50.00	0.066	1.036	0.06
64	23:56		1.109						
65	25:27	1.00	1.180	1.00	4.23	50.00	0.077	0.914	0.08
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	2.20	50.00	0.086	1.947	0.04
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	2.27	50.00	0.054	1.194	0.05
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	2.35	50.00	0.054	1.153	0.05
72	30:42	1.00	1.020	1.00	0.95	50.00	0.010	0.528	0.02
73	32:34		0.948						
74	33:20		0.970						
75	33:24		0.972						
76	34:13	1.00	0.995	1.00	2.34	50.00	0.060	1.286	0.05
77	38:00		1.106						
78	38:06		1.109						
79	39:02		1.136						

847520828


RIC
100.0
RIC
01/24/92 1:30:00
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 5 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: S017012 #1
CALI: S017012 #3
SCANS 300 TO 3000
113920.
500
6:40
1000
13:20
1500
20:00
2000
26:40
2500
33:20
3000
SCAN
9:00 TIME
IS1
SS1
IS2
SS2
IS3
IS4
PHENANTHRENE
FLUORANTHENE
PYRENE
SS3
BENZO(A) ANTHRACENE
IS5
CHRYSENE
BENZO(A) PYRENE
IS6

Quantitation Report File: SSRTO1

Data: SO17012.TI
/24/92 1:30:00
Sample: O17012 BN+15/E F-2 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	555	7:24	8	0.377	A BB	216649.	62.069 -82.4	14.01
2	RIC	591	7:53	8	0.401	A BB	107794.	30.882	6.97
3	RIC	631	8:25	8	0.429	A BB	39351.	11.274 -14.6	2.54
4	RIC	858	11:26	8	0.583	A BB	124289.	35.608	8.04
5	RIC	960	12:48	8	0.652	A BB	61616.	17.653 -19.9	3.98
6	RIC	1269	16:55	8	0.862	A BB	133919.	38.367	8.66
7	RIC	1301	17:21	8	0.884	A BB	30381.	8.704 -9.17	1.96
8	RIC	1472	19:38	8	1.000	A BB	349047.	100.000 -103	22.57
9	RIC	1618	21:34	8	1.099	A BB	135865.	38.925	8.78
10	RIC	1895	25:16	8	1.287	A BB	167012.	47.848 -49.2	10.80
11	RIC	2256	30:05	8	1.533	A BB	119092.	34.119	7.70
12	RIC	2578	34:22	8	1.751	A BB	61578.	17.642	3.98

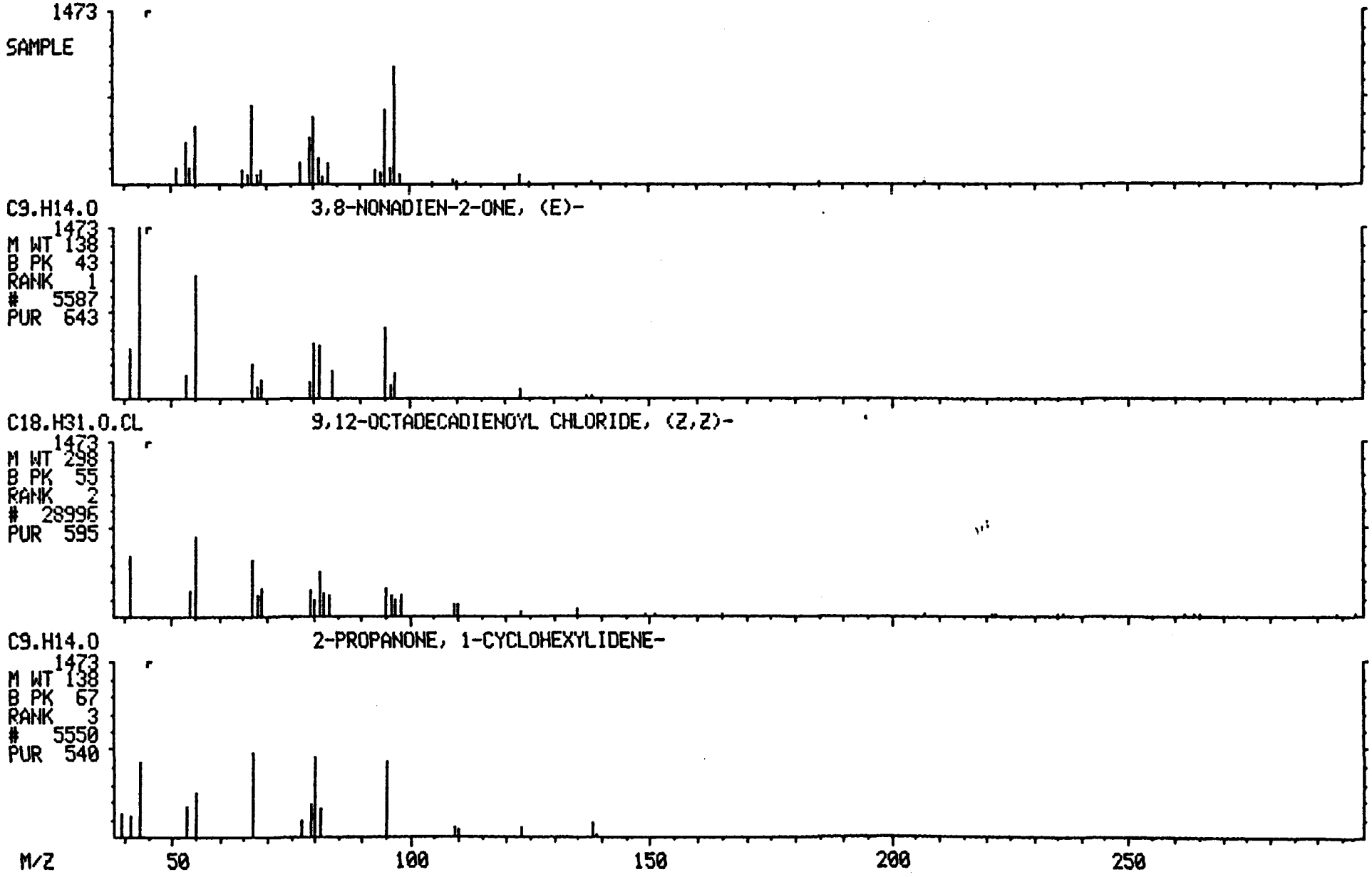
847520829

847520830

LIBRARY SEARCH
01/24/92 1:30:00 + 7:24
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 # 555
CALI: S017012 # 3

BASE M/Z: 97
RIC: 56447.



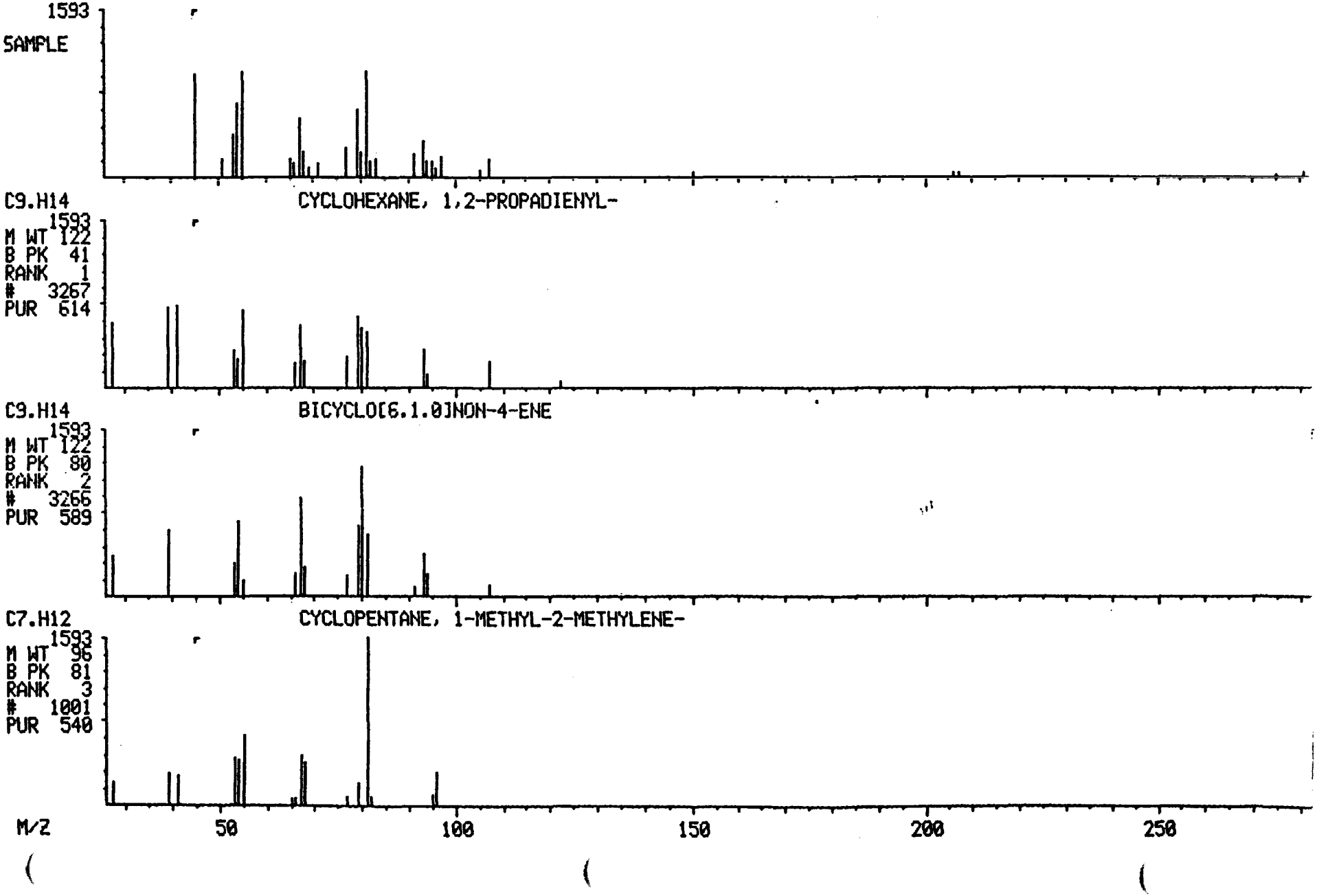
847520831

LIBRARY SEARCH
01/24/92 1:30:00 + 8:25
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 # 631
CALI: S017012 # 3

BASE M/Z: 81
RIC: 11503.

490

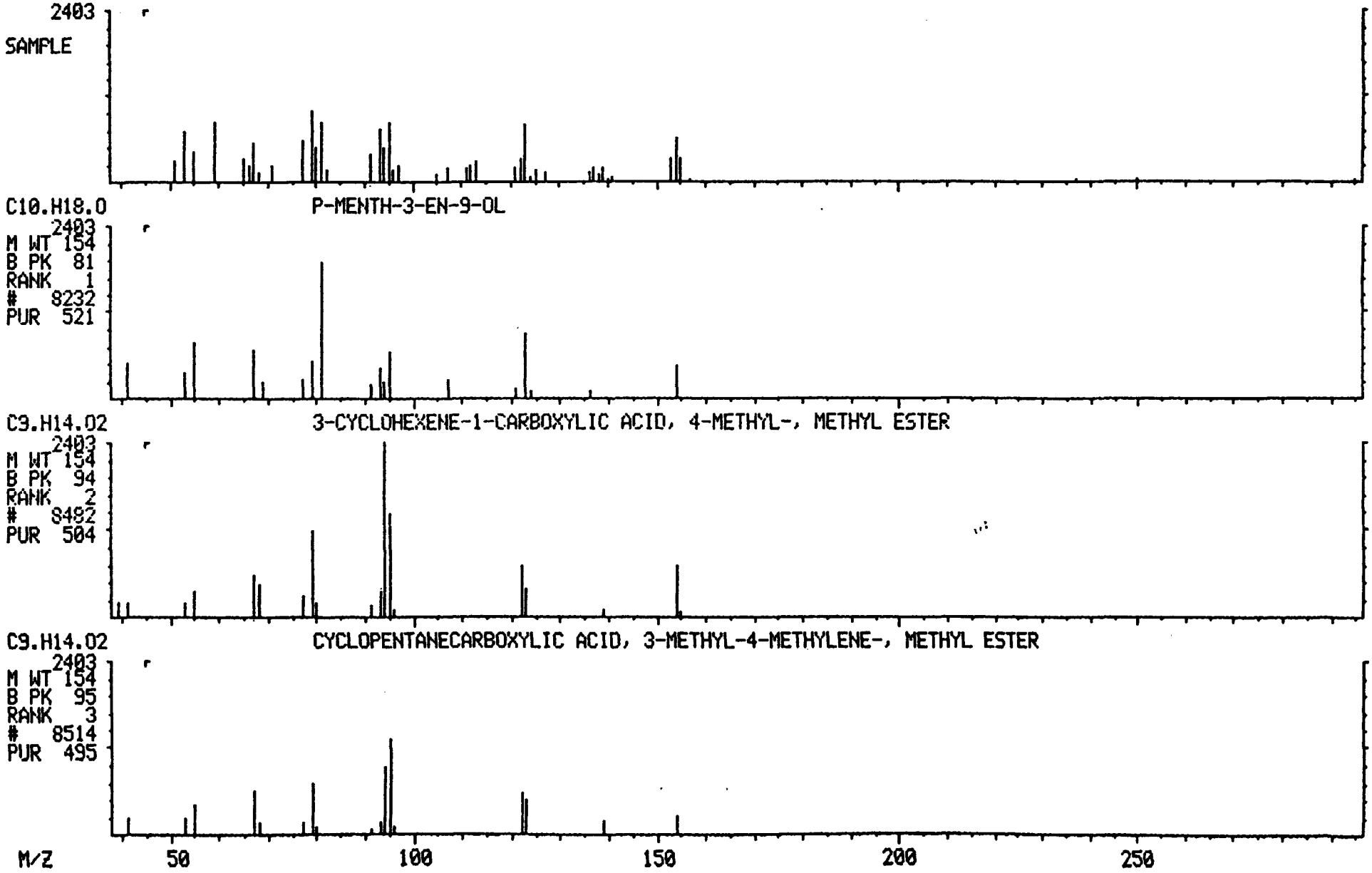


847520832

LIBRARY SEARCH
01/24/92 1:30:00 + 12:48
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 # 960
CALI: S017012 # 3

BASE M/Z: 79
RIC: 21343.

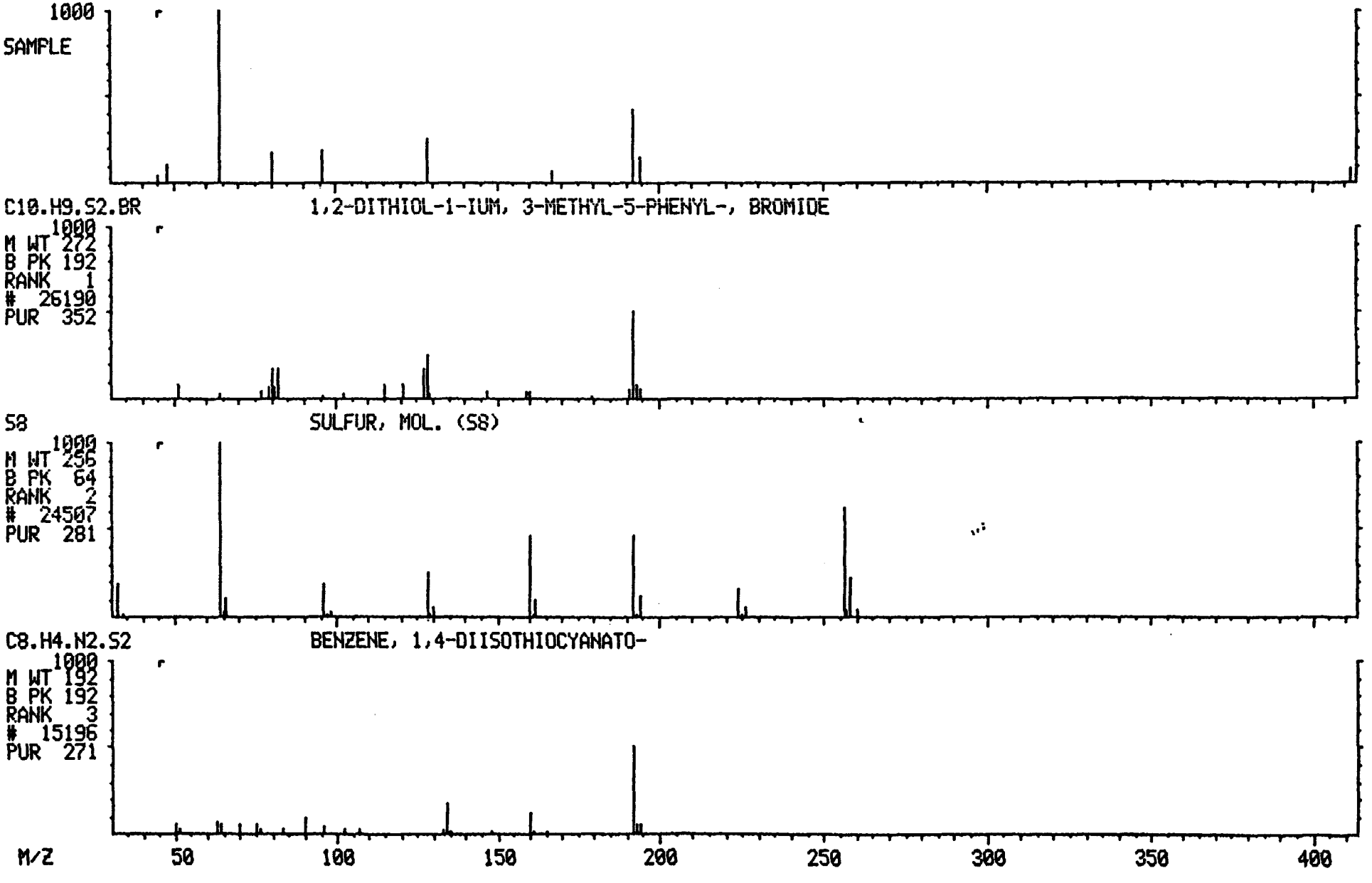


847520833

LIBRARY SEARCH
01/24/92 1:30:00 + 17:21
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 #1301
CALI: S017012 # 3

BASE M/Z: 64
RIC: 1939.

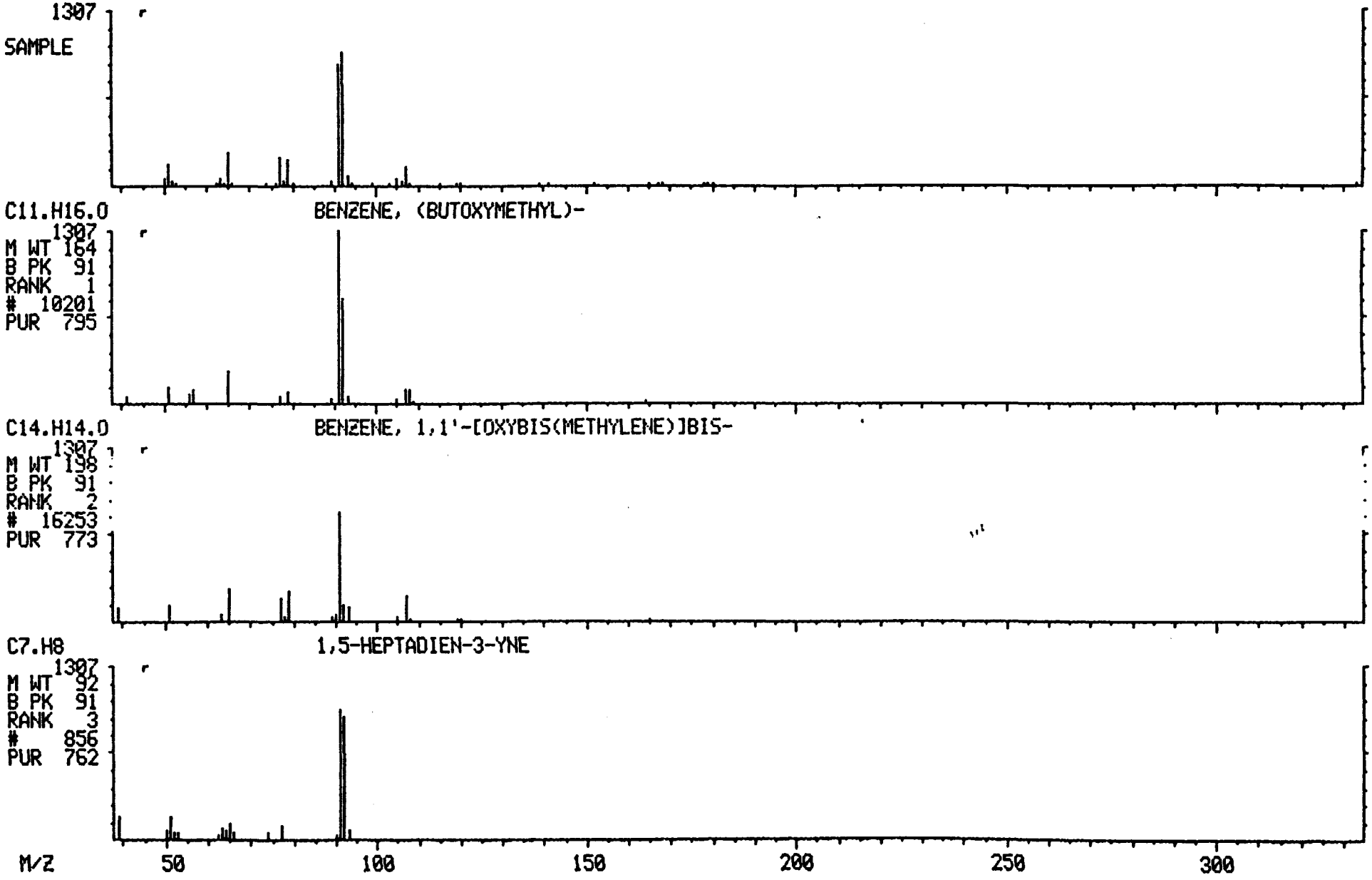


847520834

LIBRARY SEARCH
01/24/92 1:30:00 + 19:38
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 #1472
CALI: S017012 # 3

BASE M/Z: 92
RIC: 93951.

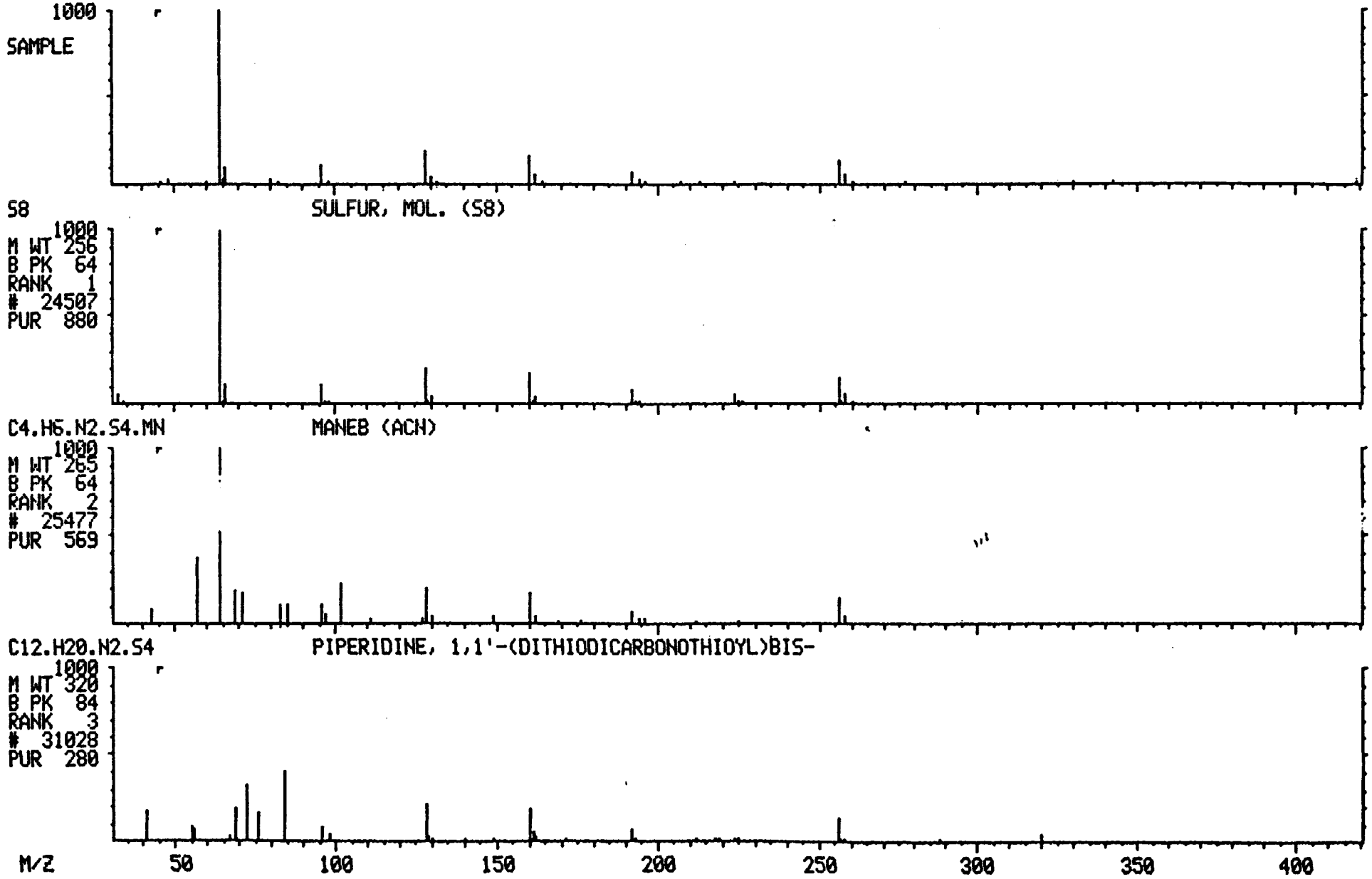


847520835

LIBRARY SEARCH
01/24/92 1:30:00 + 25:16
SAMPLE: 017012 BN+15/E F-2 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017012 #1895
CALI: S017012 # 3

BASE M/Z: 64
RIC: 23967.



Quantitation Report File: S017013

ta: S017013.TI
01/24/92 2:17:00
Sample: 017013 BN+15/E G-I DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520836

No	Name
48	C260 2,4-DINITROPHENOL
49	C265 DIBENZOFURAN
50	C270 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	592	7:54	1	1.000	A BB	20361.	40.000 NG	9.72
2	136	858	11:26	2	1.000	A BB	39884.	40.000 NG	9.72
3	164	1269	16:55	3	1.000	A BB	23717.	40.000 NG	9.72
4	188	1617	21:34	4	1.000	A BV	37897.	40.000 NG	9.72
5	240	2256	30:05	5	1.000	A BV	30566.	40.000 NG	9.72
6	264	2578	34:22	6	1.000	A BB	18266.	40.000 NG	9.72
7	82	711	9:29	2	0.829	A BV	256.	0.448 NG	0.11
8	172	1120	14:56	3	0.883	A BB	3458.	4.057 NG	0.99
9	244	2013	26:50	5	0.892	A BB	4737.	3.811 NG	0.93
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	93	554	7:23	1	0.936	A BB	256.	0.495 NG	0.12
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	45	666	8:53	1	1.125	A BB	357.	0.478 NG	0.12
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	128	862	11:30	2	1.005	A BB	287.	0.256 NG	0.06
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	153	1276	17:01	3	1.006	A BB	522.	0.729 NG	0.18
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	1.00	0.826	1.00	0.45	50.00	0.005	0.573	0.01
8	14:56	1.00	0.882	1.00	4.06	50.00	0.117	1.438	0.08
9	26:52	1.00	0.893	1.00	3.81	50.00	0.124	1.627	0.08
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26	0.99	0.936	1.00	0.49	50.00	0.010	1.017	0.01
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51	1.00	1.116	1.01	0.48	50.00	0.014	1.467	0.01
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
6	9:32		0.830						
7	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32	1.00	1.005	1.00	0.26	50.00	0.006	1.125	0.01
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03	1.00	1.007	1.00	0.73	50.00	0.018	1.207	0.01
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

Quantitation Report File: S017013

Data: S017013.TI
01/24/92 2:17:00
Sample: 017013 BN+15/E G-1 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	166	1399	18:39	3	1.102	A BB	790.	1.008 NG	0.24
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1622	21:38	4	1.003	A BV	21124.	20.876 NG	5.07
63	178	1634	21:47	4	1.011	A VB	6952.	7.085 NG	1.72
64	149	1793	23:54	4	1.109	A BB	1709.	1.540 NG	0.37

ok ok

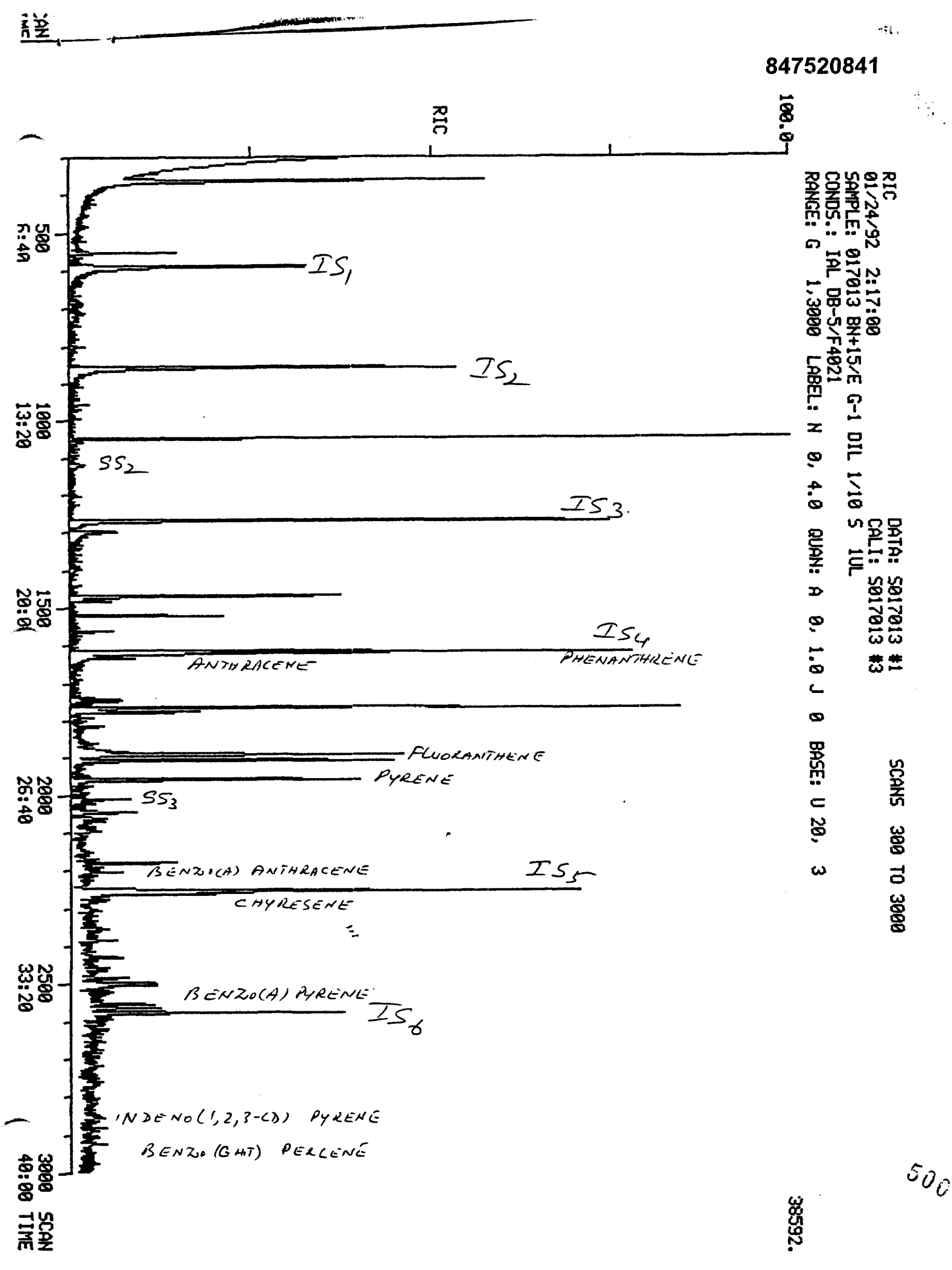
49

847520839

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
66	202	1908	25:26	4	1.180	A BB	24989.	28.851	NG	7.01
66	NOT FOUND									
67	202	1959	26:07	5	0.868	A BV	25212.	16.943	NG	4.12
68	NOT FOUND									
69	228	2252	30:02	5	0.998	A BV	11283.	12.368	NG	3.01
70	NOT FOUND									
71	228	2262	30:10	5	1.003	A VB	12895.	14.634	NG	3.56
72	NOT FOUND									
73	NOT FOUND									
74	252	2501	33:21	6	0.970	A BB	12402.	18.956	NG	4.61
75	252	2501	33:21	6	0.970	A BB	12402.	19.042	NG	4.63
76	252	2565	34:12	6	0.995	A VV	6309.	10.740	NG	2.61
77	276	2848	37:58	6	1.105	A BB	2370.	4.127	NG	1.00
78	278	2855	38:04	6	1.107	A BB	699.	1.361	NG	0.33
79	276	2924	38:59	6	1.134	A BB	2484.	3.999	NG	0.97

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39	1.00	1.102	1.00	1.01	50.00	0.027	1.322	0.02
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	20.88	50.00	0.446	1.068	0.42
63	21:48	1.00	1.011	1.00	7.08	50.00	0.147	1.036	0.14
64	23:56	1.00	1.109	1.00	1.54	50.00	0.036	1.171	0.03
65	25:27	1.00	1.180	1.00	28.85	50.00	0.528	0.914	0.58
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	16.94	50.00	0.660	1.947	0.34
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	12.37	50.00	0.295	1.194	0.25
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	14.63	50.00	0.337	1.153	0.29
72	30:42		1.020						
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	18.96	50.00	0.543	1.433	0.38
75	33:24	1.00	0.972	1.00	19.04	50.00	0.543	1.426	0.38
76	34:13	1.00	0.995	1.00	10.74	50.00	0.276	1.286	0.21
77	38:00	1.00	1.106	1.00	4.13	50.00	0.104	1.257	0.08
78	38:06	1.00	1.109	1.00	1.36	50.00	0.031	1.125	0.03
79	39:02	1.00	1.136	1.00	4.00	50.00	0.109	1.360	0.08

847520841



500

Quantitation Report File: SSRT01

ta: S017013.TI
01/24/92 2:17:00
Sample: 017013 BN+15/E G-1 DIL 1/10 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN
14	UNKNOWN
15	UNKNOWN
16	UNKNOWN
17	UNKNOWN
18	UNKNOWN
19	UNKNOWN
20	UNKNOWN

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	363	4:50	17	0.161	A BB	94901.	63.509	6.75
2	RIC	555	7:24	17	0.246	A BB	17683.	11.834	1.26
3	RIC	591	7:53	17	0.262	A BB	79782.	53.391	5.67
4	RIC	858	11:26	17	0.380	A BB	100744.	67.419	7.17
5	RIC	1049	13:59	17	0.465	A BB	79748.	53.369	5.67
6	RIC	1269	16:55	17	0.562	A BB	118723.	79.451	8.44
7	RIC	1470	19:36	17	0.652	A BB	57107.	38.217	4.06
8	RIC	1522	20:18	17	0.675	A BB	18234.	12.202	1.30
9	RIC	1617	21:34	17	0.717	A BV	103999.	69.598	7.40
10	RIC	1622	21:38	17	0.719	A VB	74494.	49.852	5.30
11	RIC	1767	23:34	17	0.783	A BV	107994.	72.271	7.68
12	RIC	1778	23:42	17	0.788	A VB	28242.	18.900	2.01
13	RIC	1893	25:14	17	0.839	A BB	92448.	61.868	6.58
14	RIC	1908	25:26	17	0.846	A BB	56322.	37.692	4.01
15	RIC	1959	26:07	17	0.868	A BB	65996.	44.166	4.69
16	RIC	2181	29:05	17	0.967	A BB	35760.	23.931	2.54
17	RIC	2256	30:05	17	1.000	A BB	149429.	100.000	10.63
18	RIC	2502	33:22	17	1.109	A BB	44523.	29.795	3.17
19	RIC	2568	34:12	17	1.137	A BB	15330.	10.259	1.09
20	RIC	2678	35:42	17	1.186	A BB	64432.	43.132	4.58

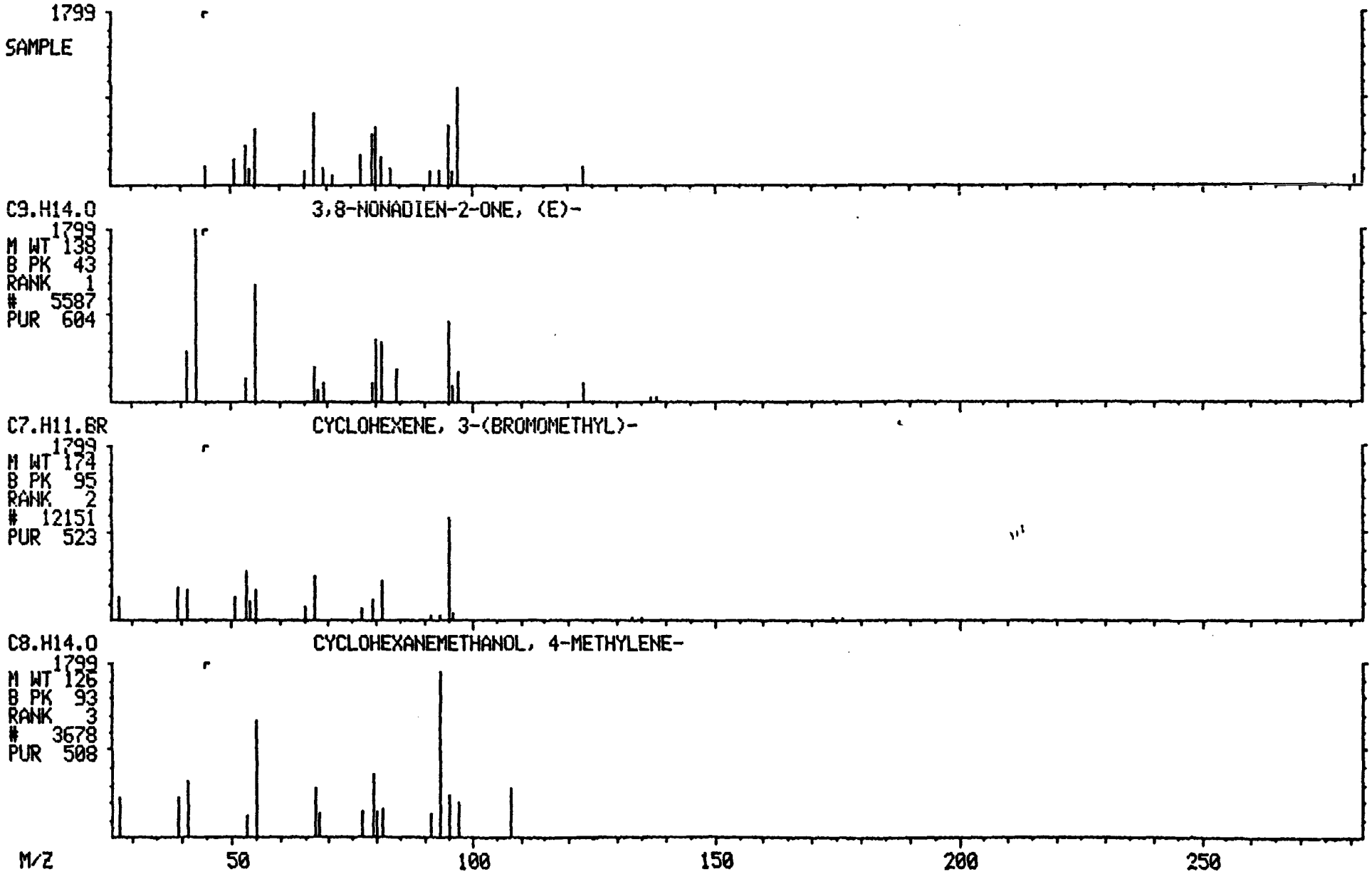
847520842

847520843

LIBRARY SEARCH
01/24/92 2:17:00 + 7:24
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 # 555
CALI: S017013 # 3

BASE M/Z: 97
RIC: 5175.

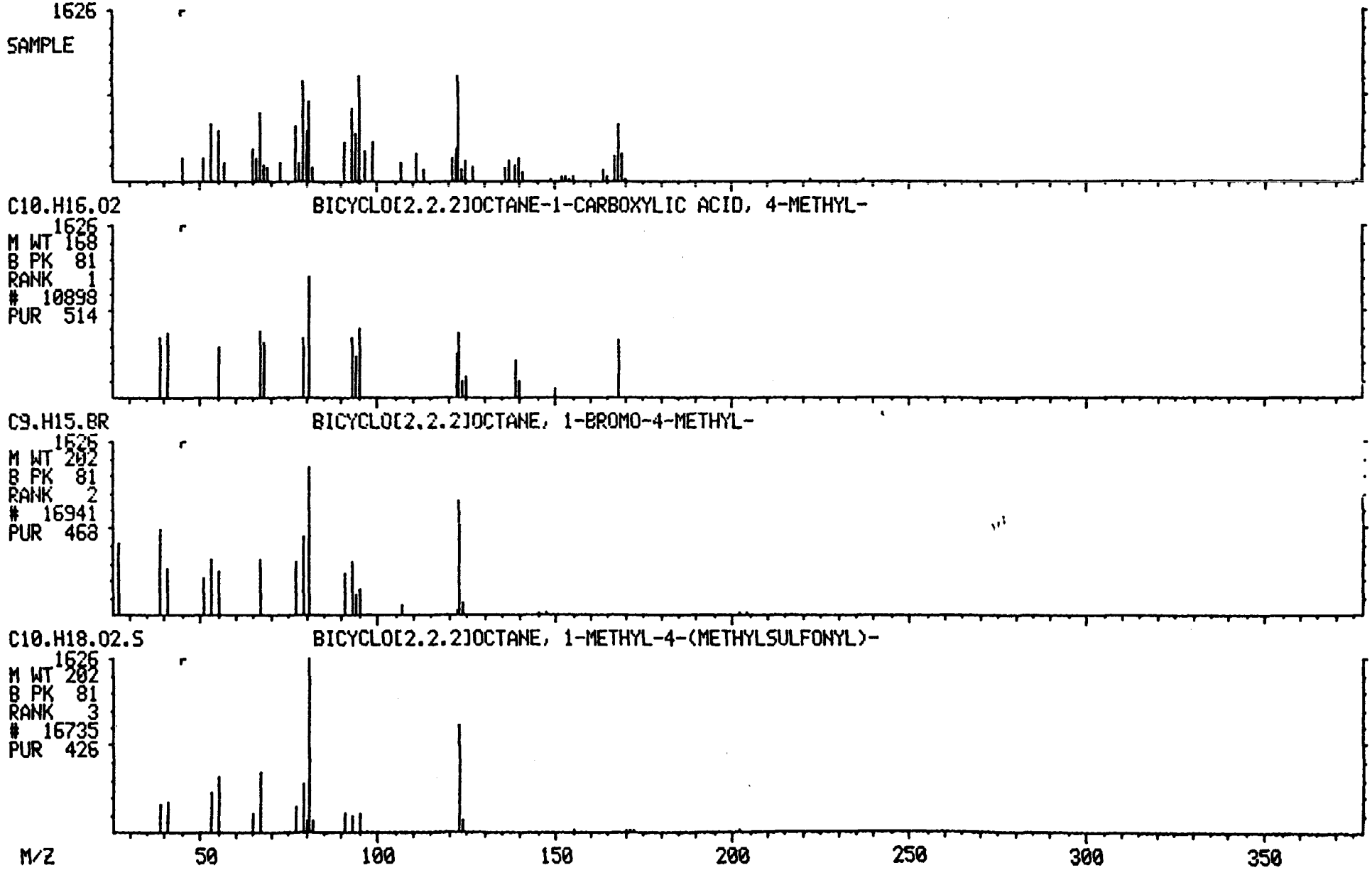


847520844

LIBRARY SEARCH
01/24/92 2:17:00 + 13:59
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #1049
CALI: S017013 # 3

BASE M/Z: 95
RIC: 27135.

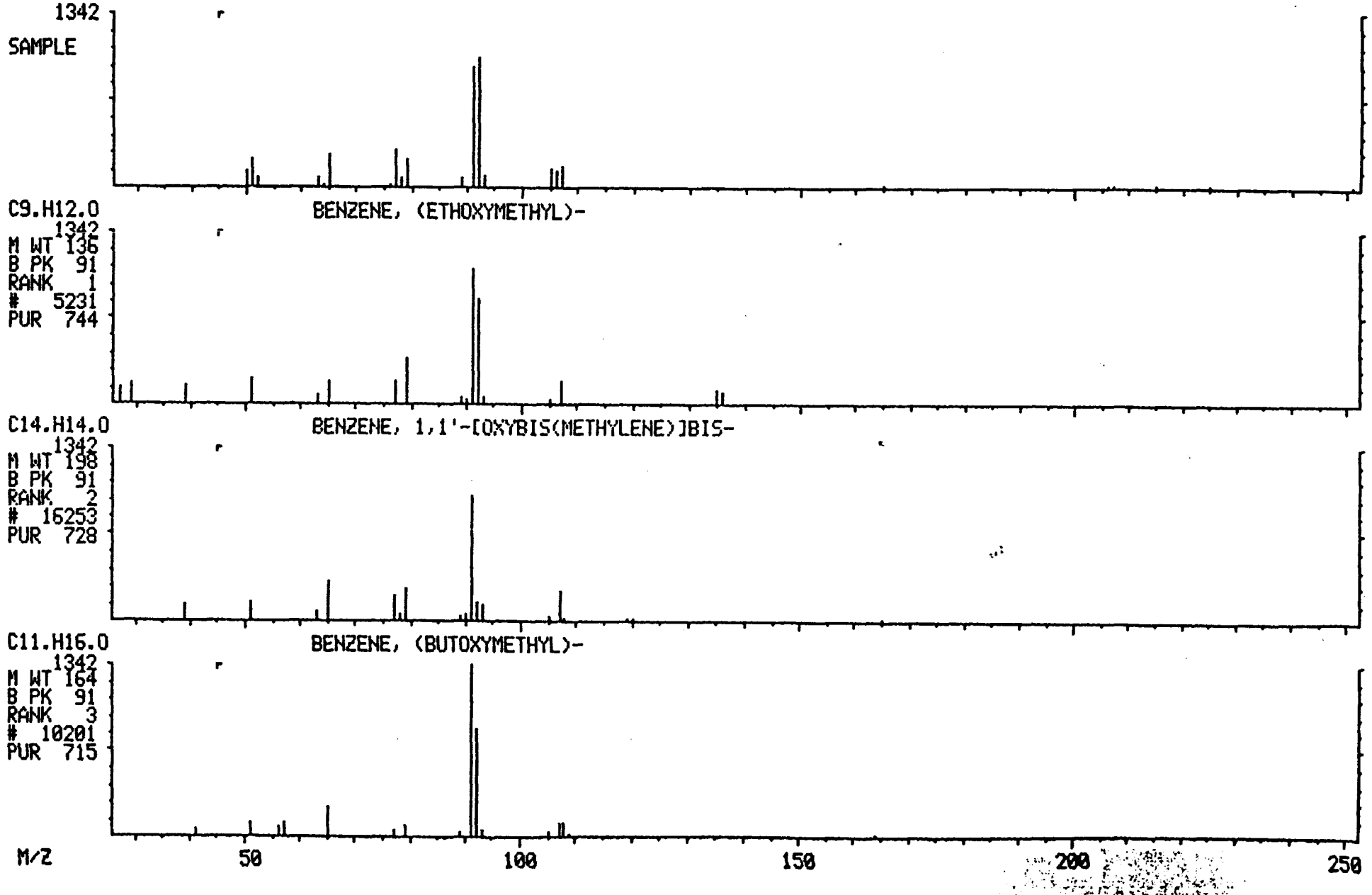


847520845

LIBRARY SEARCH
01/24/92 2:17:00 + 19:36
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #1470
CALI: S017013 # 3

BASE M/Z: 92
RIC: 12271.



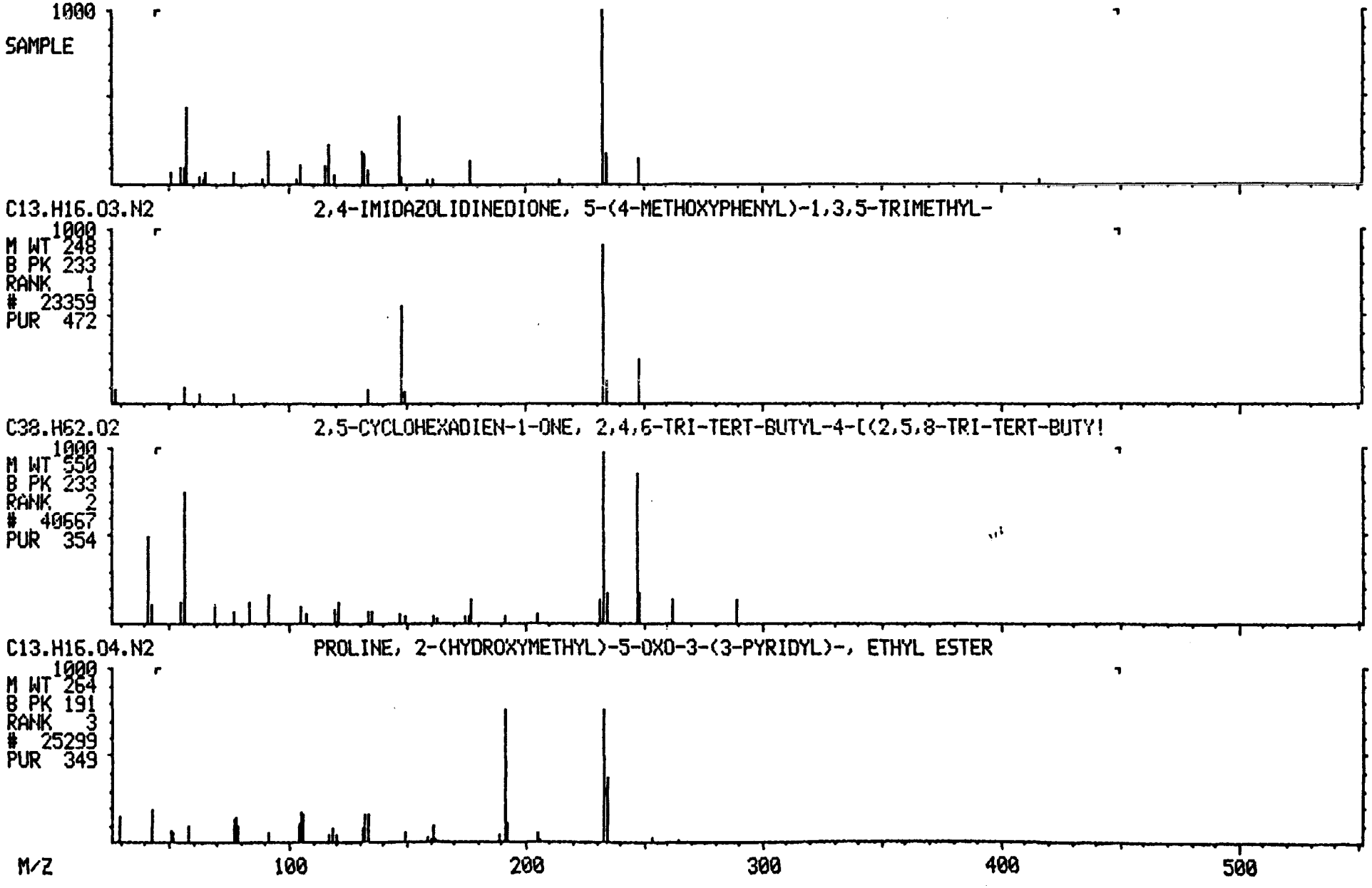
847520846

505

LIBRARY SEARCH
01/24/92 2:17:00 + 20:18
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #1522
CALI: S017013 # 3

BASE M/Z: 233
RIC: 6959.

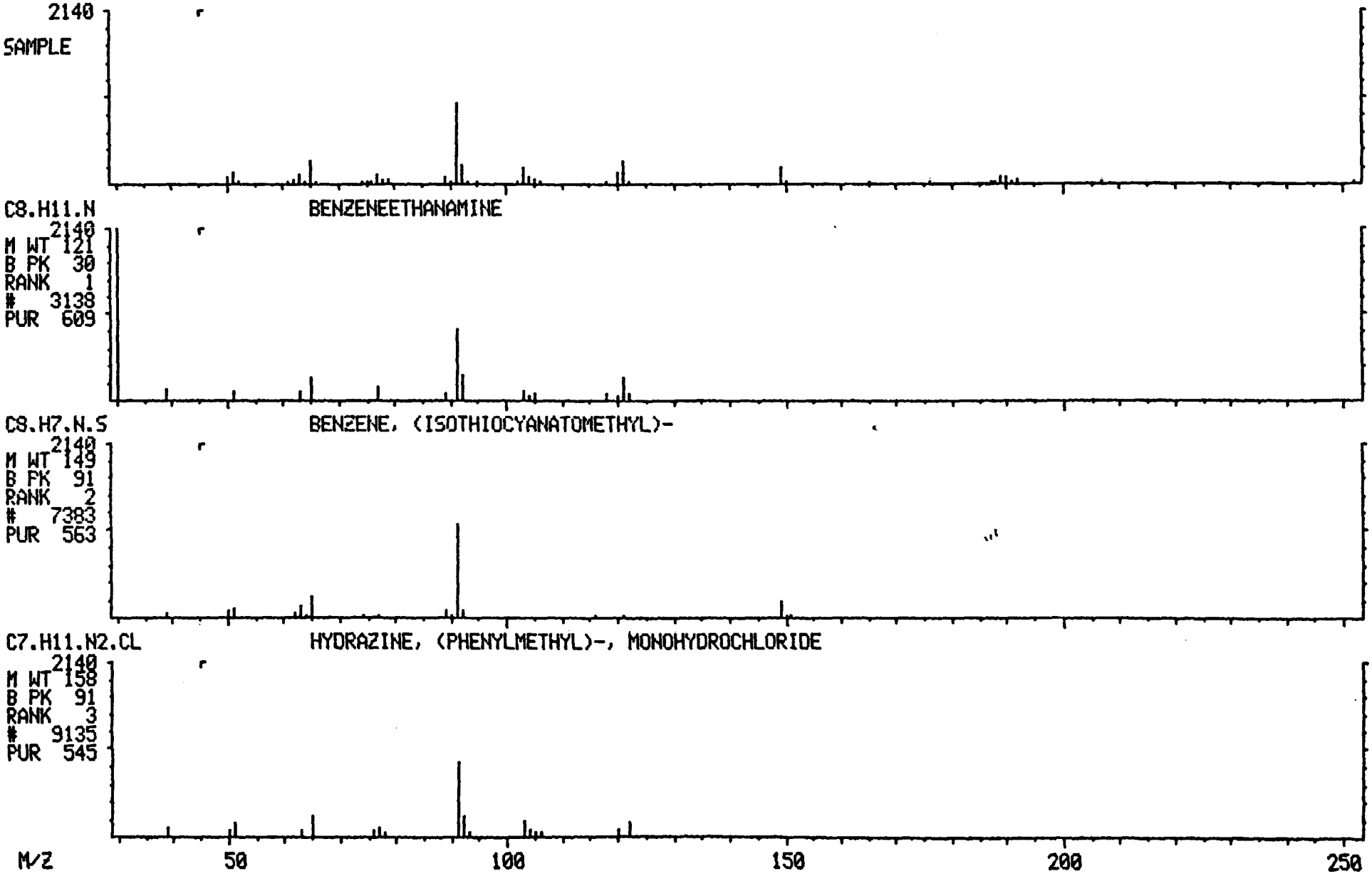


847520847

LIBRARY SEARCH
01/24/92 2:17:00 + 23:34
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: 5017013 #1767
CALI: 5017013 # 3

BASE M/Z: 91
RIC: 28863.

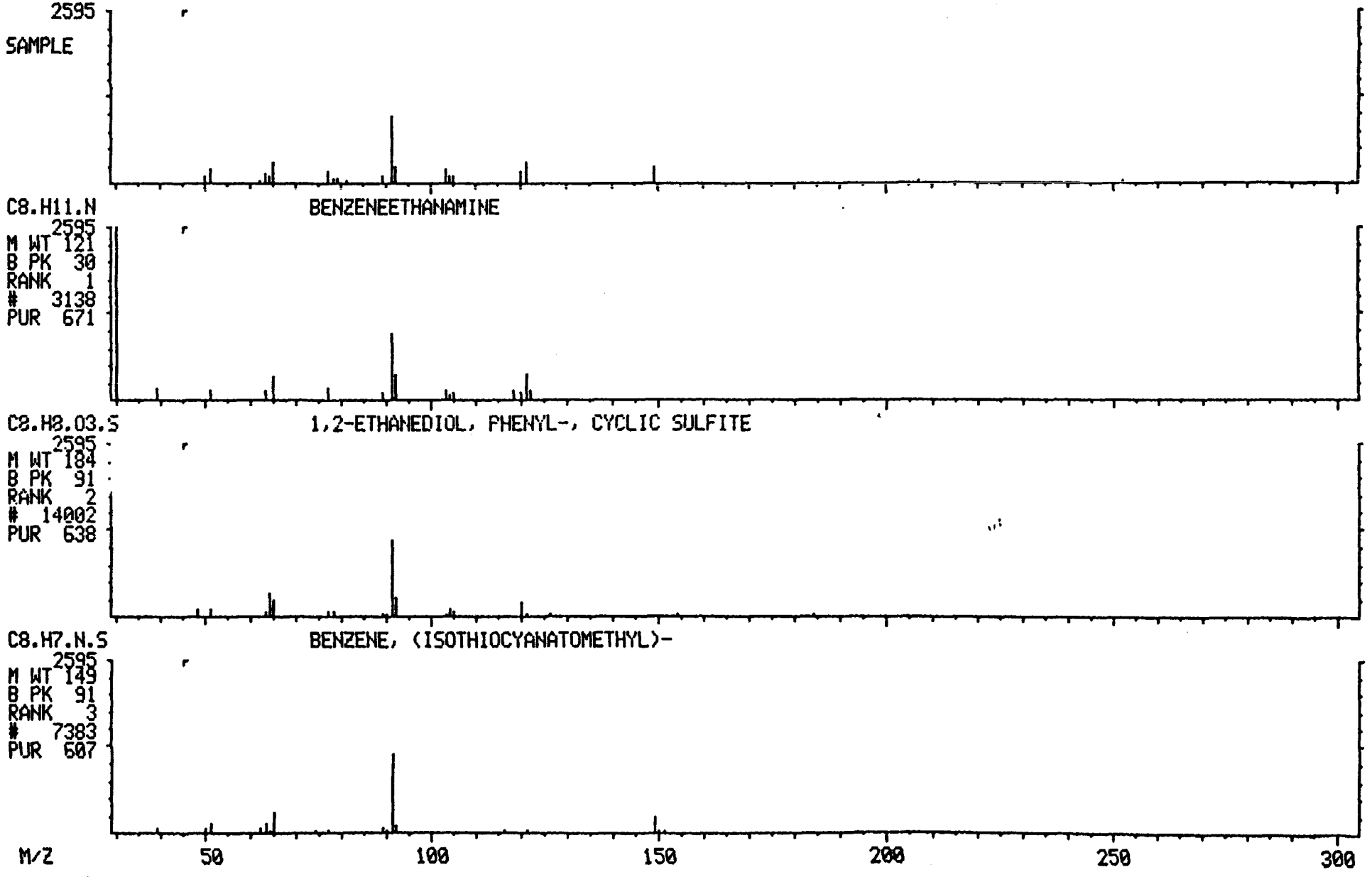


847520848

LIBRARY SEARCH
01/24/92 2:17:00 + 23:42
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #1778
CALI: S017013 # 3

BASE M/Z: 91
RIC: 6103.



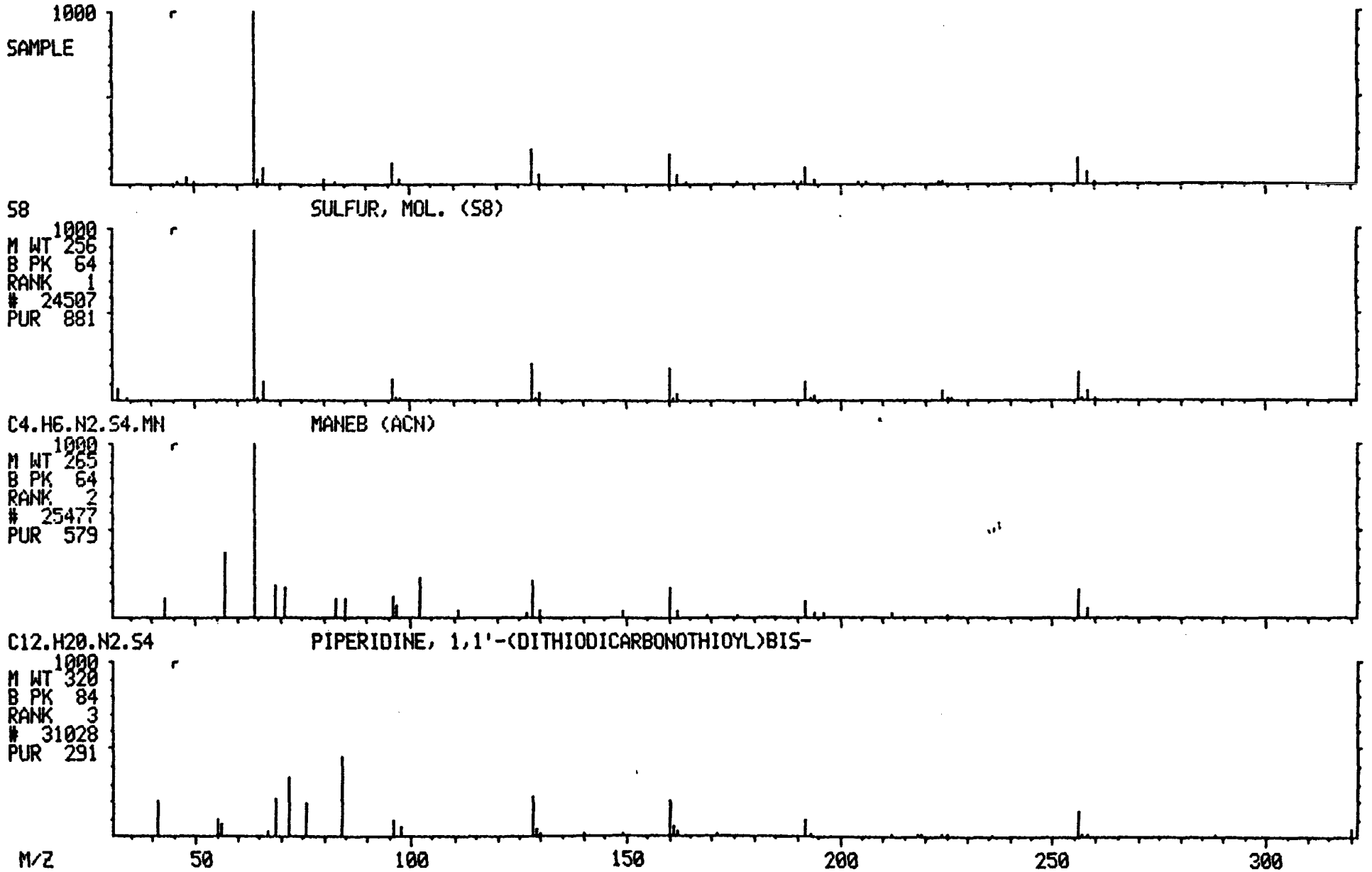
847520849

503

LIBRARY SEARCH
01/24/92 2:17:00 + 25:14
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #1893
CALI: S017013 # 3

BASE M/Z: 64
RIC: 15887.

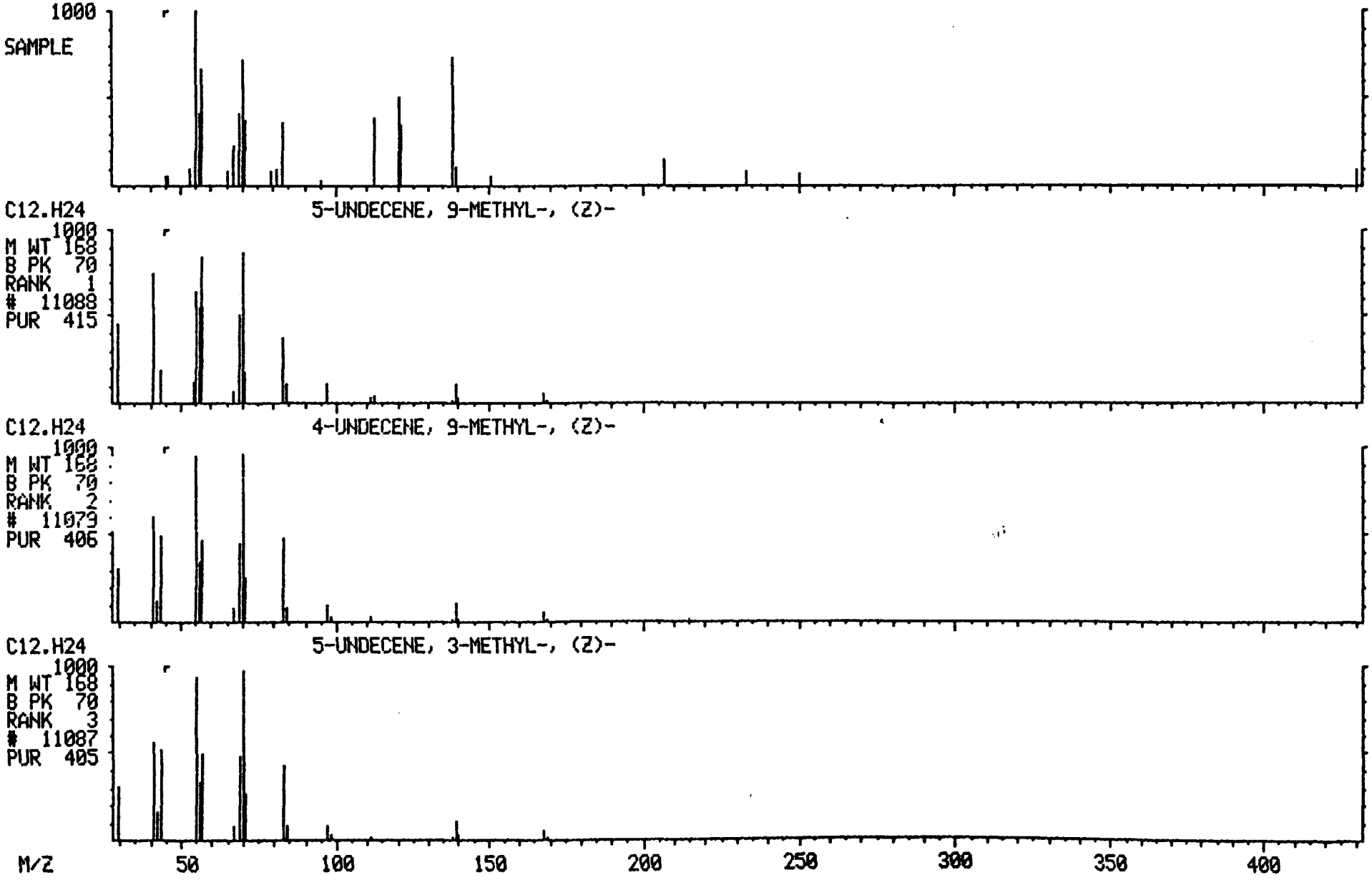


847520850

LIBRARY SEARCH
01/24/92 2:17:00 + 29:05
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 5 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #2181
CALI: S017013 # 3

BASE M/Z: 55
RIC: 4719.



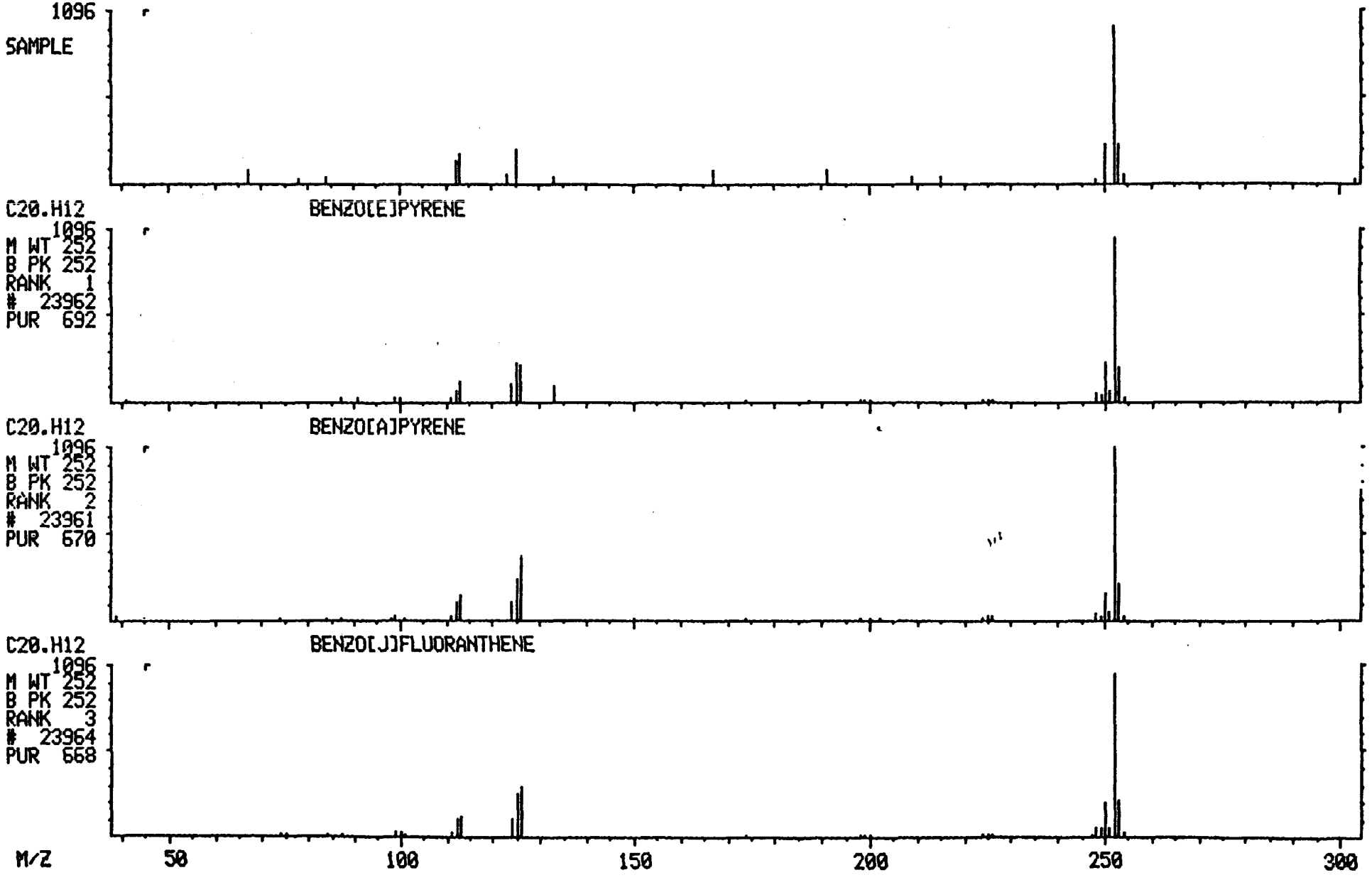
847520851

LIBRARY SEARCH
01/24/92 2:17:00 + 33:22
SAMPLE: 017013 BN+15/E G-1 DIL 1/10 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017013 #2502
CALI: S017013 # 3

BASE M/Z: 252
RIC: 3079.

510



Quantitation Report File: S017014

Data: S017014.TI
1/23/92 0:02:00
Sample: 017014 BN+15/E G-2 DIL 1/5 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI05	1,4-DICHLOROBENZENE-D4 *IS1*
2	CI10	NAPHTHALENE-D8 *IS2*
3	CI15	ACENAPHTHENE-D10 *IS3*
4	CI20	PHENANTHRENE-D10 *IS4*
5	CI25	CHRYSENE-D14 *IS5*
6	CI30	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

847520852

No	Name	
48	C260	2,4-DINITROPHENOL
49	C265	DIBENZOFURAN
50	C270	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	150	590	7:52	1	1.000	A BB	28244.	40.000 NG	13.12
2	136	858	11:26	2	1.000	A BB	64925.	40.000 NG	13.12
3	164	1270	16:56	3	1.000	A BB	33679.	40.000 NG	13.12
4	188	1617	21:34	4	1.000	A BV	48623.	40.000 NG	13.12
5	240	2256	30:05	5	1.000	A BV	34104.	40.000 NG	13.12
6	264	2577	34:22	6	1.000	A BB	21328.	40.000 NG	13.12
7	82	711	9:29	2	0.829	A BV	7494.	8.060 NG	2.64
8	172	1119	14:55	3	0.881	A BV	11831.	9.774 NG	3.21
9	244	2014	26:51	5	0.893	A BB	11223.	8.093 NG	2.65
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
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31	NOT FOUND								
32	NOT FOUND								
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34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	7:56	0.99	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:29	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	16:56	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:34	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:06	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:22	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:29	1.00	0.826	1.00	8.06	50.00	0.092	0.573	0.16
8	14:56	1.00	0.882	1.00	9.77	50.00	0.281	1.438	0.20
9	26:52	1.00	0.893	1.00	8.09	50.00	0.263	1.627	0.16
10	5:10		0.652						
11	7:17		0.918						
12	19:29		1.150						
13	7:14		0.911						
14	7:18		0.921						
15	7:26		0.936						
16	7:30		0.945						
17	7:50		0.987						
18	7:58		1.005						
19	8:25		1.061						
20	8:26		1.064						
21	8:24		1.059						
22	8:51		1.116						
23	9:14		1.165						
24	9:14		1.165						
25	9:16		1.168						
26	9:32		0.830						
27	10:14		0.891						
28	10:27		0.911						
29	10:44		0.935						
30	10:59		0.957						
31	11:10		0.973						
32	11:23		0.992						
33	11:32		1.005						
34	11:50		1.030						
35	12:10		1.060						
36	13:28		1.173						
37	13:39		1.189						
38	14:25		0.851						
39	14:41		0.867						
40	14:47		0.873						
41	15:08		0.894						
42	15:38		0.923						
43	16:26		0.970						
44	16:26		0.970						
45	16:58		1.002						
46	16:34		0.979						
47	17:03		1.007						
48	17:17		1.020						
49	17:34		1.037						
50	17:42		1.045						

847520854

Quantitation Report File: S017014

Data: S017014.TI
01/23/92 0:02:00
Sample: 017014 BN+15/E G-2 DIL 1/5 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	178	1622	21:38	4	1.003	A BB	4785.	3.686 NG	1.21
63	178	1622	21:38	4	1.003	A BB	4785.	3.801 NG	1.25
64	149	1795	23:56	4	1.110	A BB	1902.	1.336 NG	0.44

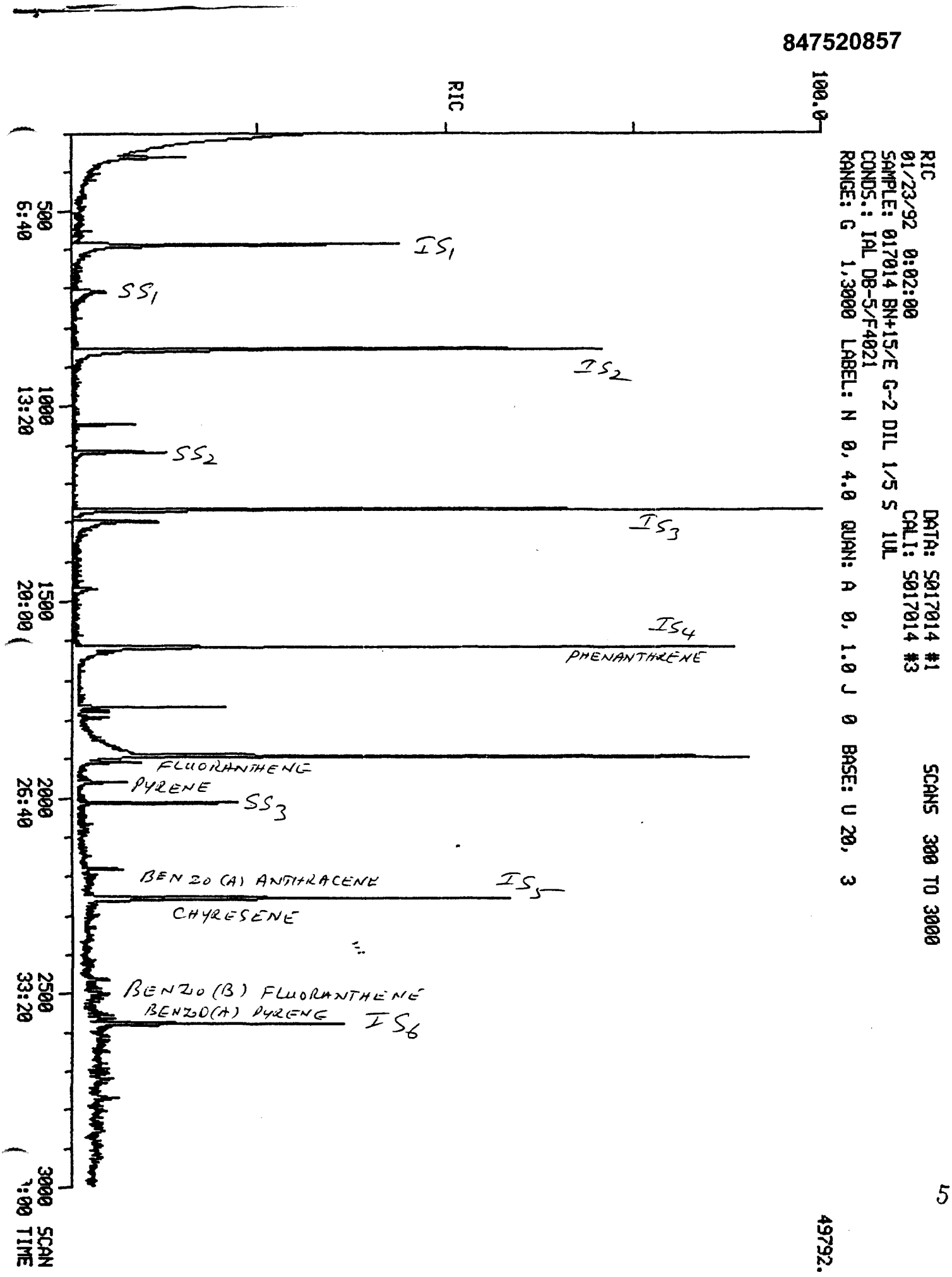
847520855

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	202	1910	25:28	4	1.181	A BB	5212.	4.690 NG	1.54
66	NOT FOUND								
67	202	1961	26:09	5	0.869	A BB	5060.	3.048 NG	1.00
68	NOT FOUND								
69	228	2252	30:02	5	0.998	A BV	3012.	2.959 NG	0.97
70	NOT FOUND								
71	228	2261	30:09	5	1.002	A VB	3261.	3.317 NG	1.09
72	NOT FOUND								
73	NOT FOUND								
74	252	2500	33:20	6	0.970	A BB	4289.	5.614 NG	1.84
75	252	2500	33:20	6	0.970	A BB	4289.	5.640 NG	1.85
76	252	2565	34:12	6	0.995	A BB	2415.	3.521 NG	1.15
77	276	2848	37:58	6	1.105	A BB	718.	1.071 NG	0.35
78	NOT FOUND								
79	276	2925	39:00	6	1.135	A BB	415.	0.572 NG	0.19

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:47		1.050						
52	18:39		1.102						
53	18:42		1.105						
54	18:46		1.108						
55	18:54		1.117						
56	19:04		0.884						
57	19:11		0.889						
58	19:15		0.892						
59	20:17		0.940						
60	20:40		0.958						
61	21:17		0.986						
62	21:39	1.00	1.004	1.00	3.69	50.00	0.079	1.068	0.07
63	21:48	0.99	1.011	0.99	3.80	50.00	0.079	1.036	0.08
64	23:56	1.00	1.109	1.00	1.34	50.00	0.031	1.171	0.03
65	25:27	1.00	1.180	1.00	4.69	50.00	0.086	0.914	0.09
66	26:02		0.865						
67	26:09	1.00	0.869	1.00	3.05	50.00	0.119	1.947	0.06
68	28:40		0.953						
69	30:02	1.00	0.998	1.00	2.96	50.00	0.071	1.194	0.06
70	30:07		1.001						
71	30:10	1.00	1.003	1.00	3.32	50.00	0.076	1.153	0.07
72	30:42		1.020						
73	32:34		0.948						
74	33:20	1.00	0.970	1.00	5.61	50.00	0.161	1.433	0.11
75	33:24	1.00	0.972	1.00	5.64	50.00	0.161	1.426	0.11
76	34:13	1.00	0.995	1.00	3.52	50.00	0.091	1.286	0.07
77	38:00	1.00	1.106	1.00	1.07	50.00	0.027	1.257	0.02
78	38:06		1.109						
79	39:02	1.00	1.136	1.00	0.57	50.00	0.016	1.360	0.01

847520856

847520857



516

Quantitation Report File: SSRT01

Data: S017014.TI
/23/92 0:02:00
ample: 017014 BN+15/E G-2 DIL 1/5 S 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.042
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN
6	UNKNOWN
7	UNKNOWN
8	UNKNOWN
9	UNKNOWN
10	UNKNOWN
11	UNKNOWN
12	UNKNOWN
13	UNKNOWN

xylene

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	362	4:50	10	0.191	A BB	22232.	8.867	1.81
2	RIC	590	7:52	10	0.311	A BB	114442.	45.644	9.30
3	RIC	858	11:26	10	0.453	A BB	153118.	61.070	12.44
4	RIC	1049	13:59	10	0.554	A BB	10486.	4.182	0.85
5	RIC	1119	14:55	10	0.591	A BB	28228.	11.259	2.29
6	RIC	1270	16:56	10	0.670	A BB	173443.	69.176	14.09
7	RIC	1299	17:19	10	0.685	A BB	42131.	16.804	3.42
8	RIC	1618	21:34	10	0.854	A BB	174509.	69.602	14.18
9	RIC	1768	23:34	10	0.933	A BB	25515.	10.176	2.07
10	RIC	1895	25:16	10	1.000	A BB	250726.	100.000	20.37
11	RIC	2014	26:51	10	1.063	A BB	30360.	12.109	2.47
12	RIC	2257	30:06	10	1.191	A BB	123420.	49.225	10.03
13	RIC	2578	34:22	10	1.360	A BB	81980.	32.697	6.66

517

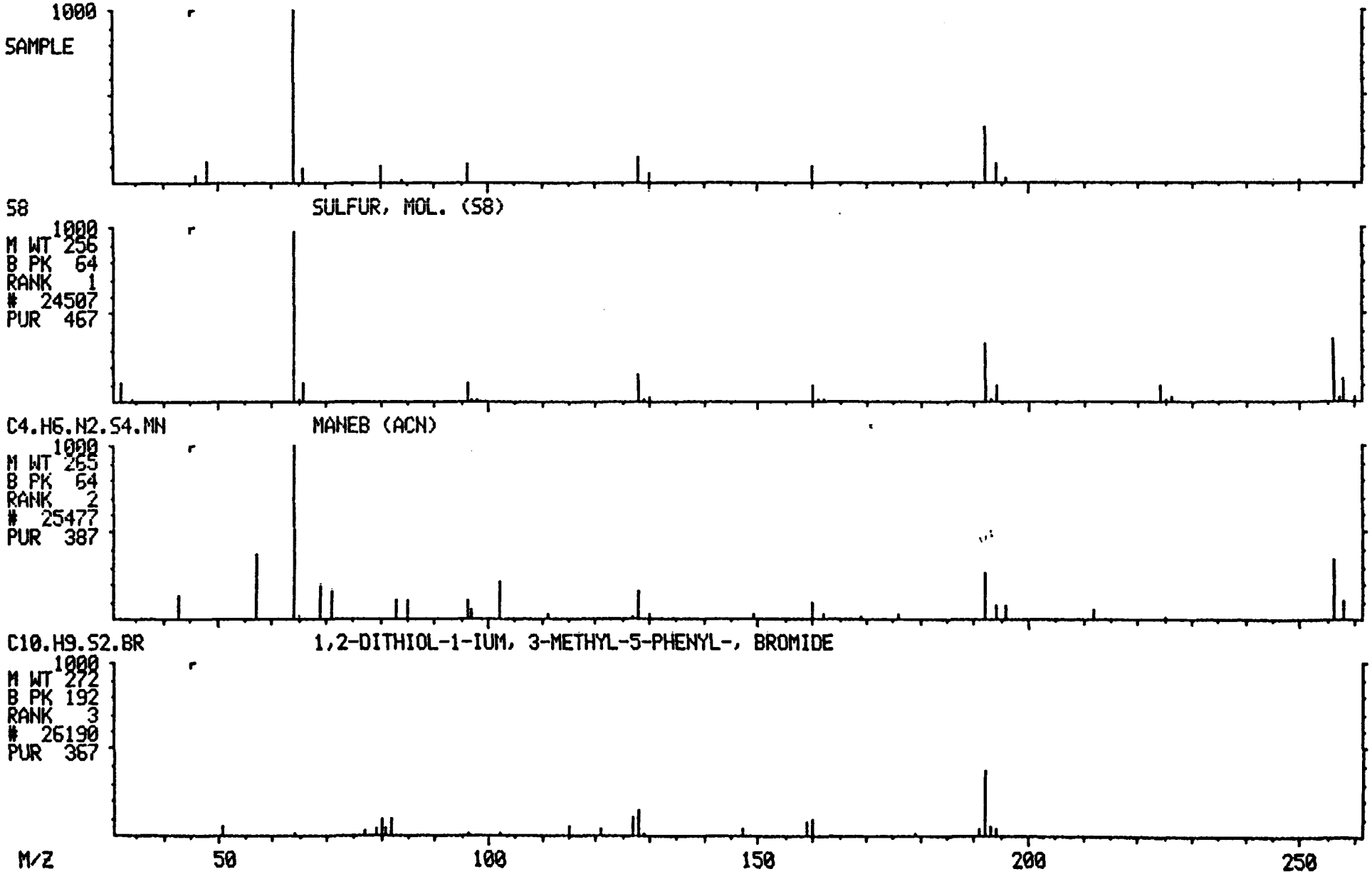
847520858

847520859

LIBRARY SEARCH
01/23/92 0:02:00 + 17:19
SAMPLE: 017014 BN+15/E G-2 DIL 1/5 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017014 #1299
CALI: S017014 # 3

BASE M/Z: 64
RIC: 4279.

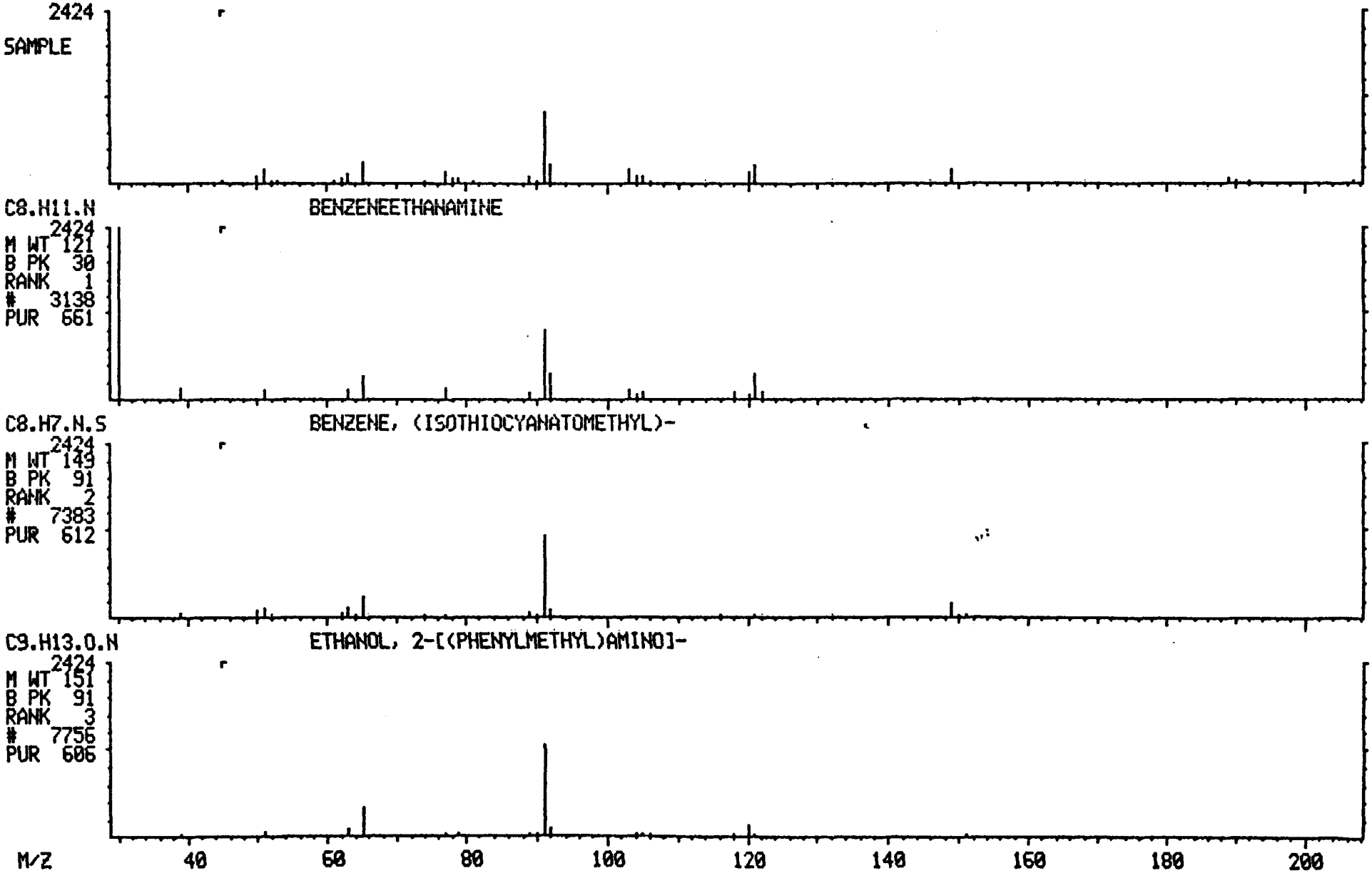


847520860

LIBRARY SEARCH
01/23/92 0:02:00 + 23:34
SAMPLE: 017014 BN+15/E G-2 DIL 1/5 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017014 #1768
CALI: S017014 # 3

BASE M/Z: 91
RIC: 8335.



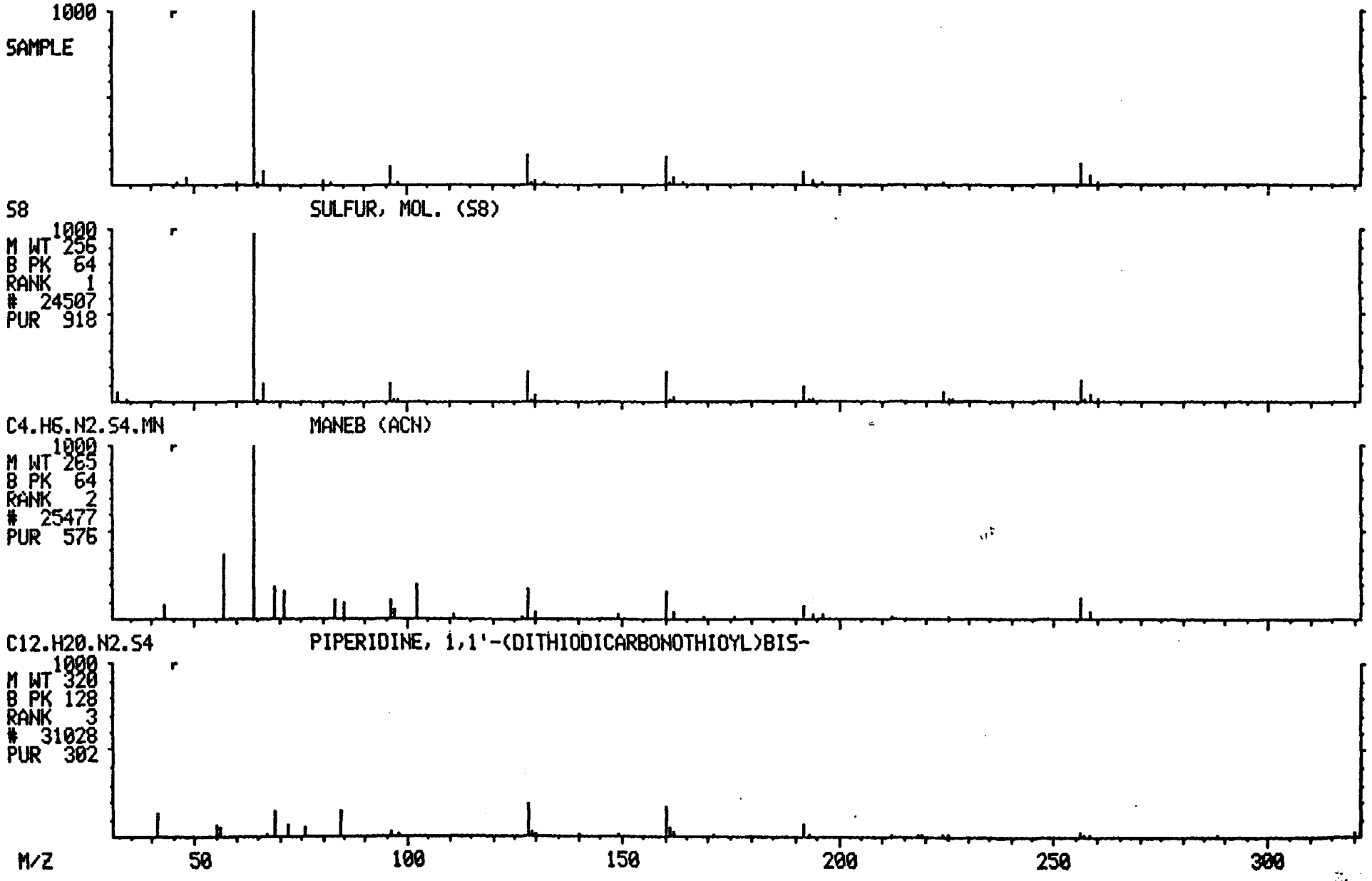
847520861

520

LIBRARY SEARCH
01/23/92 0:02:00 + 25:16
SAMPLE: 017014 BN+15/E G-2 DIL 1/5 S 1UL
CONDS.: IAL DB-5/F4021
ENHANCED (S 15B 2N 0T)

DATA: S017014 #1895
CALI: S017014 # 3

BASE M/Z: 64
RIC: 39999.



Quantitation Report File: S017019

Data: S017015.T1
/08/91 17:32:00
Sample: 017015 BN+IS/E FIELD W 1UL
Conds: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.037
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	C105	1,4-DICHLOROBENZENE-D4 *IS1*
2	C110	NAPHTHALENE-D8 *IS2*
3	C115	ACENAPHTHENE-D10 *IS3*
4	C120	PHENANTHRENE-D10 *IS4*
5	C125	CHRYSENE-D14 *IS5*
6	C130	PERYLENE-D12 *IS6*
7	CS05	NITROBENZENE-D5 *SS1*
8	CS10	2-FLUOROBIPHENYL *SS2*
9	CS15	TERPHENYL-D14 *SS3*
10	CS20	2-FLUOROPHENOL *SS4*
11	CS25	PHENOL-D5 *SS5*
12	CS30	2,4,6-TRIBROMOPHENOL *SS6*
13	C010	ANILINE
14	C015	PHENOL
15	C020	BIS(2-CHLOROETHYL)ETHER
16	C025	2-CHLOROPHENOL
17	C030	1,3-DICHLOROBENZENE
18	C035	1,4-DICHLOROBENZENE
19	C040	BENZYL ALCOHOL
20	C045	1,2-DICHLOROBENZENE
21	C050	2-METHYLPHENOL
22	C055	BIS(2-CHLOROISOPROPYL)ETHER
23	C060	4-METHYLPHENOL
24	C065	N-NITROSODI-N-PROPYLAMINE
25	C070	HEXACHLOROETHANE
26	C110	NITROBENZENE
27	C115	ISOPHORONE
28	C120	2-NITROPHENOL
29	C125	2,4-DIMETHYLPHENOL
30	C130	BIS(2-CHLOROETHOXY)METHANE
31	C135	2,4-DICHLOROPHENOL
32	C140	1,2,4-TRICHLOROBENZENE
33	C145	NAPHTHALENE
34	C150	4-CHLOROANILINE
35	C155	HEXACHLOROBUTADIENE
36	C160	4-CHLORO-3-METHYLPHENOL
37	C165	2-METHYLNAPHTHALENE
38	C210	HEXACHLOROCYCLOPENTADIENE
39	C215	2,4,6-TRICHLOROPHENOL
40	C220	2,4,5-TRICHLOROPHENOL
41	C225	2-CHLORONAPHTHALENE
42	C230	2-NITROANILINE
43	C235	ACENAPHTHALENE
44	C240	DIMETHYL PHTHALATE
45	C245	3-NITROANILINE
46	C250	2,6-DINITROTOLUENE
47	C255	ACENAPHTHENE

52

847520862

No	Name	
48	C260	2,4-DINITROPHENOL
49	C265	DIBENZOFURAN
50	C270	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	150	608	8:06	1	1.000	A BB	33651.	40.000	NG	7.01
2	136	870	11:36	2	1.000	A BB	71543.	40.000	NG	7.01
3	164	1278	17:02	3	1.000	A BB	32477.	40.000	NG	7.01
4	188	1627	21:42	4	1.000	A BB	43541.	40.000	NG	7.01
5	240	2267	30:14	5	1.000	A BB	23772.	40.000	NG	7.01
6	264	2591	34:33	6	1.000	A BB	15858.	40.000	NG	7.01
7	82	722	9:38	2	0.830	A BB	82113.	78.741	NG	13.80
8	172	1129	15:03	3	0.883	A BV	108662.	93.179	NG	16.33
9	244	2025	27:00	5	0.893	A BB	86356.	135.125	NG	23.69
10	NOT FOUND									
11	NOT FOUND									
12	NOT FOUND									
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	237	1090	14:32	3	0.853	A BB	194.	0.854	NG	0.15
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

847520863

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:07	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
2	11:37	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
3	17:04	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
4	21:42	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
5	30:14	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
6	34:31	1.00	1.000	1.00	40.00	40.00	1.000	1.000	1.00
7	9:36	1.00	0.830	1.00	78.74	50.00	0.918	0.583	1.57
8	15:04	1.00	0.883	1.00	93.18	50.00	2.677	1.436	1.86
9	27:00	1.00	0.893	1.00	138.13	50.00	2.906	1.075	2.70
10	5:25		0.667						
11	7:28		0.920						
12	19:36		1.148						
13	7:26		0.915						
14	7:30		0.923						
15	7:37		0.938						
16	7:41		0.946						
17	8:01		0.987						
18	8:10		1.005						
19	8:35		1.057						
20	8:37		1.061						
21	8:34		1.056						
22	9:02		1.112						
23	9:24		1.156						
24	9:24		1.158						
25	9:26		1.161						
26	9:42		0.835						
27	10:23		0.894						
28	10:35		0.912						
29	10:52		0.936						
30	11:08		0.959						
31	11:18		0.974						
32	11:32		0.993						
33	11:41		1.006						
34	11:58		1.030						
35	12:18		1.060						
36	13:34		1.169						
37	13:46		1.186						
38	14:32	1.00	0.852	1.00	0.85	50.00	0.005	0.280	0.02
39	14:48		0.867						
40	14:54		0.873						
41	15:15		0.894						
42	15:45		0.923						
43	16:34		0.970						
44	16:33		0.970						
45	17:05		1.001						
46	16:42		0.978						
47	17:10		1.006						
48	17:23		1.019						
49	17:41		1.036						
50	17:47		1.042						

847520864

Quantitation Report File: S017015

847520865

Data: S017015.TI
1/08/92 17:32:00
Sample: 017015 BN+15/E FIELD W 1UL
Conds.: IAL DB-5/F4021
Formula: Instrument: FINN Weight: 0.037
Submitted by: JS Analyst: JS Acct. No.:

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C275	2,4-DINITROTOLUENE
52	C280	FLUORENE
53	C285	DIETHYL PHTHALATE
54	C290	4-CHLOROPHENYL-PHENYLETHER
55	C295	4-NITROANILINE
56	C310	2-METHYL-4,6-DINITROPHENOL
57	C315	N-NITROSODIPHENYLAMINE
58	C320	1,2-DIPHENYL HYDRAZINE
59	C325	4-BROMOPHENYL-PHENYLETHER
60	C330	HEXACHLOROBENZENE
61	C335	PENTACHLOROPHENOL
62	C340	PHENANTHRENE
63	C345	ANTHRACENE
64	C350	DI-N-BUTYL PHTHALATE
65	C355	FLUORANTHENE
66	C410	BENZIDINE
67	C415	PYRENE
68	C420	BUTYL BENZYL PHTHALATE
69	C425	BENZO(A)ANTHRACENE
70	C430	3,3-DICHLOROBENZIDINE
71	C435	CHRYSENE
72	C440	BIS(2-ETHYLHEXYL) PHTHALATE
73	C510	DI-N-OCTYL PHTHALATE
74	C515	BENZO(B)FLUORANTHENE
75	C520	BENZO(K)FLUORANTHENE
76	C525	BENZO(A)PYRENE
77	C530	INDENO(1,2,3-CD)PYRENE
78	C535	BENZO(A,H)ANTHRACENE
79	C540	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	% RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
1	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								
64	149	1804	24:03	4	1.109	A BB	27147.	22.781 NG	3.99

52

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								

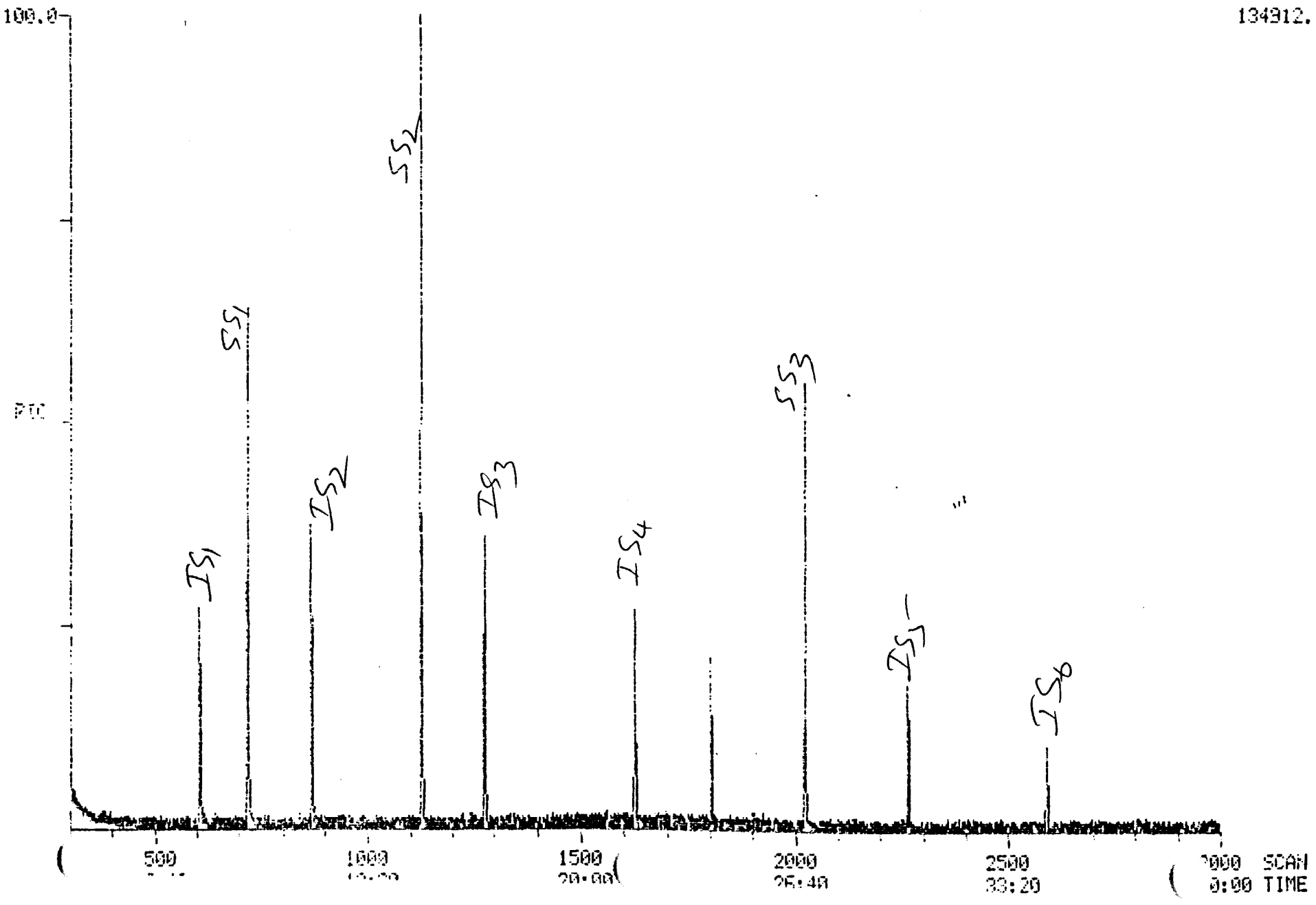
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:54		1.048						
52	18:46		1.100						
53	18:50		1.104						
54	18:53		1.106						
55	19:02		1.116						
56	19:11		0.884						
57	19:18		0.889						
58	19:22		0.893						
59	20:24		0.940						
60	20:47		0.958						
61	21:23		0.985						
62	21:47		1.004						
63	21:55		1.010						
64	24:04	1.00	1.109	1.00	22.78	50.00	0.499	1.095	0.46
65	25:36		1.179						
66	26:09		0.865						
67	26:17		0.869						
68	28:48		0.952						
69	30:10		0.998						
70	30:15		1.000						
71	30:19		1.003						
72	30:50		1.020						
73	32:42		0.947						
74	33:28		0.969						
75	33:33		0.972						
76	34:22		0.995						
77	38:13		1.107						
78	38:20		1.110						
79	39:17		1.138						

847520867

RIC
01/08/92 17:32:00
SAMPLE: 017015 BN+15/E FIELD W 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

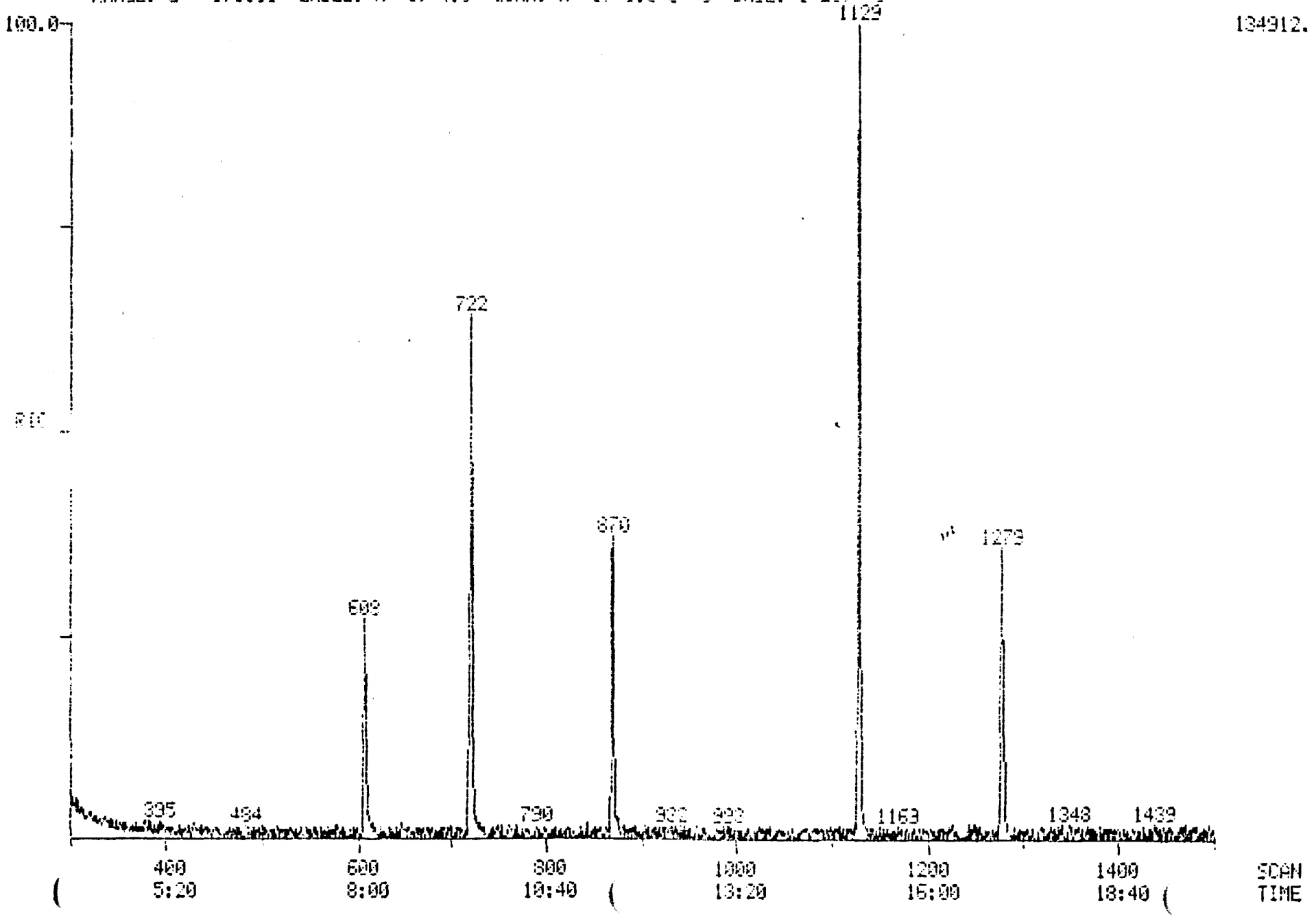
DATA: S017015 #1
CALI: S017015 #3

SCANS 300 TO 3000



847520868

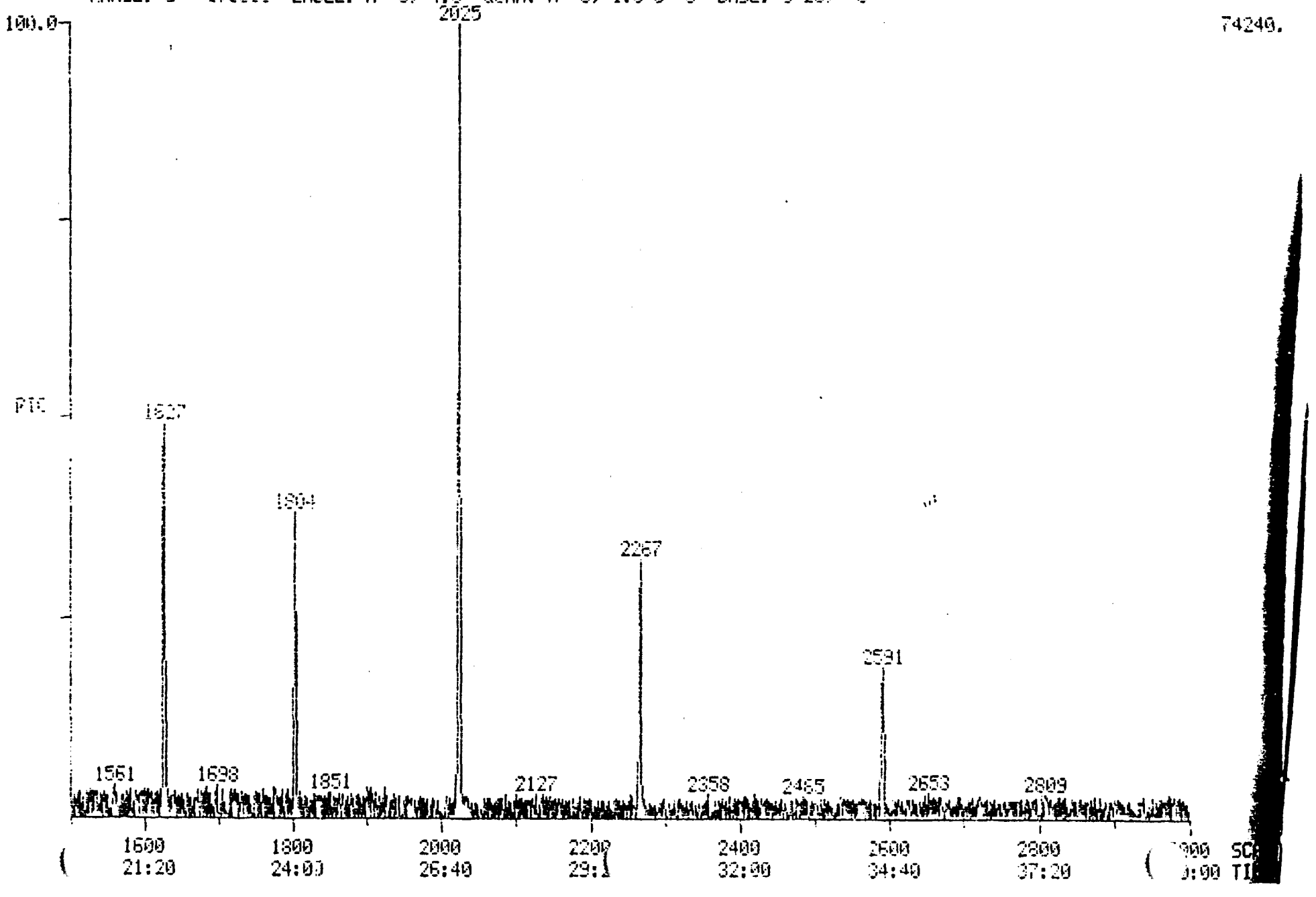
RIC DATA: 5017015 #1 SCANS 300 TO 1500
01/08/92 17:32:00 CALI: 5017015 #3
SAMPLE: 017015 BN+15/E FIELD W 1UL
CONDS.: IAL DB-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



RIC
01/08/92 17:32:00
SAMPLE: 017015 BN+15/E FIELD W 1UL
CONDS.: IAL 06-5/F4021
RANGE: G 1,3000 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: S017015 #1
CALI: S017015 #3

SCANS 1500 TO 3000



INTEGRATED ANALYTICAL LABORATORIES, INC.

CHAIN OF CUSTODY

P.O. # 4481

#91025

Client: EWMA Project: ELAN CHEMICAL Sampling Date/Time: 1.6.92/all day

Report: (Please Circle) Normal / 4 wks, 3 wks, 2 wks, RUSH

Format: (Please Circle) Normal, Summary, ECRA, Tier II, Tier 1

Report to: C. Langewisch Bill To: EWMA

Case No.: 10920-017

# of Containers	2	2	2	2	2
IAL ID#	017001	017002	017003	017004	017005
Client ID#	A-1	A-2	B-1	B-2	C-1
Matrix	S →				
601 (8010)					
602 (8020)					
BTEX (8020)					
608-PCB (8080)					
608-Pest (8080)					
Pest & Herb, TCLP					
624 (8240)					
624, TCLP					
624 + 15 (8240)	✓	✓	✓	✓	✓
MTBE, TBA					
625-BN (8270)					
625-BN + 15 (8270)	✓	✓	✓	✓	✓
625-BNA (8270)					
625-BNA, TCLP					
625-BNA + 15 (8270)					
625-BNA + 25 (8270)					
PAH					
PAH + 15					
PP Metal					
EP Tox Metal					
TCLP Metals					
Cyanide, Total					
Phenol					
Sulfide, Reactive					
Ignitability					
Flash Point					
TPHC					
pH					
Other					
Hg, Cr	✓	✓	✓	✓	✓
Solids	✓	✓	✓	✓	✓

Proper Preservation: Yes / No Sampled by: C Kuby

Delivered by: Chris A. Signed: Chris Kuby Date/Time: 1/7/92 9:40

CUSTODY TRANSFERRED :

Name: Barb Diver Signed: Barb Diver Date/Time: 1.7.92/1600

Comments:

529

Test Methods in parenthesis are for nonaqueous samples.

INTEGRATED ANALYTICAL LABORATORIES, INC.

CHAIN OF CUSTODY

#91025

P.O. # 4481

Client: EWMA Project: ELAN CHEMICAL Sampling Date/Time: 1.6.92/all day

Report: (Please Circle) Normal/4 wks, 3 ~~wks~~, 2 wks, RUSH

Format: (Please Circle) Normal, Summary, ECRA, Tier II, Tier 1

Report to: C Langewisch Bill To: EWMA

Case No.: 10920-017

# of Containers	2	2	2	2	2
IAL ID#	017006	017007	017008	017009	017010
Client ID#	C-2	D-1	D-2	E-1	E-2
Matrix	S				
601 (8010)					
602 (8020)					
BTEX (8020)					
608-PCB (8080)					
608-Pest (8080)					
Pest & Herb. TCLP					
624 (8240)					
624, TCLP					
624 + 15 (8240)	✓	✓	✓	✓	✓
MTBE, TBA					
625-BN (8270)					
625-BN + 15 (8270)	✓	✓	✓	✓	✓
625-BNA (8270)					
625-BNA, TCLP					
625-BNA + 15 (8270)					
625-BNA + 25 (8270)					
PAH					
PAH + 15					
PP Metal					
EP Tox Metal					
TCLP Metals					
Cyanide, Total					
Phenol					
Sulfide, Reactive					
Ignitability					
Flash Point					
TPHC					
pH					
Other					
Hg, Cr	✓	✓	✓	✓	✓
Solids	✓	✓	✓	✓	✓

Proper Preservation: (Yes) / No Sampled by: C Kirby

Delivered by: Chris K. Signed: Chris Kay Date/Time: 1/7/92 4:00

CUSTODY TRANSFERRED :

Name: Barb Diver Signed: Barb Diver Date/Time: 1.7.92/16[illegible]

Comments:

530

Test Methods in parenthesis are for nonaqueous samples.

INTEGRATED ANALYTICAL LABORATORIES, INC.

CHAIN OF CUSTODY

#91025

P.O. # 4481

Client: EWMA Project: ELAN CHEMICAL Sampling Date/Time: 1.6.92/allday

Report: (Please Circle) Normal/4 wks, 3 wks, 2 wks, RUSH

Format: (Please Circle) Normal, Summary, ECRA, Tier II, Tier 1

Report to: C Langwisch Bill To: EWMA

Case No.: 10920-017

# of Containers	2	2	2	2	2
IAL ID#	017011	017012	017013	017014	017015
Client ID#	F-1	F-2	G-1	G-2	FIELD
Matrix	S →				A
601 (8010)					
602 (8020)					
BTEX (8020)					
608-PCB (8080)					
608-Pest (8080)					
Pest & Herb. TCLP					
624 (8240)					
624, TCLP					
624 + 15 (8240)	✓	✓	✓	✓	✓
MTBE, TBA					
625-BN (8270)					
625-BN + 15 (8270)	✓	✓	✓	✓	✓
625-BNA (8270)					
625-BNA, TCLP					
625-BNA + 15 (8270)					
625-BNA + 25 (8270)					
PAH					
PAH + 15					
PP Metal					
EP Tox Metal					
TCLP Metals					
Cyanide, Total					
Phenol					
Sulfide, Reactive					
Ignitability					
Flash Point					
TPHC					
pH					
Other					
Hg, Cr	✓	✓	✓	✓	✓
solids	✓	✓	✓	✓	

Proper Preservation: Yes / No Sampled by: CKirby

Delivered by: Chris K. Signed: Chris Kirby Date/Time: 1/7/92 4:00

CUSTODY TRANSFERRED :

Name: Barb Dwyer Signed: Barb Dwyer Date/Time: 1.7.92/16⁰⁰

Comments:

Test Methods in parenthesis are for nonaqueous samples.

53

A New Jersey Certified Laboratory, #16751.

847520872

LAB NAME:

Integrated Analytical Laboratories, INc.

150 Railroad AVenue

Paterson, New Jersey 07501

CHAIN OF CUSTODY RECORD

Client: EWMA | Project: Elan Chemical

Address: 1235a Rt 23 South | Job # 91025

City: Wayne | Customer P.O. 4481

State/Zip: New Jersey 07474 | Contact Person Chris L.

Deliverables (Circle One) Standard Tier I ECRA Tier II Other

Turnaround Time: Normal

Sample Number	Field #	* M	** C	Description of Samples	Analytical Requests
017001	A-1	S	2	Soil Samples Collected	All samples for BN+15, VO+15
2	A-2			during boring.	Mercury and Chromium.
3	B-1			installation	
4	B-2			-1 Samples Collected	
5	C-1			from 0' to 2'.	
6	C-2			-2 Samples Collected	
7	D-1			from 0" to 6" Above	
8	D-2			groundwater.	
9	E-1				
10	E-2				

Person(s) Assuming Responsibility for Sampling: Chris K.

Date: 1/6/92 Time: All day

Relinquished by:	Received by:	Organization	Date	Time	Reason
Chris Kelly	Barb Dwyer	IAL	1.7.92	10am	Analysis

Comments: Note: All samples screened relatively high on PID.

* M = Matrix (A) Aqueous, (F) Filter, (O) Oil, (S) Soil/Sludge, (X) Other

** C = Number of Containers

532

847520873

LAB NAME:

Integrated Analytical Laboratories, INc.

150 Railroad AVenue

Paterson, New Jersey 07501

CHAIN OF CUSTODY RECORD

Client: EWMA | Project: Elan Chemical

Address: 1235a Rt 23 South | Job # 91025

City: Wayne | Customer P.O. 4481

State/Zip: New Jersey 07474 | Contact Person Chris L.

Deliverables (Circle One) Standard Tier I ECRA Tier II Other

Turnaround Time: Normal

Sample Number	Field #	* M	** C	Description of Samples	Analytical Requests
017011	F-1	S	2	Soil samples collected	All Samples for BN+15, VO+15
12	F-2			from borings	Mercury and Chromium
13	G-1			-1 samples = 0'-2' depth	
14	G-2			-2 samples = 0" to 6"	
				above groundwater	
15	Field	A	5	Blank	BN+15, VO+15, Mercury, Chromium

Person(s) Assuming Responsibility for Sampling: Chris K.

Date: 1/6/92 Time: All day

Relinquished by:	Received by:	Organization	Date	Time	Reason
Chris Kirby	Barb Dwin	IAL	1-7-92	16W	Analysis

Comments:

* M = Matrix (A) Aqueous, (F) Filter, (O) Oil, (S) Soil/Sludge, (X) Other

** C = Number of Containers

53

847520874

Integrated Analyt L

~~VOA's~~
~~BN's~~
~~Hg, Cr~~
~~Solids~~

Analytical Laboratories, Inc.

MPLE CONTROL RECORD
RATORY CUSTODY CIRONICAL

Sampling Date: 1.6.92
Receipt Date: 1.7.92

Receipt Officer: B Dries
Case ID No.: 10920-017

Custody Seal — Present/Absent
Intact/Not Intact
Chain-of-Custody — Present/Absent
Sample Tags — Present/Absent
Listed/Not Listed on C.O.C.
Shipping Bill — Present/Absent No.

LABORATORY SAMPLE NUMBER	DATE/TIME REMOVED ANALYST INITIALS	EXTRACTION	ANALYSIS	DATE/TIME RETURNED ANALYST INITIALS
001—015	Sampled by EWMA 1.6.92/all day			
001-015	Received by IAL		1.7.92/1600	
001-014	1.8.92/1010 5.0		Solids	1.8.92/1030 5.0
015	1.8.92/0800 KF	BN+15/E		1.8.92/1000 KF
001-014	1.17.92/0900 KF	BN+15/E		1.17.92/1600 KF
015	01/08/92 1000 W		BN+15/E	01/08/92 2300 25
006	01/17/92 1200 W		BN+15/E	01/17/92 2200 25
003-005, 007-008, 014	01/22/92 1200 W		BN+15/E	01/22/92 2300 25
001-003, 009-013	01/23/92 1200 W		BN+15/E	01/23/92 2200 25
001	01/24/92 1200 W		BN+15/E	01/24/92 2300 25
001—006, 008 015	1/10/92 4.5P VZ		VO+15	1/10/92 11.5P VZ
005, 007, 008-014	1/13/92 4.5P VZ		VO+15	1/13/92 10.5P VZ
007, 010, 014	1/21/92 5.5P VZ		VO+15	1/21/92 11.3P VZ
015	1/5-92 0800 K	Dig. Hg CR		1/5-92 0900 K
015	1/5-92 0900 K		Hg CR	1/9-92 consumed K
001-014	1/9-92 1100 K	Dig. Hg		1/5-92 1130 K

REVIEW & APPROVAL J M Luft
REMARKS:

5.

847520875

Integrated Analytical Labs

Integrated Analytical Laboratories, Inc.

SAMPLE CONTROL RECORD
LABORATORY CUSTODY CHRONICAL

Sampling Date: 1.6.92
Receipt Date: 1.7.92

Receipt Officer: B Diver
Case ID No.: 10920- 017

Custody Seal — ~~Present~~/Absent
~~Intact~~/Not Intact

Chain-of-Custody — ~~Present~~/Absent

Sample Tags — ~~Present~~/Absent
~~Listed~~/Not Listed on C.O.C.

Shipping Bill — Present/~~Absent~~ No. _____

LABORATORY SAMPLE NUMBER	DATE/TIME REMOVED ANALYST INITIALS	EXTRACTION	ANALYSIS	DATE/TIME RETURNED ANALYST INITIALS
001-014	1/10-92 0800 [illegible]	Dig. CR		1/10-92 0900 [illegible]
001-014	1/13-92 0800 [illegible]		CR	1/13-92 consumed
001-014	1/14-92 0900 [illegible]		Hg	1/14-92 consumed

REVIEW & APPROVAL REMARKS: [signature]

53

847520876

Purchase Order

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES
P.O. BOX 648
WAYNE, NJ 07474

201-633-7900 FAX: 201-633-7482

Show this Purchase Order Number on all correspondence, invoices, shipping papers and packages. **4481**

TO
Intergrated Analytical Laboratories, Inc.
150 Railroad Ave.
Paterson, N.J. 07501
RE: ELAN CHEMICAL

DATE	REQUISITION NO.
1/7/92	# 91025

SHIP TO
EWMA
Wayne

REQUISITIONED BY	WHEN SHIP	SHIP VIA	F.O.B. POINT	TERMS
	-			

QTY. ORDERED	QTY. RECEIVED	STOCK NO. / DESCRIPTION	UNIT PRICE	TOTAL
16		16 Soil Samples for BN+15, VO+15, chromium, mercury +		
1		Water for BN+15, VO+15, chromium + mercury		

1. Please send _____ copies of your invoice.
2. Order is to be entered in accordance with prices, delivery and specifications shown above.
3. Notify us immediately if you are unable to ship as specified.

AUTHORIZED BY

ORIGINAL

847520877

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COUNSELLORS AT LAW
ONE NEWARK CENTER
NEWARK, N.J. 07102
(201) 642-3900 (212) 571-0240
FAX: (201) 642-7413

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ATLANTIC CITY, N.J. 08401
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OF COUNSEL

JEROME C. EISENBERG
GEORGE S. FISCHLER
HOWARD T. ROSEN
DOROTHY G. BLACK

THOMAS A. PENN
GULIET D. HIRSCH
ROBERT A. RECIO

WRITER'S DIRECT DIAL
(201) 642-5968

WRITER'S DIRECT FAX
(201) 623-5967

April 2, 1992

VIA FEDERAL EXPRESS

Jodie M. Stein, Senior Environmental
Specialist
New Jersey Department of Environmental
Protection & Energy
Division of Responsible Party Site
Remediation
Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Company
268 Doremus Avenue
Newark, New Jersey
Our File No. 11213-7

Dear Ms. Stein:

In accordance with your letter of November 8, 1991, Elan has performed sampling of its property in the former drum storage area. The results are presented in tabular form as Appendix A hereto. Based on these results, Elan recommends encapsulation of the area with an impermeable asphalt cover. The following are our findings and conclusions.

VOCs

Total volatile organic compounds ("VOCs") are below the 1,000 part per million ("ppm") cleanup standard proposed in the February 3, 1992 New Jersey Register ("cleanup standards"). VOCs are between the 100 ppm and 1,000 ppm cleanup standard in two of the fourteen sample locations. There are no actual or potential impacts to any subsurface structure. Consequently, VOCs are at

levels below the cleanup standards and no further action is suggested.

Metals

The concentration of mercury on the property is below the 14 ppm cleanup standard. Chromium is not included in the cleanup standards. Elan has never used chromium in its operations. The chromium detected on-site, the concentrations of which range from 31.4 ppm to 4,970 ppm, is most likely a constituent of fill used throughout Essex and Hudson Counties. This conclusion is supported by the chromium level found in the off-site sample, 142 ppm.

The proposed regulations provide that subsurface cleanup standards for inorganic contaminants should be site specific, and include considerations of a contaminant's toxicity and potential or demonstrated mobility. The chromium levels on-site are probably the result of contaminated fill and are at highest concentrations at depths below five feet. At this depth, there is no risk of exposure to humans or animals via ingestion, inhalation or absorption. Further, because of the immobility of chromium compounds, encapsulation will prevent any lateral or vertical migration from rainwater.

Base Neutral Compounds

The cleanup standards for base neutral compounds ("BNs") are compound specific. Certain BNs listed in Appendix A hereto do not have cleanup standards. The carcinogenic polycyclic aromatic hydrocarbons ("CaPAHs"), however, do have cleanup standards. You will note that for all but one of the CaPAHs, off-site conditions reveal higher concentrations than found on-site. See results of Sample S4-B (off-site sampling of March 25, 1991) listed in Tables 1 and 2 of the enclosed EWMA Sampling Results Report. For example, benzo(a)anthracene was found on-site in the shallow samples at levels ranging from below minimum detection limit to 5,150 ppb. Off-site conditions for benzo(a)anthracene were 17,100 ppb. Chrysene in shallow samples ranged from below minimum detection limit to 5,430 ppb, whereas off-site conditions revealed chrysene at 16,400 ppb. Benzo(b)fluoranthene in shallow samples ranged from below minimum detection limit to 8,650 ppb, whereas off-site conditions were 21,900 ppb. For benzo(a)pyrene, shallow samples revealed levels ranging from below minimum detection limit to 4,100 ppb. Off-site, benzo(a)pyrene was detected at 21,600 ppb. Finally, benzo(ghi)perylene was detected on-site, but only below minimum detection limits, whereas off-site levels were detected at 8,750 ppb. The only CaPAH found on-site at levels higher than off-

site was indeno(1,2,3-cd)pyrene; 143 ppb on-site and ND off-site. This compound was in a deep sample (5.5 - 6.0 feet).

These results indicate that the fill material used on-site, and probably off-site on adjacent properties, contains base neutral compounds which are above cleanup standards. The soil boring logs provided as Appendix 1 to the EWMA report supported this conclusion. It would be unrealistic to consider a cleanup of these compounds to cleanup standards.

Conclusion

In consideration of the absence of receptors and the levels of contaminants found, remediation should be the immediate encapsulation of the entire former drum storage area with an impermeable asphalt cover. Kindly review the enclosed sampling data and provide approvals for Elan's immediate encapsulation of the area. I look forward to hearing from you.

Very truly yours,

Lee Henig-Elona

LHE/pl
Enclosure

cc: Richard Greenberg, Ph.D.
Environmental Waste Management Associates

David Weisman, President
Elan Chemical Co.
(w/enclosure)

847520881

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Jodie M. Stein, Sr. Env. Specialist
N.J. Dept. Environmental Prot.&Energy
DIv. Responsible Party Site Remediatn.
2 Babcock Place (Metro Regional Office
West Orange, New Jersey 07052

Release No. Phone No.

Reference Info

LHE/224 (13510-2) Env. #2 of 2

Routing Code

SVC CODE | Priority Overnight Service | Standard Overnight Service | Econ Two-Day | Gov't Overnight Svc

WEIGHT | DECLARED VALUE | SPECIAL HANDLING CODES | 1 HOLD FOR PICK-UP | 2 DELIVER WEEK-DAY | 3 DELIVER SATURDAY | 4 DANGEROUS GOODS | 5 | 6 DRY ICE | 10 | 12 HOLIDAY DELIVERY

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ONE NEWARK CENTER
NEWARK NJ 0 7 1 0 2

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Jodie M. Stein, Sr. Env. Specialist
N.J. Dept. Environmental Prot.&Energy
DIv. Responsible Party Site Remed.
2 Babcock Place
West Orange, NJ 07052

Release No. Phone No.

Reference Info

LHE/224 (1351002) Env. #1 of 2

Routing Code

SVC CODE | Priority Overnight Service | Standard Overnight Service | Econ Two-Day | Gov't Overnight Svc

WEIGHT | DECLARED VALUE | SPECIAL HANDLING CODES | 1 HOLD FOR PICK-UP | 2 DELIVER WEEK-DAY | 3 DELIVER SATURDAY | 4 DANGEROUS GOODS | 5 | 6 DRY ICE | 10

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
SITE REMEDIATION PROGRAM

MEMORANDUM OF AGREEMENT

The purpose of this application is to solicit a Memorandum of Agreement (MOA) from the New Jersey Department of Environmental Protection and Energy. The MOA will allow the Department to provide the applicant with oversight of remedial activities or site assessments.

PLEASE TYPE OR PRINT

DATE July 27, 1992

A. Select the appropriate activity below for which the applicant is requesting a MOA

Site Assessment Activities_____

Remedial Activities ___X___

B. Property Use: Residential_____ Agricultural_____
Industrial ___X___ Undeveloped _____
Commercial _____ Other_____

Explain:_____

C. Please answer all the following site specific questions completely and accurately. Attach separate paper if necessary and refer to corresponding numbers below. Please type or print all information clearly.

1. Who is requesting this MOA?
Name David Weisman, President
Affiliation Elan Chemical Co., Inc.
Address 268 Doremus Avenue
City/Town Newark
State New Jersey Zip Code 07105
State of Incorporation New Jersey Corp. status active

2. Select which phase(s) of the remediation process are to be performed pursuant to the MOA being requested.

[ ] PA/SI
[ ] RI Work Plan
[ ] RI Report
[ ] FS Work Plan
[ ] FS Report
[ ] Remedial Design Workplan
[ ] Remedial Design Report
[ ] Operational/Maint. Work Plan
[X] other Recommendations set forth in Sampling Results Report prepared by EWMA dated April 1, 199, a copy of which is enclosed.

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3. At what site is the applicant interested in conducting remedial activities?

Name Elan Chemical Co., Inc.
Address 268 Doremus Avenue
Block(s) 5014 Lot(s) 8 & 8A
Latitude ____ Longitude ____
Municipality Newark County Essex
State New Jersey Zip Code 07105

4. Who is the current owner(s) of the site? (answer if different from C.l.)

Name Elan Chemical Co., Inc.
Address ____
City/Town ____
State ____ Zip Code ____
Phone (201) 344-8014

5. Who will be the contact for all matters of this application? (* answer if different than C.l.)

Name Lee Henig-Elona Title Esq.
* Affiliation Clapp & Eisenberg, P.C.
* Address One Newark Center
* City/Town Newark
* State New Jersey Zip Code 07102
Phone (201) 642-5958

6. What were the past operations at the site?

N/A

7. What are the current operations at the site?

Manufacturing of specialty organic chemicals for flavors and perfumery.

8. What are the intended future uses of the site?

Same as current operations.

9. Are there currently, or have there ever been any hazardous substances as defined by N.J.A.C. 7:1E-1 et seq. and/or hazardous wastes as defined by N.J.A.C. 7:26-8 et seq., used, generated, treated, stored, disposed or discharged at the site?

Yes X No ____

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10. Are there currently, or have there ever been, any above or below ground storage tanks at the site?

Yes__X__ No_____

11. Describe briefly the major types of contaminants found at the site and what media they affect.

Limited soil contamination exists in the area of the property previously used for drum storage. Chromium, probably associated with the fill underlying the property, is present in elevated concentrations both on-site and off-site. See Sampling Result Report.

12. Describe in detail how the contamination came to exist at the site. For example, were there past spills, landfill operations, industrial septic systems, USTs, deposition of fill material, etc.?

See prior answer.

13. List any civil/criminal actions taken against the owner/operator, managers or officials associated with the site for violations of any environmental laws or statutes.

Check here if no violations or alleged violation [ ]
Date of action April 17, 1992
Section of law or statute violated miscellaneous hazardous waste regulations
Type of enforcement action Administrative Order and Notice of Civil Administrative Penalty Assessment
Description of the violation See enclosed AO & NOCAPA

How was the violation or alleged violation resolved?
Alleged violations cured; penalty assessment is now being contested before the Office of Administrative Law.

14. List all permits currently held by the applicant for the site. (NJPDES, RCRA, etc.)

Passaic Valley Sewerage Authority - discharge of pretreated effluent to sewer.
Certificates to Operate Control Apparatus (air).

15. Was a Deed search ever conducted?

Yes_____ No__X__ For what period of time?_____

847520884

16. Provide the information requested below on the previous owners of the site and the entities who operated at the site.

Name	Owner or Operator	From	To
N/A			

17. Give a brief discussion of all former operations at the site, including but not limited to types of operations, materials used, waste generated, and waste disposal techniques.

N/A

#43866

847520885

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GULIET D. HIRSCH
PAUL S. WERTHER

WRITER'S DIRECT DIAL
(201) 642-
5958

WRITER'S DIRECT FAX
(201)
623-5967

August 24, 1992

Jodie M. Stein, Sr. Environmental Specialist
New Jersey Department of Environmental
Protection & Energy
Division of Responsible Party Site
Remediation - Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co., Inc.
268 Doremus Avenue
Newark, New Jersey

Dear Ms. Stein:

Enclosed are the two original Memoranda of Agreement executed by David Weisman on behalf of Elan Chemical Co., Inc. Kindly execute both agreements and return one to me for our records.

Thank you very much.

Very truly yours,

Lee Henig-Elona

LHE/pl/#44640
Enclosure

cc: David Weisman, President (w/o encs.)
Elan Chemical Co.

847520886

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

IN THE MATTER OF	:	
THE ELAN CHEMICAL SITE	:	MEMORANDUM
AND	:	OF
ELAN CHEMICAL CO., INC.	:	AGREEMENT

This Memorandum of Agreement is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection and Energy (hereinafter "the Department" or "NJDEPE") by N.J.S.A. 13:1D-1 et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and duly delegated to the Assistant Director, Division of Responsible Party Site Remediation pursuant to N.J.S.A. 13:1B-4.

FINDINGS

The property that is the subject of this memorandum of agreement is owned by Elan Chemical Co., Inc., and is located at 268 Doremus Avenue and is designated as Block 5014, Lot 8 & 8A on the tax maps of the City of Newark, Essex County, New Jersey (hereinafter the "Site"). The Site encompasses 1.79 acres and is bounded generally by Passaic River to the East and Doremus Ave to the West.

Elan Chemical Co., Inc. located at 268 Doremus Ave, Newark, New Jersey 07105, (hereinafter "Elan"), incorporated in the State of New Jersey, with its principal offices at 268 Doremus Ave, Newark, New Jersey is the party executing this Memorandum of Agreement.

The intent of this memorandum of agreement is to allow Elan to conduct any of the remedial activities outlined herein with oversight from the Department. Elan has indicated to the Department in its application dated July 27,1992, that it wishes to conduct the following activities at the Site with the Department's oversight:

The Department will review and comment on the sampling results and remedial proceedures set forth in the Sampling Results Report dated April 1,1992, previously submitted to the Department.

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847520887

By entering into this memorandum of agreement, Elan does not admit to any fact, fault or liability under any statute or regulation for conditions which existed before, during, or after Elan's execution of this memorandum of agreement.

AGREEMENT

I. Remediation

Elan agrees to submit the Sampling Results Report and the Department agrees to review and comment on documents submitted.

Within thirty (30) calendar days after the Department's receipt of any submission pursuant to this memorandum of agreement, the Department will inform Elan in writing of any administrative deficiencies in the submission, pursuant to proposed N.J.A.C. 7:26E, that will prevent the Department from conducting its review. When the Department determines that the submission is administratively complete, the Department will notify Elan in writing of the timeframe required for the Department to complete the review.

Within seven (7) days after the effective date of this memorandum of agreement, Elan will submit to the Department: a) the name, address and telephone number of the individual who will be the contact for Elan regarding technical matters concerning this memorandum of agreement and b) the name and address of the designated agent for Elan for the purpose of service for all matters concerning this memorandum of agreement.

Elan may terminate this memorandum of agreement if it is determined that it is no longer feasible or desirable to continue with this memorandum of agreement, when Elan:

a. Submits full payment to the Department for any Department oversight costs the Department incurred pursuant to this memorandum of agreement which Elan has not paid;

. Notifies the Department in writing of its intentions to terminate memorandum of agreement;

. Submits all data generated pursuant to this memorandum of agreement; and

Ensures that no environmental hazards exist at the Site as a result of Elan's actions pursuant to this memorandum of agreement.

V. General Conditions

Elan shall, in addition to any other obligation required by law, notify the Department contact immediately upon knowledge of any condition posing an immediate threat to human health and/or the environment.

Elan shall perform all work conducted pursuant to this memorandum of agreement in accordance with proposed N.J.A.C. 7:26E and prevailing professional standards.

Elan shall conform all actions required by this memorandum of agreement with all applicable federal, State and local laws and regulations.

Nothing in this memorandum of agreement shall relieve Elan from complying with all other applicable laws and regulations.

Elan shall preserve all potential evidentiary documentation found at the Site, including without limitation, documents, labels, drums, bottles, boxes or other containers, and/or other physical materials that could lead to the establishment of the identity of any person which generated, treated, transported, stored or disposed of contaminants at the Site, until written approval is received from the Department to do otherwise.

Upon receipt of a written request from the Department, Elan shall submit to the Department all data and information concerning contamination at the Site, including technical records and contractual documents, and raw sampling and monitoring data, whether or not such data and information was developed pursuant to this memorandum of agreement.

This memorandum of agreement shall be governed and interpreted under the laws of the State of New Jersey.

This memorandum of agreement shall be binding, jointly and severally, on each signatory, its successors and assignees. No change in the ownership or corporate or business status of any signatory, or of the facility or Site shall alter any signatory's responsibilities under this memorandum of agreement.

847520889

This memorandum of agreement shall become effective upon execution hereof by all parties.

Date:_____ **NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY**

BY:_____
Signature

_____
Print Full Name Signed Above

_____
Title

Date:_____ **ELAN CHEMICAL CO., INC.**

BY: David Weisman
Signature

DAVID R. WEISMAN
Print Full Name Signed Above

Pres
Title

847520890

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

September 16, 1992

RECEIVED
SEP 17 1992

Lee Henig-Elona, Esq.
Clapp & Eisenberg
Counsellors At Law
1 Newark Center
Newark, NJ 07102

Re: DRPSR Case #88-12-15-0731

Dear Ms. Henig-Elona:

As agreed to under the Memorandum of Agreement signed on August 27, 1992, the Department has had the opportunity to review all the sampling results submitted to this office regarding Elan Chemical. Based on these findings, this office will approve encapsulation of the entire former drum storage area with an impermeable asphalt cover, pursuant to the proposed Cleanup Standards found at N.J.A.C. 7:26D as a remedial alternative. Be advised, however, that a use restriction (i.e. deed restriction) may be required for the Elan site if the proposed Cleanup Standards are adopted substantively "as is". Please see N.J.A.C. 7:26D, Appendix A, which, under the proposed standards, requires a use restriction when the Department allows contaminants to remain above the regulatory level. The use restriction is not required at this time, however, Elan may wish to proceed voluntarily with implementation of same. In addition, although capping may be an acceptable remedial alternative for this office, it may not be so for other Departmental programs (i.e. ECRA) and should be taken into consideration. Furthermore, as environmental investigations at the site have not demonstrated that ground water has not been impacted by soil contamination, it is recommended that a ground water study be performed. This, however, is not a requirement at this time, but could be in the future.

Please contact this office at 201-669-3960 two weeks prior to the encapsulation of Elan's property so that I can be present if necessary.

Sincerely,

Jodie M. Stein
Senior Environmental Specialist

JMS/plm

847520891

CLAPP & EISENBERG

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COUNSELLORS AT LAW

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MARK L. MANEWITZ

PHILIP M. KRUGER
RANDI SCHILLINGER
JONAH D. ZIMILES
COLLEEN D. SHIARELLA
VINCENT F. PAPALIA
CAMILLE M. KENNY
ROBERT J. ROHRBERGER
HARVEY C. KAISH
CHRISTOPHER M. HARTWYK
MARY BETH CLARK
LEE HENIG-ELONA
MARK F. KLUGER
ROBERT A. SCHWARTZ
KIMBERLY D. SUTTON
IRIS J. GOODWIN+
MADELINE E. COX
DEIRDRE A. DILLON
JODY L. IRWIN
BRYAN W. LINDSAY
ROBERT J. BEACHAM
JEFFREY N. RABIN
JOANN K. DOBRANSKY
ADAM N. SARAVAY
EDWARD W. MILLSTEIN

OF COUNSEL

JEROME C. EISENBERG
GEORGE S. FISCHLER
HOWARD T. ROSEN
DOROTHY G. BLACK

THOMAS A. PENN
GULIET D. HIRSCH
PAUL S. WERTHER

+MEMBER OF N.Y. BAR ONLY

WRITER'S DIRECT DIAL
(201) 642-
5958

WRITER'S DIRECT FAX
(201)
623-5967

November 5, 1992

Jodie M. Stein, Sr. Environmental
Specialist
New Jersey Department of Environmental
Protection & Energy
Division of Responsible Party Site
Remediation - Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co., Inc.
268 Doremus Avenue
Newark, New Jersey
DRPSR Case No. 88-12-15-0731

Dear Ms. Stein:

Pursuant to your letter dated September 16, 1992, Elan intends to encapsulate the property on November 23, 1992. We will let you know if this date changes.

Very truly yours,

Lee Henig-Elona

LHE/pl/60022

cc: David Weisman, President (w/o encs.)
Mr. Al Roque
Elan Chemical Co.

bcc: Jeffrey M. Schwartz

847520892

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION
COUNSELLORS AT LAW

ONE NEWARK CENTER
NEWARK, N.J. 07102
(201) 642-3900 (212) 571-0240
FAX: (201) 642-7413

ATLANTIC CITY OFFICE
26 SO. PENNSYLVANIA AVE.
ATLANTIC CITY, N.J. 08401
(609) 347-7330
FAX: (609) 347-2611

ALFRED C. CLAPP (1959-1988)
ARNOLD K. MYTELKA
STUART L. PACHMAN
ROGER S. CLAPP
WILLIAM J. O'SHAUGHNESSY
EDWARD N. FITZPATRICK
JOHN J. BARRY
MICHAEL A. BACKER
JEFFREY W. LORELL
LAWRENCE B. MINK
ELMER M. MATTHEWS
RONALD H. JANIS
MELVYN H. BERGSTEIN
SALVATORE T. ALFANO
JEFFREY M. SCHWARTZ
FREDERIC S. KESSLER
MARK FALK
ROBERT A. MARSICO
JOHN L. CONOVER
JOHN M. DONNELLY
BRUCE P. McMORAN
JOHN A. AVERY
DANIEL J. WAGNER
AGNES I. RYMER
MICHAEL W. ZELENTY
MARK L. MANEWITZ

PHILIP M. KRUGER
RANDI SCHILLINGER
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JOANN K. DOBRANSKY
ADAM N. SARAVAY
ROBERT W. GEIGER+
EDWARD W. MILLSTEIN
WILLIAM M.A. PORTER

OF COUNSEL
JEROME C. EISENBERG
GEORGE S. FISCHLER
HOWARD T. ROSEN
DOROTHY G. BLACK
THOMAS A. PENN
PAUL S. WERTHER

+MEMBER OF N.Y. BAR ONLY

WRITER'S DIRECT DIAL
(201) 642-5958

WRITER'S DIRECT FAX
(201) 623-6987

January 6, 1993

Jodie M. Stein, Sr. Environmental
Specialist
New Jersey Department of Environmental
Protection & Energy
Division of Responsible Party Site
Remediation - Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Co., Inc.
268 Doremus Avenue
Newark, New Jersey
DRPSR Case No. 88-12-15-0731

Dear Ms. Stein:

Pursuant to the Department's letter of September 16, 1992 and my letter of November 5, 1992, Elan has encapsulated the property.

We hereby request that the Memorandum of Agreement signed on August 27, 1992 be terminated.

Very truly yours,

Lee Henig-Elona

LHE/pl/60022

cc: David Weisman, President

bcc: Jeffrey M. Schwartz

847520893

APPENDIX

ELAN CHEMICAL COMPANY, INC.
RESPONSES TO
ENVIRONMENTAL PROTECTION AGENCY
REQUEST FOR INFORMATION

VOLUME 3 OF 3

847520894

QUESTION 11
PART A

EFO-001 (6/93)
was FWE-009

New Jersey Department of Environmental Protection and Energy
Division of Enforcement Field Operations
Metro Bureau of Water & Hazardous Waste Enforcement
2 Babcock Place, West Orange, N.J. 07052
(201) 669-3900

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 7-12-93

NAME OF FACILITY Elan Chemical

LOCATION OF FACILITY 268 Doremus Ave.

NAME OF OPERATOR Al Rogue / Director of Compliance

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following alleged violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION 1) 7:26-7.4(a)3 - Failure of generator to prepare a manifest before transporting or offering for transport hazardous waste off-site
2) 7:26-8.5(a) - Failure of generator of solid waste to determine if waste is hazardous.

Re: B/L - 30065 (6-7-93) and B/L - 30092 (6-9-93)

Remedial action to correct these violations must be initiated immediately and be completed by N/A. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of up to $50,000 per violation.

Facility Receipt of Copy Only

Investigator, Division of Enforcement Field Operations
Department of Environmental Protection & Energy
William P. McGuigan Jr.
Issued - 7-2-93

847520896

State of New Jersey
Department of Environmental Protection and Energy
Enforcement

Jeanne M. Fox
Acting Commissioner

Marlen Dooley
Assistant Commissioner

OCT 19 1993

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Elan Chemical Company
268 Doremus Avenue
Newark, NJ 07105

ATTENTION: Mr. David R. Weisman, President

Dear Mr. Weisman:

There is enclosed for service upon you a **NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT** issued by the New Jersey Department of Environmental Protection and Energy pursuant to the provisions of the Solid Waste Management Act.

The Department is available to meet with the principals of the case to discuss the enclosed enforcement document. All requests for meetings must be in writing and must include an agenda of items to be discussed at the meeting. Should you desire such a meeting please write to Mr. Peter T. Lynch at the address listed below:

New Jersey Department of Environmental Protection and Energy
Metro Bureau of Water and Hazardous Waste Enforcement
2 Babcock Pl.
W. Orange, NJ 07052-5504
Attention: Peter T. Lynch, Chief

Be advised that this does not affect the time frame within which you may request an administrative hearing, under the Notice of Right to a Hearing provisions of the enclosed document.

Please Respond To:

Tel. #

847520897

Should you have any questions concerning this matter, please contact Mr. Jeffrey A. Sterling at (201) 669-3900.

Very truly yours,

James K. Hamilton
Assistant Director
Water and Hazardous Waste
Enforcement

JKH/wpm
Enclosure(s)
cc: File
Health Department
Mayor's Office
Ed Neafsy, DCJ
Joel Golumbek, USEPA Region 2
Chris Piatek, DOL

State of New Jersey
Department of Environmental Protection and Energy
Enforcement

Jeanne M. Fox
Acting Commissioner

Marlen Dooley
Assistant *Commissioner*

IN THE MATTER OF	:	**NOTICE OF CIVIL ADMINISTRATIVE**
ELAN CHEMICAL COMPANY	:	**PENALTY ASSESSMENT**
268 DOREMUS AVE.	:	
NEWARK, NJ 07105	:	

This Notice of Civil Administrative Penalty Assessment is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection and Energy (hereinafter "NJDEPE" or the "Department") by N.J.S.A. 13:1D-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and duly delegated pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1) The Department has determined that Elan Chemical Company (hereinafter "Elan") is a generator of hazardous waste (EPA ID# NJD042895680) as defined in N.J.A.C. 7:26-1.4 and is located at Block 4014, Lot 8, 268 Doremus Ave., City of Newark, County of Essex, State of New Jersey.

2) On July 12, 1993 an inspection was conducted at Elan by Department personnel during which the following violations were observed:

a. Elan failed to determine whether the solid waste that it generates is a hazardous waste, in violation of N.J.A.C. 7:26-8.5(a). Specifically, Elan failed to determine whether two shipments of solid waste offered to Merola Enterprises, Inc., on June 7 and June 9, 1993, for transport to S & W Waste, Inc., Kearny, New Jersey, and which Elan identified as ". . . distillation bottoms, X910 . . ." (i.e. non-hazardous waste) on Bills of Lading Numbers 30065 and 30092, were hazardous waste. The shipments offered to Merola Enterprises, Inc. for transport to S & W Waste, Inc. were determined to contain ignitable wastes (EPA waste code D001).

b. Further, Elan failed to prepare a manifest before transporting or offering for transport off-site the shipments of hazardous waste referenced in 2(a) above on June 7 and June 9, 1993, in violation of N.J.A.C. 7:26-7.4(a)3.

Please Respond To: Tel. #

c. Elan failed to ensure that the quantity of waste in each satellite accumulation area is less than fifty-five (55) gallons of hazardous waste or less than one (1) quart of acutely hazardous waste, in violation of N.J.A.C. 7:26-9.3(d)1. Specifically, Elan accumulated two (2) fifty-five (55) gallon containers of F005 type hazardous waste in it's processing area, in violation of N.J.A.C. 7:26-9.3(d)1.

d. Elan accumulated hazardous waste in an above ground tank for ninety (90) days or less prior to receiving written Department approval, in violation of N.J.A.C. 7:26-9.3(b). Specifically, Elan stored hazardous waste in an unpermitted five thousand (5000) gallon above ground tank for the purpose of physically and chemically treating the waste prior to transfer to an approved above ground tank, in violation of N.J.A.C. 7:26-9.3(b).

e. Elan failed to provide the required classroom or on-the-job training for facility personnel, in violation of N.J.A.C. 7:26-9.4(g). Specifically:

1. Elan failed to maintain documents and/or records of the job title for each position at the facility related to hazardous waste management and the name of the employee filling each job, in violation of N.J.A.C. 7:26-9.4(g)6i.

2. Elan failed to maintain a written job description, including a description of the requisite skill, education or other qualifications, and duties of the employees assigned, for each position listed under N.J.A.C. 7:26-9.4(g)6i, in violation of N.J.A.C. 7:26-9.4(g)6ii.

f. Elan failed to make the required arrangements with police and fire departments, emergency response contractors, equipment suppliers, or local hospitals, or to document any such authority's refusal to enter into such arrangements, in violation of N.J.A.C. 7:26-9.6(f). Specifically:

1. Elan failed to make agreements with emergency response contractors and equipment suppliers, in violation of N.J.A.C. 7:26-9.6(f)3.

2. Elan failed to make arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility, in violation of N.J.A.C. 7:26-9.6(f)4.

3) The Department conducted a reinspection on August 12, 1993 and determined that Elan had corrected or satisfied the violations referenced in paragraphs 2c, 2d, 2e, and 2f above, and implemented procedures to prevent a recurrence of the violations referenced in paragraphs 2a and 2b above.

4) Based on the facts set forth in these **FINDINGS**, the Department has determined that Elan violated the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated pursuant thereto, N.J.A.C. 7:26-1 et seq., specifically N.J.A.C. 7:26-7.4(a)3, -8.5(a), -9.3(d)1, -9.3(b), -9.4(g)6i, -9.4(g)6ii, -9.6(f)3, and -9.6(f)4.

NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

5) Pursuant to N.J.S.A. 13:1E-9e and N.J.A.C. 7:26-5.4(f), and based upon the above **FINDINGS**, the Department has determined that a civil administrative penalty be assessed against Elan in the amount of $40,000. The Department's basis for this Civil Administrative Penalty is set forth in the Penalty Assessment Worksheet(s) attached hereto and incorporated herein as Attachment A.

6) Payment of the penalty is due when a final order is issued by the Commissioner subsequent to a hearing, if any, or when this Notice of Civil Administrative Penalty Assessment becomes a final order (see following paragraph). Payment shall be made by certified check payable to "Treasurer, State of New Jersey" and shall be submitted to:

New Jersey Department of Environmental Protection and Energy
Division of Financial Management Planning and General Services
Bureau of Revenue
CN 417
Trenton, NJ 08625-0417

7) If no request for a hearing is received within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment, it shall become a final order upon the twenty-first calendar day following its receipt and the penalty shall then be due and payable.

NOTICE OF RIGHT TO A HEARING

8) Pursuant to N.J.S.A. 52:14B-1 et seq. and N.J.S.A. 13: 1E-9, Elan is entitled to an administrative hearing. Any hearing request, along with the enclosed **ADMINISTRATIVE HEARING REQUEST CHECKLIST AND TRACKING FORM FOR ENFORCEMENT DOCUMENTS**, shall be delivered to the addresses below within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment.

i) **Office of Legal Affairs**
Attention: Adjudicatory Hearing Requests
Department of Environmental Protection and Energy
CN402
Trenton, N.J. 08625-0402

ii) Division of Enforcement Field Operations
Metro Bureau of Water and Hazardous Waste Enforcement
2 Babcock Place
W. Orange, N.J. 07052-5504
Attention: Peter T. Lynch, Chief

9) Pursuant to N.J.A.C. 7:26-5.3 Elan shall, in its request for a hearing, furnish NJDEPE with the following:

a. The name, address, telephone number and EPA Identification Number (if applicable) of Elan and its authorized representative;

b. Elan's defenses, to each of the Department's findings of fact in the findings section of the notice of civil administrative penalty assessment, stated in short and plain terms;

c. An admission or denial of each of the Department's findings of fact in the findings section of the notice of civil administrative penalty assessment. If Elan is without knowledge or information sufficient to form a belief as to the truth of a finding, Elan shall so state and this shall have the effect of a denial. A denial shall fairly meet the substance of the findings denied. When Elan intends in good faith to deny only a part or a qualification of a finding, Elan shall specify so much of it as is true and material and deny only the remainder. Elan may not generally deny all of the findings but shall make all denials as specific denials of designated findings. For each finding which Elan denies, Elan shall allege the fact or facts as Elan believes such fact or facts to be;

d. Information supporting the request and specific reference to or copies of all written documents relied upon to support the request;

e. An estimate of the time required for the hearing (in days and/or hours); and

f. A request, if necessary, for a barrier-free hearing location for physically disabled persons.

GENERAL PROVISIONS

10) Neither the issuance of this Notice of Civil Administrative Penalty Assessment nor anything contained herein shall relieve Elan of the obligation to comply with all applicable laws, including but not limited to the statutes and rules cited herein.

11) This Notice of Civil Administrative Penalty Assessment is binding on Elan, its agents, successors, assigns, any trustee in bankruptcy or

other trustee, and any receiver appointed through a proceeding in law or equity.

12) Notice is given that violations of any statutes, rules or permits other than those herein cited may be cause for additional enforcement actions, either administrative or judicial. By issuing this Notice of Civil Administrative Penalty Assessment the Department does not waive its right to initiate additional enforcement actions.

13) Obligations and penalties of this Notice of Civil Administrative Penalty Assessment are imposed pursuant to the police powers of the State of New Jersey for the enforcement of the law and the protection of the public health, safety, and welfare and are not intended to constitute debt or debts which may be limited or discharged in a bankruptcy proceeding.

14) Notice is given that pursuant to N.J.S.A. 13:1E-9e, the Department is authorized to assess a civil administrative penalty of not more than $50,000 for each violation, and each day during which the violation continues constitutes an additional, separate and distinct offense.

15) Notice is further given that any person who violates the provisions of N.J.S.A. 13:1E-1 et seq. or any code, rule, or regulation promulgated pursuant thereto shall be liable to a penalty of not more than $50,000 per day to be collected in a civil action, and any person who violates an administrative order issued pursuant to N.J.S.A. 13:1E-9c or a court order issued pursuant to N.J.S.A. 13:1E-9d, or who fails to pay a civil administrative penalty assessed pursuant to N.J.S.A. 13:1E-9e in full after it is due is subject upon order of a court to a civil penalty not to exceed $100,000 per day of such violations.

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

DATE: OCT 19 1993

BY: _____
James K. Hamilton
Assistant Director
Water and Hazardous Waste
Enforcement

JKH/wpm

ATTACHMENT A

PENALTY ASSESSMENT WORKSHEET

Violator Name: ELAN CHEMICAL COMPNAY

Location: 268 DOREMUS AVE. NEWARK, NJ 07105

Case #: NJD 042 895 680 Inspector: WILLIAM P. MCQUIGGAN JR.

Date of Violation: JULY 12, 1993 Page 1 of 2

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	8.5(a)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000
Number of days/violations	2
Total Base Penalty	$20,000
If subparagraph (f)3i applies: Total base penalty x 1.00	N/A
If subparagraph (f)3ii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iv applies: Total base penalty x 0.25	N/A
Total Civil Administrative Penalty	$20,000

Justification for Severity Factor Adjustments:

Elan failed to determine if waste was hazardous prior to shipping off-site on June 7, 1993, and June 9, 1993.

Prepared by: WILLIAM P. MCQUIGGAN JR.

847520904

ATTACHMENT A

PENALTY ASSESSMENT WORKSHEET

Violator Name: ELAN CHEMICAL COMPNAY

Location: 268 DOREMUS AVE. NEWARK, NJ 07105

Case #: NJD 042 895 680 Inspector: WILLIAM P. MCQUIGGAN JR.

Date of Violation: JULY 12, 1993 Page 2 of 2

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	7.4(a)3
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000
Number of days/violations	2
Total Base Penalty	$20,000
If subparagraph (f)3i applies: Total base penalty x 1.00	N/A
If subparagraph (f)3ii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iv applies: Total base penalty x 0.25	N/A
Total Civil Administrative Penalty	$20,000

Justification for Severity Factor Adjustments:

Elan failed to prepare two hazardous waste manifests for shipments on June 7, 1993, and June 9, 1993.

Prepared by: WILLIAM P. MCQUIGGAN JR.

847520905

Administrative Hearing Request Checklist and Tracking Form for Enforcement Documents

I. Enforcement Document Being Appealed:

_____
Title of Enforcement Document

_____ _____
Issuance Date of Enforcement Document | Document Number (if any)

II. Person Requesting Hearing:

_____ _____
Name | Name of Attorney, if applicable

_____ _____

_____ _____
Address | Address of Attorney

III. Please Include the Following Information as Part of Your Request:

A. The date the alleged violator received the enforcement document being contested;
B. A copy of the Enforcement Document and a list of all issues being appealed;
C. An admission or denial of each of the findings of fact, or a statement of insufficient knowledge;
D. The defenses to each of the findings of fact in the enforcement document;
E. Information supporting the request;
F. An estimate of the time required for the hearing;
G. A request, if necessary, for a barrier-free hearing location for physically disabled persons;
H. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of your hearing request to the Office of Administrative Law; and
I. This form, completed, signed and dated with all of the information listed above, including attachments, to:

1. Office of Legal Affairs
ATTENTION: Adjudicatory Hearing Requests
Department of Environmental Protection and Energy
401 East State Street
CN 402, Trenton, New Jersey 08625-0402

2. Peter T. Lynch, Chief, Metro Bureau,
2 Babcock Place,
West Orange, NJ 07052 - (With Attachments)

3. All co-permittees (w/attachments)

IV. Signature:_____ Date:_____

847520906

DEP-06/A
10/91

New Jersey Department of Environmental Protection and Energy

☐ Check here if Revised Billing

ENFORCEMENT INVOICE

Document # ME101993
Date Rec'd
Amount

DIVISION Enforcement Field Operations - Metro
PROGRAM Water & Haz., Waste Enforcement

TYPE: ☒ Fine/Penalty, ☐ Cost Recovery

FACILITY ID NO. NJD042895680
PROGRAM ID NO. HM-001-94

Case/Company Name Elan Chemical Co.
Address 268 Doremus Avenue
Newark, NJ 07105

Please identify appropriate category:
☐ County ☐ Local ☐ Private
Authority: ☐ Regional ☐ Local
☐ Industrial ☐ Commercial ☐ Other - Specify

DATE ASSESSED	DESCRIPTION	AMOUNT
10/19/93	Notice of Civil Administrative Penalty Assessment.	$40,000.00
DATE DUE: Within 21 days of receipt	**AMOUNT DUE:**	$40,000.00

Make check payable to: Treasurer, State of New Jersey

Mail to: NJDEPE, Bureau of Revenue
CN 417, Trenton, N.J. 08625-0417

COPY DISTRIBUTION: White - Remittance Copy Yellow - Company Pink - Bureau of Revenue Goldenrod - Division

847520907

CLAPP & EISENBERG
A Professional Corporation
One Newark Center
Newark, New Jersey 07102
(201) 642-3900
Attorneys for Appellant
Elan Chemical Company Inc.

IN THE MATTER OF ELAN CHEMICAL COMPANY INC. 268 Doremus Avenue Newark, NJ 07105 Case No. NJD 042 895 680	REQUEST FOR ADMINISTRATIVE HEARING FOR NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

Elan Chemical Company Inc. ("Elan"), hereby requests an administrative hearing in connection with the above-referenced Notice of Civil Administrative Penalty Assessment issued to Elan on October 19, 1993, in accordance with N.J.S.A. 52:14B-1 and N.J.S.A. 13:1E-9.

Attached is a completed "Administrative Hearing Request Checklist and Tracking Form For Enforcement Documents", which sets forth the information required by N.J.A.C. 7:27A-3.4.

CLAPP & EISENBERG, P.C.

By: _____
Mark L. Manewitz

Date: 11/12/93

110338

847520908

Administrative Hearing Request Checklist and Tracking Form for Enforcement Documents

I. Enforcement Document Being Appealed:

Notice of Civil Administrative Penalty Assessment
Title of Enforcement Document

October 19, 1993
Issuance Date of Enforcement Document

NJD 042 895 680
Document Number (if any)

II. Person Requiring Hearing:

Elan Chemical Company Inc.
Name

268 Doremus Avenue

Newark, New Jersey 07105
Address

Mark L. Manewitz
Name of Attorney (if applicable)

Clapp & Eisenberg

1 Newark Ctr., Newark, NJ 07102
Address of Attorney

III. Please include the Following Information as Part of Your Request: **(SEE ATTACHED)**

A. The date the alleged violator received the enforcement document being contested;

B. A copy of the Enforcement Document and a list of all issues being appealed;

C. An admission or denial of each of the findings of fact, or a statement of insufficient knowledge;

D. The defenses to each of the findings of fact in the enforcement document;

E. Information supporting the request;

F. An estimate of the time required for the hearing;

G. A request, if necessary, for a barrier-free hearing location for physically disabled persons;

H. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of your hearing request to the Office of Administrative Law; and

I. This form, completed, signed and dated with all of the information listed above, including attachments, to:

1. Office of Legal Affairs
ATTENTION: Adjudicatory Hearing Requests
Department of Environmental Protection and Energy
401 East State Street, CN 402
Trenton, New Jersey 08625-0402

2. Peter T. Lynch, Chief, Metro Bureau,
2 Babcock Place
West Orange, NJ 07052 - (With Attachments)

3. All co-permittees (w/attachments)

IV. Signature: Mark T. Maneri Date: 11/12/93

847520910

ATTACHMENT

III. A. Elan Chemical Company ("Elan") received the Notice of Civil Penalty Assessment (the "Notice"), which is the subject of this hearing request, on October 22, 1993.

B. A copy of the Notice issued to Elan and a list of issues being appealed are attached as Exhibit "A".

C. Elan responds to the FINDINGS set forth in the Notice as follows:

1. Upon information and belief, Elan admits that the Department has determined that Elan Chemical Company is a generator of hazardous waste (EPA Id. No. NJD042895680), as defined in N.J.A.C. 7:26-1.4, and is located at Block 4014, Lot 8, 268 Doremus Avenue, City of Newark, County of Essex, State of New Jersey.

2. a. Elan admits that on July 12, 1993 an inspection was conducted at Elan by Department Personnel, but denies that the violations alleged in paragraph 2 of the FINDINGS were observed on such occasion. Upon information and belief, on or about July 2, 1993, S&W Waste, Inc. ("S&W") sent Thomas Sherman of the New Jersey Department of Environmental

Protection and Energy ("NJDEPE") a letter which alleges that on two dates specified in the letter it received drums of material from Elan which, on the basis of tests purportedly conducted by S&W, should have been characterized as hazardous waste. The S&W letter is attached as Exhibit "B". Elan has no information sufficient to form a belief as to whether the tests in question were conducted by S&W, or, if conducted, whether they were accurate. Elan has not been provided a sample to conduct its own tests upon, as is the usual custom. Furthermore, regardless of whether the tests were conducted and were correct, pursuant to a contract between Elan and S&W governing the disposal of the materials in question, the evaluation should have made by S&W so as to determine the character of the materials in question prior to S&W's transportation of the materials. This would have avoided any noncompliance with the regulations alleged to have been violated in paragraph 2a of the Notice.

Elan also denies that it failed to determine whether the solid waste that it generates is a

847520912

hazardous waste, in violation of N.J.A.C. 7:26-8.5(a). Elan further denies that it failed to determine whether two shipments of solid waste on June 7 and June 9, 1993 to S&W, which Elan allegedly identified as: "...distillation bottoms, X910..." (i.e., non-hazardous waste) on Bills of Lading Nos. 30065 and 30092, were hazardous waste. Elan further denies that it made separate shipments of waste on June 7 and June 9 to S&W and is without information sufficient to admit or deny whether the wastes shipped on Bills of Lading 30065 and 30092 contained ignitable wastes (EPA Waste Code D001).

b. Elan on information and belief denies that it failed to prepare a manifest or equivalent document before transporting or offering for transport off-site the above-referenced shipments of allegedly hazardous waste in violation of N.J.A.C. 7:26-7.4(a)3. Based upon representations to Elan made by S&W, as substantiated by correspondence to S&W from NJDEPE (see Exhibit "C"), only bills of lading were required.

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D. Elan sets forth its DEFENSES to each of the FINDINGS set forth in the Notice, as follows:

FACTS

As a by-product of its manufacturing activities, Elan generated certain waste material, packed it into drum containers and determined it to be non-hazardous waste. In order to assure that the material was properly disposed of, it obtained a proposal from S&W for the performance of certain services relating to the disposal of the waste material. The proposal specified the services which S&W agreed to perform. The proposal, which is attached as Exhibit "D", stated that S&W agreed, for a specified charge, to perform quality control testing of the waste, to prepare all required manifesting and labels, to transport and dispose of the waste and to provide containers. The S&W proposal further stated that in the event any of the waste was tested and proved to be inconsistent with representative waste samples or approved waste streams, processing and disposal would be conducted at a higher charge. Elan accepted the proposal. Approximately 680 drums were to be transported and disposed of by S&W. S&W provided Elan with containers at Elan's site into which the drums were to be loaded for transportation. S&W advised Elan that, based on advice to S&W from NJDEPE, bills of lading were the

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proper transmittal documents for the waste in question. Elan had no reason to second-guess this advice because (1) its own preliminary examination of the waste material led it to believe it was not hazardous waste, and (2) it had contracted with what it believed to be a reputable, professional waste disposal company in the form of S&W, which had agreed to test the waste material and prepare all required manifesting.

S&W proceeded to begin work. Over a three-week period beginning on May 17, 1993, it removed all of the material. As of June 7, 1993, it had removed all but the last 72 drums. The last group of drums was removed on June 7 and on June 9. S&W removed these drums on these two days at its convenience. At the time it removed the drums from Elan's property, it did not advise Elan that special manifesting was required for these last drums, or that its testing indicated that the drums contained material which required special handling or any handling different from that required for the approximately 600 drums it had removed from Elan's property for disposal on prior dates. Instead, some three weeks after S&W removed the last 72 drums from Elan's property, without advice or notice to Elan, it wrote to NJDEPE charging that it had "received" from Elan two shipments of hazardous waste -- the same waste it had contractually agreed to quality

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control test and manifest for Elan.

So far as Elan is aware, NJDEPE has not corroborated S&W's tests of the waste in question, nor determined that the material in question was in fact derived from Elan, nor considered S&W's responsibility for any violations of regulations which may have occurred in connection with this waste.

Elan first became aware that any problem existed in connection with this matter on July 12, 1993 when an NJDEPE inspector arrived at its property to perform a compliance inspection of Elan's property.

Elan submits that S&W failed to properly discharge its obligations undertaken pursuant to its contract with Elan and that such failure is actionable.

1. <u>With respect to FINDINGS 2(a) and 2(b) pertaining to an alleged failure to properly manifest wastes</u>:

   a. There is insufficient evidence to find that Elan is in violation of the regulations asserted.

   Elan believes there is a question as to whether or not the S&W tests are a fair characterization of the material which is the

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subject of the violation. In the absence of confirmatory samples or other evidence provided as to the actual flashpoint of the material, Elan asserts that there is insufficient evidence from the S&W tests to determine that the material was in fact hazardous. A confirmatory sample should have been provided to Elan so that it could make its own determination about the material. The material had been previously understood by Elan to be solids; such solids would not have displayed the flammability found in S&W's tests. Additional information is required and may well show that the material was not hazardous. Where the material is not hazardous, no violation occurred.

b. <u>If there was a violation, one violation occurred, not two</u>. Elan segregated 72 drums into the container provided by S&W for the purpose of shipment on June 7, 1993. S&W, however, for its own convenience, did not remove the entire lot on June 7, 1993. Instead, S&W returned on June 9, 1993 to pick up the drums left behind on June 7, and created a second bill of lading. Evidence that S&W made two pickups for its own convenience can be inferred from the signature on the second bill of lading.

847520917

Under these circumstances, Elan fully expected that there would be one shipment. If there was an error as to the material in question, one pickup should have occurred and only one violation should be asserted. S&W's sole actions have multiplied the number of offenses Elan has been charged with. Elan's conduct alone cannot constitute more than one offense.

c. If any regulation regarding manifesting was violated, it was N.J.A.C. 7:26-7.3(a)1, not N.J.A.C. 7:26-7.4(a)3. The department has asserted a violation of N.J.A.C. 7:26-7.4(a)3, to wit:

> Failure of generator to prepare a manifest before transporting or offering for transport hazardous waste off-site.

The circumstances are that Elan contracted with S&W to provide the proper forms for the transaction. S&W informed Elan, in reliance upon Mr. Sherman's letter of May 12, 1993 (Exhibit "C"), that only a bill of lading was required. Elan relied upon S&W, and S&W, for their own convenience, used a bill of lading rather than a manifest form. Under these circumstances, if Elan has violated any regulations regarding manifesting, it would be a violation of N.J.A.C. 7:26-7.3(a)1, to wit:

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Failure to use manifest forms from the Department for hazardous waste originating in New Jersey.

N.J.A.C. 7:26-7.3(a)1 more accurately describes the facts which occurred. Here there was no failure to manifest, but perhaps there was an unintended failure to use the correct form. The bill of lading was approved by the department as the equivalent of a manifest for distillation bottoms, X910. The bill of lading served in the place of a manifest. (Exhibit "C"). To penalize Elan for failure to prepare a manifest, where a bill of lading is equivalent and was prepared by S&W, is not appropriate. The most that can be found is that the wrong form was used.

2. With respect to the allegations set forth in FINDINGS 2(a) and 2(b) pertaining to an alleged failure to properly characterize wastes:

a. Elan did characterize the material. A quality control inspection from samples taken from the facility's inventory was performed by Elan. Drums were characterized as non-hazardous and isolated to a non-hazardous waste storage area. Furthermore, although the materials were characterized by Elan, S&W was hired to assure proper handling and

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manifesting of the material. S&W failed to properly do this for Elan on the last pick up of drums.

b. The material changed character after Elan performed its characterization. The following events are believed to have occurred: When Elan characterized the waste, all of the drums contained solids and were segregated into a non-hazardous storage area. Subsequent to receiving the notice of violation, Elan determined that solids of the type in the last S&W group, when exposed to heat, can allow solvents to separate from the solid material inside the drum. Although precise information on the material actually disposed of is not available, it appears that this phenomenon could explain the liquids noted by S&W during the QA/QC. The final shipment of drums took place on a warm June day (see Exhibit "E"). Elan complied with its obligations to characterize the material and cannot be in violation of N.J.A.C. 7:26-8.5(a) as a result of the unexpected change in character of the material.

C. If there was a violation, one violation occurred, not two.

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Please refer to the discussion under D.1.b. above.

3. With respect to FINDINGS 2(c), (d), (e) and (f), Elan makes no admissions as to the correctness of the findings, notes that DEPE acknowledges that any purported violations have been cured, and interposes no further defense because corrective action was taken by Elan within the compliance deadlines and no penalty has been proposed.

E. Information supporting this request will follow under separate cover.

F. We estimate that approximately two (2) days will be required for the hearing.

G. Non-Applicable.

H. Elan is willing to negotiate a settlement with the Department prior to the Department's processing of this hearing request to the Office of Administrative Law.

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EXHIBIT A

847520922

State of New Jersey
Department of Environmental Protection and Energy
Enforcement

Jeanne M. Fox
Acting Commissioner

Marlen Dooley
Assistant Commissioner

OCT 19 1993

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Elan Chemical Company
268 Doremus Avenue
Newark, NJ 07105

ATTENTION: Mr. David R. Weisman, President

Dear Mr. Weisman:

There is enclosed for service upon you a **NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT** issued by the New Jersey Department of Environmental Protection and Energy pursuant to the provisions of the Solid Waste Management Act.

The Department is available to meet with the principals of the case to discuss the enclosed enforcement document. All requests for meetings must be in writing and must include an agenda of items to be discussed at the meeting. Should you desire such a meeting please write to Mr. Peter T. Lynch at the address listed below:

New Jersey Department of Environmental Protection and Energy
Metro Bureau of Water and Hazardous Waste Enforcement
2 Babcock Pl.
W. Orange, NJ 07052-5504
Attention: Peter T. Lynch, Chief

Be advised that this does not affect the time frame within which you may request an administrative hearing, under the Notice of Right to a Hearing provisions of the enclosed document.

Please Respond To:

Tel. #

847520923

Should you have any questions concerning this matter, please contact Mr. Jeffrey A. Sterling at (201) 669-3900.

Very truly yours,

James K. Hamilton
Assistant Director
Water and Hazardous Waste
Enforcement

JKH/wpm
Enclosure(s)
cc: File
Health Department
Mayor's Office
Ed Neafsy, DCJ
Joel Golumbek, USEPA Region 2
Chris Piatek, DOL

State of New Jersey
Department of Environmental Protection and Energy
Enforcement

Jeanne M. Fox
Acting Commissioner

Marlen Dooley
Assistant *Commissioner*

IN THE MATTER OF	:	**NOTICE OF CIVIL ADMINISTRATIVE**
ELAN CHEMICAL COMPANY	:	**PENALTY ASSESSMENT**
268 DOREMUS AVE.	:	
NEWARK, NJ 07105	:	

This Notice of Civil Administrative Penalty Assessment is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection and Energy (hereinafter "NJDEPE" or the "Department") by N.J.S.A. 13:1D-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and duly delegated pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1) The Department has determined that Elan Chemical Company (hereinafter "Elan") is a generator of hazardous waste (EPA ID# NJD042895660) as defined in N.J.A.C. 7:26-1.4 and is located at Block 4014, Lot 8, 268 Doremus Ave., City of Newark, County of Essex, State of New Jersey.

2) On July 12, 1993 an inspection was conducted at Elan by Department personnel during which the following violations were observed:

a. Elan failed to determine whether the solid waste that it generates is a hazardous waste, in violation of N.J.A.C. 7:26-8.5(a). Specifically, Elan failed to determine whether two shipments of solid waste offered to Merola Enterprises, Inc., on June 7 and June 9, 1993, for transport to S & W Waste, Inc., Kearny, New Jersey, and which Elan identified as ". . . distillation bottoms, X910 . . ." (i.e. non-hazardous waste) on Bills of Lading Numbers 30065 and 30092, were hazardous waste. The shipments offered to Merola Enterprises, Inc. for transport to S & W Waste, Inc. were determined to contain ignitable wastes (EPA waste code D001).

b. Further, Elan failed to prepare a manifest before transporting or offering for transport off-site the shipments of hazardous waste referenced in 2(a) above on June 7 and June 9, 1993, in violation of N.J.A.C. 7:26-7.4(a)3.

Please Respond To: Tel. #

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Recycled Paper

c. Elan failed to ensure that the quantity of waste in each satellite accumulation area is less than fifty-five (55) gallons of hazardous waste or less than one (1) quart of acutely hazardous waste, in violation of N.J.A.C. 7:26-9.3(d)1. Specifically, Elan accumulated two (2) fifty-five (55) gallon containers of F005 type hazardous waste in it's processing area, in violation of N.J.A.C. 7:26-9.3(d)1.

d. Elan accumulated hazardous waste in an above ground tank for ninety (90) days or less prior to receiving written Department approval, in violation of N.J.A.C. 7:26-9.3(b). Specifically, Elan stored hazardous waste in an unpermitted five thousand (5000) gallon above ground tank for the purpose of physically and chemically treating the waste prior to transfer to an approved above ground tank, in violation of N.J.A.C. 7:26-9.3(b).

e. Elan failed to provide the required classroom or on-the-job training for facility personnel, in violation of N.J.A.C. 7:26-9.4(g). Specifically:

1. Elan failed to maintain documents and/or records of the job title for each position at the facility related to hazardous waste management and the name of the employee filling each job, in violation of N.J.A.C. 7:26-9.4(g)6i.

2. Elan failed to maintain a written job description, including a description of the requisite skill, education or other qualifications, and duties of the employees assigned, for each position listed under N.J.A.C. 7:26-9.4(g)6i, in violation of N.J.A.C. 7:26-9.4(g)6ii.

f. Elan failed to make the required arrangements with police and fire departments, emergency response contractors, equipment suppliers, or local hospitals, or to document any such authority's refusal to enter into such arrangements, in violation of N.J.A.C. 7:26-9.6(f). Specifically:

1. Elan failed to make agreements with emergency response contractors and equipment suppliers, in violation of N.J.A.C. 7:26-9.6(f)3.

2. Elan failed to make arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or discharges at the facility, in violation of N.J.A.C. 7:26-9.6(f)4.

3) The Department conducted a reinspection on August 12, 1993 and determined that Elan had corrected or satisfied the violations referenced in paragraphs 2c, 2d, 2e, and 2f above, and implemented procedures to prevent a recurrence of the violations referenced in paragraphs 2a and 2b above.

4) Based on the facts set forth in these FINDINGS, the Department has determined that Elan violated the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated pursuant thereto, N.J.A.C. 7:26-1 et seq., specifically N.J.A.C. 7:26-7.4(a)3, -8.5(a), -9.3(d)1, -9.3(b), -9.4(g)6i, -9.4(g)6ii, -9.6(f)3, and -9.6(f)4.

NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

5) Pursuant to N.J.S.A. 13:1E-9e and N.J.A.C. 7:26-5.4(f), and based upon the above FINDINGS, the Department has determined that a civil administrative penalty be assessed against Elan in the amount of $40,000. The Department's basis for this Civil Administrative Penalty is set forth in the Penalty Assessment Worksheet(s) attached hereto and incorporated herein as Attachment A.

6) Payment of the penalty is due when a final order is issued by the Commissioner subsequent to a hearing, if any, or when this Notice of Civil Administrative Penalty Assessment becomes a final order (see following paragraph). Payment shall be made by certified check payable to "Treasurer, State of New Jersey" and shall be submitted to:

New Jersey Department of Environmental Protection and Energy
Division of Financial Management Planning and General Services
Bureau of Revenue
CN 417
Trenton, NJ 08625-0417

7) If no request for a hearing is received within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment, it shall become a final order upon the twenty-first calendar day following its receipt and the penalty shall then be due and payable.

NOTICE OF RIGHT TO A HEARING

8) Pursuant to N.J.S.A. 52:14B-1 et seq. and N.J.S.A. 13: 1E-9, Elan is entitled to an administrative hearing. Any hearing request, along with the enclosed ADMINISTRATIVE HEARING REQUEST CHECKLIST AND TRACKING FORM FOR ENFORCEMENT DOCUMENTS, shall be delivered to the addresses below within twenty (20) calendar days from receipt of this Notice of Civil Administrative Penalty Assessment.

i) Office of Legal Affairs
Attention: Adjudicatory Hearing Requests
Department of Environmental Protection and Energy
CN402
Trenton, N.J. 08625-0402

ii) Division of Enforcement Field Operations
Metro Bureau of Water and Hazardous Waste Enforcement
2 Babcock Place
W. Orange, N.J. 07052-5504
Attention: Peter T. Lynch, Chief

9) Pursuant to N.J.A.C. 7:26-5.3 Elan shall, in its request for a hearing, furnish NJDEPE with the following:

a. The name, address, telephone number and EPA Identification Number (if applicable) of Elan and its authorized representative;

b. Elan's defenses, to each of the Department's findings of fact in the findings section of the notice of civil administrative penalty assessment, stated in short and plain terms;

c. An admission or denial of each of the Department's findings of fact in the findings section of the notice of civil administrative penalty assessment. If Elan is without knowledge or information sufficient to form a belief as to the truth of a finding, Elan shall so state and this shall have the effect of a denial. A denial shall fairly meet the substance of the findings denied. When Elan intends in good faith to deny only a part or a qualification of a finding, Elan shall specify so much of it as is true and material and deny only the remainder. Elan may not generally deny all of the findings but shall make all denials as specific denials of designated findings. For each finding which Elan denies, Elan shall allege the fact or facts as Elan believes such fact or facts to be;

d. Information supporting the request and specific reference to or copies of all written documents relied upon to support the request;

e. An estimate of the time required for the hearing (in days and/or hours); and

f. A request, if necessary, for a barrier-free hearing location for physically disabled persons.

GENERAL PROVISIONS

10) Neither the issuance of this Notice of Civil Administrative Penalty Assessment nor anything contained herein shall relieve Elan of the obligation to comply with all applicable laws, including but not limited to the statutes and rules cited herein.

11) This Notice of Civil Administrative Penalty Assessment is binding on Elan, its agents, successors, assigns, any trustee in bankruptcy or

other trustee, and any receiver appointed through a proceeding in law or equity.

12) Notice is given that violations of any statutes, rules or permits other than those herein cited may be cause for additional enforcement actions, either administrative or judicial. By issuing this Notice of Civil Administrative Penalty Assessment the Department does not waive its right to initiate additional enforcement actions.

13) Obligations and penalties of this Notice of Civil Administrative Penalty Assessment are imposed pursuant to the police powers of the State of New Jersey for the enforcement of the law and the protection of the public health, safety, and welfare and are not intended to constitute debt or debts which may be limited or discharged in a bankruptcy proceeding.

14) Notice is given that pursuant to N.J.S.A. 13:1E-9e, the Department is authorized to assess a civil administrative penalty of not more than $50,000 for each violation, and each day during which the violation continues constitutes an additional, separate and distinct offense.

15) Notice is further given that any person who violates the provisions of N.J.S.A. 13:1E-1 et seq. or any code, rule, or regulation promulgated pursuant thereto shall be liable to a penalty of not more than $50,000 per day to be collected in a civil action, and any person who violates an administrative order issued pursuant to N.J.S.A. 13:1E-9c or a court order issued pursuant to N.J.S.A. 13:1E-9d, or who fails to pay a civil administrative penalty assessed pursuant to N.J.S.A. 13:1E-9e in full after it is due is subject upon order of a court to a civil penalty not to exceed $100,000 per day of such violations.

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

DATE: OCT 19 1993

BY: _____
James K. Hamilton
Assistant Director
Water and Hazardous Waste
Enforcement

JKH/wpm

ATTACHMENT A

PENALTY ASSESSMENT WORKSHEET

Violator Name: ELAN CHEMICAL COMPNAY

Location: 268 DOREMUS AVE. NEWARK, NJ 07105

Case #: NJD 062 895 680 Inspector: WILLIAM P. MCQUIGGAN JR.

Date of Violation: JULY 12, 1993 Page 1 of 2

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	8.5(a)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000
Number of days/violations	2
Total Base Penalty	$20,000
If subparagraph (f)3i applies: Total base penalty x 1.00	N/A
If subparagraph (f)3ii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iv applies: Total base penalty x 0.25	N/A
Total Civil Administrative Penalty	$20,000

Justification for Severity Factor Adjustments:

Elan failed to determine if waste was hazardous prior to shipping off-site on June 7, 1993, and June 9, 1993.

Prepared by: WILLIAM P. MCQUIGGAN JR.

847520930

ATTACHMENT A

PENALTY ASSESSMENT WORKSHEET

Violator Name: ELAN CHEMICAL COMPANY

Location: 268 DORENUS AVE. NEWARK, NJ 07105

Case #: NJD 042 895 680 Inspector: WILLIAM P. MCQUIGGAN JR.

Date of Violation: JULY 12, 1993 Page 2 of 2

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	7.4(a)3
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000
Number of days/violations	2
Total Base Penalty	$20,000
If subparagraph (f)3i applies: Total base penalty x 1.00	N/A
If subparagraph (f)3ii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iv applies: Total base penalty x 0.25	N/A
Total Civil Administrative Penalty	$20,000

Justification for Severity Factor Adjustments:

Elan failed to prepare two hazardous waste manifests for shipments on June 7, 1993, and June 9, 1993.

Prepared by: WILLIAM P. MCQUIGGAN JR.

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ATTACHMENT A

PENALTY ASSESSMENT WORKSHEET

Violator Name: ELAN CHEMICAL COMPNAY

Location: 268 DOREMUS AVE. NEWARK, NJ 07105

Case #: NJD 042 895 680 Inspector: WILLIAM P. MCQUIGGAN JR.

Date of Violation: JULY 12, 1993 Page 2 of 2

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	7.4(a)3
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000
Number of days/violations	2
Total Base Penalty	$20,000
If subparagraph (f)3i applies: Total base penalty x 1.00	N/A
If subparagraph (f)3ii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iii applies: Total base penalty x 0.50	N/A
If subparagraph (f)3iv applies: Total base penalty x 0.25	N/A
Total Civil Administrative Penalty	$20,000

Justification for Severity Factor Adjustments:

Elan failed to prepare two hazardous waste manifests for shipments on June 7, 1993, and June 9, 1993.

Prepared by: WILLIAM P. MCQUIGGAN JR.

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DEP-062A
10/91

New Jersey Department of Environmental Protection

☐ Check here if Revised Billing

ENFORCEMENT INVOICE

Date Rec'd _____
Amount _____

DIVISION Enforcement Field Operations - Metro
PROGRAM Water & Haz., Waste Enforcement
TYPE: ☒ Fine/Penalty, ☐ Cost Recovery
FACILITY ID NO. NJD042895680
PROGRAM ID NO. HM-001-94

Case/Company Name Elan Chemical Co.
Address 268 Doremus Avenue
Newark, NJ 07105

Please identify appropriate category:
☐ County ☐ Local ☐ Private
Authority: ☐ Regional ☐ Local
☐ Industrial ☐ Commercial ☐ Other - _____ Specify

DATE ASSESSED	DESCRIPTION	AMOUNT
10/19/93	Notice of Civil Administrative Penalty Assessment.	$40,000.00
DATE DUE: Within 21 days of receipt	AMOUNT DUE:	$40,000.00

Make check payable to: Treasurer, State of New Jersey

Mail to: NJDEPE, Bureau of Revenue
CN 417, Trenton, N.J. 08625-0417

COPY DISTRIBUTION: White - Remittance Copy Yellow - Company Pink - Bureau of Revenue Goldenrod - Division

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List of Issues Being Appealed

- Whether Elan caused two shipments of X910 waste to be made on June 7 and June 9, 1993.

- Whether Elan improperly failed to prepare a manifest for the June 7 and June 9 shipments.

- Whether Elan failed to determine whether waste was hazardous prior to shipment off-site.

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EXHIBIT B

847520935

July 2, 1993

Thomas Sherman, Chief
N.J.D.E.P.E.
Bureau of Hazardous Waste Engineering
33 Arctic Parkway
Trenton, NJ 08625

RE: Unmanifested waste received at S&W Waste Inc.,
115 Jacobus Ave., S. Kearny, NJ

Dear Mr. Sherman:

S&W Waste Inc. received a roll off on June 7, 1993 on a bill of lading which contained 38 drums of Distillation Bottoms. S&W Waste Inc. also received a roll off on June 9, 1993 on a bill of lading which contained Distillation Bottoms. The waste code of the above material is X910.

According to S&W Waste incoming QA/QC analysis, 38 drums received on June 7 and 23 drums received on June 9 exhibited EPA characteristic of ignitability and should also have been D001.

The generator of the material is: Elan Chemical
268 Doremus Ave.
Newark, NJ

If you have any further questions, please contact the undersigned.

Very truly yours;

Richard Mohlenhoff
Environmantal Manager
S&W Waste, Inc.

cc: Metro Field office

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EXHIBIT C

847520937

State of New Jersey
Department of Environmental Protection and Energy
Environmental Regulation
Hazardous Waste Regulation Program
CN 421
Trenton, NJ 08625-0421
Phone# 609-633-1418

Scott A. Weiner
Commissioner

Frank Coolick
Administrator

Robert Fixter
Vice President of Compliance
S&W Waste, Inc.
115 Jacobus Avenue
Kearny, New Jersey 07032

MAY 12 1993

RE: Handling of Non-Hazardous Waste, S&W Waste, Inc., Kearny, Hudson County, EPA ID No. NJD 991 291 105, New Jersey Hazardous Waste Facility Permit Number 0907N1HP05

Dear Mr. Fixter:

This letter is in response to your May 4, and 10, 1993 letters. Your letters request approval to ship and receive non-hazardous waste without the use of hazardous waste manifests as is currently required by S&W Waste, Inc. (S&W) existing hazardous waste facility permit. Instead S&W proposes to use a bill-of-lading that will allow the proper tracking of non-hazardous waste from its initial receipt to its ultimate shipment off-site.

As previously stated in a April 5, 1993 letter from the Bureau of Hazardous Waste Engineering (Bureau) to S&W, the Department will be proposing new regulations that will require all commercial hazardous waste facilities that handle non-hazardous waste to obtain a solid waste permit and to be included in the county solid waste management plan. However, the Division of Solid Waste Management and the Hazardous Waste Regulation Program have determined that this Bureau will continue to permit the management of ID 27, ID 72 and X910 non-hazardous wastes at Hazardous Waste Facilities (HWF) until the new regulations are adopted. Hazardous waste permits will not specifically state that the management of these wastes shall conform to District Solid Waste Management Plans or Waste Flow rules, will not require manifesting of non-hazardous wastes to or from HWF and will not require that the wastes be managed as if they were hazardous waste. Rather the Bureau will include reasonable and appropriate selected design and operating requirements from the Hazardous Waste Regulations in permit conditions concerning the management of non-hazardous waste.

However, until these regulations are adopted and until such time as your existing hazardous waste facility permit is renewed and the above mentioned changes incorporated into the permit, the Bureau agrees to allow S&W to manage the tracking, receipt and shipment of non-hazardous waste without the use of hazardous waste manifests. S&W shall utilize a bill-of-lading for the tracking, receipt and shipment of non-hazardous waste as described in your May 4 and 10, 1993 letters. However, all other applicable conditions

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of the permit pertaining to the management of non-hazardous waste such as but not limited to waste analysis, stacking, aisle spacing and secondary containment capacity shall remain in full force and effect.

If you have any questions regarding, this matter please call John P. Scott of my staff at (609) 292-9880.

Very truly yours,

Thomas Sherman, Chief
Bureau of Hazardous Waste Engineering

EP58/dbm

c: Michael Poetzsch, USEPA Region II
Peter T. Lynch, MBWHWEFO

DOCUMENT: S&WINC1
FOLDER: CFDMOB

SALES NO. 201-578-
FAX 201-344-1255 • SALES FAX

EXHIBIT D

847520940

S&W WASTE INC.

May 17, 1993

Mr. Al Roque
Elan, Inc.
268 Doremus Avenue
Newark, NJ 07105

RE: Waste Disposal Approval No. 009

Dear Mr. Roque:

S & W Waste, Inc. is pleased to propose for the removal and disposal of distillation bottoms currently stored at your Newark, N.J. facility.

Please note that S & W Waste, Inc. has the appropriate permits to operate a TSD facility: New Jersey DEP Number 0907K, EPA ID Number NJD991291105.

S & W will accept the above referenced waste stream(s) provided the waste is consistent with the sample and analytical data provided, and is properly marked, packaged and manifested according to all applicable DOT, EPA, and state regulations. This notification is given pursuant to the requirements of N.J.A.C. 7:26-9.4.

S & W can accept only those drums which have approval codes indelibly marked, i.e. stenciled, painted or crayoned at least three (3) inches high, on the side of the drums.

The following pricing is based upon representative sample(s) received, approval of your waste stream(s), and will be effective immediately. If at the time of RCRA Quality Control testing, the waste does not conform to the representative sample(s) and approved waste stream(s), an additional fee for processing and disposal will be charged. You will be notified immediately should this occur.

The charges are as follows:

Disposal $65.00 per drum
Includes: Transportation, Demurrage,
Container Rental, Incoming QA/QC
Analysis, Manifesting and Labels

115 Jacobus Avenue South Kearny, New Jersey 07032
TEL- 201-344-4004 • SALES NO.- 201-578-4800
ADM. FAX- 201-344-1265 • SALES FAX-201-344-8652

PRINTED ON RECYCLED PAPER

The above price guide will be honored for thirty (30) days upon receipt of the proposal. For on going waste streams it may be necessary on occasion, to adjust prices due to qualified economic circumstances. Should this occur, every attempt will be made to contact you. S & W requests payment be made within fifteen (15) days of invoice.

Due to the continuing developments in the availability and costs of insurance we are compelled to implement an insurance surcharge of four percent (4%) on all billing charges.

If this proposal is satisfactory, please call our Scheduling Department at (201)344-4004 to arrange a pick-up of your waste. At the time of scheduling, please advise your three-digit waste approval number. All Purchase Orders and Confirmations should be mailed to the attention of S & W's Customer Service Department.

Certificates of Disposal are sent out by request.

Thank you for the opportunity to be of service. You may be assured that we look forward to assisting you in managing your hazardous waste. Any questions concerning this proposal, please do not hesitate to contact me immediately.

Very truly yours,

S & W WASTE, INC.

Sam Christopher
Technical Representative

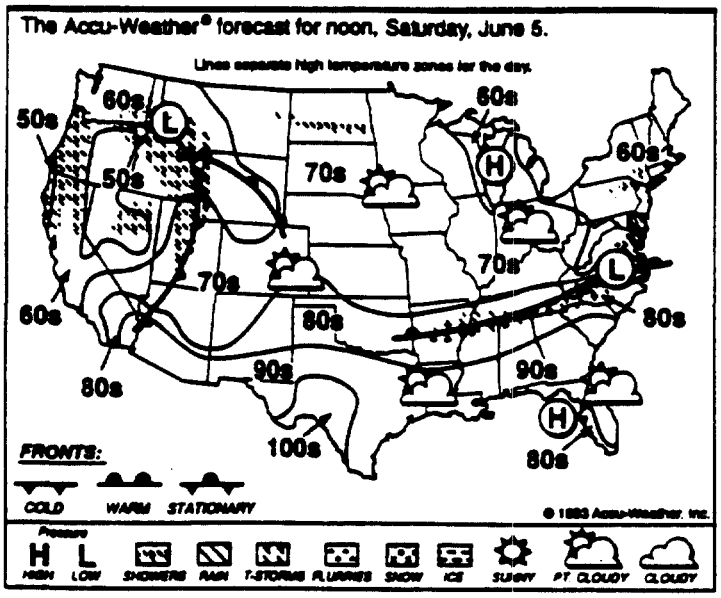
SC/kc

EXHIBIT E

847520943

WEATHER

The Accu-Weather® forecast for noon, Saturday, June 5.



Partly sunny

Today: Clouds followed by sun and clouds in the afternoon. High in the upper 70s.

Tonight: Clear. Low in the mid 50s.

Tomorrow: Sunny. High near 80.

Extended: Partly cloudy Tuesday. High in low 80s. Partly cloudy Wednesday, chance of rain. High in upper 80s. Chanc of showers Thursday. Upper 80s.

Cooling Degree Days: Friday, 3; for the month, 11; for the season, 129; for the same time last year, 74
Sunrise, 5:26; sunset, 8:25

CITY	HI	LO	FORECAST
Anchorage	67	53	Cloudy
Atlanta	90	68	Cloudy
Boston	77	55	Rain
Chicago	55	49	Sunny
Cleveland	67	51	Cloudy
Dallas	99	75	Sunny
Denver	78	49	Cloudy
Honolulu	86	72	Sunny
Houston	92	76	Sunny
Las Vegas	85	64	Sunny
Los Angeles	75	62	Rain
Miami	85	78	Cloudy
Milwaukee	55	47	Cloudy
Minneapolis	70	43	Cloudy
New Orleans	88	72	Sunny
Pittsburgh	72	48	Rain
Portland, Me.	71	44	Cloudy
St. Louis	78	64	Cloudy
San Francisco	67	57	Rain
San Juan	94	81	Cloudy
Seattle	69	55	Cloudy
Washington	74	57	Rain

FOREIGN	HI	LO	FORECAST
Jerusalem	86	63	Clear
London	70	54	Clear
Moscow	79	55	Clear
Paris	73	54	Clear

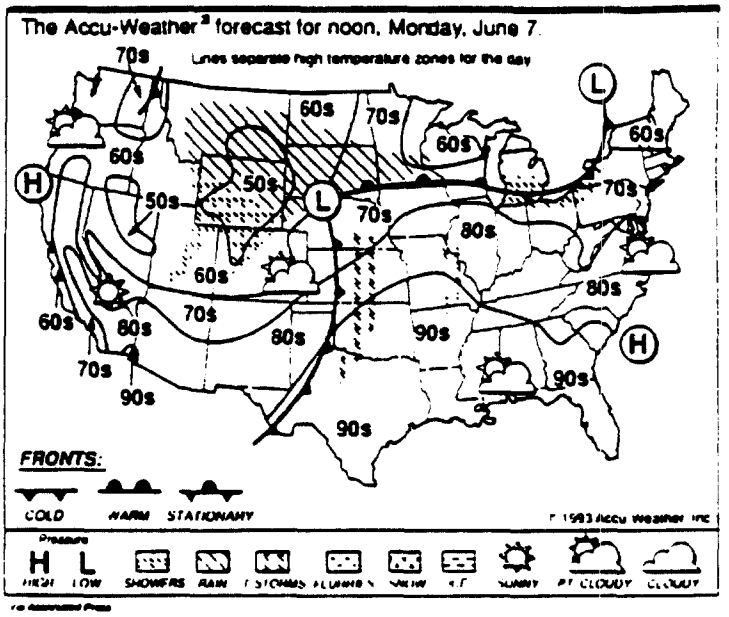
National Picture: Rain over northern New England, the Midwest and northern Plains and thunderstorms over the Rockies. Ninety-degree heat will continue from southern New Mexico to Georgia with warmer air working its way into the Midwest.

The Star-Ledger (USPS 919-920) is published at Star-Ledger Plaza, Newark, N.J. 07102-1200. Second class postage paid at Newark, N.J.
POSTMASTER: Send address changes to: STAR-LEDGER, Post Office Box 148, Newark, N.J. 07101-9981.
Mail subscriptions are only ... on the first of each month. All subscriptions are payable in advance.

		1 YR.	6 MOS.	3 MOS.	1 MO.
MAIL SUBSCRIPTION RATES	DAILY	345.00	180.00	97.50	48.00
	SUN.	180.00	105.00	52.50	30.00
	D&S	525.00	285.00	150.00	78.00

847520944

WEATHER



Partly sunny, warmer

Today: Partly sunny. High near 80; 70s near the shore.

Tonight: Partly cloudy. Low in the low to mid 60s.

Tomorrow: Increasing cloudiness. Chance of a sprinkle. High near 80; 70s along the shore.

Extended: Partly cloudy Wednesday. Lows 50s to low 60s. Highs 70s to low 80s. Chance of showers and thunderstorms Thursday and Friday. Lows 60s. Highs mid 70s to low 80s.

Heating Degree Days: Saturday, 3; month, 4; season, 4,567, last year, 4,729. Sunrise, 5:26; sunset, 8:25.

CITY	HI	LO	FORECAST
Anchorage	66	51	Cloudy
Atlanta	98	61	Cloudy
Boston	68	51	Cloudy
Chicago	71	48	Rain
Cleveland	62	43	Cloudy
Dallas	93	77	Cloudy
Denver	82	51	Rain
Honolulu	85	75	Clear
Houston	90	78	Cloudy
Las Vegas	75	48	Cloudy
Los Angeles	68	54	Clear
Miami	89	76	Cloudy
Milwaukee	76	54	Rain
Minneapolis	74	56	Rain
New Orleans	91	61	Cloudy
Pittsburgh	65	45	Rain
Portland, Me.	66	48	Cloudy
St. Louis	71	58	Cloudy
San Francisco	65	56	Clear
San Juan	93	79	Cloudy
Seattle	77	57	Cloudy
Washington	81	57	Cloudy

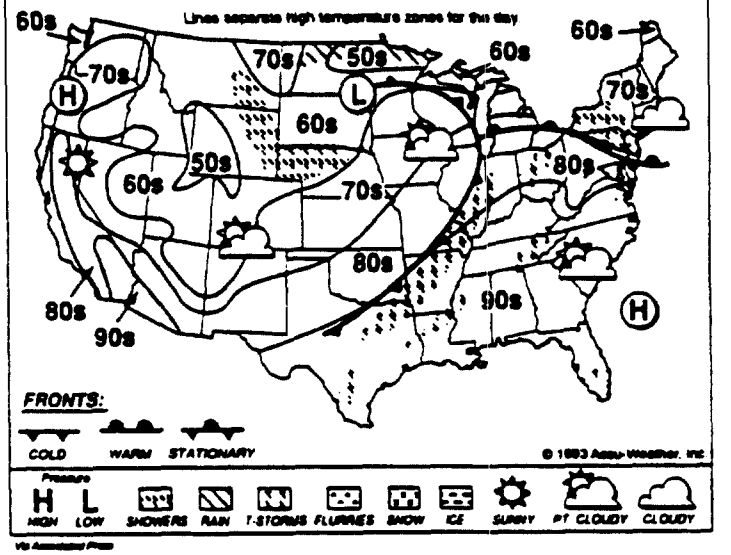
FOREIGN	HI	LO	FORECAST
Jerusalem	81	63	Clear
London	77	59	Clear
Moscow	69	57	Cloudy
Paris	82	61	Clear
Rome	82	59	Clear
Stockholm	72	53	Clear
Tokyo	66	61	Cloudy

National Picture: Hot, humid weather to continue from the Southern plains to the Southeast. Strong thunderstorms from Nebraska to western Texas. Showers over the Ohio Valley and rain from Montana to southern Minnesota. Showers and thunderstorms also in the central Rockies.

847520945

WEATHER

The Accu-Weather® forecast for noon, Tuesday, June 8.



Mostly cloudy

Today: Considerable cloudiness. High in the upper 70s. Wind southeast 5-10 mph.

Tonight: Mostly cloudy, 40 percent chance of showers. Low in the mid 60s.

Tomorrow: Variable cloudiness, hot and humid, 30 percent chance of thunderstorms. High 85-90.

Extended: Partly cloudy. Highs in the 80s. Lows in the 60s. Chance of showers or thunderstorms. Highs in the upper 70s to low 80s. Lows in the upper 50s inland to upper 60s near the coast.

Cooling Degree Days: Sunday, 1; month, 12; season, 130; last year, 84.

Sunrise, 5:25; sunset, 8:26.

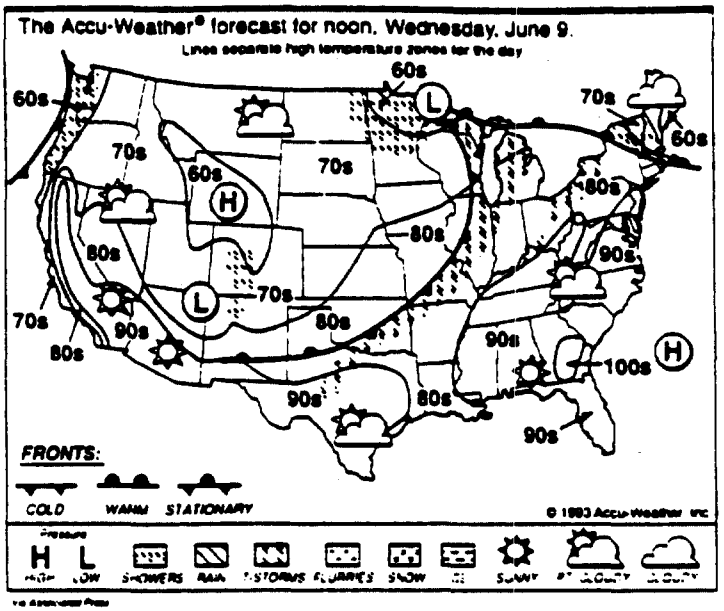
National Picture: Hot, humid air should prevail from Texas to the Virginias. Showers and thunderstorms from New York and Pennsylvania westward to North Dakota. Strong thunderstorms from Chicago to Dallas.

CITY	HI	LO	FORECAST
Anchorage	61	49	Rain
Atlanta	88	70	Cloudy
Boston	57	51	Sunny
Chicago	73	59	Rain
Cleveland	73	57	Cloudy
Dallas	95	78	Sunny
Denver	73	48	Cloudy
Honolulu	87	74	Sunny
Houston	92	79	Cloudy
Las Vegas	70	54	Sunny
Los Angeles	68	58	Sunny
Miami	93	77	Sunny
Milwaukee	75	58	Rain
Minneapolis	73	58	Rain
New Orleans	91	76	Cloudy
Pittsburgh	72	53	Rain
Portland, Me.	53	46	Sunny
St Louis	65	61	Rain
San Francisco	66	59	Sunny
San Juan	91	77	Cloudy
Seattle	62	52	Cloudy
Washington	75	55	Sunny

FOREIGN	HI	LO	FORECAST
Jerusalem	84	64	Cloudy
London	81	61	Clear
Moscow	66	48	Cloudy
Paris	84	60	Cloudy
Rome	82	61	Clear
Stockholm	66	46	Cloudy
Tokyo	70	61	Cloudy

847520946

WEATHER



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Tomorrow: Variable cloudiness, hot and humid, 30 percent chance of thunderstorms. High 85-90.

Extended: Partly cloudy Thursday. Highs in the 80s. Lows in the 60s. Chance of showers or thunderstorms. Friday highs in the upper 70s to low 80s. Lows in the upper 50s inland to upper 60s near the coast.

Cooling Degree Days: Sunday, 1; month, 12; season, 130; last year, 84.

Sunrise, 5:25; sunset, 8:26.

National Picture: Hot, humid air should prevail from Texas to the Virginias. Showers and thunderstorms from New York and Pennsylvania westward to North Dakota. Strong thunderstorms from Chicago to Dallas.

CITY	HI	LO	FORECAST
Anchorage	56	48	Cloudy
Atlanta	94	69	Cloudy
Boston	77	51	Rain
Chicago	67	59	Rain
Cleveland	76	58	Cloudy
Dallas	89	78	Cloudy
Denver	68	46	Cloudy
Honolulu	88	73	Cloudy
Houston	91	79	Cloudy
Las Vegas	82	54	Sunny
Los Angeles	72	57	Sunny
Miami	86	79	Sunny
Milwaukee	62	48	Rain
Minneapolis	70	62	Cloudy
New Orleans	92	76	Cloudy
Pittsburgh	77	53	Cloudy
Portland, Me.	74	46	Rain
St. Louis	89	61	Rain
San Francisco	70	56	Sunny
San Juan	89	77	Cloudy
Seattle	62	52	Cloudy
Washington	80	56	Sunny

FOREIGN	HI	LO	FORECAST
Jerusalem	72	59	Clear
London	67	64	Cloudy
Moscow	59	45	Cloudy
Paris	82	59	Clear
Rome	84	58	Clear
Stockholm	63	38	Clear
Tokyo	75	66	Cloudy

847520947

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
25 MARKET STREET
CN 093
TRENTON, NJ 08625-0093

DEBORAH T. PORITZ
ATTORNEY GENERAL

JACK M. SABATINO
ASSISTANT ATTORNEY GENERAL
DIRECTOR

(609) 292-6945

June 29, 1994

The Honorable Arnold Samuels
Administrative Law Judge
Office of Administrative Law
185 Washington Street
Newark, New Jersey 07102

Re: Elan Chemical Company v. DEPE
OAL Docket No. EHW 03399-94
Agency Ref. No. HWE-HM-001-94

Dear Judge Samuels:

Enclosed please find a fully executed Stipulation of Settlement in the above-referenced matter. This case is currently scheduled for a Mandatory Early Settlement Conference for July 13, 1994. Inasmuch as the matter has been resolved, I would ask that the conference date be adjourned and that this matter be concluded.

Very truly yours,

DEBORAH T. PORITZ
ATTORNEY GENERAL OF NEW JERSEY

By: Christine Piatek
Christine Piatek
Deputy Attorney General

cc: Randy Schillinger, Esq.
David Brook, DAG
Peter Lynch, MBRE
Jeffrey Sterling, MBRE

DEBORAH T. PORITZ
Attorney General of New Jersey
Attorney for Respondent
New Jersey Department of Environmental
Protection and Energy
R.J. Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

By: Christine Piatek
Deputy Attorney General
(609) 292-6945

OFFICE OF ADMINISTRATIVE LAW
DOCKET NO. EHW 03399-94N
AGENCY REF. NO. HM-001-94

ELAN CHEMICAL COMPANY)

Petitioner,)

v.) STIPULATION OF SETTLEMENT

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY,)

Respondent.)

The following Stipulation of Settlement is entered into by the New Jersey Department of Environmental Protection and Energy ("NJDEPE") and Elan Chemical Company ("Elan") in resolution of an administrative matter opened by the NJDEPE for assessment and collection of civil administrative penalties pursuant to the Solid Waste Management Act, N.J.S.A. 13:1D-1 et seq., and the regulations promulgated thereunder, N.J.A.C. 7:26-1 et seq., specifically, N.J.A.C. 7:26-8.5(a), -7.4(a)3, -9.3(d)1, -9.3(b), -9.4(g)6i, -9.4(g)6ii, -9.6(f)3 and -9.6(f)4.

WHEREAS, the NJDEPE issued a Notice of Civil Administrative Penalty Assessment ("NOCAPA") to Elan on October 19, 1993, finding that, based upon an inspection conducted by representatives of the NJDEPE on July 12, 1993, Elan violated the Solid Waste Management Act, N.J.S.A. 13:1D-1 et seq. , and the regulations promulgated thereunder, N.J.A.C. 7:26-1 et seq., specifically, N.J.A.C. 7:26-8.5(a), -7.4(a)3, -9.3(d)1, -9.3(b), -9.4(g)6i, -9.4(g)6ii, -9.6(f)3 and -9.6(f)4.

WHEREAS, the NOCAPA further found that upon reinspection on August 12, 1993, Elan attained compliance with each of the regulatory provisions cited in the NOCAPA, and

WHEREAS, Elan requested an administrative hearing on November 12, 1993 to contest the findings of the NOCAPA and the penalty assessed thereunder, and

WHEREAS, in order to resolve these matters without further trial or adjudication or further delay or expense of litigation, the NJDEPE and Elan have agreed to settle the NOCAPA in accordance with the following terms:

THE PARTIES hereby stipulate and agree to the following terms:

1. Elan shall submit to the NJDEPE payment in the amount of $24,000 as follows: Payment one (1) of $12,000.00 shall be made within thirty (30) days of execution of this Stipulation of Settlement by the parties. Payment two (2) of $12,000.00 shall be made within ninety (90) days of execution of this Stipulation of Settlement by the parties. Payment shall be made by check payable to "Treasurer, State of New

Jersey" and shall be submitted with the white copies of the Form DEP-062A provided to Elan to:

NJDEPE-Bureau of Revenue

CN 417

Trenton, New Jersey 08625-0417

2. The payment of $24,000.00 in two (2) installments shall constitute full, final and complete settlement of the NOCAPA referenced in this Stipulation of Settlement.

3. By entering into this Stipulation of Settlement, Elan makes no admission of liability as to any finding of fact or conclusion of law set forth in NOCAPA HM-001-94.

4. Elan hereby withdraws its request for administrative hearing regarding the NOCAPA referenced herein and issued to Elan on October 19, 1993.

5. As a further condition of settlement, Elan shall provide to the NJDEPE an inventory of all containers and/or drums presently located on any and all portions of the site of Elan Chemical Company. Such inventory shall provide, at a minimum, the identification and quantities of all materials contained in such containers and/or drums and the proposed use or disposal of such materials.

6. Nothing in this Stipulation Agreement shall constitute a waiver of any statutory or regulatory right of the NJDEPE pertaining to the operation by Elan at its facility located at Block 4014, Lot 8, 268 Doremus Avenue, City of Newark, Essex County, State of New Jersey, nor shall it

preclude the NJDEPE from taking enforcement action against Elan for any matters not set forth in the NOCAPA referenced herein or this Stipulation of Settlement. Further, this Stipulation of Settlement does not constitute settlement of any other matter pending against Elan before the NJDEPE, the Office of Administrative Law or the Superior Court of New Jersey.

7. Failure by Elan to submit payment to the NJDEPE within thirty (30) days of the date of full execution of this agreement shall constitute default of this Stipulation of Settlement. Should such default occur, NJDEPE shall exercise its full and legal right to enforce the NOCAPA in the Superior Court of New Jersey and seek collection of the full amount of the penalties assessed therein together with interest and costs.

8. The parties agree that this Stipulation of Settlement fully resolves all outstanding disputes between the parties which arise out of NOCAPA HM-001-94 and OAL EHW 3399-94N.

9. This Stipulation of Settlement is entered into with the full consent and authority of the NJDEPE and Elan.

By: Christine Piatek
Christine Piatek
Deputy Attorney General

DATE: 6/29/94

By: Jeffrey M. Schwartz
Jeffrey M. Schwartz, Esq.
Counsel for Elan
Chemical Company

DATE: 6/27/94

DEBORAH T. PORITZ
Attorney General of New Jersey
Attorney for Respondent
New Jersey Department of Environmental
Protection and Energy
R.J. Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

By: Christine Piatek
Deputy Attorney General
(609) 292-6945

Jul 13 3 [illegible] PM '94

OFFICE OF ADMINISTRATIVE LAW
DOCKET NO. EHW 03399-94N
AGENCY REF. NO. HM-001-94

ELAN CHEMICAL COMPANY	)	
Petitioner,	)	STIPULATION OF SETTLEMENT
v.	)	
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY,	)	
Respondent.	)	

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CN 417

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9. This Stipulation of Settlement is entered into with the full consent and authority of the NJDEPE and Elan.

By: Christine Piatek
Christine Piatek
Deputy Attorney General

DATE: 6/29/94

By:
Jeffrey M. Schwartz, Esq.
Counsel for Elan
Chemical Company

DATE: 6/21/94

847520956

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW
185 WASHINGTON STREET
NEWARK, NJ 07102
(201)-648-6006

A copy of the administrative law judge's decision is enclosed.

This decision was mailed to the parties on JUL 20 1994.

847520957

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW

DECISION APPROVING SETTLEMENT
OAL DKT. NO. EHW 3399-94N
AGENCY DKT. NO. HWE-HM-001-94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
Petitioner,
v.
ELAN CHEMICAL COMPANY
Respondent.

Christine Piatek, Deputy Attorney General, for petitioner
(Deborah T. Poritz, Attorney General of New Jersey)

Jeffery M. Schwartz, Esq. for respondent
(Clapp & Eisenberg, Attorneys)

Record Closed: July 13, 1994 Decided: July 15, 1994

BEFORE **ARNOLD SAMUELS**, ALJ:

On October 19, 1993, the petitioner issued an Administrative Order and Notice of Civil Administrative Penalty Assessment to the respondent for violation of the Solid Waste Management Act, *N.J.S.A.* 13:1D-1 et seq., and the regulations thereunder. The respondent contested the Order and Penalty Assessment and requested an Administrative hearing. On April 13, 1994 the matter was transmitted to the Office of Administrative Law (OAL) for hearing and determination as a contested case pursuant to *N.J.S.A.* 52:14F-1 to -13.

A mandatory early settlement conference was scheduled for July 13, 1994 at the OAL in Newark, New Jersey. Prior to the conference counsel advised that the matter had been settled. A written stipulation of settlement was filed in the OAL on July 13, 1994. A copy of the stipulation is attached hereto and made a part hereof.

I have reviewed the record and the settlement terms and **FIND**:

1. The parties have voluntarily agreed to the settlement as evidenced by their signatures of their representatives.

2. The settlement fully disposes of all issues in controversy and is consistent with the law.

I **CONCLUDE** that this agreement meets the requirements of *N.J.A.C.* 1:1-19.1 and that the settlement should be approved. I approve the settlement and, therefore, **ORDER** that the parties comply with the settlement terms and that these proceedings be concluded.

Since the agency head has consented to the settlement terms, this decision is deemed the final decision. *N.J.A.C.* 1:1-19.1(b)2.

July 15, 1994
DATE

ARNOLD SAMUELS, ALJ

sej

847520959

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
25 MARKET STREET
CN 093
TRENTON, NJ 08625-0093

DEBORAH T. PORITZ
ATTORNEY GENERAL

JACK M. SABATINO
ASSISTANT ATTORNEY GENERAL
DIRECTOR

(609) 292-6945

June 29, 1994

The Honorable Arnold Samuels
Administrative Law Judge
Office of Administrative Law
185 Washington Street
Newark, New Jersey 07102

Re: Elan Chemical Company v. DEPE
OAL Docket No. EHW 03399-94
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ATTORNEY GENERAL OF NEW JERSEY

By: Christine Piatek
Christine Piatek
Deputy Attorney General

cc: Randy Schillinger, Esq.
David Brook, DAG
Peter Lynch, MBRE
Jeffrey Sterling, MBRE

LAPS

New Jersey Is An Equal Opportunity Employer

QUESTION 11
PART B

847520961

Attorney(s): **GABRIEL M. AMBROSIO, ESQ.**
Office Address & Tel. No.: **464 Valley Brook Avenue, P.O. Box 911**
Lyndhurst, NJ 07071 (201) 933-8844
Attorney(s) for Plaintiff(s)

PASSAIC VALLEY SEWERAGE COMMISSIONERS, a body politic and corporate of the State of New Jersey,	SUPERIOR COURT OF NEW JERSEY ESSEX COUNTY : CHANCERY DIVISION
Plaintiffs,	DOCKET NO. C-11-94
vs.	Civil Action
ELAN CHEMICAL COMPANY, INC.,	**SUMMONS**
Defendant.	

The State of New Jersey, to Above Named Defendant:

ELAN CHEMICAL COMPANY, INC., 268 Doremus Avenue, Newark, NJ

DEFENDANT, YOU ARE HEREBY SUMMONED in a Civil Action in the Superior Court of New Jersey, instituted by the above named plaintiff(s), and required to serve upon the attorney(s), for the plaintitf(s), whose name and office address appears above, an answer to the annexed Complaint within 20 days after the service of the Summons and Complaint upon you, exclusive of the day of service. If you fail to answer, judgment by default may be rendered against you for the relief demanded in the Complaint. You shall promptly file your answer and proof of service thereof in duplicate with the Clerk of the Superior Court, CN-971, Trenton, New Jersey 08625, in accordance with the rules of civil practice and procedure.

If you cannot afford to pay an attorney, call a Legal Services Office. An individual not eligible for free legal assistance may obtain a referral to an attorney by calling a county lawyer referral service. These numbers may be listed in the yellow pages of your phone book or may be obtained by calling the New Jersey State Bar Association Lawyer Referral Service toll-free 800-792-8315 (within New Jersey) or 609-394-1101 (from out of state). The phone numbers for the county in which this action is pending are: Lawyer Referral Service, (201) 622-6207, Legal Services Office (201) 624-4500.

Dated: January 10, 1994

Donald F. Phelan
DONALD F. PHELAN
Clerk of the Superior Court

Name of Defendant to be served: Elan Chemical Company, Inc.
Address for service: 268 Doremus Avenue, Newark, NJ

847520962

GABRIEL M. AMBROSIO, ESQ.
464 Valley Brook Avenue
P.O. Box 911
Lyndhurst, New Jersey 07071
(201) 933-8844
Attorneys for Plaintiff

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - ESSEX COUNTY

PASSAIC VALLEY SEWERAGE COMMISSIONERS, a body politic and corporate of the State of New Jersey,

Plaintiff,

v.

ELAN CHEMICAL COMPANY, INC.,

Defendant.

DOCKET NO: C- 11-94

Civil Action

COMPLAINT

Plaintiff, the PASSAIC VALLEY SEWERAGE COMMISSIONERS, having its principal offices located at 600 Wilson Avenue, in the City of Newark, County of Essex and State of New Jersey, says by way of complaint:

THE PARTIES

1. Plaintiff, the PASSAIC VALLEY SEWERAGE COMMISSIONERS ("PVSC"), is a body politic and corporate organized pursuant to the laws of the State of New Jersey and is charged with the responsibility of protecting the streams and rivers within its sewerage and drainage district from pollution.

2. In accordance with N.J.S.A. 58:14-1 et seq., the PVSC adopted rules and regulations to enforce its statutory mandate. In addition, the PVSC is authorized to enforce its mandate and its rules and regulations, through the filing of law suits, against any

person that discharges sewerage or other polluting matter directly or indirectly into the waters for which it is responsible.

3. The defendant, Elan Chemical Company, Inc. ("Elan") is believed to be a corporation of the State of New Jersey. Elan operates an industrial facility located at 268 Doremus Avenue, Newark, New Jersey (the "Facility"), from which it discharges industrial and other wastes to the PVSC Treatment Works.

COUNT ONE

4. In accordance with its rules and regulations, the PVSC issued Sewer Connection Permit No. 20403242 ("Permit"), with an effective date of April 14, 1991, and an expiration date of April 14, 1996, which authorizes Elan to discharge to the PVSC Treatment Works.

5. Among other conditions, Part C(2) of the Permit and Section 313.1 of the rules and regulations of the PVSC, require that Elan comply with the Organic Chemicals, Plastics and Synthetic Fibers ("OCPSF") Categorical Pretreatment Standards adopted by the United States Environmental Protection Agency ("EPA") at 40 C.F.R. 414. The Permit further directs that the defendant comply with the monitoring and reporting requirements set forth at 40 C.F.R. 403.12(e) and to report to the PVSC the results of that monitoring on Monitoring Report forms. ("MR-1 Forms"). In addition, the PVSC has monitored the defendant's discharges to the PVSC's system to determine its compliance with the OCPSF Categorical Pretreatment Standards.

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6. Beginning on or about July 1991 and continuing to the present, Elan has submitted MR-1 Forms to the PVSC. During the same period, the PVSC has separately monitored Elan's discharges to the PVSC system. Review of the defendant's MR-1 Forms and the PVSC's own monitoring results demonstrates that Elan exceeded the OCPSF discharge limitations for the following pollutants on the following dates and in the following amounts:

Date of Sample	Parameter	Discharge Limitation	Sample Result
Jul 91 (a)	Toluene	14.30984 g/day	17.88413
	Total Zinc	536.61913 g/day	638.66198
08/06/91	1,2-Dichloro-ethane	293.35179 g/day	1567.17925
	Toluene	37.81887 g/day	166.31290
Aug 91(a)	1,2-Dichloro-ethane	91.99185 g/day	1567.17925
	Chlorobenzene	16.35411 g/day	47.97488
	Toluene	14.30984 g/day	166.31290
Sep 91(a)	Total Zinc	547.19745 g/day	692.21973
Oct 91 (a)	1,2-Dichloro-ethane	91.99185 g/day	221.34680
	Toluene	14.30984 g/day	27.34284
11/04/91	1,2-Dichloro-ethane	293.35179 g/day	437.73525
	Toluene	37.81887 g/day	122.56587
Nov 91 (a)	1,2-Dichloro-ethane	91.99185 g/day	437.73525
	Toluene	14.30984 g/day	122.56587
12/02/91	1,2-Dichloro-ethane	293.35179 g/day	8775.99563
Dec 91 (a)	1,2-Dichloro-ethane	91.99185 g/day	8775.99563
01/07/92	1,2-Dichloro-ethane	293.35179 g/day	7953.5870

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Date of Sample	Parameter	Discharge Limitation	Sample Result
Jan 92 (a)	1,2-Dichloro-ethane	91.99185 g/day	7953.58704
	Methlyene Chloride	18.39837 g/day	42.60850
03/02/92	Toluene	37.81887 g/day	42.28331
Mar 92 (a)	Toluene	14.30984 g/day	42.28331
	Total Zinc	536.61913 g/day	878.06067
09/01/92	Total Zinc	1333.88184 g/day	2494.76920
Sep 92 (a)	Total Zinc	536.61913 g/day	1393.10710
Apr 93 (a)	Toluene	14.30984 g/day	16.04563
May 93 (a)	Toluene	14.30984 g/day	26.19924
06/03/93	Toluene	37.81887 g/day	52.57778
Jun 93 (a)	Toluene	14.30984 g/day	52.57778
Jul 93 (a)	Toluene	14.30984 g/day	19.51828
09/01/93	Toluene	37.81887 g/day	41.50230
	Total Zinc	1333.88184 g/day	2172.94174
Sep 93 (a)	Toluene	14.30984 g/day	41.50230
	Total Zinc	536.61913 g/day	1107.22202
Nov 93 (a)	Total Zinc	536.61913 g/day	640.02696

(a) = Monthly average discharge
g/day = Grams per day

7. The defendant's discharge of pollutants in excess of the OCPSF Categorical Pretreatment limitations of its Permit and 40 C.F.R. 414 is a violation of the rules and regulations of the PVSC and an unlawful act in violation of N.J.S.A. 58:14-1 et seq.

8. Each monthly average discharge violation identified in paragraph (6) of this Complaint (with the exception of the April 1993 discharge of Toluene, the July 1991 discharge of Total Zinc

and the November 1993 discharge of Total Zinc) also constitutes a "serious violation" as that term is defined under N.J.S.A. 58:10A-3(v) of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

9. Based upon the foregoing violations of the rules and regulations of the PVSC and the Permit, the PVSC advised Elan to take immediate steps to prevent continued violation of the rules and regulations of the PVSC and the Permit. To date, Elan has failed to comply with the directives of the PVSC and therefore, is likely to continue to exceed its discharge limitations for the parameters identified in paragraph (6) of this Complaint.

10. If continued, the unlawful acts and practices of the defendant will adversely effect or threaten to adversely effect public health or safety or the operation of the PVSC system.

WHEREFORE, the Passaic Valley Sewerage Commissioners demand the entry of an Order against the defendant:

(a) Declaring the defendant to be in violation of the rules and regulations of the PVSC, the Permit and N.J.S.A. 58:14-1 et seq.;

(b) Declaring the defendant to be a "significant noncomplier," as that term is defined under N.J.S.A. 58:10A-3(w), for having committed the "serious violations" described hereunder;

(c) Enjoining the defendant from further violations of the rules and regulations of the PVSC, the Permit and N.J.S.A. 58:14-1 et seq.;

(d) Revoking Sewerage Connection Permit No. 20403242 for having violated the rules and regulations of the PVSC, the Permit and N.J.S.A. 58:14-1 et seq.;

(e) Assessing civil penalties against the defendant for having engaged in unlawful acts and practices described herein;

(f) Assessing attorney's fees and cost against the defendant;

(g) For such other relief as the Court deems just and proper.

GABRIEL M. AMBROSIO, ESQ.

Dated: January 4, 1994

by: _____
John T. Ambrosio, Esq.
Attorneys for Plaintiff

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RULE 4:5-1 CERTIFICATION

I hereby certify that the matter in controversy is not the subject of any other action pending in any Court and is likewise not the subject of any pending arbitration proceeding. I further certify that I have no knowledge of any contemplated action or arbitration proceeding which is contemplated regarding the subject matter of this action and that I am not aware of any other parties who should be joined in this action.

GABRIEL M. AMBROSIO, ESQ.

Dated: January 4, 1994

by: _____
John T. Ambrosio, Esq.
Attorneys for Plaintiff

JTA:ja
Elan.cmp

FOR USE BY CLERK'S OFFICE ONLY

PAYMENT TYPE:	CK CG CA
CHG / CK NO.	
AMOUNT:	
OVERPAYMENT:	

CIVIL CASE INFORMATION STATEMENT (CIS) Use for initial pleadings (not motions) under R. 4:5-1.

ATTORNEY NAME: GABRIEL M. AMBROSIO, ESQ.	TELEPHONE NUMBER: (201) 933-8844	COUNTY OF VENUE: ESSEX
FIRM NAME (If Attorney): GABRIEL M. AMBROSIO, ESQ.		DOCKET NUMBER (When available):
OFFICE ADDRESS: 464 Valley Brook Avenue, P.O. Box 911 Lyndhurst, New Jersey 07071		DOCUMENT TYPE (See reverse side for codes): COMPLAINT
		JURY DEMAND: ☐ Yes ☒ No
NAME OF PARTY (e.g., Joe Cos. Permit): Passaic Valley Sewerage Commissioners, Plaintiff	CAPTION: Passaic Valley Sewerage Commissioners vs. Elan Chemical Company, Inc.	

THE INFORMATION PROVIDED BELOW CANNOT BE INTRODUCED INTO EVIDENCE

CASE TYPE NUMBER (See reverse side for codes): 156	Is this a Title 59 action? ☐ Yes ☒ No

Check if applicable: ☐ Punitive Damages ☐ Friendly Hearing Sought ☐ Declaratory Judgment

CCR Desired? ☐ Yes Specify type: ☒ No

Present Medical Expenses:

☐ $2500 or less ☐ More than $2500. If more, do you wish to submit this case to Arbitration? ☐ Yes ☐ No

Briefly describe the case; include any special characteristics that may warrant extended discovery or accelerated disposition (See reverse side for additional instructions):

Violation of Sewer Connection Permit and/or N.J.S.A. 58:14-1, et seq.

Describe all pending actions related to this case, i.e., arising out of the same occurrence or transaction (give docket number if known):

ESTIMATED NUMBER OF DAYS TO TRY THE CASE: | CASE ASSESSMENT (Attorney or CCM Comm.):

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CLAPP & EISENBERG
A Professional Corporation
One Newark Center
Newark, New Jersey 07102
(201) 642-3900
Attorneys for Defendant
Elan Chemical Company, Inc.

FEB 1 0

Essex County

PASSAIC VALLEY SEWERAGE COMMISSIONERS, a body politic and corporate of the State of New Jersey

Plaintiff,

vs.

ELAN CHEMICAL COMPANY, INC.,

Defendant.

SUPERIOR COURT OF NEW JERSEY
ESSEX COUNTY : CHANCERY DIVISION

Docket No. C-11-94

Civil Action

ANSWER

Defendant Elan Chemical Company, Inc. ("Elan"), by its attorneys Clapp & Eisenberg, a professional corporation, by way of Answer to the Complaint of Passaic Valley Sewerage Commissioners, individually, says:

1. Defendant declines to respond to the allegations of Paragraph (1) because the allegations constitute a conclusion of law as to which no response is required.

2. Defendant declines to respond to the allegations of Paragraph (2) because the allegations constitute a conclusion of law as to which no response is required.

3. The defendant admits the allegations contained in the Paragraph (3) of the Complaint.

COUNT ONE

4. The defendant admits the allegations contained in

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the Paragraph (4) of the Complaint.

5. Defendant neither admits nor denies the allegations of Paragraph 5 regarding the contents of the referenced document, but refer plaintiff to the document which speaks for itself. The defendant lacks sufficient knowledge to either confirm or deny the last sentence of Paragraph (5) of the Complaint concerning the PVSC'S monitoring of the defendant's discharge to the PVSC's system.

6. The defendant denies each allegation that a violation occurred of the Permit monthly average discharge limits. The defendant is without information sufficient to admit or deny that the testing methods of PVSC are accurate and does not admit any of the violations contained in Paragraph (6) of the Complaint based upon PVSC testing.

7. The defendant denies the allegations in Paragraph (7) of the Complaint.

8. The defendant denies the alleged "serious" as well as the other violations described in Paragraph (6) of the Complaint.

9. Defendant admits that it received non-compliance notifications from the PVSC. Defendant denies the remainder of the allegations in Paragraph (9) of the Complaint.

10. The defendant denies the allegations of Paragraph (10) of the Complaint.

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AFFIRMATIVE DEFENSES

First Affirmative Defense

The defendant asserts the affirmative defenses of upset, bypass, and testing and laboratory error.

Second Affirmative Defense

All monthly averages measured by the PVSC using only one sample may not be used to calculate a monthly average violation.

Third Affirmative Defense

Some or all of the Permit violations alleged in the complaint are based on improper sampling.

Fourth Affirmative Defense

Defendant has taken appropriate steps in response to directions by the PVSC.

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WHEREFORE, Elan Chemical Company, Inc. requests the entry of an Order against plaintiff PVSC dismissing the Complaint.

Clapp & Eisenberg, P.C.
Attorneys for Defendant
Elan Chemical Corporation, Inc.

By:_____

Dated: February 10, 1994

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CERTIFICATION

I hereby certify that the within Answer was filed and served within the time prescribed by the Rules of this Court.

Clapp & Eisenberg, P.C.
Attorneys for Defendant
Elan Chemical Corporation., Inc.

By: _____

Dated: February 10, 1994

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RULE 4:5-1 CERTIFICATION

I hereby certify that the matter in controversy is not the subject of any other action pending in any Court and is likewise not the subject of any pending arbitration proceeding. I further certify that I have no knowledge of any contemplated action or arbitration proceeding which is contemplated regarding the subject matter of this action and that I am not aware of any other parties that should join this action.

Clapp & Eisenberg, P.C.
Attorneys for Defendant
Elan Chemical Corporation., Inc.

By: _____

Dated: February 10, 1994

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SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - GENERAL EQUITY

CHAMBERS OF
HARRY A. MARGOLIS
Presiding Judge

GIBRALTAR BUILDING
153 HALSEY STREET
EIGHTH FLOOR
NEWARK, NEW JERSEY 07101
ADDRESS ALL MAIL TO:
P.O. BOX 47026
NEWARK, NEW JERSEY 07101
(201) 648-2021

March 8, 1994

NOTICE OF PRETRIAL CONFERENCE

Passaic Valley Sewerage Comm. VS. Elan Chemical Co.

DOCKET NO. C-11-94

1. This case has been set down for a pretrial conference before me at 2:15 o'clock, on the Eighth Floor, Gibraltar Building, Newark, N.J. on May 27, 1994.

2. A pretrial memorandum on behalf of each party and complying with the provisions of Rule 4:25 shall be forwarded in time to be received by this Court at least 10 days prior to pretrial date. FAILURE TO COMPLY MAY RESULT IN SANCTIONS. R. 1:2-4 (b).

3. Each memorandum shall be accompanied by six additional copies of the respective factual and legal contentions for the Court.

4. The pretrial conference MUST be attended for each party by the lawyer who will try the action.

BY ORDER OF THE COURT

HARRY A. MARGOLIS, P.J.Ch.

NOTE: Please have clients available in court or by phone in the event settlement discussions reach that stage.

cc: Gabriel M. Ambrosio, (Attn: John Ambrosio, Esq.)
Clapp & Eisenberg (Attn: Mark L. Manewitz, Esq.)

RECEIVED
MAR 10 1994
RECEIVED

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SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - GENERAL EQUITY

CHAMBERS OF
HARRY A. MARGOLIS
Presiding Judge

GIBRALTAR BUILDING
153 HALSEY STREET
EIGHTH FLOOR
NEWARK, NEW JERSEY 07101
ADDRESS ALL MAIL TO:
P.O. BOX 47026
NEWARK, NEW JERSEY 07101
(201) 648-2021

March 8, 1994

NOTICE OF TRIAL DATE

Passaic Valley Sewerage Comm. VS. Elan Chemical Co.

DOCKET NO. C-11-94

The above entitled matter is scheduled for trial on July 11, 1994 at 9:00 A.M., Eighth Floor, Gibraltar Building, 153 Halsey Street, Newark, N.J. Briefs are due as previously ordered.

Adjournments will not be granted unless for compelling reasons and upon formal application to the court on notice to all parties.

HARRY A. MARGOLIS, P.J.Ch.

NOTE: If the Court's schedule changes in any material way, you will receive telephone notice.

cc: Gabriel M. Ambrosio (Attn: john Ambrosio, Esq.)
Clapp & Eisenberg (Attn: Mark L. Manewitz, Esq.)

RECEIVED
MAR 10 1994

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GABRIEL M. AMBROSIO
Attorneys at Law
464 VALLEY BROOK AVENUE, P.O. BOX 911
LYNDHURST, NEW JERSEY 07071
TEL. (201) 933-8844

FAX No. (201) 933-4299

GABRIEL M. AMBROSIO
JOHN T. AMBROSIO

Facsimile Transmission Cover Sheet

Date: February 15, 1995 (12:34pm)

To: Randi Schillinger, Esq.

Fax No.: 622-3349

From: John T. Ambrosio, Esq.

No. of Pages: 10 (including this page)

Subject: Elan Chemical

Message: Please review the enclosed second draft of the proposed consent order and get back to me with your comments.

CONFIDENTIALITY NOTICE

The information contained in this facsimile transmission may be privileged and confidential intended for the sole use of the persons or entities named on this transmittal cover sheet. If you are not an intended recipient of this transmission, the dissemination, distribution, copying or use of the information it contains is strictly prohibited. If you have received this transmission in error, please call the sender immediately to arrange for the return of this information.

GABRIEL M. AMBROSIO, ESQ.
464 Valley Brook Avenue
P.O. Box 911
Lyndhurst, New Jersey 07071
(201) 933-8844
Attorneys for Plaintiff

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION - ESSEX COUNTY

PASSAIC VALLEY SEWERAGE COMMISSIONERS, a body politic and corporate of the state of New Jersey,

Plaintiff,

v.

ELAN CHEMICAL COMPANY, INC.,

Defendant.

DOCKET NO: C-11-94

Civil Action

CONSENT ORDER AND FINAL JUDGMENT

This matter having been opened to the Court by Gabriel M. Ambrosio, Esq. (John T. Ambrosio, Esq., appearing) on behalf of the plaintiff, the PASSAIC VALLEY SEWERAGE COMMISSIONERS ("PVSC"), alleging that the defendant, Elan Chemical Company, Inc. ("Elan Chemical"), violated the provisions of N.J.S.A. 58:14-1 et seq. by discharging pollutants in excess of discharge limitations of Permit No. 20403242 ("Permit"), the rules and regulations of the PVSC, and the Organic Chemicals, Plastics and Synthetic Fibers ("OCPSF") Categorical Pretreatment Standards adopted by the United States Environmental Protection Agency ("EPA") at 40 C.F.R. 414, and the defendant having consented to the entry of the within Consent Order and Final Judgment, and for good cause thus shown;

IT IS on this day of February 1995;

ORDERED that:

Civil Penalties

1. Within 20 days of the date hereof, the defendant, Elan Chemical, shall pay to the PVSC the sum of ten thousand dollars ($10,000.00) (the "Settlement Amount") in settlement of all civil penalties that potentially could have been assessed against the defendant for allegedly having violated the provisions of N.J.S.A. 58:14-1 et seq. by discharging pollutants in excess of OCPSF discharge limitations of the Permit and the rules and regulations of the PVSC between July 1, 1991 and the present, including, but not limited to, those alleged violations set forth in the complaint filed by the plaintiff in this action (the "Complaint"). All settlement payments shall be made payable to the "Passaic Valley Sewerage Commissioners."

Compliance Schedule

2. Elan Chemical shall comply with the following schedule for the purpose of controlling and eliminating discharges of organics from its effluent stream in excess of the OCPSF limitations of the Permit and the rules and regulations of the PVSC:

(a) On or before February 1, 1995, Elan Chemical shall commence the design phase for the installation of pretreatment control equipment intended to eliminate discharges of organics from its effluent stream in excess of the OCPSF discharge limitations of the Permit.

(b) On or before July 1, 1995, Elan Chemical shall commence the construction phase for the installation of pretreatment control equipment intended to eliminate

discharges of organics from its effluent stream in excess of the OCPSF discharge limitations of the Permit.

(c) On or before September 15, 1995, Elan Chemical shall have completed the construction and installation, and commence testing, of the pretreatment control equipment intended to eliminate discharges of organics from its effluent stream in excess of the OCPSF discharge limitations of the Permit.

(d) On or before October 15, 1995, Elan Chemical shall be in compliance with the OCPSF discharge limitations of the Permit and the rules and regulations of the PVSC.

Progress Reports

3. Elan Chemical shall submit to the PVSC monthly progress reports concerning its compliance with the requirements and obligations of this Order. Each progress report shall comply with all the reporting requirements specified by 40 C.F.R. 403.12, and any amendments thereto, which is specifically incorporated herein and made a part hereof.

Final Report

4. Within ninety (90) days of completing the corrective action described in paragraph #2, the defendant shall submit to the PVSC a final report concerning its compliance with all applicable pretreatment standards. Said final report shall comply with all the reporting requirements specified by 40 C.F.R. 403.12, and any amendments thereto, which is specifically incorporated herein and

made a part hereof.

Force Majeure

5. The completion date for the corrective action described in paragraph #2 or for the submission of any report required by this Order, shall be extended for the period of time that the defendant or its agent is prevented by a Force Majeure event from proceeding with the corrective action or submitting the required report. As used in this Order, a Force Majeure event shall mean an event which is beyond the reasonable control of the defendant or any entity controlled by defendant, including, but not limited to, its contractors and subcontractors, including, but not limited to, such events as fire, explosion, inclement weather conditions (that create unforeseen delays), labor disputes, inability to obtain or unavoidable delay in the delivery of materials, inability to obtain or unavoidable delay in securing municipal approvals and/or work permits, inability to obtain or unavoidable delay in securing State approvals and/or Treatment Works Approval and unforeseen subsurface conditions. If the occurrence of a Force Majeure event causes or may cause delay in meeting any completion or submission date set forth above, defendant shall notify the PVSC in writing within ten (10) days of the occurrence of such event, the precise cause of the delay, the measures taken or to be taken by the defendant to prevent or minimize the delay, an estimate of the date by which such measures will be completed or such report will be submitted, and an estimate of the duration of the delay. The defendant shall

promptly implement all reasonable measures to prevent or minimize any such delays, prevent or minimize any adverse impact on the PVSC system as a result of such delays, and to comply with all requirements of this Order as soon as possible.

6. If the PVSC finds that: (a) the defendant has complied with the notice requirements of the preceding paragraph and; (b) the delay or anticipated delay has been or will be caused by a Force Majeure event, the PVSC shall extend the time for performance under this Order no longer than the delay resulting from the Force Majeure event. If the PVSC determines that: (a) the defendant did not comply with the notice requirements of the preceding paragraph or; (b) the event causing the delay does not constitute a Force Majeure event, failure to complete the corrective action under paragraph #2 or to submit any report required hereunder shall be a violation of the requirements of this Order and subject the defendant to sanctions under the applicable statutes and regulations. The burden of establishing that any delay is caused by a Force Majeure event rests with the defendant.

General Provisions

7. The corrective action undertaken by the defendant pursuant to this Order shall constitute the penalty for any potential additional violations of the OCPSF discharge limitations of the Permit and the rules and regulations of the PVSC during the period covered by the compliance schedule. In the event that the defendant completes all corrective action on or before the completion dates set forth in the compliance schedule, and as

modified by any Force Majeure event, any such exceedances experienced during this period shall not be subject to additional penalty.

8. The defendant further understands that any exceedance of the OCPSF discharge limitations experienced after the final completion date set forth in the compliance schedule, shall be subject to further enforcement proceedings and civil penalties.

9. Nothing in this Order shall preclude the PVSC from taking enforcement action against the defendant for matters not set forth herein or in the Complaint.

10. All provisions of the Permit shall remain in full force and effect and are not modified by this Order. The defendant expressly understands that the compliance requirements contained in this Order do not modify any provisions of the Permit or any duties or liabilities of the defendant thereunder.

11. This Order shall be binding on the defendant, its assignees and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.

12. Defendant shall perform all work conducted pursuant to this Order in accordance with prevailing professional standards.

13. This Order shall not relieve the defendant from obtaining and complying with all applicable federal, state and local permits, as well as all applicable statutes and regulations while carrying out the obligations imposed by this Order.

14. The obligations and civil penalties of this Order are imposed pursuant to the police powers of the State for the

enforcement of law and the protection of public health, safety, welfare and are not intended to constitute a debt or debts which may be limited or discharged in a bankruptcy proceeding.

15. In addition to the PVSC's statutory and regulatory rights to enter and inspect, the defendant shall allow the PVSC and its authorized representatives access to its facility at all times for the purpose of monitoring defendant's compliance with this Order. While at the defendant's facility, the PVSC and its personnel shall observe all applicable health and safety rules and regulations.

16. The defendant shall make available to the PVSC all technical records and contractual documents maintained or created by the defendant or its contractors in connection with this Order.

17. The PVSC reserves the right to require the defendant to take additional actions as authorized by law should the PVSC determine that such actions are necessary to protect human health, the environment or the PVSC system. Nothing in this Order shall constitute a waiver of any statutory right of the PVSC to require the defendant to undertake such additional measures should the PVSC determine that such measures are necessary, subject to the defendant's rights under this Order, applicable statutes and regulations.

18. The defendant shall not construe any informal advice, guidance, suggestions or comments by the PVSC or by person(s) acting on behalf of the PVSC, as relieving the defendant of its obligation to obtain written approvals as may be required herein, unless such advice, guidance, suggestions or comments by the PVSC

shall be submitted in writing to the defendant.

19. The defendant shall give written notice of this Order to any successor in interest prior to transfer of ownership of the facility which is the subject of this Order and shall simultaneously verify to the PVSC that such notice has been given.

20. No modification or waiver of this Order shall be valid except by written amendment duly executed by the defendant and the PVSC.

21. The Court shall retain jurisdiction over the parties to this action solely for the purpose of enforcing the provisions of this Order.

22. The PVSC reserves the right to reopen this case in the event the Commissioners of the PVSC, at their next available public meeting, do not accept the recommendations of the chief counsel to enter into this Consent Order and Final Judgment.

23. Nothing contained in this Consent Order and Final Judgment shall be construed as an admission of liability by any party to this Consent Order and Final Judgment, nor shall the same be construed as having any evidentiary value or purpose. By entering into this Consent Order and Final Judgment, Elan makes no admission of liability as to any finding of fact or conclusion of law as set forth in the Complaint. The parties further agree that this settlement resolves all outstanding disputes which arise out of the Complaint and any potential additional claims for civil penalties which might arise during the compliance period which are predicated upon ~~the~~ alleged discharges ~~of waste~~ in excess of the

OCPSF discharge limitations of the Permit and the rules and regulations of the PVSC.

Hon. Harry A. Margolis, P.J.Ch.

The undersigned hereby consent to the entry of the foregoing order, both as to substance and form.

GABRIEL M. AMBROSIO, ESQ.

Dated: by:
John T. Ambrosio, Esq.
Attorneys for the PVSC

ELAN CHEMICAL COMPANY, INC.

Dated:
Authorized Signature

Print Name

Print Title & Position

JTA:ja
Elan Chemical.con

QUESTION 11
PART C

847520989

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
LANCE R. MILLER, DIRECTOR
CN 028
Trenton, N.J. 08625-0028
(609) 633-1408
Fax # (609) 633-1454

17 APR 1991

IN THE MATTER OF	:	**ADMINISTRATIVE ORDER**
Elan Chemical Company, Inc.	:	**AND**
268 Doremus Avenue	:	**NOTICE OF CIVIL ADMINISTRATIVE**
Newark, New Jersey 07108	:	**PENALTY ASSESSMENT**

This Administrative Order and Notice of Civil Administrative Penalty Assessment is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP" or the "Department") by N.J.S.A. 13:1D-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and duly delegated to the Assistant Director for Enforcement of the Division of Hazardous Waste Management pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. The Department has determined that Elan Chemical Company, Inc. (hereinafter "Elan") is a generator of hazardous waste (EPA ID# NJD042895680) as defined in N.J.A.C. 7:26-1.4 and is located at Block 4014, Lots 8 and 20, 268 Doremus Avenue, City of Newark, Essex County, State of New Jersey.

2. During an inspection conducted by a representative of the Department at Elan on June 14, 1990 the Department observed the following violations:

   a Elan failed to comply with the exception reporting requirements, in violation of N.J.A.C. 7:26-7.4(h). Specifically,

      i. Elan failed to contact the hauler and/or the owner or operator of the designated facility to determine the status of the hazardous waste and to notify the Department of the situation, when a copy of manifest #NJA0571060, with the handwritten signature of the owner or operator of the designated facility, was not received within 35 days of the date the waste was accepted by the initial hauler, in violation of N.J.A.C. 7:26-7.4(h)1.

      ii. Elan failed to submit an Exception Report to the Department when a copy of manifest #NJA0571060, with the handwritten

signature of the owner or operator of the designated facility, was not received within 45 days of the date the waste was accepted by the initial hauler, in violation of N.J.A.C. 7:26-7.4(h)2.

b Elan failed to ship waste off site within 90 days, in violation of N.J.A.C. 7:26-9.3(a)1. Specifically, numerous containers of F005 waste were stored at Elan for greater than 90 days.

c. Elan failed to clearly mark containers with the date when the accumulation period began, in violation of N.J.A.C. 7:26-9.3(a)3. Specifically, numerous containers of F005 waste were not marked with the date when the accumulation period began and were not marked with the words "Hazardous Waste".

d. Elan stored hazardous waste in inadequate containers, in violation of N.J.A.C. 7:26-9.4(d)1i. Specifically, F005 waste was leaking from an undetermined number of containers.

e. Elan failed to handle hazardous waste as required by N.J.A.C. 7:26-9.4(d)2. Specifically, F005 waste was stored in corroded containers and was not transferred to containers in good condition or managed in some other way that complies with the requirements of N.J.A.C. 7:26-9.4.

f. Elan failed to comply with the following requirements for management of containers, in violation of N.J.A.C. 7:26-9.4(d)4. Specifically,

i. Elan failed to keep containers securely closed so that there is no escape of hazardous waste or its vapors, in violation of N.J.A.C. 7:26-9.4(d)4i. Specifically, F005 waste was stored in containers where the lids were either corroded or missing or not securely closed.

ii. Elan opened, handled, or stored containers holding hazardous waste in a manner which may rupture the container or cause it to leak, in violation of N.J.A.C. 7:26-9.4(d)4iii. Specifically, containers of F005 waste were observed to be improperly stored up to 4 tiers high.

g. Elan failed to perform daily inspections of each area where containers are stored, in violation of N.J.A.C. 7:26-9.4(d)5.

h. Elan failed to provide required classroom or on-the-job training for facility personnel, in violation of N.J.A.C. 7:26-9.4(g). Specifically,

i. Elan failed to have a written description for each position listed under N.J.A.C. 7:26-9.4(g)6i, in violation of N.J.A.C. 7:26-9.4(g)6ii.

ii. Elan failed to have a written description of the type and amount of both introductory and continuing training that

will be given to each person filling a position listed under N.J.A.C. 7:26-9.4(g)6i, in violation of N.J.A.C. 7:26-9.4(g)6iii.

i. Elan failed to maintain sufficient aisle space for the unobstructed movement of personnel or equipment in an emergency, in violation of N.J.A.C. 7:26-9.6(e). Specifically, containers of F005 waste were observed to be stored with no aisle space or with inadequate aisle space.

j. Elan failed to list emergency equipment in the contingency plan, updated as required, with its location, description, or capabilities specified, in violation of N.J.A.C. 7:26-9.7(g).

3. During an inspection conducted by a representative of the Department at Elan on July 9, 1990, the Department observed the following additional violation:

a. Elan failed to determine if solid waste was hazardous, in violation of N.J.A.C. 7:26-8.5(a). Specifically, numerous containers of solid waste, whose identity was undetermined at the time of the inspection, were later determined by Elan to be an F005 waste.

4. During reinspections conducted at Elan on July 16 and July 26, 1990, the Department determined that Elan had corrected the violations referenced in paragraphs 2a, 2b, 2d, 2e, 2f, 2g and 3a above.

5. Based on the facts set forth in these **FINDINGS**, the Department has determined that Elan has violated the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the regulations promulgated pursuant thereto, N.J.A.C. 7:26-1 et seq., specifically N.J.A.C. 7:26-7.4(h)1, 7.4(h)2, 8.5(a), 9.3(a)1, 9.3(a)3, 9.4(d)1i, 9.4(d)2, 9.4(d)4i, 9.4(d)4iii, 9.4(d)5, 9.4(g)6ii, 9.4(g)6iii, 9.6(e) and 9.7(g).

ORDER

NOW, THEREFORE, PURSUANT TO N.J.S.A. 13:1E-9c, IT IS HEREBY ORDERED THAT ELAN SHALL:

6. Within fifteen (15) calendar days after receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment, correct the violations set forth in paragraphs 2.c, 2.h, 2.i and 2.j above.

7. Within twenty (20) calendar days upon receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment submit the enclosed **VERIFICATION OF COMPLIANCE** by certified mail, return receipt requested or by hand delivery to the address below, indicating that you have corrected the violations referenced in

paragraph 6 (six) above.

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
Bureau of Compliance and Technical Services
CN 028
Trenton, NJ 08625
Attention: Margaret Elsishans

THIS ORDER SHALL BE EFFECTIVE UPON RECEIPT.

NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT

8. Pursuant to N.J.S.A. 13:1E-9e and N.J.A.C. 7:26-5.4(f), and based upon the above **FINDINGS**, the Department has determined that a civil administrative penalty is assessed against Elan in the amount of $21,000.00. The Department's basis for this Civil Administrative Penalty is set forth in the Penalty Assessment Worksheet(s) attached hereto and incorporated herein as Attachment A.

9. Payment of the penalty is due when a final order is issued by the Commissioner subsequent to a hearing, if any, or when this Administrative Order and Notice of Civil Administrative Penalty Assessment becomes a final order (see following paragraph). Payment shall be made by certified check payable to "Treasurer, State of New Jersey" and shall be submitted to:

New Jersey Department of Environmental Protection
Division of Financial Management Planning and General Services
Bureau of Revenue
CN 402
Trenton, NJ 08625

10. If no request for a hearing is received within twenty (20) calendar days from receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment, it shall become a final order upon the twenty-first calendar day following its receipt and the penalty shall then be due and payable.

NOTICE OF RIGHT TO A HEARING

11. Pursuant to N.J.S.A. 52:14B-1 et seq. and N.J.S.A. 13: 1E-9, Elan is entitled to an administrative hearing. Any hearing request, along with the enclosed **ADMINISTRATIVE HEARING REQUEST CHECKLIST AND TRACKING FORM FOR ENFORCEMENT DOCUMENTS**, shall be delivered to the address below within twenty (20) calendar days from receipt of this Administrative Order and Notice of Civil Administrative Penalty Assessment.

Assistant Director for Enforcement
Division of Hazardous Waste Management
401 East State Street
CN 028
Trenton, New Jersey 08625
Attention: Wayne C. Howitz, Assistant Director

12. Pursuant to N.J.A.C. 7:26-5.3 Elan shall, in its request for a hearing, furnish NJDEP with the following:

    a. The name, address, telephone number and EPA Identification Number (if applicable) of Elan and its authorized representative;

    b. Elan's defenses, to each of the Department's findings of fact in the findings section of the administrative order or notice of civil administrative penalty assessment, stated in short and plain terms;

    c. An admission or denial of each of the Department's findings of fact in the findings section of the administrative order or notice of civil administrative penalty assessment. If Elan is without knowledge or information sufficient to form a belief as to the truth of a finding, Elan shall so state and this shall have the effect of a denial. A denial shall fairly meet the substance of the findings denied. When Elan intends in good faith to deny only a part or a qualification of a finding, Elan shall specify so much of it as is true and material and deny only the remainder. Elan may not generally deny all of the findings but shall make all denials as specific denials of designated findings. For each finding which Elan denies, Elan shall allege the fact or facts as Elan believes such fact or facts to be;

    d. Information supporting the request and specific reference to or copies of all written documents relied upon to support the request;

    e. An estimate of the time required for the hearing (in days and/or hours); and

    f. A request, if necessary, for a barrier-free hearing location for physically disabled persons.

GENERAL PROVISIONS

13. Neither the issuance of this Administrative Order and Notice of Civil Administrative Penalty Assessment nor anything contained herein shall relieve Elan of the obligation to comply with all applicable laws, including but not limited to the statutes and rules

cited herein.

14. This Administrative Order and Notice of Civil Administrative Penalty Assessment is binding on Elan, its agents, successors, assigns, any trustee in bankruptcy or other trustee, and any receiver appointed through a proceeding in law or equity.

15. Notice is given that violations of any statutes, rules or permits other than those herein cited may be cause for additional enforcement actions, either administrative or judicial. By issuing this Administrative Order and Notice of Civil Administrative Penalty Assessment the Department does not waive its right to initiate additional enforcement actions.

16. Obligations and penalties of this Administrative Order and Notice of Civil Administrative Penalty Assessment are imposed pursuant to the police powers of the State of New Jersey for the enforcement of the law and the protection of the public health, safety, and welfare and are not intended to constitute debt or debts which may be limited or discharged in a bankruptcy proceeding.

17. Notice is given that pursuant to N.J.S.A. 13:1E-9e, the Department is authorized to assess a civil administrative penalty of not more than $50,000 for each violation, and each day during which the violation continues constitutes an additional, separate and distinct offense.

18. Notice is further given that any person who violates the provisions of N.J.S.A. 13:1E-1 et seq. or any code, rule, or regulation promulgated pursuant thereto shall be liable to a penalty of not more than $50,000 per day to be collected in a civil action, and any person who violates an administrative order issued pursuant to N.J.S.A. 13:1E-9c or a court order issued pursuant to N.J.S.A. 13:1E-9d, or who fails to pay a civil administrative penalty assessed pursuant to N.J.S.A. 13:1E-9e in full after it is due is subject upon order of a court to a civil penalty not to exceed $100,000 per day of such violations.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
Wayne C. Howitz
Assistant Director
Hazardous Waste Enforcement

WCH/mte

PENALTY ASSESSMENT WORKSHEET

Violator Name: Elan Chemical Company, Inc.

Location: 268 Doremus Avenue, Newark, N.J. 07108

Case #: NJD042895680 Inspector: Stein

Date of Violation: 6/14/90 & 7/9/90 Page 1 of 5

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	8.5(a)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$10,000.00
Number of days/violations	one
Total Base Penalty	$10,000.00
If subparagraph (f)3i applies: Total base penalty x 1.00	NA
If subparagraph (f)3ii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iv applies: Total base penalty x 0.25	NA
Total Civil Administrative Penalty	$10,000.00

Justification for Severity Factor Adjustments:

Prepared by: Margaret Elsishans Date: 8/10/90

847520996

PENALTY ASSESSMENT WORKSHEET

Violator Name: Elan Chemical Company, Inc.

Location: 268 Doremus Avenue, Newark, N.J. 07108

Case #: NJD042895680 Inspector: Stein

Date of Violation: 6/14/90 & 7/9/90 Page 2 of 5

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	9.3(a)3
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$5,000.00
Number of days/violations	one
Total Base Penalty	$5,000.00
If subparagraph (f)3i applies: Total base penalty x 1.00	NA
If subparagraph (f)3ii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iv applies: Total base penalty x 0.25	NA
Total Civil Administrative Penalty	$5,000.00

Justification for Severity Factor Adjustments:

Prepared by: Margaret Elsishans Date: 8/10/90

847520997

PENALTY ASSESSMENT WORKSHEET

Violator Name: Elan Chemical Company, Inc.

Location: 268 Doremus Avenue, Newark, N.J. 07108

Case #: NJD042895680 Inspector: Stein

Date of Violation: 6/14/90 & 7/9/90 Page 3 of 5

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	9.4(g)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$2,000.00
Number of days/violations	one
Total Base Penalty	$2,000.00
If subparagraph (f)3i applies: Total base penalty x 1.00	NA
If subparagraph (f)3ii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iv applies: Total base penalty x 0.25	NA
Total Civil Administrative Penalty	$2,000.00

Justification for Severity Factor Adjustments:

Prepared by: Margaret Elsishans Date: 8/10/90

847520998

PENALTY ASSESSMENT WORKSHEET

Violator Name: Elan Chemical Company, Inc.

Location: 268 Doremus Avenue, Newark, N.J. 07108

Case #: NJD042895680 Inspector: Stein

Date of Violation: 6/14/90 & 7/9/90 Page 4 of 5

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	9.6(e)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$2,000.00
Number of days/violations	one
Total Base Penalty	$2,000.00
If subparagraph (f)3i applies: Total base penalty x 1.00	NA
If subparagraph (f)3ii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iv applies: Total base penalty x 0.25	NA
Total Civil Administrative Penalty	$2,000.00

Justification for Severity Factor Adjustments:

Prepared by: Margaret Elsishans Date: 8/10/90

847520999

PENALTY ASSESSMENT WORKSHEET

Violator Name: Elan Chemical Company, Inc.

Location: 268 Doremus Avenue, Newark, N.J. 07108

Case #: NJD042895680 Inspector: Stein

Date of Violation: 6/14/90 & 7/9/90 Page 5 of 5

Rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	9.7(g)
Base penalty for rule violated as listed in N.J.A.C. 7:26-5.4(g)7 through 12.	$2,000.00
Number of days/violations	one
Total Base Penalty	$2,000.00
If subparagraph (f)3i applies: Total base penalty x 1.00	NA
If subparagraph (f)3ii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iii applies: Total base penalty x 0.50	NA
If subparagraph (f)3iv applies: Total base penalty x 0.25	NA
Total Civil Administrative Penalty	$2,000.00

Justification for Severity Factor Adjustments:

Prepared by: Margaret Elsishans Date: 8/10/90

847521000

11213-7 Elan Chem.

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- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

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(609) 347-7330

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KAREN L. GILMAN
ALAN J. LANCZBERG†
DANIEL J. WAGNER
AGNES I. RYMER
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OF COUNSEL

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AMY S. WINKELMAN††

† MEMBER OF N.Y. BAR ONLY
†† MEMBER OF MASS. BAR ONLY

TELECOPIER (201) 642-

May 6, 1991

Via Certified Mail

Assistant Director for Enforcement
Division of Hazardous Waste Management
New Jersey Department of Environmental
Protection
401 East State Street, CN 028
Trenton, New Jersey 08625

Attention: Wayne C. Howitz

RE: Elan Chemical Company, Inc.
Administrative Order dated
17 April, 1991
Our Reference No. 11213-7

Dear Mr. Howitz:

On April 22, 1991, Elan received service of an Administrative Order and Notice of Civil Administrative Penalty Assessment issued by the Department on April 17, 1991. Elan hereby requests an administrative hearing to adjudicate the findings and penalty assessment set forth in the Administrative Order. An Administrative Hearing Request Checklist and Tracking Form for Enforcement Documents is enclosed. Please note that the Administrative Order did not contain the Verification of

847521002

Complaince referred to in paragraph 7. Therefore, we have requested that Ms. Elsishans provide us with a copy.

Very truly yours,

Lee Henig-Elona

/db
Enclosure
cc: Richard J. McManus, Director, Legal Bridge Unit
David Weisman, President
John Vassiliades, Vice President-Production
Margaret Elsishans, Bureau of Compliance and Technical Services

ADMINISTRATIVE HEARING REQUEST CHECKLIST
AND TRACKING FORM FOR ENFORCEMENT DOCUMENTS

I. Enforcement Document Being Appealed:

Administrative Order and Notice of Civil Administrative Penalty Assessment
Title of Enforcement Document

17 April 1991 | _____
Issuance Date of Enforcement Document | **Document Number (if any)**

II. Person Requesting Hearing:

David Weisman, President	Lee Henig-Elona, Esq.
Name	**Name of Attorney, if applicable**
Elan Chemical Company, Inc.	Clapp & Eisenberg, P.C.
268 Doremus Avenue Newark, New Jersey 07105	80 Park Plaza, 23rd floor Newark, New Jersey 07102
Address	**Address of Attorney**

III. Please Include the Following Information as Part of Your Request:

A. **The date the alleged violator received the enforcement document being contested;**
B. **A list of all issues being appealed;**
C. **An admission or denial of each of the findings of fact, or a statement of insufficient knowledge;**
D. **The defenses of each of the findings of fact in the enforcement document;**
E. **Information supporting the request;**
F. **An estimate of the time required for the hearing;**
G. **A request, if necessary, for a barrier-free hearing location for physically disabled persons;**
H. **A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's processing of your hearing request to the Office of Administrative Law; and**
I. **This form, completed, signed and dated with all of the information listed above, including attachments, to:**

1. **Wayne C. Howitz, Assistant Director, Hazardous Waste Enforcement, CN 028 Trenton, New Jersey 08625 (w/attachments).**

2. **Richard J. McManus, Director, Legal Bridge Unit CN 402 Trenton, New Jersey 08625 (w/o attachments)**

IV. Signature: _____ **Date:** 5/6/91

847521004

ATTACHMENT
TO ADMINISTRATIVE HEARING REQUEST CHECKLIST
AND TRACKING FORM FOR ENFORCEMENT DOCUMENTS

A. April 22, 1991.

B. Elan is appealing only those finding which are both inaccurate and are the bases of a penalty assessment. Specifically, Elan challenges the Department's findings in paragraphs 2(c), 2(i), 2(j) and 3.

C. Elan responds to all of the findings, set forth in the Administrative Order as follows:

1. Elan admits the findings set forth in paragraph 1;

2. Elan admits the findings set forth in paragraph 2(a)i and 2(a) ii; Elan denies the findings set forth in paragraph 2(b), 2(c), 2(d), 2(e), 2(f) and 2(g); Elan denies the findings set forth in 2(h) except to admit that the requirements for written descriptions were not met; Elan is without knowledge or information sufficient to form a belief as to the truth of the finding set forth in paragraph 2(i); and Elan denies the findings set forth in paragraph 2(j).

3. Elan denies the findings set forth in paragraph 3.

D. Elan did not store F005 waste for greater than 90 days. Elan's usuable materials are not F005 waste. Elan's waste containers were clearly marked as "Hazardous Waste" and were posted with the date that the accumulation period began. Elan's waste containers were not inadequate or corroded and were not leaking F005 wastes. Elan's management of containers was in conformity with the applicable regulations. Elan performed daily inspections of areas where containers are stored. Aisle space of greater than 18" may not be needed for unobstructed movement of personnel fire protection equipment, spill control equipment, and decontamination equipment. Elan's contingency plan meets all the applicable regulatory requirements. Elan's usuable material is not a "solid waste." Even if the usuable material was a solid waste, the regulations mandating that a generator determine whether a solid waste is a hazardous waste grants a generator a reasonable time to make that determination. Elan acted reasonably and complied with the applicable regulations.

E. Elan will provide, under separate cover, data regarding the nature of its usuable materials.

F. Four days.

G. Not necessary.

H. Elan is willing to negotiate a settlement of this penalty assessment.

RECEIVED
JUN 24 1991
CLAPP & EISENBERG

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
LANCE R. MILLER, DIRECTOR
CN 028
Trenton, N.J. 08625-0028
(609) 633-1408
Fax # (609) 633-1454

IN THE MATTER OF

19 JUN 1991

Elan Chemical Company, Inc.
268 Doremus Avenue
Newark, New Jersey 07108
ATTENTION: John Vassiliades

RE: ADMINISTRATIVE ORDER AND NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT DATED APRIL 17, 1991, ACTION #HM-041-91

Dear Mr. Vassiliades:

The Department of Environmental Protection has completed its review of your request dated May 6, 1991, for an adjudicatory hearing on the above referenced matter. The Department hereby grants the request for an adjudicatory hearing.

Because you have indicated that you are willing to attempt to settle this matter, the Department will not process your hearing request at least until July 31, 1991, in order to provide time for settlement discussions. If the settlement discussions are not successful, the Department will thereafter process your hearing request.

By referring your hearing request to the Office of Administrative Law, the Department does not waive its right to contest the introduction or consideration of any defenses or issues which it believes to be inappropriately raised.

Please contact Margaret Elsishans at (609) 633-0700 as soon as possible to arrange a meeting to discuss settlement of this matter.

Very truly yours,

Wayne C. Howitz
Assistant Director
Hazardous Waste Enforcement

WCH/mte

Lee Henig-Elona
Clapp & Eisenberg
Counsellors at Law
80 park Plaza
Newark, New Jersey 07102

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State of New Jersey

OFFICE OF ADMINISTRATIVE LAW

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OAL DOCKET NO.: EHW 04406-92 N

AGENCY REF. NO.: HM-041-90

TRANSMITTING AGENCY:
HAZARDOUS WASTE MANAGEMENT

FILING DATE: 06/15/92

****

ELAN CHEMICAL COMPANY, INC. VS

NOTICE OF FILING

NJDEPE/OFFICE OF ENFORCEMENT POLICY

****

NATURE OF PROCEEDING:
APPEAL OF A NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT.

THIS CASE WAS RECEIVED BY THE OFFICE OF ADMINISTRATIVE LAW ON THE ABOVE FILING DATE. YOU WILL RECEIVE ANOTHER NOTICE INFORMING YOU OF THE DATE AND LOCATION OF THE HEARING.

ALL DISCOVERY MUST BE COMPLETE 5 DAYS BEFORE THE HEARING UNLESS ANOTHER DATE IS ESTABLISHED BY THE JUDGE. THEREFORE, PARTIES MUST BEGIN IMMEDIATELY TO EXCHANGE INFORMATION, TO SEEK ACCESS TO PUBLIC DOCUMENTS, TO EXHAUST OTHER INFORMAL MEANS OF OBTAINING INFORMATION AND, IF NECESSARY, TO SERVE DISCOVERY NOTICES AND MOTIONS.

REQUESTED DISCOVERY OR A REASONABLE SCHEDULE FOR SUPPLYING THE INFORMATION MUST BE PROVIDED WITHIN 15 DAYS OF RECEIVING THE REQUEST. OBJECTIONS TO A DISCOVERY NOTICE MUST BE MADE BY TELEPHONE CONFERENCE CALL TO THE JUDGE AND PARTIES WITHIN 10 DAYS OF RECEIVING THE NOTICE. IF YOU WISH TO COMPEL A RESPONSE TO A DISCOVERY NOTICE OR TO OBJECT TO A RESPONSE, YOU MUST PLACE A TELEPHONE CONFERENCE CALL TO THE JUDGE AND PARTIES WITHIN 10 DAYS OF THE NOTICE DUE DATE OR RECEIPT OF THE INADEQUATE RESPONSE. IF YOU DO NOT, THE JUDGE MAY REFUSE TO COMPEL THE DISCOVERY OR MAY DENY YOUR OBJECTION.

PARTIES MAY REPRESENT THEMSELVES OR MAY BE REPRESENTED BY AN ATTORNEY. IN SOME CASES, QUALIFIED NONLAWYERS MAY REPRESENT A PARTY. EMPLOYEES OF STATE AGENCIES, PRINCIPALS OF CLOSE CORPORATIONS, PARALEGALS AND OTHERS MAY BE PERMITTED TO REPRESENT A PARTY. THE STANDARDS ARE SET OUT IN N.J.A.C. 1:1-5.1 ET SEQ. NONLAWYERS MUST SUBMIT A NOTICE OF APPEARANCE/APPLICATION ON FORMS OBTAINED FROM THE CLERK AT LEAST 10 DAYS BEFORE THE HEARING.

THE PROCEDURE FOR THE HEARING IS FULLY SET OUT IN THE UNIFORM ADMINISTRATIVE PROCEDURE RULES, N.J.A.C. 1:1-1 ET SEQ.

DATE JUN 25 1992

WILLIAM SPEZIALE
DEPUTY CLERK

847521007

SERVICE LIST OF PARTIES

RICHARD J. MC MANUS
DIRECTOR
OFFICE OF LEGAL AFFAIRS
DEPT. ENVIR. PROTECT. & ENERGY
CN 402
TRENTON NJ 08625

DAVID RESTAINO, DAG.
DIV. OF LAW
HUGHES JUSTICE COMPLEX
CN 093
TRENTON, NJ 08625

JAMES HAMILTON, ASST. DIR.
NJDEPE/WATER HAZARDOUS WASTE ENF.
401 E. STATE ST.
CN 029
TRENTON, NJ 08625

LEE HENIG-ELONA, ESQ.
CLAPP & EISENBERG
1 NEWARK CENTER
NEWARK, NJ 07102

ELAN CHEMICAL COMPANY, INC.
268 DOREMUS AVE.
NEWARK, NJ 07108

847521008

State of New Jersey

OFFICE OF ADMINISTRATIVE LAW
185 WASHINGTON STREET
NEWARK, NJ 07102
(201) 648-6072

Edith Klinger
Administrative Law Judge

August 5, 1992

David Restaino, DAG
Division of Law
Hughes Justice Complex
CN 093
Trenton, N.J. 08625

Lee Henig-Elona, Esq.
Clapp & Eisenberg
1 Newark Center
Newark, N.J. 07102

RECEIVED
AUG 7 1992
RECEIVED

RE: New Jersey Department of Environmental Protection and Energy, Division of Hazardous Waste Management v. Elan Chemical Co., Inc.
OAL Dkt. No. EHW 4406-92

Dear Counsel:

Enclosed please find a copy of the Prehearing Order in the above-referenced matter. Pursuant to *N.J.A.C.* 1:1-13.2(b) and (c), any party may, upon written motion filed no later than five days after receiving this prehearing order, request that the order be amended to correct any errors. In any event, this order may be amended by the undersigned administrative law judge to accommodate circumstances occurring after its entry date. Unless precluded by law, this order may also be amended by the undersigned to conform with the proofs.

Very truly yours,

EDITH KLINGER
Administrative Law Judge

EK/to
Enclosure
cc: William Speziale,
Legal Assistant 3

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW

PREHEARING ORDER
OAL DKT. NO. EHW 4406-92
AGENCY DKT. NO. HM -041-90

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY, DIVISION OF HAZARDOUS WASTE MANAGEMENT,
Petitioner,
v.
ELAN CHEMICAL COMPANY, INC.
Respondent.

Pursuant to *N.J.A.C.* 1:1-13.1 *et seq.*, a telephone prehearing conference was held in the above-entitled matter on JULY 22, 1992, and the following procedures were settled:

BEFORE EDITH KLINGER, ALJ:

1. NATURE OF THE PROCEEDINGS AND ISSUES TO BE RESOLVED:

A. Nature of proceedings

The respondent, Elan Chemical Company, Inc. (Elan), appeals from an Administrative Order and Notice of Civil Administrative Penalty Assessment, alleging that it violated the Solid Waste Management ACT (SWMA) *N.J.S.A.* 13:1E-1 *et seq.* and the regulations promulgated pursuant thereto.

B. Issues to be resolved

1. Do the materials which are the subject of the Administrative Order constitute "Solid Waste" within the meaning of the SWMA?
2. If so, are the materials "hazardous"?
3. Were the violations committed as alleged in the Administrative Order of April 17, 1991?
4. If so, what penalty, if any, is appropriate?

2. PARTIES AND THEIR DESIGNATED ATTORNEYS OR REPRESENTATIVES:

For petitioner: (New Jersey Department of Environmental Protection)

David Restaino, DAG
Division of Law
Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

For respondent: (Elan Chemical Company, Inc.)

Lee Henig-Elona, Esq.
Clapp & Eisenberg
1 Newark Center
Newark, New Jersey 07102

3. SPECIAL LEGAL REQUIREMENTS AS TO NOTICE OF HEARING:

None.

4. SCHEDULE OF HEARING DATES, TIME AND PLACE:

The hearing will take place on February 1, 2, 3 and 4, 1993 at 9:00 a.m. at the Office of Administrative Law in Newark.

No adjournments will be granted except in strict accordance with the requirements of *N.J.A.C.* 1:1-9.6.

5. STIPULATIONS:

The parties shall file a joint stipulation of facts with the undersigned prior to the hearing. The stipulation will contain a recitation of all facts which are not the subject of dispute. The parties will submit with the stipulation any documentary evidence which would be admitted either by consent or without objection.

6. SETTLEMENT:

If settlement is reached prior to the hearing, immediate notice should be forwarded to the undersigned, followed by a stipulation of settlement or agreement signed by all parties and containing the terms of settlement to be included in an Initial Decision.

7. AMENDMENTS TO PLEADINGS:

None.

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8. DISCOVERY AND DATE FOR COMPLETION:

Initial interrogatories will be served by the parties by August 31, 1992. Answers will be provided 30 days from receipt of the interrogatories. All discovery will be completed by January 18, 1993.

9. ORDER OF PROOFS:

The burden of proof is on the petitioner. Petitioner shall proceed first in the order of proof unless otherwise directed by the undersigned.

10. EXHIBITS MARKED FOR IDENTIFICATION AND IN EVIDENCE:
&11.

No exhibit will be marked for identification or introduced into evidence at the hearing unless a copy is provided to the undersigned and a copy is provided for each party. This requirement will be strictly enforced unless impracticable.

12. ESTIMATED NUMBER OF FACT AND EXPERT WITNESSES:

There is no limit on the number of witnesses, but the parties are advised to eliminate repetitive and cumulative testimony. It is requested that, wherever possible, facts be stipulated to eliminate the need for unnecessary testimony.

13. MOTIONS:

None.

14. OTHER SPECIAL MATTERS:

The parties agree that there is no ongoing violation.

This Order may be reviewed by the Department of Environmental Protection and Energy either upon interlocutory review pursuant to *N.J.A.C.* 1:1-14.10 or at the end of the contested case pursuant to *N.J.A.C.* 1:1-18.6.

August 5, 1992
DATE

EDITH KLINGER, ALJ

ro

847521012

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
CN 093
TRENTON 08625

ROBERT J. DEL TUFO
ATTORNEY GENERAL

EDWARD J. DAUBER
ASSISTANT ATTORNEY GENERAL
DIRECTOR

RECEIVED
AUG 1992

(609) 984-7243

August 12, 1992

The Honorable Edith Klinger, ALJ
Office of Administrative Law
185 Washington St.
Newark, NJ 07102

Re: NJDEPE v. Elan Chemical Co., Inc.
OAL Docket No. EHW 4406-92
Agency Ref. No. HM-041-90

Dear Judge Klinger:

As you know, I represent the Department of Environmental Protection and Energy ("DEPE" or "the Department") in the above-captioned matter, for which I have just received a copy of the Pre-Hearing Order. Pursuant to N.J.A.C. 1:1-13.2(b), the Department hereby requests that the Order be amended to reflect the following. According to N.J.A.C. 7:26-1.13, in an enforcement action, persons claiming that a material is not a solid waste or that a material is conditionally exempt from N.J.A.C. 7:26 shall demonstrate and appropriately document that the material is not a solid waste or is conditionally exempt from the regulations and that there was a legal disposition for the material. N.J.A.C. 7:26-1.13(b), (c). Thus, paragraph 9 of the Pre-Hearing Order should be amended to reflect that respondent Elan Chemical Company bears the burden of proof for issues one and two stated in paragraph 1 of the Pre-Hearing Order.

I would also like to express my concern with paragraph 14 of the Pre-Hearing Order, which states that the parties agree that there is no on-going violation. According to my notes of the pre-hearing conference, Ms. Henig-Elona, counsel for Elan Chemical Company, stated that the company

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reuses materials and thus stores them until they are reused again. She stated that determination of a material's hazardousness is therefore not an easy proposition. Although the Department recognizes that it is not assessing further penalties for the materials specifically involved in this OAL case itself, based on the above it is leery of agreeing that there is no "on-going violation." Moreover, apparently Elan Chemical is in the process of cleaning up some materials which have spilled onto its property. As such, the Department finds it difficult to agree with paragraph 14 of the Pre-Hearing Order and would prefer that it be amended to remove that sentence.

Thank you for your courtesy.

Respectfully submitted,

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY

By: David Restaino
David Restaino
Deputy Attorney General

dr.mj

c.: Lee Henig-Elona, Esq.
Jeffrey Sterling, DEPE

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MICHAEL A. BACKER
JEFFREY W. LORELL
LAWRENCE B. MINK
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RONALD H. JANIS
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JEFFREY M. SCHWARTZ
FREDERIC S. KESSLER
MARK FALK
ROBERT A. MARSICO
JOHN L. CONOVER
JOHN M. DONNELLY
JOHN A. AVERY
KAREN L. GILMAN
DANIEL J. WAGNER
AGNES I. RYMER
MICHAEL W. ZELENTY

PHILIP M. KRUGER
RANDI SCHILLINGER
JONAH D. ZIMILES
COLLEEN D. SHIARELLA
VINCENT F. PAPALIA
CAMILLE M. KENNY
ROBERT J. ROHRBERGER
HARVEY C. KAISH
CHRISTOPHER M. HARTWYK
MARY BETH CLARK
LEE HENIG-ELONA
MARK F. KLUGER
LINDA A. ELFENBEIN
AMY S. WINKELMAN
ROBERT A. SCHWARTZ
KIMBERLY D. SUTTON
MADELINE E. COX
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WRITER'S DIRECT DIAL
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5958

WRITER'S DIRECT FAX
(201)
623-5967

August 19, 1992

Honorable Edith Klinger
Administrative Law Judge
Department of Law & Public Safety
Division of Law
Richard J. Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

Re: NJDEPE v. Elan Chemical Co., Inc.
OAL Docket No. EHW-4406-92
Our File No. 11213-7

Dear Judge Klinger:

I have read David Restaino's letter to you dated August 12, 1992. His characterization of my statement during our pre-hearing conference is inaccurate. I never said that because materials are reused a "determination of a material's hazardousness is therefore not an easy proposition". Further, merely determining whether a material is hazardous is not the issue. The more appropriate questions are whether or not the reusable material is a "solid waste", if so, whether the "solid waste" is "hazardous" and, if so, whether the Department's regulation which Elan purportedly violated is a reasonable interpretation of the enabling legislation in question.

With regard to the question of ongoing violations, I am not sure why Mr. Restaino is "leery of agreeing" that there are no ongoing violations. There is no question that subsequent to the issuance of the Notice of Violation dated June 14, 1990, the Department has inspected the facility and has not issued additional Notices of Violations. Contrary to Mr. Restaino's assertion, Elan is not in the process of "cleaning up some materials which have spilled onto its property". In fact, a Memorandum of Agreement

application filed with the Department clearly indicates that Elan's environmental consultant believes that the contamination on-site results from fill material and was not caused by Elan. Accordingly, we object to removing paragraph 14 of the Order.

Very truly yours,

Lee Henig-Elona

LHE/pl/#47469

cc: David Restaino, Esq.
Deputy Attorney General

David Weisman, President (w/enc.)
Elan Chemical Company

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
CN 093
TRENTON 08625

ROBERT J. DEL TUFO
ATTORNEY GENERAL

EDWARD J. DAUBER
ASSISTANT ATTORNEY GENERAL
DIRECTOR

(609) 984-7243

RECEIVED
SEP 1 1992

August 28, 1992

The Honorable Edith Klinger
Administrative Law Judge
Office of Administrative Law
185 Washington Street
Newark, New Jersey 07102

Re: NJDEPE v. Elan Chemical Co., Inc.
OAL Docket No. EHW 4406-92-N
Agency Ref. No. HM-041-90

Dear Judge Klinger:

Please accept this letter in response to Ms. Henig-Elona's letter dated August 19, 1992, as regards paragraph 14 of the Prehearing Order.

Important to note is the fact that Elan Chemicals is indeed claiming that the materials contained in certain of its drums are not solid waste nor hazardous, but are reusable. Elan Chemicals bears the burden of proving it is not waste. N.J.A.C. 7:26-1.13. If these materials were to be determined by your Honor as not waste, certainly there would be no "ongoing violations." Until that time, however, the Department objects to agreeing that there is no such ongoing violations since Elan Chemicals may be illegally storing these materials if they are waste. As such, it reiterates its position that paragraph 14 be deleted, in order to protect itself in case that contingency arises.

Moreover, the fact that Elan's environmental consultant "believes" that the on-site contamination was not caused by Elan does nothing to change the fact that paragraph 14 must be deleted. Initially, the Memorandum of Agreement itself merely suggests that fill material is the cause:

> Limited soil contamination exists in the area of the property previously used for drum storage. Chromium, probably associated

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> with the fill underlying the property, is present in elevated concentrations both on-site and off-site. See Sampling Result Report. [Memorandum of Agreement application at page 3, number 11 (emphasis added).]

Furthermore, the Department has yet to concur with the consultant's belief, and as such it refuses to have that clean-up issue prejudiced by a single sentence in the Prehearing Order.

Based on the above, the Department reiterates its position that paragraph 14 be amended to delete the sentence contained therein. If you wish, I am available at your convenience to discuss this matter further.

Respectfully submitted,

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY

By:
David Restaino
Deputy Attorney General

c.: Lee Henig-Elona, Esquire
Clapp & Eisenberg
One Newark Center
Newark, NJ 07102

CLAPP & EISENBERG
A Professional Corporation
One Newark Center
Newark, New Jersey 07102
(201) 642-3900
Attorneys for Applicant

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY, DIVISION OF HAZARDOUS WASTE MANAGEMENT, Petitioner, v. ELAN CHEMICAL COMPANY, INCORPORATED, Respondent.	OFFICE OF ADMINISTRATIVE LAW OAL DOCKET NO. EHW 04406-92N AGENCY DOCKET NO. HM-041-90 **APPLICANT'S FIRST SET OF INTERROGATORIES TO THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY**

TO: David Restaino, DAG
Division of Law
Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

PLEASE TAKE NOTICE THAT, pursuant to N.J.A.C. 1:1-10.2(a), Elan Chemical Company (hereinafter "Elan"), the applicant for an administrative hearing in the above-captioned matter, submits the following Interrogatories to be answered by the New Jersey State Department of Environmental Protection and Energy, under oath and within thirty (30) days from receipt thereof, the time prescribed by the Court's case management order.

PLEASE TAKE FURTHER NOTICE that these Interrogatories are continuing in nature, requiring the respondent to amend or

supplement its answers to the Interrogatories if those answers later prove to be incorrect or incomplete.

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DEFINITIONS

1. The term "the Applicant" means Elan Chemical Company, and its officers, directors, shareholders, employees, agents, representatives, attorneys, consultants, and others acting on its behalf.

2. The term "the DEP" means the New Jersey State Department of Environmental Protection and Energy, its officers, employees, agents, representatives, attorneys, consultants and others acting on its behalf, including the Division of Hazardous Waste Management.

3. The term "plant" means the Applicant's chemical manufacturing facility, located at 268 Doremus Avenue, Newark, New Jersey.

4. The term "Administrative Order" means the Administrative Orders and Notice of Civil Administrative Penalty Assessment issued to the Applicant by the DEP's Division of Hazardous Waste Management in connection with alleged violations of N.J.A.C. Chapter 7 dated April 17, 1991. This Administrative Order describes alleged violations found during inspections conducted by representatives of the DEP at Elan on June 14, 1990 and July 9, 1990.

5. The term "the alleged failure to mark containers" means the alleged failure to clearly mark containers with the date when the accumulation period began and with the words "Hazardous

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Waste", in violation of N.J.A.C. 7:26-9.3(a)3, as allegedly observed June 14, 1990 and as alleged in the Administrative Order.

6. The term "the alleged personnel training violation" means the alleged failure to provide classroom or on-the-job training for facility personnel, in violation of N.J.A.C. 7:26-9.4(g), as allegedly observed June 14, 1990 and as alleged in the Administrative Order.

7. The term "the alleged aisle space violation" means the alleged failure to maintain sufficient aisle space for the unobstructed movement of personnel or equipment in an emergency, in violation of N.J.A.C. 7:26-9.6(e), as allegedly observed June 14, 1990 and as alleged in the Administrative Order.

8. The term "the alleged contingency plan violation" means the alleged failure to list emergency equipment in the contingency plan, with its location, description or capabilities specified, in violation of N.J.A.C. 7:26-9.7(g), as allegedly observed June 14, 1990 and as alleged in the Administrative Order.

9. The term "the alleged failure to determine if solid waste was hazardous" means the alleged failure to identify certain containers of hazardous waste as F005 waste, in violation of N.J.A.C. 7:26-8.5(a), as allegedly observed July 9, 1990 and as alleged in the Administrative Order.

10. The term "the Alleged Violations" means any and all of the alleged violations of N.J.A.C. 7:26-9.3(a)3, N.J.A.C.

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7:26-9.4(g), N.J.A.C. 7:26-9.7(g), N.J.A.C. 7:26-9.6(e) and N.J.A.C. 7:26-8.5(a) identified in the previous five paragraphs.

11. The term "you" or "your" mean the DEP, its agents, representatives, attorneys, consultants and others acting on its behalf, including, but not limited to the Division of Hazardous Waste Management.

12. The term "person" means and includes natural persons, firms, associations, corporations, partnerships, governmental or other entities; and whenever a request is made for the name of a person, it is the intention that the answer shall also state his, her or its address.

13. The term "concerning" means and includes: with respect to, referring to, establishing, evidencing, constituting, comprising of, commenting on, responding to, showing, describing, analyzing, regarding, reflecting, presenting, containing or mentioning.

14. The term "document" means the original and any nonidentical copy of any written, typed, recorded or graphic matter, however produced and/or reproduced, including without limitation any tapes, recordings, or other forms of mechanical or electronic reproduction and including information stored in any electronic data storage, retrieval or processing device or system or any other thing considered to be a "document" under Rule 4:18-1 of the Rules Governing Civil Practice.

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15. The terms "identify" and "identity," when used in reference to a natural person, mean to state a) his or her full name; b) home and business addresses; c) present employer and title; d) education, training and background as would be set forth in a curriculum vitae; and e) telephone number.

16. the terms "identify" and "identity," when used in reference to corporate or other business entities, mean to state the name of the entity and its principal business address and telephone number.

17. The terms "identify" and "identity" when used in reference to a document, mean to state: the date and author; type of document (e.g., letter, memorandum, photograph, telegram, etc.), or some other means of identifying it; the general nature or description of the subject matter of such document; the name of each person to whom such document was addressed, copied, or sent; and its present location or custodian. If any such document was, but is no longer in your possession or subject to your control, state what disposition was made of it.

Instructions

1. If you claim any form of privilege as a ground for not answering an Interrogatory or any part thereof, set forth in complete detail the facts upon which the privilege is based, including sufficient facts to enable the tribunal to make a full determination as to the validity of the claim of privilege.

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2. Wherever an Interrogatory calls for the identification of a document or nonwritten communication claimed to be privileged or otherwise protected from disclosure, include in the statement of the identity of such document or nonwritten communication the fact of such claim of privilege and the basis asserted for such claim.

In addition, as to any document claimed to be privileged, list:

a. the author(s) of the document;

b. all recipients of the document, whether or not identified on the face of the document;

c. the subject matter of the document;

d. the date of the document;

e. the basis for the privilege claimed;

f. a statement of all facts necessary to permit adjudication of the claim of privilege.

3. Where an Interrogatory calls for the "full factual basis" supporting an allegation or denial, furnish the following information:

a. set forth all facts known to you that support the allegation or denial;

b. identify all persons with knowledge of those facts;

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c. identify all documents that you contend provide a factual basis for the allegation or denial, and attach true copies thereof; and

d. if you contend that conversation(s) occurred that provide a factual basis for the allegation or denial, identify all persons participating in the conversation(s), and set forth the date, place and time of each conversation and the words spoken by each person. If the words are not known with precision, set forth a summary of what was said by each person.

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INTERROGATORIES

1. Identify (as that term is defined herein) the person answering these interrogatories on behalf of the DEP.

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2. Identify all persons with knowledge of facts concerning the alleged failure to mark containers, and for each such person, describe with particularity the knowledge he or she possesses.

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3. Identify all persons with knowledge of facts concerning the alleged personnel training violation and for each such person, describe with particularity the knowledge he or she possesses.

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4. Identify all persons with knowledge of facts concerning the alleged aisle space violation and for each such person, describe with particularity the knowledge he or she possesses.

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5. Identify all persons with knowledge of facts concerning the alleged contingency plan violation and for each such person, describe with particularity the knowledge he or she possesses.

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6. Identify all persons with knowledge of facts concerning the alleged failure to determine if solid waste was hazardous, and for each such person, describe with particularity the knowledge he or she possesses.

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7. Identify and attach copies hereto of all documents in your possession, custody or control concerning the alleged failure to mark containers including but not limited to field notes, sketches, witness complaints and reports and photographs.

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8. Identify and attach copies hereto of all documents in your possession, custody or control concerning the alleged personal training violation, including but not limited to field notes, sketches, witness complaints and reports and photographs.

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9. Identify and attach copies hereto of all documents in your possession, custody or control concerning the alleged contingency plan violation, including but not limited to field notes, sketches, witness complaints and reports and photographs.

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10. Identify and attach copies hereto of all documents in your possession, custody or control concerning the alleged aisle space violation, including but not limited to field notes, sketches, witness complaints and reports and photographs.

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11. Identify and attach copies hereto of all documents in your possession, custody or control concerning the alleged failure to determine if solid waste was hazardous, including but not limited to field notes, sketches, witness complaints and reports and photographs.

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12. If any document identified in response to Interrogatories 7 through 11 no longer exists or is no longer in your possession, custody or control, identify each such document, state the present or last known location of the document, and state the date on which each document ceased to exist or ceased to be within your possession, custody or control.

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13. For each Alleged Violation (as that term is described herein), identify each person who investigated the violation, and with respect to each such person:

a. state the person's educational history;

b. state the person's current job title, as well as his or her job title at the time of the investigation;

c. describe the person's duties, functions and responsibilities in each of those positions;

d. describe the person's training, including but not limited to any training in investigating alleged violations of New Jersey regulations concerning hazardous waste; and

e. describe the person's job experience, including but not limited to any experience in investigating alleged violations of New Jersey regulations concerning hazardous waste, and in investigating alleged violations concerning chemical manufacturing facilities.

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14. For the alleged failure to mark containers, provide a complete description of the investigation undertaken by the DEP, including but not limited to:

a. all observations made by the investigator(s);

b. all actions taken to determine the alleged contents of the relevant containers;

c. all persons contacted by the DEP;

d. all persons interviewed by the DEP;

e. all reports or other documents prepared in the course of the investigation;

f. all persons involved in the preparation of the Administrative Order issued as to the alleged violation; and

g. all persons consulted in preparing the Administrative Order issued as to the alleged violation.

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15. For the alleged personnel training violation, provide a complete description of the investigation undertaken by the DEP, including but not limited to:

a. all observations made by the investigator(s);

b. all persons contacted by the DEP;

c. all persons interviewed by the DEP;

d. all reports or other documents prepared in the course of the investigation;

e. all persons involved in the preparation of the Administrative Order issued as to the alleged violation; and

f. all persons consulted in preparing the Administrative Order issued as to the alleged violation.

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16. For the alleged aisle space violation, provide a complete description of the investigation undertaken by the DEP, including but not limited to:

a. all observations made by the investigator(s);

b. all persons contacted by the DEP;

c. all persons interviewed by the DEP;

d. all reports or other documents prepared in the course of the investigation;

e. all persons involved in the preparation of the Administrative Order issued as to the alleged violation; and

f. all persons consulted in preparing the Administrative Order issued as to the alleged violation.

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17. For the alleged contingency plan violation, provide a complete description of the investigation undertaken by the DEP, including but not limited to:

a. all observations made by the investigator(s);

b. all persons contacted by the DEP;

c. all persons interviewed by the DEP;

d. all reports or other documents prepared in the course of the investigation;

e. all persons involved in the preparation of the Administrative Order issued as to the alleged violation; and

f. all persons consulted in preparing the Administrative Order issued as to the alleged violation.

847521043

18. For the alleged failure to determine if solid waste was hazardous, provide a complete description of the investigation undertaken by the DEP, including but not limited to:

a. all observations made by the investigator(s);

b. all actions taken to determine the alleged contents of the relevant containers;

c. all persons contacted by the DEP;

d. all persons interviewed by the DEP;

e. all reports or other documents prepared in the course of the investigation;

f. all persons involved in the preparation of the Administrative Order issued as to the alleged violation; and

g. all persons consulted in preparing the Administrative Order issued as to the alleged violation.

847521044

19. If you have obtained a statement from any person concerning the plant, the Alleged Violations, or any other issue in this case, set forth the substance of each such statement and, as to each statement, identify:

a. the person who gave the statement;

b. the person who obtained the statement;

c. all persons present when the statement was given;

d. the date and place of each such statement;

e. whether the statement was recorded and, if so, the nature and present custody of the recording; and

f. attach hereto a copy of any such statement which was made in writing, and a transcript of any oral statement which was recorded.

847521045

20. If you contend that any declaration against interest has been made by any party or any person with regard to the Alleged Violations or any other issue in this case:

a. set forth the date and place of each such declaration against interest;

b. identify the person making each declaration against interest;

c. identify all other persons present when each declaration against interest was made;

d. set forth the substance of each declaration against interest; and

e. identify all documents that reflect, refer or relate to each declaration against interest and attach true copies thereof.

847521046

21. Identify each person whom you expect to call as an expert witness at the hearing in this case, and with respect to each such expert:

a. state the subject matter on which the expert is expected to testify;

b. state the qualifications of the expert which enable him or her to render an opinion on such subject, and attach a copy of the expert's curriculum vitae;

c. state the substance of the facts and opinions to which the expert is expected to testify, and a summary of the grounds for each such opinion;

d. state the substance, in detail, of all oral reports, conclusions and comments given by the expert in connection with the subject matter about which he or she is expected to testify;

e. attach a copy of all written reports rendered by the expert in connection with the subject matter about which he or she is expected to testify;

f. for each expert witness, state what information and documents he or she reviewed, examined or analyzed in rendering an opinion and attach true copies of these documents; and

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g. for each expert, list any textbook, article, paper or other authority he or she intends to rely upon or to offer into evidence at the trial to substantiate any opinions or conclusions.

847521048

22. Identify each person whom you expect to call as a fact witness at the hearing in this case, and with respect to each such witness, describe the subject matter on which the witness is expected to testify.

847521049

23. Identify and attach a copy of each and every unreported decision of any court of law or the Office of Administrative Law upon which you intend to rely at the hearing in this case.

847521050

24. As to the alleged failure to mark containers, state

a) the specific duration of the alleged violation; and

b) the nature and extent of the harm to human health or environment caused by the alleged violation.

847521051

25. As to the alleged personnel training violation, state

a) the specific duration of the alleged violation; and

b) the nature and extent of the harm to human health or environment caused by the alleged violation.

847521052

26. As to the alleged aisle space violation, state

a) the specific duration of the alleged violation; and

b) the nature and extent of the harm to human health or environment caused by the alleged violation.

847521053

27. As to the alleged contingency plan violation, state

a) the specific duration of the alleged violation; and

b) the nature and extent of the harm to human health or environment caused by the alleged violation.

847521054

28. As to the alleged failure to identify hazardous waste, state

a) the specific duration of the alleged violation; and

b) the nature and extent of the harm to human health or environment caused by the alleged violation.

CLAPP & EISENBERG
A Professional Corporation
Attorneys for Elan Chemical Company

By: _____
Lee Henig-Elona

Dated: August 19, 1992

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847521055

ROBERT J. DEL TUFO
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Attorney for NJDEPE
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OFFICE OF ADMINISTRATIVE LAW
OAL DOCKET NO. EHW 4406-92-N
AGENCY REF. NO. HM-041-90

ELAN CHEMICAL CO., INC.	)	
Petitioner,	)	Administrative Action
v.	)	INTERROGATORIES, REQUESTS FOR PRODUCTION OF DOCUMENTS, AND REQUESTS FOR ADMISSIONS
STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY, OFFICE OF ENFORCEMENT POLICY,	)	
Respondent.	)	

TO: LEE HENIG-ELONA, ESQUIRE
Clapp & Eisenberg
A Professional Corporation
One Newark Center
Newark, New Jersey 07102
Attorneys for Elan Chemical Co., Inc.

847521056

PLEASE TAKE NOTICE that the State of New Jersey, Department of Environmental Protection and Energy, hereby demands that written answers be furnished under oath to the following Interrogatories, and responses be provided to its Request for Production of Documents and Requests for Admissions, in the time and manner prescribed by N.J.A.C. 1:1-10 of the rules of the Office of Administrative Law, within fifteen (15) days of service.

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY

By: David Restaino
David Restaino
Deputy Attorney General

DATED: 8-31-92

847521057

DEFINITIONS

The following definitions shall apply herein except where otherwise indicated by words or context:

1. "State," "DEPE" or "the Department" means the State of New Jersey, Department of Environmental Protection and Energy, as well as its agents, employees, representatives, and such persons acting on its behalf.

2. "Address" means the present or last known street name and number, city or town, state, and zip code.

3. "Document," "Documents," "Documentation" or "written communications" refers to any written, printed, typed, photographed, recorded or graphic matter, however produced or reproduced, including without limitation all bills, receipts, accounts, photographs, charts, drawings, X-rays, diagrams, maps, memoranda of conversations or other communications, diaries, invoices, surveys, ledgers, papers, books, documents, records, checks, files, writings, memoranda, letters (sent or received), periodicals, telegrams, indexes, tables, bulletins, booklets, vouchers, notebooks, working papers, discs, tapes, data processing cards, financial statements, contracts, and notes which are now, or were at any time, in the possession, custody or control of ELAN. This includes, as to all items, original documents, drafts and all copies where applicable, tape recordings, mechanical recordings or

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similar recordings and any log and/or transcript, and any other tangible things of a similar nature, which are in the custody, possession or control of the party to whom these Interrogatories are addressed.

4. "Identify" or "identification," when used in reference to:

(a). an individual person, mean to state his or her (i) full name, (ii) residence address, (iii) business address, and (iv) present or last known business affiliation.

(b). a company, corporation, association, partnership or any legal entity other than an individual person, these terms mean to state its (i) full name and type of organization or entity, (ii) address and principal place of business, and (iii) the jurisdiction and date of incorporation or organization.

(c). a document, mean to state (i) the type of document (e.g., letter, memorandum, etc.), or some other means of identifying it, (ii) its title and date, (iii) the number of pages thereof, (iv) its subject matter, (v) the identity of its author, signer, and any person who participated in its preparation, (vi) the identity of its addressee or recipient, (vii) the identity of each person to whom copies were sent and each person by whom copies were received, and (viii) its present location or custodian.

If any such document was, but is no longer, in your possession or subject to your control, state what disposition was made of it and when.

5. "Elan" means Elan Chemical Company, Incorporated, and its employees, officers, agents, and assigns and each person acting or purporting to act on its behalf, and any representative or legal counsel authorized to answer to Elan.

6. For the purposes of these interrogatories, Elan is interchangeable with "you, "your," and "yourself."

7. "Person" includes natural or juridical persons, including without limitation firms, proprietorships, associations, partnerships, corporations, unincorporated associations, any governmental bodies, commissions, boards or agencies, and every other type of organization or entity, or if appropriate or indicated any divisions, subsidiaries or departments of persons.

8. "Subject property" or "site" means the property which is the subject of this case, also known as 268 Doremus Avenue, City of Newark, Essex County, New Jersey, including Lot(s) 8 and 20, Block(s) 4014.

9. "Order," "Administrative Order," or "AO/NOCAPA" mean the Administrative Order and Notice of Civil Administrative Penalty Assessment issued to Elan (with DEPE reference number HM-041-90) and dated April 17, 1991.

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10. The term "interrogatory" shall include requests for admissions and requests for production of documents, and shall include each of the questions asked below.

11. All other words herein have their ordinary meaning.

DIRECTIONS

A. If additional space is required to answer any interrogatory completely, use appropriately-captioned additional sheets and indicate the interrogatory being answered.

B. All demands for answers, including those which require the furnishing of documents, are continuing demands. You are therefore requested, by way of supplementary answers or amendments thereto, to provide such additional information as you, or any person on your behalf, may hereafter obtain which will augment or modify the answers now given.

C. These interrogatories are to be answered and certified by the named party, and, where applicable, a representative of the corporate party (or other legal person, if not a corporation) having authority sufficient that the corporation is bound by such answers. You are also requested to identify separately for each Interrogatory all persons and documents consulted by you in preparing your answer thereto.

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D. All references to the singular pronoun shall be construed as the plural pronoun where applicable. All references to the masculine pronoun shall be construed as feminine where applicable and vice versa.

E. Whenever an Interrogatory calls upon you to "state" information of a particular kind, your answer should:

(a) set forth every item of pertinent information that you possess; and

(b) as to each such item, identify every individual and identify and attach every document constituting a source of such item of information.

F. If any answer is given which states an objection to an interrogatory on any ground, please state specifically and completely said ground and the nature of the objection. Please answer the remainder of the interrogatory should it be only partially objectionable.

1. State your full name, present address, date of birth and the capacity in which you are answering these interrogatories.

2. Set forth the date upon which: (a) these interrogatories were received by you and (b) on which they were answered by you.

847521063

3. Do you admit that you own a facility located at the subject property? If your answer is "no," please set forth specifically and completely the reasons for your answer, including the address which you contend is correct.

4. Do you admit that you generate hazardous waste at a facility located at the subject property? If your answer is "no," please set forth specifically and completely the reasons for your answer, including the address which you contend is correct.

847521064

5. Identify and state the present address of any and all persons having knowledge of any relevant facts relating to the events giving rise to the AO/NOCAPA contested here.

6. With regard to each individual named in answer to the preceding interrogatory, please state your relationship to said person and give a narrative description of all the relevant facts within that person's knowledge.

847521065

7. Identify and attach any and all documents which have any bearing on the factual questions at issue in this case. Please also identify all such documents not in your possession that you are aware of and please state their location.

8. Identify which documents will be relied upon by you and/or introduced in evidence by you.

847521066

9. If you or anyone acting on your behalf, are in possession of (or know of the existence of) any photographs, maps or diagrams of the instrumentalities, locality, or any other thing or matter involved in this litigation -- including photos of the drums of materials which are the subject of the alleged N.J.A.C. 7:26-8.5(a) violation -- please state:

(a) the dates and times when such photographs, maps or diagrams were taken or made;

(b) the names and addresses of the persons who took or made them and the name and address of their employers;

(c) where the photographs were taken or the subject matter of the maps or diagrams;

(d) the objects or subjects of the particular site or view which each photograph, map or diagram represents; and

(e) the present location of the photographs, maps or diagrams and the name and address of the persons presently in custody and control thereof.

847521067

10. Identify all persons whom you expect to call as fact witnesses.

11. As to each person named in answer to the preceding interrogatory:

(a) state the subject matter on which he or she is expected to testify;

(b) state the substance of the facts and opinions to which the witness is expected to testify and give a summary of the grounds for each opinion;

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(c) state his or her field of expertise;

(d) set forth the full and detailed qualifications, training, professional and practical experience, education and degree obtained by each person. As to each item listed in answer to this, part (d) of this interrogatory, set forth the relevant dates and/or years of same, as well as the names and addresses of each institution attended. Furthermore, set forth the nature of each place at which experience or training was received;

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(e) attach to your answers to these interrogatories copies of all written reports or statements of all witnesses. If any report or statement was not reduced to writing, set forth completely the substance of such report or statement, and the date and to whom it was made. If recorded, attach a transcript of such report or statement.

(f) Identify all articles or publications of any nature authored by each of the witnesses, which relate in any way to his or her field of expertise or the subject matter of his or her anticipated testimony. As to each such article or publication, identify the publisher and set forth the date and location of publication.

847521070

12. Identify all persons whom you expect to call as expert witnesses.

13. As to each person named in answer to the preceding interrogatory:

(a) state the subject matter on which he or she is expected to testify;

(b) state his or her field of expertise;

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(c) state the substance of the facts and opinions to which the witness is expected to testify and give a summary of the grounds for each opinion;

(d) state the date when their opinions were rendered;

(e) state whether said opinions were written or oral;

(f) state the date(s) when said experts made their examinations or inspections;

(g) set forth the full and detailed qualifications, training, professional and practical experience, education and degree obtained by each person. As to each item listed in answer to this sub-part of this interrogatory, set forth the relevant dates and/or years of same, as well as the names and addresses of each institution attended. Furthermore, set forth the nature of each place at which experience or training was received;

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(h) attach to your answers to these interrogatories copies of all written reports or statements of all witnesses. If any report or statement was not reduced to writing, set forth completely the substance of such report or statement, and the date and to whom it was made. If recorded, attach a transcript of such report or statement.

(i) Identify all articles or publications of any nature authored by each of the witnesses, which relate in any way to his or her field of expertise or the subject matter of his or her anticipated testimony. As to each such article or publication, identify the publisher and set forth the date and location of publication.

847521074

14. Set forth the names and addresses of any persons, other than those already identified as expert witnesses, who have been retained, specifically employed or consulted by you in anticipation of litigation or preparation for litigation and who are not expected to be called as expert witnesses. As to each person so identified, please answer items (a) through (i) of the preceding interrogatory.

15. With regard to each individual identified in the three preceding interrogatories, please identify by case name and docket number any cases (other than the within litigation) in which said individuals have appeared as well as the names of any counsel in said actions.

847521075

16. If you or your expert witnesses intend to rely upon or offer into evidence any textbook, paper or authority to substantiate any opinions and conclusions or to rely upon the same in your examination or cross examination of any experts, please state:

(a) the exact title of each such textbook, paper or authority;

(b) the name of the author of each;

(c) the name and address of the publisher of each;

(d) the date each was published.

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17. Do you dispute any of the 5 Findings made by the Department in the AO/NOCAPA? If so, please list which Finding(s) you dispute, and, as to each, please also state (a) each and every fact you will rely upon to support your dispute with these finding(s), and (b) specifically and completely the legal basis for your contention.

18. State specifically and attach all documents regarding all remedial action taken by you, or on your behalf, to comply with paragraphs 6 and 7 of the "Order" contained in the AO/NOCAPA. Please also specify the dates of all action taken.

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19. State specifically those conclusions of fact and/or law contained in the AO/NOCAPA which you do not admit and set forth, specifically, the factual and/or legal basis for any contention that any conclusion is incorrect.

20. State specifically those conclusions of fact and/or law contained in the AO/NOCAPA which you do admit.

847521078

21. Provide a full, detailed description of the facts which support your defense, if any, that you will set forth at the hearing of this administrative proceeding to the allegations set forth in the AO/NOCAPA. Include true copies of all documents, if any, which support each defense, whether or not such documents are admissible.

22. Please set forth all facts you contend relate to any defense you intend to raise. Attach copies of any proofs, supporting documents, writings, records or tangible evidence for each such fact.

847521079

23. Provide the full, detailed and specific legal defense, if any, you will set forth at the hearing of this administrative proceeding to the allegations set forth in the AO/NOCAPA. Include true copies of all documents, if any, which support such defense, whether or not such documents are admissible. Set forth the specific statutory, regulatory or other citation(s) of authority which support each defense.

847521080

24. State specifically and completely any precise constitutional infirmity you are alleging with respect to the {{penalty}} in the AO/NOCAPA. Your answer should include, without limitation, the specific identification of any statute, regulation or penalty which you claim is unconstitutional either facially or applied to you and the precise constitutional provision you rely upon for each of your assertions.

25. If it is your position that any of DEPE's regulations are not a reasonable interpretation of the enabling legislation, please set forth in detail all facts supporting that position and please also identify the specific regulation and the specific portion of the enabling legislation which support your position.

847521081

26. If you contend that the prosecutions involved in this matter are violative of any of your rights, constitutional or otherwise, set forth all facts within your knowledge which relate to such allegation(s).

27. Do you contest the amount of the penalty imposed by the Department in the AO/NOCAPA?

847521082

28 If your answer to the preceding interrogatory was in the affirmative, please set forth specifically and completely the precise **factual** basis upon which you will rely to establish that the penalty assessed in the AO/NOCAPA is inappropriate or should be reduced.

29. If your answer to interrogatory number 27 was in the affirmative, please set forth specifically and completely the precise **legal** basis upon which you will rely to establish that the penalty assessed in the AO/NOCAPA is inappropriate or should be reduced.

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30. In lieu of the penalty assessed in the AO/NOCAPA, what (if any) penalty do you maintain is an appropriate amount which should have been assessed in this case?

31. State specifically and completely the precise factual **and/or** legal basis upon which you will rely to establish that the penalty amount set forth in your above response, is appropriate.

847521084

32. Is it contended that any admissions with regard to the issues in this case have been made by any party hereto or by any agent, servant or employee of any party hereto?

33. If the answer to the preceding interrogatory is in the affirmative, set forth the exact words, if known. If not known, set forth the substance of each such admission, the name and address of the person making the admission, the names and addresses of all persons present when the admission was made, the place, date and time it was made. If the admission was reduced to writing, annex a copy hereto.

847521085

34. Is it contended that any declarations against interest with regard to the issues in this case have been made by any party hereto or by an officer, agent or employee of any party hereto?

35. If the answer to the preceding interrogatory is in the affirmative, set forth the exact words, if known. If not known, set forth the substance of each such declaration against interest, the name and address of the person making the declaration against interest, the names and addresses of all persons present when the declaration against interest was made, and the place, date and time when it was made. If the declaration against interest was reduced to writing, annex a copy hereto.

847521086

36. If you or your attorney have taken, obtained or received oral or written statements of any persons, relevant to the subject matter of this litigation, please:

a) state the names and current addresses of the persons whose statements were taken;

b) state the dates upon which said statements were taken;

c) state the names and current addresses of the persons by whom said statements were taken;

d) state whether said statements were oral or written, and/or recorded;

e) indicate, if written, in whose possession said statements presently are, and whether said statements were signed by those persons;

f) indicate, if oral and/or recorded, the substance of said statements, and attach a transcript if applicable;

g) indicate, if recorded, the nature and present custody of the recordings; and

h) attach true and exact copies of each statement.

847521088

37. Please state (a) the total number of containers of materials referenced in paragraph 3 of the AO/NOCAPA; (b) their specific location on the subject property; (c) how high these containers were stacked; and (d) the aisle space (in inches) between the containers.

38. Please state the number of containers which you contend (in paragraph D of your May 6, 1991 request for an administrative hearing, hereinafter "hearing request") are usable or intermediate materials.

847521089

39. Please state whether any of the materials that you contend are usable (in paragraph D of your hearing request) were stored in the same general location on the subject property as any materials which were later determined to be solid or hazardous waste. If so, please identify which alleged usable containers your response refers to, and the location of all such containers.

847521090

40. As to the containers referenced in your answer to interrogatory number 38, have any tests, studies or analyses ever been performed with regard the contents of these containers? If so, please set forth the following for each of the containers referenced in interrogatory number 38:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis.

847521091

41. Have any substances been spilled, dripped, poured, leaked, emitted, released, or otherwise discharged, onto land or waters at the subject property in full strength or mixed with other substances, from the containers which you contend (in paragraph D of your hearing request) are usable? If so, set forth in detail:

a. The name(s) and chemical constituents of each such substance and from which container it emanated;

b. The date(s) of all such discharges;

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c. The amount discharged;

d. The manner in which each discharge took place, including the equipment and processes involved;

e. The location at the subject property of each discharge;

f. Any tests, studies, or investigations performed by any person of such discharges. Identify and attach to your answer hereto copies of all documents concerning same.

847521093

42. If the answer to the preceding question was in the affirmative, please state how you intended to reuse the materials which had so spilled, dripped, poured, leaked, emitted, released, or otherwise discharged, and please also state how those materials were not solid or hazardous waste.

847521094

43. Is it admitted that some of the containers, which you contend (in paragraph D of your hearing request) are usable, were on June 14, 1990 corroded, rusting leaking or rotting? If your answer is "no," please set forth specifically and completely the reasons for your answer. If your answer is "yes," please state the exact number of containers to which you are referring, and please specifically identify each container.

847521095

44. If your answer to the preceding question was in the affirmative, have any tests, studies or analyses ever been performed with regard the contents of these containers? If so, please set forth the following for each such container:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis.

847521096

45. Is it admitted that some of the containers, which you contend (in paragraph D of your hearing request) are usable, were on June 14, 1990 not securely closed, or had corroded or missing or unsecured lids? If your answer is "no," please set forth specifically and completely the reasons for your answer. If your answer is "yes," please state the exact numbers of containers to which you are referring and specifically identify each such container.

847521097

46. If your answer to the preceding question was in the affirmative, have any tests, studies or analyses ever been performed with regard the contents of these containers and/or with regard to the release of vapors from these containers? If so, please set forth the following for each such container:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis.

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47. Please state specifically and completely how each of the containers referenced in answer to question 38 are usable.

48. Please describe specifically and completely the nature of your processes in which you contend the materials referenced in answer to question number 38 are usable.

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49. Please state specifically and completely the number of times you have run each of the processes referenced in the preceding question, since June 14, 1990, and please also identify and attach all relevant production records which support your answer.

50. Please state specifically and completely the material used in each of the processes referenced in your answer to question number 48.

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51. Please list specifically and completely the nature of all your different production processes.

52. Please state specifically and completely the material used in each of these processes.

847521101

53. Is it admitted that some of the materials referenced in paragraph 3 of the AO/NOCAPA, including those which you contend are usable, are flammable or explosive in nature? If the answer is "no," please set forth specifically and completely the reasons for your answer.

54. If the answer to the preceding question was in the affirmative, please (a) specifically identify each container which did contain flammable or explosive materials; (b) the specific contents of that container, including an identification of all chemical constituents; (c) the exact location of this container on the subject property; (d) how high the drums above, below and surrounding this container were stacked; and (e) the aisle space (in inches) of the aisle in which this container was located.

55. Have any actions been taken to manifest, and dispose of, any of the containers referenced in paragraph 3 of the AO/NOCAPA? If so, please set forth the following:

a. The date the action occurred -- and the precise location to where the containers were shipped or disposed of -- and please also identify the person who performed it;

b. Identify each document referring or relating in any way to each such action and annex hereto a copy of each document, including all manifests;

c. Describe in complete detail the contents of the containers, e.g., the exact percentages of the chemical constituents in the container.

847521103

56. As to the containers referenced in paragraph 3 of the AO/NOCAPA, which have been manifested or disposed of, have any tests, studies or analyses ever been performed with regard the contents of these containers? If so, please set forth the following for each such container:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis;

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d. Describe in complete detail how these materials are not reusable in your processes. Include in your answer a detailed description of all processes to which you refer, and what materials are necessary for those processes.

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57. As to the containers referenced in paragraph 3 of the AO/NOCAPA, which have been manifested or disposed of, please state (a) the date(s) when the materials therein were originally placed in any container, and (b) the date(s) when these materials were transferred (if at all) to a different container.

58. As to the containers referenced in paragraph 3 of the AO/NOCAPA, which have been manifested or disposed of, please state what was written on any labels attached to each such container on June 14, 1990.

847521106

59. Have any substances been spilled, dripped, poured, leaked, emitted, released, or otherwise discharged, onto land or waters at the subject property in full strength or mixed with other substances, from the containers referenced in paragraph 3 of the AO/NOCAPA (excluding those which you contend (in paragraph D of your hearing request) are usable)? If so, set forth in detail:

a. The name(s) and chemical constituents of each such substance and from which container it emanated;

b. The date(s) of all such discharges;

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c. The amount discharged;

d. The manner in which each discharge took place, including the equipment and processes involved;

e. The location at the subject property of each discharge;

f. Any tests, studies, or investigations performed by any person of such discharges. Identify and attach to your answer hereto copies of all documents concerning same.

847521108

60. Is it admitted that some of the containers referenced in paragraph 3 of the AO/NOCAPA were on June 14, 1990 corroded, rusting leaking or rotting? If your answer is "no," please set forth specifically and completely the reasons for your answer, including the address which you contend is correct. If your answer is "yes," please state the exact numbers of containers to which you are referring.

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61. If your answer to the preceding question was in the affirmative, have any tests, studies or analyses ever been performed with regard the contents of these containers? If so, please set forth the following as to each such container:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis.

847521110

62. Is it admitted that some of the containers referenced in paragraph 3 of the AO/NOCAPA were on June 14, 1990 not securely closed, or had corroded or missing or unsecured lids? If your answer is "no," please set forth specifically and completely the reasons for your answer. If your answer is "yes," please state the exact numbers of containers to which you are referring.

847521111

63. If your answer to the preceding question was in the affirmative, have any tests, studies or analyses ever been performed with regard the contents of these containers and/or with regard to the release of vapors from these containers? If so, please set forth the following as to each such container:

a. The date of each such test, study, or analysis, and please also identify the person who performed it;

b. Identify each document referring or relating in any way to any such test, study, or analysis performed, and annex hereto a copy of each document;

c. Describe in complete detail the nature and results of each test, study, or analysis.

847521112

64. Please state specifically and completely the classroom or on-the-job training given your facility personnel prior to June 14, 1990, and please also state the specific date(s) of all such training.

65. Please identify and attach all documents which support your denial, in paragraph C.2. of your hearing request, of the findings in paragraph 2(h) of the AO/NOCAPA.

847521113

66. Please attach a copy of your contingency plan which was in effect on June 14, 1990.

67. Please specifically refer to the location in your contingency plan, in effect on June 14, 1990, of the emergency equipment and its location at your facility, its description and its capabilities.

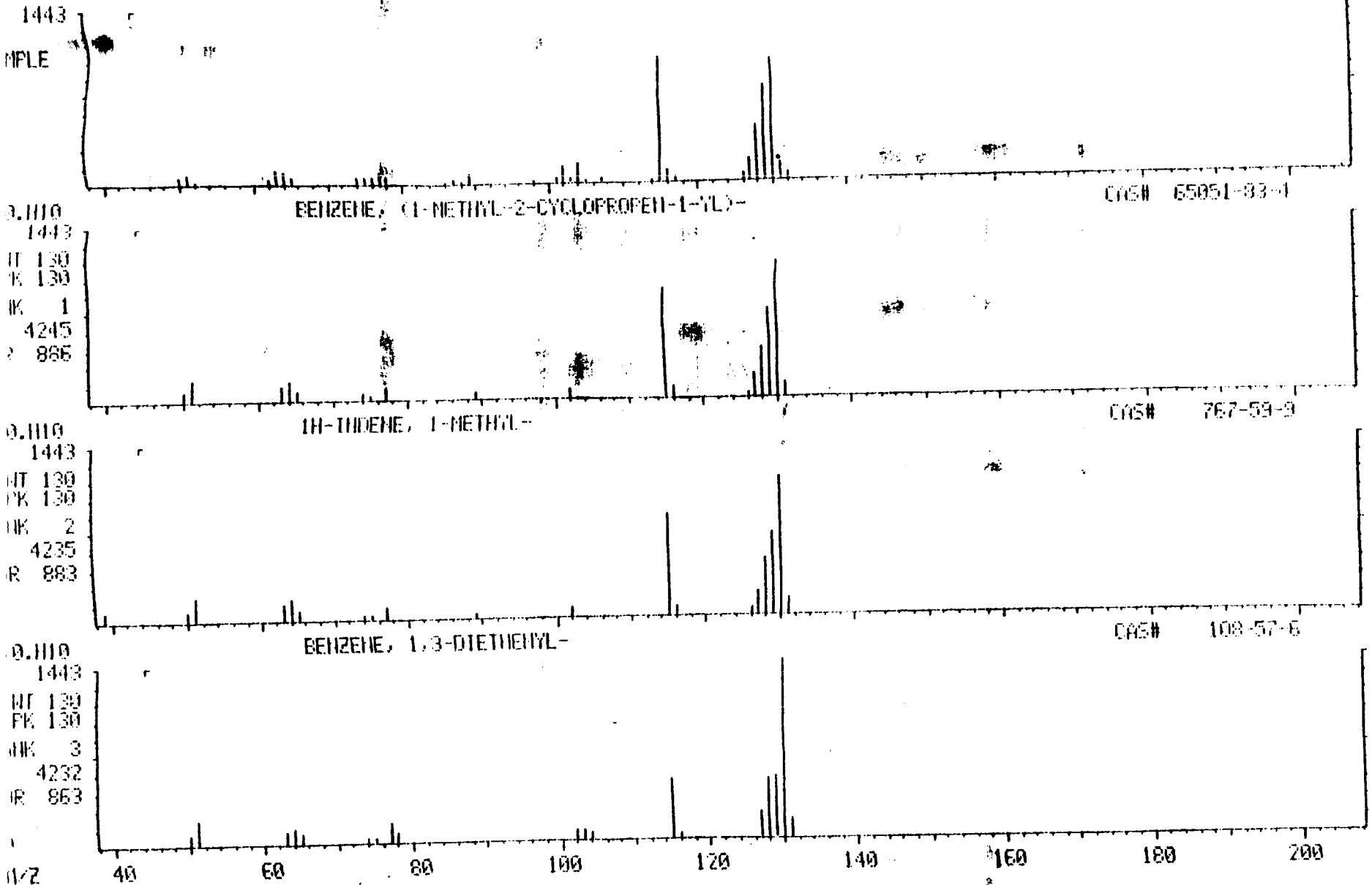
847521114

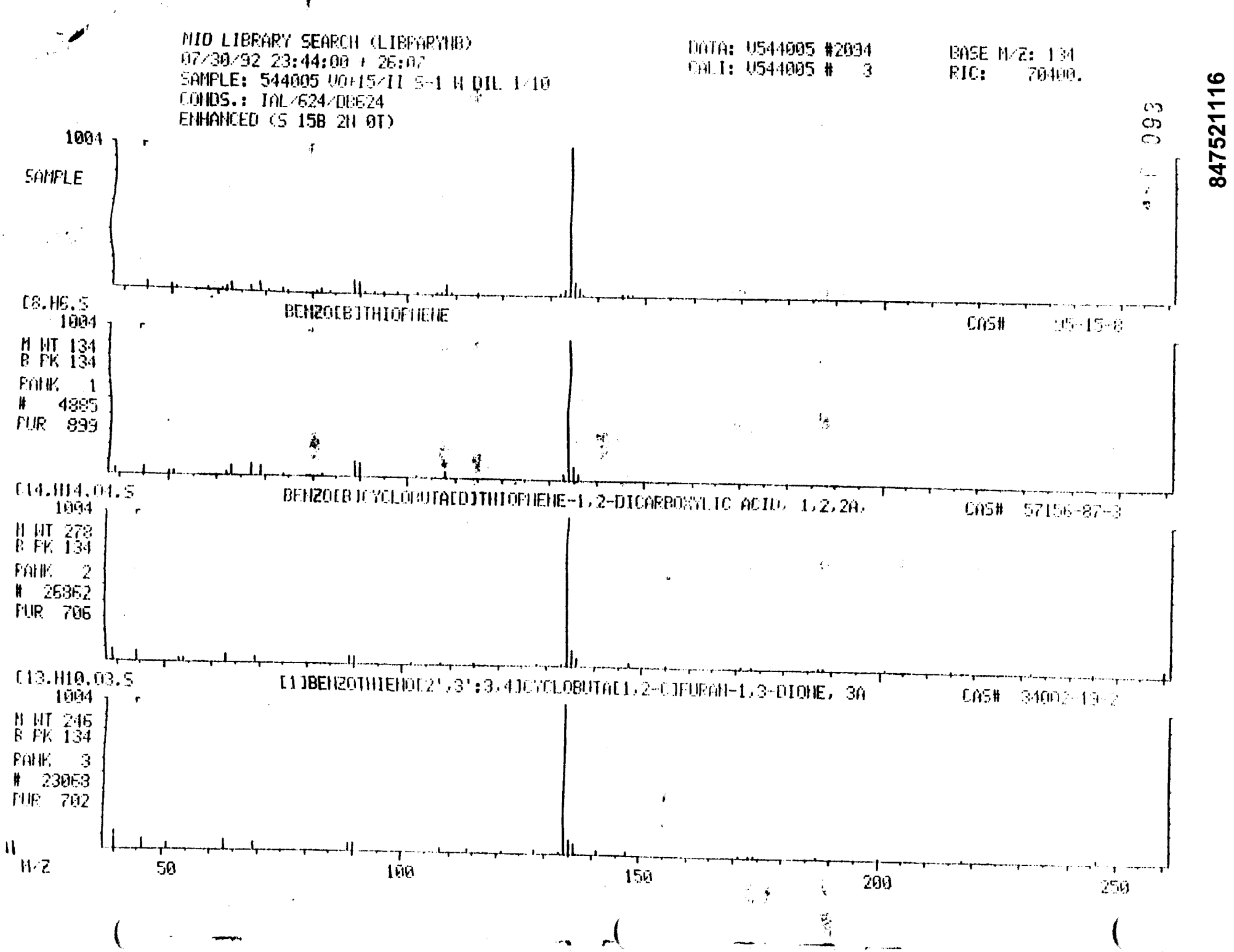
MID LIBRARY SEARCH (LIBRARYHB)
07/30/92 23:44:00 + 25:32
SAMPLE: 544005 (0+15/II S-1 W DIG 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: U544005 #2048
CALI: U544005 # 3

BASE M/Z: 115
RIC: 10344.

847521115



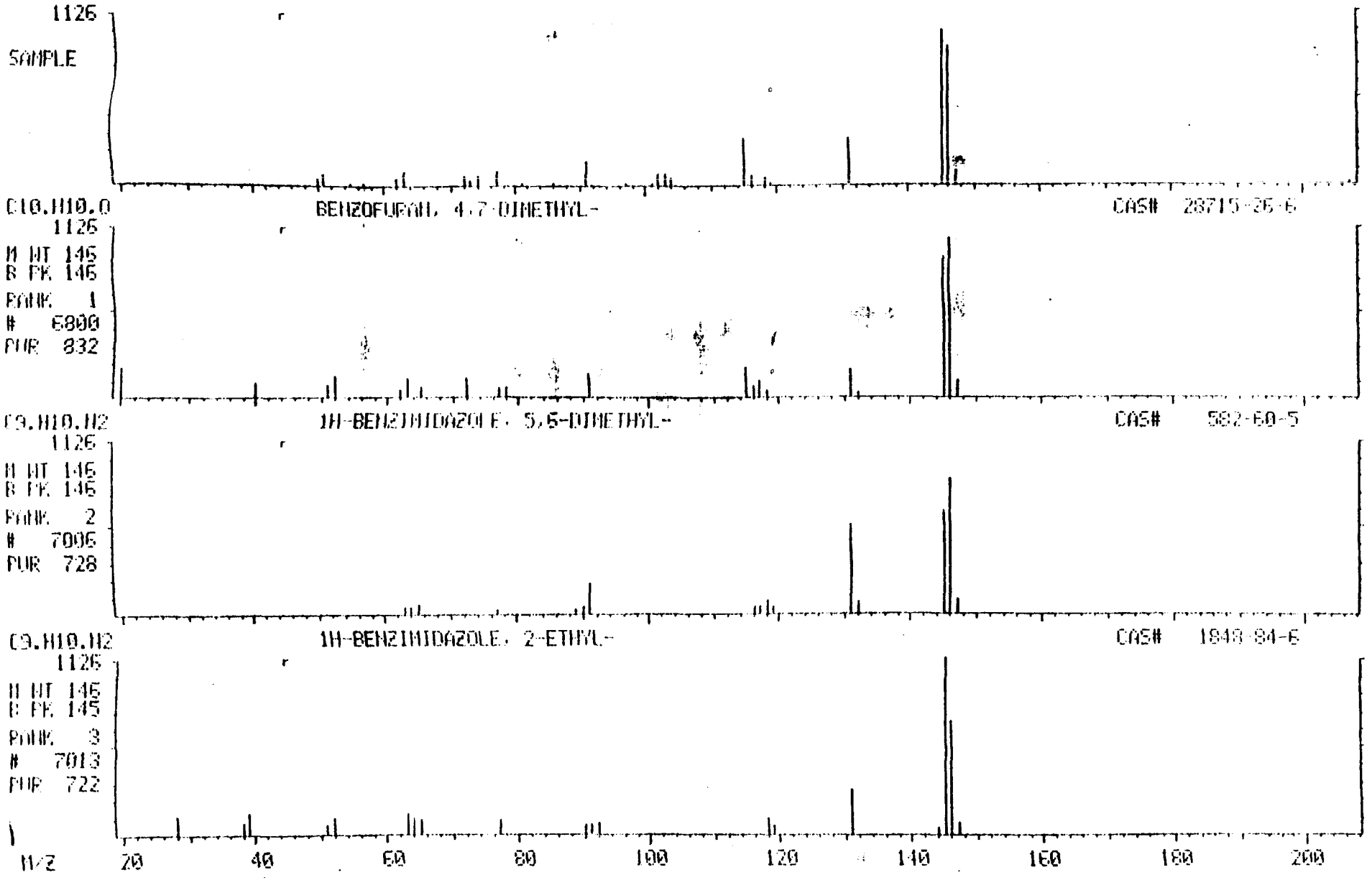

NIO LIBRARY SEARCH (LIBRARYNB)
07/30/92 23:44:00 + 26:07
SAMPLE: 544005 VOA15/II 5-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544005 #2004
CALI: V544005 # 3
BASE M/Z: 134
RIC: 70400.
1004
SAMPLE
C8.H6.S
BENZO[B]THIOPHENE
CAS# 95-15-8
1004
M WT 134
B PK 134
RANK 1
4885
PUR 899
C14.H14.04.S
BENZO[B]CYCLOBUTA[D]THIOPHENE-1,2-DICARBOXYLIC ACID, 1,2,2A,
CAS# 57156-87-3
1004
M WT 278
B PK 134
RANK 2
26862
PUR 706
C13.H10.03.S
[1]BENZOTHIENO[2',3':3,4]CYCLOBUTA[1,2-C]FURAN-1,3-DIONE, 3A
CAS# 34002-19-2
1004
M WT 246
B PK 134
RANK 3
23063
PUR 702
M/Z
50
100
150
200
250

847521116

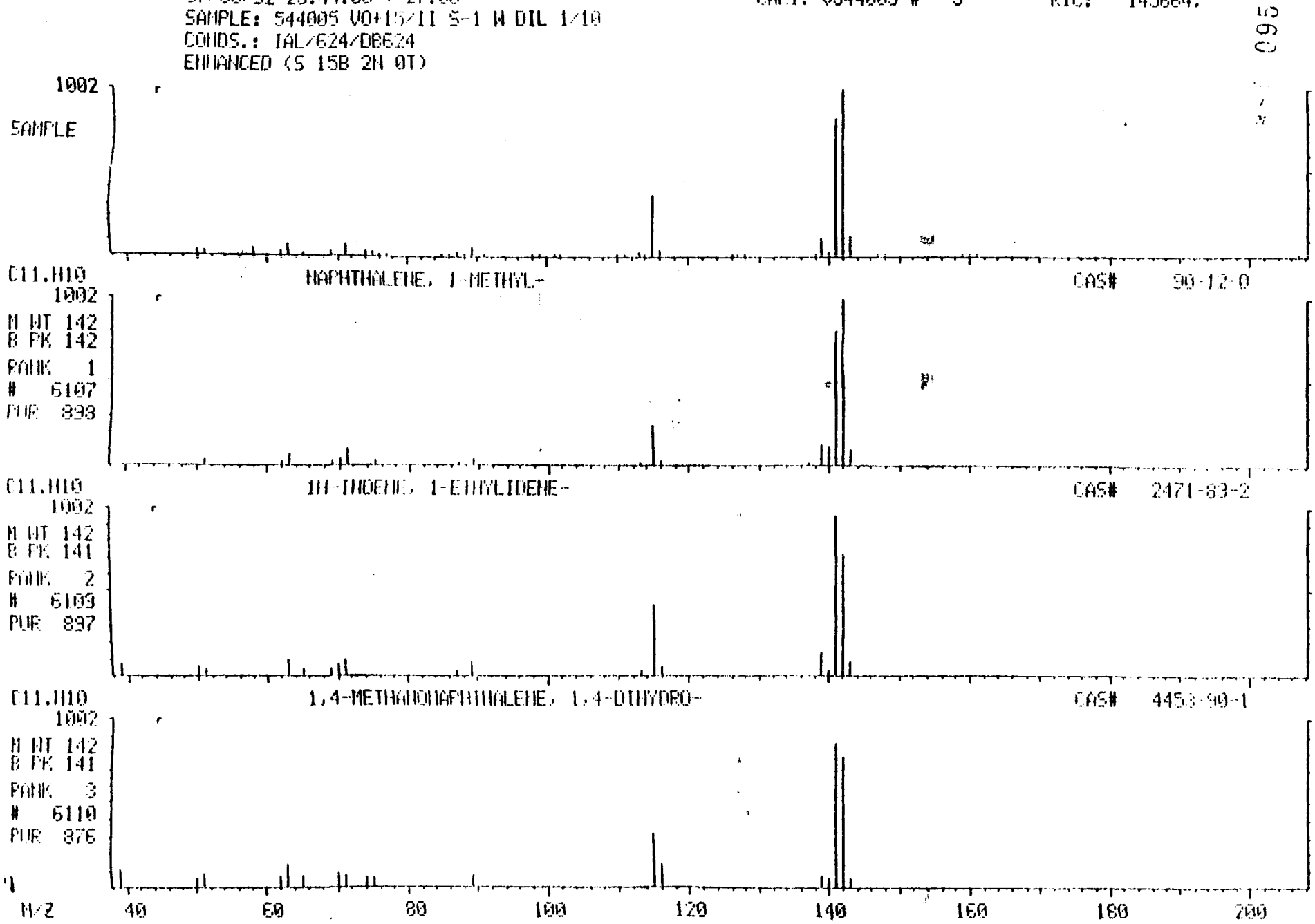
MID LIBRARY SEARCH (LIBRARYNB)
07/30/92 23:44:00 + 26:14
SAMPLE: 544005 VO+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544005 #2104
CALI: V544005 # 3

BASE M/Z: 145
RIC: 3904.



847521117

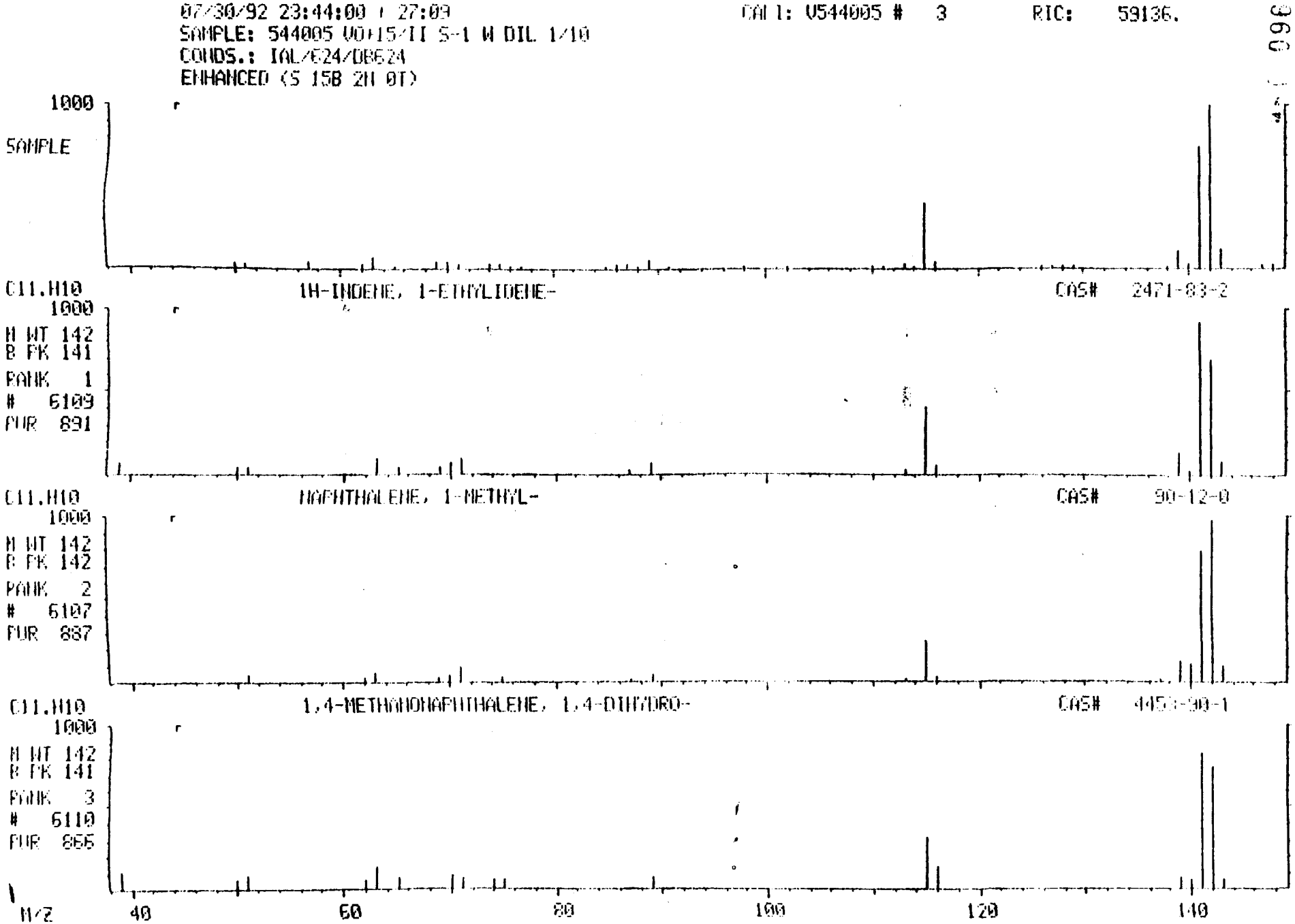

NIO LIBRARY SEARCH (LIBRARY/NB)
07/30/92 23:44:00 + 27:00
SAMPLE: 544005 VO+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544005 #2165
CAL.: V544005 # 3
BASE M/Z: 142
RIC: 145664.
1002
SAMPLE
C11.H10
NAPHTHALENE, 1-METHYL-
CAS# 90-12-0
1002
M WT 142
B PK 142
RANK 1
6107
PUR 838
C11.H10
1H-INDENE, 1-ETHYLIDENE-
CAS# 2471-83-2
1002
M WT 142
B PK 141
RANK 2
6109
PUR 897
C11.H10
1,4-METHANONAPHTHALENE, 1,4-DIHYDRO-
CAS# 4453-90-1
1002
M WT 142
B PK 141
RANK 3
6110
PUR 876
M/Z
40
60
80
100
120
140
160
180
200

847521118

MID LIBRARY SEARCH (LIBRARYNB)
07/30/92 23:44:00 + 27:09
SAMPLE: 544005 VO+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544005 #2177
CAL 1: V544005 # 3

BASE M/Z: 142
RIC: 59136.



847521119

Quantitation Report File: V544005A

Data: V544005A.TI
08/04/92 20:41:00
Sample: 544005 VO+15/II S-1 W DIL 1/50 RERUN
Conds.: IAL/624/DB624
rmula: NA Instrument: FINN Weight: 0.000
ubmitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

097

847521120

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	653	8:09	1	1.000	A BB	10875.	50.000	UG/L	15.33
2	114	845	10:32	2	1.000	A BB	34291.	50.000	UG/L	15.33
3	117	1326	16:32	3	1.000	A BB	35045.	50.000	UG/L	15.33
4	65	756	9:26	1	1.158	A BB	15375.	53.424	UG/L	16.38
5	98	1082	13:29	2	1.280	A BB	33131.	40.719	UG/L	12.48
6	95	1543	19:14	3	1.164	A BB	27232.	54.768	UG/L	16.79
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	381	4:45	1	0.583	A VV	358.	1.362	UG/L	0.42
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	78	753	9:23	2	0.891	A BB	2741.	4.866	UG/L	1.49
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1092	13:37	2	1.292	A BB	28616.	31.981	UG/L	9.80
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1360	16:57	3	1.026	A BB	1642.	1.520	UG/L	0.47
31	91	1383	17:15	3	1.043	A BB	1219.	0.653	UG/L	0.20
32	91	1383	17:15	3	1.043	A BB	1219.	0.653	UG/L	0.20
33	91	1450	18:05	3	1.094	A BB	961.	0.954	UG/L	0.29
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	73	432	5:23	1	0.662	A BV	986.	1.699	UG/L	0.52
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:06	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:23	1.01	1.157	1.00	53.42	50.00	1.414	1.323	1.07
5	13:28	1.00	1.281	1.00	40.72	50.00	0.966	1.186	0.81
6	19:14	1.00	1.165	1.00	54.77	50.00	0.777	0.709	1.10
7	1:28		0.182						

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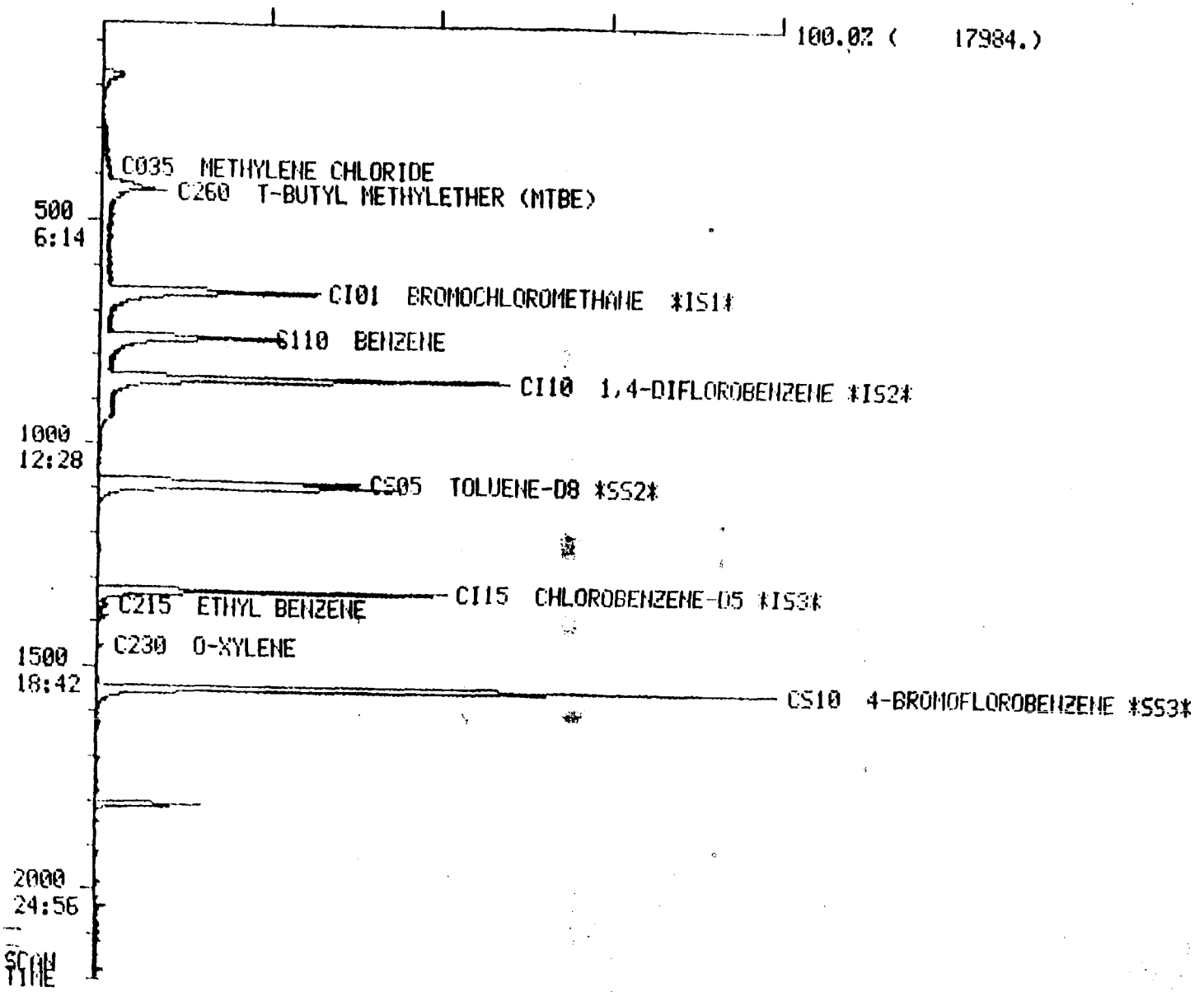
847521121

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
8	1:34		0.194						
9	2:00		0.246						
0	2:07		0.262						
1	3:26		0.423						
12	4:42	1.01	0.580	1.01	1.36	50.00	0.033	1.208	0.03
13	5:16		0.651						
14	6:13		0.766						
15	8:29		1.046						
16	8:35		1.058						
17	8:55		1.100						
18	9:23	1.00	0.892	1.00	4.87	50.00	0.080	0.821	0.10
19	9:32		0.907						
20	10:53		1.036						
21	11:18		1.075						
22	12:03		1.147						
23	13:02		1.240						
24	13:36	1.00	1.294	1.00	31.98	50.00	0.834	1.305	0.64
25	14:18		1.361						
26	14:37		1.390						
27	14:42		1.399						
28	15:20		1.459						
29	16:34		1.003						
30	16:57	1.00	1.026	1.00	1.52	50.00	0.047	1.541	0.03
31	17:14	1.00	1.043	1.00	0.65	50.00	0.035	2.661	0.01
32	17:14	1.00	1.043	1.00	0.65	50.00	0.035	2.661	0.01
33	18:04	1.00	1.094	1.00	0.95	50.00	0.027	1.437	0.02
34	18:25		1.115						
5	19:49		1.199						
6	21:41		1.312						
37	21:55		1.327						
38	22:43		1.375						
39	5:22	1.00	0.662	1.00	1.70	100.00	0.045	2.667	0.02
40	6:16		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

DF FROM FILE: V544005A SCANS 60 TO 2200 ACQ ED: 08/04/92 20:41:00
CALI: V544005A #3
SAMPLE: 544005 VO+15/II S-1 W DIL 1/50 RERUN
CONDS.: INL/624/DB624



847521123

Quantitation Report File: V544006

Data: V544006.TI
07/31/92 0:20:00
Sample: 544006 VO+15/II S-2 W DIL 1/10
Mnds.: IAL/624/DB624
mula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLORDBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
?	C115	1,2-DICHLOROETHANE
?	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

847521124

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	652	8:08	1	1.000	A BB	18742.	50.000	UG/L	1.70
2	114	846	10:33	2	1.000	A BB	98862.	50.000	UG/L	1.70
3	117	1329	16:34	3	1.000	A BB	103793.	50.000	UG/L	1.70
4	65	754	9:24	1	1.156	A BB	31921.	56.498	UG/L	1.92
5	98	1087	13:33	2	1.285	A BB	109793.	52.449	UG/L	1.78
6	95	1547	19:17	3	1.164	A BB	79118.	52.019	UG/L	1.77
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	374	4:40	1	0.574	A*BV	263.	0.623	UG/L	0.02
13	NOT FOUND									
14	NOT FOUND									
15	83	682	8:30	1	1.046	A BB	573.	0.438	UG/L	0.01
16	NOT FOUND									
17	NOT FOUND									
18	78	755	9:25	2	0.892	A BB	19047.	12.217	UG/L	0.42
19	62	768	9:35	2	0.903	A BB	2111.	3.044	UG/L	0.10
20	NOT FOUND									
21	63	912	11:22	2	1.078	A BB	36.	0.061	UG/L	0.00
22	NOT FOUND									
23	NOT FOUND									
24	91	1098	13:41	2	1.298	A BB	4532240.	1860.570	UG/L	63.29
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	112	1333	16:37	3	1.003	A BB	7463.	3.662	UG/L	0.12
30	91	1363	17:00	3	1.026	A BB	20259.	6.271	UG/L	0.21
31	91	1387	17:18	3	1.044	A BB	27818.	4.427	UG/L	0.15
32	91	1387	17:18	3	1.044	A BB	27818.	4.427	UG/L	0.15
33	91	1454	18:08	3	1.094	A BB	13722.	4.258	UG/L	0.14
34	NOT FOUND									
35	NOT FOUND									
36	146	1761	21:57	3	1.325	A BB	3380.	2.082	UG/L	0.07
37	146	1761	21:57	3	1.325	A BB	3380.	1.938	UG/L	0.07
38	NOT FOUND									
39	73	435	5:25	1	0.667	A BB	7753.	TIC 7.757	UG/L	0.26
40	NOT FOUND									
41	59	465	5:48	1	0.713	A BB	31.	TIC 6.191	UG/L	0.21
42	NOT FOUND									
43	128	2088	26:02	3	1.571	A BB	1128820.	TIC 719.566	UG/L	24.48
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

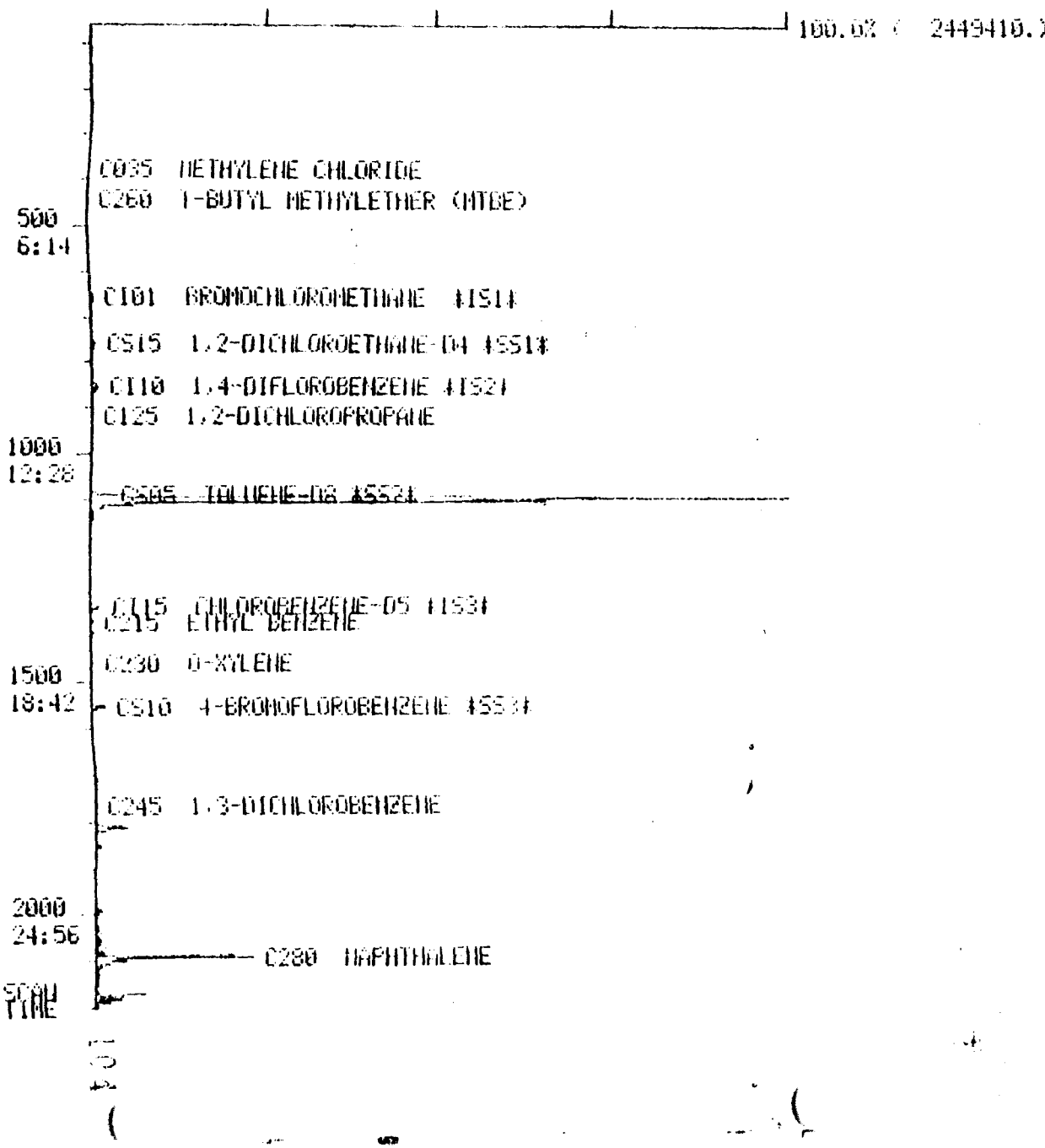
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	56.50	50.00	1.703	1.507	1.13
5	13:31	1.00	1.280	1.00	52.45	50.00	1.111	1.059	1.05
6	19:18	1.00	1.164	1.00	52.02	50.00	0.762	0.732	1.04
7	1:25		0.175						

847521125

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:23		0.416						
12	4:38	1.01	0.569	1.01	0.62	50.00	0.014	1.126	0.01
13	5:14		0.644						
14	6:11		0.761						
15	8:29	1.00	1.044	1.00	0.44	50.00	0.031	3.487	0.01
16	8:35		1.057						
17	8:56		1.098						
18	9:25	1.00	0.891	1.00	12.22	50.00	0.193	0.789	0.24
19	9:34	1.00	0.906	1.00	3.04	50.00	0.021	0.351	0.06
20	10:55		1.033						
21	11:21	1.00	1.074	1.00	0.06	50.00	0.000	0.301	0.00
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	1860.58	50.00	45.844	1.232	37.21
25	14:21		1.359						
26	14:39		1.387						
27	14:46		1.398						
28	15:24		1.458						
29	15:38	1.00	1.003	1.00	3.66	50.00	0.072	0.982	0.07
30	17:00	1.00	1.026	1.00	6.27	50.00	0.195	1.556	0.13
31	17:18	1.00	1.043	1.00	4.43	50.00	0.266	3.005	0.09
32	17:18	1.00	1.043	1.00	4.43	50.00	0.266	3.005	0.09
33	18:08	1.00	1.093	1.00	4.26	50.00	0.132	1.562	0.09
34	18:29		1.114						
35	19:52		1.198						
36	21:45	1.01	1.311	1.01	2.08	50.00	0.033	0.782	0.04
37	21:59	1.00	1.326	1.00	1.94	50.00	0.033	0.840	0.04
38	22:47		1.374						
39	5:22	1.01	0.662	1.01	7.76	100.00	0.207	2.667	0.08
40	6:16		0.810						
41	5:41	1.02	0.700	1.02	6.19	1000.00	0.000	0.013	0.01
42	7:51		0.981						
43	26:03	1.00	1.569	1.00	719.57	50.00	10.876	0.756	14.39
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521126

DATA FROM FILE: 0544006 SCANS 60 TO 2200 ACQUIRED: 07/31/92 0:20:00
CALI: 0544006 #3
SAMPLE: 544006 00:15/11 5-2 W 10IL 1/10
CONDS.: IAL/624/00624



847521127

Quantitation Report File: V5--006

Data: V544006.TI
07/31/92 0:20:00
Sample: 544006 VO-15/II S-2 W DIL 1/10
Conds.: IAL/624/D8624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=HEIGHT * REF AMNT/(REF HEIGHT * RESP FACT)
Resp. fac. from Library Entry

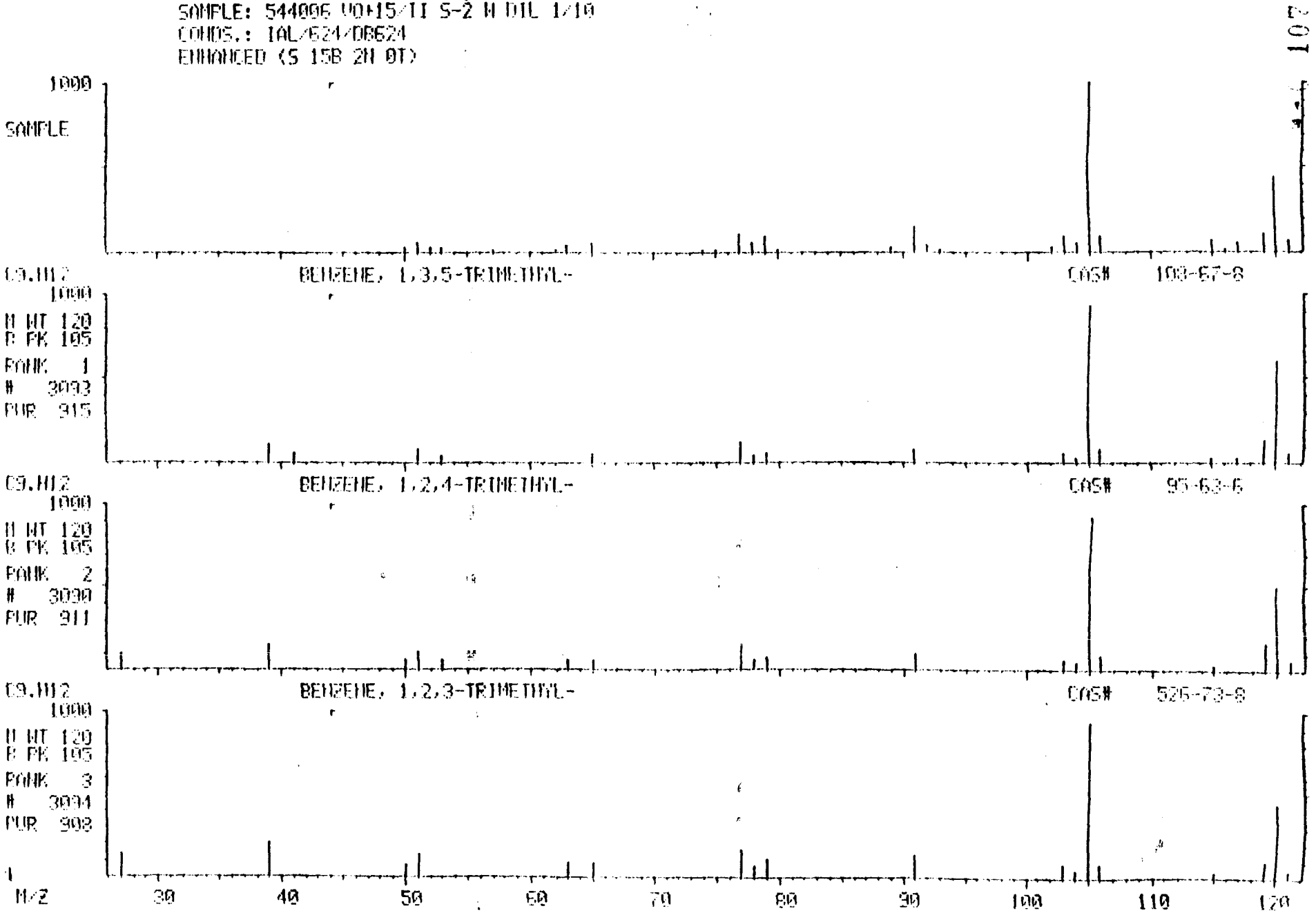
No	CAS #	Name
1	0-00-0	CI01 BROMOCHLOROMETHANE *IS1*
2	0-00-0	CI10 1,4-DIFLOROBENZENE *IS2*
3	0-00-0	CI15 CHLOROBENZENE-D5 *IS3*
4	108-67-8	BENZENE, 1,3,5-TRIMETHYL-
5	611-15-4	BENZENE, 1-ETHENYL-2-METHYL-
6	673-32-5	BENZENE, 1-PROPYNYL-
7	17059-52-8	BENZOFURAN, 7-METHYL-
8	768-00-3	BENZENE, (1-METHYL-1-PROPENYL)-, (E)-
9	0-00-0	UNKNOWN
10	3454-07-7	BENZENE, 1-ETHENYL-4-ETHYL-
11	36444-19-9	ETHANONE, 1-(METHYLPHENYL)-
12	622-76-4	BENZENE, 1-BUTYNYL-
13	0-00-0	UNKNOWN
14	65051-83-4	BENZENE, (1-METHYL-2-CYCLOPROPEN-1-YL)-
15	95-15-8	BENZOCBITHIOPHENE
16	28715-26-6	BENZOFURAN, 4,7-DIMETHYL-
17	0-00-0	UNKNOWN
18	2471-83-2	1H-INDENE, 1-ETHYLIDENE-
19	2471-83-2	1H-INDENE, 1-ETHYLIDENE-

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	TOT	652	8:08	1	1.000	A BB	7360.*	50.000	UG/L	5.02
2	TOT	846	10:33	2	1.000	A BB	15563.*	50.000	UG/L	5.02
3	TOT	1329	16:34	3	1.000	A BB	28298.*	50.000	UG/L	5.02
4	TOT	1705	21:16	3	1.283	A BB	8043.*	14.217		1.43
5	TOT	1809	22:33	3	1.361	A BB	99538.*	175.938		17.68
6	TOT	1849	23:03	3	1.391	A BB	11205.*	19.805		1.99
7	TOT	1986	24:46	3	1.494	A BB	16811.*	29.715		2.99
8	TOT	2019	25:10	3	1.519	A BB	9421.*	16.652		1.67
9	TOT	2036	25:23	3	1.532	A BV	767.*	1.355		0.14
10	TOT	2036	25:23	3	1.532	A BV	14816.*	26.188		2.63
11	TOT	2037	25:24	3	1.533	A BV	5359.*	9.471		0.95
12	TOT	2042	25:28	3	1.536	A VV	6154.*	10.878		1.09
13	TOT	2052	25:35	3	1.544	A VB	10709.*	18.932		1.91
14	TOT	2052	25:35	3	1.544	A VB	11022.*	19.482		1.96
15	TOT	2097	26:09	3	1.578	A VB	65913.*	116.503		11.71
16	TOT	2107	26:16	3	1.585	A VB	5535.*	9.783		0.98
17	TOT	2115	26:22	3	1.591	A BB	1058.*	1.871		0.19
18	TOT	2159	27:03	3	1.632	A BV	145664.*	257.465		25.87
19	TOT	2181	27:12	3	1.641	A VB	66176.*	116.968		11.75

847521128

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:38	1.23	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:24	1.12	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:40	1.06	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4					14.22	1.00	14.217	1.000	14.22
5					175.94	1.00	175.938	1.000	175.94
6					19.81	1.00	19.805	1.000	19.81
7					29.71	1.00	29.715	1.000	29.71
8					16.65	1.00	16.652	1.000	16.65
9					1.35	1.00	1.355	1.000	1.35
10					26.19	1.00	26.188	1.000	26.19
11					9.47	1.00	9.471	1.000	9.47
12					10.88	1.00	10.878	1.000	10.88
13					18.98	1.00	18.982	1.000	18.98
14					19.48	1.00	19.482	1.000	19.48
15					116.50	1.00	116.503	1.000	116.50
16					9.78	1.00	9.783	1.000	9.78
17					1.87	1.00	1.871	1.000	1.87
18					257.47	1.00	257.466	1.000	257.47
19					118.97	1.00	118.968	1.000	118.97

847521129

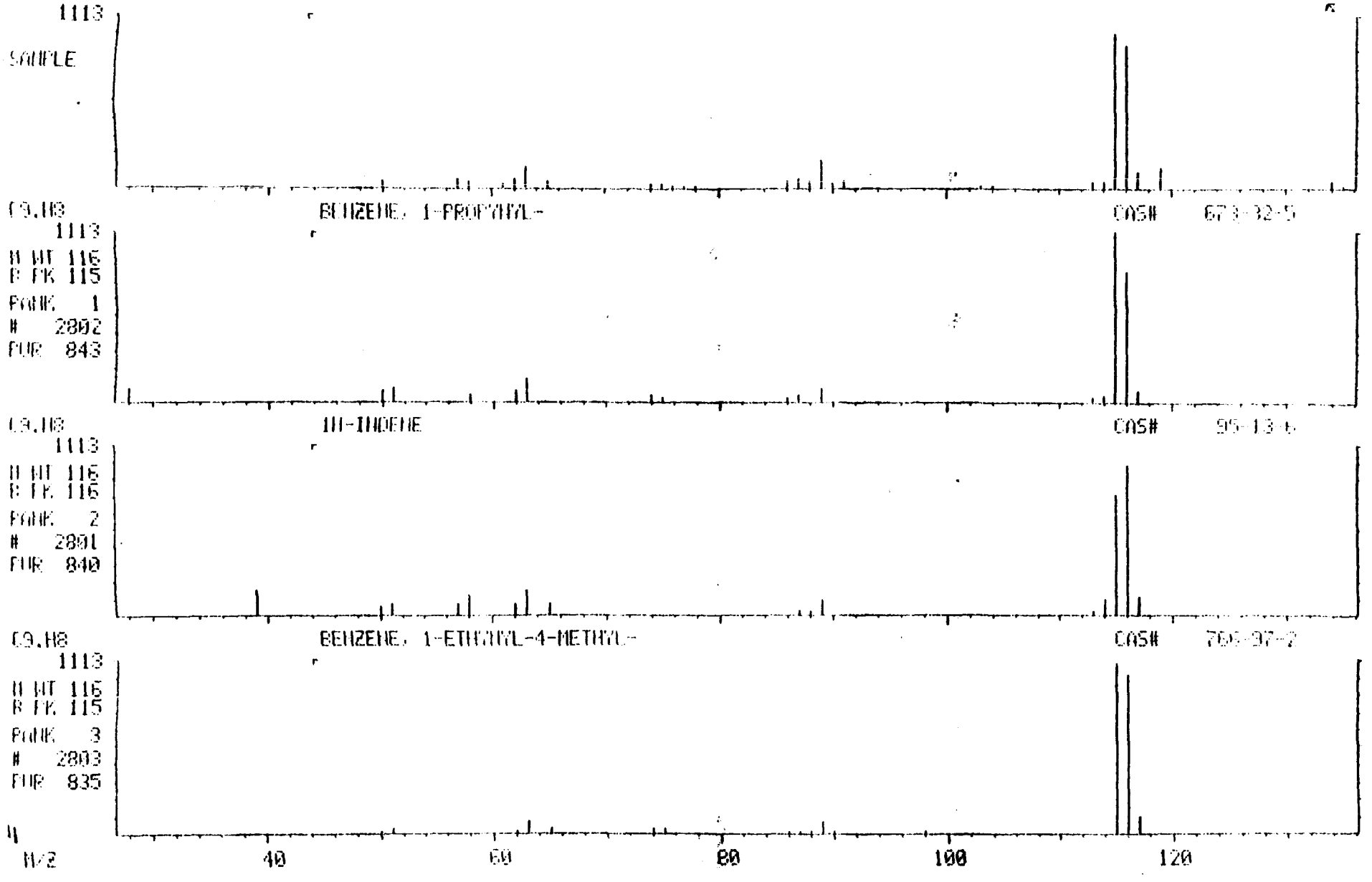

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 21:16
SAMPLE: 544006 V0+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544006 #1706
CALI: V544006 # 3
BASE M/Z: 105
RIC: 6896.
SAMPLE
C9.H12
BENZENE, 1,3,5-TRIMETHYL-
CAS# 108-67-8
M WT 120
B PK 105
RANK 1
3093
PUR 915
C9.H12
BENZENE, 1,2,4-TRIMETHYL-
CAS# 95-63-6
M WT 120
B PK 105
RANK 2
3030
PUR 911
C9.H12
BENZENE, 1,2,3-TRIMETHYL-
CAS# 526-73-8
M WT 120
B PK 105
RANK 3
3094
PUR 908
M/Z
30
40
50
60
70
80
90
100
110
120

847521130

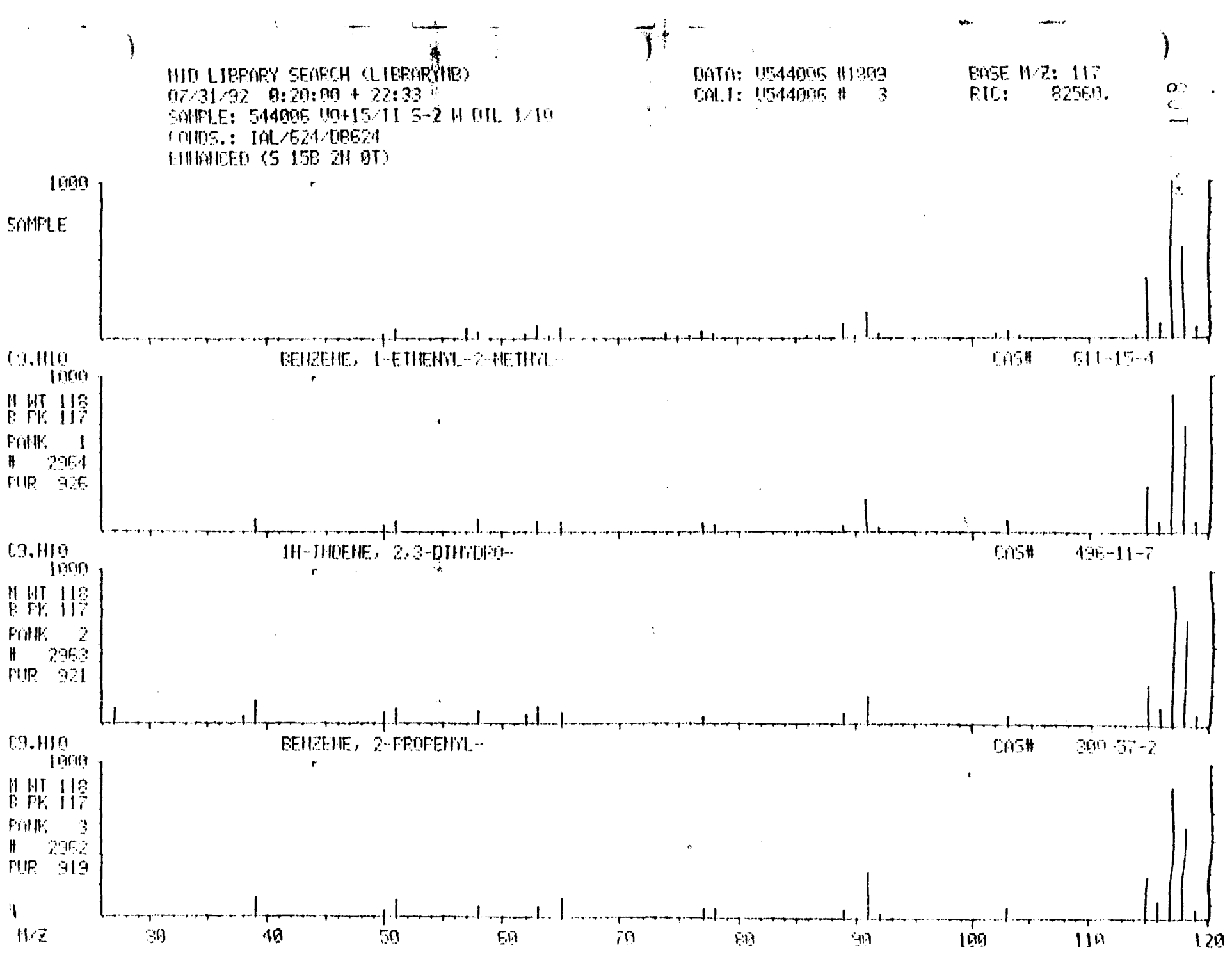
MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 23:03
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #1849
CALI: V544006 # 3

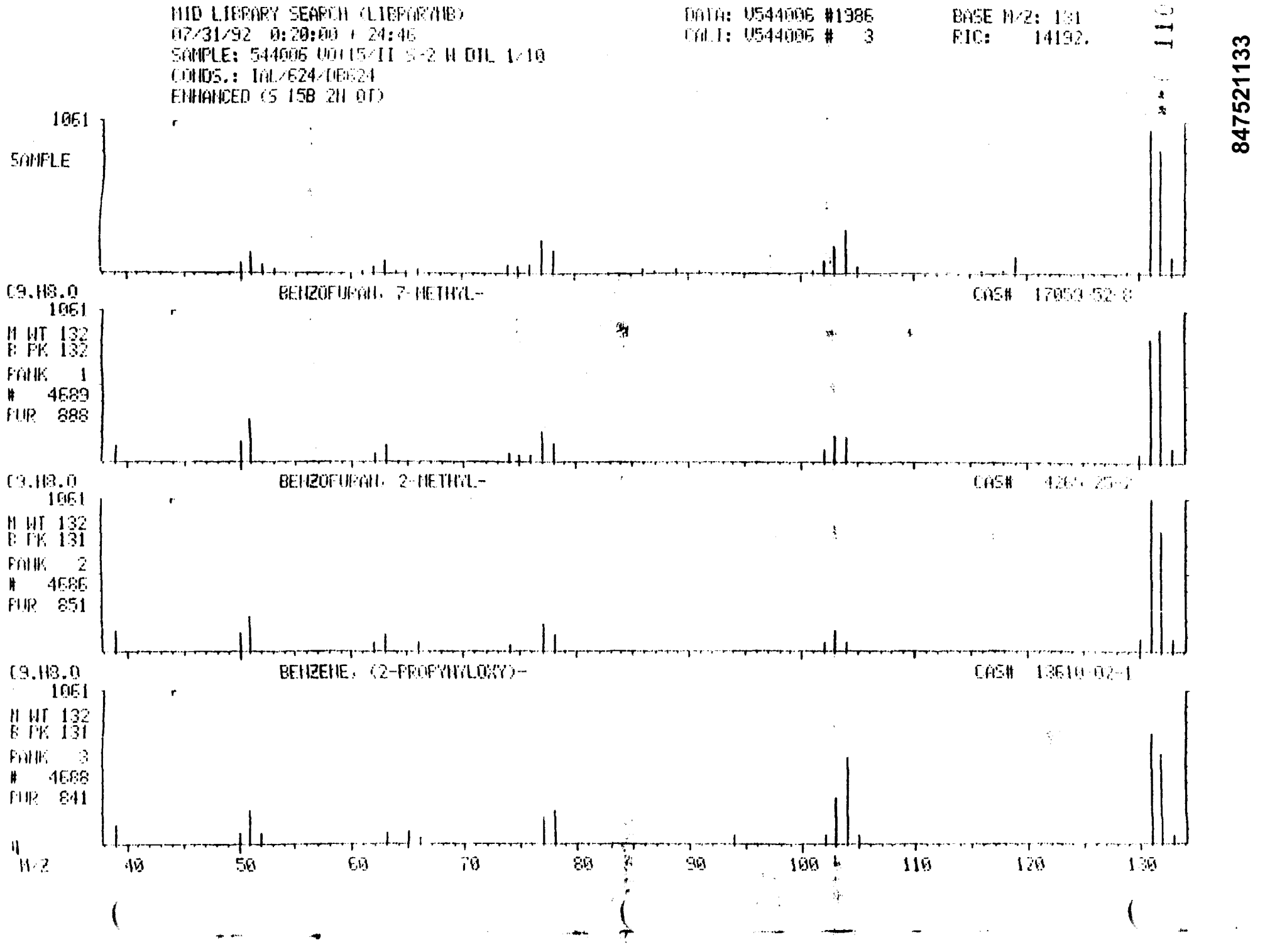
BASE M/Z: 115
RIC: 9936.



847521131


MID LIBRARY SEARCH (LIBRARYMB)
07/31/92 0:20:00 + 22:33
SAMPLE: 544006 V0+15/TI S-2 W DIL 1/10
COMDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: U544006 #1303
CALI: U544006 # 3
BASE M/Z: 117
RIC: 82560.
SAMPLE
C3.MID
BENZENE, 1-ETHENYL-2-METHYL-
CAS# 611-15-4
N WT 118
B PK 117
RANK 1
2964
PUR 926
C3.MID
1H-INDENE, 2,3-DIHYDRO-
CAS# 496-11-7
N WT 118
B PK 117
RANK 2
2963
PUR 921
C3.MID
BENZENE, 2-PROPENYL-
CAS# 300-57-2
N WT 118
B PK 117
RANK 3
2962
PUR 919
M/Z
30
40
50
60
70
80
90
100
110
120

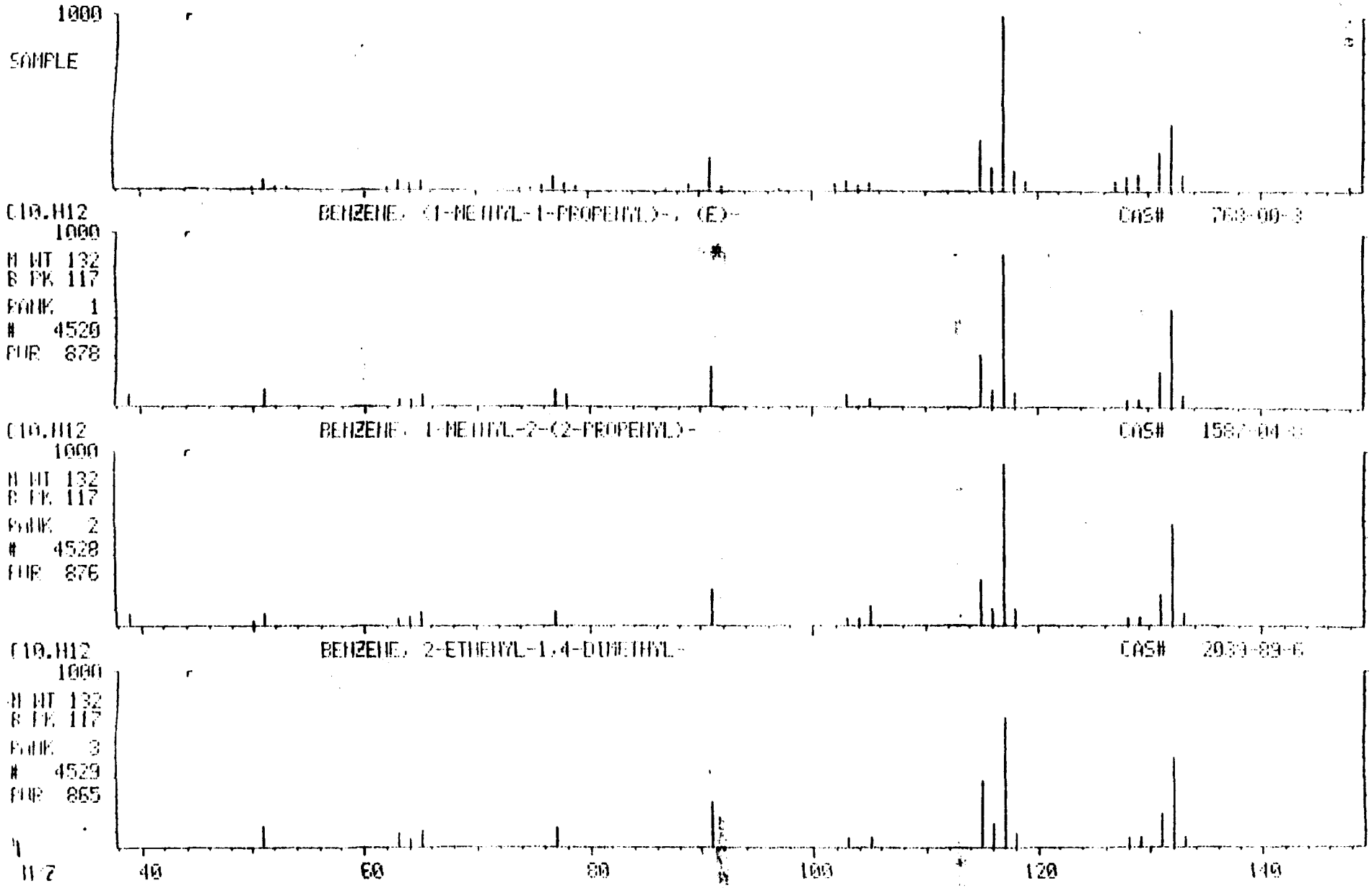
847521132


MID LIBRARY SEARCH (LIBPAR/MB)
07/31/92 0:20:00 + 24:46
SAMPLE: 544006 U0115/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: U544006 #1986
CAL: U544006 # 3
BASE M/Z: 131
RIC: 14192.
847521133
1061
SAMPLE
C9.H8.O
BENZOFURAN, 7-METHYL-
CAS# 17059-52-8
M WT 132
B PK 132
RANK 1
4689
PUR 888
C9.H8.O
BENZOFURAN, 2-METHYL-
CAS# 4265-25-2
M WT 132
B PK 131
RANK 2
4686
PUR 851
C9.H8.O
BENZENE, (2-PROPYNYLOXY)-
CAS# 13610-02-1
M WT 132
B PK 131
RANK 3
4688
PUR 841
M/Z
40
50
60
70
80
90
100
110
120
130

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 25:10
SAMPLE: 544006 V0+15 II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #2019
CALI: V544006 # 3

BASE M/Z: 117
RIC: 9392.



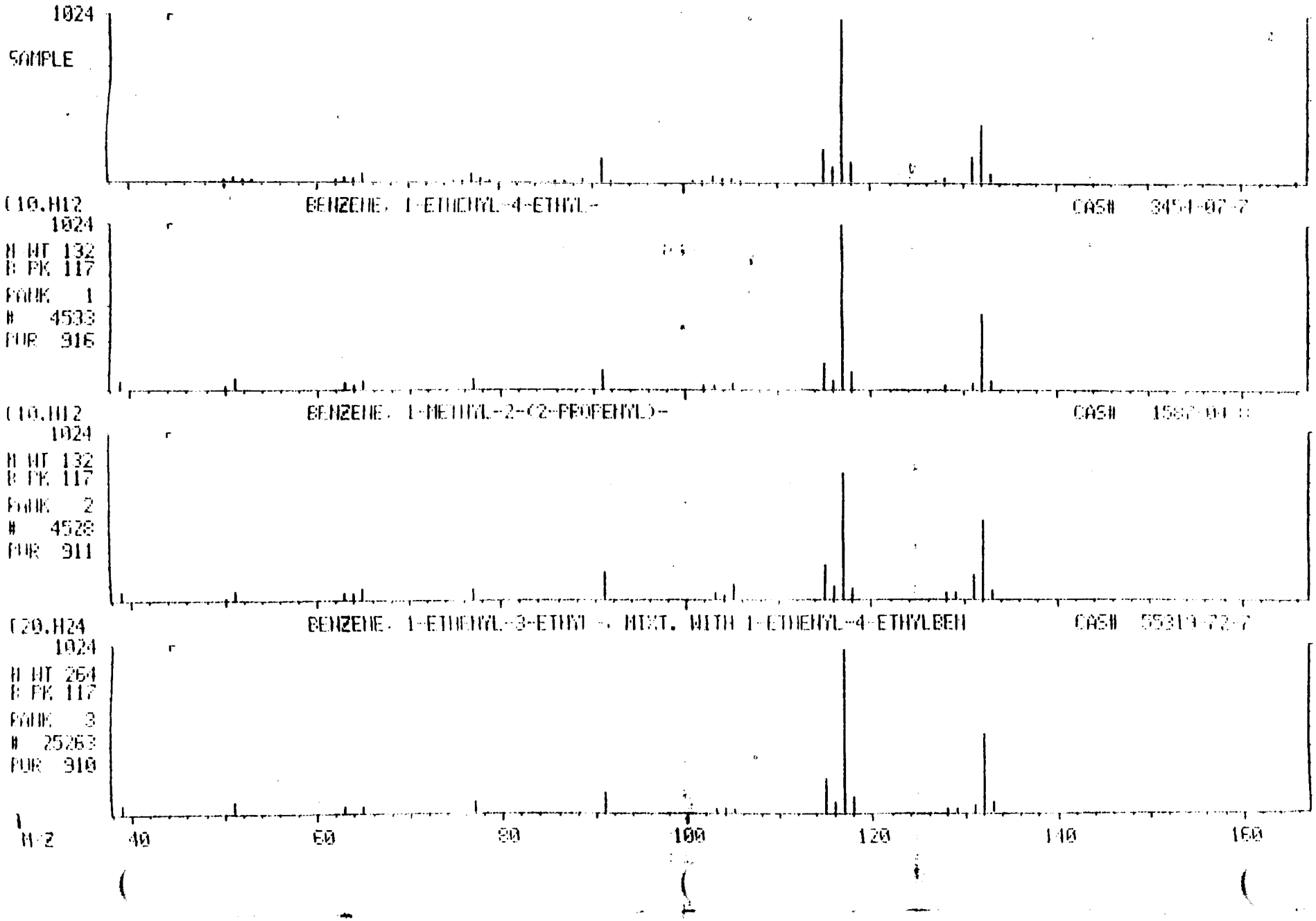
847521134

847521135

HID LIBRARY SEARCH (LIBRARYHD)
07/31/92 0:20:00 + 25:22
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #2035
CALI: V544006 # 3

BASE M/Z: 117
RIC: 12160.

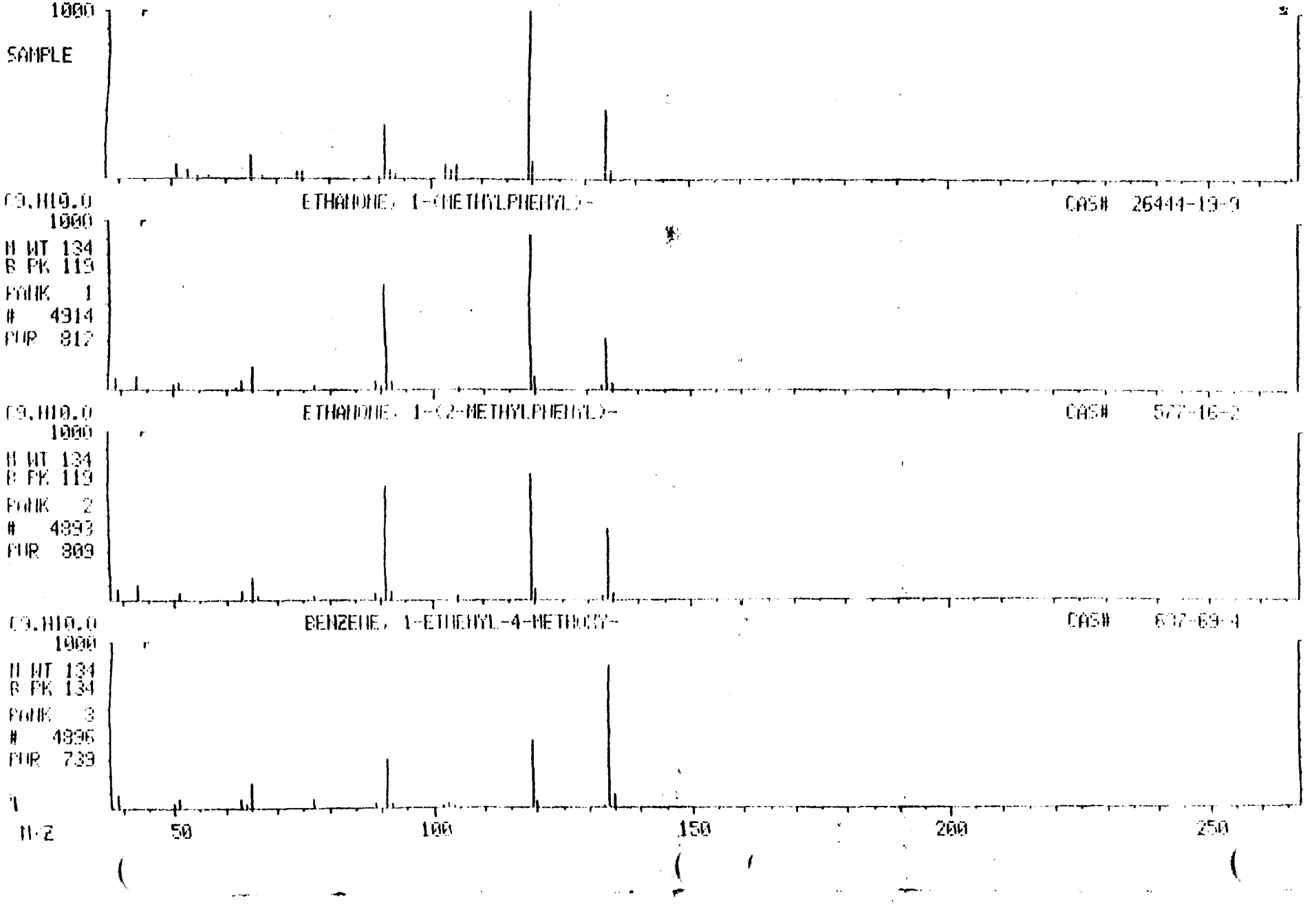


8475211136

MID LIBRARY SEARCH (LIBRARYMB)
07/31/92 0:20:00 + 25:25
SAMPLE: 544006 V0015/II S-2 N DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2H 0T)

DATA: V544006 #2038
CAL I: V544006 # 3

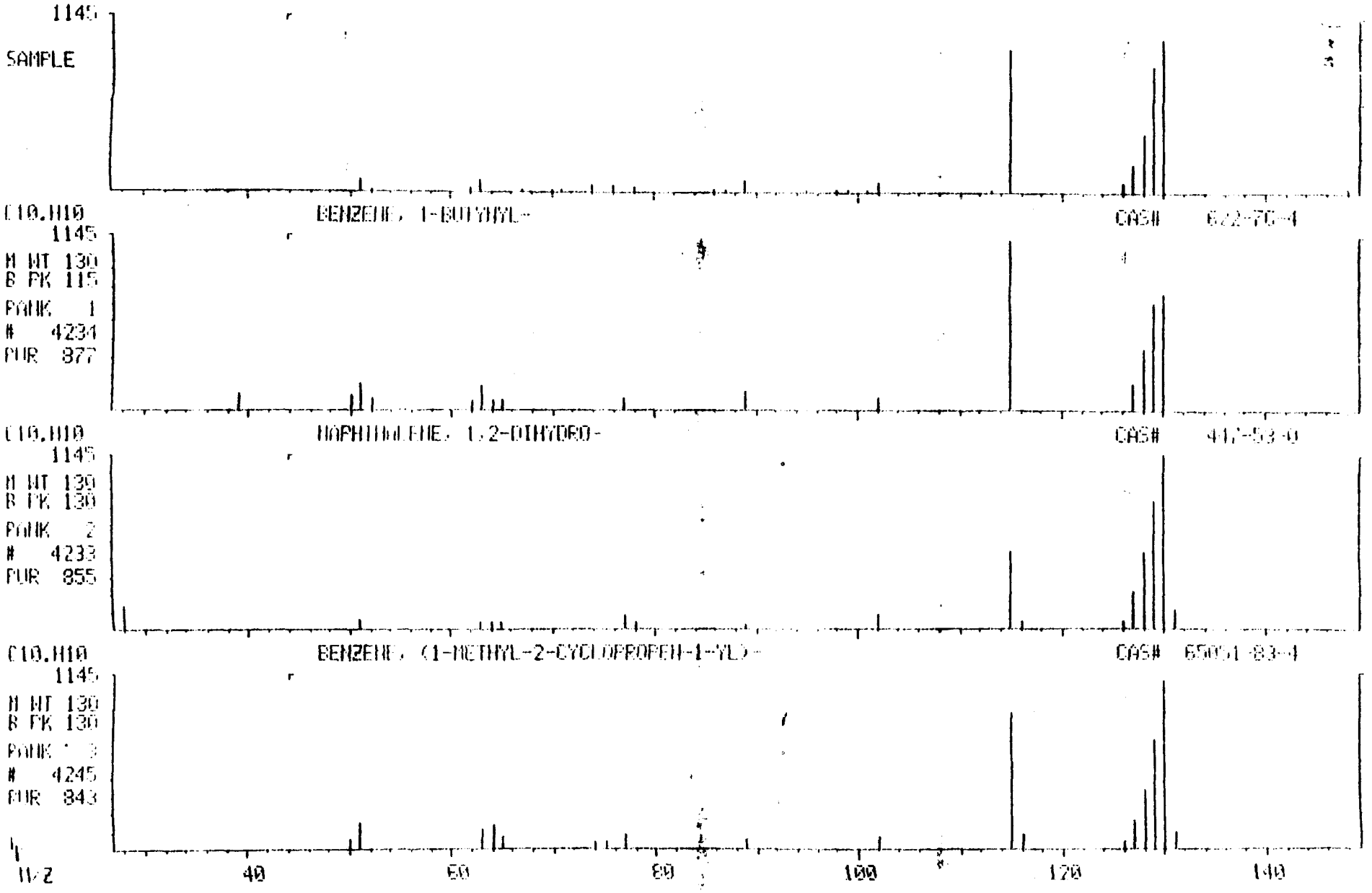
BASE M/Z: 119
RIC: 4200.



MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 25:28
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #2042
CALI: V544006 # 3

BASE M/Z: 130
RIC: 4368.

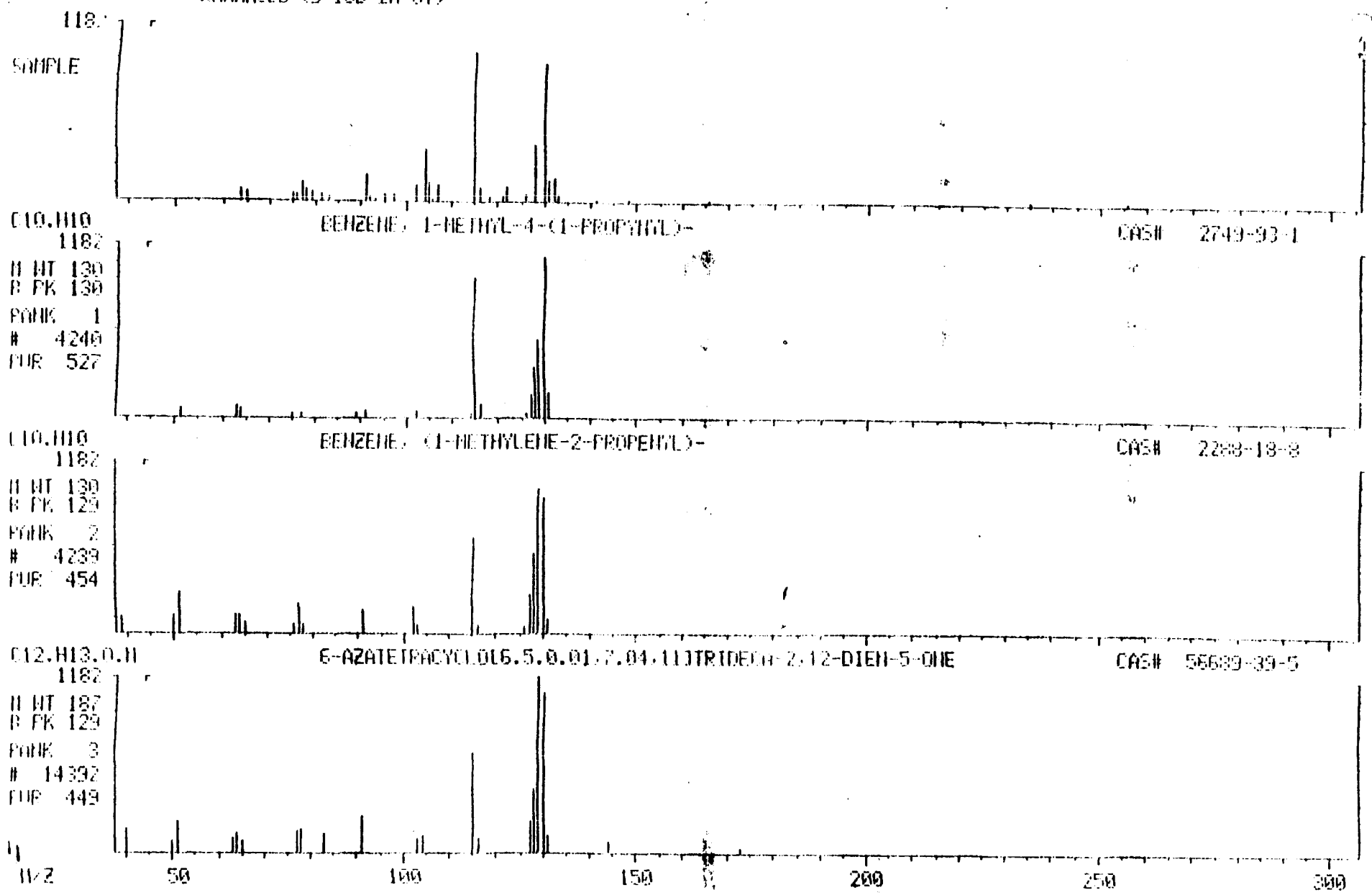


847521137

MID LIBRARY SEARCH (LIBRARYMB)
07/31/92 0:20:00 + 25:34
SAMPLE: 544006 V0+15/II S-2 N DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #2050
CALI: V544006 # 3

BASE M/Z: 115
RIC: 5544.

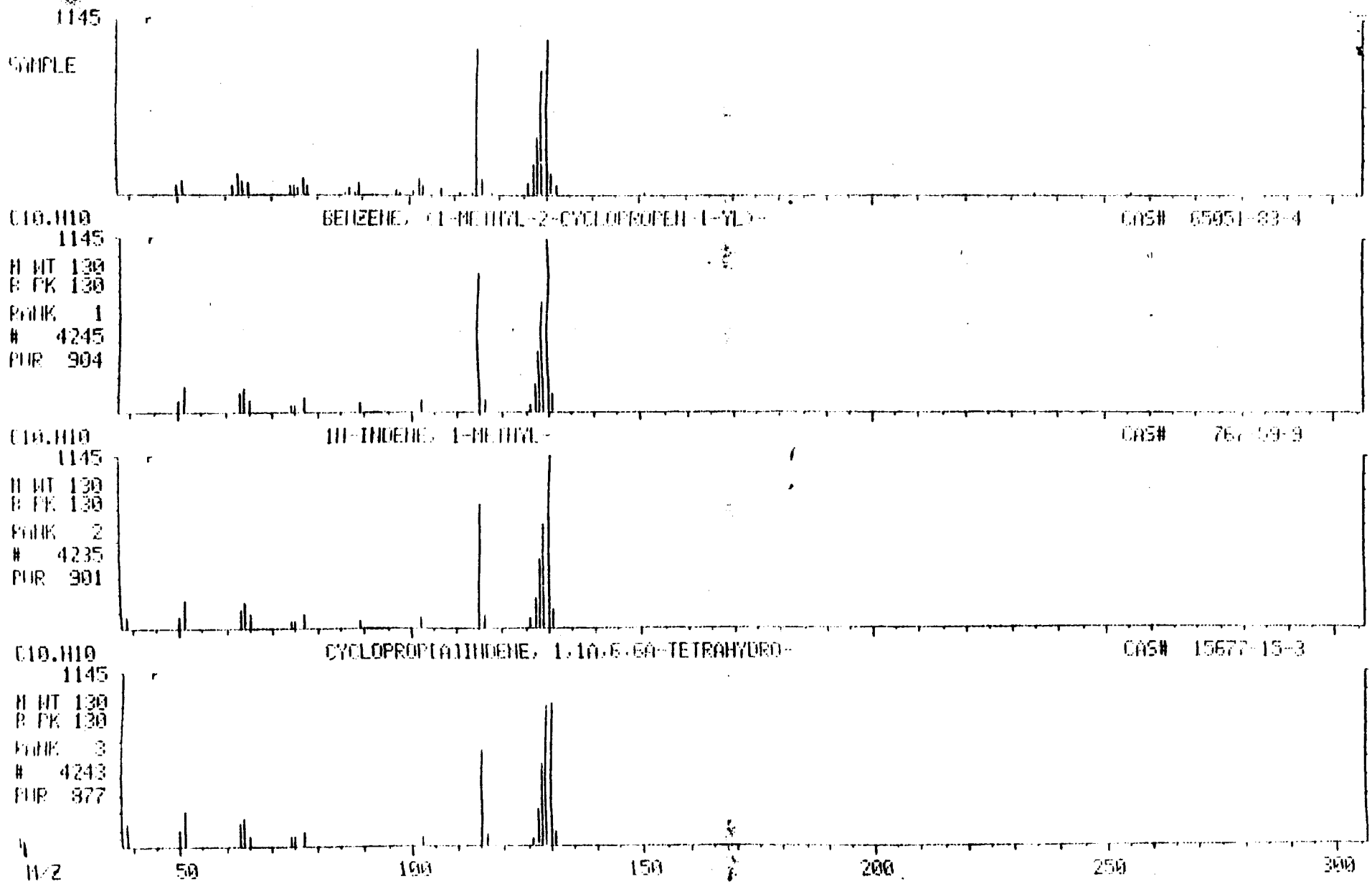


847521138

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 25:35
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544006 #2052
CALI: V544006 # 3

BASE M/Z: 130
RIC: 9856.



847521139

NID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 26:00
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2H 0T)

DATA: V544006 #2097
CALI: V544006 # 3

BASE M/Z: 134
BIC: 65024.

847521140

1038

SAMPLE

C8.H6.S BENZO[B]THIOPHENE CAS# 95-15-8

1038

M WT 134
B PK 134
RANK 1
4885
PUR 904

C11.H14.O4.S BENZO[B]CYCLOBUTA[D]THIOPHENE-1,2-DICARBOXYLIC ACID, 1,2,2A, CAS# 57156-87-3

1038

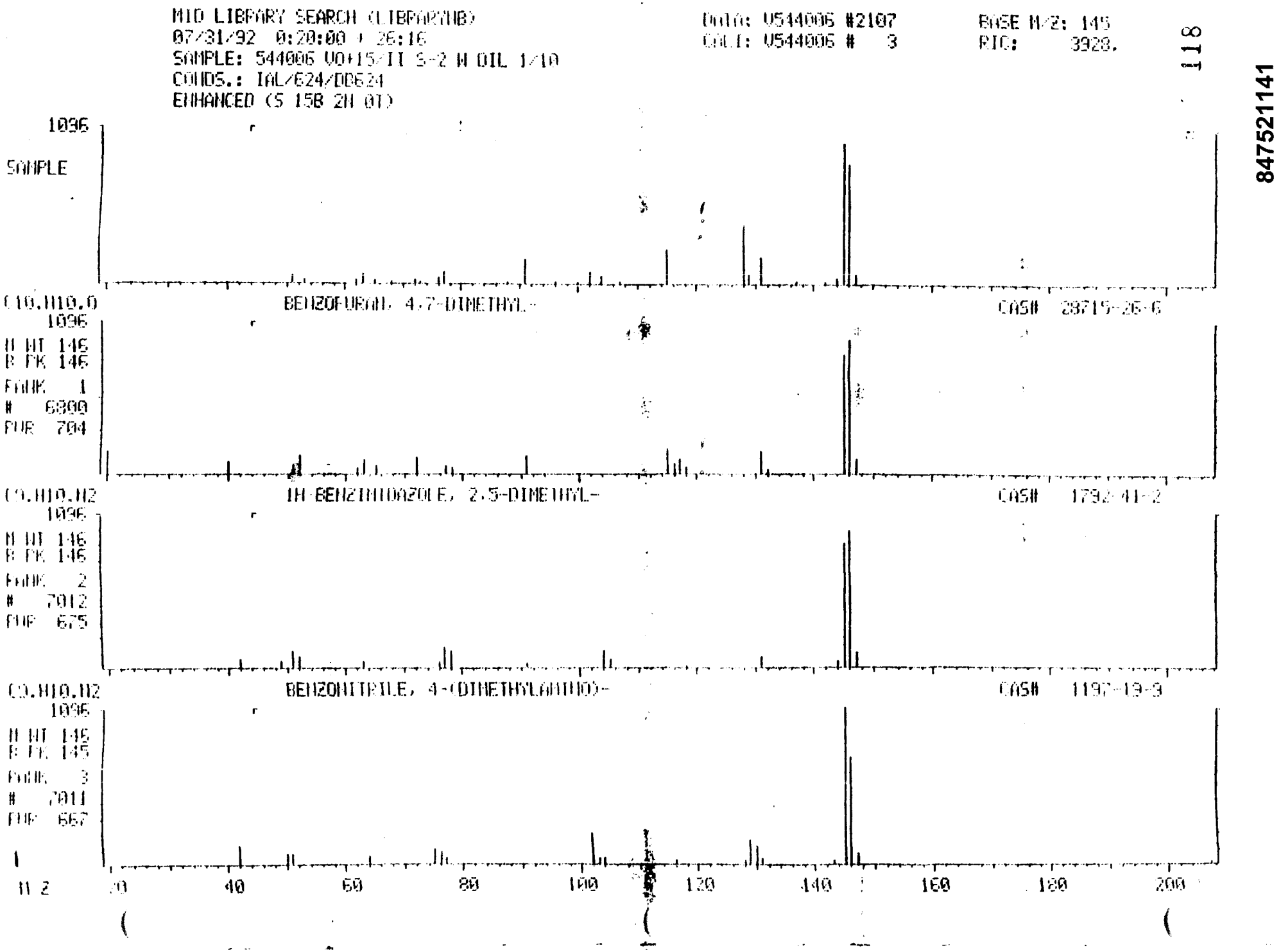
M WT 278
B PK 134
RANK 2
26862
PUR 701

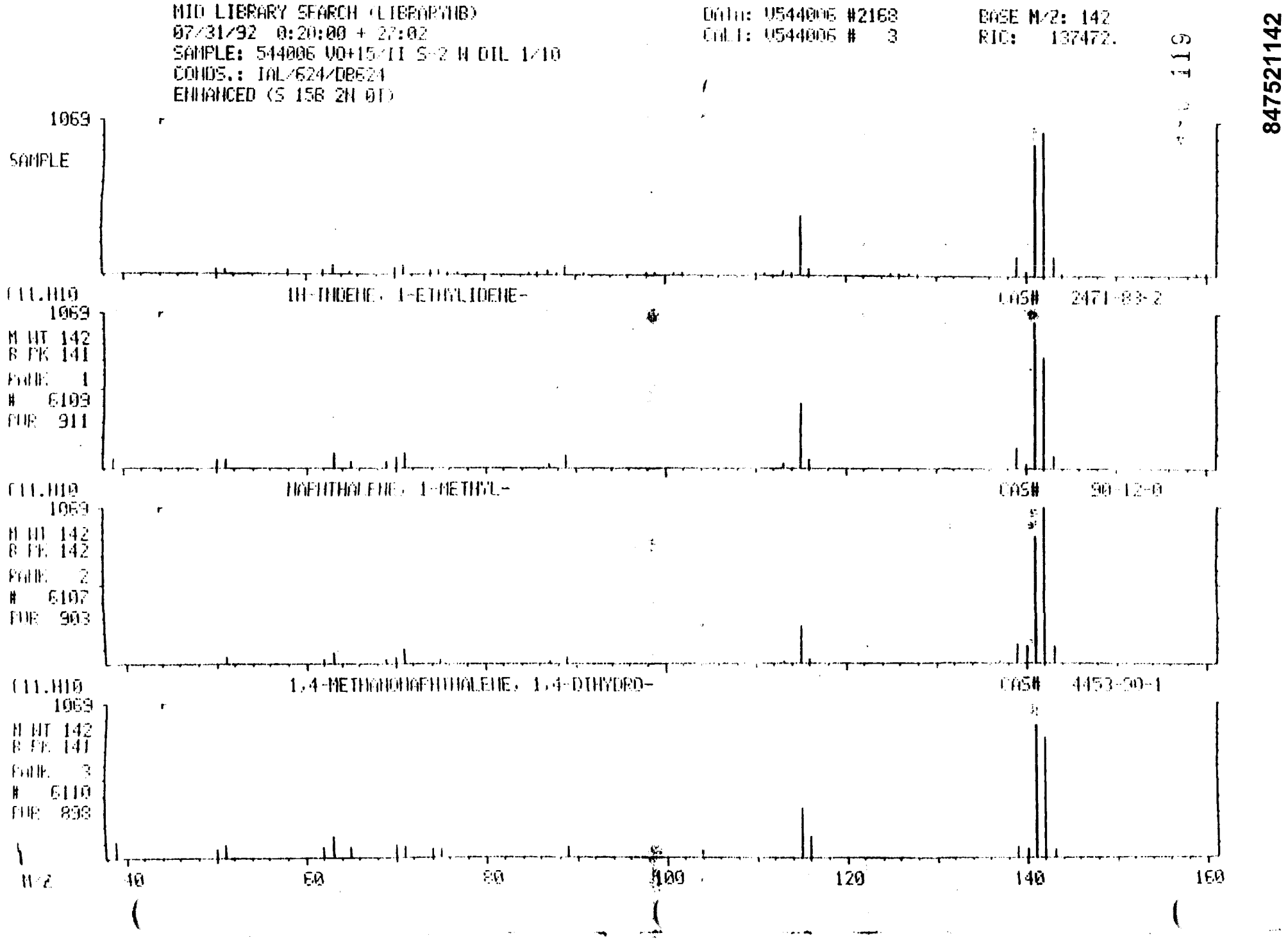
C13.H10.O3.S [1]BENZOTHIENO[2',3':3,4]CYCLOBUTA[1,2-C]FURAN-1,3-DIONE, 3A CAS# 34002-19-2

1038

M WT 246
B PK 134
RANK 3
23068
PUR 697

M/Z 50 100 150 200 250

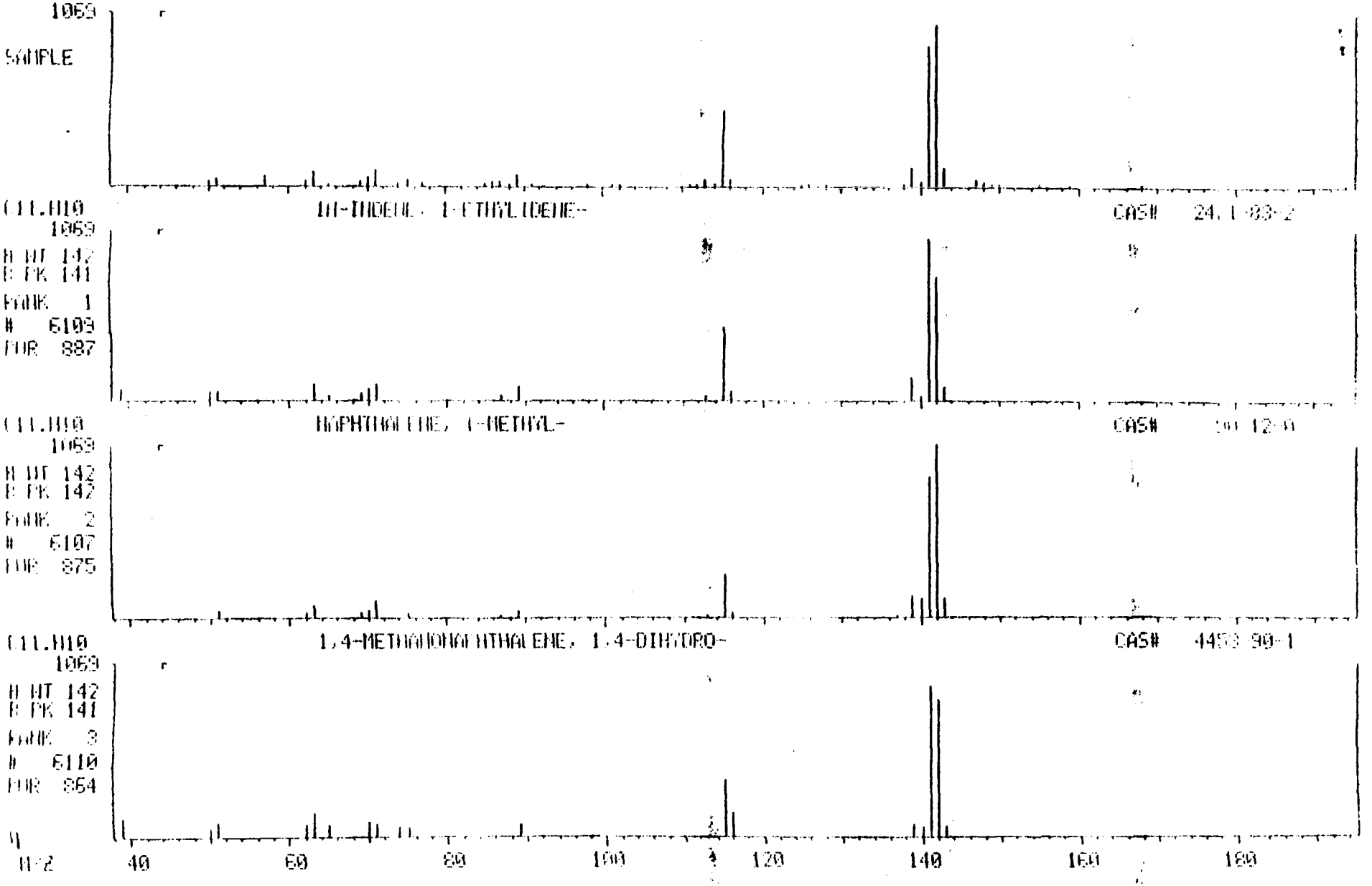

MID LIBRARY SEARCH (LIBPAR2MB)
07/31/92 0:20:00 + 26:16
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
Data: V544006 #2107
Cal: V544006 # 3
BASE M/Z: 145
RIC: 3928.
118
847521141
1096
SAMPLE
C10.H10.O
BENZOFURAN, 4,7-DIMETHYL-
CAS# 28715-26-6
1096
N HT 146
R PK 146
RANK 1
6800
PUR 704
C9.H10.N2
1H-BENZIMIDAZOLE, 2,5-DIMETHYL-
CAS# 1792-41-2
1096
N HT 146
R PK 146
RANK 2
7012
PUR 675
C9.H10.N2
BENZONITRILE, 4-(DIMETHYLAMINO)-
CAS# 1197-19-9
1096
N HT 146
R PK 145
RANK 3
7011
PUR 667
M/Z
20
40
60
80
100
120
140
160
180
200


MID LIBRARY SEARCH (LIBRARY.MB)
07/31/92 0:20:00 + 27:02
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
Data: V544006 #2168
Cal.: V544006 # 3
BASE M/Z: 142
RIC: 137472.
847521142
1069
SAMPLE
C11.H10
1H-INDENE, 1-ETHYLIDENE-
CAS# 2471-83-2
M WT 142
B PK 141
PURE 1
6109
PUR 911
NAPHTHALENE, 1-METHYL-
CAS# 90-12-0
M WT 142
B PK 142
PURE 2
6107
PUR 903
1,4-METHANONAPHTHALENE, 1,4-DIHYDRO-
CAS# 4453-90-1
M WT 142
B PK 141
PURE 3
6110
PUR 898
M/Z
40
60
80
100
120
140
160

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 0:20:00 + 27:12
SAMPLE: 544006 VO+15/II S-2 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N UT)

DATA: V544006 #2181
CALI: V544006 # 3

BASE M/Z: 142
RIC: 60480.



847521143

Quantitation Report File: V54400bA

Data: V54400bA.TI
[illegible]
Sample: 54400b VO+15/II 8-2 W DIL 1/500 RERUN
Mds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	C101	BROMOCHLOROMETHANE *IS1*
2	C110	1,4-DIFLOROBENZENE *IS2*
3	C115	CHLOROBENZENE-D5 *IS3*
4	C815	1,2-DICHLOROETHANE-D4 *SS1*
5	C805	TOLUENE-D8 *SS2*
6	C810	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
1	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C300	2-PROPANOL

121

847521144

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	652	9:09	1	1.000	A BB	13642.	50.000	UG/L	16.05
2	114	849	10:32	2	1.000	A BB	9807.	50.000	UG/L	16.05
3	117	1085	15:31	3	1.000	A BB	30964	50.000	UG/L	16.05
4	65	755	9:26	1	1.156	A BB	15459.	42.821	UG/L	13.74
5	98	1092	13:29	2	1.280	A BB	43007.	47.602	UG/L	15.28
6	95	1544	19:15	3	1.165	A BB	23918.	49.606	UG/L	15.92
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	379	4:44	1	0.580	A BV	440.	1.335	UG/L	0.43
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	78	754	9:24	2	0.998	A BB	79	0.126	UG/L	0.04
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1091	13:36	3	1.271	A BB	33043.	33.258	UG/L	10.87
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	91	1382	17:14	3	1.043	A BV	138.	0.076	UG/L	0.02
32	91	1382	17:14	3	1.043	A BV	138.	0.076	UG/L	0.02
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

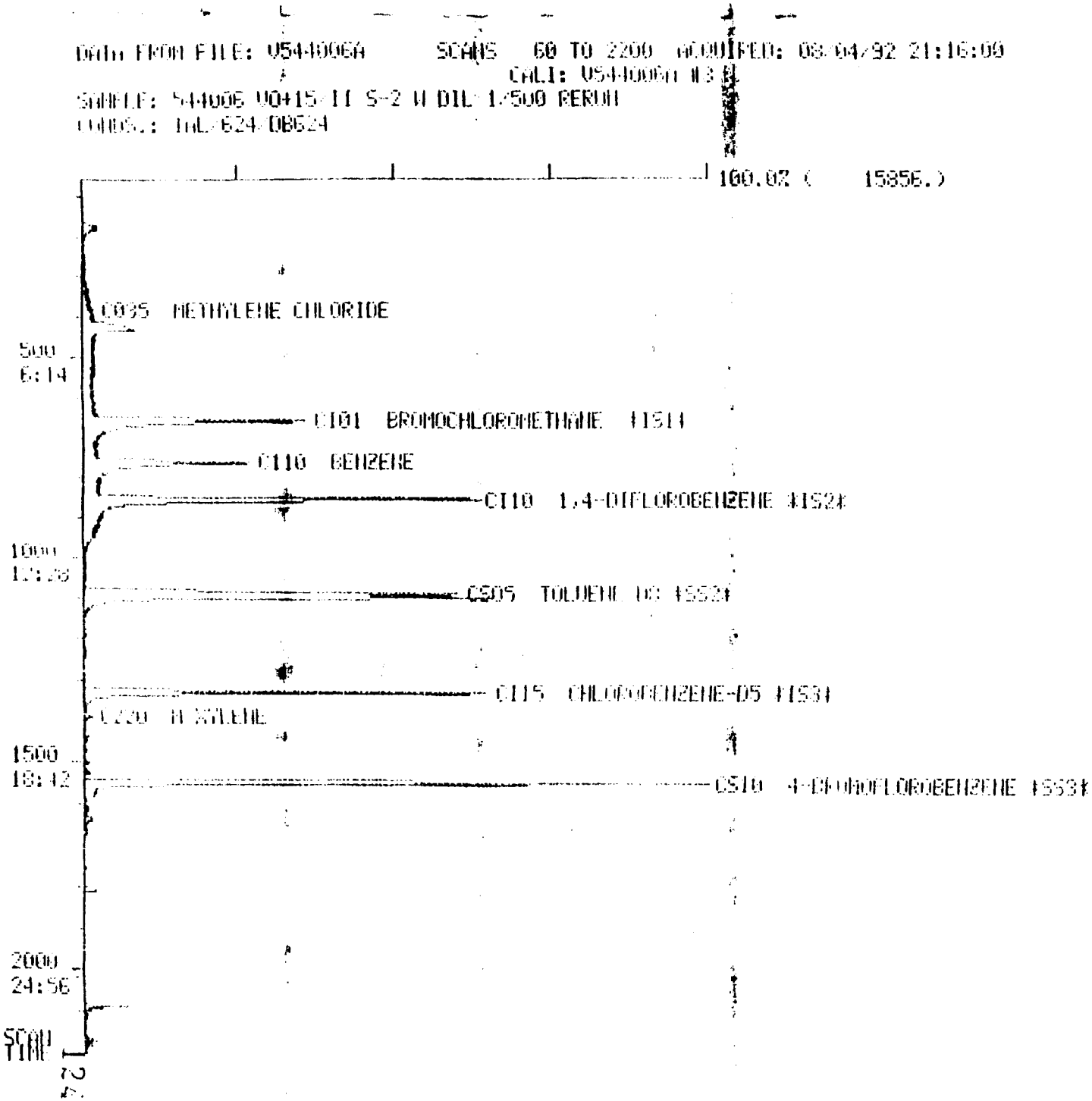
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R Fac	R Fac(L)	Ratio
1	8:06	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:22	1.00	1.157	1.00	42.82	50.00	1.133	1.323	0.86
5	13:28	1.00	1.281	1.00	47.60	50.00	1.129	1.186	0.95
6	19:14	1.00	1.165	1.00	49.61	50.00	0.704	0.709	0.99
7	1:28		0.182						

847521145

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:34		0.194						
9	2:00		0.246						
10	2:07		0.262						
11	3:26		0.423						
12	4:42	1.01	0.580	1.00	1.33	50.00	0.032	1.208	0.03
13	5:16		0.651						
14	6:13		0.766						
15	8:29		1.046						
16	8:35		1.058						
17	8:55		1.100						
18	9:23	1.00	0.892	1.00	0.13	50.00	0.002	0.821	0.00
19	9:32		0.907						
20	10:53		1.036						
21	11:18		1.075						
22	12:03		1.147						
23	13:02		1.240						
24	13:36	1.00	1.294	1.00	33.26	50.00	0.868	1.305	0.67
25	14:18		1.361						
26	14:27		1.390						
27	14:42		1.399						
28	15:20		1.459						
29	16:34		1.003						
30	16:57		1.026						
31	17:14	1.00	1.043	1.00	1.08	50.00	0.004	2.661	0.00
32	17:14	1.00	1.043	1.00	0.08	50.00	0.004	2.661	0.00
33	18:04		1.094						
34	18:25		1.115						
35	19:49		1.199						
36	21:41		1.312						
37	21:55		1.327						
38	22:40		1.375						
39	5:22		0.362						
40	6:12		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	19:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521146

847521147


DATA FROM FILE: V5440006A SCANS 60 TO 2200 MODIFIED: 08/04/92 21:16:09
CALI: V5440006A #3
SAMPLE: 5440006 VOA15 II S-2 W DIL 1/500 RERUN
COMMS.: InL/624-DB624
100.0% (15856.)
C035 METHYLENE CHLORIDE
500
6:14
C101 BROMOCHLOROMETHANE (ISI)
C110 BENZENE
C110 1,4-DIFLOROBENZENE (IS2)
1000
12:28
C505 TOLUENE D8 (SS2)
C115 CHLOROBENZENE-D5 (IS3)
C220 M-XYLENE
1500
18:42
CS10 4-BROMOFLOROBENZENE (SS3)
2000
24:56
SCAN TIME

Quantitation Report File: V544007

Data: V544007.TI
07/31/92 2:07:00
Sample: 544007 VO+15/II S-3 ~ DIL 1:100
Gs.: IAL/624/DB624

Formula: NA
Submitted by: IAL

Instrument: FINN
Analyst: FRK

Weight: 0.000
Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C300	2-PROPANOL

847521148

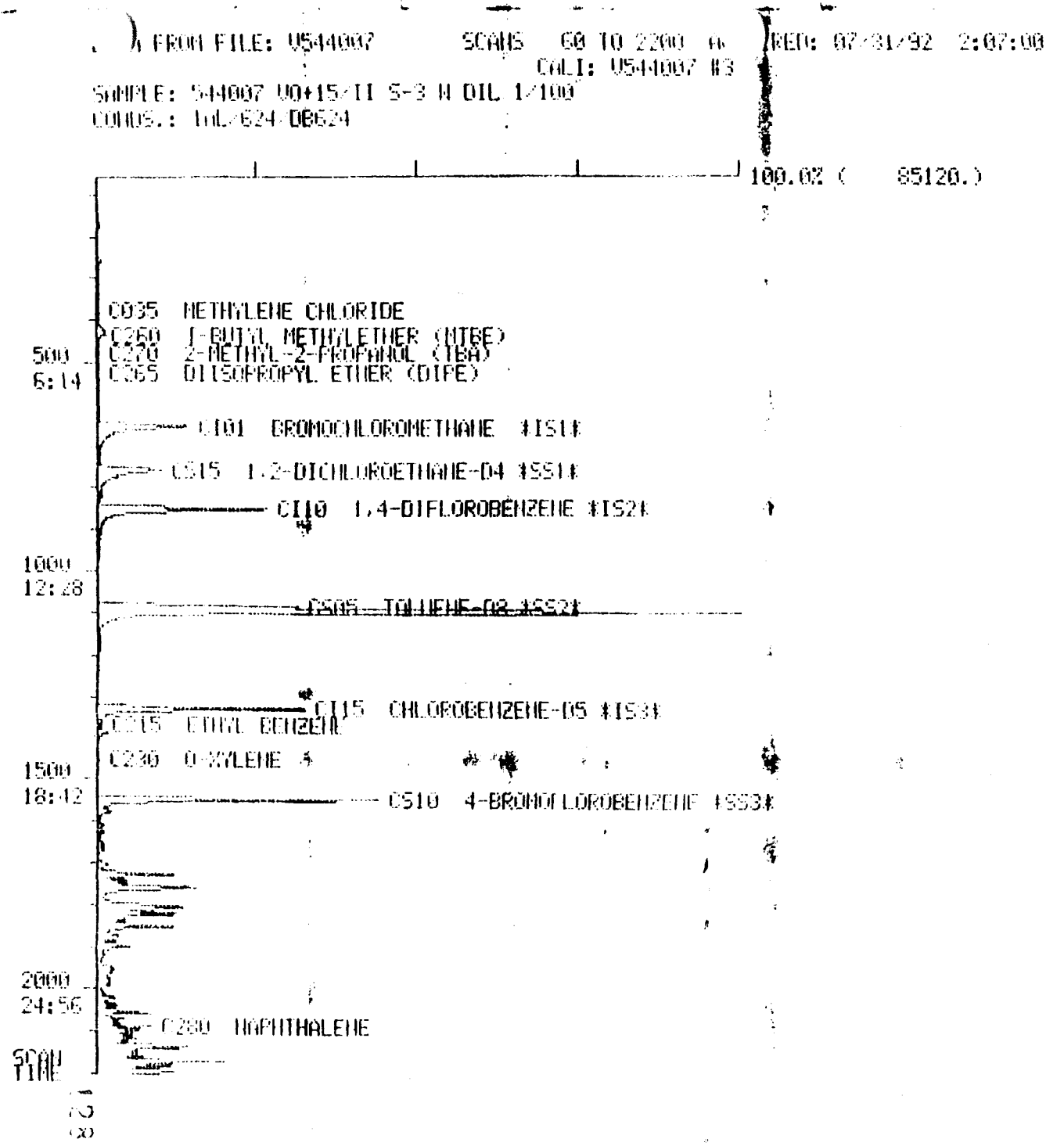
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	649	8:06	1	1.000	A BB	22621.	50.000	UG/L	10.38
2	114	843	10:31	2	1.000	A BB	91462.	50.000	UG/L	10.38
3	117	1335	16:32	3	1.000	A BB	84701.	50.000	UG/L	10.38
4	65	752	9:23	1	1.159	A BB	35539.	52.115	UG/L	10.82
5	98	1082	13:29	2	1.284	A BB	99911.	51.590	UG/L	10.71
6	95	1545	19:16	3	1.165	A BB	62043.	49.987	UG/L	10.38
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	371	4:38	1	0.572	A BV	234.	0.459	UG/L	0.10
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	78	753	9:23	2	0.893	A VB	202.	0.140	UG/L	0.03
19	62	764	9:32	2	0.906	A BB	8755.	8.967	UG/L	1.86
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1092	13:37	2	1.295	A BB	313351.	139.044	UG/L	28.88
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	112	1331	16:36	3	1.004	A BB	5659.	3.403	UG/L	0.71
30	91	1362	16:59	3	1.027	A BB	2253.	0.855	UG/L	0.18
31	91	1384	17:15	3	1.044	A BB	6087.	1.192	UG/L	0.25
32	91	1384	17:15	3	1.044	A BB	6087.	1.192	UG/L	0.25
33	91	1450	18:05	3	1.094	A BB	2119	0.806	UG/L	0.17
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	73	434	5:25	1	0.669	A BB	51.	0.042	UG/L	0.01
40	45	519	6:28	1	0.800	A BV	37.	0.029	UG/L	0.01
41	59	474	5:55	1	0.730	A BB	113.	18.696	UG/L	3.88
42	NOT FOUND									
43	129	2086	26:01	3	1.573	A BB	13038.	10.419	UG/L	2.16
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.158	1.00	52.11	50.00	1.571	1.507	1.04
5	13:31	1.00	1.280	1.00	51.59	50.00	1.092	1.059	1.03
6	19:18	1.00	1.164	1.00	49.99	50.00	0.732	0.733	1.00
7	1:25		0.175						

847521149

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:23		0.416						
12	4:38	1.00	0.569	1.00	0.46	50.00	0.010	1.126	0.01
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:56		1.098						
18	9:25	1.00	0.891	1.00	0.14	50.00	0.002	0.789	0.00
19	9:34	1.00	0.906	1.00	8.97	50.00	0.063	0.351	0.18
20	10:55		1.033						
21	11:21		1.074						
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	139.04	50.00	3.426	1.232	2.78
25	14:21		1.359						
26	14:39		1.387						
27	14:46		1.398						
28	15:24		1.458						
29	16:38	1.00	1.003	1.00	3.40	50.00	0.067	0.982	0.07
30	17:00	1.00	1.026	1.00	0.85	50.00	0.027	1.556	0.02
31	17:18	1.00	1.043	1.00	1.19	50.00	0.072	3.005	0.02
32	17:18	1.00	1.043	1.00	1.19	50.00	0.072	3.005	0.02
33	18:08	1.00	1.093	1.00	0.81	50.00	0.025	1.552	0.02
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
37	21:59		1.326						
38	22:47		1.374						
39	5:22	1.01	0.602	1.01	0.04	100.00	0.001	2.667	0.00
40	6:18	1.02	0.810	0.99	0.03	100.00	0.001	2.846	0.00
41	5:41	1.04	0.700	1.04	18.70	1000.00	0.000	0.013	0.02
42	7:51		0.981						
43	26:03	1.00	1.569	1.00	10.42	50.00	0.157	0.756	0.21
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521150


FROM FILE: U544007 SCANS 60 TO 2200
RED: 07/31/92 2:07:00
CALI: U544007 #3
SAMPLE: 544007 VO+15/II S-3 W DIL 1/100
COMUS.: TnL/624/DB624
100.02 (85120.)
C035 METHYLENE CHLORIDE
C260 T-BUTYL METHYLETHER (MTBE)
C270 2-METHYL-2-PROPANOL (TBA)
C365 DIISOPROPYL ETHER (DIPE)
500
6:14
C101 BROMOCHLOROMETHANE #IS1#
C315 1,2-DICHLOROETHANE-D4 #SS1#
C110 1,4-DIFLOROBENZENE #IS2#
1000
12:28
C305 TOLUENE-D8 #SS2#
C115 CHLOROBENZENE-D5 #IS3#
C215 ETHYL BENZENE
C230 O-XYLENE
1500
18:42
C310 4-BROMOFLOROBENZENE #SS3#
2000
24:56
C280 NAPHTHALENE
SCAN
TIME

847521151

Quantitation Report File: V544007

Data: V544007.TI
07/31/92 2:07:00
Sample: 544007 VB-15/II 5-5 w OIL 1:100
Misc: IAL/B24/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=HEIGHT * REF AMNT/(REF HEIGHT * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI01 BROMOCHLOROMETHANE *IS1*
2	0-00-0	CI10 1,4-DIFLOROBENZENE *IS2*
3	0-00-0	CI15 CHLOROBENZENE-D5 *IS3*
4	1632-70-8	UNDECANE, 5-METHYL-
5	62108-27-4	DECANE, 2,4,5-TRIMETHYL-
6	62185-53-9	NONANE, 5-(2-METHYLPROPYL)-
7	13475-78-0	HEPTANE, 5-ETHYL-2-METHYL-
8	0-00-0	UNKNOWN
9	0-00-0	UNKNOWN
10	62108-25-2	DECANE, 2,6,7-TRIMETHYL-
11	17301-25-6	UNDECANE, 2,8-DIMETHYL-
12	17301-32-5	UNDECANE, 4,7-DIMETHYL-
13	0-00-0	UNKNOWN
14	2809-64-5	NAPHTHALENE, 1,2,3,4-TETRAHYDRO-5-METHYL-
15	0-00-0	UNKNOWN
16	0-00-0	UNKNOWN
17	0-00-0	UNKNOWN
18	13065-07-1	NAPHTHALENE, 1,2,3,4-TETRAHYDRO-2,7-DIMETHYL-
	629-59-4	TETRADECANE
	0-00-0	UNKNOWN

No	m:t	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	TOT	649	8:06	1	1.000	A BB	7632.*	50.000	UG/L	13.63
2	TOT	844	10:31	2	1.000	A BB	14848.*	50.000	UG/L	13.63
3	TOT	1326	16:32	3	1.000	A BB	22560.*	50.000	UG/L	13.63
4	TOT	1724	21:30	3	1.300	A BB	8337.*	18.477		5.04
5	TOT	1756	21:54	3	1.324	A VB	9992.*	22.146		6.04
6	TOT	1756	21:54	3	1.324	A VB	10156.*	22.509		6.14
7	TOT	1801	22:27	3	1.358	A BV	8722.**	19.330		5.27
8	TOT	1804	22:30	3	1.360	A BV	3313.*	7.343		2.00
9	TOT	1804	22:30	3	1.360	A BV	3313.*	7.343		2.00
10	TOT	1819	22:41	3	1.372	A VB	8260.*	18.306		4.99
11	TOT	1849	23:03	3	1.394	A BB	7347.**	16.284		4.44
12	TOT	2053	25:36	3	1.548	A BV	4967.*	11.053		3.01
13	TOT	2130	26:33	3	1.606	A BV	6787.*	15.043		4.10
14	TOT	2134	26:36	3	1.609	A BV	5944.*	13.173		3.59
15	TOT	2164	26:59	3	1.632	A BV	1111.**	2.463		0.67
16	TOT	2167	27:01	3	1.634	A BV	7676.*	17.012		4.64
17	TOT	2175	27:10	3	1.640	A VB	3103.*	6.877		1.88
18	TOT	2187	27:16	3	1.649	A VV	1975.*	4.376		1.19
19	TOT	2191	27:19	3	1.652	A BB	4702.*	10.420		2.84
20	TOT	2194	27:21	3	1.655	A VV	2085.*	4.622		1.26

847521152

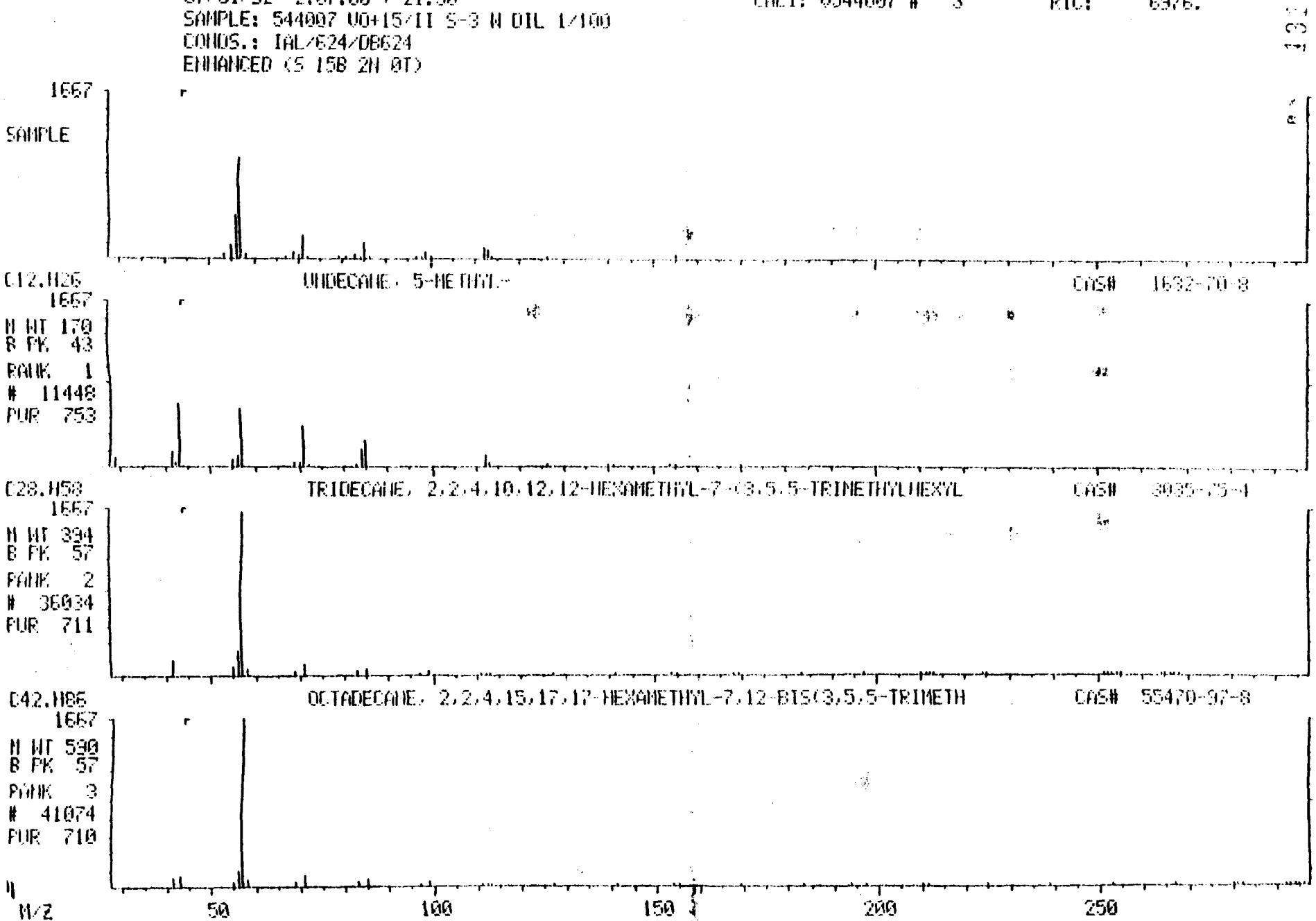
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:38	1.22	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:24	1.12	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:40	1.06	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4					18.48	1.00	18.477	1.000	18.48
5					22.15	1.00	22.146	1.000	22.15
6					22.51	1.00	22.509	1.000	22.51
7					19.33	1.00	19.330	1.000	19.33
8					7.34	1.00	7.343	1.000	7.34
9					7.34	1.00	7.343	1.000	7.34
10					18.31	1.00	18.306	1.000	18.31
11					16.28	1.00	16.284	1.000	16.28
12					11.05	1.00	11.053	1.000	11.05
13					15.04	1.00	15.043	1.000	15.04
14					13.17	1.00	13.173	1.000	13.17
15					2.46	1.00	2.463	1.000	2.46
16					17.01	1.00	17.012	1.000	17.01
17					8.86	1.00	8.877	1.000	8.86
18					4.38	1.00	4.376	1.000	4.38
19					10.42	1.00	10.420	1.000	10.42
20					4.62	1.00	4.622	1.000	4.62

847521153

MID LIBRARY SEARCH (LIBRARY/NB)
07/31/92 2:07:00 + 21:30
SAMPLE: 544007 U0+15/II S-3 N OIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: U544007 #1725
CAL.I: U544007 # 3

BASE M/Z: 57
RIC: 6976.



847521155

MID LIBRARY SEARCH (LIBRARY.MB)
07/31/92 2:07:00 + 21:53
SAMPLE: 544007 VO+15/II 5-3 H DIL 1/100
COMDS.: IAL/624/DB624
ENHANCED (S 15B 2H 0D)

Data: U544007 #1755
CALI: U544007 # 3

BASE M/Z: 71
RIC: 7648.

1951

SAMPLE

C13.H28 DECANE, 2,4,6-TRIMETHYL- CAS# 62108-27-4

1951
W WT 184
B PK 43
RANK 1
13917
PUR 805

C13.H28 NONANE, 5-(2-METHYLPROPYL)- CAS# 62185-53-9

1951
W WT 184
B PK 57
RANK 2
13920
PUR 805

C13.H28 UNDECANE, 3,7-DIMETHYL- CAS# 17301-29-0

1951
W WT 184
B PK 43
RANK 3
13879
PUR 799

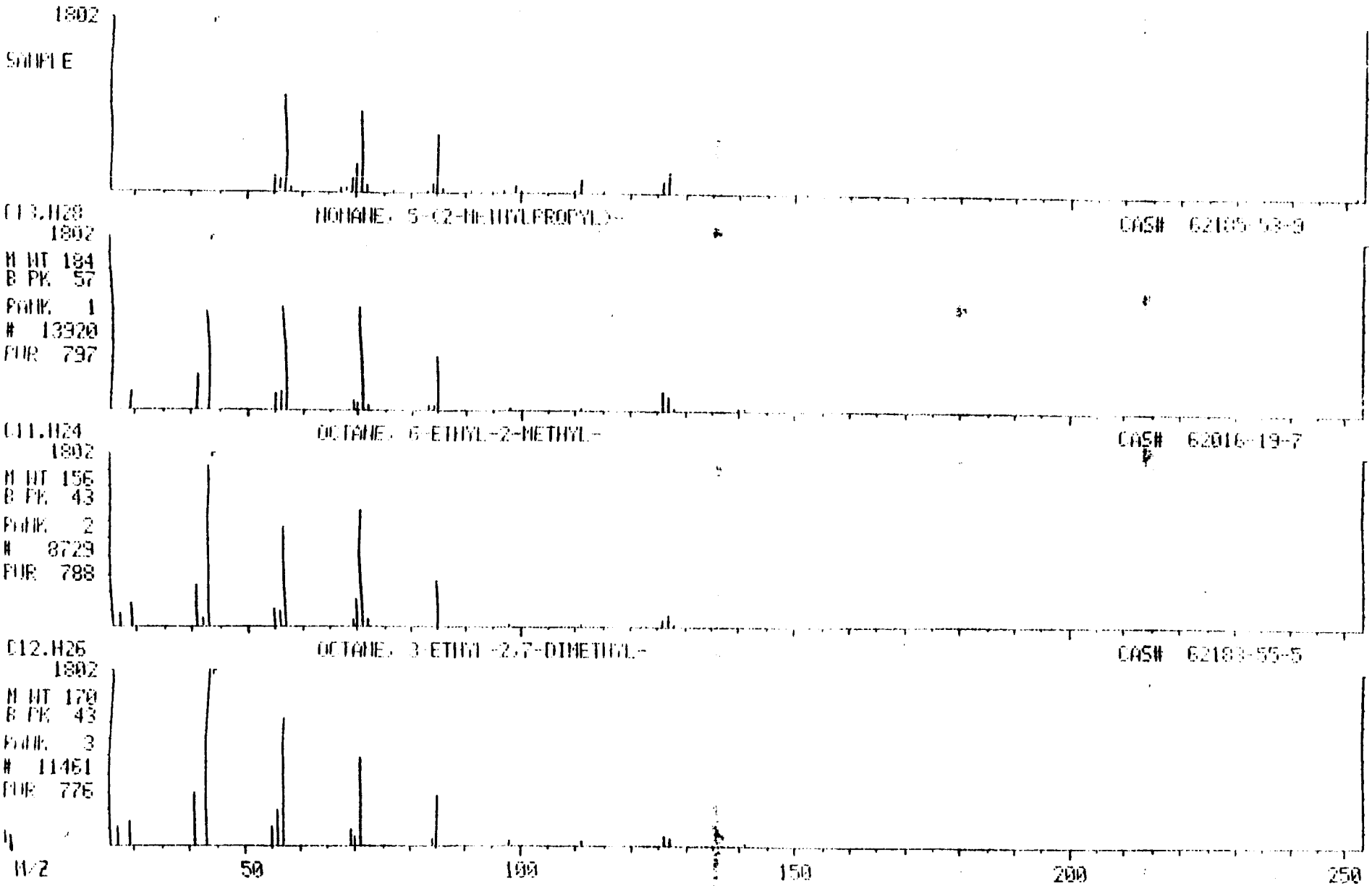
M/Z 50 100 150 200 250

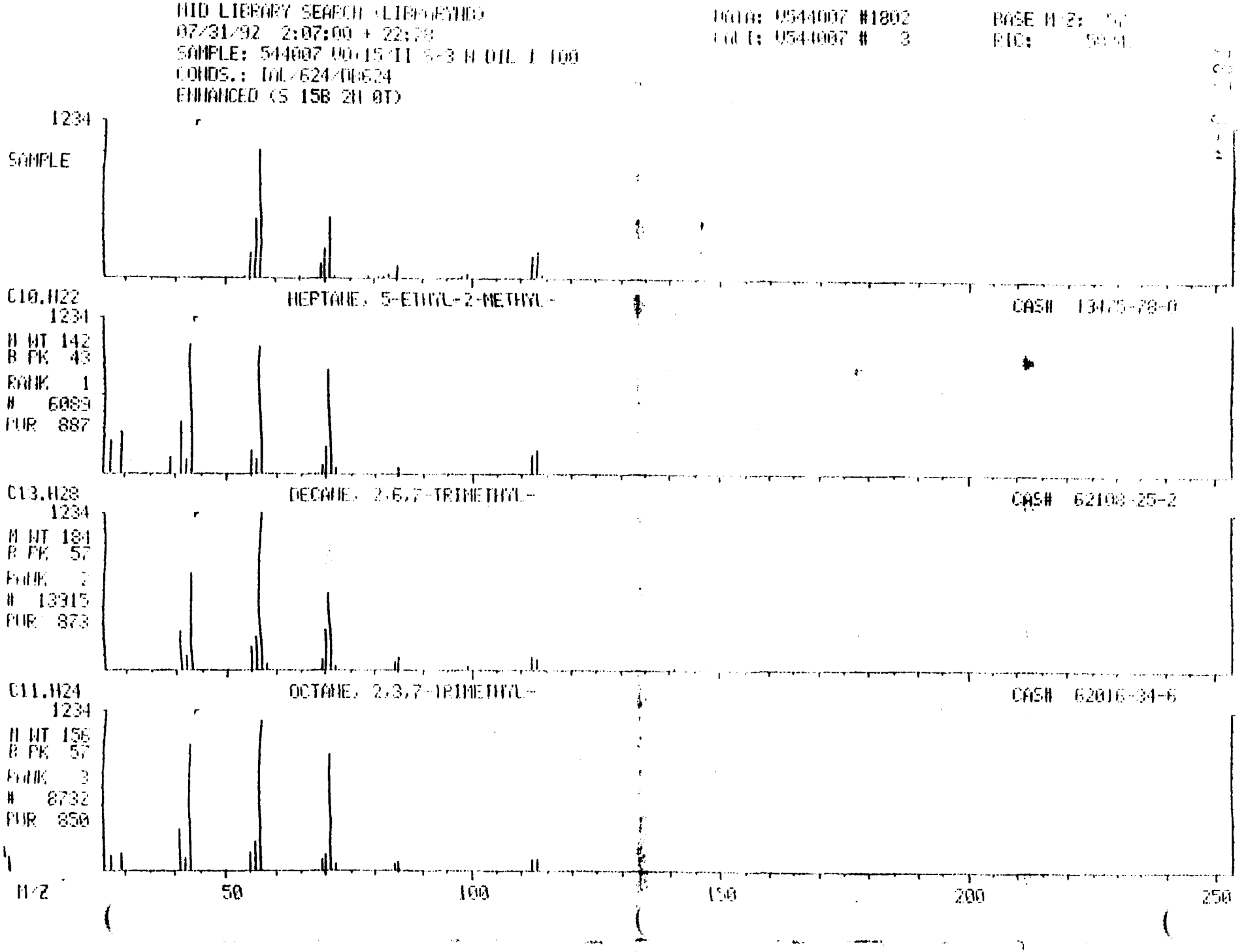
847521156

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 2:07:00 + 21:54
SAMPLE: 544007 V0+15/II S-3 W DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544007 #1757
CAL 1: V544007 # 3

BASE M/Z: 57
RIC: 7600.




NID LIBRARY SEARCH (LIB=METHD)
07/31/92 2:07:00 + 22:78
SAMPLE: 544007 00:15:11 5-3 M OIL 1 100
CONDS.: DIL/624/DB624
ENHANCED (S 15B 2H 0T)
DATA: 0544007 #1802
COL I: 0544007 # 3
BASE M/Z: 57
PIC: 50.4
SAMPLE
C10.H22
HEPTANE, 5-ETHYL-2-METHYL-
CAS# 13475-78-0
M WT 142
B PK 43
RANK 1
6089
PUR 887
C13.H28
DECANE, 2,6,7-TRIMETHYL-
CAS# 62108-25-2
M WT 184
B PK 57
RANK 2
13315
PUR 873
C11.H24
OCTANE, 2,3,7-TRIMETHYL-
CAS# 62016-34-6
M WT 156
B PK 57
RANK 3
8732
PUR 850
M/Z
50
100
150
200
250

847521157

MID LIBRARY SEARCH (LIBRARYHB)
07/31/92 2:07:00 + 22:40
SAMPLE: 544007 V0+15/II S-3 W DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544007 #1818
CALI: V544007 # 3

BASE M/Z: 57
RIC: 6384.

136

847521158

1036
SAMPLE

C13.H28 DECANE, 2,6,7-TRIMETHYL- CAS# 62108-25-2
1036
M WT 184
B PK 57
RANK 1
13915
PUR 871

C14.H30 DODECANE, 4,6-DIMETHYL- CAS# 61141-72-8
1036
M WT 198
B PK 57
RANK 2
16282
PUR 840

C12.H26 DECANE, 3,6-DIMETHYL- CAS# 17312-53-7
1036
M WT 170
B PK 57
RANK 3
11458
PUR 827

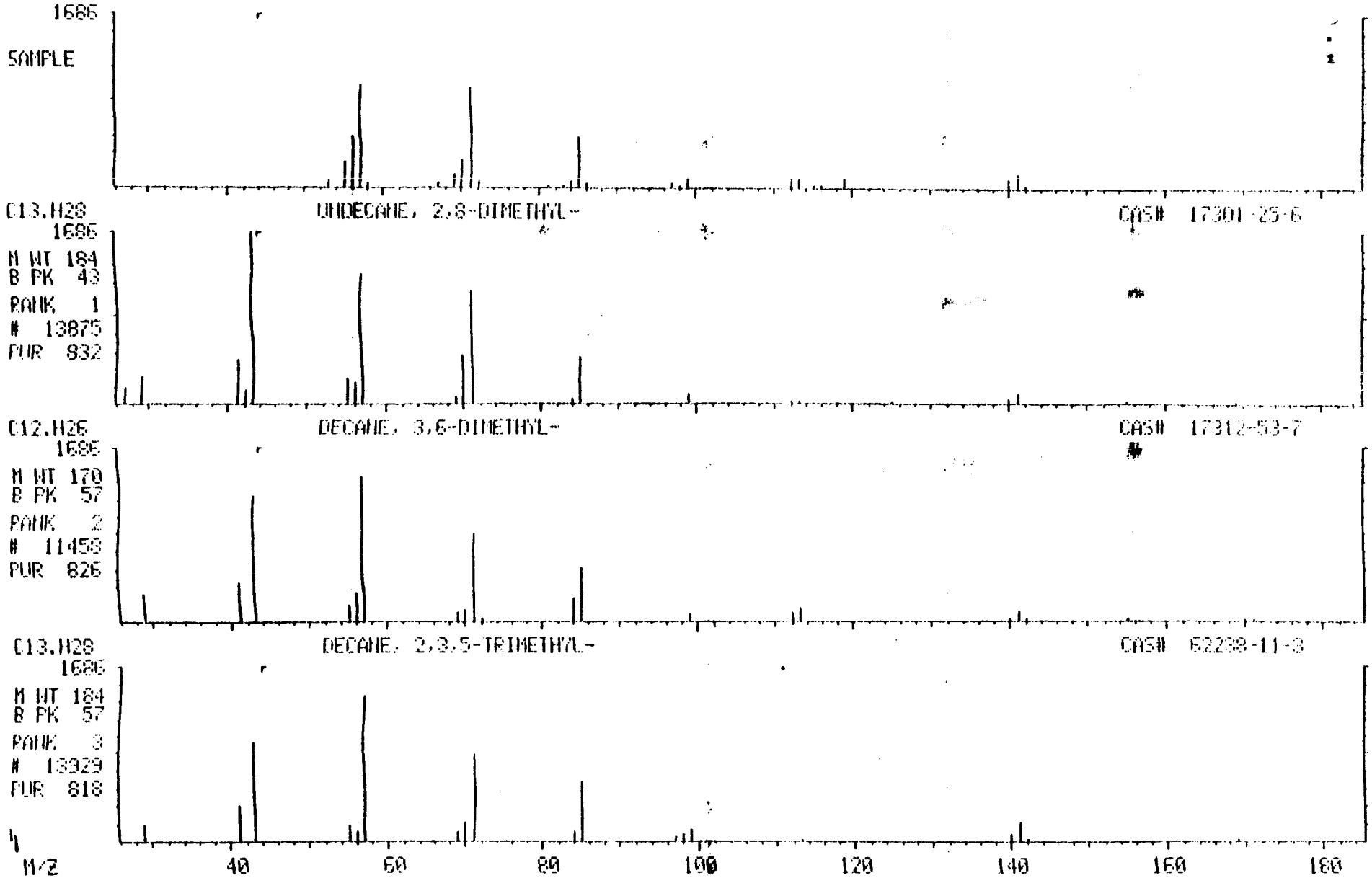
M/Z 40 60 80 100 120 140 160 180

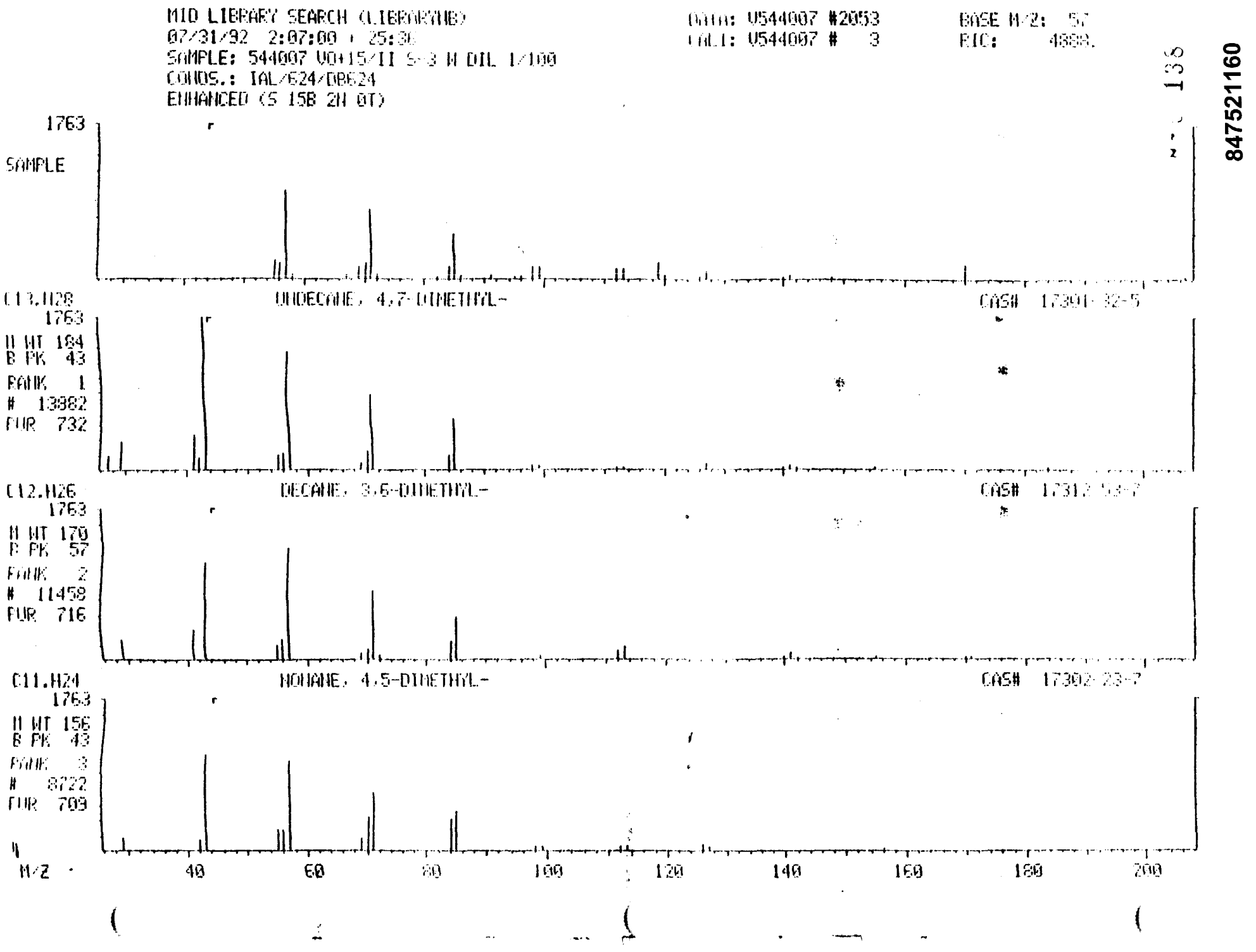
847521159

MID LIBRARY SEARCH (LIBRARYMB)
07/31/92 2:07:00 + 23:04
SAMPLE: 544007 VO+15/II S-3 N DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544007 #1850
CAL: V544007 # 3

BASE M/Z: 57
RIC: 6378.




MID LIBRARY SEARCH (LIBRARY1B)
07/31/92 2:07:00 : 25:30
SAMPLE: 544007 VOA15/II S-3 W DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544007 #2053
CAL1: V544007 # 3
BASE M/Z: 57
EIC: 4888.
1763
SAMPLE
C13.H28
UNDECANE, 4,7-DIMETHYL-
CAS# 17301-32-5
1763
M WT 184
B PK 43
RANK 1
13882
PUR 732
C12.H26
DECANE, 3,6-DIMETHYL-
CAS# 17312-53-7
1763
M WT 170
B PK 57
RANK 2
11458
PUR 716
C11.H24
NONANE, 4,5-DIMETHYL-
CAS# 17302-23-7
1763
M WT 156
B PK 43
RANK 3
8722
PUR 709
M/Z
40
60
80
100
120
140
160
180
200

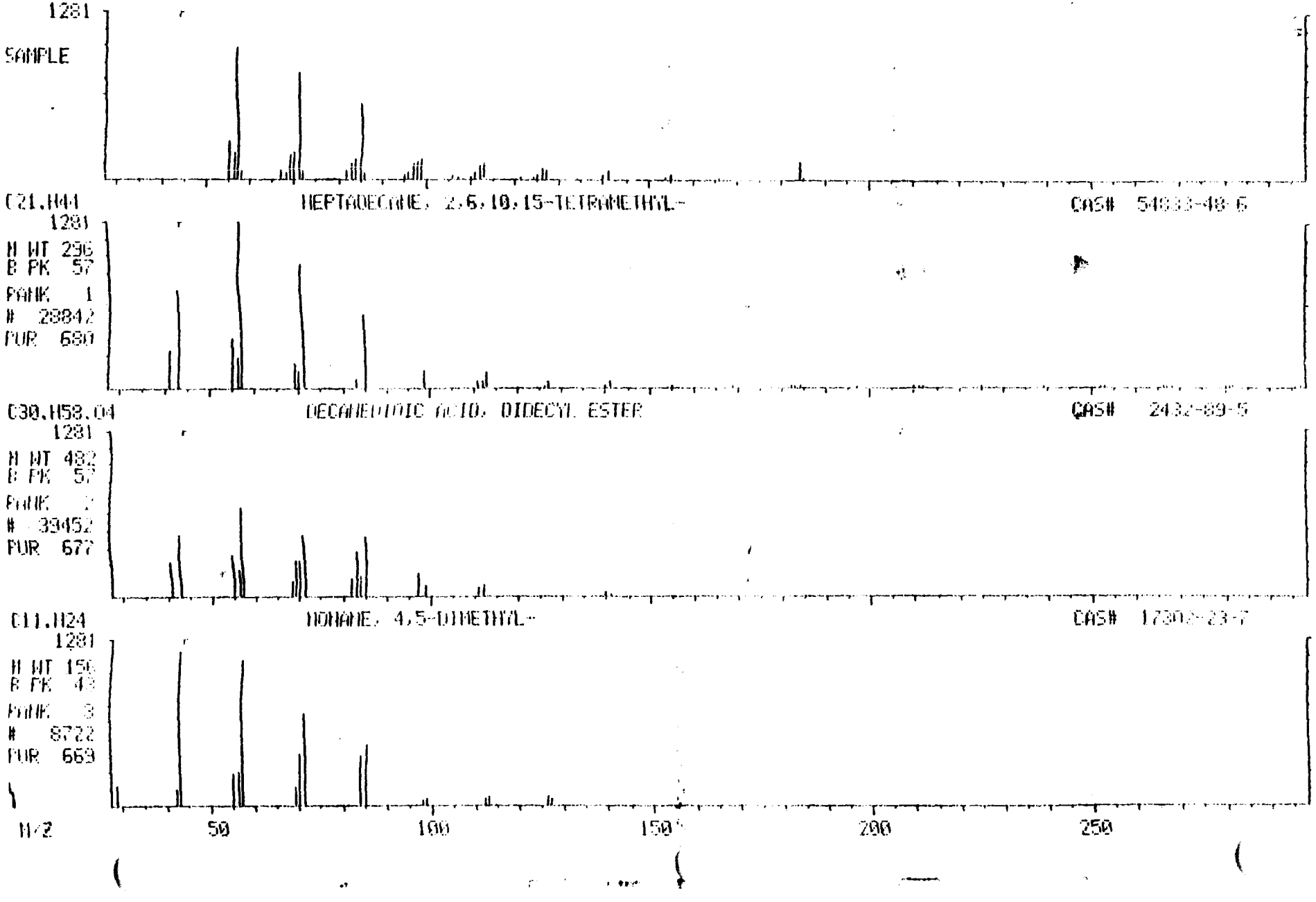
847521160

847521161

MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 2:07:00 + 26:33
SAMPLE: 544007 VO+15/II S-3 W DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544007 #2130
CALI: V544007 # 3

BASE M/Z: 57
RIC: 6920.



847521162

MID LIBRARY SEARCH (LIBRARY.MB)
07/31/92 2:07:00 + 26:36
SAMPLE: 544007 VO+15/II S-3 W DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: U544007 #2134
CALI: U544007 # 3

BASE M/Z: 131
RIC: 5880.

1254

SAMPLE

C11.H14 NAPHTHALENE, 1,2,3,4-TETRAHYDRO-5-METHYL- CAS# 2809-64-5

1254
M WT 146
B PK 131
PANK 1
6812
PUR 833

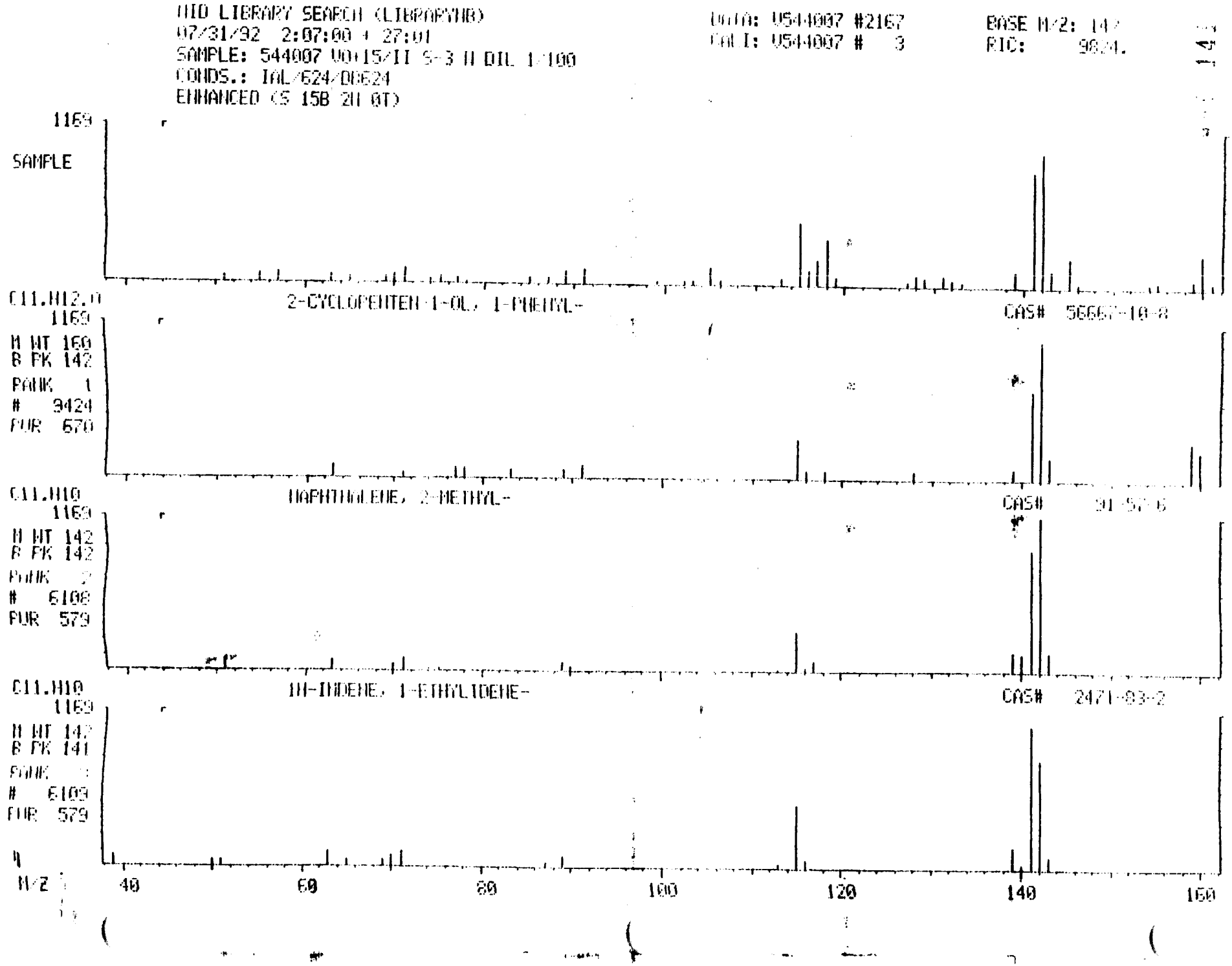
C11.H14 NAPHTHALENE, 1,2,3,4-TETRAHYDRO-6-METHYL- CAS# 1680-51-9

1254
M WT 146
B PK 131
PANK 2
6810
PUR 826

C11.H14 NAPHTHALENE, 1,2,3,4-TETRAHYDRO-1-METHYL- CAS# 1559-81-5

1254
M WT 146
B PK 131
PANK 3
6808
PUR 760

M/Z 40 60 80 100 120 140 160 180 200

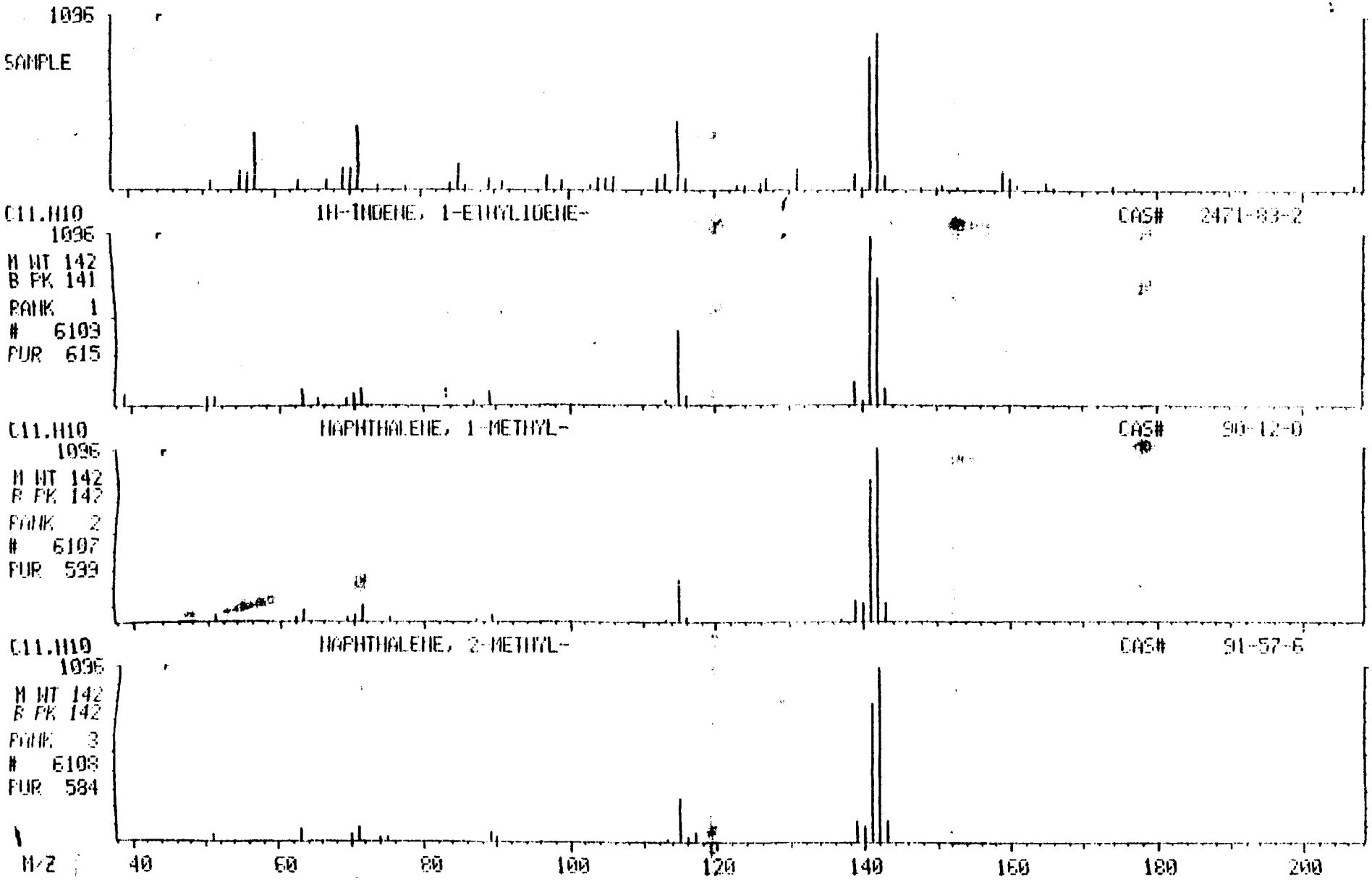

HID LIBRARY SEARCH (LIBRARYHB)
07/31/92 2:07:00 + 27:01
SAMPLE: 544007 V0:15/II S-3 H DIL 1:100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2H 0T)
Data: U544007 #2167
Cal I: U544007 # 3
BASE M/2: 142
RIC: 9824.
1169
SAMPLE
C11.H12.O
2-CYCLOPENTEN-1-OL, 1-METHYL-
CAS# 5666?-10-8
M WT 160
B PK 142
PANK 1
3424
PUR 670
C11.H10
NAPHTHALENE, 2-METHYL-
CAS# 91-57-6
M WT 142
B PK 142
PANK 2
6108
PUR 579
C11.H10
1H-INDENE, 1-ETHYLIDENE-
CAS# 2471-83-2
M WT 142
B PK 141
PANK 3
6109
PUR 579
M/Z
40
60
80
100
120
140
160

847521163

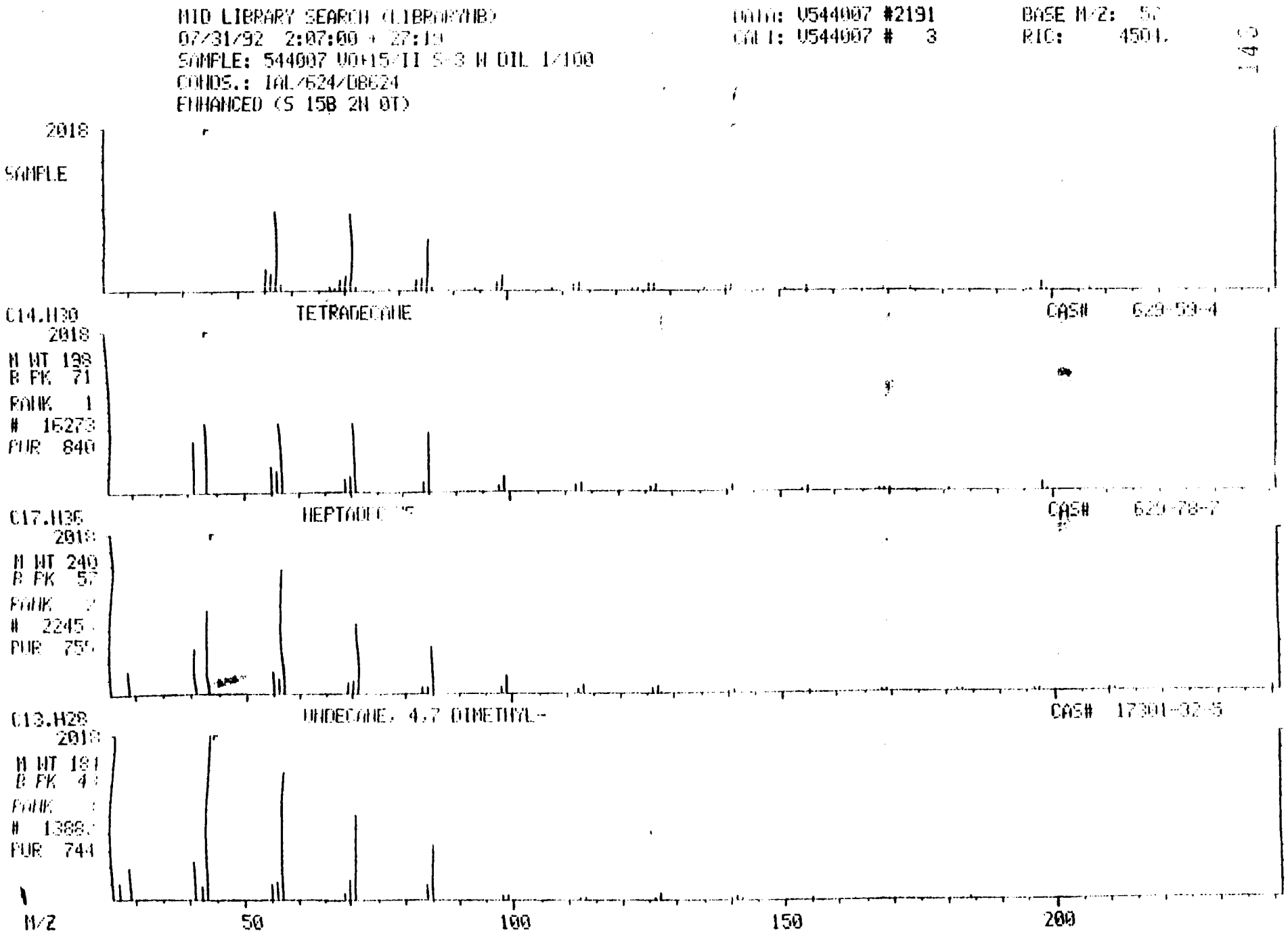
MID LIBRARY SEARCH (LIBRARYNB)
07/31/92 2:07:00 + 27:09
SAMPLE: 544007 VOH15/II S-3 M DIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544007 #2178
CAL.I: V544007 # 3

BASE M/Z: 142
RIC: 4280.



847521165


NID LIBRARY SEARCH (LIBRARY/NB)
07/31/92 2:07:00 + 27:19
SAMPLE: 544007 V0+15/II S-3 W OIL 1/100
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544007 #2191
CAL: V544007 # 3
BASE M/Z: 57
RIC: 4501.
2018
SAMPLE
C14.H30
TETRADECANE
CAS# 629-59-4
2018
M WT 198
B PK 71
RANK 1
16273
PUR 840
C17.H36
HEPTADEC
CAS# 629-78-7
2018
M WT 240
B PK 57
RANK 2
2245
PUR 75
C13.H28
UNDECANE, 4,7 DIMETHYL-
CAS# 17301-32-5
2018
M WT 184
B PK 43
RANK 3
1388
PUR 744
M/Z
50
100
150
200

847521166

Integrated Analytical Laboratories, Inc.

Integrated Analytical Labs

CHAIN OF CUSTODY

Case No : 10920-544
Customer: EWMA
Report : STANDARD
Format : Tier II
Date/Time : 07/30/92 / 13:30
Project : Elan Chemical #91025

P.O. # 4974
Bill To: 1235A Rt. 23 South
P.O. Box 648
Wayne, NJ 07474
Report To: C. Langewisch

# of Containers	2	2	2	2	2	2
IAL ID #	544-001	544-002	544-003	544-004	544-005	544-006
Client ID #	TV-1	FIE	TRIP	TV-2	S-1	S-2
Matrix	A		A	A	A	A
Date	07/30/92	07/	07/30/92	07/30/92	07/30/92	07/30/92
Time	11:20			11:40	11:35	11:25
624			√			
624+15	√	√		√	√	√

Comments:

Sampled by: Dan Hartmann

Delivered by: Dan Hartmann Signed by: Dan Hartmann Date/Time: 7/30/92 13:27

TODY TRANSFERRED:

Name: S O'HANLON Signed by: S. O'Hanlon Date/Time: 7.30.92/13 30

144

A New Jersey Certified Laboratory, #16751.

7/31

Integrated Analytical Laboratories, Inc.

CHAIN OF CUSTODY

Case No : 10920-544
Customer: EWMA
Report : STANDARD
Format : Tier II
Date/Time : 07/30/92 / 13:30
Project : Elan Chemical #91025

P.O. # 4974
Bill To: 1235A Rt. 23 South
P.O. Box 648
Wayne, NJ 07474
Report To: C. Langewisch

# of Containers	2
IAL ID #	544-007
Client ID #	S-3
Matrix	A
Date	07/30/9.
Time	11:50
624+15	√

2
00

Comments:

Sampled by: Dan Hartmann

Delivered by: Dan Hartmann Signed by: [signature] Date/Time: 7/30/92 13:27

TODY TRANSFERRED:

Name: S. O' HANLON Signed by: S. O'Hanlon Date/Time: 7-30-92/13 30

145

A New Jersey Certified Laboratory, #16751.

847521167

CLIENT CHAIN OF CUSTODY

Integrated Analytical Laboratories, Inc.
250 Railroad Avenue
Paterson, NJ 07501

Client: Ewma
Address: 1235A Rt 23 South
City: Wayne
State/Zip: NJ 07474

Project: Ekco Chemical #9025
Customer P.O.: 4974
Contact Person: GL.

Deliverables (Circle One) Std Tier I Tier II BUST ECRA Other

Turnaround Time: Normal

Sample #	Field #	M	#	Desc. of Samples	Date/Time	Analytical Requests
54400 1	TV-1	Aq	2	H_2O from Vault	7/30/92 11:20	624+15
2	Field			Blank H_2O	7/30/92 —	624+15
3	Trip			Blank H_2O	7/30/92 —	624
4	TV-2	Aq	2	H_2O from Vault	7/30/92 11:40	624+15
5	S-1	Aq	2	Sewer H_2O	7/30/92 11:35	624+15
6	S-2	Aq	2	Sewer H_2O	7/30/92 11:25	624+15
7	S-3	Aq	2	Sewer	7/30/92 11:50	624+5

Person(s) Assuming Responsibility for Sampling: Dan Hartmann

Relinquished by:	Received by:	Organization	Date	Time	Reason
Dan Hartmann	S.O Hanlon	IAL	7-30-92	13 30	Analysis

Comments: _____

M = Matrix: (A) Aqueous, (F) Filter, (O) Oil, (S) Soil/Sludge, (T) Air, (X) Other

C = Number of Containers

847521168

Integrated Analytical Laboratories, Inc.

SAMPLE CONTROL RECORD
LABORATORY CUSTODY CHRONICLE

Sampling Date: 7.30.92
Receipt Date: 7.30.92

Receipt Officer S. O'Hanlon
Case ID Number: 10920- 544

Custody Seal — (Present)/Absent
Chain of Custody — (Intact)/Not Intact
Sample Tags — (Present)/Absent
Shipping Bill — (Present)/Absent — (Listed)/Not Listed on C.O.C. No. _____

LABORATORY SAMPLE NUMBER	DATE/TIME REMOVED	ANALYST INITIALS	EXTRACTION METHOD	ANALYSIS METHOD	DATE/TIME RETURNED	ANALYST INITIALS
001-007	SAMPLED	BY	EWMA	7.30.92	1120-1150	
001-007	RECEIVED	BY	IAL	7.30.92	1330	
003	7.30.92	1.20p CL		VC	7.30.92 / 3.??	CL
001, 002, 004-007	7.30.92	1.30p CL		Vol 15	7.30.92 / 9.30p	CL
001, 005, 006	8.4.92	1.00p CL		Vol 15	8.4.92 / 5.00p	CL

REVIEW & APPROVAL _____
REMARKS:

147

847521169

ENVIRONMENTAL WASTE
MANAGEMENT ASSOCIATES
P.O. BOX 648
WAYNE, NJ 07474

201-633-7900 FAX: 201-633-7482

Show this Purchase Order Number on all correspondence, invoices, shipping papers and packages.

4974

TO

IAL
150 Railroad Ave
Patterson, NJ 07501

DATE	REQUISITION NO
7/30/92	

Elan Chemical
#41025

REQUISITIONED BY	WHEN SHIP	SHIP VIA	F.O.B. POINT	TERMS

QTY. ORDERED	QTY. RECEIVED	STOCK NO. / DESCRIPTION	UNIT PRICE	TOTAL
SH 2-6		Aqueous for 624+75		
1		Aqueous for 624		
				148

1. Please send _____ copies of your invoice.
2. Order is to be entered in accordance with prices, delivery and specifications shown above.
3. Notify us immediately if you are unable to ship as specified.

AUTHORIZED BY

ORIGINAL

847521170

Stanchart Business Credit, Inc.

New York, New York

ENSR

Phase I Environmental Assessment
Elan Chemical Co.
268 Doremus Avenue
Newark, NJ

ENSR Consulting and Engineering

October 1992

Document Number 6294-003-400(464)

REC'D 10/7/92

847521171

ENSR

ENSR Consulting
and Engineering

Somerset Executive Square I
One Executive Drive
Somerset, NJ 08873
(908) 560-7323
(908) 560-1688/FAX

October 2, 1992

Mr. Donald Flores
Stanchart Business Credit, Inc.
477 Madison Avenue, 20th Floor
New York, New York 10022

Re: Phase I Environmental Assessment
Elan Chemical Co. Property
268 Doremus Avenue, Newark, New Jersey

Dear Mr. Flores:

ENSR Consulting and Engineering (ENSR) is pleased to submit its Phase I Environmental Assessment of the above referenced facility. This evaluation was performed pursuant to ENSR's written proposal dated September 10, 1992, which was approved by you the same day. We understand this assessment was requested to provide you with information to assist in your decision regarding the issuance of a credit extension to Elan Chemical Co.

The details of the scope of the investigative effort are provided in Exhibit A. The following paragraphs summarize our initial findings, provide recommendations regarding the need for future investigative activities, and discuss study limitations.

Site Location and Description

The subject site consists of three parcels (Lots 8, 9, and 20 of Bock 5014) which contain a main manufacturing building with attached offices, and ancillay rooms, and two other significant structures used for warehousing and other production activities. These parcels of land are situated on Doremus Avenue in an industrialized section of Newark, NJ.

Site History

The main parcel (Lot 8) was developed prior to the late 1920s as a vegetable oil plant. Sometime prior to the late 1940s and continuing through the 1960s, the site was used under several names for the manufactung of paints and a variety of sealings and coatings. Based on a review of industrial directories and fire insurance maps, Elan Chemical Co. began using the main parcel in 1971. In 1977 Lot 20, a railroad right-of-way, was sold to Elan Chemical Co. by the Central Railroad of New Jersey. Railroad tracks and the elevated fill were removed from this parcel and Elan began utilizing this area for storage.

847521172

Descripti of Current Site Uses

The propert s currently used to manufacture ingredients for the food flavor g industry. The manufac ring activities consist of the batch processing of various acids and batch specific alcoh s, involving reactions, pH adjustments, and distillations. Solvent s are also used in the pr ss. The principal wastes generated by the processes are wastewater and water-soluble c mpounds, and waste solvents. Wastewater is pre-treated on site before being discharge to the local sewage authority. Solvents are recycled into the processing operations until t y are no longer useable. They are then stored onsite in 55-gallon drums before pumped in an aboveground 4,500-gallon storage tank prior to off-site disposal. A large portion of t exterior property is used for the temporary storage of chemical intermediates (i.e., "ork in progress") in 55-gallon drums.

Summary of Findin

Based upon the historic search, review of facility provided reports and correspondence, limited review of governmental waste incident files and databases, interviews with site representatives, and the on e visual inspection of the property, evidence was found to indicate that there has been contamination problem affecting the subject site related to leaking hazardous waste dru . During the course of the investigation, several other sources of potential concern w identified, each of which are briefly discussed below.

- Former Drum Storage a

The unpaved area currently use r scrap metal storage was formerly used (as late as 1990) to store 55-gallon drums of zardous waste solvents. Several inspections by the New Jersey Department of Enviro ental Protection and Energy (NJDEPE) Division of Hazardous Waste Managemer fron 988 through 1990 resulted in Notice of Violations (NOVs) for violations including nprop labelling of hazardous waste drums, discharge of hazardous substances from leking d failure to ship hazardous waste offsite within 90 days, and manifesting and ther co ency plan deficiencies.

Elan Chemical Co. hired a constant wh 991 and 992 conducted soil boring sampling in areas of stained soil. Our revi w of th sampli data indicates a number of the soil samples contained polycyclic armatic h rbons (PAHs) at concentrations greater than the proposed New Jersey Cleaup Sta published in the New Jersey Register on February 3, 1992 (N.J.A.C. 7:26). The o standards were developed for residential and non-residential surface soil subsu e ils, groundwater, and building interiors in order to expedite the cleanup various faci es throughout the state. Though these

cleanup standards are only proposed at this time, the NJDEPE has advised ENSR on other projects that they are using these proposed regulations as guidelines in determining appropriate actions for potential areas of concern. In addition, chromium was detected in all the samples in concentrations as high as 1230 ppm. There is no proposed cleanup standard for chromium at this time; however, a guideline of 100 ppm has been used in the past. Elan Chemical Co.'s consultant proposed to encapsulate the area with asphalt. A Memorandum of Agreement was entered into between NJDEPE and Elan Chemical Co. on August 27, 1992 allowing the area of concern to be encapsulated as proposed. We wish to point out that the NJDEPE has informed Elan Chemical Co. that leaving contaminants in place that may exceed the New Jersey Proposed Cleanup Standards, when and if promulgated, may require a deed restriction on the property. In addition, other NJDEPE programs, i.e., ECRA may or may not accept this proposed remedial measure.

On April 17, 1991, an Administrative Order and Notice of Civil Administrative Penalty Assessment was issued by NJDEPE with a $21,000 fine based on the previous inspections discussed above. Elan Chemical Co. is appealing the fine and a hearing is currently scheduled for February 93.

- Known Contamination in a New Jersey Bell Underground Vault

Directly in front of the subject property, to the right of the entrance door, is a New Jersey Bell underground vault (manhole). New Jersey Bell workers discovered chemical odors coming from the water in the manhole and informed NJDEPE in May 1992. A sample collected by New Jersey Bell in April 1992 revealed contamination with toluene and other solvents used by Elan Chemical Co. An additional sample was collected from "fresh liquid" which entered the manhole after it had been pumped out and similar contaminants were found. As a result, New Jersey Bell has claimed the underground cables have failed and are currently running overhead telephone lines since the potential hazards prevent them from making repairs. New Jersey Bell has requested that NJDEPE identify the responsible party and implement corrective action. Elan Chemical Co. has been notified by NJDEPE as a potential source of the contamination based on the presence of an Elan Chemical Co. cistern located to the left of the entrance door. Prior to 1985, this cistern was used by the facility to collect process effluent before discharge into the sewer. In 1985, Elan Chemical Co. claims it sealed the line into the cistern when it began using its on-site pretreatment process. The facility claims the source of the contamination originates from overflow of the municipal sewer line which runs parallel in close proximity to the underground New Jersey Bell cable. In addition, Elan Chemical Co. claims to have filled the cistern with sand after hearing about the problem with the New Jersey Bell vault. ENSR contacted the NJDEPE investigator handling the case, Mr. Ray Greulich, and was told that he is currently

attempting to determine the building code requirements from 19[illegible]at would dictate the proper procedures for disconnecting their effluent line to the cistern. [illegible]point out, however, that these measures undertaken by Elan Chemical Co. do not elimi[illegible] the cistern as a potential source of the contamination and the potential for the facility t[illegible] identified as a Potentially Responsible Party (PRP).

- Non-Compliance with PVSC Discharge Permit

Elan Chemical Co. discharges pre-treated process effluent to the Passaic Valley Sewage Authority (PVSA) under a valid discharge permit. ENSR reviewed monthly testing results from discharge samples collected from October 1991 through September 1992 for permit compliance. Each month at least one chemical compound exceeded its discharge limit. There is the potential for the PVSA to require Elan Chemical Co. to improve its treatment process.

- Discharge Pipe into the Passaic River

Upon a review of NJDEPE hazardous waste files, ENSR discovered that during a RCRA site inspection on July 16, 1990, the NJDEPE discovered a discharge pipe exiting the southeast portion of site into the Passaic River. The NJDEPE investigator, Ms. Jodie Stein, determined that no permit was on file with the NJDEPE Division of Water Resources.

- Aboveground Hazardous Waste Storage Tank (Tank No. 61)

As previously mentioned, Elan Chemical Co. has in the past and at the present time, used a 4,500-gallon aboveground storage tank to store waste toluene and methanol, prior to off-site disposal. As a result of a December 8, 1988, site inspection, the NJDEPE issued a Notice of Violation (NOV) for failure to obtain Department approval for storage of waste in an aboveground tank and not having the tank labelled hazardous waste (N.J.A.C. 7:26-9.3(b)). Elan submitted a letter to the N[illegible]EPE notifying them that use of the tank had been discontinued. ENSR obtained a copy of an internal NJDEPE memo which indicated that Elan had come into compliance with this and other violations.

Interviews with site representatives dur[illegible] ENSR's September 11, 1992 site inspection indicated that waste solvents are tempor[illegible]ily stored in the tank in question, Tank 61.

- Prior Disposal Practices of Former Operations

As previously discussed, ENSR has learned that the subject property was use[d] the mid-1900s to manufacture paints and various coatings and sealants. Although th[ere] was no available information regarding waste disposal information nor was there any [ob]servable evidence of on-site waste disposal during our site inspection, there is concern [th]at this former operation may have released hazardous substances to the environment.

Review of Available Material Safety Data Sheets

ENSR was provided by Elan Chemical Co. a raw material inventory list dated June 30, 92. During our site inspection of September 11, 1992, we reviewed available Material Data Safety Sheets (MSDS) for these raw materials to identify any materials which were described as toxic. While each MSDS is different in terms of how much chemical information is provided and how it is presented, ENSR has compiled a partial list (Table 1) of chemicals which were identified as either toxic or a high health hazard (T), or having low toxicity (LT). Please be aware that other raw materials used by Elan Chemical Co., that either did not have an available MSDS or whose MSDS contained insufficient information, may also be toxic.

Recommendations

ENSR's findings related to the Former Drum Disposal Area, other historical on-site operations, and the New Jersey Bell underground vault, as discussed above, cannot be verified without undertaking an analytical testing program. The decision to implement such a program is dependent on Stanchart Business Credit, Inc.'s assessment of the potential business risks involved, along with the consideration of the various indemnification agreements, warranties, or representations that may exist between the two parties. Based solely upon the results of this preliminary investigation, the information suggests that some testing for potential groundwater contamination should be considered. This testing program, if implemented, should focus on determining whether the soil contamination identified in the Former Drum Disposal Area, the cistern and any other potential contamination from the former paint manufacturing operations, has released contaminants into the groundwater.

ENSR believes that if the facility were to trigger the requirements of the NJDEPE Environmental Cleanup Responsibility Act (ECRA), there is a high probability of finding significant waste-related problems at the site. Furthermore, it is unclear how the proposed NJDEPE cleanup standards will affect the site. In order for Stanchart Business Credit, Inc. to fully verify and assess the potential environmental liabilities at this site, ENSR would

ENSR

TABLE 1

Partial List of Toxic Raw Materials Used by Elan Chemical Co.

Chemical	Identifie
Acetic Anhydride	T
Acetone	LT
Cassia Oil Natural	LT
Arquad HT-75	T
Aluminum Chloride	T
Aluminum Isopropylate	T
Benzyl Chloride	T
Boric Acid	T
N-Butyric Anhydride	LT
Cedrol Crude-X POL	LT
Cedarwood Oil	LT
Cinnamic Alcohol	LT
Dimethyl Formamide	T
Dimethyl Sulfate	T
Glycerine	LT
Heptane	LT
Heptanoic Acid	T
N-Hexanol	LT
Hydrochloric Acid	T
Isopare	LT
Methanol	T
Cinnamic Acid	LT
Ethylene Dichloride	T
Formaldehyde 37%	T
Caproic Acid Natural	T
4-Isopropylanaline	T
4-N-Butylanaline	T
P-N-Butylanaline	T
4-sec-Butylanaline	T
Acetone natural	LT
Benzoyl Chloride	T

T - Toxic or a high health hazard
LT - Low toxicity

recommend implementing an ECRA-type sampling program. While implementing such a sampling program would be costly at this time and possibly perceived by Stanchart Business Credit, Inc. to be unnecessary based on their assessment of the business risks involved, we do recommend, at a minimum, the implementation of the following tasks using NJDEPE approved procedures:

- Install and sample a minimum of three monitoring wells onsite.
- Advance a minimum of two soil borings adjacent to the former cistern and collect and analyze soil samples at a depth below the base of the cistern, and collect a sample of the sand in the cistern.
- Collect and analyze water samples from both the pre-treated process effluent (prior to discharge to the sewer) and the New Jersey Bell vault for comparison purposes.
- Collect and analyze a surface sample of the stained soil observed behind the dumpster area during our September 11, 1992 site inspection.

Regarding the ongoing issues which NJDEPE has been involved with and other issues that they have expressed concern with in the past, we recommend that Stanchart Business Credit maintain contact with the appropriate NJDEPE representatives for status updates on the following:

- The proposed encapsulation of the Former Drum Area. It is also recommended that the NJDEPE-ECRA office be contacted to determine whether ECRA would accept this remedial measure.
- The resolution of the $21,000 fine cited in the April 17, 1991 Administrative Order and Notice of Civil Administrative Penalty Assessment.
- The New Jersey Bell vault investigation as it may identify Elan Chemical Co. as a potentially responsible party.
- The discharge pipe entering the Passaic River.
- The storage of hazardous waste in an aboveground tank.

Study Limitations

This report describes the results of ENSR's initial investigation to identify the potential presence of significant environmental liabilities materially affecting the subject property. In the conduct of this investigation, ENSR has attempted to independently assess the potential presence of such problems within the limits of the established scope of work as described in our proposal dated September 10, 1992. However, verification of potentially important facts was not always possible. As with any due diligence evaluation, there is a certain degree of dependence upon oral information provided by facility or site representatives which is not readily verifiable through visual inspection or supported by any available written documentation. ENSR shall not be held responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed by facility or site representatives at the time this investigation was performed.

This report and all field data, notes, and laboratory test data (where applicable) were gathered and/or prepared by ENSR in accordance with the agreed upon scope of work and generally accepted engineering and scientific practice in effect at the time of ENSR's investigation of the site. The statements, conclusions, and opinions contained in this report are only intended to give approximations of the environmental condition of the site. Moreover, there are several major modifications that are inherent in the conduct of this or any other environmental due diligence examination.

First, it is difficult to predict which, if any, of the potential environmental issues identified will become actual problems in the future, for federal and state environmental regulations continually change as do the enforcement priorities of the applicable governmental agencies involved.

Second, even for problems currently identified, it is often difficult and sometimes impossible to accurately estimate the liabilities that may be involved in remedying the problem(s), for the legal and technological standards for evaluating, remedying, and allocating liability for environmental issues are in a constant state of change. Moreover, the liability for remedying environmental problems tends to be highly dependent upon agency negotiations and the sometimes arbitrary and unpredictable nature of agency officials charged with such negotiations.

Third, there is always the distinct possibility that major sources of future environmental liability have yet to manifest themselves to the point where they are reasonably identifiable through an external investigation such as the one conducted herein.

This report, including all supporting field data, notes, and laboratory data where applicable (collectively referred to hereinafter as "Information") was prepared or collected by ENSR for the benefit of its client, Stanchart Business Credit, Inc. ENSR's client may release the information to third parties, who may use and rely upon the Information at their discretion. However, any use of or reliance upon the Information by a party other than specifically named above shall be solely at the risk of such third party and without legal recourse against ENSR, its parent or its subsidiaries and affiliates, or their respective employees, officers, or directors, regardless of whether the action in which recovery of damages is sought is based upon contract, tort (including the sole, concurrent, or other negligence and strict liability of ENSR), statute or otherwise. This Information shall not be used or relied upon by a party that does not agree to be bound by the above statement.

ENSR appreciates the opportunity to provide environmental services to Stanchart Business Credit, Inc. If you have any questions regarding our report or its findings, please contact me at (908) 560-7323.

Sincerely,

Donald P. Hessemer
Senior Project Manager

Gilbert Long
General Manager and Principal

DPH/gpk

Reference No. 6494-003-400(464)

Attachments: Exhibit A
cc: File 6294-003

EXHIBIT A
SUPPORTING DOCUMENTATION FOR ENVIRONMENTAL DUE DILIGENCE

PART I: SITE OWNERSHIP AND LOCATION

1. **Site Owner:**

   (a) **Name:** Elan Chemical Co.

   (b) **Address:** 268 Doremus Avenue
   Newark, NJ 07105

2. **Site Operator:**

   (a) **Name:** Elan Chemical Co.

   (b) **Address:** 268 Doremus Avenue
   Newark, NJ 07105

3. **Site Location References: (See Figure 1: Site Location Map)**

   (a) **Address:** 268 Doremus Avenue
   Newark, NJ 07105

   (b) **County:** Essex

   (c) **U.S.G.S. Quad Map:** Jersey City and Elizabeth, NJ

PART II: DESCRIPTION AND CHARACTERIZATION OF SITE

1. **Physical Description of Site (See Figure 2: Site Plan)**

   (a) **Site acreage:** Approximately 4 acres

   (b) **Estimated % of site covered by buildings and pavement:** 90%

   (c) **Site and building layout:** The rectangular-shaped property is located along the easterly side of Doremus Avenue. The site contains a main one-story building extending from Doremus Avenue towards the center portion of the property. This building contains offices, lunchroom, lockerroom, and the main manufacturing operations. A storage shed used to store hoses, belts, and pumps is located along the northwest corner of the site. In the northeast portion of the site is a one-story building which contains three rooms: the shipping and receiving area, the vanilla warehouse area, and an extraction

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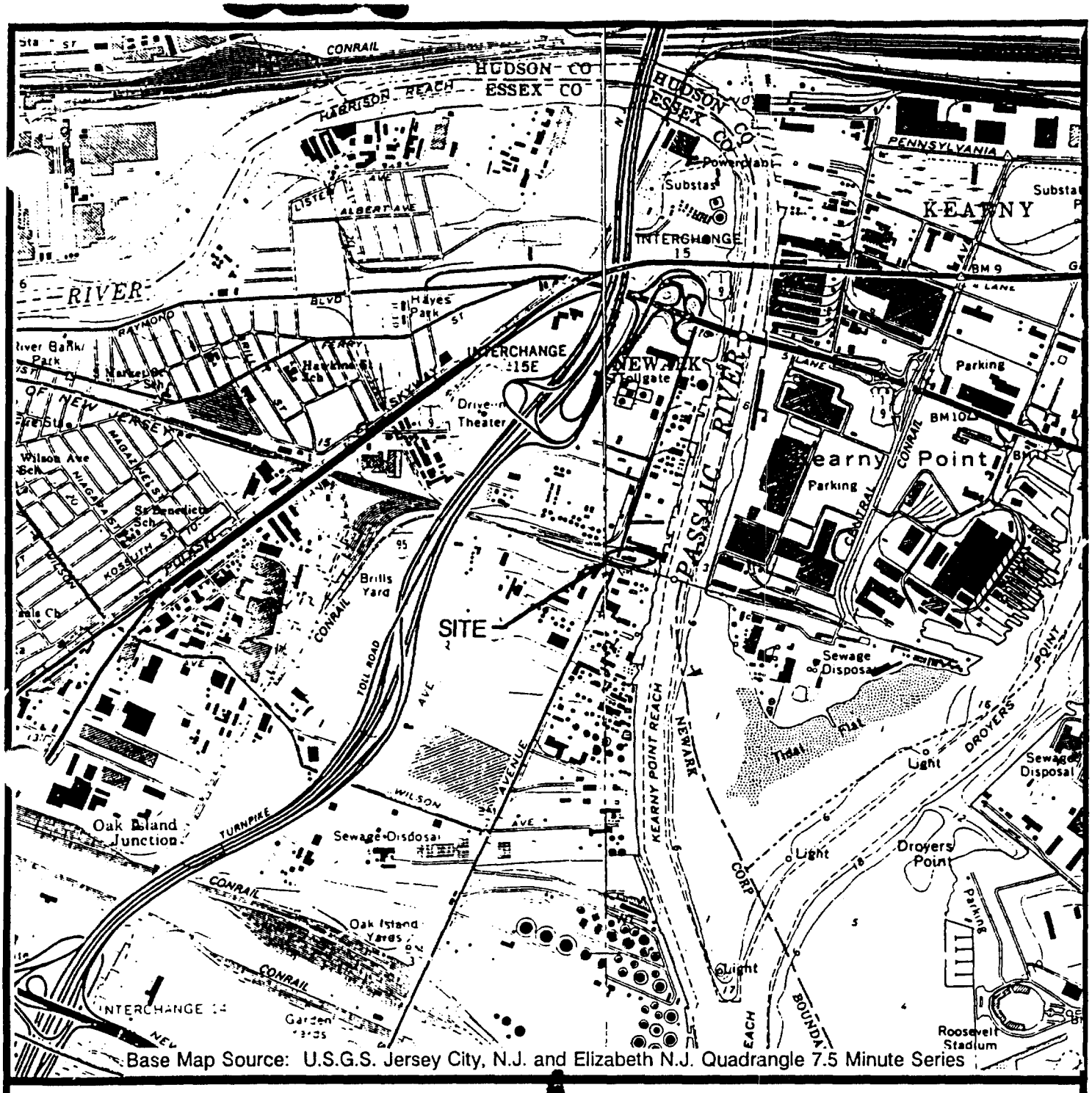

Base Map Source: U.S.G.S. Jersey City, N.J. and Elizabeth N.J. Quadrangle 7.5 Minute Series

Scale: 1" = 2000'

Figure 1

Site Location Map

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Elan Chemical Co. Newark, New Jersey

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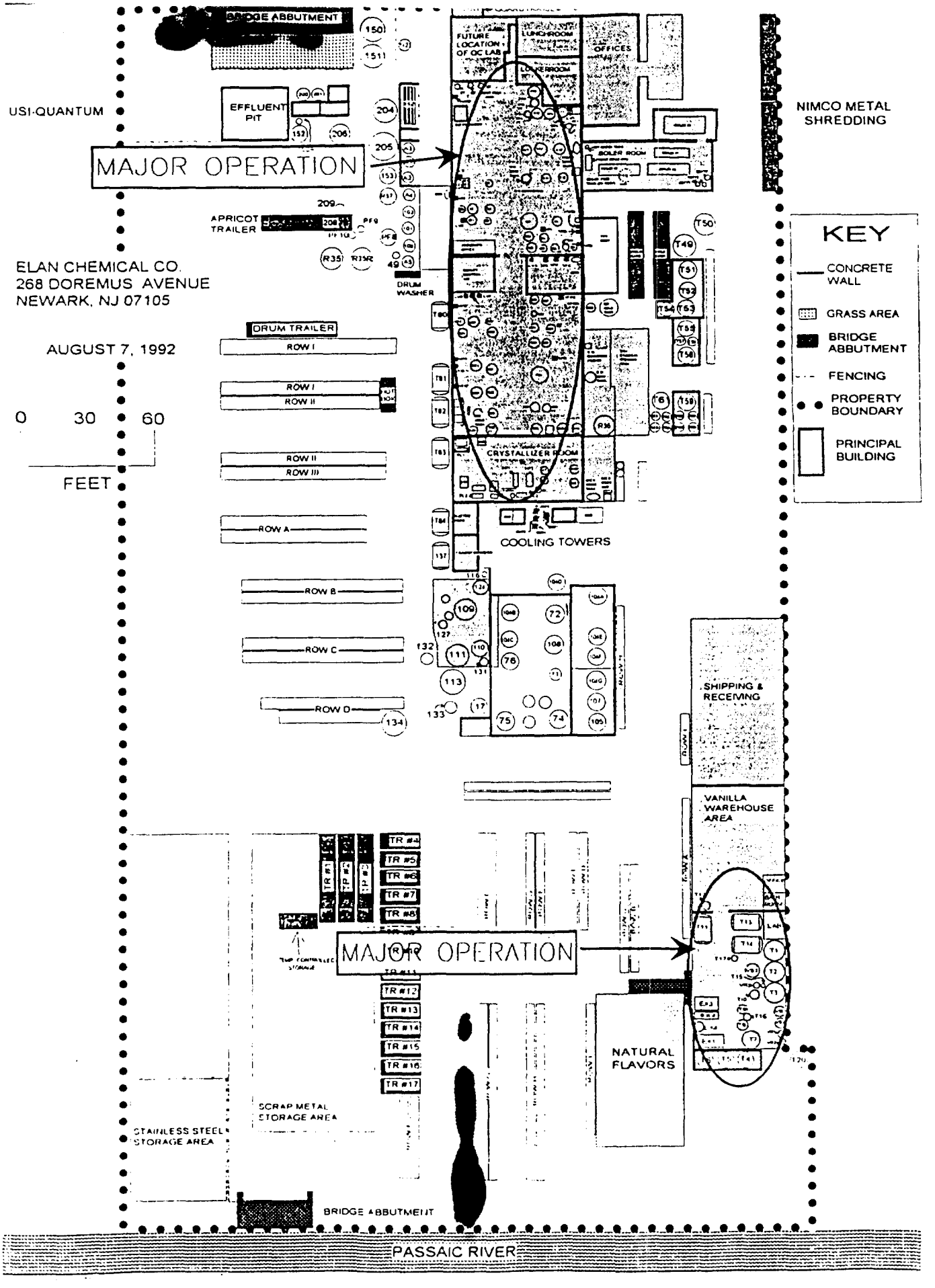

FIGURE 2

SITE PLAN

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and blending room. Adjacent to south side of this building is the Natural Flavors Building. The eastern end of the site is used for the outside storage of finished goods and also contains the outside scrap metal storage area. A small one-story building used for toluene extraction is located in the center of the site. The southern portion of the site contains the outside drum storage area for work in progress. Finally, the southwestern portion of the site contains the wastewater effluent pit and treatment system. Interspersed through the center of the property are numerous aboveground storage tanks containing process chemicals and wastewater.

(d) **Topography and slope:** The subject property is relatively flat; however, in the rear of the property, the ground slopes to the north where Elan has recently installed a catch basin which will eventually be pumped to the on-site treatment system.

(e) **Depth to groundwater/flow direction:*** Depth to groundwater was determined to be between 6 to 6.5 feet below grade during soil boring activities in January 1992. Groundwater flow is expected to be towards the Passaic River and subject to tidal fluctuations.

(f) **Surface water and wet areas (including streams, rivers, ponds, etc.):** The Passaic River borders the eastern side of the site along the rear portion of the property.

(g) **Ditches/Drainage Features:** None observed.

2. **Brief Description of Current Use in Terms of Products Made; Processes Used; Raw Materials Employed; Chemicals and Fuels Used; and Wastes Generated, Including Waste Disposal Facilities/Locations Used:**

Elan Chemical Co. manufacturers food flavorings and ingredients used in flavors and fragrances. Major process operations take place in the Blending Room and the Main Manufacturing Building. In the Blending Room, vanilla extract is produced by blending ground vanilla with ethyl alcohol. Wastes include wastewater and spent vanilla beans. The wastewater goes into floor drains which lead to a sump and is then pumped to the on-site pretreatment system.

The Main Manufacturing Building houses the batch processing operation involving various acids and batch specific alcohols. The process consists of reactions, washings, and distillation. The reaction process produces an ester. Water and water-soluble contaminants are driven off by adjusting the pH (washing) which increases the grade of the product. Process wastewater is diverted for on-site pretreatment before being discharged to the Passaic Valley Sewage Authority. Solvents are used in the process as a carrier to decrease the viscosity of the ester which allows for easier handling. The resulting ester/solvent

*Unless otherwise noted, the groundwater flow direction has been inferred from a review of regional topographic data. Site specific conditions may vary due to a variety of factors, including geologic anomalies, utilities, nearby pumping wells (if present), and other developments.

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mixture is distilled to recover the solvent, which is then recycled into the process until it is no longer effective. Waste solvents are temporarily stored in 55-gallon drums in the exterior Hazardous Waste Storage Area before being pumped into an aboveground 4500-gallon storage tank (Tank 61) where it is blended prior to off-site disposal.

The facility is heated by oil and gas although currently it is heated primarily by gas.

3. **Selected Facility Information:**

   (a) **Septic tanks/leaching fields:** None observed or reported.

   (b) **Sanitary sewers:** The subject property is served by the municipal sanitary system.

   (c) **Process wastewater sewers:** The subject facility discharges between 60,000 to 70,000 gallons/day of treated wastewater to the Passaic Valley Sewerage Commission (PVSC) under a valid permit. The waste stream also includes cooling water and water from building floor drains and sumps. More detailed information is provided in Part VI, No. 3, Wastewater Discharges.

   (d) **Facility water supplies (potable and process):** Potable and process water is obtained from the City of Newark Municipal System.

   (e) **Wells (active or abandoned monitoring, potable or process water supplies, injection, gas/oil):** None present.

   (f) **Other:** None.

4. **Observations Concerning Waste Management Practices at Site**

   (a) **Date of site/facility inspection:** September 11, 1992.

   (b) **Weather-related limitations:** None.

   (c) **Access-related limitations:** None.

   (d) **General condition of interior areas:**

      (i) **Process areas:** The Blending Room appeared well maintained. Floor drain channels in the cement floor transport wastewater to the on-site wastewater treatment system. The Main Manufacturing Building had numerous wet areas on the concrete floor.

      (ii) **Raw material/chemical supply areas:** Raw materials are received in 55-gallon drums in the Shipping and Receiving Room which appeared well maintained.

      (iii) **Waste storage areas:** With the exception of floor drains and sumps described below, all wastes are stored in drums and an exterior aboveground tank. Tank 61,

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which is used to mix and store waste solvents prior to off-site disposal, had no containment diking and is in a paved area.

(iv) **Floor drains, sumps:** A floor drain channel system leading to a sump is present in the Blending Room, the Natural Flavors Building, and the Main Manufacturing Building. All three systems lead to the on-site treatment system and were observed containing wastewater during the inspection.

(v) **Other:** None.

(e) **General condition of exterior areas:**

(i) **Process areas:** Much of the exterior areas is used for storage of finished products and "intermediate" (work in progress) stored in drums on pallets in paved areas. The drums appeared in good condition. Intermediates are stored in large aboveground holding tanks in diked areas.

(ii) **Waste storage areas:** A hazardous waste storage area was observed outside containing two drums on a pallet in a paved area beneath an overhang. There was no access limitation or diking in the area. Drums were marked as flammable liquid and hazardous waste and dated 4/27/92. It should be noted that this waste appears to have been stored greater than 90 days.

The bulk of the hazardous waste produced at the site is a mixture of primarily toluene and methanol and other solvents stored in an aboveground tank. No ground staining was observed in this area.

The Scrap Metal Storage Area, located on the main non-paved portion of the site (gravel), contained large abandoned vessels and empty drums as well as a dumpster which was observed to contain empty bags and cardboard. Behind the dumpster stained soil was observed.

(iii) **Loading/unloading docks:** No significant conditions were observed at the loading dock area in front of the Shipping and Receiving Room.

(iv) **Tank fill locations:** No evidence of spills was observed at the No. 4 fuel oil storage tank.

(v) **Catch basins:** Two catch basins for storm runoff were observed in the driveway along the northern side of the site. They discharge to the PVSC. Three others were observed in a line between the Main Manufacturing Building and the Work in Progress Area, and according to the Site Effluent Plot Plan, lead to the on-site treatment system prior to discharge to the PVSC.

(vi) **Other:** A pool of brown slurry with an odor of vanilla and alcohol was observed in a low lying catch basin area outside the Electrical Transformer Area. This catch basin also appears to lead to the on-site pretreatment system.

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(f) **Other observations:**

(i) **Discolored soils:** Stained soil, yellow in color, was observed behind a dumpster in the Scrap Metal Storage Area.

(ii) **Discolored water:** Oily sheens were observed on puddles of recent rainwater throughout the site.

(iii) **Unusual odors:** Due to the site operations, strong fragrance odors were observed throughout the site.

(iv) **Unusual vegetative conditions:** None observed.

(v) **Other observations:** Water with an unidentified chemical odor was observed in a New Jersey Bell manhole located directly in front of the subject property.

PART III: SITE HISTORY AND DESCRIPTION OF SURROUNDING LAND USES

1. **Description and Former Uses of Site, Including Dates Where Known, and Other Relevant Information Concerning Waste Generation, Disposal, and Underground Tanks:**

The subject site appears to have been developed prior to 1926 based on a review of "Robinson's Atlas of the City of Newark 1926" and a 1931 Sanborn Insurance Map. Both of these maps show the presence of most of what is currently the Main Manufacturing Building and identify the occupant as Schultz Vegetable Oil Company. The Sanborn Map identified the structure as storage. A boiler house which is no longer present was also shown as well as a steel frame structure which was "vacant and dilapidated". An industrial directory identified Better Finishes and Coatings (BFC) as the occupant in 1949 which manufactured paints, enamels, lacquers, and other coatings.

A 1951 Sanborn Map confirmed BFC as the occupant and identified the main building for paint manufacturing. This map also showed the absence of the boiler house and steel frame. Industrial directories show the site remaining as BFC and Essex Chemical Corp. through 1964 continuing the manufacturer of coatings and sealants.

A 1974 Sanborn Map shows ancillary structures attached to the main building and a warehouse building which appears to be the present Vanilla Warehouse Area and Blending Room. The appearance of solvent tanks at the east end of the main building is also shown on this 1974 map. The industrial directories identify Elan Chemical Corp. as the occupant since 1971 although there is a gap from 1964 to 1971. A review of property deeds indicates that the property was sold to Elan in 1977 and included property previously owned by the Central Railroad of New Jersey. According to Mr. David Weisman, President of Elan Chemical Corp., the southern portion of the property had been a railroad right-of-way and

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had been covered with about 20 feet of fill for the railroad. The railroad removed the tracks and fill before selling Elan the property.

2. **Description of Current and Former Uses of Properties Abutting or Adjacent to the Site, Including Relevant Information Concerning Potential Waste Generation and Underground Tanks:**

The entire Doremus Avenue is a heavily industrialized area. The subject property is bounded to the north by a scrap metal yard (NIMCO Shreading Co.), to the east by the Passaic River, to the south by Quantum Chemical Co., and to the west by Doremus Avenue. Directly across Doremus Avenue is currently an open lot with tires and crushed cars; however, the predominant parcel of land is the former Pitt-Consol Chemical Co. NIMCO Shreading Co. and Quantum Chemical Co. both are listed as having registered underground storage tanks.

Pitt-Consol is currently under investigation under the Superfund program. Sanborn maps as far back to at least 1974 show Pitt-Consol occupying this adjacent property with numerous aboveground storage tanks present. According to a 1986 report submitted to the New Jersey Turnpike Authority which documented a historical survey of potential sources of contamination within and adjacent to a proposed turnpike right-of-way, the Pitt-Consol property was identified as having a variety of potential contamination sources including as far back as 1934, including tank storage and liquid storage. The 1931 and 1951 Sanborn maps show this property being occupied as a tar plant. Sanborn maps from 1 974, 1951, and 1931 indicate the adjacent property to the north of Elan (currently a scrap metal storage yard) as an oil blending plant with oil tanks at the eastern and western ends of the property.

3. **Description of Other Potentially Significant Land Uses Currently Situated Within a Minimum of 250 Feet of Site:**

Numerous additional chemical and petroleum facilities extend in both directions on Doremus Avenue.

PART IV: INVENTORY OF SENSITIVE RECEPTORS IN SITE VICINITY

1. **Wells/Potable Drinking Water Supplies Within a Minimum of 1,000 Feet:**

According to Mr. Nicholas Koval of the Essex County Department of Planning and Economic Development, there are no potable wells or other drinking water wells in Newark. The area obtains its drinking water from the Wannaque Reservoir in northern New Jersey.

2. **Residences Within a Minimum of 1,000 Feet:**

There are no residences within 1,000 feet of the subject facility. The area is entirely industrial.

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3. **Significant Wet Areas/Surface Water Bodies Within a Minimum of 1,000 Feet:**

   The Passaic River borders the eastern side of the subject property.

4. **Other Sensitive, Off-Site Receptors Within a Minimum of 1,000 Feet:**

   None present.

PART V: DESCRIPTION OF KNOWN OR SUSPECTED RELEASES OF HAZARDOUS MATERIALS OR PETROLEUM HYDROCARBONS

1. **Has the Subject Site ever been Listed on Any of the Following:**

	Yes	No
(a) National Priorities List (Superfund)	___	X
(b) CERCLIS Data Base (of Potential Problem Sites)	___	X
(c) State List/Inventory of Problem Sites	___	X

   If "Yes", describe the listing, including lead agency, reason for listing, and current status of the case: [provide copies of any relevant reports, letters, or other supporting documentation]

2. **If the Facility or Site Has Not Been Listed in (1) Above, Has the Facility Ever Had a Release, Spill, or Leak of a Hazardous Substance or Petroleum Hydrocarbons or Has the Facility/Site Ever Been Investigated by a Governmental Agency for the Actual or Potential Presence of an On-Site Contamination Problem? If so, Describe the Circumstances Surrounding the Incident (Date, Source, Location), Including Any Notification Submitted or Received, the Agency Response and Current Status of the Matter: [Provide copies of any notification, relevant reports, letters, or other supporting documentation]** See Attachments A, B, and C.

   - Spill in Scrap Metal Storage Area

     According to Elan Chemical Co. and a review of correspondence between the company and the NJDEPE, the Scrap Metal Storage Area was formerly used as a drum storage area, and leaking drums were discovered by NJDEPE in this gravel area. Elan hired a consultant, Environmental Waste Management Associates (EWMA), who collected soil samples from three visually stained areas in March 1991. The results were submitted to NJDEPE in a report dated March 26, 1991 with recommendations for additional soil sampling. The NJDEPE approved the sampling plan and EWMA advanced 8 soil borings in the area in January 1992. Sampling results and a recommendation to

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encapsulate the area with asphalt were submitted to NJDEPE in April 1992. The NJDEPE responded on June 4, 1992 by offering Elan the opportunity to perform remedial activities under a Memorandum of Agreement (MOA) with the NJDEPE. An MOA was subsequently signed on August 27, 1992, and the NJDEPE approved the proposal for encapsulation in a letter to Elan dated September 16, 1992. The NJDEPE also indicated that a deed restriction may be required if proposed cleanup standards (N.J.A.C. 7:26D) "are adopted substantively as is," and that the proposed encapsulation may or may not be acceptable for other NJDEPE programs such as ECRA.

- New Jersey Bell Manhole Contamination

  At the present time, there is an NJDEPE investigation looking into the contamination of a New Jersey Bell underground vault (manhole) located in front of the subject property. The situation was brought to the attention of NJDEPE by New Jersey Bell in May 1992 when a field crew noticed unusual odors emanating from the manhole. A sample of the liquid collected in April 1992 revealed the presence of toluene and other solvents. The manhole was pumped out on May 26, 1992, three times as new liquid was entering into the manhole and another sample was collected which revealed similar chemical compounds as the first sample. Due to this condition, New Jersey Bell has asserted that the underground cables are failing and they will not permit their field crew to enter the manhole for repairs. New Jersey Bell has requested that NJDEPE identify the responsible party and implement corrective actions.

  Approximately 8 to 10 feet to the north of the manhole is a cistern, which Elan used prior to 1985 to discharge process effluent before it entered the municipal sewer. NJDEPE suspects that this cistern is a potential source of the contamination discovered in the New Jersey Bell vault. Elan responded to an NJDEPE request to sample the water in the cistern by informing NJDEPE that the cistern had been filled with sand.

3. **Are There Any Sites Located Within a Minimum of 1,000 Feet of the Subject Site that are Shown on Either the National Priorities List of Federally-Designated/Proposed Superfund Sites, the U.S. EPA's CERCLIS Data Base List of Potential Problem Sites, or Any Comparable State List: for Each Identified Site, Describe Source of Listing, Approximate Distance and Direction Relative to Subject Site, and Whether or Not the Listed Site Appears to be in an Upgradient, Downgradient, or Parallel Hydrogeological Gradient Relative to the Subject Property:**

   National Distillers and Chemical Corp., located to the south at 300 Doremus Avenue, is less than ⅛ mile from the subject property and is listed on CERCLIS. An EPA site inspection was completed in September 1985. This site appears to be in a parallel hydrogeological gradient relative to the subject property.

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Four additional sites, listed on CERCLIS, are located between ⅛ and ¼ mile away from the subject property:

- Celanese Chemical Co. (375 Doremus Avenue)
- Celanese Newark Terminal (354 and 375 Doremus Avenue)
- Newark Housing Authority Property (291 - 549 Avenue P)
- Pitt-Consol Chemical Company (191 Doremus Avenue)

The Newark Housing Authority and the Pitt-Consol Chemical Co. appear to be upgradient from the subject property, while the Celanese properties appear to be in a parallel gradient. There are no NPL sites within a ½ mile of the subject property.

National Distillers and Chemical Corp., the two Celanese properties, and Pitt-Consol Chemical Company are also included in the New Jersey List of Hazardous Waste Sites.

PART VI: SELECTED REGULATORY ISSUES

1. **Solid and Hazardous Waste**

   (a) **Identify and describe principal wastes generated, including estimated annual quantities by waste type: [Use table shown below–attach copies of annual/bi-annual waste reports, manifests, etc.]** See Attachment D.

Hazardous Wastes		Non-Hazardous Wastes	
Waste Type	**Annual Vol.**	**Waste Type**	**Annual Vol.**
Flammable Spent Solvents	43,814 gal (1991)	Trash	480 cu. yds.

   (b) **Identify RCRA Status of Facility (Check One)**

   i. **Conditionally exempt small quantity generator (<100 kg/mo)** ___

   ii. **Small quantity generator (100-1,000 kg/mo)** ___

   iii. **Generator (>1,000 kg/mo)** X

   iv. **TSD facility** ___

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Comment: Facility reportedly stores hazardous waste on site less than 90 days but has been cited for violations in the past. During our September 11, 1992 site inspection, two drums of hazardous waste were observed onsite dated 4/27/92, indicating greater than 90 days storage. In addition, hazardous wastes is also being stored in an aboveground tank.

List the facility's EPA identification number:
[Attach copy of EPA Notification of Hazardous Waste Activity]

NJ D04289560
Copy of EPA Notification of Hazardous Waste Activity was unavailable.

(c) **What is the maximum quantity of hazardous waste the facility generates on a monthly basis? [kg/mo – 1 kg = 2.2 lbs = 0.26 gal]** Based on the review of two hazardous waste manifests dated 7/6/92 and 8/11/92, Elan disposed of 5,000 gallons of hazardous waste in that one month span.

(d) **What is the maximum quantity of hazardous waste the facility accumulates onsite at any one time? [kg]** Based on a review of 1991 hazardous waste manifests, the maximum quantity stored on site was 5300 gallons which was disposed of in May 1991.

(e) **What is the maximum period of time the hazardous waste remains onsite (prior to onsite treatment, storage or disposal; or shipment offsite for treatment, storage or disposal)? [days]** Based on a review of 1991 hazardous waste manifests, the maximum period is approximately 45 days; however, the facility has been cited for storing greater than 90 days in the past.

(f) **Describe the condition(s) of the hazardous waste storage area(s). [Consider container condition, aisle spacing, container stacking, etc.]:** At the time of the inspection, two waste drums in fair condition were located on a pallet in the hazardous waste storage area. The area is paved and was covered with an overhang. Tank 61 is a 4500-gallon aboveground tank used to blend and store toluene/methanol waste prior to off-site disposal. The tank is not diked.

(g) **If the facility is a TSDF, describe each unit and its permit status below. [If the facility has RCRA interim status, attach a copy of the Part A permit application, a copy of the request letter from EPA for the Part B application, and a copy of the facility's letter of transmittal of the Part B application. If the facility has received a RCRA Part B permit, attach a copy.]** The subject facility is not a TSDF.

(h) **Has the facility ever held RCRA interim status, submitted a RCRA Part B permit application, or received a RCRA Part B permit at <u>any</u> time?**

___ **Yes** _X_ **No**

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If "Yes", has the EPA ever conducted a RCRA Facility Assessment (RFA) or an Environmental Priorities Initiative (EPI) inspection of the facility? If so, describe below the circumstances and findings [attach copies of any written EPA materials].

(i) **Has the EPA imposed any RCRA Corrective Action requirements on the facility as part of either a Part B permit or an enforcement action?**

___ **Yes** _X_ **No**

If "Yes", identify below the Corrective Action requirements and the current status of the facility's achievement of these requirements [attach copy of corrective action requirements].

(j) **Have there been any governmental RCRA-related inspections or investigations during the past five years?**

_X_ **Yes** ___ **No**

If "Yes", when, by whom, why, and what were the results [attach copies of appropriate documentation where available]? The NJDEPE-Division of Hazardous Waste Management conducted a partial generator inspection on December 8, 1988, and a subsequent full generator inspection on December 22, 1988.

Major findings from the December 8, 1988 inspection included failure to have waste shipped offsite within 90 days, discharge of hazardous substances from leaking drums, improper labeling of hazardous waste drums, failure to obtain NJDEPE approval to store hazardous waste in an aboveground tank, and improper completion of manifests. The December 22, 1988 inspection revealed five violations concerning notification and emergency planning requirements. A follow-up investigation by NJDEPE on February 3, 1989 was conducted to determine the status of Elan's efforts to remediate the area of leaking drums and revealed drums being segregated and repacked but many leaking drums remaining and soil contamination evident. This is the area where soil samples were collected in 1991 and 1992 by Elan Chemical Co.'s consultant.

On December 27, 1989, the NJDEPE inspected the area near No. 4 Fuel Oil Tank where approximately 100 gallons had been spilled. According to the NJDEPE, the area had been cleaned up and wastes had been removed off site.

On June 14, 1990, NJDEPE-DHWM conducted a RCRA inspection of the site and major findings focused on the storage of hazardous waste. Approximately 1600 drums in deteriorating condition and leaking were observed. In addition, stained soil areas were also observed. A follow-up inspection was performed on July 16, 1990 and a major finding included the discovery of discharge pipe protruding from the southeast corner of the property into the Passaic River. The NJDEPE inspector recommended a referral to the NJDEPE Division of Water Resources for investigation.

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(k) **Have there been any RCRA notices of violation or enforcement actions taken against the subject facility?**

_X_ **Yes** ___ **No**

If "Yes", when, by whom, why, penalty involved, and was compliance achieved to the satisfaction of the agency [attach appropriate documentation where available]? Notices of Violation (NOVs) were issued by the NJDEPE-DHWM in response to the above RCRA inspections. These NOVs were dated 12/8/88, 12/22/88, 2/3/89, 6/14/90, and 7/9/90 (see Attachment E).

(l) **What is done with waste generated (including solid wastes, recycled materials, and hazardous waste) relative to disposal? (check below)**

___ **On-site recycling/disposal**

_X_ **Off-site recycling/disposal**

If off-site disposal, identify below disposal locations (name, city, state) by waste type and approximate years during which disposal location (s) used.

Waste Type	Disposal Facility (Name, City, State)	Estimated Period of Usage
Spent Solvents	S&W, South Kearney, NJ	1982 - Present
Spent Solvents	Solvent Recovery Services of NJ, Linden, NJ	February and May, 1988
Chromic Acid	SCA Chemical Services, Newark, NJ	1986

(m) **Has the facility or facility owner(s) ever been identified as a potentially responsible party (PRP) at any site?**

___ **Yes** _X_ **No**

If "Yes", describe the circumstances, including estimated percentage contribution and regulatory status of case [attach appropriate and available documentation]: ENSR reviewed the Environmental Data Resources, Inc. Company PRP Reports, dated September 14, 1992, for the subject site under the names Elan Chemical Corp., Elan Chemical Company, and Elan Natural Flavorings. According to these reports, no sites were found that would list Elan as a Potentially Responsible Party (PRP).

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2. Above and Underground Storage Tanks

(a) Are there any active or inactive (but not abandoned) above or underground storage tanks present on the subject site?

Above Ground	Underground
_X_ Yes ___ No	___ Yes _X_ No

If "Yes", describe all above and underground storage tanks, including contents, capacity (gals), year installed, construction material, secondary containment, cathodic protection or leak detection devices installed, tank tightness test results. See Attachment F.

(b) Are there any known underground tanks that have been abandoned in-place or removed?

___ Yes _X_ No

If "Yes", to 2 (b) above, describe each tank, including size, contents, year abandoned/removed, reason for abandonment/removal, and testing results:

(c) Are there any storage tanks (hydrocarbon, mineral oil, or vegetable oil) with a capacity of (i) 42,000 gallons or more of underground storage; or (ii) 1,320 gallons or more aggregate of above ground storage, with no single container having a capacity in excess of 660 gallons?

___ Yes _X_ No

If "Yes", does the facility have a spill prevention control and countermeasure (SPCC) plan that reasonably reflects current conditions and that has been certified by a registered engineer within the past 3 years? [attach copy of cover page plus certification signature]

___ Yes _X_ No

Date of most recent SPCC plan:_____

(d) Do any of the underground tanks (USTs) require registration under federal or comparable state UST regulations?

___ Yes ___ No

If "Yes", has the facility properly registered each tank? [attach copy of registration]

___ Yes ___ No

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(e) **Are there any USTs subject to federal or comparable state UST regulations that were installed before December 1988?**

___ **Yes** ___ **No**

If "Yes", is the UST in compliance with the phased-in leak detection requirements for both the tank and piping?

___ **Yes** ___ **No**

If the UST is not in compliance with the leak detection requirements, describe the circumstances below:

3. **Wastewater Discharges**

(a) **Identify and describe wastewater streams from subject facility, including effluent type (sanitary, process, storm), estimated volumes (gallons per day), and discharge point (receiving stream, sewage system, septic field, etc).**

Description of Wastewater Stream	Estimated Volume in Gallons Per Day (gpd)	Description of Discharge Point
Sanitary	Unknown	Sewage System (PVSA)
Stormwater	Unknown	Pre-Treatment/Sewage System
Process Effluent	60,000 - 70,000	Pre-Treatment/Sewage System

(b) **Describe the pre-treatment of wastewater streams, if any.** Since 1985, stormwater runoff and process wastewater are routed to an on-site pretreatment facility located in the southwest portion of the property. The wastewater enters an aboveground concrete aeration tank and then a second tank for pH adjustment prior to discharge to the Passaic Valley Sewer Authority. Prior to 1985, stormwater runoff and process wastewater were diverted to the underground cistern prior to discharge to the municipal sewer.

Additional pre-treatment prior to that described above occurs in two 12,000-gallon aboveground tank Nos. 134 and 205 where Isopar, a treatment chemical, is added to remove toluene from wastewater.

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(c) **Describe whether or not the facility has received the necessary permits for each discharge point. For each permit, identify the name of issuing agency, date permit granted, expiration/renewal date, and key permit limitations/requirements [attach copies of permits]:** The facility has a Sewer Connection Permit No. 20403242 issued by the Passaic Valley Sewerage Commissioners. The current permit has an effective date of 4/19/91 and an expiration date of 4/14/96. Key requirements for Elan include continuous monitoring of pH and LEL (lower explosive limit) (see Attachment G).

(d) **Have there been any governmental wastewater-related inspections or investigations during the past five years?**

_X_ **Yes** ___ **No**

If "Yes", when, by whom, why, and what were the results? [attach available and appropriate documentation]: According to Elan, the Passaic Valley Sewage Authority (PVSA) takes random and monthly samples of the pre-treated effluent. ENSR reviewed monthly testing results from October 1991 through September 1992 for compliance with maximum monthly averages. Each month at least one chemical compound exceeded the maximum monthly average limit. The following compounds had exceedances: zinc (7 months); toluene (6 months); 1,2-dichloroethane (4 months); methylene chloride (2 months); and benzene (1 month). There is the potential for PVSA to require Elan to improve their treatment process.

(e) **Have there been any wastewater-related notices of violations or enforcement actions taken against the facility?**

___ **Yes** _X_ **No**

If "Yes", when, by whom, why, penalty involved, and was compliance achieved to satisfaction of agency? [attach appropriate and available documentation]:

4. **Storm Water**

(a) **Is the facility subject to NPDES storm water regulations?**

_X_ **Yes** ___ **No**

If "Yes",

(i) **Has the facility applied for and/or received a NPDES permit that covers their storm water discharges?**

Received: ___ **Yes** _X_ **No**

Applied: ___ **Yes** _X_ **No**

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If applied for, but not received, list date of application and describe the current status of the application review: The subject facility is currently in the process of obtaining the required information to apply for a permit. According to site representatives, Elan is performing topographical studies with other Doremus Avenue companies and will likely be part of a permit with area-wide companies.

(ii) **If permit received, identify the name of the issuing agency, date permit granted, expiration/renewal date, and key permit limitations/requirements [attach copy of permit]:**

(b) **Have there been any governmental storm water related inspections or investigations during the past five years?**

___ **Yes** _X_ **No**

If "Yes", when, by whom and what were the results [attach available and appropriate documentation]?

(c) **Have there been any storm water related notices of violation or enforcement actions taken against the facility?**

___ **Yes** _X_ **No**

If "Yes", when, by whom, why, penalty involved, and was the compliance achieved to the satisfaction of the agency [attach available and appropriate documentation]?

5. **Air Quality**

(a) **What is the attainment/non-attainment status for the air quality control region within which the facility is located relative to each of the designated criteria pollutants (check appropriate boxes below)?**

Criteria Pollutant	Attainment	Non-Attainment
Sulfur Dioxide	X	
Particulates		X
Carbon Monoxide		X
Nitrogen Dioxide	X	
Ozone		X
Lead	Unknown	

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(b) **Describe significant point emission sources, including when each source was installed or modified (year).** According to a January 1992 printout from the NJDEPE Division of Environmental Quality, the subject facility has 54 stacks including vents on storage tanks, reactors, general ventilation, and their Boiler No. 4. The years each source was installed is unknown.

(c) **Describe whether or not the facility has received the necessary permits for each identified emission source (includes emission registrations where required). Identify any major permit limitations/requirements and identify any permits/registration that have lapsed and require renewal [attach copies of permits where applicable].** According to the above referenced printout for the permit status of these stacks, 40 are permanent, 8 are temporary, 5 have been deleted, and 1 is unknown. Those identified as permanent are valid for 5 years; temporary indicates a 90-day extension; and deleted indicates the permit was eliminated if the equipment is out of service or the source is no longer there. Based on our limited review of available permits, typical permit conditions are no visible emissions and no odors beyond property line.

(d) **Have there been any governmental air quality-related inspections or investigations during the past five years?**

_X_ **Yes** ___ **No**

If "Yes", when, by whom, and what were the results? [attach available documentation]. According to the above referenced printout, inspections by the NJDEPE-DEQ for each stack have been conducted between 1987 and 1991.

(e) **Have there been any air quality-related notices of violation or enforcement actions taken against the facility?**

___ **Yes** _X_ **No**

If "Yes", when, by whom, why, penalty involved, and was compliance achieved to satisfaction of agency? [attach available documentation]

6. **SARA Title III**

(a) **Is the facility required to prepare, or have available, material safety data sheets (MSDS) for any hazardous chemical under OSHA?**

_X_ **Yes** ___ **No**

If "Yes", is the hazardous chemical present at the facility in quantities at or above the specified reporting threshold?

___ **Yes** _X_ **No**

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If "Yes" relative to threshold quantities, has the facility:

(i) Submitted an MSDS for each hazardous chemical, or a list of hazardous chemicals, to the local emergency planning committee, the state emergency response commission, and the local fire department [obtain copies of letters of transmittal]?

___ Yes ___ No

(ii) Annually submitted a Tier I (Tier II if required by the state) emergency and hazardous chemical inventory form to the local emergency planning committee, the state emergency response commission, and the local fire department [obtain copies of the most recent submittal]?

___ Yes ___ No

(b) Determine the following:	Yes	No
(i) Does the facility appear in any of the following standard industrial classifications, 20-39?	X	___
(ii) Does the facility have 10 or more employees?	X	___
(iii) Does the facility manufacture or process a listed SARA toxic chemical above the applicable threshold?	___	X
(iv) Does the facility otherwise use a listed SARA toxic chemical above 10,000 lb/yr?	X	___

If "Yes to items (i), and (ii), and either (iii) or (iv) of Question 5(b) above, has the facility annually submitted a form R (release report) for each toxic chemical above the applicable thresholds [obtain copies of most recent submittals]?

X Yes ___ No

(c) Has the facility had a release, or releases of, a CERCLA hazardous substance or a designated extremely hazardous substance since 1987 above reportable quantities which resulted in exposure to persons beyond the boundary of the subject property?

___ Yes X No

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If "Yes", was each release reported to the local emergency planning committee and the state emergency response commission [attach copy of appropriate documentation]?

___ Yes ___ No

7. **PCB Containing Items/Equipment**

   (a) **List major PCB items (transformers, capacitors, heat transfer equipment, hydraulic equipment, etc.) and check concentration category of each item if known [attach copy of supporting analytical testing results]:**

Item	<50 ppm	50-500 ppm	>500 ppm	Unknown
Three Exterior Transformers	X*			

* According to Elan, they have been told by PSE&G, the electrical utility, that the transformers are PCB-free.

   (b) **Are all PCB items with PCB concentration levels at or above 50 ppm properly marked?**

   ___ Yes ___ No

   If "No" to Question 6 (b) above, describe:

   (c) **Are there any signs of leakage or staining around the PCB equipment?**

   (d) **Are inspections conducted of the PCB equipment?**

   (e) **What is the frequency of the inspections?**

   (f) **What is the minimum interval between the inspections?**

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(g) Do records exist to support inspection frequency?

(h) Are there any disconnected or out-of-service PCB items being stored?

___ Yes _X_ No

If "Yes", how long have they been stored on-site (days)? ___

8. Other Regulatory or Related Matters

(a) Has an asbestos survey ever been conducted at the facility?

___ Yes _X_ No

If "Yes", summarize key findings: identify who or what firm performed the survey, identify when the survey was performed, and describe reason for survey [attached copy of survey findings]:

(b) Has there ever been a prior environmental audit or due diligence evaluation performed at the subject site/facility?

___ Yes _X_ No

If "Yes", summarize key findings: identify who or what firm performed the work, identify when study was performed, and describe reason for study [attach copy of study]:

(c) Has there ever been any prior monitoring or testing of site or facility air emissions, surface or groundwater, or soils (surface or subsurface)?

_X_ Yes ___ No

If "Yes", summarize key findings: identify who or what firm performed the work, identify when study performed, and describe reason for study [attach copy of study]: Surface and subsurface soils were tested in the Scrap Metal Storage Area (former Drum Storage Area) in 1991 and 1992 by Environmental Waste Management Associates (EWMA). The investigation was performed to characterize and delineate three areas of stained soil in this storage area. During the January 1992 sampling event, 8 soil borings were advanced and 2 soils samples were collected from each boring. Chromium was detected in all samples ranging from 31.4 to 4,970 ppm. Chromium concentrations were generally higher at deeper intervals. One sample, collected at 3.5-4.0 ft depth, contained ethylbenzene at a concentration above the proposed NJDEPE cleanup standards. In addition, 6 polycyclic aromatic hydrocarbons (PAHs) were detected at concentrations above the proposed cleanup standards in samples collected between 1.5-2.0 ft in depth. A copy of a portion of the results report is provided as Attachment A.

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(d) **Are there any active, pending, or potential legal suits being brought against the subject facility for alleged environmental health or safety problems by past or present employees, neighbors, or other parties and not previously discussed?**

___ **Yes** _X_ **No**

If "Yes", describe [attach copy of documentation]:

PART VII: REFERENCES

1. **Persons Performing the Site Investigation (name, title, responsibility):**

Donald P. Hessemer, Senior Project Manager: Site visit and report preparation
Kerry Sullivan, Chemical Engineer: Site visit
Kathy Whooley, Biologist: Local and state records search

2. **Persons Interviewed (name, title, address, phone number):**

David Weisman, President
Elan Chemical Co.
Newark, NJ
201-344-8014

Karal Sulimirski, Facilities Manager
Elan Chemical Co.
Newark, NJ
201-344-8014

Bill Hart, Consultant for Elan Chemical Co.
Hart Environmental Services
609-655-5807

Jodie Stein, Senior Environmental Specialist
New Jersey Department of Environmental Protection and Energy (NJDEPE)
Division of Responsible Party Site Remediation
West Orange, NJ
201-669-3960

Gary Gruelich, Senior Environmental Specialist
NJDEPE - Division of Responsible Party Site Remediation
West Orange, NJ
201-669-3960

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Jack Boehmer
City of Newark, Division of City Planning
Newark, NJ
201-733-8419

3. **Reports and Documents Reviewed:****

- Toxicheck - Environmental Data Resources, Inc., HAZ-SEARCH/PLUS Report, September 14, 1992

Federal Records

- Environmental Protection Agency's (EPA) National Priorities List (NPL)
- EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- RCRA Hazardous Waste Data Management System
- Resource Conservation and Recovery Information System
- Hazardous Materials Incident Report System
- Toxic Release Inventory System
- PCB Activity Database
- Toxic Substances Control Act

State Records

- Registered Underground Storage Tanks
- State Hazardous Waste Site
- Solid Waste Facilities/Landfill Sites

- NJDEPE, Division of Responsible Party Site Remediation, West Orange, NJ. Various files related to RCRA compliance and inspection activities.

- Tax Assessor's Records, Newark, NJ.

- Robinson's Atlas of the City of Newark, 1926, New Jersey (3 volumes), published by Elisha Robinson, 1927.

- Sanborn Fire Insurance Maps. 1931, 1951, 1974, 1988, for Subject Property and Surrounding Properties, Newark, NJ.

- 1987 Aerial Photo of Subject Property and Vicinity.

**We have examined and relied upon the reports and documents listed above which are based on the professional expertise or knowledge of the authors thereof. We have not conducted an independent examination of facts contained in these reference materials and have assumed that the information set forth therein is true and accurate.

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- Suburban Regional Health Commission, West Orange, NJ. Files regarding Air Permits.
- Preliminary Site Investigations: New Jersey Turnpike Widening from Passaic River to Milepost 105. Louis Berger & Associates, Inc., December 1986.
- Elan Chemical Co. Various files including hazardous waste manifests, site plans, list of air permits.
- Passaic Valley Sewerage Commissioners, Sewer Connection Permit, Permit No. 20403242.
- Sampling Results Report, April 1, 1992. Elan Chemical Co., Prepared by Environmental Waste Management Association.

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SIGNATURES AND QUALITY CONTROL REVIEW

BY: Donald P. Hessemer DATE: 10/2/92

TITLE: Senior Project Manager

QUALITY CONTROL REVIEW BY: Richard J Warbinek

TITLE: Associate DATE: 10/2/92

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847521206

SAMPLING RESULTS REPORT

April 1, 1992

ELAN CHEMICAL CORP.
268 DOREMUS AVE
NEWARK, NEW JERSEY
EWMA CASE #91025

Volume I of II

Prepared By:
Environmental Waste Management Associates
1235A Route 23, P.O. Box 648
Wayne, New Jersey 07474

847521207

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EWMA QA/QC - HEALTH&SAFETY	APPENDIX 2
LABORATORY ANAYTICAL RESULTS	APPENDIX 3

847521208

INTRODUCTION:

Environmental Waste Management Associates ("EWMA") was retained by Elan Chemical Company ("Elan") to address potential soil contamination in a former drum storage area at the above referenced facility. EWMA collected four soil samples on March 25, 1991 to screen three visually stained areas for contamination and to establish a background soil profile. EWMA's discovery of contamination was detailed in the March 26, 1991, Sampling Results Report (submitted to the NJDEPE) along with a recommendation to perform further sampling. On November 8, 1991, the NJDEPE approved EWMA's recommendation to collect additional samples to delineate and characterize the contamination.

EWMA returned to the site on January 6, 1992 to install eight soil borings in the former drum storage area.

SCOPE OF WORK:

This report details observations made during boring and sampling activities at the Elan Chemical facility, 268 Doremus Avenue, Newark, New Jersey. The sampling objective was to gather information (delineate and characterize soil contamination in a former drum storage area) in preparation for the development of a remediation strategy. The following sections of this report detail site conditions, sampling activities, field observations, analytical results and their implications for the development of the remediation plan.

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SITE GEOLOGY, TOPOGRAPHY AND DRAINAGE:

The site is located within the Piedmont Physiographic Province of New Jersey. This area is comprised of a broad lowland composed of gently rounded hills with a few ridges and steeper hills rising above the plain. The altitudes within the Piedmont average 200 to 400 feet above mean sea level. Several large swamps occupy the low-lying areas of the Piedmont. Surface conditions have been modified considerably by the Wisconsin Glaciation of Pleistocene Age. The subject site is relatively level near Doremus Avenue, to moderately sloped to the east toward the Passaic River.

The Engineering Soil Survey of Essex County, New Jersey has classed the soils in the area of the subject site as "Made Land." According to the soil survey, the site soils consist of areas of tidal marsh that have been reclaimed for industrial development. The substantial depth of fill material required to support industrial construction is usually underlain by a somewhat compressed tidal marsh profile. This tidal marsh profile consists of a decomposed organic mat extending from two to possibly more than five feet below the level of the overlying fill material. The mat is underlain by highly organic silts, clayey silts, and clays extending down to Brunswick shale at depths that may exceed two hundred feet. Groundwater flow at the subject site is tidal in nature.

Soil boring activities showed the stratigraphic column at the site to be fairly consistent. Specifically, the surface of the site was covered by suspected fill materials consisting of brown to dark gray, fine to medium and fine to coarse sands with gravel and residue consisting of crushed brick and cinders typical of urban fill.

The site soils were classified in the field visually and texturally according to the Unified Soil Classification System, a copy of which is contained in Appendix # 1 along with the soil boring logs.

SITE HYDROGEOLOGY:

According to the Soil Survey for Essex County, New Jersey the depth to seasonal high water table in the vicinity of the site is less than six feet below grade. In addition, groundwater flow at the site is tidal in nature due to the close proximity of the Passaic River and Newark Bay and the underlying tidal marsh. Groundwater levels recorded during soil boring activities ranged from six and one half feet below grade at 9:30 AM (Boring "B") to six feet below grade at 1:30 PM (Boring "G").

SOIL BORING AND SAMPLING ACTIVITIES:

On January 6, 1992 EWMA representatives visited the above referenced site to supervise the installation of soil borings and collect soil samples. The soil borings were installed by a New Jersey licensed driller from S.B.I. Environmental Well Drilling, Inc. using a truck mounted drill rig. Soil samples were collected during boring advancement with 2 inch stainless steel split spoon sampling devices. The samples were field screened with a portable photoionization detector ("PID") and selected samples were retained for laboratory analysis for volatile organics plus a forward library search ("VO+15"), base neutral compounds plus a forward library search ("BN+15"), chromium, and mercury.

847521211

All split spoon samplers were decontaminated prior to sample collection according to EWMA's QA/QC Plan contained in Appendix #2; all samples were collected and preserved according to EWMA's QA/QC Plan contained in Appendix #2; site specific stratigraphy is recorded in EWMA's boring logs contained in Appendix #1; and the Site Plan (Figure #1) shows the boring locations.

Boring locations and sample depths were chosen based on information obtained from the previous sampling episode (March 25, 1991) and the Sampling Plan Approval of November 8, 1991. Six inch incremental samples were collected from borings "A", "C", "E", "F", and "G" at the surface (1.5 - 2.0 feet below grade) and at 0 to 6 inches above groundwater. Samples were collected from borings "B" and "D" at a depth of 3.5 to 4.0 feet below grade and 0 to 6 inches above groundwater. The depth to groundwater decreased from 6.5 feet below site grade in the morning to 6.0 feet below site grade in the afternoon. Mechanical problems in the field precluded vertical delineation at sample location "S-1" and an additional subsurface background sample could not be collected.

FINDINGS:

EWMA's field screening records and laboratory analytical information are summarized in the enclosed data summary tables. Data summary tables were broken down as follows: Table #1 contains the summarized laboratory analytical data for samples collected less than four feet below grade; Table #2 contains the summarized laboratory analytical data for samples collected 0 to 6 inches above

groundwater (tidal influence zone); and Table #3 is a record of EWMA's PID field screening results. The laboratory analytical data report package is contained in Appendix #3.

SUMMARY AND RECOMMENDATIONS:

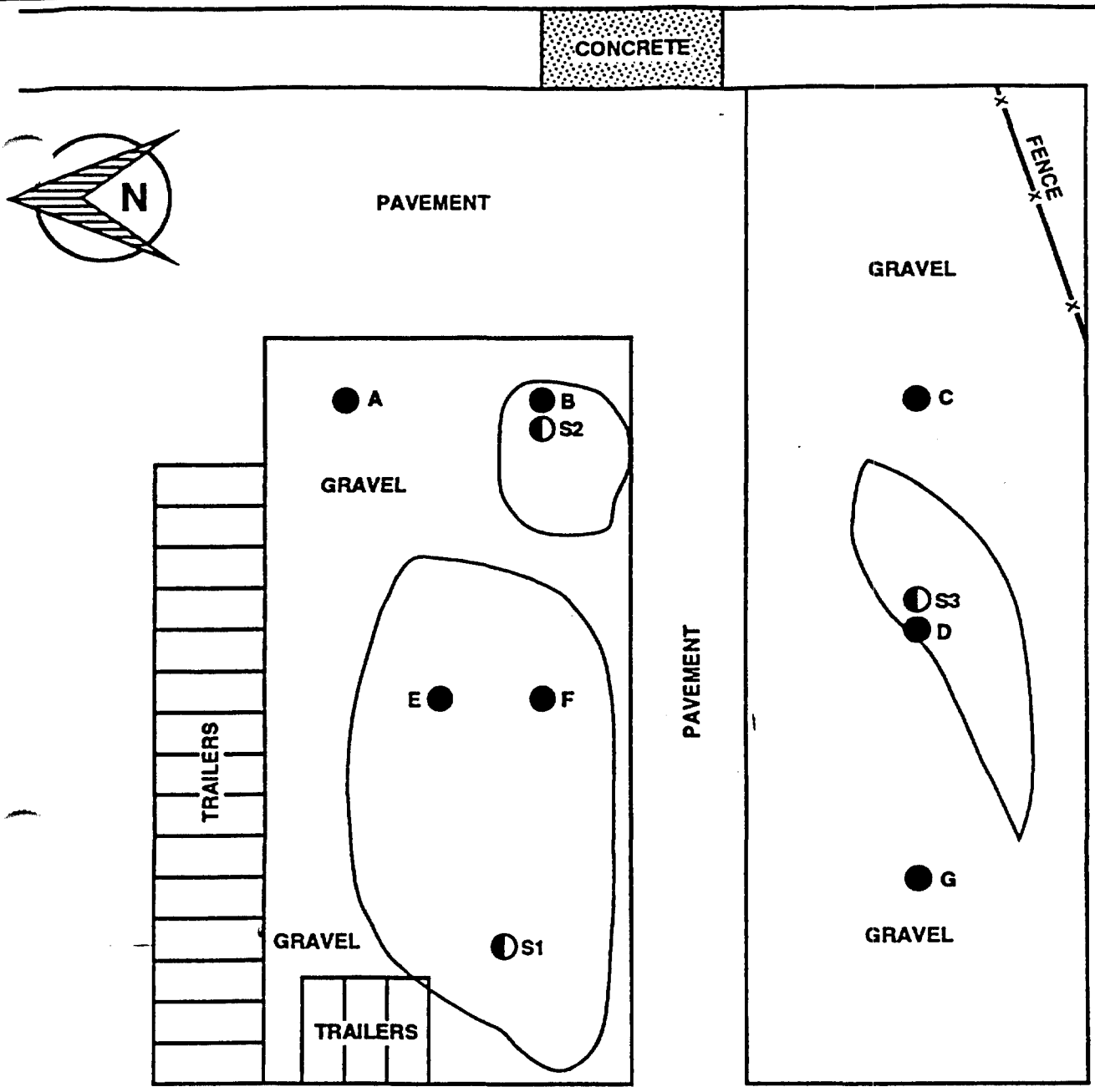
Although a background sample could not be obtained on January 6, 1992, EWMA believes that laboratory analytical data from the background sample (laboratory data from S-4-A/B has been incorporated into Table #1 and Table #2), collected on March 25, 1991, is relevant to this second phase of sampling. EWMA makes this contention because the organic contaminants detected above NJDEPE proposed cleanup standards in the former drum storage area were also detected in the background sample which was collected across Doremus Avenue. Specifically, benzo (a) anthracene, chrysene, benzo (b) fluoranthene, benzo (k) fluoranthene, benzo (a) pyrene and benzo (g,h,i) perylene were detected at concentrations corresponding to, if not greater than, the levels detected in the samples collected form Borings A, B, C, D, E, F and G. In addition, chromium was detected in the background sample. The only organic contaminants detected above proposed NJDEPE standards and not detected in the background sample were ethylbenzene (detected in sample D-1) and indeno (1,2,3-cd) pyrene (a suspected fill contaminant detected in A-1, F-1, G-1 and D-2).

Based on the laboratory analytical findings detailed in this report, EWMA believes that base neutral contamination, detected in samples collected in the former drum storage area, is characteristic of the poor quality urban fill material used to reclaim

the land from the former tidal marsh that the site is located on. In addition, ash, cinders, and decomposed brick were observed throughout the borings as in the previous sampling episode.

Ethylbenzene was detected in all samples collected from the site, but was not detected in the background sample. Therefore, ethylbenzene in the soil may be the result of the former drum storage in the area. However, although ethylbenzene was detected in all samples, none of the samples exceeded the proposed NJDEPE contaminant specific residential surface soil cleanup standard (pursuant to N.J.A.C. 7:26D), and only sample D-1 exceeded the subsurface soil standard.

The Elan Chemical facility is located in a heavily industrialized section of Newark, J. The land in this area (including the surrounding sites) was created for industrial use, and is zoned for that purpose. The contamination detected in the former drum storage area of the Elan Chemical facility, has been contributed to by the poor quality of the fill materials used to create the land in this area. The remote location of the former drum storage area precludes any actual or potential impact to subsurface structures. Therefore, based upon the findings of this sampling investigation, EWMA recommends that the former drum storage area should be paved with an impervious cover to isolate the soil contaminants. Further remediation, or removal of the contaminants is not warranted.



DOREMUS AVENUE

~300'

S4

LEGEND:

- SAMPLE LOCATION (3/25/91)
- BORING LOCATION (1/6/92)

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES P.O.BOX 648 Wayne, N.J. 07474 Tel. (201)633-7900	SCALE: NOT TO SCALE DATE: 1/6/92	PROJECT# 91025
	DRAWN BY: A P CHECKED BY: C L	
BORING LOCATION MAP ELAN CHEMICAL 268 DOREMUS AVENUE NEWARK, N J.		DRAWING# 1

847521215

TABLE 1

SHALLOW SAMPLES

TABLE #1 ELAN CHEMICAL VOLATILE ORGANIC RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	S4-B**	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	1.5' - 2.0'	3.5' - 4.0'	1.5' - 2.0'	3.5' - 4.0'	1.5' - 2.0'	1.5' - 2.0'	1.5' - 2.0'	1.5' - 2.0'	-
Mercury	1100	540	1100	470	1130	600	310	477	0.7
Chromium	177000	44600	490000	31400	198000	230000	476000	142000	ND
Targeted Volatile Organic Compounds:									
Methylene chloride	ND	3.0J	4.3J	2.6J	7.5	6.4	11.1	6B	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Toluene	45.4	ND	1410	ND	ND	3410	ND	1.9J	ND
Ethylbenzene	267	103	1580	557000	81500	1820J	7160	ND	ND
Total Xylenes	67.2	ND	40.7	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	17.9	ND	ND	ND	ND	1.2J	ND
TOTAL TARGETED VOs	379.6	106J	3052.9J	557002.6J	81507.5J	5236.4J	7171.1	4.3J	ND
Volatile Organic Tentatively Identified Compounds:									
3-Carene	ND	72.6	ND	ND	ND	ND	ND	ND	ND
1,3,6-Octatriene-3,7-dimethyl(E)	ND	14.2	ND	ND	ND	ND	ND	ND	ND
2-Methyltrimer-1-propene	ND	9.94	ND	ND	ND	ND	ND	ND	ND
1,7,7-Trimethylbicyclo[2.2.1]hept-2-ene	ND	5.62	ND	ND	ND	ND	ND	ND	ND
1-Methyl-4-(1-methylethyl)benzene	ND	14.2	ND	ND	ND	ND	ND	ND	ND
1,3,3-Trimethylbicyclo[2.2.1]heptan-2-one	ND	14.2	ND	ND	ND	ND	ND	ND	ND
Camphor (ACN)	ND	23.4	ND	ND	ND	ND	ND	ND	ND
2-Ethyl-3-methyloxetane	ND	ND	ND	ND	ND	ND	ND	ND	ND
(TBA) 2-Methyl-2-propanol	ND	ND	69.6	ND	ND	ND	ND	ND	ND
t-Butyl-3,3-dimethylbutylether	ND	ND	47.2	ND	ND	ND	ND	ND	ND
Limonene	ND	ND	156	ND	ND	ND	ND	ND	ND
1-Phenylethanone	ND	ND	162	ND	ND	ND	ND	ND	ND
Camphor	ND	ND	38.6	ND	ND	ND	ND	ND	ND
(2-Methoxyethenyl) benzene	ND	ND	46.1	ND	ND	ND	ND	ND	ND
1-Methoxy-4-propylbenzene	ND	ND	122	ND	ND	ND	ND	ND	ND
(2,2-Diethoxyethyl)benzene	ND	ND	102	ND	ND	ND	ND	ND	ND
(Bicyclo[2.2.1]heptan-2-ol)	ND	ND	274	ND	ND	ND	ND	ND	ND
Freon-113	ND	ND	ND	14700	17800	23300	14300	ND	ND
1-Phenylethanone	ND	ND	ND	ND	46000	ND	ND	ND	ND
(E)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	61100	ND	ND	ND
Freon-12	ND	ND	ND	ND	ND	ND	11400	ND	ND
TOTAL VO TICs	ND	154.16	1017.5	14700	63800	84400	25700	ND	ND
TOTAL VO+15	379.6	260.6J	4070.4J	571702.6J	145307.5J	89636.4J	32871.1J	4.3J	ND

S4-B was collected on 3/25/91 to establish a background contamination level**

84752121

TABLE #1 ELAN CHEMICAL TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	S4-A**	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	1.5'-2.0'	1.5'-2.0'	0 -0.5'	~
Targeted Base Neutral Compounds:									
Acenaphthene	ND	93.0J	ND	ND	ND	803J	ND	2560J	ND
Phenanthrene	10000	1550	2970J	ND	4400J	12900	7770	28400	ND
Anthracene	280J	384	ND	ND	ND	3760	2640J	7090J	ND
Di-n-butyl phthalate	ND	90.0JB	ND	ND	ND	ND	ND	1580J	22.8B
Fluoranthene	18200	2440	3770J	1760J	7440J	12400	10800	40300	ND
Pyrene	8730	1290	2030J	ND	4400J	6860	6290	22200	ND
Benzo (a) anthracene	5150	808	1730J	ND	3110J	4200	4610	17100	ND
Chrysene	4480	847	1960J	ND	3340J	4230	5430	16400	ND
Bis(2-ethylhexyl) phthalate	1120J	463	ND	ND	ND	767J	ND	2640J	ND
Benzo (b) fluoranthene	8650	592	3240J	ND	3040J	6020	ND	21900	ND
Benzo (k) fluoranthene	ND	488	ND	ND	1970J	ND	ND	17800	ND
Benzo (a)pyrene	4100	628	1880J	ND	2960J	3980	3980	21600	ND
Indeno (1,2,3-cd) pyrene	2460J	305J	ND	ND	ND	1680J	1530J	ND	ND
Benzo (a,h) anthracene	ND	108J	ND	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	1940J	291J	ND	ND	ND	1570J	1490J	8750	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	803J	ND	ND	ND
TOTAL TARGETED BN'S	65110J	10287J	17580J	1760J	30660J	59973J	44540J	208320J	ND

**S4-A was collected on 3/25/91 to establish a background contamination level

847521218

TABLE #1 ELAN CHEMICAL NON-TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-1	B-1	C-1	D-1	E-1	F-1	G-1	FIELD
lab ID number:	17001	17003	17005	17007	17009	17011	17013	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92
Sample depth (feet):	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	3.5'-4.0'	1.5'-2.0'	1.5'-2.0'	1.5'-2.0'	-
Base Neutral Tentatively Identified Compounds:								
MolSulfur (S8)	18200	1180	ND	ND	ND	12600	13200	ND
Benzo [J] fluoranthene	5520	1130	ND	ND	ND	ND	ND	ND
(Z)-3,7-dimethyl-1,3,6-octatriene	ND	560	ND	ND	ND	ND	ND	ND
Limonene	ND	363	ND	ND	ND	ND	ND	ND
(1R)-1,3,3-Trimethylbicyclo-[2.2.1] heptan-1-one	ND	510	ND	ND	ND	ND	ND	ND
1,7,7-Trimethylbicyclo[2.2.1] heptan-2-one	ND	499	ND	ND	ND	ND	ND	ND
11-Nitro-1-undecene	ND	926	ND	ND	ND	ND	ND	ND
(2-Methoxyethenyl)benzene	ND	ND	7350J	ND	ND	ND	ND	ND
Diisooctylesterdiphosphoric acid	ND	ND	7760	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	44600	ND	ND	ND	ND	ND
(Phenylmethyl) monohydrochloridehydrazine	ND	ND	14200	ND	ND	ND	ND	ND
1-Phenylnaphthalene	ND	ND	9110	ND	ND	ND	ND	ND
(Z)-3-Methyl-5-undecene	ND	ND	8580	ND	ND	ND	ND	ND
1-Ethenyl-4-methoxybenzene	ND	ND	5050J	ND	ND	ND	ND	ND
(Isothiocyanatomethyl) benzene	ND	ND	7450J	ND	ND	ND	4050	ND
Benzeneethanamine	ND	ND	ND	ND	ND	ND	15500	ND
(1,1-Dimethylethyl)cyclohexane	ND	ND	ND	117000	ND	ND	ND	ND
6-Cyclohexyl-6-cyclohexylundecane	ND	ND	ND	16000	ND	ND	ND	ND
1-Tetradecanol	ND	ND	ND	24400	ND	ND	ND	ND
Dioctadecylesterphosphonic acid	ND	ND	ND	10100	ND	ND	ND	ND
9-Eicosyne	ND	ND	ND	25500	ND	ND	ND	ND
0-Decylhydroxylamine	ND	ND	ND	11100	ND	ND	ND	ND
10-[(Tetrahydro-2H-pyran-2-yl)oxy]-1-decanol	ND	ND	ND	12300	ND	ND	ND	ND
3,9-Diethyl-6-tridecanol	ND	ND	ND	32300	ND	ND	ND	ND
Tetrahydro-2-(12-pentadecynyloxy)-2H-pyran	ND	ND	ND	11000	ND	ND	ND	ND
5-Docecyne	ND	ND	ND	13400	ND	ND	ND	ND
Spiro [4.5] decane	ND	ND	ND	16700	ND	ND	ND	ND
17-Pentatriacontene	ND	ND	ND	15000	ND	ND	ND	ND
(E)-9-Octadecene	ND	ND	ND	34400	ND	ND	ND	ND
1,9-Dibromononane	ND	ND	ND	15200	ND	ND	ND	ND
.a.Methylbenzenemethanol	ND	ND	ND	ND	29900	ND	ND	ND
1-Phenylethanone	ND	ND	ND	ND	368000	ND	ND	ND
2,6-bis(1,1-Dimethylethyl) phenol	ND	ND	ND	ND	11000	ND	ND	ND
Xylazine	ND	ND	ND	ND	15500	ND	ND	ND
2,4,5-Trimethyl-2-phenyl-1,3-dioxolane	ND	ND	ND	ND	57500	ND	ND	ND
1,4-bis(1-Methylethyl) benzene	ND	ND	ND	ND	25400	ND	ND	ND
. .,3,4-Trimethylester-benzenebutanoic acid	ND	ND	ND	ND	43200	ND	ND	ND
AR,AR-Diethylbenzeneethanol	ND	ND	ND	ND	584000	ND	ND	ND
1,3,6,8-Tetramethylpyrido[3,4-D]-pyrmidine-2,4 (1,3H)dione	ND	ND	ND	ND	82700	ND	ND	ND
6-Methyl-1-heptanol	ND	ND	ND	ND	36200	ND	ND	ND
N,N,1-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	39100	ND	ND	ND
1,2,4-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	110000	4230	ND	ND
N-(Trimethylsilyl)-6-[(trimethylsilyl)oxy]-8-quinolinamine	ND	ND	ND	ND	12800	ND	ND	ND
P-Di-Tert-pentylbenzene	ND	ND	ND	ND	26300	ND	ND	ND
1,1'-(1-Methylethylidene) bisbenzene	ND	ND	ND	ND	26300	ND	ND	ND
1-Cyclohexylidene-2-propanone	ND	ND	ND	ND	ND	160000	ND	ND
1,2-Propadienylcyclohexane	ND	ND	ND	ND	ND	28800	ND	ND
P-Menth-3-en-9-ol	ND	ND	ND	ND	ND	68300	ND	ND
1,5-Heptandien-3-yne	ND	ND	ND	ND	ND	101000	ND	ND
2-Cyclohexyl-4-methyphenol	ND	ND	ND	ND	ND	10400	ND	ND
1-Ethyl-3,5-diisopropylbenzene	ND	ND	ND	ND	ND	4820	ND	ND
3-(Bromoethyl)cyclohexane	ND	ND	ND	ND	ND	ND	3270J	ND
4-Methylbicyclo[2.2.2] octane-1-carboxylic acid	ND	ND	ND	ND	ND	ND	10000	ND
(Ethoxymethyl) benzene	ND	ND	ND	ND	ND	ND	8180	ND
(Z)-9-Methyl-5-undecene	ND	ND	ND	ND	ND	ND	3570J	ND
5-(4-Methoxyphenyl)-1,3,5-trimethyl-2,4-imidazolidinedione	ND	ND	ND	ND	ND	ND	2600J	ND
Benzo [E] pyrene	ND	ND	ND	ND	ND	ND	10300	ND
TOTAL BN TICs	23720	5168	104100J	354400	1467900	390150	70670J	ND
TOTAL BN+15	88830J	15455J	121680J	356160J	1498560J	450123J	115210J	ND

847521219

TABLE 2

DEEP SAMPLES

TABLE #2 ELAN CHEMICAL VOLATILE ORGANIC RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	S4-B**	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	6.0 - 6.5'	6.0 - 6.5'	5.5'-6.0'	5.5'-6.0'	6.0 - 6.5'	6.0 - 6.5'	5.5'-6.0'	1.5' - 2.0'	-
Mercury	140	480	650	4550	250	550	1830	477	500
Chromium	126000	432000	247000	4970000	610000	1500000	1230000	142000	ND
Targeted Volatile Organic Compounds:									
Methylene chloride	ND	4.7J	1.5J	8.5	3.6J	5.2	ND	6B	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Toluene	ND	3.25J	59	10.5J	15.9J	2360J	ND	1.9J	ND
Ethylbenzene	124	44.1	25.9	12200	177	1300J	6.5J	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	1.2J	ND
Total Xylenes	63.7J	ND	7.62J	ND	ND	ND	ND	ND	ND
TOTAL TARGETED VOs	187.7J	52.05J	94.02J	12219J	196.5J	3665.2J	6.5J	4.3J	ND
Volatile Organic Tentatively Identified Compounds:									
2-Ethyl-3-methyloxetane	ND	7.75	ND	ND	ND	ND	ND	ND	ND
Freon-113	ND	ND	ND	ND	56.6	25400	ND	ND	ND
3,3,5,5-Tetramethyl-1,2,4-trithiolane	ND	ND	ND	105	ND	ND	ND	ND	ND
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazole	ND	ND	ND	28.1	ND	ND	ND	ND	ND
2,3,4-Trimethyl-2-pentene	ND	ND	ND	133	ND	ND	ND	ND	ND
(1-Methylethyl)benzene	ND	ND	ND	133	ND	ND	ND	ND	ND
2-Methyltrimer-1-propene	ND	ND	ND	986	ND	ND	ND	ND	ND
2,4,4-Trimethyl-1-pentene	ND	ND	ND	1480	ND	ND	ND	ND	ND
1,1,3,5-Tetramethylciscyclohexane	ND	ND	ND	217	ND	ND	ND	ND	ND
1,1,3-Trimethylcyclopentane	ND	ND	ND	452	ND	ND	ND	ND	ND
3,4,4-Trimethyl-2-pentene	ND	ND	ND	133	ND	ND	ND	ND	ND
4,5-Dihydro-3,4,5-trimethyl-1H-pyrazoie	ND	ND	ND	156	ND	ND	ND	ND	ND
1-(1,1-Dimethylethyl)-3-methylbenzene	ND	ND	ND	1040	ND	ND	ND	ND	ND
2-Methoxy-2-Octene	ND	ND	ND	ND	12	ND	ND	ND	ND
(E)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	24800	ND	ND	ND
Freon-12	ND	ND	ND	ND	ND	ND	ND	ND	ND
Unknown (Retention Time 20:59)	ND	ND	ND	276	ND	ND	ND	ND	ND
TOTAL VO TICs	ND	7.75	ND	5139.1	68.6	50200	ND	ND	ND
TOTAL VO+15	187.7J	59.8J	94.02J	17358.1J	265.1J	53865.2J	6.5J	4.3J	ND

S4-B** was collected on 3/25/91 to establish a background contamination level

8475212221

TABLE #2 ELAN CHEMICAL TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	S4-A**	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	142004	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	3/25/91	1/6/92
Sample depth (feet):	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	5.5'-6.0'	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	0-0.5'	~
Targeted Base Neutral Compounds:									
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	2560J	ND
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	ND	ND	ND	2640J	ND
Phenanthrene	ND	ND	786	63300	ND	1160J	851J	28400	ND
Anthracene	ND	ND	217J	11600J	ND	ND	ND	7090J	ND
Di-n-butyl phthalate	ND	ND	1690B	ND	ND	ND	ND	1580J	22.8B
Fluoranthene	ND	ND	2180	65000	ND	1570J	1080J	40300	ND
Pyrene	ND	ND	1300	36700	ND	823J	690J	22200	ND
Benzo (a) anthracene	ND	ND	881	19800	ND	823J	690J	17100	ND
Chrysene	ND	ND	893	23500	ND	823J	759J	16400	ND
Benzo (b) fluoranthene	ND	ND	1110	ND	ND	ND	1290J	21900	ND
Benzo (k) fluoranthene	ND	ND	640	36100	ND	ND	ND	17800	ND
Benzo (a)pyrene	ND	ND	960	18500	ND	823J	805J	21600	ND
Indeno (1,2,3-cd) pyrene	ND	ND	431	7710J	ND	ND	ND	ND	ND
Benzo (a,h) anthracene	ND	ND	158J	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	ND	ND	403	ND	ND	ND	ND	8750	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGETED BN'S	ND	ND	9959J	282210J	ND	6022J	6165J	208320J	ND

S4-A was collected on 3/25/91 to establish a background contamination level**

847521222

TABLE #2 ELAN CHEMICAL NON-TARGETED BASE NEUTRAL RESULTS

Sample Number:	A-2	B-2	C-2	D-2	E-2	F-2	G-2	FIELD
lab ID number:	17002	17004	17006	17008	17010	17012	17014	17015
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l
Sample date:	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92	1/6/92
Sample depth (feet):	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	5.5'-6.0'	6.0'-6.5'	6.0'-6.5'	5.5'-6.0'	~
Base Neutral Tentatively Identified Compounds:								
Mol.Sulfur (S8)	ND	32500	1020	ND	13200	18400	13200	ND
Benzo [J] fluoranthene	ND	ND	912	ND	ND	ND	ND	ND
Mol.Sulfur	21000	ND	ND	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	1440	ND	ND	ND	ND	ND
1-Phenylnaphthalene	ND	ND	478	ND	ND	ND	ND	ND
(Isothiocyanatomethyl) benzene	ND	ND	1440	ND	ND	ND	ND	ND
2-Hydroxypentylesterbenzoic acid	ND	ND	304J	ND	ND	ND	ND	ND
Benzeneethanamine	ND	ND	ND	ND	ND	ND	1360J	ND
11-H-Benzo [A] fluorene	ND	ND	434	ND	ND	ND	ND	ND
1-Dodecanethiol	ND	ND	1080	ND	ND	ND	ND	ND
2,3,4-Trimethylthiophene	ND	ND	ND	38200	ND	ND	ND	ND
AR,AR-Diethylbenzeneethanol	ND	ND	ND	ND	25200	ND	ND	ND
1,2,4-Trimethyl-5-(1-methylethyl) benzene	ND	ND	ND	ND	7840J	ND	ND	ND
P-Menth-3-en-9-ol	ND	ND	ND	ND	ND	7440	ND	ND
(Z)-3,8-Nonadien-2-one	ND	ND	ND	ND	ND	30100	ND	ND
1,2-Propadienylcyclohexane	ND	ND	ND	ND	ND	5460	ND	ND
(Butoxymethyl) benzene	ND	ND	ND	ND	ND	38500	ND	ND
Unknown (Retention Time 17:19)	ND	ND	ND	ND	ND	ND	2230J	ND
Unknown (Retention Time 17:21)	ND	ND	ND	ND	ND	3400J	ND	ND
TOTAL BN TICs	**21000**	**32500**	**7108J**	**38200**	**46240J**	**149540J**	**16790J**	**ND**
TOTAL BN+15	**21000**	**32500**	**17067J**	**583310J**	**46240J**	**105922J**	**22955J**	**ND**

8475212223

TABLE 3

PHOTOIONIZATION DETECTOR SCREENING RESULTS

ELAN CHEMICAL TABLE #3

BORING LOCATION	PID RESULT SAMPLE - 1 (Parts Per Million)	PID RESULT SAMPLE - 2 (Parts Per Million)
A	29	37.3
B	25.4	24.7
C	58	24.9
D	340	87.7
E	83.2	32.8
F	204	137
G	533	46.8

APPENDIX 1

SOIL BORING LOGS

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)	SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)	SM	SILTY SANDS, SAND-SILT MIXTURES
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

GRADATION *

% FINES BY WEIGHT	
TRACE	0% TO 10%
LITTLE	10% TO 20%
SOME	20% TO 35%
AND	35% TO 50%

COMPACTNESS * — SAND AND/OR GRAVEL

	RELATIVE DENSITY
LOOSE	0% TO 40%
MEDIUM DENSE	40% TO 70%
DENSE	70% TO 90%
VERY DENSE	90% TO 100%

CONSISTENCY * — CLAY AND/OR SILT

	RANGE OF BEARING STRENGTH IN POUNDS PER SQUARE FOOT
VERY SOFT	LESS THAN 250
SOFT	250 TO 500
MEDIUM	500 TO 1000
STIFF	1000 TO 2000
VERY STIFF	2000 TO 4000
HARD	GREATER THAN 4000

* VALUES ARE FROM LABORATORY OR FIELD TEST DATA, WHERE APPLICABLE. WHEN NO TESTING HAS PERFORMED, VALUES ARE ESTIMATED.

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

847521227

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG — BORING # A — SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	10'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
A1	6"	10, 15, 25, 32	0–2		Fine to Medium, Dark Gray, Very Dense Sand, Some Fine Gravel
	0"	34, 24, 25	2–3		No Recovery
		14, 3	3–4		
A2	4"	2, 3, 3, 12	4–6		Fine to Medium, Brown, Medium Dense Sand, Brick Fragments, Mica (Moist)
	6"	5, 13, 18, 6	6–8	Wet	
	11"	30, 19, 14	8–10		Fine to Medium, Dark Gray,Very Dense Sand, Some Fine Gravel, Some Brick Fragments (Wet)
			10–20		

847521228

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # B SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
B-1	5"	11, 9, 11	0 – 1		Decomposed Asphalt Fine to Medium, Dark Gray, Dense Sand, With Some Fine Gravel
	12"	18, 23, 22, 15	1 – 4		Fine to Medium, Brown, Very Dense Sand, Some Fine Gravel, Ashes, Glass, Mica and Brick Fragments
	3.5"	18, 30, 30, 13	4 – 6		
B-2	9"	10, 9, 21, 14, 10	6 – 8	Wet	Fine to Medium, Brown, Very Dense Sand, Some Fine Gravel and Brick Fragments (Wet)

847521229

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG — BORING # C — SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
C-1	4"	2, 2	1		Fine to Medium, Dark Gray, Medium Dense Sand With Some Gravel
		5, 4	2		
	12"	13, 16	3		
		10, 7	4		
C-2	6"	6, 21	5		
		20, 12	6	Wet	Fine to Medium, Brown, Dense Sand, With Some Fine Gravel and Ashes (Wet)
	10"	7, 5	7		
		6	8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		
			19		
			20		

847521230

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG — BORING # D — SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
D-1	3"	7 2 3 4	1 2		Fine to Medium, Dark Gray, Medium Dense Sand, Some Fine Gravel, Some Wood Fragments
	15"	4 15 15 10	3 4		Fine to Medium, Dark Gray, Dense Sand, Some Fine Gravel,Unidentified Object (Fragment of Melted Plastic?)
D-2	6"	6 5 20 22	5 6	Wet	
	6"	9 3 6 5	7 8		Last 2" of Sample Consisted of Dark Gray Silt (A Sheen Was Noted On Water Within The Spoon)
			9 10 11 12 13 14 15 16 17 18 19 20		

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG

BORING # E SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
E-1	3"	5, 7, 11, 13	0 - 2		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel, Brick Fragments and Fine Mica Particles
	7"	14, 11, 11, 6	2 - 4		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel
E-2	12"	5, 5, 4, 9	4 - 6		
	7"	2, 4, 12, 11	6 - 8	Wet	Fine to Medium, Brown, Medium Dense Sand (Wet)

847521232

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # F SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical
LOCATION:		**TOPO SETTING :**
268 Doremus Avenue, Newark, N.J.		Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.
DRILLING RIG TYPE:	**SIZE & TYPE OF BIT:**	**DATE STARTED:**	**DATE COMPLETED:**
Air Rotary	NA	1/6/92	1/6/92
SAMPLE TYPE:	**HAMMER WT. / DROP**	**TOTAL DEPTH:**	**WATER LEVEL:**
Split Spoon	140 lbs / 30 in.	11'	6.5'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
F-1	5"	2, 4, 29, 16	0 – 2		Fine to Medium, Dark Gray, Dense Sand, With Fine Gravel, Brick Fragments and Fine Mica Particles
	14"	11, 9, 7, 8	2 – 4		
	15.5"	5, 5, 4, 4	4 – 6		
F-2	5"	11, 9, 2, 9	6 – 8	Wet	Fine to Medium, Dark Gray, Medium Dense Sand, With Fine Gravel
	7"	12, 10, 14, 13	8 – 10		Fine to Medium, Red, Dense Sand and Clay
			10 – 20		

847521233

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES

1235 A Route 23 S, P.O. Box 648, Wayne, NJ 07474 Phone: (201) - 633 - 7900 Fax: (201) - 633 - 7582
Route 518 Business Park Dr., Skillman, NJ 08558 Phone: (609) - 683 - 7600 Fax: (609) - 683 - 1555

BORING LOG BORING # G SHEET 1 OF 1

CASE #:	CLIENT:	PROJECT :
91025	Elan Incorporated	Elan Chemical

LOCATION:	TOPO SETTING :
268 Doremus Avenue, Newark, N.J.	Flat

DRILLING CONTRACTOR:	DRILLER:	SAMPLER :	INSPECTOR :
SBI	Eric	Skippy	Chris K.

DRILLING RIG TYPE:	SIZE & TYPE OF BIT:	DATE STARTED:	DATE COMPLETED:
Air Rotary	NA	1/6/92	1/6/92

SAMPLE TYPE:	HAMMER WT.	DROP	TOTAL DEPTH:	WATER LEVEL:
Split Spoon	140 lbs	30 in.	8'	6'

SAMPLES #	Recovery	Blows	DEPTH	SOIL TYPE	IDENTIFICATION OF SOIL / REMARKS
G-1	9"	2, 4, 19, 16	1, 2		Fine to Medium, Dark Gray, Dense Sand, Some Fine Gravel
	14"	11, 9, 7, 8	3, 4		
G-2	15.5"	5, 5, 4, 4	5, 6	Wet	Fine to Medium, Brown, Dense Sand
	17"	11, 12, 5, 4	7, 8		Fine to Medium, Brown, Dense Sand

* The Cable Used to RaiseThe 140 lb Hammer snapped

847521234

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

September 16, 1992

RECEIVED
SEP 17 1992

Lee Henig-Elona, Esq.
Clapp & Eisenberg
Counsellors At Law
1 Newark Center
Newark, NJ 07102

Re: DRPSR Case #88-12-15-0731

Dear Ms. Henig-Elona:

As agreed to under the Memorandum of Agreement signed on August 27, 1992, the Department has had the opportunity to review all the sampling results submitted to this office regarding Elan Chemical. Based on these findings, this office will approve encapsulation of the entire former drum storage area with an impermeable asphalt cover, pursuant to the proposed Cleanup Standards found at N.J.A.C. 7:26D as a remedial alternative. Be advised, however, that a use restriction (i.e. deed restriction) may be required for the Elan site if the proposed Cleanup Standards are adopted substantively "as is". Please see N.J.A.C. 7:26D, Appendix A, which, under the proposed standards, requires a use restriction when the Department allows contaminants to remain above the regulatory level. The use restriction is not required at this time, however, Elan may wish to proceed voluntarily with implementation of same. In addition, although capping may be an acceptable remedial alternative for this office, it may not be so for other Departmental programs (i.e. ECRA) and should be taken into consideration. Furthermore, as environmental investigations at the site have not demonstrated that ground water has not been impacted by soil contamination, it is recommended that a ground water study be performed. This, however, is not a requirement at this time, but could be in the future.

Please contact this office at 201-669-3960 two weeks prior to the encapsulation of Elan's property so that I can be present if necessary.

Sincerely,

Jodie M. Stein
Senior Environmental Specialist

JMS/plm

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State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

CERTIFIED MAIL
RETURN RECIEPT REQUESTED

ELAN Chemicals Inc.
268 Doremus Avenue
Newark, New Jersey 07105

Att: David Weismen, President

June 5, 1992

Sub: Ongoing Investigation as to the Source of Contamination of the New Jersey Bell Underground Vault #1083 Located in front of 268 Doremus Ave
DRPSR Case # 92-05-08-1051M

Dear Mr. Weismen:

The purpose of this letter is to inform you that the Department suspects ELAN Chemicals Inc. as a potential source of the contamination referenced above. This decision is based on the known soil contamination that is present at ELAN Chemicals and on the proximity of the cistern to the Bell vault. The cistern is located to the left of the entrance door to the facility and the vault is located to the right.

On May 15, 1992, Jodie Stein of this office and myself met with representatives of ELAN Chemicals, Karol Sulimirski, and explained the reason for our investigation. During our visit we were supplied with sampling results of the effluent which the company discharges to Passaic Valley Sewer Authority. The constituents detected in that effluent were similar in nature to those found in the vault. At that time we inquired into the existence of any testing that was performed on the material prior to being treated and discharged. We were informed that prior testing was not required and therefore was unavailable.

At the present time the Department is requesting that ELAN Chemical arrange for an outside contractor to test the material in the cistern. If ELAN Chemical agrees to sample the material it should be analyzed by an independent laboratory for Volatile Organics plus 15, EPA Method 624 and Total Petroleum Hydrocarbons Method 418.1. If ELAN Chemical determines that it will not perform this requested sampling, the Department at this time is requesting permission from ELAN Chemical for access to the cistern so that the Department may make other arraignments for its sampling. The sampling results will assist the Department in determining the potential source of this contamination.

If you have any questions concerning the contents of this letter or its requirements, please contact me at my office (201) 669-3960.

Sincerely,

Gary Greulich
Senior Environmental Specialist

cc: Karol Sulimirski, ELAN Chemical Engineer
File

847521237

Bell Atlantic
650 Park Avenue
East Orange, New Jersey 07017

David Forti
Senior Engineer
Environmental Management

July 1, 1992

Mr. Gary Greulich
NJDEPE
Metro Bureau of Field Operations
2 Babcock Place
West Orange, NJ 07052

RE: NJB Manhole #1083 Contamination

Dear Mr. Greulich,

As previously discussed in our meeting on May 8, 1992, New Jersey Bell has encountered Hazardous chemicals in NJB manhole #1083, located on Doremus Ave, Newark (immediately in front of 268 Doremus Ave). This problem still exists and is threatening the telephone service in that area.

As discussed, this problem was first brought to my attention on March 30, 1992 when our field forces noticed an unusual odor emanating from the manhole. Aquifer Systems took a sample of the product from the manhole on April 6, 1992. As shown in the attached results, the liquid in the manhole was contaminated with 1, 2-Dichloroethane, Toluene, Chlorobenzene, Ethylbenzene, m,o,p-Xylene, Benzyl Alcohol, Benzoic Acid, and other unusual chemicals.

On 5/26/92, I had the liquid contents of this manhole pumped out to prevent exposure of our cables to the concentrated solvents. The contents were transported under manifest #NJA1381681 (copy attached). While pumping this manhole it was observed that product was entering back into the manhole nearly as fast as it was pumped out. It was also noticed that the fresh liquid entering into the manhole was steaming and contained the same sweet odor as the original product pumped from the hole.

After this manhole was pumped free of liquids three times, a sample of the incoming liquid was taken by Aquifer systems. The analysis of this liquid showed that the product entering the manhole was contaminated with 1,2-Dichloroethane, Toluene, Chlorobenzene, Ethylbenzene, and Benzyl Alcohol. A copy of this analysis is also attached.

Due to the concentrations of solvents present, the telephone cables running through this manhole are failing. Because of the toxicity of the liquids, NJB will not permit their forces to enter into the manhole for cable repairs. NJB has implemented a project to run new lines overhead and abandon the existing lines.

Should these cables fail and cause a service outage, New Jersey Bell will seek to recover emergency repair work expenses as well as lost revenues from the responsible party.

Your assistance in identifying the responsible party and implementing corrective actions would be greatly appreciated.

Should you require any other information please feel free to contact me at (201) 266-9053.

Sincerely yours,

David Forti, P.E.

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

Certified Mail
Return Receipt Requested

Clapp & Eisenberg
Counsellors at Law
One Newark Center
Newark, New Jersey 07102

Att: Ms. Lee Henig-Elona

July 24,1992

Sub: Potential Contamination Of N.J.Bell Vault 1083
By ELAN Chemicals Inc. Cistern located at
268 Doremus Ave., Newark, New Jersey
DRPSR Case# 92-05-08-1051M

Dear Ms. Henig-Elona:

The purpose of this letter is to serve as a follow up to our phone conversation of July 14,1992. During that conversation you requested copies of the documentation used in determining that the ELAN cistern was a potential source of the contamination in the N.J.Bell vault #1083. To that end you will find three attachments with this letter.

As stated to you during our previously mentioned conversation, there were several reasons that led to suspecting the cistern as a potential source of the contamination.

1. The original sampling of the material in the vault showed elevated levels of 1,2-Dichloroethane, Toluene, Chlorobenzene, Ethylbenzene, m,o,p-Xylenes, Benzyl Alcohol, Benzoic Acid and other chemicals.

2. The material in the vault had a strong sickly sweet odor. This same odor was detected in the then accessible cistern.

3. The Right to Know information attained by this office shows that ELAN Chemicals Inc. handles many of the chemicals that were detected in the N.J.Bell Vault.

4. The proximity of the ELAN cistern to the N.J.Bell vault was taken into account. The vault and cistern are approximately 8 to 10 feet apart.

In addition to the information above, this office was notified by N.J.Bell that a second sample was taken from the vault upon attempts to pump the vault dry. This second sample was taken from the material which was entering the vault and was reported to be warm (steaming).

In consideration of the information submitted, it is reasonable to assume that the cistern is a potential source of the contamination in the N.J.Bell vault. At this time, this office is again requesting that ELAN Chemicals arrange for the sampling of this cistern as outlined in my previous correspondence of June 6,1992. You are required to notify this office within 10 days of receipt of this letter, regarding the potential sampling episode.

If you have any questions concerning the submitted information or I can be of further assistance, please contact me at my office (201)669-3960.

Sincerely,

Gary Greulich
Senior Environmental Specialist

cc: David Weisman, President ELAN w/o attachments
David Forti, N.J.Bell w/o attachments

847521241

CLAPP & EISENBERG

A PROFESSIONAL CORPORATION
COUNSELLORS AT LAW

ONE NEWARK CENTER
NEWARK, N.J. 07102
(201) 642-3900 (212) 571-0240
FAX: (201) 642-7413

ATLANTIC CITY OFFICE
26 SO. PENNSYLVANIA AVE.
ATLANTIC CITY, N.J. 08401
(609) 347-7330
FAX: (609) 347-2611

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MELVYN H. BERGSTEIN
SALVATORE T. ALFANO
JEFFREY M. SCHWARTZ
FREDERIC S. KESSLER
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HARVEY C. KAISH
CHRISTOPHER M. HARTWYK
MARY BETH CLARK
LEE HENIG-ELONA
MARK F. KLUGER
LINDA A. ELFENBEIN
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KIMBERLY D. SUTTON
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JOANN K. DOBRANSKY
ADAM N. SARAVAY
EDWARD W. MILLSTEIN
DONNA M. BUSICHIO

OF COUNSEL

JEROME C. EISENBERG
GEORGE S. FISCHLER
HOWARD T. ROSEN
DOROTHY G. BLACK

THOMAS A. PENN
GULIET D. HIRSCH
PAUL S. WERTHER

WRITER'S DIRECT DIAL
(201) 642-
5958

WRITER'S DIRECT FAX
(201)
623-5967

August 5, 1992

Jodie M. Stein, Sr. Environmental Specialist
New Jersey Department of Environmental
Protection & Energy
Division of Responsible Party Site
Remediation - Metro Regional Office
2 Babcock Place
West Orange, New Jersey 07052

Re: Elan Chemical Company
268 Doremus Avenue
Newark, New Jersey

Dear Ms. Stein:

Pursuant to our telephone conversations, I enclose a Site Plan of the Elan Chemical Company facility, which indicates the location of the subsurface sanitary sewer, stormwater run-off line and manufacturing effluent line.

Sanitary Sewer

The sanitary sewer line is used for sanitary waste only. Sanitary waste collects in the cistern located in the northwestern corner of the property and is then discharged into the sewer, which flows from north to south to the Passaic Valley Sewerage Authority ("PVSA").

Stormwater Run-Off Line

A sump pump is in the process of being installed in the northeastern corner of the property in order to comply with anticipated state regulations, which will implement the federal Clean Water Act's Stormwater Discharges Associated with Industrial Activity Program. The new sump will collect storm water runoff and will connect with an existing line, which, since 1985, has routed

stormwater run-off through the on-site pre-treatment facility prior to discharge to the PVSA sewer. A surface drain which collects stormwater run-off is also located in approximately the center of the property.

Manufacturing Effluent Line

Until approximately 1985, the sewer line from Elan's factory exited on the north side of Elan's property into a cistern, and from there directly into the PVSA sewer. See red dotted line on Site Plan. In 1985, Elan installed a pre-treatment facility for its manufacturing effluent. After treatment, the effluent runs to the PVSA sewer south of the plant and south of the Bell vault #1083.

The former line which connected the plant to the cistern was sealed in 1985. Since that time, the manufacturing effluent could not and has not entered the cistern from Elan's plant. The cistern, however, remained connected to the PVSA sewer system. In fact, after hearing of the problem with Bell's vault, Elan opened the cistern and ascertained that the seals isolating the cistern from the plant were in place. As a further precaution, Elan filled the cistern with sand. The Bell vault apparently continues to fill with contaminated water notwithstanding the fact that Elan's cistern has been filled with sand.

Likely Explanation

The PVSA sewer line which runs in front of Elan's property chronically overflows during periods of heavy rain, this Spring and Summer being perhaps the worse Elan has seen in years. The Bell vault is directly adjacent to the sewer line and is open to the street through holes in their manhole cover. Shortly before the incident in question, Elan observed sewer water coming up through the manholes of the sewer line which are adjacent to the manholes of the Bell's vault. Consequently, Elan postulates that the Bell vault is encroached upon by the effluent in the adjacent sewer.

Elan would like to discuss the sampling request set forth in the Department's June 6, 1992 letter, as the cistern, which has been filled with sand, cannot be sampled.

Please give me a call to discuss alternatives.

Very truly yours,

Lee Henig-Elona

LHE/pl/#44640
Enclosure

cc: David Weisman, President (w/o enc.)
Elan Chemical Co.

OMB#: 2050-0005 Expires: 1-31-83

1981 STATUS SHEET FOR NON-REGULATED FACILITIES

INSTRUCTIONS: THIS SHEET MUST BE COMPLETED ONLY BY FACILITIES THAT DID NOT TREAT, STORE, OR DISPOSE OF HAZARDOUS WASTE IN 1981 AND ARE NOT REQUIRED TO COMPLETE THE 1981 FACILITY ANNUAL REPORT. If you received a preprinted label attached to the envelope in which this form was enclosed, affix it in the space provided, complete section S-IV, sign the certification at the bottom of this page and return it to your EPA Regional Office by January 10, 1983 in the return envelope provided. If any of the information on the label is incorrect, draw a line through it and provide the correct information in the appropriate section below. If you did not receive a preprinted label, complete all sections.

ELAN CHEMICAL COMPANY
268 DOREMUS AVE
AFFIX LABEL HERE
NEWARK N. J. 07105

S-I. FACILITY EPA I.D. NUMBER

T/A C
F N J D 0 4 2 8 9 5 6 8 0 1 1
1 2 13 14 15

S-II. NAME OF FACILITY

E L A N C H E M I C A L C O M P A N Y
30 69

S-III. FACILITY MAILING ADDRESS

3 2 6 8 D O R E M U S A V E
15 16 45
Street or P.O. Box

4 N E W A R K N J 0 7 1 0 5
15 16 41 42 47 51
City or Town State Zip Code

S-IV. 1981 STATUS (please explain your 1981 non-regulated status here)

In the year of 1981, ELAN CHEMICAL COMPANY, did not generate or dispose of any Hazardous Waste Material.

S-V. CERTIFICATION

I certify under penalty of law that the installation identified above did not treat, store, or dispose of hazardous waste during 1981 and that to the best of my knowledge this facility is not subject to the RCRA Annual Reporting requirement.

JOHN VASSILIADES VP-PRODUCTION John Vassiliades 1/6/83
Print/Type Name Title Signature of Authorized Representative Date Signed

847521245

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF HAZARDOUS WASTE
GENERATOR'S ANNUAL REPORT
FOR YEAR OF 1982

1. GENERATOR'S NAME ELAN CHEMICAL CO. 2. EPA ID NO. NJD042895680

3. ADDRESS 268 DOREMUS AVE, NEWARK, N.J. Telephone Number 201-344-8014

4. TRANSPORTER'S NAME METRO DISPOSAL CO. 5. EPA ID NO. NJT000029819

6. ADDRESS 440 SMITH STRET, KEASBEY, N.J. 08832

7. FACILITY'S NAME S. & W WASTE INC. 8. EPA ID NO. NJD096865837

9. ADDRESS 115 JACOBUS AVE., S. KEARNY, N.J. 07032

10. MANIFEST NO.	DESCRIPTION OF WASTE	DOT HAZ. CLASS	QUANTITY	UNITS	EPA WASTE TYPE	REJECTED
NJ0069498	CREOSOTE BOTTOMS	COMBUSTIBLE	3790	3	X 188	
NJ0069498	CEDARWOOD OIL	N/A	1084	3	X910	

847521246

* - PLACE AN "*" UNDER THE REJECTED COLUMN FOR THOSE MANIFESTS REJECTED BY FACILITY.

10/6/83

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF HAZARDOUS WASTE
GENERATOR'S ANNUAL REPORT
FOR YEAR OF 1983

1. GENERATOR'S NAME ELAN CHEMICAL CO. 2. EPA ID NO. NJD042895680
3. ADDRESS 268 DOREMUS AVE. TELEPHONE 201-344-8014
4. TRANSPORTER'S NAME S & W WASTE INC. 5. EPA ID NO NJD096865837
5. ADDRESS 53 PENNSYLVANIA AVE., SOUTH KEARNY, N.J. 07032
7. FACILITY'S NAME S & W WASTE INC. 8. EPA ID NO NJD096865837
9. ADDRESS 53 PENNSYLVANIA AVE., SOUTH KEARNY, N.J. 07032

10. MANIFEST NO	DESCRIPTION OF WASTE	DOT HAZ.CLASS	QUANTITY	UNITS	EPA WASTE TYPE	REJECTED
NJ0180214	Waste Solvents NOS	FLAMMABLE	4125	1	D001	
NJ0180216	Waste Solvents NOS	FLAMMABLE	1210	1	D001	
NJ0188740	Waste Solvents NOS	FLAMMABLE	1000	1	D001	
NJ0188747	Waste Solvents NOS	FLAMMABLE	4400	1	D001	
NJ0174152	Waste Solvents NOS	FLAMMABLE	4400	1	D001	
NJ0174153	Waste Solvents NOS	FLAMMABLE	1210	1	D001	
NJ0178930	Waste Solvents NOS	FLAMMABLE	1485	1	D001	
NJ0178923	Waste Solvents NOS	FLAMMABLE	4290	1	D001	

847521247

* - PLACE AN "*" UNDER THE REJECTED COLUMN FOR THOSE MANIFESTS REJECTED BY FACILITY.

Part VI. Page 1 of 1

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
MANIFEST SECTION
GENERATOR ANNUAL REPORT 1984

1. Generator Name: Elan Chemical Co. EPA ID No. NJD042895680

Site Address: 268 Doremus Ave., Newark, N.J. 07105

2. Transporter Name: S & W Waste Inc. EPA ID No. NJD991291105

3. TSD Facility Name: S & W Waste Inc. EPA ID No. NJD991291105

TSDF Address: 105 Jacobus Ave., So. Kearny, N.J. 07032

4. Waste Information:

Waste Type	Waste Description	DOT Haz Class	Total Quantity	Units
D001	Waste Solvents NOS	Flammable	24470	Gallons

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

847521248

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1985
- REPORT FORM -

1. Generator Name: Elan Chemical Co. EPA ID No.: NJD042895680

   Site Address: 268 Doremus Ave. Newark, N.J. 07105

2. Transporter Name: S & W Waste. Inc. EPA ID No.: NJD991291105

3. TSD Facility Name: S & W Waste, Inc. EPA ID No.: NJD991291105

   TSD Address: 105 Jacobus Ave. South Kearny, N.J. 07032

A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units
D001	Waste Flammable Liquid NOS	Flammable	5665	G

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

847521249

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1986
- REPORT FORM -

Generator Name: Elan Chemical Co. EPA ID No.: NJD042895680

Site Address: 268 Doremus Ave. Newark, N.J. 07105

Transporter Name: S & W Waste Inc. EPA ID No.: NJD991291105

TSD Facility Name: S & W Waste Inc. EPA ID No.: NJD991291105

TSD Address: 105 Jacobus Ave. South Kearny, N.J. 07032

A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units
D001	Waste Flammable Liquid Nos	Flammable	660	G

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

847521250

PAGE ___ OF ___

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1986
- REPORT FORM -

Generator Name: Elan Chemical Company EPA ID No.: NJD042895680

Site Address: 268 Doremus Ave. Newark, N.J. 07105

Transporter Name: SCA Chemical Services Co. EPA ID No.: NJD089216790

TSD Facility Name: SCA EPA ID No.: NJD089216790

TSD Address: 100 Lister Ave. Newark, N.J. 07105

A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units
D002	Waste Chromic Acid Solution	Corrosive Liquid	165	G

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

847521251

PAGE ___ OF ___

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1987
- REPORT FORM -

1. Generator Name: Elan Chemical Co. 2. EPA ID No.: NJD 042895680

3. Site Address: 268 Doremus Avenue, Newark, New Jersey 07105

4. Transporter Name: Continental Carriers 5. EPA ID No.: NJD 990720658

6. TSD Facility Name: Solvent Recovery Services of N.J. INC. 7. EPA ID No.: NJD 002182897

8. TSD Address: 1200 Sylan Street, Linden, New Jersey 07036

9. A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units
F005	Waste Flammable Liquid No 5	Flammable UN 1993	15022	G

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

847521252

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1988
- REPORT FORM -

1. **Generator Name** Elan Chemical Co.

2. **USEPA ID Number** NJD 042895680

3. **Site Address** 268 Doremus Ave. Newark, N.J. 07105

4. **Transporter Name** Continental Carriers

5. **Transporter USEPA ID Number** NJD 990720658

6. **TSD Facility Name** Solvents Recovery Services of N.J. Inc.

7. **TSD Facility EPA ID Number** NJD 002182897

8. **TSD Address** 1200 Sylvan Street, Linden, N.J. 07036

9.

Waste A.) Number (I)	Waste B.) Description (11)	DOT Haz C.) Class (11 or J)	Total D.) Quantity (13)	E.) Units (14)
F005	Waste Flammable Liquid	Flammable Liquid UN1993	14,714	G

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type.

847521253

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1988
- REPORT FORM -

1. Generator Name: Elan Chemical Co.
2. USEPA ID Number: NJD 042895680
3. Site Address: 268 Doremus Ave. Newark, N.J. 07105
4. Transporter Name: S & W Waste, Inc.
5. Transporter USEPA ID Number: NJD 991291105
6. TSD Facility Name: S & W Waste
7. TSD Facility EPA ID Number: NJD 991291105
8. TSD Address: 105 Jacobus Ave. South Kearny, N.J. 07032

9.

Waste A.) Number (I)	Waste B.) Description (11)	DOT Haz C.) Class (11 or J)	Total D.) Quantity (13)	E.) Units (14)
F005	Waste Flammable Liquid	Flammable Liquid UN1993	40,911	G

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type.

847521254

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1989
-REPORT FORM-

1. Generator Name Elan Chemical Co.

2. USEPA ID Number NJD 042895680

3. Site Address 268 Doremus Ave. Newark, N.J. 07105

4. Transporter Name S & W Waste

5. Transporter USEPA ID Number NJD991291105

6. TSD Facility Name S & W Waste

7. TSD Facility EPA ID Number NJD991291105

8. TSD Address 105 Jacobus Ave. South Kearny, N.J. 07032

9.

A.) Waste Number (I)	B.) Waste Description (11)	C.) DOT Haz Class (11 or J)	D.) Total Quantity (13)	E.) Units (14)
X725	Hazardous Waste Solid NOS	T/S Oil (#4) S-10% Absorbants 90-95%	200	P
F005	Waste Flammable Liquid	Flammable Liquid UN1993	79235	G

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type

847521255

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME ELAM CHEMICAL CO

268 Doremus Ave Newark 07105

EPA ID NO. NJD042895680

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM **GM**

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 14 of the 1990 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description (Instruction Page 15): Corrosive waste from a production process: Mixture of water, Sulfuric Acid and Sodium Dichromate

B. EPA hazardous waste code (Page 15): D005 D006 D007 D008

C. State hazardous waste code (Page 16): NA

D. SIC code (Page 16): 2869

E. Source code (Page 16): A37

F. Form code (Page 16): B103

G. Origin (Page 16): Code 1; System type M NA

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. 7664-93-9 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): 0

B. Quantity generated in 1990 (Page 17): 9900

C. UOM (Page 18): 5

D. Density (Page 18): 1.2 ☐ 1 lbs/gal ☒ 2 sg

E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? (Page 18): ☐ 1 Yes (CONTINUE TO SYSTEM 1) ☒ 2 No (SKIP TO SEC. III)

SYSTEM 1

System type (Page 18): M

Quantity treated, disposed or recycled in 1990 (Page 18):

SYSTEM 2

System type (Page 18): M

Quantity treated, disposed or recycled in 1990 (Page 18):

Sec. III

A. Was this waste shipped off site? (Instruction Page 19) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility to which waste was shipped (Instruction Page 19)	C. System type (Page 19)	D. Total quantity shipped in 1990 (Page 19)
Site 1	NJD991291105	M079	9900
Site 2		M	

Sec. IV

A. Waste minimization results in 1990 (Instruction Page 20) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (THIS FORM IS COMPLETE)

B. Activity (Page 21)	C. Other effects (Page 21)	D. Quantity recycled in 1990 due to new activities (Page 21)	E. Activity/Production Index (Page 21)	F. Source Reduction Quantity (Page 22)
W14 W54	☐ 1 Yes	NA	NA.	NA
W W	☒ 2 No			

Comments:

847521256

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER.

SITE NAME: Elan Chemical Co.

268 Doremus Ave. Nwk, N.J. 07105

EPA ID NO.: NJD041218956810

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM **GM**

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 14 of the 1990 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description (Instruction Page 15): Ignitable spent solvent from production processes.

B. EPA hazardous waste code (Page 15)	C. State hazardous waste code (Page 16)
D001 F005 NA NA	C433

D. SIC code (Page 16)	E. Source code (Page 16)	F. Form code (Page 16)	G. Origin (Page 16)
2869	A33	B203	Code 1, System type MNA

H. TRI constituent (Page 17)	I. CAS numbers (Page 17)
3	1. 67-56-1 2. 108-88-3 3. 1330-20-7 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17)	B. Quantity generated in 1990 (Page 17)	C. UOM (Page 18)	D. Density (Page 18)	E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? (Page 18)
78235	62650	5	DK . ☐ 1 lbs/gal ☐ 2 sg	☐ 1 Yes (CONTINUE TO SYSTEM 1) ☒ 2 No (SKIP TO SEC. III)

SYSTEM 1		SYSTEM 2	
System type (Page 18)	Quantity treated, disposed or recycled in 1990 (Page 18)	System type (Page 18)	Quantity treated, disposed or recycled in 1990 (Page 18)
M		M	

Sec. III

A. Was this waste shipped off site? (Instruction Page 19) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility to which waste was shipped (Instruction Page 19)	C. System type (Page 19)	D. Total quantity shipped in 1990 (Page 19)
Site 1	NJD991291105	M051	62650
Site 2		M	

Sec. IV

A. Waste minimization results in 1990 (Instruction Page 20) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (THIS FORM IS COMPLETE)

B. Activity (Page 21)	C. Other effects (Page 21)	D. Quantity recycled in 1990 due to new activities (Page 21)	E. Activity/Production Index (Page 21)	F. Source Reduction Quantity (Page 22)
W14 W54 W	☐ 1 Yes ☒ 2 No	NA	0.9	7762

Comments: Sec 1-I 142-82-5

847521257

BEFORE COPYING FORM, ENTER:

SITE NAME: ELAN CHEMICAL CO.

EPA ID NO.: NJD 042 395 680

1991 Hazardous Waste Report

FORM GM

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 13 of the 1991 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description (Instruction Page 15): Ignitable spent solvent from production processes.

B. EPA hazardous waste code (Page 15)				C. State hazardous waste code (Page 15)	
F005	NA	NA	NA	C433	NA

D. SIC code (Page 16)	E. Origin code (Page 16)	F. Source code (Page 17)	G. Point of measurement (Page 17)	H. Form code (Page 17)	I. RCRA-radioactive mixed (Page 17)
2869	1 — System type: MNA	A03	1	BP03	2

J. Reported TRI constituent (Page 18)	K. CAS numbers (Page 18)				
3	1. 108-88-3	2. 67-56-1	3. 111-27-3	4. 111-87-5	5. 142-82-5

Sec. II

A. Quantity generated in 1990 (Instruction Page 18)	B. Quantity generated in 1991 (Page 18)	C. UOM (Page 19) / Density	D. Did this site do any of the following to this waste: treat on site, dispose on site, recycle on site, or discharge to a sewer/POTW? (Page 19)
62650.0	43814.0	5 — . DK — ☐ 1 lbs/gal ☐ 2 sg	☐ 1 Yes (CONTINUE TO SYSTEM 1) ☒ 2 No (SKIP TO SEC. III)

ON-SITE SYSTEM 1		ON-SITE SYSTEM 2	
On-site system type (Page 19)	Quantity treated, disposed or recycled on site in 1991	On-site system type (Page 19)	Quantity treated, disposed or recycled on site in 1991
M	.	M	.

Sec. III

A. Was any of this waste shipped off site in 1991? (Instruction Page 20) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility waste was shipped to (Page 20)	C. System type shipped to (Page 20)	D. Off-site availability code (Page 21)	E. Total quantity shipped in 1991 (Page 21)
Site 1	NJD 991 291 105	M051	1	43814.0
Site 2	NA	M		.

Sec. IV

A. Did new activities in 1991 result in minimization of this waste? (Instruction Page 22) ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (THIS FORM IS COMPLETE)

B. Activity (Page 22)	C. Other effects (Page 22)	D. Quantity recycled in 1991 due to new activities (Page 23)	E. Activity/production index (Page 23)	F. 1991 Source reduction quantity (Page 24)
W14 W54 W W	☐ 1 Yes ☒ 2 No	NA.	NA.	65B0.0

Comments:

847521258

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
5th Fl., 401 E. State St., Trenton, N.J. 08625

'84

NOTICE OF VIOLATION

ID NO. NJD 042895680 DATE 12/8/88

NAME OF FACILITY Elan Chemical Co

LOCATION OF FACILITY 268 Doremus Ave. Newark

NAME OF OPERATOR John Vassiliades - V.P. Production

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION

N.J.A.C. 7:26-9.6(e) - owner operator shall maintain aisle space to allow unobstructed movement of personnel fire protection equipment, spill control equipment etc.

N.J.A.C. 7:26-7.4(g)2 - failure to submit an annual report detailing by manifest waste type, method of treatment, quantities treated etc

Remedial action to correct these violations must be initiated immediately and be completed by 12/22/88. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward C Phillips

Investigator, Division of Waste Management
Department of Environmental Protection

847521259

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
5th Fl., 401 E. State St., Trenton, N.J. 08625

2 of 4

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 12/8/88

NAME OF FACILITY ELAN Chemical Co.

LOCATION OF FACILITY 268 Doremus Ave. Newark

NAME OF OPERATOR John Vassiliades - V.P. Production

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NJAC 7:26-9.3(a) 1 - failure to have Waste shipped off-site within 90 days.
NJAC 7:26-9.3(a)3 - accumulation start date not marked or visible, each container not marked or labeled Hazardous waste.
NJAC 7:26-9.3(b) - no approval from Department for storage of waste in an above ground tank also, tank not labeled Hazardous waste.

Remedial action to correct these violations must be initiated immediately and be completed by 12/22/88. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward C. Gillespie
Investigator, Division of Waste Management
Department of Environmental Protection

847521260

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
5th Fl., 401 E. State St., Trenton, N.J. 08625

3 of 4

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 12/8/88

NAME OF FACILITY Elan Chemical Co.

LOCATION OF FACILITY 268 Doremus Ave Newark

NAME OF OPERATOR John Vassiliades VP Production

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION

NJAC 7:26-7.4(c)1 - failure to properly complete any part of a manifest.

Manifest # NJA 0405589

Remedial action to correct these violations must be initiated immediately and be completed by 12/22/88. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward C. Phillips
Investigator, Division of Waste Management
Department of Environmental Protection

847521261

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
5th Fl., 401 E. State St., Trenton, N.J. 08625

4/84

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 12/8/88

NAME OF FACILITY Elan Chemical Co.

LOCATION OF FACILITY 268 Doremus Ave. Newark

NAME OF OPERATOR John Vassiliades VP Production

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION

NJSA 58:10-23c - discharge of a hazardous substance -

NJSA 58:10-23e - person responsible for discharge should notify the Department

discharge involves at a minimum heavy oils.

Remedial action to correct these violations must be initiated immediately and be completed by To be determined. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward Phillips
Investigator, Division of Waste Management
Department of Environmental Protection

847521262

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
~~5th Fl., 401 E. State St., Trenton, N.J. 08625~~
2 BABCOCK PLACE WEST ORANGE 07052

1 of 2

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 12/22/88

NAME OF FACILITY ELAN Chemical Company

LOCATION OF FACILITY 268 Doremus Avenue. Newark NJ

NAME OF OPERATOR John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION

NJAC 7:26-9.4(g)6i - job title for each position at facility related to hazardous waste mgmt & name of employee filling job.
NJAC 7:26-9.4(g)6ii - written job description for each position related to hazardous waste management.
NJAC-7:26-9.6(c)4 - arrangements with local hospitals & hazardous hospitals for hazardous waste handled & potential injuries or illnesses.

Remedial action to correct these violations must be initiated immediately and be completed by 1-12-89. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward C. Kilby
Investigator, Division of Waste Management
Department of Environmental Protection

847521263

Form HWM-004
3/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
~~5th Fl., 401 E. State St., Trenton, N.J. 08625~~
2 BABCOCK PLACE WEST ORANGE

2 of 2

NOTICE OF VIOLATION 07052

ID NO. NJD042895680 DATE 12/22/88

NAME OF FACILITY ELAN Chemical Company

LOCATION OF FACILITY 268 Doremus Avenue Newark N.J.

NAME OF OPERATOR John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION

NJAC 7:26 9.6(F)3 - agreement with emergency response contractors and equipment supplies.

NJAC 7:26 9.7(e) - written contingency plans for emergency procedures.

Remedial action to correct these violations must be initiated immediately and be completed by 1-12-89. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Edward A. Phillips
Investigator, Division of Waste Management
Department of Environmental Protection

847521264

HWM 0010
1/90

'90 5

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, N.J. 07052
(201) 669-3960

NOTICE OF VIOLATION

ID NO NJD041289680 DATE 6-14-90

NAME OF FACILITY Elan Chem Inc.

LOCATION OF FACILITY 268 Doremus Ave

NAME OF OPERATOR Newark, NJ 07105
↳ John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NJAC 7:26-7.4(h)1: Failure to receive signed copy of TSD manifest*. NJAC 7:26-7.4(h)2: Failure to submit an exception report to the Dept. NJAC 7:26-9.3(a)1: Haz. waste accum. onsite for more then 90 days. NJAC 7:26-9.4(a)2 Containers are in poor condition. NJAC 7:26-9.4(a)1: Containers are not of sturdy leak-proof construction. NJAC 7:26-9.4(a)4: Containers not securely closed.

Remedial action to correct these violations must be initiated immediately and be completed by July 14, 1990. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $50,000 per violation.

1 # NJA057106

William M Stein
Investigator, Division of Hazardous Waste Management
Department of Environmental Protection

847521265

HWM 0010
1/90

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, N.J. 07052
(201) 669-3960

NOTICE OF VIOLATION

ID NO. NJD042895680 DATE 6-14-90

NAME OF FACILITY Elan Chem, Inc.

LOCATION OF FACILITY 268 Doremus Ave. Newark, NJ 07105

NAME OF OPERATOR John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NJAC 7:26-9.4(d)4iii: Containers Improperly stored (stacked 4-high). NJAC 7:26-9.4(d)5: NO daily inspection of haz. waste storage area. NJAC 7:26-9.3(a)3: Containers are not labeled with the words "haz. waste" or "Accum. start date". NJAC 7:26-9.4(g)6i: NO written job description of each position handling haz. waste. NJAC 7:26-9.4(g)6iii: No written description on the type & amt of haz. waste training.

Remedial action to correct these violations must be initiated immediately and be completed by July 14, 1990. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $50,000 per violation.

Investigator, Division of Hazardous Waste Management
Department of Environmental Protection

847521266

HWM 0010
1/90

[redacted]

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, N.J. 07052
(201) 669-3960

NOTICE OF VIOLATION

ID NO NJD042895680 DATE 6-14-90

NAME OF FACILITY Elan Chem Inc.

LOCATION OF FACILITY 268 Doremus Ave. Newark NJ 07105

NAME OF OPERATOR John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NJAC 7:26-9.6(e) & Inadequate aisle space (18") NJAC 7:26-9.7(g) & The contingency plan lacks a list of emerg. equipment, location, physical description & brief outline of capabilities.

Remedial action to correct these violations must be initiated immediately and be completed by July 14, 1990. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $50,000 per violation.

John M Stein

Investigator, Division of Hazardous Waste Management
Department of Environmental Protection

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Addendum to 6/14/90 NOV

[redacted]

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, N.J. 07052
(201) 669-3960

Let's protect our earth

NOTICE OF VIOLATION

ID NO. NJD042845680 DATE 7-9-90

NAME OF FACILITY Elan Chemical

LOCATION OF FACILITY 268 Doremus Ave Newark NJ 07108

NAME OF OPERATOR John Vassiliades

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION NJAC 7:26-8.5(a): Failure of generator to test its waste to determine if its Hazardous. NJAC 7:26-9.4(d)4.iv: Containers of haz. waste are not segregated by waste type

Remedial action to correct these violations must be initiated immediately and be completed by July 31, 1990. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $50,000 per violation.

Investigator, Division of Hazardous Waste Management
Department of Environmental Protection

847521268

[redacted]

Tank List 8/4/92

Tk No.	Cap. (Gal)	Contents	Cas No.	Dimensions
41	********	Centrifuge	********	4' D X 5' H
42		Crystallizer	********	3' D X 22" H
45	********	Continuous Distillation Unit	********	********
48	4,500	Water (Boiler Feed Tank)	********	
49	8,000	Fuel Oil #4	68476-31-3	7.5' D X 24' H
50	14,500	Water	********	
51	4,000	Hexanol/Octanol	111-27-3	8' D X 10' H
52	4,000	Octanol	111-87-5	8' D X 10' H
53	8,000	Hexanol	111-27-3	
54	4,000	Octanol	111-87-5	8' D X 10' H
55	4,500	Ethyl Alcohol 2B	64-17-5	8' D X 12' H
56	1,300	Ethyl Alcohol 2B	64-17-5	4' D X 14' H
57	1,300	Ethyl Alcohol 2B	64-17-5	4' D X 14' H
58	4,500	Potassium Hydroxide 45%	1310-58-3	8' D X 12' H
59	4,500	Diethyl Sulfate	64-67-5	8' D X 12' H
60A	1,300	Diethyl Sulfate	64-67-5	4' D X 14' H
60B	1,300	Diethyl Sulfate	64-67-5	4' D X 14' H
60C	1,300	Diethyl Sulfate	64-67-5	4' D X 14' H
60D	1,300	Diethyl Sulfate	64-67-5	4' D X 14' H
61	4,500	Toluene/Methanol	108-88-3	8' D X 12' H
62A	1,300	Toluene/Methanol	108-88-3	4' D X 14' H
62B	1,300	Xylene (ex Peeb)	1330-20-7	4' D X 14' H
62C	1,300	Toluene/Methanol	108-88-3	4' D X 14' H
62D	1,300	Toluene/Methanol	108-88-3	4' D X 14' H
72	5,000	Methanol	67-56-1	7' D X 18' H
73	2,500	Not In Use	********	
74	9,000	Sodium Ethylate	64-17-5	
75	9,000	Code 1	64-17-5	
76	9,000	Toluene	108-88-3	
80	1,300	Aldehyde C-14 (1st Dist.)	108-88-3	
81	2,500	Ethyl p-Ethoxy Benzoate (Crude)	1330-20-7	
82	2,000	Not In Use	********	
83	2,000	Acetophenone	98-86-2	
84	2,000	gamma-Nonalactone (Lites)	108-88-3	
104A	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104B	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104C	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104D	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104E	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104F	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
104G	12,000	Sodium Hydroxide 5%	1310-73-2	8' D X 24' H
105	5,000	Hydrochloric Acid	7647-01-0	9' D X 20' H
107	8,000	Sodium Hydroxide 25%	1310-73-2	8' D X 24' H
108	9,000	Toluene (Recovered)	108-88-3	8' D X 30' H
109	4,700	Acidification Tank (HCL)	7647-01-0	10' D X 8' H
110	4,000	Extractor	********	********
111	5,000	Acidification Tank (HCL)	7647-01-0	10' D X 8' H
113	5,000	Acidification Tank (HCL)	7647-01-0	10' D X 8'6" H
116	********	Centrifuge	********	********

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Tank List 8/4/92

Tk No.	Cap. (Gal)	Contents	Cas No.	Dimensions
124	1,000	Extractor/Wash Tank	********	********
125	1,000	Not In Use	********	********
127	500	Concentrator	********	********
131	********	Small Counter Current Extactor	********	********
132	********	Large Counter Current Extactor	********	********
133	3,000	Toluene X	108-88-3	7' D X 9'6" H
134	12,000	Effluent Pre-Treatment	64742-48-9	
137	2,000	Washed Toluene X	108-88-3	6' D X 10' H
150	14,000	Not in Use	********	10' D X 24' H
151	14,000	Not in Use	********	10' D X 24' H
152	500	Centrifuge Wash Tank		4' D X 5'6" H
152A	150	Centrifuge Pump Out Tank		
153	2,500	Auto 4 & 5 Receiver	********	5' D X 15'6" H
200	2,000	Sodium Hydroxide 25%	1310-73-2	5' D X 14' H
201	1,500	Hydrochloric Acid	7647-01-0	4'6" D X 12' H
202	********	Nitrogen	772-73-9	
203	********	Hydrogen		********
204	5,000	Extracted Effluent	64742-48-9	
205	12,000	Effluent Pre-Treatment	64742-48-9	
206	3,500	Iso Par H	64742-48-9	
208	900	Scrubber (10% Sodium Hydroxide)	1310-73-2	
209	300	Antifreeze (Propylene Glycol)	57-55-6	
V4	5,000	Ethyl Alcohol	64-17-5	8' D X 12' H
V5	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D X 12' H
V6	5,000	Water/Ethyl Alcohol (Vanilla Extract)	64-17-5	8' D X 12' H
T20	4,200	Iso Propyl Alcohol		

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PASSAIC VALLEY SEWERAGE COMMISSIONERS

SEWER CONNECTION PERMIT

PERMIT # 20403242

(Please use the Permit Number on any correspondence with PVSC)
In compliance with the provisions of the Federal Water Pollution Control Act, its amendments, the Clean Water Act and the Rules and Regulations of the Passaic Valley Sewerage Commissioners:

Elan Chemical Company

(herein, after referred to as the Permittee)

is authorized to discharge from a facility located at

268 Doremus Avenue

Newark, New Jersey 07105

to the Passaic Valley Sewerage Commissioners Treatment Works in accordance with discharge limitations, monitoring requirements and other conditions set forth herein.

EFFECTIVE DATE 04/14/91

EXPIRATION DATE 04/14/96

PASSAIC VALLEY SEWERAGE COMMISSIONERS

BY: _____
EXECUTIVE DIRECTOR

847521271

SIVE DISCHARGE RATE

dustrial wastes discharged in a slug of such volume or strength so as to cause treatment process upset and subsequent loss of treatment efficiency.

HEAT

(1) any discharge in excess of 150^0 F (65^0C)

(2) Heat in amounts which would inhibit biological activity in the PVSC treatment works resulting in a treatment process upset and subsequent loss of treatment efficiency, but in no case shall heat be introduced into the PVSC treatment works in such quantities that the temperature of the influent waters at the treatment plant exceed 40^0C (104^0F).

i. **UNPOLLUTED WATERS**

Any unpolluted water including, but not limited to, cooling water or uncontaminated storm water, which will increase the hydraulic load on the treatment system, except as approved by PVSC.

j. **WATER**

Any water added for the purpose of diluting wastes which would otherwise exceed applicable maximum concentration limits.

2. No person shall discharge or convey, or permit to be discharged or conveyed, to the treatment works any wastes containing pollutants of such character or quantity that will:

a. Not be susceptible to treatment or interfere with the process or efficiency of the treatment system.

b. Violate pretreatment standards. As pretreatment standards for toxic or other hazardous pollutants are promulgated by USEPA for a given industrial category, all industrial users within that category must immediately conform to the USEPA timetable as well as any numeric limitations imposed by USEPA. In addition, an industrial user shall comply with any more stringent standards as determined by PVSC or other agency.

c. Cause the PVSC treatment plant to violate its NJPDES permit, applicable receiving water standards, permit regulating sludge which is produced during treatment or any other permit issued to PVSC.

C. **EFFLUENT LIMITATIONS, MONITORING AND COnd...**

1. During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is ... outlet(s) number(ed) (20403241-44100-0201). Such discharge shall be monitored by the permittee as spec... Volume to be determined from flowmeter readings.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	DAILY MAX		MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXX	XXXXX	Twice/Month	24 hr. comp.	Quarterly
TSS (0530)	XXXXX	XXXXX	Twice/Month	24 hr. comp.	Quarterly
pH (9000)	XXXXX	5 to 10.5	Continuous	Recorder	*
LEL **	XXXXX	XXXXX	Continuous	Recorder	*
Volume	XXXXX	XXXXX	XXXXX	XXXXX	Quarterly

* Permittee to store pH and LEL Recorder Charts and have available for review by PVSC personnel on demand.

** Regulated as defined in Appendix B, Pretreatment Limitation #2 of PVSC Rules and Regulations.

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C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

1. During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is authorized to discharge from outlet(s) number(ed) (20403242-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from water consumption data. Outlet to have separate water consumption meters. Domestic waste only to be discharged from this outlet.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
			MEASUREMENT FREQUENCY	SAMPLE TYPE	REPORTING PERIOD
BOD (0310)	XXXXX	XXXXX	N/A *	N/A	XXXXX
TSS (0530)	XXXXX	XXXXX	N/A *	N/A	XXXXX
Volume	XXXXX	XXXXX	XXXXX	XXXXX	Quarterly

* Concentration for User Charge to be determined from Residential Strength Standards.

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C. EFFLUENT LIMITATIONS, MONITORING AND COMPLIANCE REQUIREMENTS

During the period beginning (04/14/91) and lasting through (04/14/96) the permittee is authorized to discharge from outlet(s) numbered (20403241-44100-0201). Such discharge shall be monitored by the permittee as specified below. Volume to be determined from flowmeter readings. Permittee to submit volume in accordance with PVSC Pretreatment Discharge Monitoring Report Form MR-1.

40 CFR 414.85, Subpart H.

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS All units are in Micrograms per liter		MONITORING REQUIREMENTS Measurement Frequency	Sample Type	Reporting Period
	DAILY MAX.	MONTHLY AVG.			
VOLUME	XXXXXXXXXXX	XXXXXXXXXXXX	XXXXXXXXXXXXXXX	XXXXXXXXXXXX	Semi-Annually
(a)	(a)	(a)	Twice/Year	(a)	Semi-Annually

(a) See Page 9 of 15, Section 2 C of this Permit for Effluent Characteristics, Daily and Monthly Discharge Limitations, and Sample Type.

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Chemical [redacted]242

In addition to the monitoring required in Section C.1. the Permittee is required to meet the following schedule of compliance:

Analysis of wastewater parameters shall be performed by a laboratory that has been certified by the State of New Jersey.

Pretreatment Compliance Requirements - Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.

Permittee to be in compliance with Organic Chemicals Categorical Pretreatment Standards 40 CFR 414.85 Subpart H.

07/21/91 First Periodic Compliance Monitoring Report due. Permittee to submit a Periodic Compliance Monitoring Report Semi-Annually January 21 and July 21 in accordance with General Pretreatment Regulations 40 CFR 403.12 section (e).

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c. Effluent Characteristics	Maximum for any one day	Maximum for monthly average	Sample Type
Benzene	134	57	Grab
Carbon Tetrachloride	380	142	Grab
Chlorobenzene	380	142	Grab
1,2,4-Trichlorobenzene	794	196	Composite
Hexachlorobenzene	794	196	Composite
1,2-Dichloroethane	574	180	Grab
1,1,1-Trichloroethane	59	22	Grab
Hexachloroethane	794	196	Composite
1,1-Dichloroethane	59	22	Grab
1,1,2-Trichloroethane	127	32	Grab
Chloroethane	295	110	Grab
Chloroform	325	111	Grab
1,2-Dichlorobenzene	794	196	Composite
1,3-Dichlorobenzene	380	142	Composite
1,4-Dichlorobenzene	380	142	Composite
1,1-Dichloroethylene	60	22	Grab
1,2-Trans-Dichloroethylene	66	25	Grab
1,2-Dichloropropane	794	196	Grab
1,3-Dichloropropylene	794	196	Grab
Ethylbenzene	380	142	Grab
Methylene Chloride	170	36	Grab
Methyl Chloride	295	110	Grab
Hexachlorobutadiene	380	142	Composite
Nitrobenzene	6402	2237	Composite
2-Nitrophenol	231	65	Composite
4-Nitrophenol	576	162	Composite
4,6-Dinitro-O-Cresol	277	78	Composite
Tetrachloroethylene	164	52	Grab
Toluene	74	28	Grab
Trichloroethylene	69	26	Grab
Vinyl Chloride	172	97	Grab
Total Cyanide	1200	420	Grab
Total Lead	690	320	Composite
Total Zinc	2610	1050	Composite

D. MONITORING AND REPORTING

1. USER CHARGE

Monitoring results obtained during the previous 3 months shall be report Discharge Monitoring Report Form MR-2. Reports are due January 21 21, July 21, October 21. The first report is due on (*) Industrial user fails to submit Form MR-2 on a timely basis, the Ex Director shall estimate the use for the period. The estimates may be days after the due date of the report, except for the fourth quarter w estimates may be made after October 21.

2. PRETREATMENT

Monitoring results shall be reported on Discharge Monitoring Rep MR-1 Semi-Annually. Reports are due January 21 and July 21.

3. REPORTS

Properly signed reports required herein shall be submitted to P following address:

PASSAIC VALLEY SEWERAGE COMMISSIONERS
INDUSTRIAL WASTE CONTROL DEPARTMENT
600 Wilson Avenue
Newark, NJ 07105

4. TEST PROCEDURES

Samples and measurements taken as required herein shall be re the volume and nature of the monitored discharge. Test prc analysis of pollutants shall conform to regulations contained in and Regulations, Federal, State and local laws or regulations.

5. RECORDING OF RESULTS

For each measurement of a sample taken pursuant to the re permit, the permittee shall maintain a record of the followin

a. The date, exact place and time of sampling;
b. The dates the analyses were performed;
c. The person (s) who performed the analysis;
d. The analytical techniques or methods used;
e. The results of all required analyses.

* Permittee has been required to submit Monit

07/15/81.

F. MANAGEMENT RESPONSIBILITIES

1. RIGHT OF ENTRY

The permittee shall allow the authorized representatives of PVSC, upon presentation of credentials:

a. To enter upon the permittee's premises where an effluent sour located or in which any records are required to be kept under the t and conditions of this permit; and

b. At reasonable times to have access to and copy any records requi be kept under the terms and conditions of this permit; to inspe monitoring equipment or monitoring methods required in this perm to sample any discharge of pollutants.

2. TRANSFER OF OWNERSHIP OR CONTROL

In the event of any change in control or ownership of facilities from w authorized discharges emanate, the permittee shall, in writing, nc succeeding owner or controller of the existence of this permit, and th apply for a new permit, a copy of which shall be forwarded to PVSC.

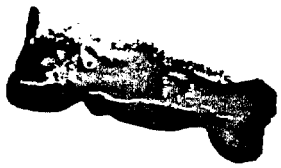
3. PERMIT MODIFICATION

After notice and opportunity for a hearing, this permit may be m revoked in whole or in part during its terms for cause including, but to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disc relevant facts; or

c. A change in any condition that requires either a temporary reduction or elimination of the authorized discharge.



The volume of each sample shall be proportional to the discharge flow rate unless specifically modified by PVSC. For a 24 hour continuous discharge, a minimum of 24 individual samples shall be collected at equal intervals and at least once per hour. For continuous discharges of less than 12 hours, individual samples shall be taken at least once every 30 minutes. For discharges which are not continuous, individual samples shall be taken such that they will be representative of plant waste.

g. "Grab" - an individual sample collected in less than 15 minutes.

h. "Quarterly" - every three (3) months.

i. "N/A" - not applicable.

MANAGEMENT REQUIREMENTS

1. CHANGE IN DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or modification which will result in new, different, or increased discharges of pollutants must be reported by submission of a new PVSC Sewer Connection Application or, if such changes will not violate the effluent limitations specified in this permit, by notices to PVSC of such changes. Following such notices, the permit may be modified to specify and limit any pollutants not previously limited.

2. NONCOMPLIANCE NOTIFICATION

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall notify PVSC within 24 hours of the occurrence.

68. Please state when you began performing the daily inspections referenced in paragraph D of your hearing request.

69. Please attach a copy of your log book (if any) of daily inspection for the year 1990, prior to June 14, 1990.

70. Please state specifically and completely what you were looking for and what you were inspecting during your daily inspections, and the number of inspections per day.

71. Please state the average daily elapsed time of your daily inspections.

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72. Please state all facts supporting your contention, in paragraph D of your hearing request, that the information referenced in answer to the four preceding questions was sufficient to comply with the contingency plan requirements set forth in N.J.A.C. 7:26-9.7(g).

73. Please state the width of all the emergency equipment referenced in the contingency plan in effect on June 14, 1990.

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74. Identify and attach to your answers to these Interrogatories all documents known to you which support, refer or relate to your answers to each of the preceding questions (if not already identified and attached).

75. If you are a corporation, partnership, or other such legal person, please state:

(a) your primary business address;

(b) the date and state of incorporation or formation;

(c) if you are a corporation, your corporate type and status(e.g., domestic profit or non-profit, and e.g., active) and corporate officers;

(d) if you are not a corporation, please specify your organizational type, e.g., partnership;

(e) the incorporator's name and address, or, if not a corporation, the names and addresses of the members of your organization;

(f) your registered agent, and his or her address;

(g) any and all names you are trading under; and

(h) if you are a subsidiary or other sub-entity of another legal person and, if so, please identify same.

76. Do you contend that other persons apart from you are responsible for the allegations found in the AO/NOCAPA? If so,

(a) identify those persons;

(b) state with specificity all facts and expert opinions upon which your contention is based; and

(c) Identify and provide copies of all documents which support your contention.

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77. Identify each and every person providing information used to answer these interrogatories and state which interrogatories he or she assisted in answering.

78. In preparing the answers to these interrogatories, have you inquired of all persons within your control who have, or might have, information to answer them? If your answer is "no," please state the names and addresses and capacities of the persons not so consulted, and, as to each, state the reason(s) why the person was not consulted.

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79. State whether, prior to answering these interrogatories, you made a diligent search for documents with a view toward listing all the information available to answer the interrogatories and providing all information available to respond to the requests for documents, and also identify all persons who participated in such a search.

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CERTIFICATION

I hereby certify that the foregoing statements made by me are true; that the copies of the reports annexed hereto rendered by proposed expert witnesses are exact copies of the entire report or reports rendered by them; and that the existence of other reports of said experts, either written or oral, are unknown to me. I further certify that these interrogatories shall be deemed continuing and that any responsive information becoming known to me subsequent to the filing of answers hereto shall be supplied by supplemental answers, together with the existence of any experts' reports later discovered or becoming available.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

I certify that I am authorized to execute these answers on behalf of Elan Chemical Co., Inc. and also to bind said party.

DATED: _____

DATED: _____

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STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
SITE REMEDIATION PROGRAM

MEMORANDUM OF AGREEMENT

The purpose of this application is to solicit a Memorandum of Agreement (MOA) from the New Jersey Department of Environmental Protection and Energy. The MOA will allow the Department to provide the applicant with oversight of remedial activities or site assessments.

PLEASE TYPE OR PRINT

DATE July 27, 1992

A. Select the appropriate activity below for which the applicant is requesting a MOA

Site Assessment Activities_____

Remedial Activities ___X___

B. Property Use: Residential_____ Agricultural_____
Industrial __X__ Undeveloped _____
Commercial _____ Other_____

Explain:_____

C. Please answer all the following site specific questions completely and accurately. Attach separate paper if necessary and refer to corresponding numbers below. Please type or print all information clearly.

1. Who is requesting this MOA?
Name David Weisman, President
Affiliation Elan Chemical Co., Inc.
Address 268 Doremus Avenue
City/Town Newark
State New Jersey Zip Code 07105
State of Incorporation New Jersey Corp. status active

2. Select which phase(s) of the remediation process are to be performed pursuant to the MOA being requested.

[ ] PA/SI
[ ] RI Work Plan
[ ] RI Report
[ ] FS Work Plan
[ ] FS Report
[ ] Remedial Design Workplan
[ ] Remedial Design Report
[ ] Operational/Maint. Work Plan
[X] other Recommendations set forth in Sampling Results Report prepared by EWMA dated April 1, 199, a copy of which is enclosed.

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3. At what site is the applicant interested in conducting remedial activities?

Name Elan Chemical Co., Inc.
Address 268 Doremus Avenue
Block(s) 5014 Lot(s) 8 & 8A
Latitude _____ Longitude _____
Municipality Newark County Essex
State New Jersey Zip Code 07105

4. Who is the current owner(s) of the site? (answer if different from C.1.)

Name Elan Chemical Co., Inc.
Address _____
City/Town _____
State _____ Zip Code _____
Phone (201) 344-8014

5. Who will be the contact for all matters of this application? (* answer if different than C.1.)

Name Lee Henig-Elona Title Esq.
* Affiliation Clapp & Eisenberg, P.C.
* Address One Newark Center
* City/Town Newark
* State New Jersey Zip Code 07102
Phone (201) 642-5958

6. What were the past operations at the site?

N/A

7. What are the current operations at the site?

Manufacturing of specialty organic chemicals for flavors and perfumery.

8. What are the intended future uses of the site?

Same as current operations.

9. Are there currently, or have there ever been any hazardous substances as defined by N.J.A.C. 7:1E-1 et seq. and/or hazardous wastes as defined by N.J.A.C. 7:26-8 et seq., used, generated, treated, stored, disposed or discharged at the site?

Yes X No _____

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10. Are there currently, or have there ever been, any above or below ground storage tanks at the site?

Yes X No

11. Describe briefly the major types of contaminants found at the site and what media they affect.

Limited soil contamination exists in the area of the property previously used for drum storage. Chromium, probably associated with the fill underlying the property, is present in elevated concentrations both on-site and off-site. See Sampling Result Report.

12. Describe in detail how the contamination came to exist at the site. For example, were there past spills, landfill operations, industrial septic systems, USTs, deposition of fill material, etc.?

See prior answer.

13. List any civil/criminal actions taken against the owner/operator, managers or officials associated with the site for violations of any environmental laws or statutes.

Check here if no violations or alleged violation [ ]
Date of action April 17, 1992
Section of law or statute violated miscellaneous hazardous waste regulations
Type of enforcement action Administrative Order and Notice of Civil Administrative Penalty Assessment
Description of the violation See enclosed AO & NOCAPA

How was the violation or alleged violation resolved?
Alleged violations cured; penalty assessment is now being contested before the Office of Administrative Law.

14. List all permits currently held by the applicant for the site. (NJPDES, RCRA, etc.)

Passaic Valley Sewerage Authority - discharge of pretreated effluent to sewer.
Certificates to Operate Control Apparatus (air).

15. Was a Deed search ever conducted?

Yes No X For what period of time?

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16. Provide the information requested below on the previous owners of the site and the entities who operated at the site.

Name	Owner or Operator	From	To
N/A			

17. Give a brief discussion of all former operations at the site, including but not limited to types of operations, materials used, waste generated, and waste disposal techniques.

N/A

#43866

847521292

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

IN THE MATTER OF	:	
THE ELAN CHEMICAL SITE	:	MEMORANDUM
AND	:	OF
ELAN CHEMICAL CO., INC.	:	AGREEMENT

This Memorandum of Agreement is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection and Energy (hereinafter "the Department" or "NJDEPE") by N.J.S.A. 13:1D-1 et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and duly delegated to the Assistant Director, Division of Responsible Party Site Remediation pursuant to N.J.S.A. 13:1B-4.

FINDINGS

The property that is the subject of this memorandum of agreement is owned by Elan Chemical Co., Inc., and is located at 268 Doremus Avenue and is designated as Block 5014, Lot 8 & 8A on the tax maps of the City of Newark, Essex County, New Jersey (hereinafter the "Site"). The Site encompasses 1.79 acres and is bounded generally by Passaic River to the East and Doremus Ave to the West.

Elan Chemical Co., Inc. located at 268 Doremus Ave, Newark, New Jersey 07105, (hereinafter "Elan"), incorporated in the State of New Jersey, with its principal offices at 268 Doremus Ave, Newark, New Jersey is the party executing this Memorandum of Agreement.

The intent of this memorandum of agreement is to allow Elan to conduct any of the remedial activities outlined herein with oversight from the Department. Elan has indicated to the Department in its application dated July 27,1992, that it wishes to conduct the following activities at the Site with the Department's oversight:

The Department will review and comment on the sampling results and remedial proceedures set forth in the Sampling Results Report dated April 1,1992, previously submitted to the Department.

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Recycled Paper

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By entering into this memorandum of agreement, Elan does not admit to any fact, fault or liability under any statute or regulation for conditions which existed before, during, or after Elan's execution of this memorandum of agreement.

AGREEMENT

I. Remediation

Elan agrees to submit the Sampling Results Report and the Department agrees to review and comment on documents submitted.

Within thirty (30) calendar days after the Department's receipt of any submission pursuant to this memorandum of agreement, the Department will inform Elan in writing of any administrative deficiencies in the submission, pursuant to proposed N.J.A.C. 7:26E, that will prevent the Department from conducting its review. When the Department determines that the submission is administratively complete, the Department will notify Elan in writing of the timeframe required for the Department to complete the review.

Within seven (7) days after the effective date of this memorandum of agreement, Elan will submit to the Department: a) the name, address and telephone number of the individual who will be the contact for Elan regarding technical matters concerning this memorandum of agreement and b) the name and address of the designated agent for Elan for the purpose of service for all matters concerning this memorandum of agreement.

Elan may terminate this memorandum of agreement if it is determined that it is no longer feasible or desirable to continue with this memorandum of agreement, when Elan:

a. Submits full payment to the Department for any Department oversight costs the Department incurred pursuant to this memorandum of agreement which Elan has not paid;

b. Notifies the Department in writing of its intentions to terminate this memorandum of agreement;

c. Submits all data generated pursuant to this memorandum of agreement; and

d. Ensures that no environmental hazards exist at the Site as a result of Elan's actions pursuant to this memorandum of agreement.

V. General Conditions

Elan shall, in addition to any other obligation required by law, notify the Department contact immediately upon knowledge of any condition posing an immediate threat to human health and/or the environment.

Elan shall perform all work conducted pursuant to this memorandum of agreement in accordance with proposed N.J.A.C. 7:26E and prevailing professional standards.

Elan shall conform all actions required by this memorandum of agreement with all applicable federal, State and local laws and regulations.

Nothing in this memorandum of agreement shall relieve Elan from complying with all other applicable laws and regulations.

Elan shall preserve all potential evidentiary documentation found at the Site, including without limitation, documents, labels, drums, bottles, boxes or other containers, and/or other physical materials that could lead to the establishment of the identity of any person which generated, treated, transported, stored or disposed of contaminants at the Site, until written approval is received from the Department to do otherwise.

Upon receipt of a written request from the Department, Elan shall submit to the Department all data and information concerning contamination at the Site, including technical records and contractual documents, and raw sampling and monitoring data, whether or not such data and information was developed pursuant to this memorandum of agreement.

This memorandum of agreement shall be governed and interpreted under the laws of the State of New Jersey.

This memorandum of agreement shall be binding, jointly and severally, on each signatory, its successors and assignees. No change in the ownership or corporate or business status of any signatory, or of the facility or Site shall alter any signatory's responsibilities under this memorandum of agreement.

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This memorandum of agreement shall become effective upon execution hereof by all parties.

Date:_____ **NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY**

BY:_____
Signature

_____
Print Full Name Signed Above

_____
Title

Date:_____ **ELAN CHEMICAL CO., INC.**

BY:_____
Signature

DAVID R. WEISMAN
Print Full Name Signed Above

Pres
Title

847521296

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
Metro Regional Office
2 Babcock Place
West Orange, NJ 07052

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

September 16, 1992

RECEIVED
SEP 17 1992

Lee Henig-Elona, Esq.
Clapp & Eisenberg
Counsellors At Law
1 Newark Center
Newark, NJ 07102

Re: DRPSR Case #88-12-15-0731

Dear Ms. Henig-Elona:

As agreed to under the Memorandum of Agreement signed on August 27, 1992, the Department has had the opportunity to review all the sampling results submitted to this office regarding Elan Chemical. Based on these findings, this office will approve encapsulation of the entire former drum storage area with an impermeable asphalt cover, pursuant to the proposed Cleanup Standards found at N.J.A.C. 7:26D as a remedial alternative. Be advised, however, that a use restriction (i.e. deed restriction) may be required for the Elan site if the proposed Cleanup Standards are adopted substantively "as is". Please see N.J.A.C. 7:26D, Appendix A, which, under the proposed standards, requires a use restriction when the Department allows contaminants to remain above the regulatory level. The use restriction is not required at this time, however, Elan may wish to proceed voluntarily with implementation of same. In addition, although capping may be an acceptable remedial alternative for this office, it may not be so for other Departmental programs (i.e. ECRA) and should be taken into consideration. Furthermore, as environmental investigations at the site have not demonstrated that ground water has not been impacted by soil contamination, it is recommended that a ground water study be performed. This, however, is not a requirement at this time, but could be in the future.

Please contact this office at 201-669-3960 two weeks prior to the encapsulation of Elan's property so that I can be present if necessary.

Sincerely,

Jodie M. Stein
Senior Environmental Specialist

847521297

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW

AMENDED PREHEARING ORDER
OAL DKT. NO. EHW 4406-92
AGENCY DKT. NO. HM-041-90

DIVISION OF HAZARDOUS WASTE MANAGEMENT, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY,
Petitioner,
v.
ELAN CHEMICAL COMPANY, INC.,
Respondent.

Pursuant to *N.J.A.C.* 1:1-13.1 *et seq.*, a telephone prehearing conference was held in the above-entitled matter on July 22, 1992, and the following procedures were settled:

BEFORE **EDITH KLINGER**, ALJ:

1. NATURE OF THE PROCEEDINGS AND ISSUES TO BE RESOLVED:

   A. Nature of proceedings

   Respondent, Elan Chemical Company, Inc. (Elan), appeals from an Administrative Order and Notice of Civil Administrative Penalty Assessment issued by the New Jersey Department of Environmental Protection and Energy (DEPE) alleging that it violated the Solid Waste Management Act (SWMA), *N.J.S.A.* 13:1E-1 *et seq.*, and the regulations promulgated thereunder.

   B. Issues to be resolved

   1. Do the materials which are the subject of the Administrative Order constitute "solid waste" within the meaning of the SWMA?

   2. If so, are the materials "hazardous"?

   3. Were the violations committed as alleged in the Administrative Order of April 17, 1991?

      (a) Are these violations ongoing?

   4. If so, what penalty, if any, is appropriate?

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2. PARTIES AND THEIR DESIGNATED ATTORNEYS OR REPRESENTATIVES:

For petitioner, DEPE:

David Restaino, Esq.
Deputy Attorney General
Division of Law - CN 112
Trenton, NJ 08625
(609) 984-7243

For respondent, Elan Chemical:

Lee Henig-Elona, Esq.
Clapp & Eisenberg
One Newark Center
Newark, NJ 07102
(201) 642-5958

3. SPECIAL LEGAL REQUIREMENTS AS TO NOTICE OF HEARING:

None.

4. SCHEDULE OF HEARING DATES, TIME AND PLACE:

The hearing will take place at 9:00 a.m. on February 1, 2, 3, and 4, 1993 at the Office of Administrative Law, 185 Washington Street, Newark, NJ 07102.

No adjournments will be granted except in strict accordance with the requirements of *N.J.A.C.* 1:1-9.6.

5. STIPULATIONS:

The parties shall file a joint stipulation of facts with the undersigned prior to the hearing. The stipulation will contain a recitation of all facts which are not the subject of dispute. The parties will submit with the stipulation any documentary evidence which would be admitted either by consent or without objection.

6. SETTLEMENT:

If settlement is reached prior to the hearing, immediate notice should be forwarded to the undersigned, followed by a stipulation of settlement or agreement signed by all parties and containing the terms of settlement to be included in an Initial Decision.

7. AMENDMENTS TO PLEADINGS:

None.

8. DISCOVERY AND DATE FOR COMPLETION:

Initial interrogatories will be served by the parties by August 31, 1992. Answers will be provided 30 days from receipt of the interrogatories. All discovery will be completed by January 18, 1993.

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9. ORDER OF PROOFS:

The burden of proof as to Issues 1 and 2 are on respondent, as are any claims of entitlement to exemption from the SWMA. Otherwise, the burden of proof is on petitioner. Petitioner shall proceed first in the order of proof unless otherwise directed by the undersigned.

10. &11. EXHIBITS MARKED FOR IDENTIFICATION AND IN EVIDENCE:

No exhibit will be marked for identification or introduced into evidence at the hearing unless a copy is provided to the undersigned and a copy is provided for each party. This requirement will be strictly enforced unless impracticable.

12. ESTIMATED NUMBER OF FACT AND EXPERT WITNESSES:

There is no limit on the number of witnesses, but the parties are advised to eliminate repetitive and cumulative testimony. It is requested that, wherever, possible, facts be stipulated to eliminate the need for unnecessary testimony.

13. MOTIONS:

None

14. OTHER SPECIAL MATTERS:

None.

This Order may be reviewed by the **Department of Environmental Protection and Energy** either upon interlocutory review pursuant to *N.J.A.C.* 1:1-14.10 or at the end of the contested case pursuant to *N.J.A.C.* 1:1-18.6.

October 30, 1992
DATE

EDITH KLINGER, ALJ

md

847521300

State of New Jersey

OFFICE OF ADMINISTRATIVE LAW

185 WASHINGTON ST.

NEWARK, NEW JERSEY 07102

(201) 648-7143

OAL DOCKET NO.: EHW 04406-92 N

AGENCY REF. NO.: HM-041-90

TRANSMITTING AGENCY:
HAZARDOUS WASTE MANAGEMENT

JUDGE: KLINGER, EDITH

RECEIVED
DEC 10 1992

ELAN CHEMICAL COMPANY, INC. VS

NOTICE OF PLENARY HEARING

NJDEPE/OFFICE OF ENFORCEMENT POLICY

NATURE OF PROCEEDING:
APPEAL OF A NOTICE OF CIVIL ADMINISTRATIVE PENALTY ASSESSMENT.

THE HEARING IN THIS CASE WILL BE HELD ON:
FEB 1, 2, 3, 4 1993 9:00 AM

OFFICE OF ADMINISTRATIVE LAW
185 WASHINGTON ST.
(ENTRANCE ON RAYMOND BLVD.)
NEWARK, N.J. 07102

A JUDGE WILL DECIDE THE CASE BASED ON ONLY WHAT IS PRESENTED AT THE HEARING. IF THERE ARE ANY PAPERS THAT YOU WOULD LIKE THE JUDGE TO CONSIDER, YOU MUST HAVE THEM AT THE HEARING. PLEASE BRING TWO COPIES OF EACH PAPER. IF YOU WANT ANY WITNESSES TO TESTIFY, YOU MUST ARRANGE FOR THEIR ATTENDANCE AT THE HEARING. IF YOU ARE NOT SURE THAT THEY WILL ATTEND THE HEARING, YOU SHOULD SERVE THEM WITH A SUBPOENA TOGETHER WITH THE APPROPRIATE FEE AT A REASONABLE TIME BEFORE THE HEARING. IF POSSIBLE THREE DAYS BEFORE THE HEARING. IF YOU NEED TO OBTAIN BLANK SUBPOENAS, CALL (201) 648-4000 IMMEDIATELY.

UNLESS PERMITTED BY THE JUDGE, BRIEFS OR OTHER WRITTEN ARGUMENT MAY NOT BE SUBMITTED AFTER THE HEARING. IF YOU WISH TO OFFER ANY SUBMISSION, YOU SHOULD BE PREPARED TO DO SO AT THE HEARING WITH THE FINAL ARGUMENT.

IF YOU DO NOT ATTEND THE HEARING, THE JUDGE MAY DISMISS YOUR CASE OR ORDER THAT THE ACTION REQUESTED BY THE OTHER PARTY BE GRANTED.

THE RULES FOR THE CONDUCT OF PLENARY HEARING ARE SET FORTH IN N.J.A.C. 1:1-1 ET SEQ., IN PARTICULAR N.J.A.C. 1:1-14.1 ET SEQ.

DATE DEC 9 1992

WILLIAM SPEZIALE
DEPUTY CLERK

847521301

847521302

State of New Jersey

ROBERT J. DEL TUFO
ATTORNEY GENERAL

DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
CN 093
TRENTON 08625

EDWARD J. DAUBER
ASSISTANT ATTORNEY GENERAL
DIRECTOR

(609) 984-7243

January 26, 1993

The Honorable Edith Klinger
Administrative Law Judge
Office of Administrative Law
185 Washington Street
Newark, New Jersey 07102

Re: NJDEPE v. Elan Chemical Co., Inc.
OAL Docket No. EHW 4406-92-N
Agency Ref. No. HM-041-90

Dear Judge Klinger:

Please be advised that the parties have reached a settlement of the above-captioned matter, which was scheduled for an administrative hearing on February 1, 2, 3 and 4, 1993. The terms of the settlement document are being discussed, and a final settlement document will be forwarded in the near future.

Thank you for your courtesy.

Respectfully submitted,

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY

By: David Restaino
David Restaino
Deputy Attorney General

Enclosure
c.: Lee Henig-Elona, Esquire
Clapp & Eisenberg
One Newark Center
Newark, NJ 07102

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JAN 28 '93 14:46 DIV OF LAW ENV PRO SEC CN112

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
RICHARD J. HUGHES JUSTICE COMPLEX
CN 093
TRENTON 08625

ROBERT J. DEL TUFO
ATTORNEY GENERAL

JACK M. SABATINO
[redacted]R
ASSISTANT ATTORNEY GENERAL
DIRECTOR

(609)984-7243

MAR 16 1993

March 9, 1993

The Honorable Edith Klinger
Administrative Law Judge
Office of Administrative Law
185 Washington St.
Newark, NJ 07102

Re: DEPE v. Elan Chemical Co., Inc.
OAL Docket No. EHW 4406-92-N
Agency Ref. No. HM-041-90

Dear Judge Klinger:

Enclosed please find a fully executed Stipulation of Settlement and Withdrawal of Hearing Request resolving the above captioned matter.

Thank you for your courtesy.

Respectfully submitted,

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY

By: _____
David Restaino
Deputy Attorney General

dr.mj
enc.
c.: Mark L. Manewitz, Esq. (w/invoices) ✓
Jeffrey Sterling, DEPE-MBRE

847521303

ROBERT J. DEL TUFO
Attorney General of New Jersey
Attorney for New Jersey, Department
of Environmental Protection and Energy
R.J. Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

By: David Restaino
Deputy Attorney General
(609) 984-7243

OFFICE OF ADMINISTRATIVE LAW
OAL DOCKET NO. EHW 4406-92-N
AGENCY REF. NO. HM-041-90

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY, Petitioner, v. ELAN CHEMICAL CO., INC., Respondent.	Administrative Action STIPULATION OF SETTLEMENT AND WITHDRAWAL OF HEARING REQUEST

1. On April 17, 1991 the Department of Environmental Protection and Energy ("DEPE")* issued an Administrative Order and Notice of Civil Administrative Penalty Assessment ("the AO/NOCAPA")

* At the time of the issuance, DEPE was the Department of Environmental Protection.

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to Elan Chemical Co., Inc. ("Elan Chemical"), located at 268 Doremus Avenue, in Newark, New Jersey.

2. The AO/NOCAPA bore the log number HM-041-91* and alleged a number of violations, including: the failure to determine if a solid waste was hazardous, in violation of N.J.A.C. 7:26-8.5(a); the failure to clearly mark containers with the date when the accumulation period began, in violation of N.J.A.C. 7:26-9.3(a)3; the failure to provide classroom or on-the-job training for facility personnel -- including the failure to have appropriate written descriptions of positions and training -- in violation of N.J.A.C. 7:26-9.4(g); the failure to maintain sufficient aisle space for the unobstructed movement of personnel or equipment in an emergency, in violation of N.J.A.C. 7:26-9.6(e); the failure to list emergency equipment in the contingency plan -- updated as required -- with its location, description or capabilities specified, in violation of N.J.A.C. 7:26-9.7(g); and the failure to comply with other provisions of the Solid Waste Management Act, and the supporting regulations, as specified in the AO/NOCAPA.

3. Pursuant to N.J.S.A. 13:1E-9e and N.J.A.C. 7:26-5.4, the AO/NOCAPA assessed a total penalty of $21,000 against Elan Chemical for failure to abide by the Solid Waste Management Act, N.J.S.A.

---

* The Agency Reference Number before the Office of Administrative Law was incorrectly listed as HM-041-90.

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13:1E-1 et seq. and the regulations promulgated thereunder, N.J.A.C. 7:26-1.1 et seq.

4. Elan Chemical timely requested a hearing before the Office of Administrative Law regarding the AO/NOCAPA. The matter was forwarded to the Office of Administrative Law for hearing.

5. The parties are desirous of adjusting their differences and have agreed to the form and content of this Stipulation of Settlement, which sets forth the disposition of this matter.

NOW, THEREFORE, IT IS STIPULATED AND AGREED THAT:

1. In full settlement of the matter described in the AO/NOCAPA, Elan Chemical shall pay to DEPE a penalty in the amount of $16,000 in three equal payments of $5,333.33. The first payment shall be made within 30 calendar days of execution this Stipulation by the parties. The two remaining payments shall be made at one calendar month intervals thereafter. Should the first payment fail to be made within the above 30 calendar day period, or the remaining payments at the one calendar month intervals, the full remaining amount shall become immediately due and payable and shall be collectable by DEPE with costs and interest (calculated pursuant to N.J. Court Rule 4:42). Moreover, this settlement shall be enforceable by an action filed in the Superior Court. Payment shall

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be made by certified check payable to "Treasurer, State Of New Jersey," and shall be sent with the appropriate invoice(s) to the Bureau of Revenue at the address stated on the invoice(s), with a copy to the undersigned Deputy Attorney General. DEPE will provide Elan Chemical with the appropriate invoice(s).

2. Elan Chemical agrees to withdraw its request for an administrative hearing before the Office of Administrative Law regarding the AO/NOCAPA.

3. Nothing paid pursuant to this Stipulation of Settlement is intended to constitute a debt, damage claim, penalty or other action which could be limited or discharged in a bankruptcy proceeding, as it is entered into pursuant to the police powers of DEPE and the State of New Jersey for the enforcement of the law and the protection of the public heath, safety and welfare.

4. Elan Chemical hereby consents to and agrees to comply with all terms and provisions of this Stipulation of Settlement which shall be fully enforceable in the Superior Court of New Jersey. All obligations imposed by this Stipulation of Settlement shall constitute continuing regulatory obligations pursuant to the police power of DEPE and the State of New Jersey intended to prevent adverse effects on man or the environment.

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5. This settlement relates only to those allegations set forth in the April 17, 1991 AO/NOCAPA, and is not a settlement of any additional administrative or judicial actions arising from other alleged conduct. Nothing in this Stipulation of Settlement shall constitute a waiver of any statutory or regulatory rights of DEPE pertaining to any of the laws of the State of New Jersey. Nor is DEPE barred or precluded from bringing any other enforcement or penalty assessment action that it may deem appropriate which it is entitled to bring under the laws of the State of New Jersey.

6. Elan Chemical makes no admission of liability concerning the allegations contained in the AO/NOCAPA.

7. Signator on behalf of Elan Chemical represents that he/she has full authority to so sign on behalf of Elan Chemical.

ELAN CHEMICAL CO., INC.

DATED:

By:

Mark L. Manewitz, Esquire
Clapp & Eisenberg
A Professional Corporation
Attorneys for Elan Chemical Co., Inc.

847521308

ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY
Attorney for DEPE

By: David Restaino
David Restaino
Deputy Attorney General

DATED: 3-9-93

elan.sos

847521309

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW
185 WASHINGTON STREET
NEWARK NJ 07102
(201) 648 6006

A copy of the administrative law judge's decision is enclosed.

This decision was mailed to the parties on APR 02 1993.

847521310

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW

DECISION APPROVING SETTLEMENT
OAL DKT. NO. EHW 4406-92
AGENCY DKT. NO. HWM-91-0076

DIVISION OF HAZARDOUS WASTE MANAGEMENT, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY,
Petitioner,
v.
ELAN CHEMICAL COMPANY, INC.,
Respondent.

David Restaino, Deputy Attorney General, for petitioner (Robert J. Del Tufo, Attorney General of New Jersey, attorney)

Lee Henig-Elona, Esq., for respondent (Clapp & Eisenberg,attorneys)

Record Closed: March 17, 1993 Decided: March 29, 1993

BEFORE **EDITH KLINGER**, ALJ:

This matter was transmitted to the Office of Administrative Law on June 15, 1992 for determination as a contested case pursuant to *N.J.S.A.* 52:14B-1 to -15 and *N.J.S.A.* 52:14F-1 to -13. The matter was set down for hearing on February 1, 2, 3, and 4, 1993 at the Office of Administrative Law in Newark, New Jersey.

Prior to the hearing date, this matter was settled. On March 17, 1993, the parties submitted the attached Stipulation of Settlement and Withdrawal of Hearing Request indicating the terms of agreement which are fully incorporated herein.

I have reviewed the record and the terms of settlement, and I **FIND**:

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1. The parties have voluntarily agreed to the settlement as evidenced by their signatures.

2. The settlement fully disposes of all issues in controversy and is consistent with law.

I **CONCLUDE** that this agreement meets the requirements of *N.J.A.C.* 1:1-19.1. Accordingly, I approve the settlement and **ORDER** that the parties comply with the terms of settlement and that these proceedings be concluded.

Since the agency head has consented to the terms of settlement, this decision is deemed the final decision. *N.J.A.C.* 1:1-19.1(b)2.

April 21 1993
Date

EDITH KLINGER, ALJ

md/e

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MAR 17 10 52 AM '93

ROBERT J. DEL TUFO
Attorney General of New Jersey
Attorney for New Jersey, Department
of Environmental Protection and Energy
R.J. Hughes Justice Complex
CN 093
Trenton, New Jersey 08625

By: David Restaino
Deputy Attorney General
(609) 984-7243

OFFICE OF ADMINISTRATIVE LAW
OAL DOCKET NO. EHW 4406-92-N
AGENCY REF. NO. HM-041-90

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY, Petitioner, v. ELAN CHEMICAL CO., INC., Respondent.	Administrative Action STIPULATION OF SETTLEMENT AND WITHDRAWAL OF HEARING REQUEST

1. On April 17, 1991 the Department of Environmental Protection and Energy ("DEPE")* issued an Administrative Order and Notice of Civil Administrative Penalty Assessment ("the AO/NOCAPA")

* At the time of the issuance, DEPE was the Department of Environmental Protection.

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to Elan Chemical Co., Inc. ("Elan Chemical"), located at 268 Doremus Avenue, in Newark, New Jersey.

2. The AO/NOCAPA bore the log number HM-041-91* and alleged a number of violations, including: the failure to determine if a solid waste was hazardous, in violation of N.J.A.C. 7:26-8.5(a); the failure to clearly mark containers with the date when the accumulation period began, in violation of N.J.A.C. 7:26-9.3(a)3; the failure to provide classroom or on-the-job training for facility personnel -- including the failure to have appropriate written descriptions of positions and training -- in violation of N.J.A.C. 7:26-9.4(g); the failure to maintain sufficient aisle space for the unobstructed movement of personnel or equipment in an emergency, in violation of N.J.A.C. 7:26-9.6(e); the failure to list emergency equipment in the contingency plan -- updated as required -- with its location, description or capabilities specified, in violation of N.J.A.C. 7:26-9.7(g); and the failure to comply with other provisions of the Solid Waste Management Act, and the supporting regulations, as specified in the AO/NOCAPA.

3. Pursuant to N.J.S.A. 13:1E-9e and N.J.A.C. 7:26-5.4, the AO/NOCAPA assessed a total penalty of $21,000 against Elan Chemical for failure to abide by the Solid Waste Management Act, N.J.S.A.

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* The Agency Reference Number before the Office of Administrative Law was incorrectly listed as HM-041-90.

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13:1E-1 et seq. and the regulations promulgated thereunder, N.J.A.C. 7:26-1.1 et seq.

4. Elan Chemical timely requested a hearing before the Office of Administrative Law regarding the AO/NOCAPA. The matter was forwarded to the Office of Administrative Law for hearing.

5. The parties are desirous of adjusting their differences and have agreed to the form and content of this Stipulation of Settlement, which sets forth the disposition of this matter.

NOW, THEREFORE, IT IS STIPULATED AND AGREED THAT:

1. In full settlement of the matter described in the AO/NOCAPA, Elan Chemical shall pay to DEPE a penalty in the amount of $16,000 in three equal payments of $5,333.33. The first payment shall be made within 30 calendar days of execution this Stipulation by the parties. The two remaining payments shall be made at one calendar month intervals thereafter. Should the first payment fail to be made within the above 30 calendar day period, or the remaining payments at the one calendar month intervals, the full remaining amount shall become immediately due and payable and shall be collectable by DEPE with costs and interest (calculated pursuant to N.J. Court Rule 4:42). Moreover, this settlement shall be enforceable by an action filed in the Superior Court. Payment shall

be made by certified check payable to "Treasurer, State Of New Jersey," and shall be sent with the appropriate invoice(s) to the Bureau of Revenue at the address stated on the invoice(s), with a copy to the undersigned Deputy Attorney General. DEPE will provide Elan Chemical with the appropriate invoice(s).

2. Elan Chemical agrees to withdraw its request for an administrative hearing before the Office of Administrative Law regarding the AO/NOCAPA.

3. Nothing paid pursuant to this Stipulation of Settlement is intended to constitute a debt, damage claim, penalty or other action which could be limited or discharged in a bankruptcy proceeding, as it is entered into pursuant to the police powers of DEPE and the State of New Jersey for the enforcement of the law and the protection of the public heath, safety and welfare.

4. Elan Chemical hereby consents to and agrees to comply with all terms and provisions of this Stipulation of Settlement which shall be fully enforceable in the Superior Court of New Jersey. All obligations imposed by this Stipulation of Settlement shall constitute continuing regulatory obligations pursuant to the police power of DEPE and the State of New Jersey intended to prevent adverse effects on man or the environment.

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5. This settlement relates only to those allegations set forth in the April 17, 1991 AO/NOCAPA, and is not a settlement of any additional administrative or judicial actions arising from other alleged conduct. Nothing in this Stipulation of Settlement shall constitute a waiver of any statutory or regulatory rights of DEPE pertaining to any of the laws of the State of New Jersey. Nor is DEPE barred or precluded from bringing any other enforcement or penalty assessment action that it may deem appropriate which it is entitled to bring under the laws of the State of New Jersey.

6. Elan Chemical makes no admission of liability concerning the allegations contained in the AO/NOCAPA.

7. Signator on behalf of Elan Chemical represents that he/she has full authority to so sign on behalf of Elan Chemical.

ELAN CHEMICAL CO., INC.

DATED:

By: _____
Mark L. Manewitz, Esquire
Clapp & Eisenberg
A Professional Corporation
Attorneys for Elan Chemical Co., Inc.

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ROBERT J. DEL TUFO
ATTORNEY GENERAL OF NEW JERSEY
Attorney for DEPE

By: _____
David Restaino
Deputy Attorney General

DATED: 3-4-93

elan.sos

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QUESTION 12

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APPENDIX 12

PLEASE REFER TO APPENDIX 7 FOR A COPY OF ELAN'S MANIFESTS.

QUESTION 13

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ENVIRONMENTAL WASTE
MANAGEMENT ASSOCIATES

CORPORATE
HEADQUARTERS:
1235A Route 23 South
P.O. Box 648
Wayne, New Jersey 07474
Phone: 201/633-7900
Fax: 201/633-7482

Certified Mail# P-054-184-620

September 10, 1992

Al Roque
Elan Chemical
268 Doremus Avenue
Newark, New Jersey
EWMA Case #91025

Dear Mr. Roque:

Enclosed please find the sampling results report for the July 30, 1992 sampling event. Should you have any questions, please contact me at our Wayne office.

Sincerely,

Environmental Waste Management Associates, Inc.
Dan Hartmann, Environmental Specialist

cc: Chris Langewisch, Project Manager, EWMA

MIDATLANTIC
REGION:
Skillman, NJ
Phone: 609/683-7600
Fax: 609/683-1556

WESTERN REGION:
Englewood, CO
Phone: 303/843-9700
Fax: 303/843-9094

RECYCLED

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SAMPLING RESULTS REPORT

September 8, 1992

ELAN CHEMICAL CORP.
268 DOREMUS AVE
NEWARK, NEW JERSEY
EWMA CASE #91025

Prepared By:
Environmental Waste Management Associates, Inc.
1235A Route 23, P.O. Box 648
Wayne, New Jersey 07474

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INTRODUCTION:

Environmental Waste Management Associates (EWMA) was retained by Al Roque of the Elan Chemical Company (Elan) to collect water samples from two Bell Telephone (Bell) vaults and three points along the sanitary/storm sewer pipeline. Samples collected were to be analyzed for volatile organic compounds via EPA Method 624+15. The purpose of the investigation was to identify and quantify potential contamination suspected in the Bell vault on the Elan property.

SCOPE OF WORK:

This report details observations made during sampling activities at the Elan Chemical facility, 268 Doremus Avenue, Newark, New Jersey. The sampling objective was to gather information in an attempt to locate the source of vapors which appeared to be emanating from a Bell Telephone vault on the western edge of Elan's property. The following sections of this report detail site conditions, sampling activities, field observations and analytical results at the Elan site.

SITE GEOLOGY, TOPOGRAPHY AND DRAINAGE:

The site is located within the Piedmont Physiographic Province of New Jersey. This area is comprised of a broad lowland composed of gently rounded hills with a few ridges and steeper hills rising above the plain. The altitudes within the Piedmont average 200 to 400 feet above mean sea level. Several large swamps occupy the low-lying areas of the Piedmont. Surface conditions have been modified considerably by

the Wisconsin Glaciation of the Pleistocene Age. The subject site is relatively level near Doremus Avenue, to moderately sloped to the east toward the Passaic River.

The Engineering Soil Survey of Essex County, New Jersey has classified the soils in the area of the subject site as "Made Land." According to the soil survey, the site soils consist of areas of tidal marsh that have been reclaimed for industrial development. The substantial depth of fill material required to support industrial construction is usually underlain by a somewhat compressed tidal marsh profile. This tidal marsh profile consists of a decomposed organic mat extending from two to possibly more than five feet below the level of the overlying fill material. The mat is underlain by highly organic silts, clayey silts, and clays extending down to Brunswick shale at depths that may exceed two hundred feet. Groundwater flow at the subject site is tidal in nature.

SITE HYDROGEOLOGY:

According to the Soil Survey for Essex County, New Jersey the depth to seasonal high water table in the vicinity of the site is less than six feet below grade. In addition, groundwater flow at the site is tidal in nature due to the close proximity of the Passaic River and Newark Bay and the underlying tidal marsh. EWMA confirmed this assumption during soil boring activities of January 6, 1992.

SAMPLING ACTIVITIES:

On July 30, 1992 an EWMA representative visited the above referenced site to collect five water samples; two from subterranean telephone vaults and three from a

sanitary/storm sewer line that runs north and south along Doremus Avenue. A sample location map is included as Figure 1. Prior to sample collection the ambient air inside the vaults/manways was screened with a portable photoionization detector ("PID") for volatile organic vapors before the manhole covers were removed. All water samples were collected in accordance with the guidelines set forth in the May 1992 NJDEPE " Field Sampling Procedures Manual". Samples were sent to a New Jersey certified laboratory for volatile organics analysis plus a forward library search ("VO+15").

FINDINGS:

EWMA's field screening records and laboratory analytical information are summarized in the enclosed data summary tables. Data summary tables were broken down as follows: Table #1 is a record of EWMA's PID field screening results; Table #2 contains the summarized laboratory analytical data. The laboratory analytical data report package is contained in Appendix #2.

Laboratory analysis of groundwater collected from the manholes on July 30, 1992 indicated volatile organic compounds at concentrations in excess of the NJDEPE proposed Groundwater Cleanup Standards published in the New Jersey Register of February 3, 1992. Specifically, concentrations of Benzene, Toluene, Total Xylenes, Methylene chloride, Chlorobenzene and 1,2-Dichloroethane exceeded the proposed standards. NJDEPE cleanup standards for these compounds are as follows: Benzene, 1 parts per billion(ppb); Toluene, 1,000 ppb; Total Xylenes, 700 ppb; Methylene chloride, 30 ppb; Chlorobenzene, 5 ppb; and 1,2-Dichloroethane, 2 ppb. In addition,

the NJDEPE has also set a cleanup standard of 10,000 ppb for total organic contamination, which was exceeded by four of the five July 30, 1992 samples. Lastly, a general cleanup standard of 1,000 ppb has been set for tentatively identified compounds where no specific standards apply. Table 2 is a summarized list of analytical results and contains all applicable NJDEPE Groundwater Cleanup Standards.

Analytical results for groundwater collected from Telephone Vault 1 (TV-1) indicated six compounds at levels exceeding the proposed cleanup standards. The compounds were: Benzene at a concentration of 140 parts per billion (ppb), Toluene at 29,900 ppb, Total Xylenes at of 1,150 ppb, Methylene chloride at of 190 ppb, Chlorobenzene at 17,200 ppb and 1,2-Dichloroethane at 30,500 ppb. Additionally, Total volatile organic contaminants registered 79,670 ppb. The Total VOC's level is nearly eight times the proposed cleanup standard.

Laboratory analytical results for groundwater collected from Telephone Vault 2 (TV-2) on July 30, 1992 indicated no contamination in excess of proposed NJDEPE cleanup standards.

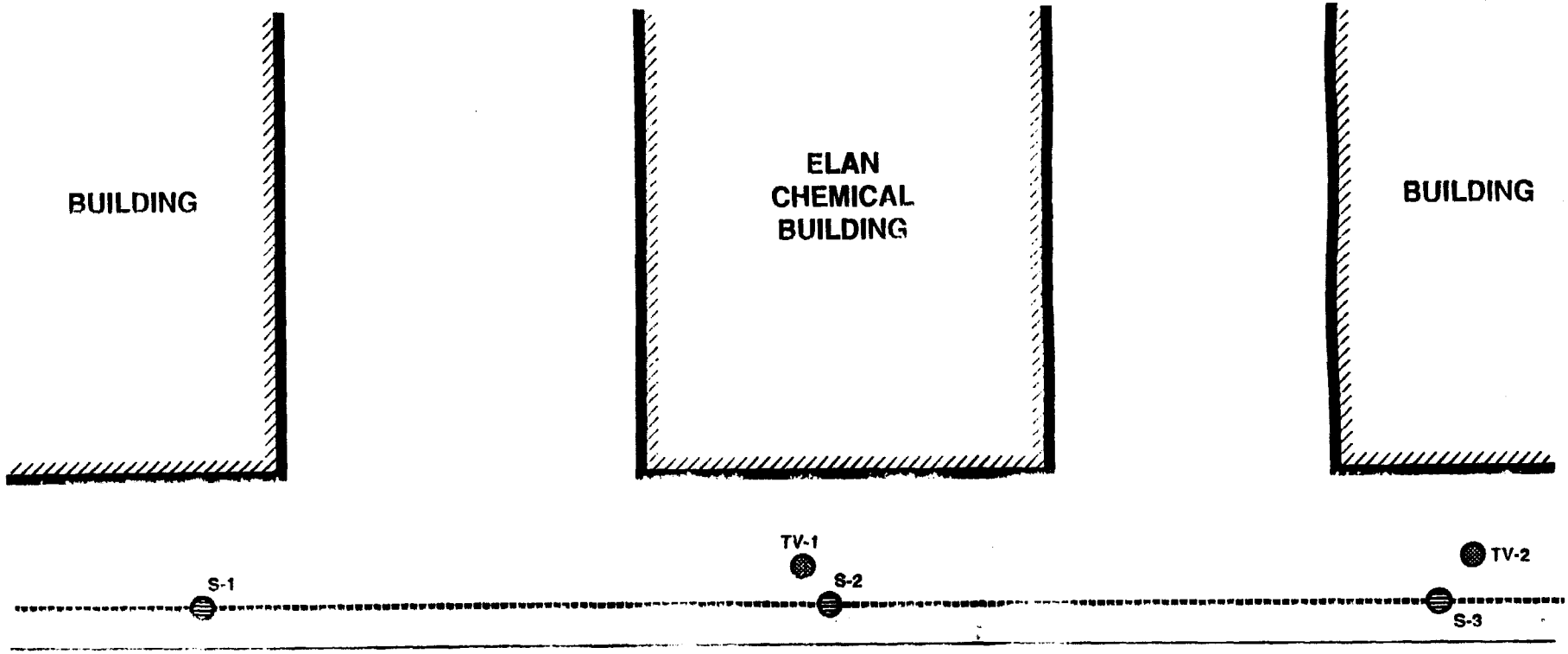
Analytical results for groundwater collected from Sewer 1 (S-1) indicated Benzene at a concentration of 173 ppb. Toluene, found at a level of 1,600 ppb and Total Xylenes at 131 ppb, both exceeded current cleanup standards. S-1 exhibited a total volatile organic contamination concentration of 20,571 ppb, a level above the 10,000 ppb limit.

Laboratory analytical results for groundwater collected from Sewer 2 (S-2) indicated three compounds in excess of their individual cleanup standards; Benzene at a level of 122 ppb, Toluene at 16,700 ppb and Total Xylenes at 131 ppb. In addition, Total volatile organic contamination of S-2 was found to be 33,996 ppb.

Laboratory analysis for groundwater collected from Sewer 3 (S-3) indicated a Total Volatile organic contamination level of 34,890 ppb. Four individual compounds were indicated at concentrations above NJDEPE cleanup standards. Results for those four compounds are as follows: Toluene, 13,900 ppb; Total Xylenes 240 ppb; Chlorobenzene 340 ppb and 1,2-Dichloroethane at 900 ppb.

FIGURE 1

SITE PLAN



LEGEND:

- STORM DRAIN
- TELEPHONE VAULT
- SEWER LINE

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES P.O.BOX 648 Wayne, N.J. 07474 Tel. (201)633-7900	SCALE: NOT TO SCALE DATE: 8/20/92 DRAWN BY: A P CHECKED BY: D H	PROJECT# 90215
SITE MAP ELAN CHEMICAL 268 DOREMUS AVENUE NEWARK, NEW JERSEY		DRAWING# 1

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TABLE 1

PHOTOIONIZATION DETECTOR RESULTS

TABLE #1
Photoionization Detector (PID) Results

ELAN CHEMICAL

LOCATION* Sample ID	PID RESULT (Parts Per Million)
Telephone Vault #1	1,821.0
Telephone Vault #2	17.6
Sewer #1	909.0
Sewer #2	564.0
Sewer #3	777.0

NOTES:

* - All PID readings taken of the ambient air inside the manways/vaults before the manhole covers were removed.

TABLE 2

SUMMARIZED LABORATORY ANALYTICAL RESULTS

Table 2: Analytical Results-July 30, 1992

Sample Number:	TV-1	TV-2	S-1	S-2	S-3	FIELD	TRIP	NJDEPE
Lab ID number:	544004	544004	544005	544006	544007	544002	352010	PROPOSED
Sample date:	7/30/92	7/30/92	7/30/92	7/30/92	7/30/92	7/30/92	5/6/92	CLEANUP
Units:	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	STANDARD
Targeted Volatile Organic Compounds:								
Benzene	140.0 J	ND	173.0	122.0	ND	ND	ND	1
Toluene	29,900.0	3.8 J	1,600.0	16,700.0	13,900.0	ND	ND	1,000
Ethylbenzene	590.0	ND	68.0	63.0 J	ND	ND	ND	700
Total Xylenes	1,150.0 J	2.0 J	131.0 J	131.0 J	240.0 J	ND	ND	40
Methyl t-butyl ether (MTBE)	ND	ND	ND	ND	ND	ND	ND	1,000
t-Butyl alcohol (TBA)	ND	ND	ND	ND	ND	ND	ND	1,000
Methylene chloride	190.0 JB	ND	ND	ND	ND	ND	ND	30
1,4- Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	70
Chlorobenzene	17,200.0	ND	ND	37.0 J	340.0 J	ND	ND	5
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	600
1,2-Dichloroethane	30,500.0	ND	ND	ND	900.0	ND	ND	2
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	600
Total Targeted Volatile Organic Compounds (VO:	79,[illegible]	5.8	1,972.0	17,055.0	15,380.0	ND	ND	–
Tentatively Identified Compounds (+15):								
Unkown	ND	ND	ND	190.0	4,620.0	ND	NA	1,000
5-Ethyl-2-methylheptane	ND	ND	ND	ND	1,930.0	ND	NA	1,000
1,3,5-Trimethylbenzene	ND	ND	176.0	142.0	ND	ND	NA	1,000
2,4,6-Trimethyldecane	ND	ND	ND	ND	2,210.0	ND	NA	1,000
2,6,7-Trimethyldecane	ND	ND	ND	ND	1,830.0	ND	NA	1,000
1-Methyl-1H-indene	ND	ND	234.0	ND	ND	ND	NA	1,000
1-Ethylidene-1H-indene	ND	ND	1,270.0	2,570.0	ND	ND	NA	1,000
Benzo[B]thiopene	ND	ND	1,390.0	1,170.0	ND	ND	NA	1,000
Napthalene	ND	ND	8,430.0	7,200.0	1,040.0	ND	NA	30
Tetradecane	ND	ND	ND	ND	1,040.0	ND	NA	1,000
1-Ethenyl-2-methylbenzene	ND	ND	2,250.0	1,760.0	ND	ND	NA	1,000
1-Ethynyl-4-methylbenzene	ND	ND	272.0	ND	ND	ND	NA	1,000
1-Butynylbenzene	ND	ND	ND	109.0	ND	ND	NA	1,000
1-Propynylbenzene	ND	ND	280.0	198.0	ND	ND	NA	1,000
5-Methylundecane	ND	ND	ND	ND	1,850.0	ND	NA	1,000
2,8-Dimethylundecane	ND	ND	ND	ND	1,630.0	ND	NA	1,000
4,7-Dimethylundecane	ND	ND	ND	ND	1,110.0	ND	NA	1,000
5-(2-Methylpropyl)nonane	ND	ND	ND	ND	2,250.0	ND	NA	1,000
7-Methylbenzofuran	ND	ND	387.0	297.0	ND	ND	NA	1,000
1-Methylnaphthalene	ND	ND	2,890.0	1,170.0	ND	ND	NA	1,000
1-(Methylphenyl)ethanone	ND	ND	ND	95.0	ND	ND	NA	1,000
4,7-Dimethylbenzofuran	ND	ND	115.0	98.0	ND	ND	NA	1,000
1,2,3,4-Tetrahydro-5-methylnaphthalene	ND	ND	ND	1,320.0	ND	ND	NA	1,000
1,2,3,5-Tetramethylbenzene	ND	ND	260.0	ND	ND	ND	NA	1,000
1-Methyl-2-(2-propenyl)benzene	ND	ND	323.0	ND	ND	ND	NA	1,000
(1-Methyl-2-cyclopropen-1-yl)benzene	ND	ND	149.0	195.0	ND	ND	NA	1,000
(1-Methyl-1-propenyl)(E) benzene	ND	ND	193.0	167.0	ND	ND	NA	1,000
1-Ethenyl-4-ethylbenzene	ND	ND	ND	262.0	ND	ND	NA	1,000
Total Tentatively Identified Compounds (+15):	ND	ND	18,599.0	16,943.0	19,510.0	ND	NA	–
Total Volatile Organic Compounds (VO+15):	79,670.0	5.8	20,571.0	33,996.0	34,890.0	ND	NA	10,000

Notes:

B - Indicates that the analyte was found in both the blank (QA/QC or field) and the sample.

J- Indicates an estimated value. The compound was detected below the minimum detection limit, but greater than zero.

NA - NOT analyzed for this Parameter.

ND - Compound not detected.

– - Total organic contamination not to exceed NJDEPE guideline of 10,000 ppb.

APPENDIX 1

EWMA QA/QC
HEALTH AND SAFETY PLAN

ENVIRONMENTAL WASTE MANAGEMENT ASSOCIATES
QUALITY ASSURANCE / QUALITY CONTROL

In order to assure the validity of the chemical test results for samples collected from the subject facility during the sampling program, the following QA/QC Program will be strictly adhered to:

QUALITY CONTROL

A. Equipment:

1. Hand turned augers, split spoon samplers and stainless steel hand trowels.
2. Disposable fiber brushes.
3. Distilled/deionized water.
4. Liquinox soap/tap water mixture.
5. Pesticide grade acetone.
6. Wide mouth, amber colored glass jars with Teflon-lined screw caps, water bottles, volatile organic vials.
7. Cooler and ice packs.
8. Labels and permanent markers.

B. Sampling Equipment Decontamination:

All soil sampling equipment will be cleaned and decontaminated by the following procedures:

1. Oil, grit, rust and soil shall be removed with the brush.
2. Liquinox soap and tap water scrub wash.
3. Tap water rinse.
4. Distilled/deionized water rinse.
5. 10% acidic solution rinse (only if sample is to be tested for metals).
6. Distilled/deionized water rinse.
7. Acetone rinse.
8. Total air dry.
9. Distilled/deionized water rinse, wrap in clean foil and tapesecurely.

All drilling equipment will be steam cleaned using a portable pressure washer prior to drilling at each sample location.

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C. Sample Collection:

1. Soil:

Samples will be retrieved using either a split spoon sampler mounted on a drilling rig or a hand turned auger, or with stainless steel hand trowels. Samples which are submitted to the laboratory for analysis will be collected in six inch increments either from the below the surface or immediately below the relevant excavation. Samples to be analyzed for volatile organic compounds will be collected from a minimum depth of eighteen to twenty-four inches from the surface; while samples for all other parameters will be collected in six inch increments beginning at a depth of zero to six inches. Should samples being analyzed for volatile organic compounds indicate presence of contamination by field inspection (HNu monitoring), additional samples may be taken to delineate vertical spread of the suspected contamination. These sample depths shall be determined by field personnel during sampling activities. Deep samples shall also be taken in six inch increments.

D. Sample Handling:

1. Soil:

Samples will be removed from the sampling equipment with sterilized and disposable wooden, polyethylene or reusable stainless steel spatulas. In no case will the soil sample come in contact with the field personnel or any foreign objects. All samples will be transferred into glassware supplied by the testing laboratory. Upon transferral to the containers, the samples will be placed into coolers packed with ice and kept chilled at four degrees Centigrade until they reach the testing laboratory.

2. Water:

All water samples will be transferred to laboratory supplied glassware. Care shall be taken to insure that no air bubbles are present in the VOA sample bottles after filling. Upon transfer to the appropriate containers, the samples will be placed into coolers packed with ice and kept chilled until they reach the testing laboratory.

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E. Chain of Custody:

Chain of custody will be initiated by the field team and maintained through sample analysis and reporting of results. Each transfer of sample custody will be recorded on the custody record, and upon transfer to the laboratory a copy will be maintained by the sampling team.

QUALITY ASSURANCE

A. Trip and Field Blanks:

Each batch of laboratory glassware shall contain a travel blank of double distilled/deionized water. A trip blank will accompany the field team, be given a sample number and returned to the laboratory for analysis in order to detect possible glassware or reagent contamination during each day of sampling. Field blanks will be generated during the soil sampling phase of the sampling program by pouring deionized/distilled water over the equipment and collecting it in a laboratory prepared bottle. At least one field blank will be generated on each day of sampling.

B. Duplicate Samples:

As a check on the reproducibility of the chemical test results, a duplicate sample may be collected from each testing area identified in the above sampling plan. The duplicate sample will be tested for all of the parameters proposed within each area of concern. Each duplicate sample will be given a unique sample number to insure that the testing laboratory is unaware of the internal check.

C. Sample Documentation:

All information pertaining to the sampling event will be recorded in ink in a bound field notebook with consecutively numbered pages. This shall include, but not be limited to date and time of sampling, weather conditions, people on site, maps of sample locations and sample numbers, listing of any significant events.

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D. Chemical Analysis:

The laboratory we have chosen to do our analyses is:
Integrated Analytical Laboratories, Inc.
150 Railroad Avenue
Paterson, New Jersey 07501

This lab is state certified by the NJDEPE,
Certification #16751.

Health and Safety Plan for Elan Chemical

Environmental Waste Management Associates:
Chain of Command:

In case of difficulties on site requiring notification of EWMA, the following are EWMA contacts listed in order of priority.

Environmental Waste Management Associates
1235A Route 23, Wayne, New Jersey 07470
(201) 633-7900

Dr. Richard S. Greenberg, President
(201) 956-0677 -home

Chris Langwisch, Project Manager
(201) 812-8699 -home

Dan Hartmann, Environmental Specialist
(201) 447-0170 -home

The chain of command for this project is as follows:

Immediate job coordination problems will be directed to the attention of the project manager or assistant project manager.

Problems relative to health and safety will be directed to the safety manager.

Job progress meetings and problems requiring corporate coordination will be directed to Dr. Greenberg.

A. Introduction:

This site specific health and safety plan will be in effect throughout the duration of the project. All personnel on site, regardless of the company they are employed through, are subject to the requirements of this plan.

B. Work Areas:

Work and support areas will be designated based on measured ambient air quality and proposed sampling locations.

Adequate safety instruction will be provided to all personnel on site. Restricted areas due to hazardous environmental conditions will be clearly posted. Care will be taken to insure that all work areas are contained.

Personnel will not be admitted on the site alone. All personnel will visit and work on the site in teams of two or more.

C. Protective Equipment:

Protective clothing will be worn by all personnel on site. The site safety manager will predetermine the appropriate level of protection for personnel entering the work area.

Contractors will be responsible for providing their personnel with appropriate protective equipment.

D. Personnel Protection Requirements:

It is anticipated that level D protection will be adequate for the proposed sampling episode. Level D protection must be work when contaminants are known to be within acceptable respiratory limits and there is no hazard

from direct skin contact.

All personnel on site will be equipped with a standard work uniform, alternatively, a supply of Tyvek suits will be available in the personnel support area on site. In addition, personnel entering the work area must wear appropriate work boots.and disposable Tyvek boot coverings. Any personnel handling soil and or water must be equipped with neoprine gloves.

Personnel working with machinery including but not limited to drilling rigs and earth moving equipment must wear a hardhat.

Constant ambient air monitoring will be conducted with a HNU and/or OVA. Should air contaminants be identified as above acceptable levels (above 5 ppm), personal protection will be upgraded to level C. Level C protection includes all apparel as required in level D protection plus approved full face, air purifying respirators, and chemical resistant clothing and gloves.

E. Action Levels

All initial site activities will be performed in level D attire. Constant monitoring of ambient conditions will document presence of airborne contaminants. A background air reading will be recorded as a baseline for general environmental conditions.

If the levels detected are less than 5 ppm, level D protection will be continued. If the detectors indicate levels greater than 5 ppm above background conditions, level C protection will be implemented. Alternatively, level D protection may be continued if exposure is limited to less than fifteen minute intervals with at least sixty minutes between exposures.

F. Site Security:

The project supervisor will be responsible for maintaining adequate site security. Access to the site will be at the sole discretion of the site supervisor. Visitors will not be permitted to enter areas of known or suspected contamination.

The project supervisor will be responsible for securing all work areas prior to leaving the site each night. All areas of potential hazard will be fenced, flagged and posted. The main gate will secured, and any openings in the fencing surrounding the property will be sealed.

G. Medical Services:

If a medical emergency occurs, limited first aid is available on site. If the victim(s) can be transported safely, the closest hospital is Saint James Hospital, 155 Jefferson Road, Newark, New Jersey.

Emergency Phone Numbers:

Hospital	589-1300
Police	911
Fire	733-7400

847521343

APPENDIX 2

LABORATORY ANALYTICAL RESULTS

Integrated Analytical Labs

Integrated Analytical Laboratories, Inc.

150 Railroad Avenue
Paterson, N.J. 07501

201-523-2509
Fax # 201-523-2818

ANALYTICAL DATA REPORT

for

Environmental Waste Management Associates
1235A Route 23 South
Wayne, NJ 07470

Project: Elan Chemical #91025
Lab Case Number: 10920-544
Date Received: July 30, 1992

CLIENT SAMPLE ID	LABORATORY SAMPLE #
TV-1	544001
Field	544002
Trip	544003
TV-2	544004
S-1	544005
S-2	544006
S-3	544007

All NJDEPE protocol were followed during analyses. These data have been reviewed and accepted by:

Michael H. Leftin, Ph.D.
Laboratory Director

The liability of Integrated Analytical Laboratories, Inc. is limited to the actual cost of the analyses performed.

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MATRIX QUALIFIERS

A - Indicates the sample is an Aqueous.

O - Indicates the sample is an Oil.

S - Indicates the sample is a Soil, Sludge or Sediment.

X - Indicates the sample is an other as indicated by Client Chain of Custody.

DATA QUALIFIERS

B - Indicates the analyte was found in the Blank and in the sample. It indicates possible sample contamination and warns the data user to use caution when applying the result of this analyte.

D - The surrogate was not detected due to the high Dilution of the sample.

J - Indicates an estimated value. The compound was detected at a value below the minimum detection limit and greater than zero. For GC/MS procedures, the mass spectral data meets the criteria required to identify the target compound.

MI - Indicates Compound concentration could not be determined due to Matrix Interferences

NA - Indicates the compound was Not Applicable.

ND - Indicates the compound was analyzed for but was Not Detected.

REPORT QUALIFIERS

All analyses were performed within the required holding time.

INTEGRATED ANALYTICAL LABORATORIES, INC.

NON-CONFORMANCE SUMMARY

Integrated Analytical Laboratories, Inc. received seven (7) aqueous samples (Project: Elan Chemical) from Environmental Waste Management Associates on July 30, 1992 for the analysis of:

Volatile Organics + 15

All NJDEPE protocol were followed during analyses. These data have been reviewed and accepted by:

Laboratory Manager

8/12/92
Date

002

847521348

INTEGRATED ANALYTICAL LABORATORIES, INC.

LABORATORY DELIVERABLES CHECK LIST

Client: Environmental Waste Management Associates
Project: Elan Chemical Case #: 10920-544

		Check If Complete
1.	Cover Page, Format, and Laboratory Certification (include Cross Reference Table of Field ID # and Laboratory ID #).	X
2.	Chain of Custody	X
3.	Summary Sheets Listing Analytical Results including QA Data Information	X
4.	Laboratory Chronicle and Methodology Summary including Sample Holding Time Check	X
5.	Initial Calibration and Continuing Calibration	X
6.	Tune Summary (MS)	X
7.	Blanks (Method, Field, Trip)	X
8.	Surrogate Recovery Summary	X
9.	Chromatographs Labelled/Compound Identification	X
10.	Minimum Detection Limits (Lower than Action Level if Clean Zone Sample - and consistent with method guidelines).	X
11.	Non-conformance Summary	X

Michael Sutton
Laboratory Manager

8/12/92
Date

0 003

847521349

STATE OF NEW JERSEY

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Let's protect Earth

Certifies That

Integrated Analytical Lab.
150 Railroad Avenue
Paterson, NJ 07501

having duly met the requirements of the

Regulations Governing Laboratory Certification
And Standards Of Performance N.J.A.C. 7:18 et. seq.

is hereby approved as a

State Certified Water Laboratory

To perform the analyses as indicated on the Annual Certified Parameter List which must accompany this certificate to be valid

16751
PERMANENT CERTIFICATION NUMBER

January 11, 1990
DATE

Helen M. Hanlon
COMMISSIONER
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NJ 004

847521350

This certification is subject to unannounced laboratory inspections as specified by N.J.A.C. 7:18-2.11(d) and agreed to by the Laboratory Manager on filing the application

TO BE CONSPICUOUSLY DISPLAYED AT THE LABORATORY WITH THE ANNUAL CERTIFIED PARAMETER LIST.

INTEGRATED ANALYTICAL LABORATORIES, INC.

GCMS ANALYSIS
Conformance/Nonconformance Summary

Case: 10920-544 Project: Elan Chemical Client: EWMA

	No	Yes
GC/MS Tuning Specifications		
a. BFB Passed	___	X
b. DFTPP Passed	___	___
GC/MS Tuning Frequency -Performed every 12 hours	___	X
GC/MS Calibration - Initial calibration performed within 30 days before sample analysis, and continuing calibration performed within 24 hours before analysis	___	X
GC/MS Calibration Requirements		
a. Calibration Check Compounds	___	X
b. System Performance Check Compounds	___	X
Blank Contamination		
a. VOA Fraction Methylene chloride		
b. B/N Fraction ___		
c. Acid Fraction ___		
Surrogate Recoveries Meet Criteria	___	X
List those compounds and their out of range recoveries:		
VOA Fraction ___		
B/N Fraction ___		
Acid Fraction ___		
Extraction Holding Time Met	___	X
Comments ___		
Analysis Holding Time Met	___	X
Comments ___		

Organic Manager

08/10/92
Date

005

847521351

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: Field
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 1
Lab ID: 544002

Compound	Conc.	MDL
Chloromethane	ND	10
Vinyl chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
1,1-Dichloroethene	ND	5
Methylene chloride	ND	5
Trichlorofluoromethane	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
trans-1,3-Dichloropropene	ND	5
Toluene	ND	5
cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Total Xylenes	ND	15
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	102	76-114	OK
Toluene-d_8	98.0	88-110	OK
4-Bromofluorobenzene	103	86-115	OK

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: Field
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544002
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: Trip
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 1
Lab ID: 544003

Compound	Conc.	MDL
Chloromethane	ND	10
Vinyl chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
1,1-Dichloroethene	ND	5
Methylene chloride	ND	5
Trichlorofluoromethane	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
trans-1,3-Dichloropropene	ND	5
Toluene	ND	5
cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Total Xylenes	ND	15
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	97.0	76-114	OK
Toluene-d_8	92.2	88-110	OK
4-Bromofluorobenzene	103	86-115	OK

847521354

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

No.:	10920-544		
Lab ID#:	544001	544002	544003
Client ID#:	TV-1	Field	Trip
Matrix-Units:	A-µg/l	A-µg/l	A-µg/l
Dil. Fact.:	100	1	1
% Solid:	0	0	0

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Chloromethane	ND	1000	ND	10	ND	10
Vinyl chloride	ND	1000	ND	10	ND	10
Bromomethane	ND	1000	ND	10	ND	10
Chloroethane	ND	1000	ND	10	ND	10
1,1-Dichloroethene	ND	500	ND	5	ND	5
Methylene chloride	190JB	500	ND	5	ND	5
Trichlorofluoromethane	ND	500	ND	5	ND	5
trans-1,2-Dichloroethene	ND	500	ND	5	ND	5
1,1-Dichloroethane	ND	500	ND	5	ND	5
Chloroform	ND	500	ND	5	ND	5
1,1,1-Trichloroethane	ND	500	ND	5	ND	5
Carbon tetrachloride	ND	500	ND	5	ND	5
Benzene	140J	500	ND	5	ND	5
1,2-Dichloroethane	30500	2500	ND	5	ND	5
Trichloroethene	ND	500	ND	5	ND	5
1,2-Dichloropropane	ND	500	ND	5	ND	5
Bromodichloromethane	ND	500	ND	5	ND	5
trans-1,3-Dichloropropene	ND	500	ND	5	ND	5
Toluene	29900	2500	ND	5	ND	5
cis-1,3-Dichloropropene	ND	500	ND	5	ND	5
1,1,2-Trichloroethane	ND	500	ND	5	ND	5
Tetrachloroethene	ND	500	ND	5	ND	5
Dibromochloromethane	ND	500	ND	5	ND	5
2-Chloroethylvinyl ether	ND	500	ND	5	ND	5
Chlorobenzene	17200	500	ND	5	ND	5
Ethylbenzene	590	500	ND	5	ND	5
Total Xylenes	1150J	1500	ND	15	ND	15
Bromoform	ND	500	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	500	ND	5	ND	5
1,3-Dichlorobenzene	ND	500	ND	5	ND	5
1,4-Dichlorobenzene	ND	500	ND	5	ND	5
1,2-Dichlorobenzene	ND	500	ND	5	ND	5

847521355

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

No.:	10920-544		
Lab ID#:	544004	544005	544006
Client ID#:	TV-2	S-1	S-2
Matrix-Units:	A-µg/l	A-µg/l	A-µg/l
Dil. Fact.:	1	10	10
% Solid:	0	0	0

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Chloromethane	ND	10	ND	100	ND	100
Vinyl chloride	ND	10	ND	100	ND	100
Bromomethane	ND	10	ND	100	ND	100
Chloroethane	ND	10	ND	100	ND	100
1,1-Dichloroethene	ND	5	ND	50	ND	50
Methylene chloride	ND	5	ND	50	ND	50
Trichlorofluoromethane	ND	5	ND	50	ND	50
trans-1,2-Dichloroethene	ND	5	ND	50	ND	50
1,1-Dichloroethane	ND	5	ND	50	ND	50
Chloroform	ND	5	ND	50	ND	50
1,1,1-Trichloroethane	ND	5	ND	50	ND	50
Carbon tetrachloride	ND	5	ND	50	ND	50
Benzene	ND	5	173	50	122	50
1,2-Dichloroethane	ND	5	ND	50	ND	50
Trichloroethene	ND	5	ND	50	ND	50
1,2-Dichloropropane	ND	5	ND	50	ND	50
Bromodichloromethane	ND	5	ND	50	ND	50
trans-1,3-Dichloropropene	ND	5	ND	50	ND	50
Toluene	3.8J	5	1600	250	16700	2500
cis-1,3-Dichloropropene	ND	5	ND	50	ND	50
1,1,2-Trichloroethane	ND	5	ND	50	ND	50
Tetrachloroethene	ND	5	ND	50	ND	50
Dibromochloromethane	ND	5	ND	50	ND	50
2-Chloroethylvinyl ether	ND	5	ND	50	ND	50
Chlorobenzene	ND	5	ND	50	37.0J	50
Ethylbenzene	ND	5	68.0	50	63.0J	50
Total Xylenes	2.0J	15	131J	150	131J	150
Bromoform	ND	5	ND	50	ND	50
1,1,2,2-Tetrachloroethane	ND	5	ND	50	ND	50
1,3-Dichlorobenzene	ND	5	ND	50	ND	50
1,4-Dichlorobenzene	ND	5	ND	50	ND	50
1,2-Dichlorobenzene	ND	5	ND	50	ND	50

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

No.:	10920-544	
Lab ID#:	544007	VB0730
Client ID#:	S-3	QCBlank
Matrix-Units:	A-µg/l	A-µg/l
Dil. Fact.:	100	1
% Solid:	0	0

Compound	Conc.	MDL	Conc.	MDL	Conc.	MDL
Chloromethane	ND	1000	ND	10		
Vinyl chloride	ND	1000	ND	10		
Bromomethane	ND	1000	ND	10		
Chloroethane	ND	1000	ND	10		
1,1-Dichloroethene	ND	500	ND	5		
Methylene chloride	ND	500	1.1J	5		
Trichlorofluoromethane	ND	500	ND	5		
trans-1,2-Dichloroethene	ND	500	ND	5		
1,1-Dichloroethane	ND	500	ND	5		
Chloroform	ND	500	ND	5		
1,1,1-Trichloroethane	ND	500	ND	5		
Carbon tetrachloride	ND	500	ND	5		
Benzene	ND	500	ND	5		
1,2-Dichloroethane	900	500	ND	5		
Trichloroethene	ND	500	ND	5		
1,2-Dichloropropane	ND	500	ND	5		
Bromodichloromethane	ND	500	ND	5		
trans-1,3-Dichloropropene	ND	500	ND	5		
Toluene	13900	500	ND	5		
cis-1,3-Dichloropropene	ND	500	ND	5		
1,1,2-Trichloroethane	ND	500	ND	5		
Tetrachloroethene	ND	500	ND	5		
Dibromochloromethane	ND	500	ND	5		
2-Chloroethylvinyl ether	ND	500	ND	5		
Chlorobenzene	340J	500	ND	5		
Ethylbenzene	ND	500	ND	5		
Total Xylenes	240J	1500	ND	15		
Bromoform	ND	500	ND	5		
1,1,2,2-Tetrachloroethane	ND	500	ND	5		
1,3-Dichlorobenzene	ND	500	ND	5		
1,4-Dichlorobenzene	ND	500	ND	5		
1,2-Dichlorobenzene	ND	500	ND	5		

847521357

VOLATILE ORGANICS
SURROGATE RECOVERY

Client ID	Lab ID#	Matrix	S1	S2	S3	Total Out
TV-1	544001	Aqueous	107	103	92.0	0
Field	544002	Aqueous	102	98.0	103	0
Trip	544003	Aqueous	97.0	92.2	103	0
TV-2	544004	Aqueous	98.6	91.4	104	0
S-1	544005	Aqueous	98.4	104	100	0
S-2	544006	Aqueous	113	105	104	0
S-3	544007	Aqueous	104	103	100	0
QCBlank	VB0730	Aqueous	90.0	95.4	97.0	0

EPA CLP QC Limits for:		Aqueous	Soil
S1	1,2-Dichloroethane-d_4	(76-114)	(70-121)
S2	Toluene-d_8	(88-110)	(81-117)
S3	4-Bromofluorobenzene	(86-115)	(74-121)

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: TV-1
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 100
Lab ID: 544001

Compound	Conc.	MDL
Chloromethane	ND	1000
Vinyl chloride	ND	1000
Bromomethane	ND	1000
Chloroethane	ND	1000
1,1-Dichloroethene	ND	500
Methylene chloride	190JB	500
Trichlorofluoromethane	ND	500
trans-1,2-Dichloroethene	ND	500
1,1-Dichloroethane	ND	500
Chloroform	ND	500
1,1,1-Trichloroethane	ND	500
Carbon tetrachloride	ND	500
Benzene	140J	500
1,2-Dichloroethane	30500	2500
Trichloroethene	ND	500
1,2-Dichloropropane	ND	500
Bromodichloromethane	ND	500
trans-1,3-Dichloropropene	ND	500
Toluene	29900	2500
cis-1,3-Dichloropropene	ND	500
1,1,2-Trichloroethane	ND	500
Tetrachloroethene	ND	500
Dibromochloromethane	ND	500
2-Chloroethylvinyl ether	ND	500
Chlorobenzene	17200	500
Ethylbenzene	590	500
Total Xylenes	1150J	1500
Bromoform	ND	500
1,1,2,2-Tetrachloroethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	107	76-114	OK
Toluene-d_8	103	88-110	OK
4-Bromofluorobenzene	92.0	86-115	OK

847521359

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: TV-1
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544001
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

011

847521360

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: TV-2
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 1
Lab ID: 544004

Compound	Conc.	MDL
Chloromethane	ND	10
Vinyl chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
1,1-Dichloroethene	ND	5
Methylene chloride	ND	5
Trichlorofluoromethane	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Bromodichloromethane	ND	5
trans-1,3-Dichloropropene	ND	5
Toluene	3.8J	5
cis-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	5
Chlorobenzene	ND	5
Ethylbenzene	ND	5
Total Xylenes	2.0J	15
Bromoform	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	98.6	76-114	OK
Toluene-d_8	91.4	88-110	OK
4-Bromofluorobenzene	104	86-115	OK

847521361

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: TV-2
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544004
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME

No Tentatively Identified Compounds were found.

847521362

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: S-1
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 10
Lab ID: 544005

Compound	Conc.	MDL
Chloromethane	ND	100
Vinyl chloride	ND	100
Bromomethane	ND	100
Chloroethane	ND	100
1,1-Dichloroethene	ND	50
Methylene chloride	ND	50
Trichlorofluoromethane	ND	50
trans-1,2-Dichloroethene	ND	50
1,1-Dichloroethane	ND	50
Chloroform	ND	50
1,1,1-Trichloroethane	ND	50
Carbon tetrachloride	ND	50
Benzene	173	50
1,2-Dichloroethane	ND	50
Trichloroethene	ND	50
1,2-Dichloropropane	ND	50
Bromodichloromethane	ND	50
trans-1,3-Dichloropropene	ND	50
Toluene	1600	250
cis-1,3-Dichloropropene	ND	50
1,1,2-Trichloroethane	ND	50
Tetrachloroethene	ND	50
Dibromochloromethane	ND	50
2-Chloroethylvinyl ether	ND	50
Chlorobenzene	ND	50
Ethylbenzene	68.0	50
Total Xylenes	131J	150
Bromoform	ND	50
1,1,2,2-Tetrachloroethane	ND	50
1,3-Dichlorobenzene	ND	50
1,4-Dichlorobenzene	ND	50
1,2-Dichlorobenzene	ND	50

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	98.4	76-114	OK
Toluene-d_8	104	88-110	OK
4-Bromofluorobenzene	100	86-115	OK

017

847521363

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: S-1
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544005
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME
1,3,5-Trimethylbenzene	176	21:13
1-Ethenyl-2-methylbenzene	2230	22:30
1-Propynylbenzene	280	23:00
1-Ethynyl-4-methylbenzene	272	23:02
7-Methylbenzofuran	387	24:43
(E)(1-Methyl-1-propenyl)benzene	193	25:07
1-Methyl-2-(2-propenyl)benzene	323	25:20
1,2,3,5-Tetramethylbenzene	260	25:22
(1-Methyl-2-cyclopropen-1-yl)benzene	149	25:25
1-Methyl-1H-indene	234	25:32
Naphthalene	8430	25:59
Benzo[B]thiophene	1390	26:07
4,7-Dimethylbenzofuran	115	26:14
1-Methylnaphthalene	2890	27:00
1-Ethylidene-1H-indene	1270	27:09

847521364

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: S-2
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 10
Lab ID: 544006

Compound	Conc.	MDL
Chloromethane	ND	100
Vinyl chloride	ND	100
Bromomethane	ND	100
Chloroethane	ND	100
1,1-Dichloroethene	ND	50
Methylene chloride	ND	50
Trichlorofluoromethane	ND	50
trans-1,2-Dichloroethene	ND	50
1,1-Dichloroethane	ND	50
Chloroform	ND	50
1,1,1-Trichloroethane	ND	50
Carbon tetrachloride	ND	50
Benzene	122	50
1,2-Dichloroethane	ND	50
Trichloroethene	ND	50
1,2-Dichloropropane	ND	50
Bromodichloromethane	ND	50
trans-1,3-Dichloropropene	ND	50
Toluene	16700	2500
cis-1,3-Dichloropropene	ND	50
1,1,2-Trichloroethane	ND	50
Tetrachloroethene	ND	50
Dibromochloromethane	ND	50
2-Chloroethylvinyl ether	ND	50
Chlorobenzene	37.0J	50
Ethylbenzene	63.0J	50
Total Xylenes	131J	150
Bromoform	ND	50
1,1,2,2-Tetrachloroethane	ND	50
1,3-Dichlorobenzene	ND	50
1,4-Dichlorobenzene	ND	50
1,2-Dichlorobenzene	ND	50

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	113	76-114	OK
Toluene-d_8	105	88-110	OK
4-Bromofluorobenzene	104	86-115	OK

847521365

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: S-2
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544006
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME
1,3,5-Trimethylbenzene	142	21:16
1-Ethenyl-2-methylbenzene	1760	22:33
1-Propynylbenzene	198	23:03
7-Methylbenzofuran	297	24:46
(E)(1-Methyl-1-propenyl)benzene	167	25:10
1-Ethenyl-4-ethylbenzene	262	25:22
1-(Methylphenyl)ethanone	95.0	25:25
1-Butynylbenzene	109	25:28
Unknown	190	25:34
(1-Methyl-2-cyclopropen-1-yl)benzene	195	25:35
Naphthalene	7200	26:02
Benzo[B]thiophene	1170	26:09
4,7-Dimethylbenzofuran	98.0	26:16
1-Ethylidene-1H-indene	2570	27:02
1-Methylnaphthalene	1170	27:12

847521366

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS

Client: EWMA
Case No.: 10920-544
Client ID: S-3
Date Analyzed: 07/30/92

Matrix-Units: A-µg/l
Dil. Fact.: 100
Lab ID: 544007

Compound	Conc.	MDL
Chloromethane	ND	1000
Vinyl chloride	ND	1000
Bromomethane	ND	1000
Chloroethane	ND	1000
1,1-Dichloroethene	ND	500
Methylene chloride	ND	500
Trichlorofluoromethane	ND	500
trans-1,2-Dichloroethene	ND	500
1,1-Dichloroethane	ND	500
Chloroform	ND	500
1,1,1-Trichloroethane	ND	500
Carbon tetrachloride	ND	500
Benzene	ND	500
1,2-Dichloroethane	900	500
Trichloroethene	ND	500
1,2-Dichloropropane	ND	500
Bromodichloromethane	ND	500
trans-1,3-Dichloropropene	ND	500
Toluene	13900	500
cis-1,3-Dichloropropene	ND	500
1,1,2-Trichloroethane	ND	500
Tetrachloroethene	ND	500
Dibromochloromethane	ND	500
2-Chloroethylvinyl ether	ND	500
Chlorobenzene	340J	500
Ethylbenzene	ND	500
Total Xylenes	240J	1500
Bromoform	ND	500
1,1,2,2-Tetrachloroethane	ND	500
1,3-Dichlorobenzene	ND	500
1,4-Dichlorobenzene	ND	500
1,2-Dichlorobenzene	ND	500

Surrogate Compounds	Recovery	Limits	Status
1,2-Dichloroethane-d_4	104	76-114	OK
Toluene-d_8	103	88-110	OK
4-Bromofluorobenzene	100	86-115	OK

INTEGRATED ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS
TENTATIVELY IDENTIFIED COMPOUNDS

Client: EWMA
Client ID: S-3
Analysis Date: 07/30/92

Case No.: 10920-544
Lab ID: 544007
Matrix-Units: A-µg/l

COMPOUND	EST. CONC.	RETENTION TIME
5-Methylundecane	1850	21:30
2,4,6-Trimethyldecane	2210	21:53
5-(2-Methylpropyl)nonane	2250	21:54
5-Ethyl-2-methylheptane	1930	22:28
Unknown	730	22:30
2,6,7-Trimethyldecane	1830	22:40
2,8-Dimethylundecane	1630	23:04
4,7-Dimethylundecane	1110	25:36
Naphthalene	1040	26:01
Unknown	1500	26:33
1,2,3,4-Tetrahydro-5-methylnaphthalene	1320	26:36
Unknown	1700	27:01
Unknown	690	27:09
Tetradecane	1040	27:19

847521368

METHODOLOGY SUMMARY

Volatile Organics - EPA 624 (Aqueous)

Helium is purged through a 5 ml water sample, contained in a purge tube at ambient temperature. The helium gas carries the volatile organics onto a gas column trap where they are collected. After the purging is completed the sorbent trap is heated and back flushed with helium to desorb the volatile organics onto a gas chromatographic column. The gas chromatograph is temperature programmed to separate the purgeables which are then detected with a mass spectrometer.

847521369

3B

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: __INTEGRATED ANALYTICAL LABS__ Contract No.: ____NA____

Lab code:_NA_Case No.: __542,544___ SAS No.:_NA_ SDG No.:_NA_

Matrix Spike - EPA Sample No.: __V544003S1/S2___

COMPOUND	SPIKE ADDED (ug/L)	SAMPL CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	50.1	100.4	61-145
Trichloroethene	50	0.0	50.2	100.4	71-120
Benzene	50	0.0	50.4	100.8	76-127
Toluene	50	0.0	43.7	87.4	76-125
Chlorobenzene	50	0.0	49.2	98.4	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	51.3	103	1.7	14	61-145
Trichloroethene	50	52.2	104	3.9	14	71-120
Benzene	50	50.7	101	0.5	11	76-127
Toluene	50	44.0	88	0.6	13	76-125
Chlorobenzene	50	50.4	101	2.4	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD:___0___ out of __5__ outside limits
Spike recovery:__0__ out of __10__ outside limits

COMMENTS: _____

847521370

3B

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab name: __INTEGRATED ANALYTICAL LAS__ Contract No.: ___NA___

Lab code:_NA_ Case No.:___542.543___ SAS No:_NA_ SDG No: _NA_

Matrix Spike - EPA Sample No.: ___V530001S1/S2____Level:(low/med) __L___

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
1,1-Dichloroethene	50	0.0	54.6	109.2	59-172
Trichloroethene	50	0.0	49.4	98.8	62-137
Benzene	50	0.0	53.4	106.8	66-142
Toluene	50	0.0	42.1	84.2	59-139
Chlorobenzene	50	0.0	50.0	100.0	60-133

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	54.6	109	0	22	59-172
Trichloroethene	50	49.7	99	0.6	24	62-137
Benzene	50	49.2	98	8.1	21	66-142
Toluene	50	43.0	86	2.1	21	59-139
Chlorobenzene	50	51.6	103	3.1	21	60-133

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD:__0___ out of __5__ outside limits
Spike recovery:__0__ out of __10__ outside limits

COMMENTS: _____

847521371

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: I.A.L. Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF0722 BFB Injection Date: 7/22/92

Instrument ID: INCOS-50 BFB Injection Time: 16:30

Matrix: (soil/water) _____ Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.5
75	30.0 - 60.0% of mass 95	51.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.3
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	Greater than 50.0% of mass 95	68.9
175	5.0 - 9.0% of mass 174	4.9 (7.2) 1
176	Greater than 95.0%, but less than 101.0% of mass 174	67.5 (97.9) 1
177	5.0 - 9.0% of mass 176	4.5 (6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD200	VOA CAL 1	V0200722.92	7/22/92	17:07
02	VSTD150	VOA CAL 2	V0150722.92	"	17:44
03	VSTD100	VOA CAL 3	V0100722.92	"	18:20
04	VSTD50	VOA CAL 4	V0050722.92	"	18:57
05	VSTD20	VOA CAL 5	V0020722.92	"	19:33
06	Method BLK	VOA BLK	VBO722	"	20:09
07	VSTD50	VOA CAL CHK	VCK0722	"	21:21
08	TRIP	520005	V520005	"	21:57
09	FIELD	004	004	"	22:33
10	MW3	003	003	"	23:08
11	MW2	002	002	↓	23:44
12	MW1	↓ 001	↓ 001	7/23/92	0:20
13	-1	519007	V519007	"	0:55
14	FB1	006	006	"	1:31
15	MW4	↓ 004	↓ 004	"	2:06
16					
17					
18					
19					
20					
21					020
22					

847521372

BROMOFLUOROBENZENE

Tuning Report
07/22/92 16:30:00 + 5:20
Instrument: FINN
#421 to #435 summed
Case Number:

Data: BF0722 # 428
Cali: FC041492 # 3
Analyst: FRK

Base m/z: 95
RIC: 94976.
Acct. No.: NA

Laboratory:

Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	3494.	16.5	15.0	40.0	95	16.5	PASS
75	10800.	51.1	30.0	60.0	95	51.1	PASS
95	21120.	100.0	100.0	---	---	100.0	PASS
96	1540.	7.3	5.0	9.0	95	7.3	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	14560.	68.9	50.0	---	95	68.9	PASS
175	1042.	4.9	5.0	9.0	174	7.2	PASS
176	14256.	67.5	95.0	101.0	174	97.9	PASS
177	945.	4.5	5.0	9.0	176	6.6	PASS

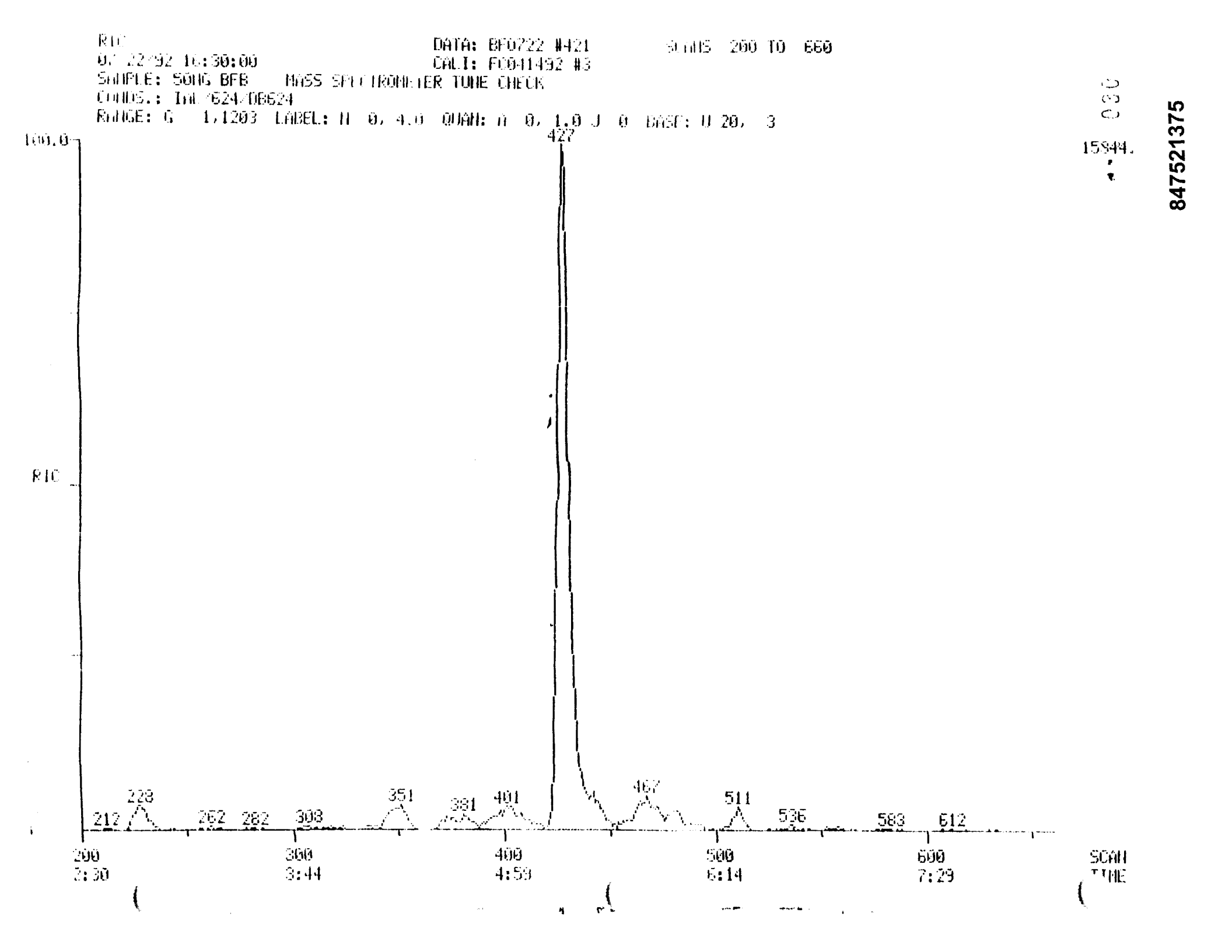
Mass List Date: BF0722 # 425 Base m/z 98
07/22/92 16:30:00 - 5:20 Cal: FC041492 # 3 RIC: 94576
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624
#421 to #435 Summed

45 0.00 0. Minima Min Inten 0.
177 Maxima # 0

Mass	% BA	Inten.	Mass	% BA	Inten.
45?	0.19	41.	175	4.93	1042.
47?	0.21	45	176	67.50	14256.
48?	0.10	22.	177	4.47	945.
49?	3.14	663.			
50?	16.50	3484.			
51?	5.37	1134.			
55?	2.28	481.			
56?	2.96	605			
57?	7.55	1594.			
60?	0.20	42.			
61?	4.54	958			
62?	4.76	1006.			
63?	3.62	764.			
67?	0.56	118.			
68?	10.44	2204.			
69	13.35	2820			
70	1.99	420.			
71	1.35	286.			
73	4.32	913.			
74	16.52	3488.			
75	51.14	10800.			
76	4.52	955.			
77	0.11	24.			
79	4.37	922.			
80	0.59	124			
81	4.85	1024.			
82	0.79	167.			
83	0.09	20.			
84	0.82	173.			
85	1.52	321.			
87	3.24	684.			
88	2.91	614.			
91	0.08	16.			
92	3.29	694.			
93	4.37	922.			
94	12.16	2568.			
95	100.00	21120.			
96	7.29	1540.			
97	0.08	17.			
98	0.44	93.			
99	0.12	25.			
100	0.07	15.			
111	0.09	20.			
116	0.08	17.			
117	0.09	18.			
119	0.11	24			
125	0.09	18.			
141	0.86	181.			
143	1.15	242.			
174	68.94	14560.			

026

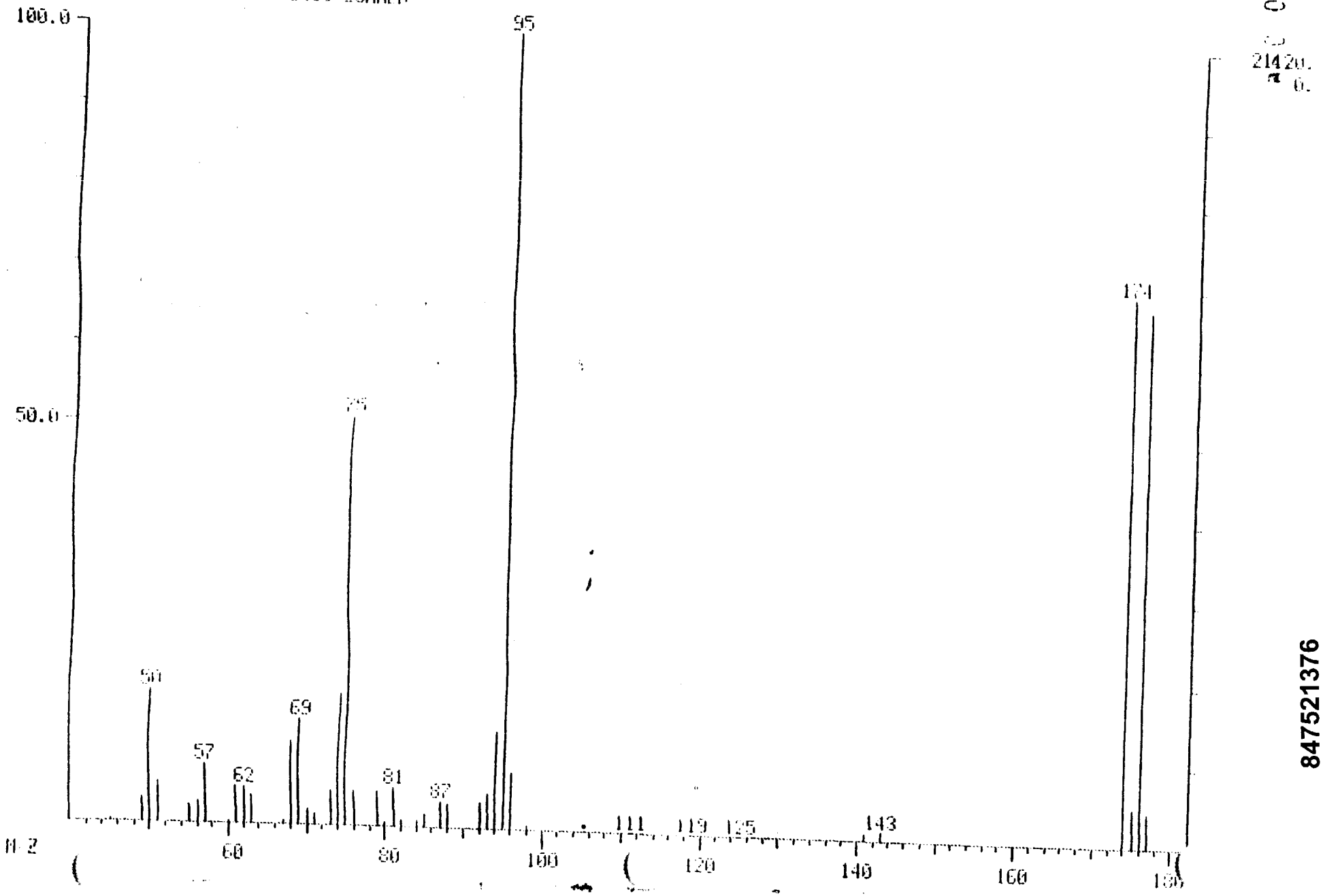
847521374


RIC
DATA: BF0722 #421
SCANS 260 TO 660
0/ 22/92 16:30:00
CALI: FC041492 #3
SAMPLE: 500G BFB MASS SPECTROMETER TUNE CHECK
COMMS.: Int 624/DB624
RANGE: G 1,1203 LABEL: H 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
100.0
427
15844.
RIC
212
228
262
282
303
351
381
401
467
511
536
583
612
200
3:30
300
3:44
400
4:59
500
6:14
600
7:29
SCAN
TIME
847521375

MASS SPECTRUM
07/22/92 16:30:00 - 5:20
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624/DB624
TEMP: 107 DEG. C
#421 TO #435 SUMMED

DATA: BF0722 #428
CALI: FC041492 #3

BASE M/Z: 95
RIC: 94976.



847521376

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: I.A.L Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF0730A BFB Injection Date: 7/30/92

Instrument ID: INCOS-50 BFB Injection Time: 16:52

Matrix: (soil/water) _____ Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.2
75	30.0 - 60.0% of mass 95	49.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.5
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	Greater than 50.0% of mass 95	71.4
175	5.0 - 9.0% of mass 174	5.9 (8.2) 1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.6 (100.3) 1
177	5.0 - 9.0% of mass 176	5.5 (7.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method BLK	VOA BLK	VB0730	7/30/92	17:09
02	LSTD50	VOA CAL CHK	VCK0730		17:45
03	W Spk	544003 MS	V5440035I		18:21
04	W Spk Dup	544003 MSD	V5440035Z		18:57
05	S Spk	530001 MS	V5300015I		19:33
06	S Spk Dup	530001 MSD	V5300015Z		20:09
07	TRIP	544003	V544003		20:45
08	TRIP	542017	V542017		21:21
09	FIELD	542016	V542016		21:57
10	FIELD	544002	V544002		22:32
11	TV-2	004	004		23:08
12	S-1	005	005		23:44
13	S-2	006	006	7/31/92	0:20
14	I	521001 Rerun	V521001D		0:55
15	TV-1	544001	V544001		1:31
16	S-3	544007	V544007		2:07
17	S-4	543001	V543001		2:43
18					
19					
20					03
21					
22					

847521377

BROMOFLUOROBENZENE

Tuning Report
07/30/92 10:52:00 + 5.22
Instrument: FINN
Case Number

Data: BF0730A # 430
Cali: FC041492 # 3
Analyst: FRK
Laboratory:

Base m/z: 95
RIC: 12208.
Acct No.: NA
Contract:

m/z	Intensity	% RA	Ion Abundance Criteria Min %	Max %	Mass	Actual	Status
50	425.	15.2	15.0	40.0	95	15.2	PASS
75	1374.	49.1	30.0	60.0	95	49.1	PASS
95	2800.	100.0	100.0	---	---	100.0	PASS
96	209.	7.5	5.0	9.0	95	7.5	PASS
173	0.	0.0	---	2.0	174	0.0	PASS
174	1998.	71.4	50.0	---	95	71.4	PASS
175	164.	5.9	5.0	9.0	174	8.2	PASS
176	2004.	71.6	95.0	101.0	174	100.3	PASS
177	155.	5.5	5.0	9.0	176	7.7	PASS

032

847521378

Mass List Data: BF0730A # 430 Base m/z 95
07/30/92 16:52:00 - 5:22 Cali: FC041492 # 3 RIC 12208
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds.: IAL/624/DB624

49	0.00	0	Minima Min Inten 0.
177			Maxima # 0

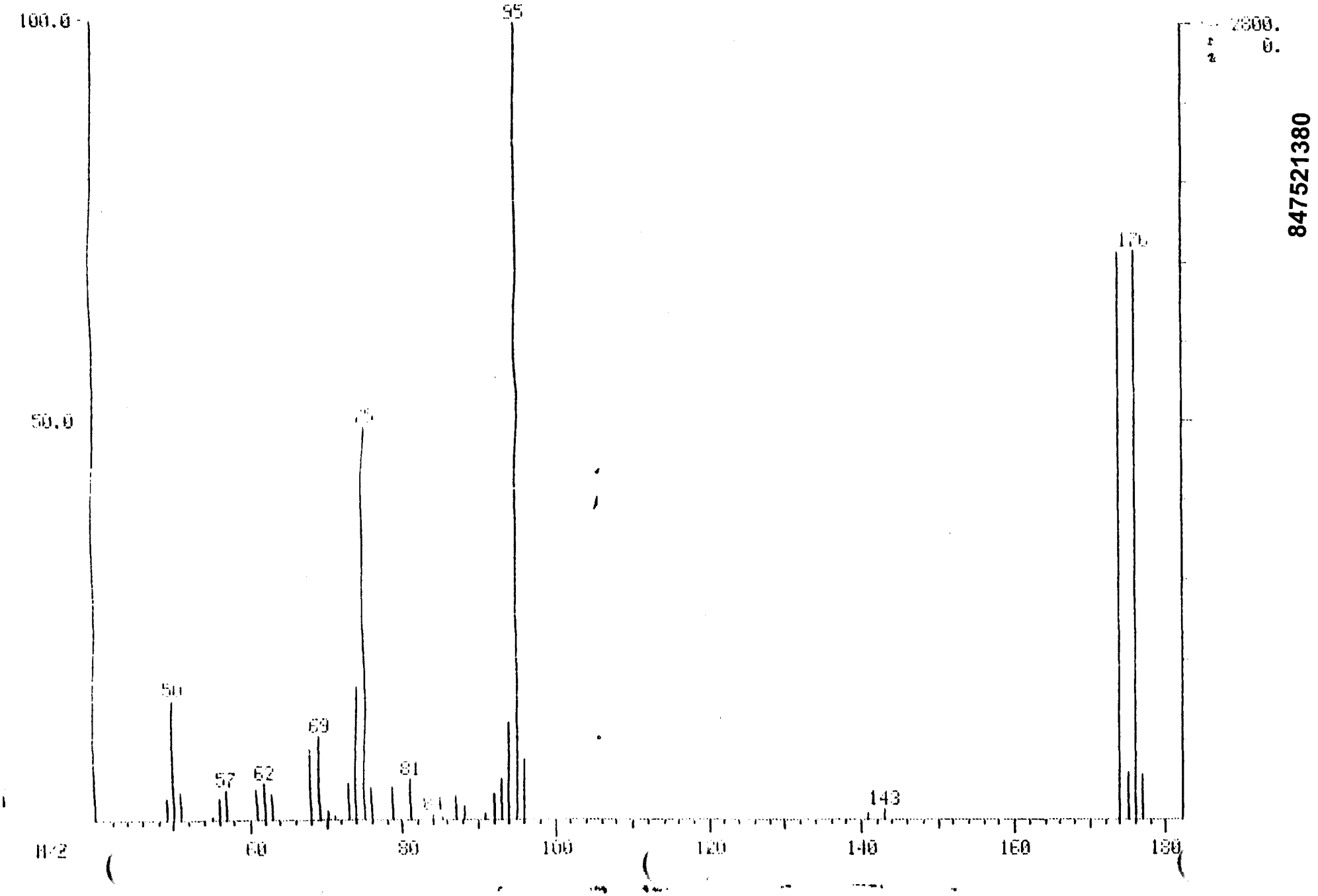
Mass		% RA	Inten.
49?		2.61	73.
50?		15.18	425.
51?		3.43	96.
55?		0.64	18.
56?		2.82	79.
57?		3.75	105.
61?	M	3.89	109.
62?		4.57	128.
63?		3.25	91.
68?		8.86	248.
69		10.50	294.
70		1.07	30.
71		0.54	15.
73		4.64	130.
74		16.57	464.
75		49.07	1374.
76		4.04	113.
79		4.07	114.
81	M	5.04	141.
84		0.75	21.
85		0.61	17.
87		3.04	85.
88		1.68	47.
91		0.71	20.
92		3.36	94.
93		5.14	144.
94		12.11	339.
95		100.00	2800.
96		7.46	209.
141		0.82	23.
143		1.21	34.
174		71.36	1998.
175		5.86	164.
176		71.57	2004.
177		5.54	155.

847521379

MASS SPECTRUM
07/30/92 16:52:00 + 5:22
SAMPLE: 50NG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: TAL/624-010624
TEMP: 107 DEG. C

DATA: BF07300 #430
FILE: F1041492 #3

BASE M/Z: 95
RIC: 12208.

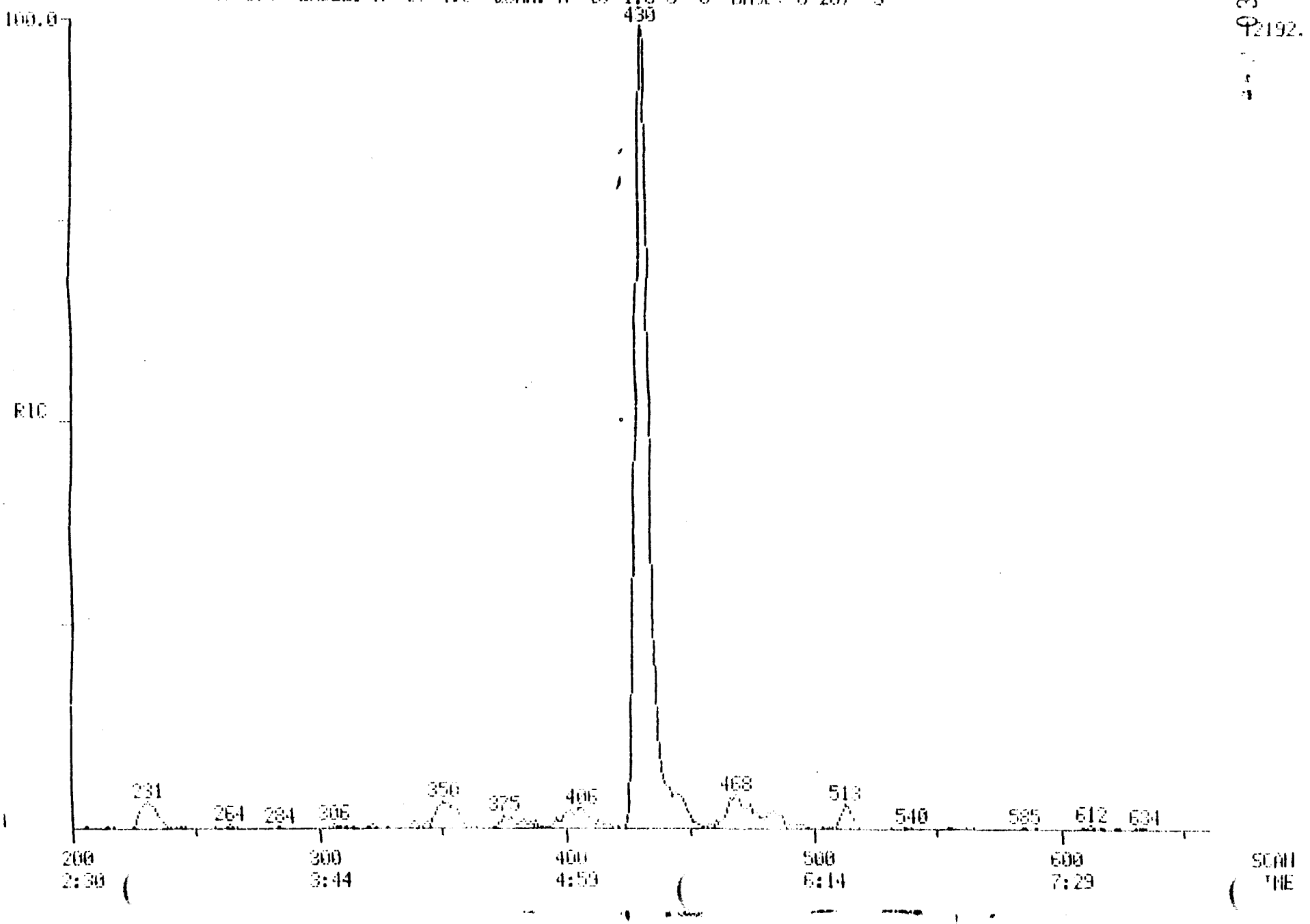


847521380

RIC
0.7 30 92 16:52:00
SAMPLE: 500G BFB MASS SPECTROMETER TUNE CHECK
COMDS.: TAL/624/DB624
RANGE: G 1. 675 LABEL: N 0. 4.0 QUAN: A 0. 1.0 J 0 BASE: U 20. 3

DATA: BF0730A #430 SCANS 200 TO 660
CALI: FC041492 #3

847521381



5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: I. A. L. Contract: NA

Lab Code: NA Case No.: 10920 SAS No.: NA SDG No.: NA

Lab File ID: BF0804 BFB Injection Date: 8/4/92

Instrument ID: INCOS-50 BFB Injection Time: 10:53

Matrix: (soil/water) _____ Level: (low/med) L Column: (pack/cap) C

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.6
75	30.0 - 60.0% of mass 95	51.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0) 1
174	Greater than 50.0% of mass 95	81.1
175	5.0 - 9.0% of mass 174	5.9 (7.3) 1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.8 (97.1) 1
177	5.0 - 9.0% of mass 176	5.0 (6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	Method BLK	VOA BLK	VB0804	8/04/92	11:08
02	VSTD	VOA CAL CHK	VCK0804		11:46
03	W SPK	549003 MS	V54900351		12:22
04	W SPK Dup	549003 MSD	V54900352		12:58
05	T3B	542008	V542008		13:34
06	T3C	009	009		14:10
07	T4A	010	010		14:45
08	T4B	011	011		15:21
09	T4C	012	012		15:56
10	T5A	013	013		16:32
11	T5B	014	014		17:07
12	T5C	015	015		17:43
13	TRIP	549003	V549003		18:18
14	FIELD	002	002		18:54
15	MW1	001	001		19:29
16	TV-2	544004 Rerun	V544004A		20:05
17	S-1	005	005A		20:41
18	S-2	006	006A		21:16
19	TV-1	001	001A		21:52
20	S-4	543001	V543001A		22:27
21					11:35
22					

847521382

BROMOFLUOROBENZENE

Tuning Report
[illegible]
Instrument: FINN
#428 to #431 summed
Case Number

Data: BF0804 # 429
Cali: [illegible]
Analyst: FRK
Laboratory:

Base m/z: 95
[illegible]
Acct No: NA
Contract:

Ion Abundance Criteria

m/z	Intensity	% RA	Min %	Max %	Mass	Actual	Status
50	961	15.6	15.0	40.0	95	15.6	PASS
75	3148.	51.2	30.0	60.0	95	51.2	PASS
95	6152.	100.0	100.0	---	---	100.0	PASS
96	430.	7.0	5.0	9.0	95	7.0	PASS
173	0	0.0	---	2.0	174	0.0	PASS
174	4992	81.1	50.0	---	95	81.1	PASS
175	366.	5.9	5.0	9.0	174	7.3	PASS
176	4848	78.8	95.0	101.0	174	97.1	PASS
177	[illegible]	[illegible]	[illegible]	9.0	176	[illegible]	PASS

Mass List Data BF0804 # 429 Base m/z .95
08/04/92 10:53:00 - 5:21 Cal: FC041492 # 3 RIC: 28160
Sample: 50NG BFB MASS SPECTROMETER TUNE CHECK
Conds: IAL/624/DB624
#428 to #431 summed

49	0.00	0.	Minima Min Inten 0
177			Maxima # 0

Mass	% RA	Inten
49?	2.84	175.
50?	15.62	961.
51?	3.93	242.
55?	0.24	15
56?	1.90	117.
57?	5.27	324.
61?	3.98	245
62?	4.14	255.
63?	3.66	225.
68?	10.14	624.
69	11.64	716.
70	0.26	16.
73	4.47	275.
74	16.84	1036.
75	51.17	3148.
76	4.42	272.
79	5.19	319.
80	0.29	18.
81	6.24	384.
82	0.62	38.
87	2.58	159.
88	2.55	157.
92	3.41	210.
93	4.65	286.
94	12.65	778.
95	100.00	6152.
96	6.99	430.
141	0.60	37.
143	0.55	34
174	81.14	4992.
175	5.95	366
176	78.80	4848.
177	5.01	308.

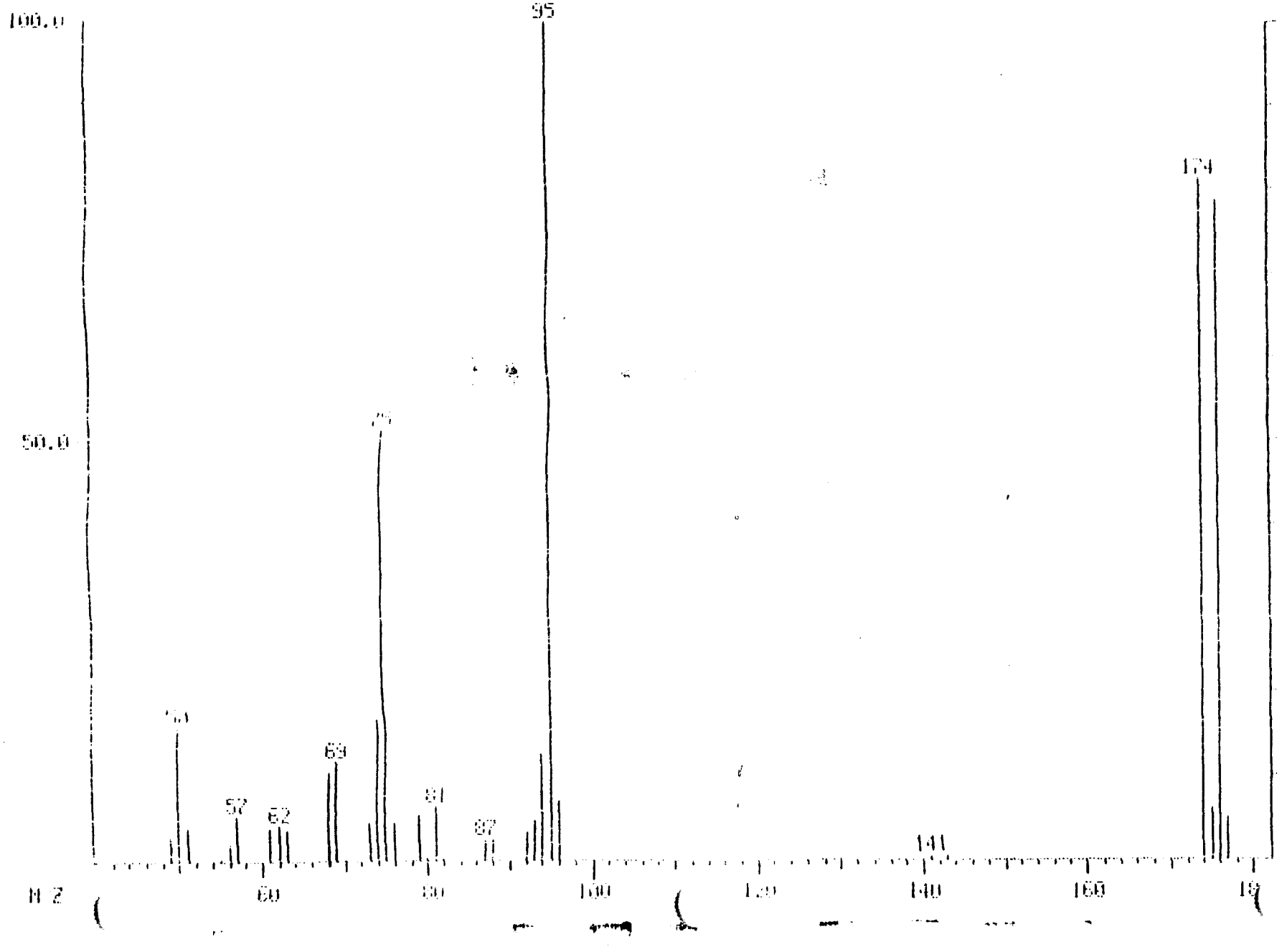
038

847521384

MASS SPECTRUM
08/04/92 10:53:00 + 5:21
SAMPLE: SONG BFB MASS SPECTROMETER TUNE CHECK
CONDS.: IAL/624 DB624
TEMP: 107 DEG. C
#428 TO #431 SUMMED

DATA: BF0804 #429
CALI: FC041492 #3

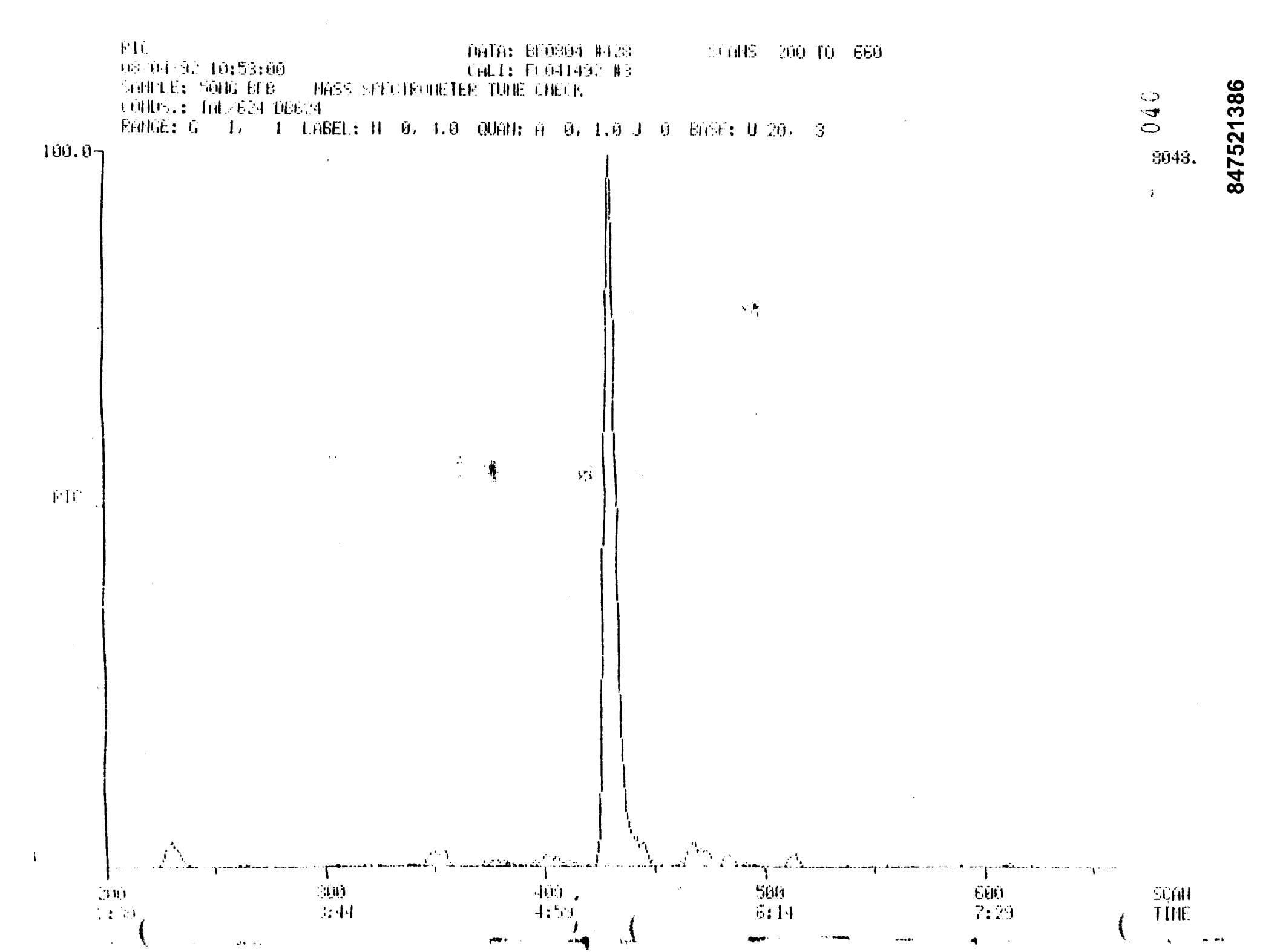
BASE M Z: 95
RIC: 28160.



6152.
0.

C39

847521385


PIC
DATA: BF0304 #428
SCANS 200 TO 660
08-04-92 10:53:00
CALI: FL941492 #3
SAMPLE: 500G BFB MASS SPECTROMETER TUNE CHECK
CONDS.: 1mL/624 DB624
RANGE: G 1, 1 LABEL: H 0, 1.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
8048.
100.0
PIC
300
1:30
400
3:44
500
4:59
600
6:14
700
7:29
SCAN
TIME
8475213B6

Initial Calibration Data

Case No. 10920 — Contract Lab: IAL
Contract No. NA — Instrument Identifier: ICOS-50KO
Calibration Date: 7/22/92
* = CCC, MAX %RSD = 30
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	RF 20PPB	RF 50PPB	RF 100PP	RF 150PP	RF 200PP	Mean RF	%RSD
CS15	1,2-DICHLOROETHANE-D4	1.362	1.338	1.808	1.800	1.705	1.603	14.606
CS05	TOLUENE-D8 *SS2*	1.039	0.828	1.192	1.173	1.103	1.067	13.752
CS10	4-BROMOFLOROBENZENE *S	0.918	0.591	0.921	0.949	0.833	0.844	17.558
C010	CHLOROMETHANE	0.474	0.458	0.468	0.460	0.425	0.457	4.163
C015	VINYL CHLORIDE	0.603	0.604	0.622	0.558	0.544	0.586	5.702
C020	BROMOMETHANE	1.136	0.999	0.999	0.952	0.894	0.996	8.967
C025	CHLOROETHANE	0.626	0.589	0.659	0.648	0.558	0.616	6.804
C030	1,1-DICHLOROETHENE	1.346	1.396	1.731	1.932	1.727	1.626	15.260
C035	METHYLENE CHLORIDE	0.793	0.699	0.851	0.829	0.840	0.803	7.681
C040	T-1,2-DICHLOROETHENE	0.734	0.907	1.076	1.112	1.065	0.979	16.126
C045	1,1-DICHLOROETHANE	1.731	1.863	2.148	2.244	1.931	1.984	10.887
C050	CHLOROFORM	3.213	3.072	3.309	3.373	3.110	3.215	3.980
C055	1,1,1-TRICHLOROETHANE	3.123	2.971	3.315	3.397	3.018	3.165	5.853
C060	CARBON TETRACHLORIDE	3.380	3.128	3.542	3.757	3.400	3.441	6.711
C110	BENZENE	0.973	0.807	0.884	0.901	0.822	0.877	7.594
C115	1,2-DICHLOROETHANE	0.451	0.392	0.423	0.415	0.369	0.410	7.547
C120	TRICHLOROETHENE	0.646	0.579	0.511	0.482	0.458	0.535	14.338
C125	1,2-DICHLOROPROPANE	0.428	0.368	0.373	0.363	0.349	0.376	8.029
C130	BROMODICHLOROMETHANE	1.030	0.949	0.834	0.819	0.767	0.880	12.152
C135	C-1,3-DICHLOROPROPENE	0.464	0.447	0.474	0.479	0.481	0.469	3.012
C140	TOLUENE	1.113	1.015	1.138	1.143	1.100	1.102	4.691
C145	T-1,3-DICHLOROPROPENE	0.286	0.276	0.312	0.315	0.312	0.300	6.034
C150	1,1,2-TRICHLOROETHANE	0.383	0.330	0.350	0.324	0.304	0.339	9.830
C155	TETRACHLOROETHENE	0.591	0.509	0.601	0.578	0.559	0.568	6.411
C160	DIBROMOCHLOROMETHANE	0.725	0.654	0.688	0.661	0.623	0.670	5.741
C210	CHLOROBENZENE	1.175	0.987	1.097	1.108	0.946	1.064	8.447
C215	ETHYL BENZENE	1.631	1.365	1.637	1.651	1.459	1.549	8.336
C220	M-XYLENE	3.013	2.541	3.100	3.111	2.585	2.870	9.868
C225	P-XYLENE	3.013	2.541	3.100	3.111	2.585	2.870	9.868
C230	O-XYLENE	1.589	1.330	1.586	1.651	1.450	1.521	8.519
C235	BROMOFORM	0.517	0.430	0.483	0.461	0.410	0.460	9.177
C240	1,1,2,2-TETRACHLOROETH	0.517	0.380	0.485	0.454	0.380	0.443	13.954
C245	1,3-DICHLOROBENZENE	0.932	0.818	0.967	0.965	0.874	0.911	7.037
C250	1,4-DICHLOROBENZENE	0.957	0.857	1.010	1.008	0.926	0.952	6.704
C255	1,2-DICHLOROBENZENE	0.970	0.834	0.937	0.926	0.830	0.899	7.052

847521387

Calibration Check

Case No. 10920 Contract Lab: IAL
Contract No. NA Instrument Identifier: ICDS-50KO
Calibration Date: 7/22/92
Standard File: VCK0730=

Date: 07/30/92 Time: 17:45.00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30(BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(O)	% D	
CS15	1,2-DICHLOROETHANE-D4	1.603	1.508	5.920	
CS05	TOLUENE-D8 *SS2*	1.067	1.059	0.702	
CS10	4-BROMOFLOROBENZENE *S	0.844	0.733	13.167	
C010	CHLOROMETHANE	0.457	0.370	19.025	#
C015	VINYL CHLORIDE	0.586	0.629	7.305	*
C020	BROMOMETHANE	0.996	1.059	6.281	
C025	CHLOROETHANE	0.616	0.675	9.519	
C030	1,1-DICHLOROETHENE	1.626	1.491	8.334	*
C035	METHYLENE CHLORIDE	0.803	1.126	40.337	
C040	T-1,2-DICHLOROETHENE	0.979	1.088	11.151	
C045	1,1-DICHLOROETHANE	1.984	2.148	8.282	#
C050	CHLOROFORM	3.215	3.488	8.477	*
C055	1,1,1-TRICHLOROETHANE	3.165	3.824	20.822	
C060	CARBON TETRACHLORIDE	3.441	4.116	19.609	
C110	BENZENE	0.677	0.789	10.078	
C115	1,2-DICHLOROETHANE	0.410	0.351	14.323	
C120	TRICHLOROETHENE	0.535	0.479	10.431	
C125	1,2-DICHLOROPROPANE	0.376	0.301	19.959	*
C130	BROMODICHLOROMETHANE	0.880	0.694	21.120	
C135	C-1,3-DICHLOROPROPENE	0.469	0.395	15.865	
C140	TOLUENE	1.102	1.232	11.854	*
C145	T-1,3-DICHLOROPROPENE	0.300	0.240	20.089	
C150	1,1,2-TRICHLOROETHANE	0.329	0.275	16.702	
C155	TETRACHLOROETHENE	0.586	0.556	5.096	
C160	DIBROMOCHLOROMETHANE	0.670	0.591	11.778	
C210	CHLOROBENZENE	1.064	0.982	7.645	#
C215	ETHYL BENZENE	1.549	1.557	0.519	*
C220	M-XYLENE	2.870	3.006	4.723	
C225	P-XYLENE	2.870	3.006	4.723	
C230	O-XYLENE	1.521	1.553	2.072	
C235	BROMOFORM	0.460	0.429	6.849	#
C240	1,1,2,2-TETRACHLOROETH	0.443	0.365	17.530	#
C245	1,3-DICHLOROBENZENE	0.911	0.783	14.090	
C250	1,4-DICHLOROBENZENE	0.952	0.841	11.633	
C255	1,2-DICHLOROBENZENE	0.899	0.770	14.403	

847521388

Calibration Check

Case No. 10920 — Contract Lab: IAL
Contract No: NA — Instrument Identifier: INCOS-50
Calibration Date: 07/22/92
Standard File: WK0804
Date: 08/04/92 — Time: 11:45:00
* = CCC, MAX %D = 25
# = SPCC, MIN AVG RF = 0.30 (BROMOFORM = 0.25)

	Compound	Mean RF(I)	RF(C)	%D	
C815	1,2-DICHLOROETHANE-D4	1.275	1.324	3.793	
C805	TOLUENE-D8 *SS2*	1.192	1.187	0.425	
C810	4-BROMOFLOROBENZENE *S	0.761	0.710	6.686	
C010	CHLOROMETHANE	0.414	0.435	5.074	#
C015	VINYL CHLORIDE	0.514	0.616	19.731	*
C020	BROMOMETHANE	0.452	0.926	41.936	
C025	CHLOROETHANE	0.569	0.407	28.402	
C030	1,1-DICHLOROETHENE	1.317	1.255	4.761	*
C035	METHYLENE CHLORIDE	1.202	1.206	4.190	
C040	T-1,2-DICHLOROETHENE	1.302	2.252	72.981	
C045	1,1-DICHLOROETHANE	1.679	1.384	17.565	#
C050	CHLOROFORM	2.512	2.423	3.534	*
C055	1,1,1-TRICHLOROETHANE	2.415	2.556	5.893	
C060	CARBON TETRACHLORIDE	2.397	2.715	13.247	
C110	BENZENE	1.200	0.822	31.491	
C115	1,2-DICHLOROETHANE	1.513	0.991	35.427	
C120	TRICHLOROETHENE	0.502	0.496	1.249	
C125	1,2-DICHLOROPROPANE	0.369	0.283	23.286	*
C130	BROMODICHLOROMETHANE	0.817	0.741	9.345	
C135	C-1,3-DICHLOROPROPENE	0.562	0.466	17.080	
C140	TOLUENE	1.214	1.308	7.373	*
C145	T-1,3-DICHLOROPROPENE	0.367	0.265	27.898	
C150	1,1,2-TRICHLOROETHANE	0.284	0.262	7.734	
C155	TETRACHLOROETHENE	1.688	0.738	7.220	
C160	DIBROMOCHLOROMETHANE	0.683	0.627	8.240	
C210	CHLOROBENZENE	0.932	1.001	7.395	#
C215	ETHYL BENZENE	1.442	1.542	6.904	*
C220	M-XYLENE	2.707	2.562	2.761	
C225	P-XYLENE	2.707	2.662	2.761	
C230	O-XYLENE	1.361	1.437	5.595	
C235	BROMOFORM	0.396	0.399	0.684	#
C240	1,1,2,2-TETRACHLOROETH	0.352	0.301	14.365	#
C245	1,3-DICHLOROBENZENE	0.886	0.854	3.618	
C250	1,4-DICHLOROBENZENE	0.935	0.879	5.984	
C255	1,2-DICHLOROBENZENE	0.860	0.810	5.865	

847521389

VOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: N/A

Lab code: NA Case No.: N/A SAS No.: NA SDG No.: NA

Lab File ID: VB0730 Lab Sample ID: 542, 521, 544, 543

Date Analyzed: 7/30/92 Time Analyzed: 17:09

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: INICOS-50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VSTD50	VOA CALCHK	VCK0730	7/30/92
02	W Spk	544003 MS	V544003S1	
03	W Spk Dup	544003 MSD	V544003S2	
04	S Spk	530001 MS	V530001S1	
05	S Spk Dup	530001 MSD	V530001S2	
06	TRIP	544003	V544003	
07	TRIP	542017	V542017	
08	FIELD	542016	V542016	
09	FIELD	544002	V544002	
10	TV-2	004	004	
11	S-1	005	005	7/31/92
12	S-2	006	006	
13		521001 Rerun	V521001D	
14	TV-1	544001	V544001	
15	S-3	544007	V544007	
16	S-4	543001	V543001	
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

847521390

Quantitation Report File: VB0730

Data: VB0730.TI
07/30/92 17:09:00
Sample: VOA METHOD BLK
ds.: IAL/624/DB624
rmula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ET-YL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

045

847521391

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	847	8:04	1	1.000	A BB	29390.	50.000	UG/L	17.39
2	114	844	10:31	2	1.000	A BB	139623.	50.000	UG/L	17.39
3	117	1327	16:33	3	1.000	A BB	114913.	50.000	UG/L	17.39
4	65	751	9:22	1	1.161	A BB	39884.	45.015	UG/L	15.66
5	98	1082	13:29	2	1.292	A BB	141154.	47.745	UG/L	16.61
6	95	1546	19:17	3	1.165	A BB	81648.	48.487	UG/L	16.86
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	374	4:40	1	0.578	A VB	751.	1.135	UG/L	0.39
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	97	686	8:33	1	1.060	A BB	170.	0.077	UG/L	0.03
17	NOT FOUND									
18	78	751	9:22	2	0.890	A BB	111.	0.050	UG/L	0.02
19	NOT FOUND									
20	NOT FOUND									
21	63	909	11:20	2	1.077	A*BB	151.	0.192	UG/L	0.07
22	NOT FOUND									
23	NOT FOUND									
24	91	1092	13:37	2	1.294	A BB	1078.	0.401	UG/L	0.14
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	91	1361	16:58	3	1.026	A BB	51.	0.014	UG/L	0.00
31	91	1383	17:15	3	1.042	A BB	543.	0.079	UG/L	0.03
32	91	1383	17:15	3	1.042	A BB	543.	0.079	UG/L	0.03
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	45.02	50.00	1.357	1.507	0.90
5	13:31	1.00	1.280	1.00	47.75	50.00	1.011	1.059	0.95
6	19:18	1.00	1.164	1.00	48.48	50.00	0.711	0.733	0.97
7	1:25		0.175						

046

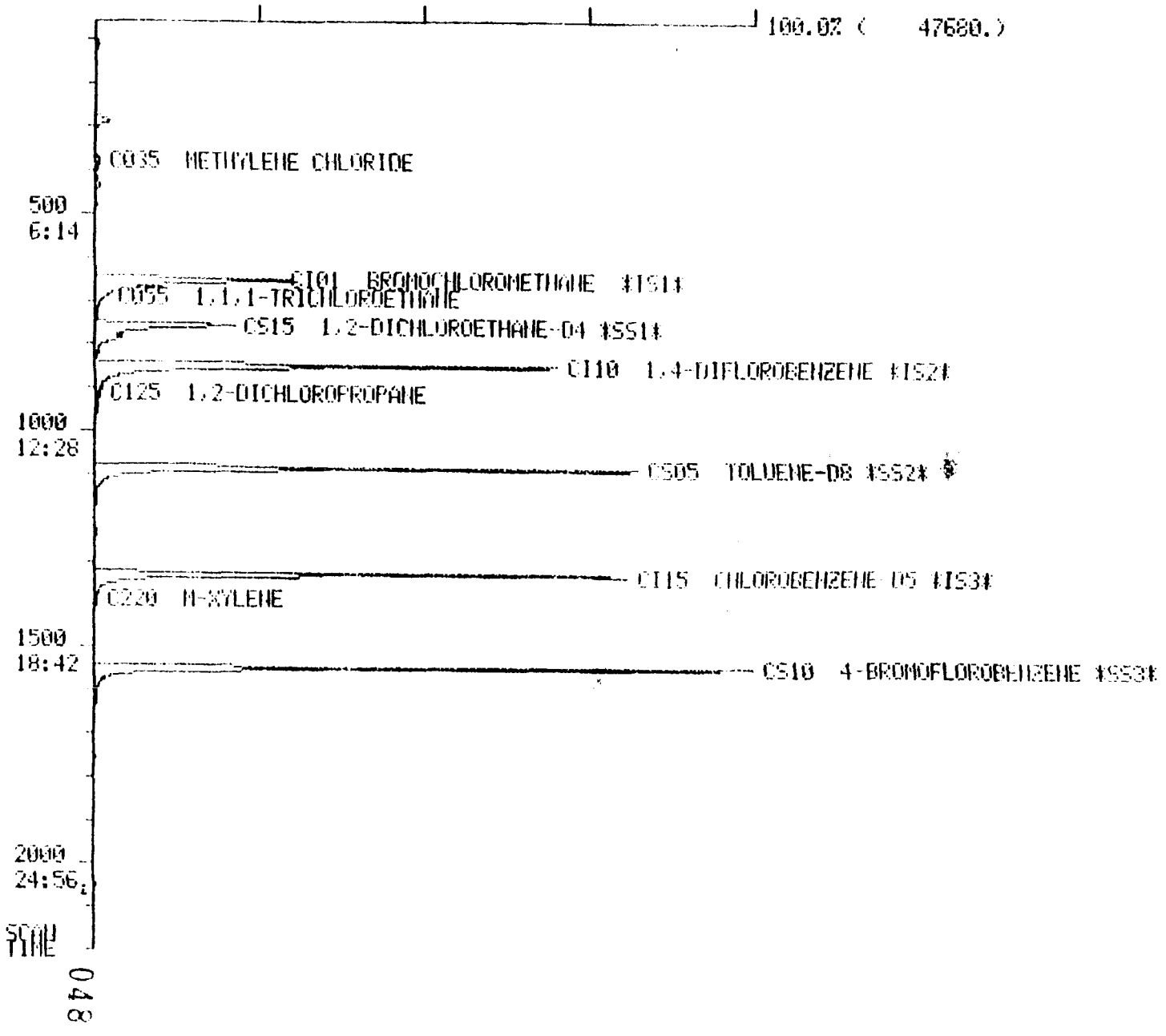
847521392

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:23		0.416						
12	4:38	1.01	0.569	1.02	1.13	50.00	0.026	1.126	0.02
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35	1.00	1.057	1.00	0.08	50.00	0.006	3.823	0.00
17	8:56		1.098						
18	9:25	0.99	0.891	1.00	0.05	50.00	0.001	0.789	0.00
19	9:34		0.906						
20	10:55		1.033						
21	11:21	1.00	1.074	1.00	0.19	50.00	0.001	0.301	0.00
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	0.40	50.00	0.010	1.282	0.01
25	14:21		1.359						
26	14:39		1.387						
27	14:44		1.395						
28	15:24		1.458						
29	16:38		1.003						
30	17:00	1.00	1.026	1.00	0.01	50.00	0.000	1.556	0.00
31	17:18	1.00	1.043	1.00	0.08	50.00	0.005	3.005	0.00
32	17:18	1.00	1.043	1.00	0.08	50.00	0.005	3.005	0.00
33	18:08		1.093						
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
37	21:59		1.326						
38	22:47		1.374						
39	5:22		0.662						
40	6:16		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521393

DATA FROM FILE: VB0730 SCANS 60 TO 2200 ACQUIRED: 07/30/92 17:09:00
CALI: VB0730 #3

SAMPLE: VOA METHOD BLK
CONDS.: IHL/624/DB624



847521394

VOLATILE METHOD BLANK SUMMARY

Lab name: INTEGRATED ANALTICAL LAB Contract: N/A

Lab code: NA Case No.: N/A SAS No.: NA SDG No.: NA

Lab File ID: VB0804 Lab Sample ID: 542, 543, 544, 549

Date Analyzed: 8/04/92 Time Analyzed: 1108

Matrix: (soil/water) W Level: (low/med) L

Instrument ID: INICCS-50

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VSTD	VOA CAL CHK	VCK0804	8/4/92
02	W SPK	549003MS	V549003S1	
03	W SPK Dup	549003MSD	V549003S2	
04	T3B	542008	V542008	
05	T3C	009	009	
06	T4A	010	010	
07	T4B	011	011	
08	T4C	012	012	
09	T5A	013	013	
10	T5B	014	014	
11	T5C	015	015	
12	TRIP	549003	V549003	
13	FIELD	002	002	
14	MW1	001	001	
15	TV-2	544004 Rerun	V544004A	
16	S-1	005	005A	
17	S-2	006	006A	
18	TV-1	001	001A	
19	S-4	543001	V543001A	
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

847521395

Quantitation Report File: VB0804

Data: VB0804.TI
08/04/92 11:08:00
Mple: VOA METHOD BLK
Lmds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENIENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENIENE
37	C250	1,4-DICHLOROBENIENE
38	C255	1,2-DICHLOROBENIENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

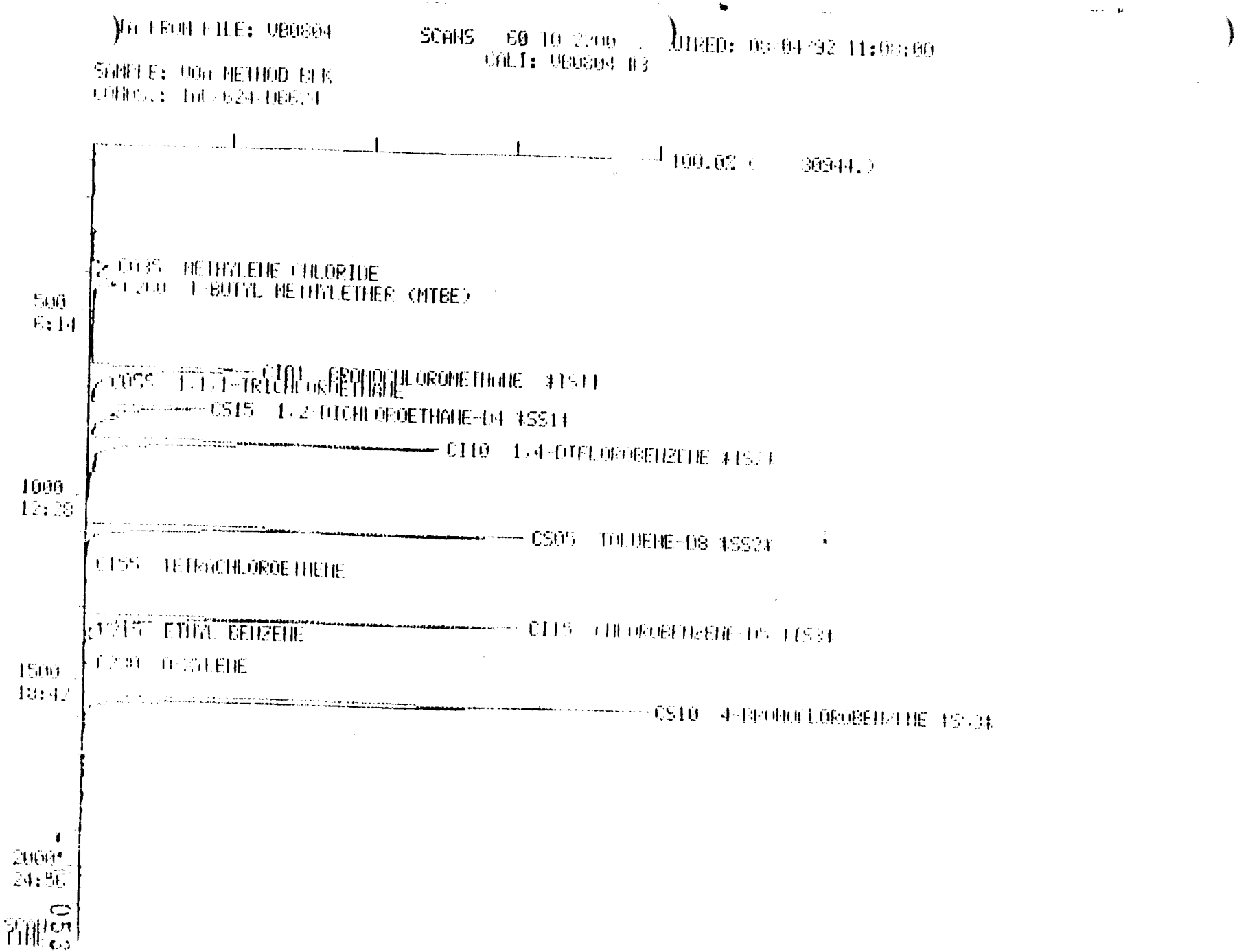
847521396

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	652	8:08	1	1.000	A BB	18067	50.000 UG/L	16.35
2	114	844	10:31	2	1.000	A BB	72434.	50.000 UG/L	16.35
3	117	1025	12:31	3	1.000	A BB	71154.	50.000 UG/L	16.35
4	65	752	9:33	1	1.153	A BB	24430.	51.096 UG/L	16.71
5	95	1081	13:29	2	1.281	A BB	89249.	51.928 UG/L	16.98
6	95	1543	19:14	3	1.165	A BB	51051.	50.547 UG/L	16.53
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	380	4:44	1	0.583	A BB	3586.	8.213 UG/L	2.69
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	97	687	8:34	1	1.054	A BV	223.	0.347 UG/L	0.03
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1073	13:38	3	1.295	A BB	1400	1.741 UG/L	0.34
25	NOT FOUND								
26	NOT FOUND								
27	166	1178	14:41	2	1.396	A BB	68	0.064 UG/L	0.02
28	NOT FOUND								
29	NOT FOUND								
30	91	1361	16:58	3	1.027	A BB	888	0.304 UG/L	0.10
31	91	1380	17:16	3	1.044	A BB	2408	0.836 UG/L	0.21
32	91	1380	17:16	3	1.044	A BB	2408	0.836 UG/L	0.21
33	91	1450	18:05	3	1.094	A BB	1227	0.800 UG/L	0.20
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	73	432	5:23	1	0.663	A BV	379.	0.393 UG/L	0.13
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:31	1.00	1.000	1.01	50.00	50.00	1.000	1.000	1.00
3	12:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:22	1.00	1.157	1.00	51.10	50.00	1.052	1.023	1.03
5	13:28	1.00	1.281	1.00	51.92	50.00	1.232	1.186	1.04
6	19:14	1.00	1.168	1.00	50.55	50.00	0.717	0.709	(0)1
7	1:29		0.182						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:34		0.194						
9	2:00		0.246						
10	2:07		0.262						
11	3:26		0.423						
12	4:42	1.01	0.580	1.00	8.21	50.00	0.198	1.208	0.16
13	5:16		0.651						
14	6:13		0.766						
15	8:29		1.046						
16	8:35	1.00	1.058	1.00	0.25	50.00	0.013	2.555	0.00
17	8:55		1.100						
18	9:23		0.892						
19	9:32		0.907						
20	10:53		1.036						
21	11:18		1.075						
22	12:02		1.147						
23	13:02		1.240						
24	13:36	1.00	1.294	1.00	0.74	50.00	0.019	1.305	0.01
25	14:19		1.361						
26	14:37		1.390						
27	14:42	1.00	1.399	1.00	0.06	50.00	0.001	0.737	0.00
28	15:20		1.459						
29	16:34		1.003						
30	16:57	1.00	1.026	1.00	0.30	50.00	0.009	1.541	0.01
31	17:12	1.00	1.048	1.00	0.34	50.00	0.024	2.661	0.01
32	17:14	1.00	1.048	1.00	0.34	50.00	0.024	2.661	0.01
33	18:04	1.00	1.094	1.00	0.60	50.00	0.017	1.437	0.01
34	18:25		1.115						
35	19:49		1.196						
36	21:41		1.312						
37	21:55		1.327						
38	22:40		1.375						
39	5:22	1.00	0.662	1.00	0.39	100.00	0.010	2.567	0.00
40	5:16		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521398


FROM FILE: VB0804
SCANS 60 TO 2200
CALI: VB0804 #3
SAMPLE: VOA METHOD BLK
100.0% (30944.)
CO35 METHYLENE CHLORIDE
1-BUTYL METHYLETHER (MTBE)
500
6:14
CI01 BROMOCHLOROMETHANE #IS1#
CO55 1,1,1-TRICHLOROETHANE
CS15 1,2-DICHLOROETHANE-D4 #SS1#
CI10 1,4-DIFLOROBENZENE #IS2#
1000
12:28
CS05 TOLUENE-D8 #SS2#
CI55 TETRACHLOROETHENE
CI15 CHLOROBENZENE-D5 #IS3#
ETHYL BENZENE
1500
18:42
CS10 4-BROMOFLOROBENZENE #SS3#
2000
24:56
SCAN TIME

Quantitation Report File: JJRT01

Data: VB0804.TI
08/04/92 11:08:00
Sample: VOA METHOD BLK
nds.: IAL/624/DB624
ormula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	UNKNOWN
2	UNKNOWN
3	UNKNOWN
4	UNKNOWN
5	UNKNOWN

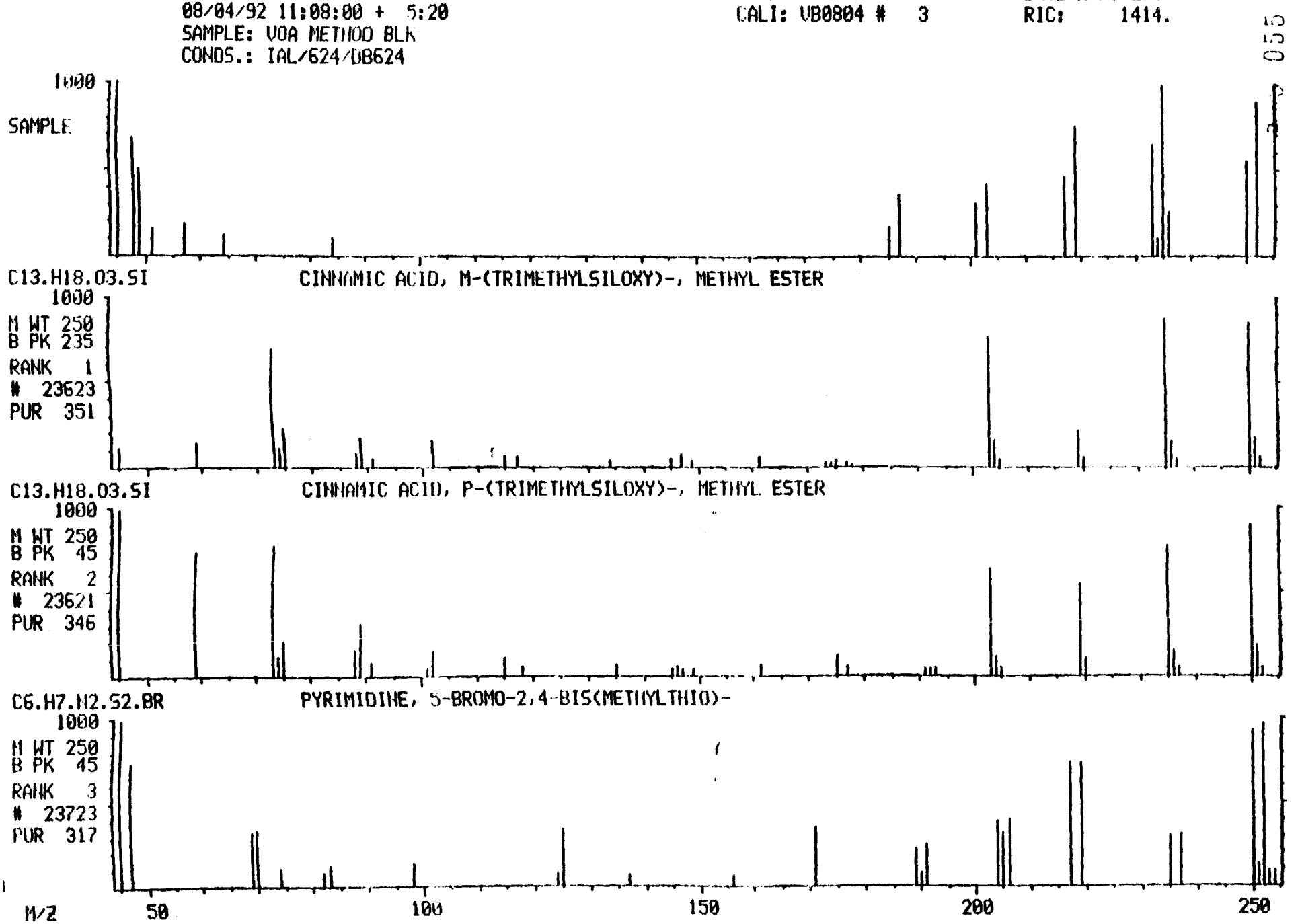
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	RIC	428	5:20	5	0.396	A BB	15941.	7.267	2.77
2	RIC	651	8:07	5	0.602	A BB	94277.	42.976	16.40
3	RIC	752	9:23	5	0.696	A BB	62234.	28.370	10.83
4	RIC	844	10:31	5	0.781	A BB	183056.	83.447	31.84
5	RIC	1081	13:29	5	1.000	A BB	219369.	100.000	38.16

No	Ret(L) Ratio	RRT(L) Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L) Ratio
1			7.27		0.073	
2			42.98		0.430	
3			28.37		0.284	
4			83.45		0.834	
5			100.00		1.000	

MID LIBRARY SEARCH (LIBRARYNB)
08/04/92 11:08:00 + 5:20
SAMPLE: VOA METHOD BLK
CONDS.: IAL/624/DB624

DATA: VB0804 # 428
CALI: VB0804 # 3

BASE M/Z: 235
RIC: 1414.



847521401

Quantitation Report File: V944001

Data: V944001.TI
07/21/92 1:31.00
Sample: 944001 (0-15.0) Type: A DIL 1:100
Misc: IAL;8E4;DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	C101 BROMOCHLOROMETHANE *IS1*
2	C110 1,4-DIFLOROBENZENE *IS2*
3	C115 CHLOROBENZENE-D5 *IS3*
4	C819 1,2-DICHLOROETHANE-D4 *SS1*
5	C805 TOLUENE-D8 *SS2*
6	C810 4-BROMOFLOROBENZENE *SS3*
7	C010 CHLOROMETHANE
8	C014 VINYL CHLORIDE
9	C021 BROMOMETHANE
10	C025 CHLOROETHANE
11	C030 1,1-DICHLOROETHENE
12	C035 METHYLENE CHLORIDE
13	C040 T-1,2-DICHLOROETHENE
14	C045 1,1-DICHLOROETHANE
15	C050 CHLOROFORM
16	C055 1,1,1-TRICHLOROETHANE
17	C060 CARBON TETRACHLORIDE
18	C110 BENZENE
19	C113 1,2-DICHLOROETHANE
20	C120 TRICHLOROETHENE
21	C122 1,2-DICHLOROPROPANE
22	C130 BROMODICHLOROMETHANE
23	C135 C-1,3-TRICHLOROPROPENE
24	C140 TOLUENE
25	C145 T-1,3-DICHLOROPROPENE
26	C150 1,1,2-TRICHLOROETHANE
27	C155 TETRACHLOROETHENE
28	C160 DIBROMOCHLOROMETHANE
29	C210 CHLOROBENZENE
30	C215 ETHYL BENZENE
31	C220 M-XYLENE
32	C225 P-XYLENE
33	C230 O-XYLENE
34	C235 BROMOFORM
35	C240 1,1,2,2-TETRACHLOROETHANE
36	C245 1,3-DICHLOROBENZENE
37	C250 1,4-DICHLOROBENZENE
38	C255 1,2-DICHLOROBENZENE
39	C2E0 T-BUTYL METHYLETHER (MTBE)
40	C2E5 DIISOPROPYL ETHER (DIPE)
41	C2F0 ETHYL-T-BUTYLETHER (ETBE)
42	C2F5 METHYL ETHYL KETONE (MEK)
43	C250 NAPHTHALENE
44	C255 PYRIDINE
	C240 ACRYLONITRILE
46	C2F5 ACROLEIN

056

847521402

No	m/t	Scan	Time	Ref	RRT	Meth	Area(Hgh)	Amount	%Tot
1	49	652	8:09	1	1.000	A BB	24412	50.000 UG/L	4.35
2	114	846	10:33	2	1.000	A BB	103528	50.000 UG/L	4.35
3	117	1330	16:35	3	1.000	A BB	103119	50.000 UG/L	4.35
4	65	755	9:25	1	1.156	A BB	39217	53.290 UG/L	4.63
5	98	1085	13:32	2	1.280	A BB	112920	51.506 UG/L	4.48
6	95	1548	19:18	3	1.164	A BB	69542	46.022 UG/L	4.00
7	NOT FOUND								
8	62	125	1:34	1	0.191	A BB	130	0.586 UG/L	0.05
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	376	4:41	1	0.576	A BV	1055.	1.919 UG/L	0.17
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	78	754	9:24	2	0.891	A BB	2224	1.362 UG/L	0.12
19	62	768	9:35	2	0.908	A BB	187499	258.088 UG/L	22.40
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1093	13:39	2	1.294	A BB	818147	320.695 UG/L	27.87
25	NOT FOUND								
26	NOT FOUND								
27	166	1154	14:46	2	1.400	A BB	55	0.045 UG/L	0.00
28	NOT FOUND								
29	112	1334	16:38	3	1.003	A BB	348412	172.072 UG/L	14.95
30	91	1363	17:00	3	1.025	A BB	18835.	5.869 UG/L	0.51
31	91	1386	17:17	3	1.042	A BB	28408	4.584 UG/L	0.40
32	91	1386	17:17	3	1.042	A BB	28408	4.584 UG/L	0.40
33	91	1455	18:08	3	1.094	A BB	7417	2.317 UG/L	0.20
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	73	434	5:25	1	0.665	A BB	5047.	3.876 UG/L	0.34
40	NOT FOUND								
41	59	458	5:43	1	0.701	A BV	473.	72.517 UG/L	6.30
42	NOT FOUND								
43	128	2089	26:03	3	1.571	A BB	3982.	2.555 UG/L	0.22
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	53.29	50.00	1.606	1.507	1.07
5	13:31	1.00	1.280	1.00	51.51	50.00	1.091	1.059	1.02
6	19:18	1.00	1.164	1.00	46.02	50.00	0.674	0.733	0.92
7	1:25		0.175						
8	1:32	1.02	0.189	1.01	0.59	50.00	0.007	0.629	0.01

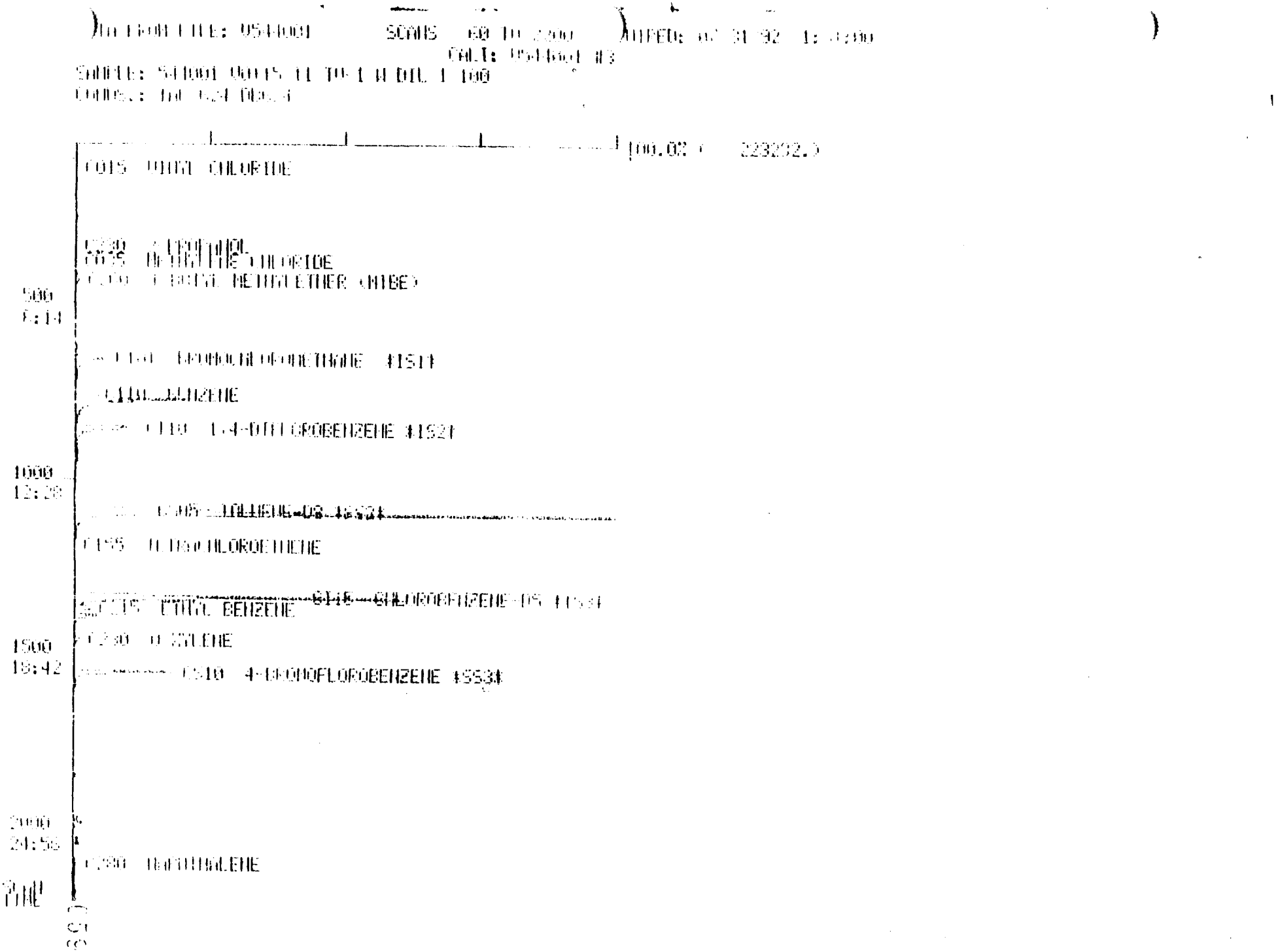
057

847521403

No	Ret. T	Ratio	RT (L)	Ratio	Amnt	Amnt (L)	% Tot	% Tot (L)	Ratio
9	1:57		0.239						
10	2:06		0.256						
11	3:23		0.416						
12	4:38	1.01	0.5e9	1.01	1.92	50.00	0.043	1.134	1.04
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:5e		1.098						
18	9:25	1.00	0.891	1.00	1.36	50.00	0.021	0.789	0.93
19	9:34	1.00	0.90e	1.00	358.09	50.00	1.811	0.351	5.15
20	10:58		1.033						
21	11:21		1.074						
22	12:0e		1.14e						
23	13:05		1.238						
24	13:38	1.00	1.298	1.00	320.70	50.00	7.902	1.332	5.41
25	14:21		1.389						
26	14:39		1.387						
27	14:4e	1.00	1.375	1.00	1.04	50.00	0.001	0.596	0.01
28	15:2-		1.418						
29	16:38	1.11	1.661	1.0-	178.27	51.00	3.379	0.752	3.44
30	17:00	1.10	1.72e	1.00	9.27	50.00	0.182	1.552	0.12
31	17:19	1.00	1.743	1.00	4.59	50.00	0.275	3.005	0.09
32	17:19	1.00	1.743	1.00	4.59	50.00	0.275	3.005	0.09
33	18:26	1.00	1.8f0	1.00	3.32	50.00	0.072	1.552	0.09
34	18:2e		1.914						
35	19:50		1.978						
36	21:43		1.311						
37	21:5-		1.32e						
38	22:47		1.374						
39	5:22	1.01	0.e63	1.00	3.86	100.00	0.103	2.5e7	0.04
40	5:1e		0.811						
41	5:41	1.00	0.7--	1.01	78.52	1000.00	0.001	0.012	1.07
42	7:51		0.481						
43	2e:02	1.00	1.3--	1.00	2.93	50.00	0.035	0.78e	1.00
44	10:44		1.512						
45	4:49		0.e19						
46	3:04		0.784						

058

847521404


SCANS 60 TO 2200
CALI: V544001 #3
SAMPLE: 544001 V0115 11 TO 1 W DIL 1 100
(00.0% (223232.)
C015 VINYL CHLORIDE
C230 ACETONE
C035 METHYLENE CHLORIDE
C160 BUTYL METHYLETHER (MTBE)
500
6:14
C160 BROMOCHLOROMETHANE *IS1*
C110 BENZENE
C110 1,4-DIFLOROBENZENE *IS2*
1000
12:28
C155 TETRACHLOROETHENE
C215 ETHYL BENZENE
C230 O-XYLENE
1500
18:42
C510 4-BROMOFLOROBENZENE *SS3*
2000
24:56
C280 NAPHTHALENE
SCAN TIME

847521405

Quantitation Report File V544001

Data: V544001 TI
07/31/92 1:31 00
Sample: 544001 VO+15/II TV-1 W DIL 1/100
Code: IAL/624/DS624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by IAL Analyst: FRK Acct No.: NA

AMOUNT=HEIGHT * REF AMNT/(REF HEIGHT * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI01 BROMOCHLOROMETHANE *IS1*
2	0-00-0	CI10 1,4-DIFLOROBENZENE *IS2*
3	0-00-0	CI15 CHLOROBENZENE-D5 *IS3*
4	0-00-0	UNKNOWN

NO TICs!

No	m/z	Scan	Time	Ref	RRT	Meth	Area Hgt	Amount	%Tot
1	TOT	653	8.09	1	1.000	A BB	8161.*	50.000 UG/L	33.05
2	TOT	847	10.34	2	1.000	A BB	16304.*	50.000 UG/L	33.05
3	TOT	1300	16.05	3	[illegible]	A BB	[illegible]	50.000 UG/L	33.05
4	TOT	671	8.22	1	1.028	A BB	212.*	1.302	0.86

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8.38	1.23	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9.24	1.12	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15.40	1.06	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4					1.30	1.00	1.302	1.000	1.30

847521406

Quantitation Report File: V544001A

Data: V544001A TI
08/04/92 21:52:00
Sample: 544001 VO-15/II TV-1 W DIL 1/500 RERUN
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C021	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	652	8:08	1	1.000	A BB	12290	50.000	UG/L	11.53
2	114	845	10:32	2	1.000	A BB	34158.	50.000	UG/L	11.53
3	117	1326	16:32	3	1.000	A BB	33624.	50.000	UG/L	11.53
4	65	755	9:25	1	1.158	A BB	14392	44.251	UG/L	10.21
5	98	1082	13:29	2	1.280	A BB	37864	46.717	UG/L	10.77
6	95	1543	19:14	3	1.164	A BB	22716.	47.615	UG/L	10.98
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	379	4:44	1	0.581	A VV	306.	1.030	UG/L	0.24
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	79	755	9:25	2	0.893	A VB	29.	0.052	UG/L	0.01
19	62	766	9:33	2	0.907	A BB	13758	60.859	UG/L	14.04
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1092	13:37	2	1.292	A BB	53299	59.798	UG/L	13.79
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	112	1329	16:34	3	1.002	A BB	33621.	35.125	UG/L	8.10
30	91	1360	16:57	3	1.026	A BB	1573	1.518	UG/L	0.35
31	91	1383	17:15	3	1.043	A BB	391.	0.386	UG/L	0.09
32	91	1383	17:15	3	1.043	A BB	391	0.386	UG/L	0.09
33	91	1450	18:05	3	1.094	A BB	523	0.541	UG/L	0.12
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	73	431	5:22	1	0.661	A BB	75.	0.114	UG/L	0.03
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

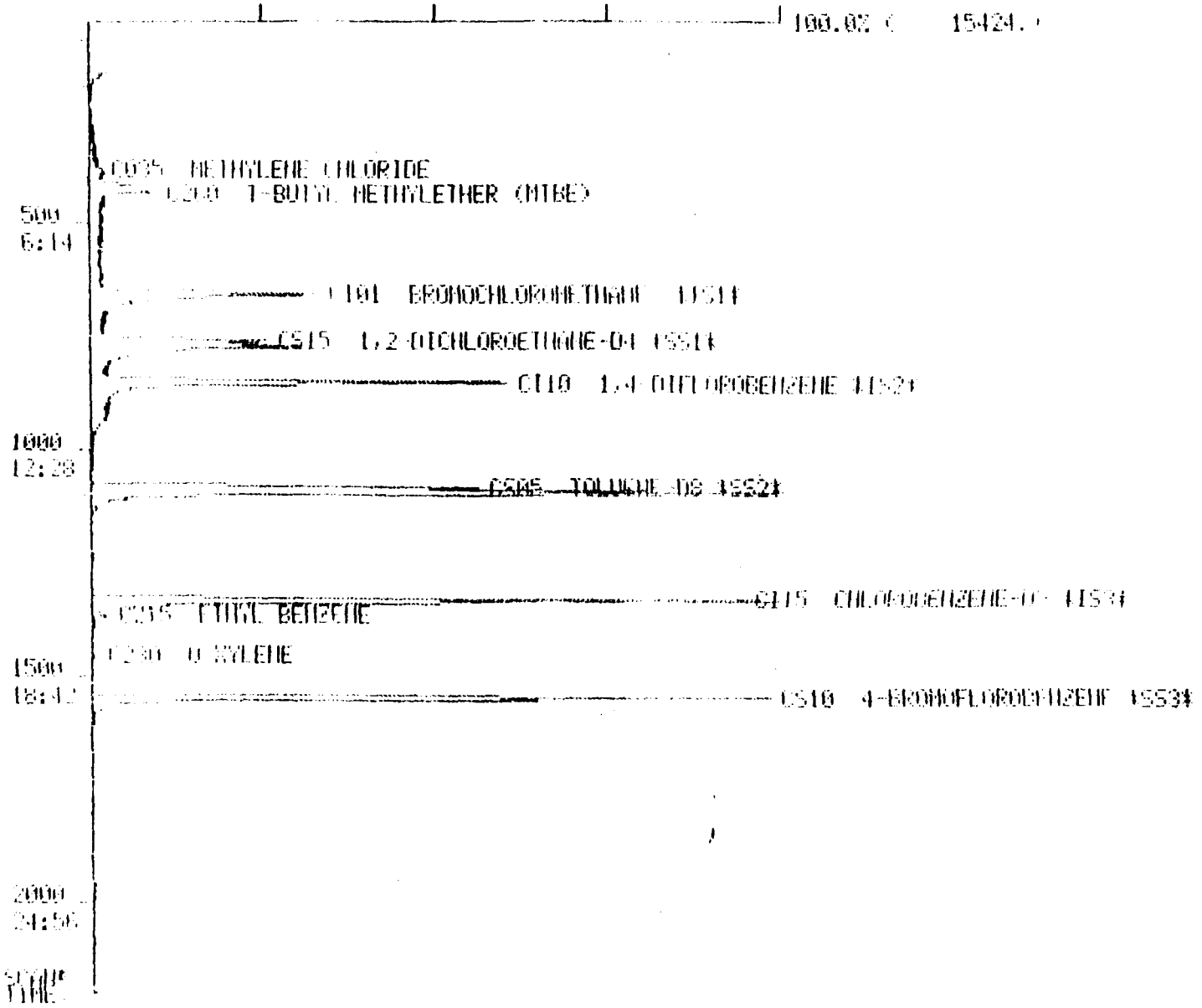
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:06	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:31	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:22	1.01	1.157	1.00	44.25	50.00	1.171	1.323	1.89
5	13:28	1.00	1.291	1.00	46.72	50.00	1.108	1.186	0.93
6	19:14	1.00	1.165	1.00	47.62	50.00	0.975	0.705	0.99
7	1:25		0.132						

062

847521408

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:34		0.194						
9	2:00		0.24e						
10	2:07		0.2e2						
11	3:26		0.423						
12	4:42	1.01	0.580	1.00	1.03	50.00	0.025	1.208	0.02
13	5:16		0.651						
14	6:13		0.766						
15	8:29		1.046						
16	8:35		1.058						
17	8:55		1.100						
18	9:23	1.00	0.892	1.00	0.05	50.00	0.001	0.821	0.00
19	9:32	1.00	0.907	1.00	60.80	50.00	0.403	0.331	1.22
20	10:53		1.036						
21	11:18		1.075						
22	12:00		1.147						
23	12:22		1.240						
24	13:36	1.00	1.294	1.00	58.80	50.00	1.560	1.305	1.20
25	14:18		1.361						
26	14:37		1.391						
27	14:42		1.399						
28	15:20		1.459						
29	16:34	1.00	1.003	1.00	35.12	50.00	0.703	1.000	0.70
30	16:57	1.00	1.025	1.00	1.52	50.00	0.047	1.541	0.03
31	17:14	1.00	1.043	1.00	0.39	50.00	0.021	2.661	0.01
32	17:14	1.00	1.043	1.00	0.39	50.00	0.021	2.661	0.01
33	18:04	1.00	1.094	1.00	0.54	50.00	0.016	1.437	0.01
34	18:25		1.115						
35	19:45		1.196						
36	21:41		1.312						
37	21:55		1.327						
38	22:43		1.375						
39	5:22	1.00	0.852	1.00	0.11	100.00	0.003	2.667	0.00
40	5:19		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

DATA FROM FILE: V544001A SCANS 60 TO 2200 ACQUIRED: 08-04-92 21:52:00
CALI: V544001A #3
SAMPLE: 544001 V0015/II TV-1 W DIL 1/500 RERUN
CONDS.: TAL/624 DB624



847521410

Quantitation Report File V544002

Data: V544002 TI
07/30/92 22:32:00
Sample: 544002 VO+15/II F W 5ML
Conds IAL 624,DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER MTBE
40	C265	DIISOPROPYL ETHER DIPE
41	C270	2-METHYL-2-PROPANOL TBA
42	C275	METHYL ETHYL KETONE MEK
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C300	2-PROPANOL

085

847521411

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	647	8:04	1	1.000	A BB	49537	50.000 UG/L	16.71
2	114	843	10:31	2	1.000	A BB	240152.	50.000 UG/L	16.71
3	117	1326	16:32	3	1.000	A BB	213386.	50.000 UG/L	16.71
4	65	751	9:22	1	1.161	A BB	75914	50.934 UG/L	16.99
5	98	1081	13:29	2	1.282	A BB	249343.	49.034 UG/L	16.39
6	95	1545	19:16	3	1.165	A BB	161740.	51.726 UG/L	17.28
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	49	369	4:36	1	0.570	A BB	96.	0.086 UG/L	0.03
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	78	751	9:22	2	0.891	A BB	90.	0.024 UG/L	0.01
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1092	13:37	2	1.295	A BB	2067	0.349 UG/L	0.12
25	NOT FOUND								
26	NOT FOUND								
27	166	1181	14:44	2	1.401	A BB	209.	0.073 UG/L	0.02
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	91	1384	17:15	3	1.044	A BB	2346.	0.183 UG/L	0.06
32	91	1384	17:15	3	1.044	A BB	2346	0.183 UG/L	0.06
33	91	1451	18:05	3	1.094	A BB	965	0.146 UG/L	0.05
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	146	1760	21:57	3	1.327	A BB	120	0.033 UG/L	0.01
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	50.83	50.00	1.532	1.507	1.02
5	13:31	1.00	1.280	1.00	49.03	50.00	1.038	1.059	0.98
6	19:18	1.00	1.164	1.00	51.73	50.00	0.758	0.733	1.03
7	1:25		0.175						

066

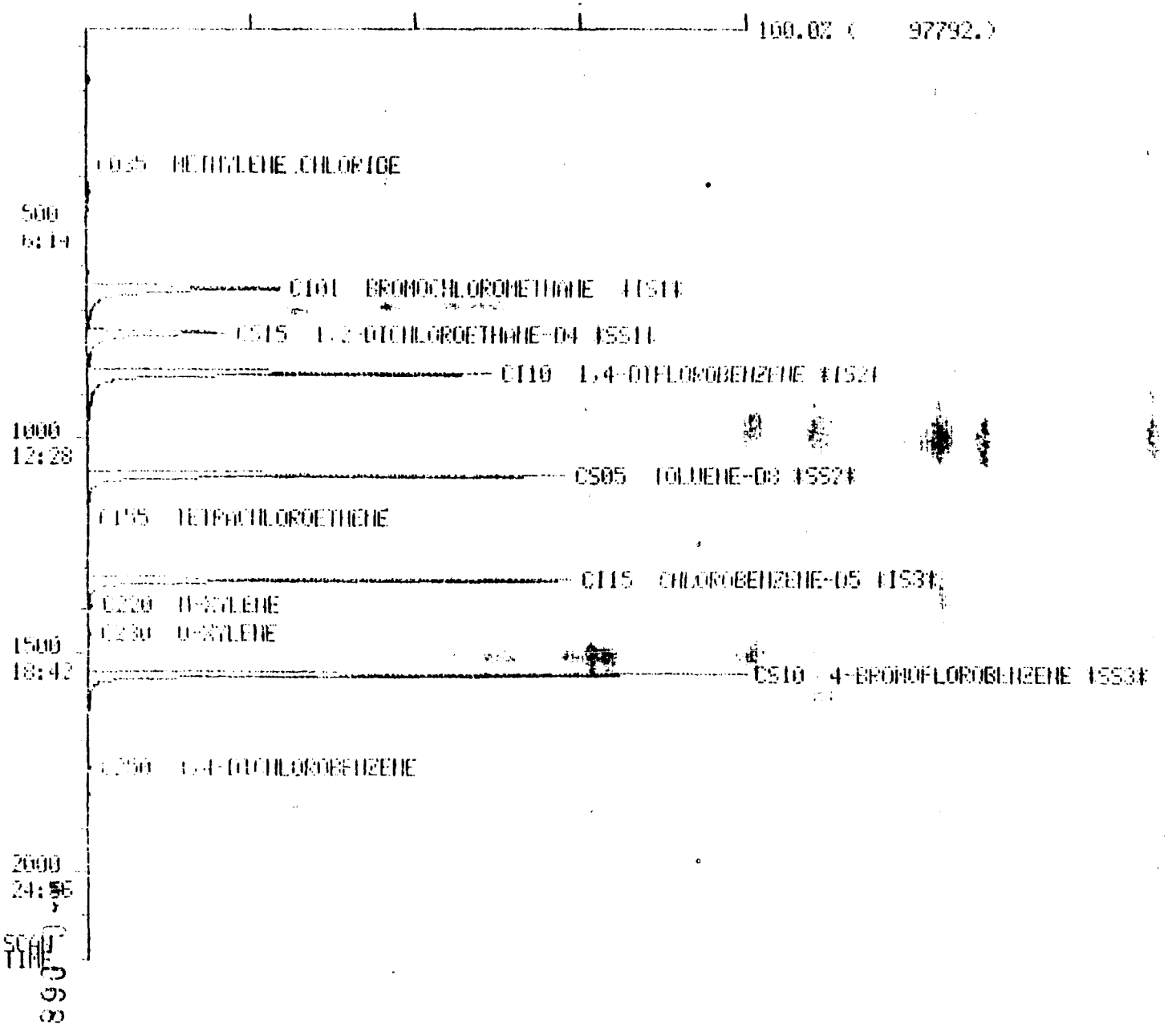
847521412

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R Fac	R Fac(L)	Ratio
8	1:02		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:20		0.416						
12	4:38	0.99	0.569	1.00	0.09	50.00	0.002	1.126	0.00
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:56		1.099						
18	9:25	0.99	0.891	1.00	0.02	50.00	0.000	0.789	0.00
19	9:34		0.906						
20	10:55		1.033						
21	11:21		1.074						
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	0.35	50.00	0.009	1.232	0.01
25	14:21		1.359						
26	14:30		1.387						
27	14:46	1.00	1.398	1.00	0.07	50.00	0.001	0.596	0.00
28	15:24		1.458						
29	15:38		1.000						
30	17:00		1.026						
31	17:18	1.00	1.040	1.00	0.18	50.00	0.011	3.005	0.00
32	17:18	1.00	1.043	1.00	0.18	50.00	0.011	3.005	0.00
33	18:08	1.00	1.092	1.00	0.15	50.00	0.006	1.552	0.00
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
37	21:59	1.00	1.326	1.00	0.02	50.00	0.001	0.840	0.00
38	22:47		1.374						
39	5:32		0.602						
40	6:15		0.810						
41	6:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521413

DATA FROM FILE: V544002 SCANS 60 TO 2200 ACQUIRED: 07/30/92 22:32:00
CALI: V544002 #3

SAMPLE: 544002 V0+15 II F W 5ML
CONDS.: TAL 624/DB624



847521414

Quantitation Report File: V544003

Data: V544003.TI
07/30/92 20:45:00
Sample: 544003 VO/II T W 5ML
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
0	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
5	C290	ACRYLONITRILE
6	C295	ACROLEIN
47	C230	2-PROPANOL

069

847521415

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	646	8:03	1	1.000	A BB	31084.	50.000	UG/L	17.19
2	114	842	10:30	2	1.000	A BB	152317.	50.000	UG/L	17.19
3	117	1326	16:32	3	1.000	A BB	124536.	50.000	UG/L	17.19
4	65	751	9:22	1	1.163	A BB	45473.	48.527	UG/L	16.68
5	98	1081	13:29	2	1.284	A BB	148673.	46.097	UG/L	15.85
6	95	1544	19:15	3	1.164	A BB	91701.	50.250	UG/L	17.28
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	371	4:38	1	0.574	A VV	511.	0.730	UG/L	0.25
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	132	873	10:53	2	1.037	A BB	252.	0.173	UG/L	0.06
21	63	906	11:18	2	1.076	A BB	84.	0.092	UG/L	0.03
22	NOT FOUND									
23	NOT FOUND									
24	91	1090	13:35	2	1.295	A BB	1090.	0.290	UG/L	0.10
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	91	1381	17:13	3	1.041	A BV	227.	0.030	UG/L	0.01
32	91	1381	17:13	3	1.041	A BV	227.	0.030	UG/L	0.01
33	91	1451	18:05	3	1.094	A BB	257.	0.066	UG/L	0.02
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.01	48.53	50.00	1.463	1.507	0.97
5	13:31	1.00	1.280	1.00	46.10	50.00	0.976	1.059	0.92
6	19:18	1.00	1.164	1.00	50.25	50.00	0.736	0.733	1.00
7	1:25		0.175						

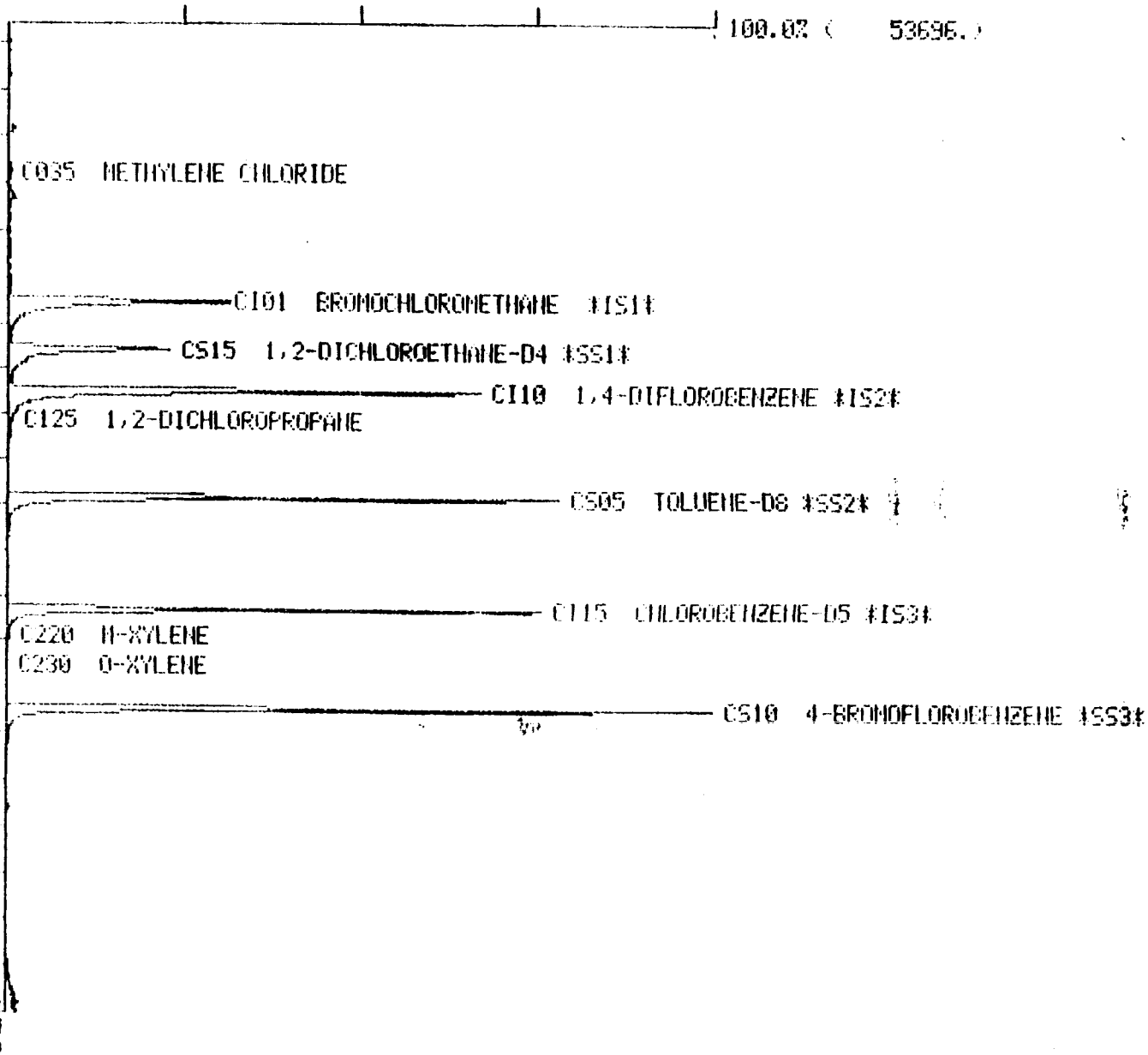
070

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:23		0.416						
12	4:38	1.00	0.569	1.01	0.73	50.00	0.016	1.126	0.01
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:56		1.098						
18	9:25		0.891						
19	9:34		0.906						
20	10:55	1.00	1.033	1.00	0.17	50.00	0.002	0.479	0.00
21	11:21	1.00	1.074	1.00	0.09	50.00	0.001	0.301	0.00
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	0.29	50.00	0.007	1.232	0.01
25	14:21		1.359						
26	14:39		1.387						
27	14:46		1.398						
28	15:24		1.458						
29	16:38		1.003						
30	17:00		1.026						
31	17:18	1.00	1.043	1.00	0.03	50.00	0.002	3.005	0.00
32	17:18	1.00	1.043	1.00	0.03	50.00	0.002	3.005	0.00
33	18:08	1.00	1.093	1.00	0.07	50.00	0.002	1.552	0.00
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
37	21:59		1.326						
38	22:47		1.374						
39	5:22		0.662						
40	6:16		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03		1.569						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521417

DATA FROM FILE: V544003 SCANS 60 TO 2200 ACQUIRED: 07/30/92 20:45:00
CAL: V544003 #3

SAMPLE: 544003 VO/II T W SML
CONDS.: IAL/624/DB624



847521418

Quantitation Report File: V544004

Data: V544004.TI
07/30/92 23:08:00
Sample: 544004 VO+15/II TV-2 W 5ML
Conds.: IAL/624/DB624
rmula: NA Instrument: FINN Weight: 0.000
ubmitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
20	C120	TRICHLOROETHENE
21	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
46	C295	ACROLEIN
47	C230	2-PROPANOL

073

847521419

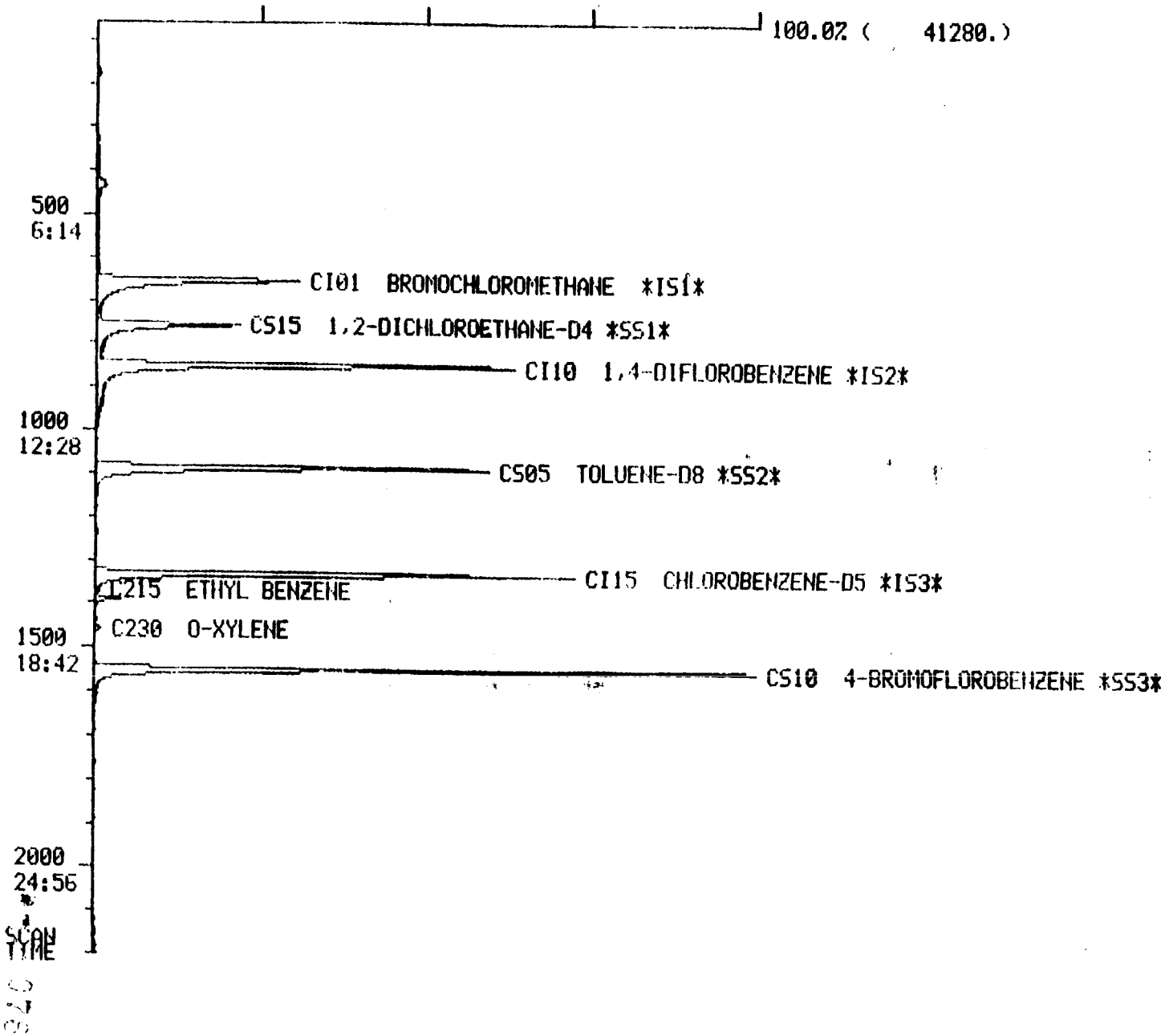
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	49	651	8:07	1	1.000	A BB	22538.	50.000 UG/L	16.70
2	114	846	10:33	2	1.000	A BB	110759.	50.000 UG/L	16.70
3	117	1329	16:34	3	1.000	A BB	93789.	50.000 UG/L	16.70
4	65	754	9:24	1	1.158	A BB	33471.	49.262 UG/L	16.45
5	98	1084	13:31	2	1.281	A BB	107214.	45.715 UG/L	15.27
6	95	1547	19:17	3	1.164	A BB	71280.	51.865 UG/L	17.32
7	NOT FOUND								
8	NOT FOUND								
9	NOT FOUND								
10	NOT FOUND								
11	NOT FOUND								
12	NOT FOUND								
13	NOT FOUND								
14	NOT FOUND								
15	NOT FOUND								
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	91	1095	13:39	2	1.294	A BB	10417.	3.817 UG/L	1.27
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	112	1333	16:37	3	1.003	A BB	6085.	3.304 UG/L	1.10
30	91	1363	17:00	3	1.026	A BB	750.	0.257 UG/L	0.09
31	91	1386	17:17	3	1.043	A BB	5641.	1.001 UG/L	0.33
32	91	1386	17:17	3	1.043	A BB	5641.	1.001 UG/L	0.33
33	91	1453	18:07	3	1.093	A BB	2091.	0.718 UG/L	0.24
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	49.26	50.00	1.485	1.507	0.99
5	13:31	1.00	1.280	1.00	45.72	50.00	0.968	1.059	0.91
6	19:18	1.00	1.164	1.00	51.86	50.00	0.760	0.733	1.04
7	1:25		0.175						

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
1	3:23		0.416						
2	4:38		0.569						
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:56		1.098						
18	9:25		0.891						
19	9:34		0.906						
20	10:55		1.033						
21	11:21		1.074						
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	3.82	50.00	0.094	1.232	0.08
25	14:21		1.359						
26	14:39		1.387						
27	14:46		1.398						
28	15:24		1.458						
29	16:38	1.00	1.003	1.00	3.30	50.00	0.065	0.982	0.07
30	17:00	1.00	1.026	1.00	0.26	50.00	0.008	1.556	0.01
31	17:18	1.00	1.043	1.00	1.00	50.00	0.060	3.005	0.02
32	17:18	1.00	1.043	1.00	1.00	50.00	0.060	3.005	0.02
33	18:08	1.00	1.093	1.00	0.72	50.00	0.022	1.552	0.01
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
7	21:59		1.326						
38	22:47		1.374						
39	5:25		0.664						
40	6:16		0.810						
41	5:43		0.701						
42	7:51		0.981						
43	25:58		1.576						
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

847521421

DATA FROM FILE: V544004 SCANS 60 TO 2200 ACQUIRED: 07/30/92 23:08:00
CALI: V544004 #3
SAMPLE: 544004 VO+15/II TV-2 W 5ML
CONDS.: IAL/624/DB624



847521422

Data: V544005.TI
07/30/92 23:44:00
Sample: 544005 VO+15/II S-1 W DIL 1/10
Conds.: IAL/624/DB624
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI01	BROMOCHLOROMETHANE *IS1*
2	CI10	1,4-DIFLOROBENZENE *IS2*
3	CI15	CHLOROBENZENE-D5 *IS3*
4	CS15	1,2-DICHLOROETHANE-D4 *SS1*
5	CS05	TOLUENE-D8 *SS2*
6	CS10	4-BROMOFLOROBENZENE *SS3*
7	C010	CHLOROMETHANE
8	C015	VINYL CHLORIDE
9	C020	BROMOMETHANE
10	C025	CHLOROETHANE
11	C030	1,1-DICHLOROETHENE
12	C035	METHYLENE CHLORIDE
13	C040	T-1,2-DICHLOROETHENE
14	C045	1,1-DICHLOROETHANE
15	C050	CHLOROFORM
16	C055	1,1,1-TRICHLOROETHANE
17	C060	CARBON TETRACHLORIDE
18	C110	BENZENE
19	C115	1,2-DICHLOROETHANE
[illegible]	C120	TRICHLOROETHENE
	C125	1,2-DICHLOROPROPANE
22	C130	BROMODICHLOROMETHANE
23	C135	C-1,3-DICHLOROPROPENE
24	C140	TOLUENE
25	C145	T-1,3-DICHLOROPROPENE
26	C150	1,1,2-TRICHLOROETHANE
27	C155	TETRACHLOROETHENE
28	C160	DIBROMOCHLOROMETHANE
29	C210	CHLOROBENZENE
30	C215	ETHYL BENZENE
31	C220	M-XYLENE
32	C225	P-XYLENE
33	C230	O-XYLENE
34	C235	BROMOFORM
35	C240	1,1,2,2-TETRACHLOROETHANE
36	C245	1,3-DICHLOROBENZENE
37	C250	1,4-DICHLOROBENZENE
38	C255	1,2-DICHLOROBENZENE
39	C260	T-BUTYL METHYLETHER (MTBE)
40	C265	DIISOPROPYL ETHER (DIPE)
41	C270	2-METHYL-2-PROPANOL (TBA)
42	C275	METHYL ETHYL KETONE (MEK)
43	C280	NAPHTHALENE
44	C285	PYRIDINE
45	C290	ACRYLONITRILE
	C295	ACROLEIN
[illegible]	C230	2-PROPANOL

847521423

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	49	648	8:05	1	1.000	A BB	21774.	50.000	UG/L	3.31
2	114	843	10:31	2	1.000	A BB	106024.	50.000	UG/L	3.31
3	117	1325	16:31	3	1.000	A BB	92863.	50.000	UG/L	3.31
4	65	751	9:22	1	1.159	A BB	32319.	49.237	UG/L	3.26
5	98	1081	13:29	2	1.282	A BB	117400.	52.294	UG/L	3.46
6	95	1543	19:14	3	1.165	A BB	68122.	50.061	UG/L	3.31
7	NOT FOUND									
8	NOT FOUND									
9	NOT FOUND									
10	NOT FOUND									
11	NOT FOUND									
12	49	371	4:38	1	0.573	A BB	88.	0.179	UG/L	0.01
13	NOT FOUND									
14	NOT FOUND									
15	NOT FOUND									
16	NOT FOUND									
17	NOT FOUND									
18	78	751	9:22	2	0.891	A BB	29860.	17.260	UG/L	1.14
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	91	1090	13:35	2	1.293	A BB	654261.	327.000	UG/L	21.64
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	112	1329	16:34	3	1.003	A BB	774.	0.424	UG/L	0.03
30	91	1359	16:57	3	1.026	A BB	19783.	6.844	UG/L	0.45
31	91	1383	17:15	3	1.044	A BB	23169.	4.151	UG/L	0.27
32	91	1383	17:15	3	1.044	A BB	23169.	4.151	UG/L	0.27
33	91	1449	18:04	3	1.094	A BB	13545.	4.698	UG/L	0.31
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	73	432	5:23	1	0.667	A BB	11270.	TIC 9.705	UG/L	0.64
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	128	2084	25:59	3	1.573	A BB	1182930.	TIC 842.738	UG/L	55.77
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:08	0.99	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	10:34	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	16:35	1.00	1.000	1.00	50.00	50.00	1.000	1.000	1.00
4	9:24	1.00	1.156	1.00	49.24	50.00	1.484	1.507	0.98
5	13:31	1.00	1.280	1.00	52.29	50.00	1.107	1.059	1.05
6	19:18	1.00	1.164	1.00	50.06	50.00	0.734	0.733	1.00
7	1:25		0.175						

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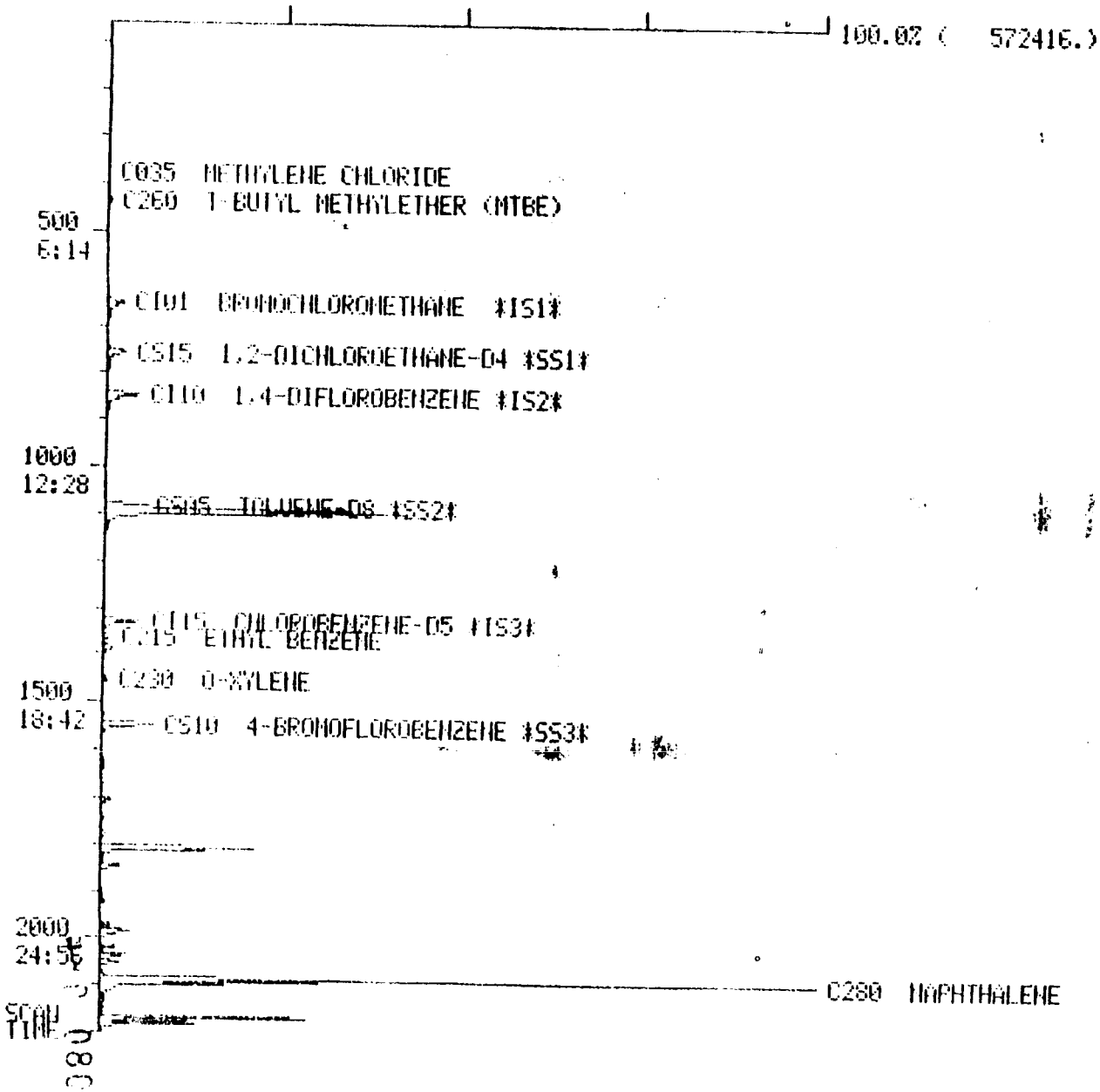
847521424

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
8	1:32		0.189						
9	1:57		0.239						
10	2:05		0.256						
11	3:23		0.416						
12	4:38	1.00	0.569	1.01	0.18	50.00	0.004	1.126	0.00
13	5:14		0.644						
14	6:11		0.761						
15	8:29		1.044						
16	8:35		1.057						
17	8:56		1.098						
18	9:25	0.99	0.891	1.00	17.26	50.00	0.272	0.789	0.35
19	9:34		0.906						
20	10:55		1.033						
21	11:21		1.074						
22	12:06		1.146						
23	13:05		1.238						
24	13:38	1.00	1.292	1.00	327.00	50.00	8.057	1.232	6.54
25	14:21		1.359						
26	14:39		1.387						
27	14:46		1.398						
28	15:24		1.458						
29	16:38	1.00	1.003	1.00	0.42	50.00	0.008	0.982	0.01
30	17:00	1.00	1.026	1.00	6.84	50.00	0.213	1.556	0.14
31	17:18	1.00	1.043	1.00	4.15	50.00	0.249	3.005	0.08
32	17:18	1.00	1.043	1.00	4.15	50.00	0.249	3.005	0.08
33	13:08	1.00	1.093	1.00	4.70	50.00	0.146	1.552	0.09
34	18:29		1.114						
35	19:52		1.198						
36	21:45		1.311						
37	21:59		1.326						
38	22:47		1.374						
39	5:22	1.00	0.662	1.01	9.70	100.00	0.259	2.667	0.10
40	6:16		0.810						
41	5:41		0.700						
42	7:51		0.981						
43	26:03	1.00	1.569	1.00	842.74	50.00	12.737	0.756	16.85
44	13:44		1.312						
45	4:49		0.618						
46	3:04		0.394						
47	4:15		0.552						

)N FROM FILE: V544005 SCANS 60 TO 2200)IRED: 07/30/92 23:44:00
CAL.: V544005 #3
SAMPLE: 544005 VO+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624



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847521426

Quantitation Report File: V544005

Data: V544005.TI
07/30/92 23:44:00
Sample: 544005 VO+15/II S-1 W DIL 1/10
Conds.: IAL,624,03e24
Formula: NA Instrument: FINN Weight: 0.000
Submitted by: IAL Analyst: FRK Acct. No.: NA

AMOUNT=HEIGHT * REF AMNT/(REF HEIGHT * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI01 BROMOCHLOROMETHANE *IS1*
2	0-00-0	CI10 1,4-DIFLOROBENZENE *IS2*
3	0-00-0	CI15 CHLOROBENZENE-D5 *IS3*
4	108-67-8	BENZENE, 1,3,5-TRIMETHYL-
5	611-15-4	BENZENE, 1-ETHENYL-2-METHYL-
6	673-32-5	BENZENE, 1-PROPYNYL-
7	766-97-2	BENZENE, 1-ETHYNYL-4-METHYL-
8	17059-52-9	BENZOFURAN, 7-METHYL-
9	768-00-3	BENZENE, (1-METHYL-1-PROPENYL)-, (E)-
10	3454-07-7	BENZENE, 1-ETHENYL-4-ETHYL-
11	527-53-7	BENZENE, 1,2,3,5-TETRAMETHYL-
12	65051-83-4	BENZENE, (1-METHYL-2-CYCLOPROPEN-1-YL)-
13	0-00-0	UNKNOWN
14	65051-83-4	BENZENE, (1-METHYL-2-CYCLOPROPEN-1-YL)-
15	95-15-8	BENZO[B]THIOPHENE
16	28715-26-6	BENZOFURAN, 4,7-DIMETHYL-
17	90-12-0	NAPHTHALENE, 1-METHYL-
18	2471-83-2	1H-INDENE, 1-ETHYLIDENE-

P	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	TOT	649	8:06	1	1.000	A BB	7656. *	50.000	UG/L	4.27
2	TOT	843	10:31	2	1.000	A BB	16800. *	50.000	UG/L	4.27
3	TOT	1325	16:31	3	1.000	A BB	24672. *	50.000	UG/L	4.27
4	TOT	1702	21:13	3	1.285	A BB	8684 *	17.600		1.50
5	TOT	1805	22:30	3	1.362	A BB	109952. *	222.827		19.02
6	TOT	1845	23:00	3	1.392	A BB	13798. *	27.964		2.39
7	TOT	1845	23:00	3	1.392	A BB	13427. *	27.211		2.32
8	TOT	1983	24:43	3	1.497	A VB	19106. *	38.720		3.31
9	TOT	2015	25:07	3	1.521	A BB	9541. *	19.336		1.65
10	TOT	2032	25:20	3	1.534	A BV	15932. *	32.288		2.76
11	TOT	2032	25:20	3	1.534	A BV	12807. *	25.954		2.22
12	TOT	2038	25:25	3	1.538	A VV	7362. *	14.920		1.27
13	TOT	2047	25:31	3	1.545	A VB	2171. *	4.400		0.38
14	TOT	2048	25:32	3	1.546	A VB	11565. *	23.437		2.00
15	TOT	2094	26:07	3	1.580	A VB	68352. *	138.521		11.82
16	TOT	2104	26:14	3	1.588	A VB	5681. *	11.513		0.98
17	TOT	2165	27:00	3	1.634	A BV	142848. *	289.492		24.71
18	TOT	2177	27:09	3	1.643	A VB	62848. *	127.367		10.87

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	6:38	1.22	1.000	1.00	50.00	50.00	1.000	1.000	1.00
2	9:24	1.12	1.000	1.00	50.00	50.00	1.000	1.000	1.00
3	15:40	1.05	1.000	1.00	50.00	50.00	1.000	1.000	1.00

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No	Ret(L)	Ratio	RET(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
4					17.60	1.00	17.600	1.000	17.60
5					222.83	1.00	222.827	1.000	222.83
6					27.96	1.00	27.964	1.000	27.96
7					27.21	1.00	27.211	1.000	27.21
8					38.72	1.00	38.720	1.000	38.72
9					19.34	1.00	19.336	1.000	19.34
10					32.29	1.00	32.288	1.000	32.29
11					25.95	1.00	25.955	1.000	25.95
12					14.92	1.00	14.920	1.000	14.92
13					4.40	1.00	4.400	1.000	4.40
14					23.44	1.00	23.437	1.000	23.44
15					138.52	1.00	138.521	1.000	138.52
16					11.51	1.00	11.513	1.000	11.51
17					289.49	1.00	289.494	1.000	289.49
18					127.37	1.00	127.367	1.000	127.37

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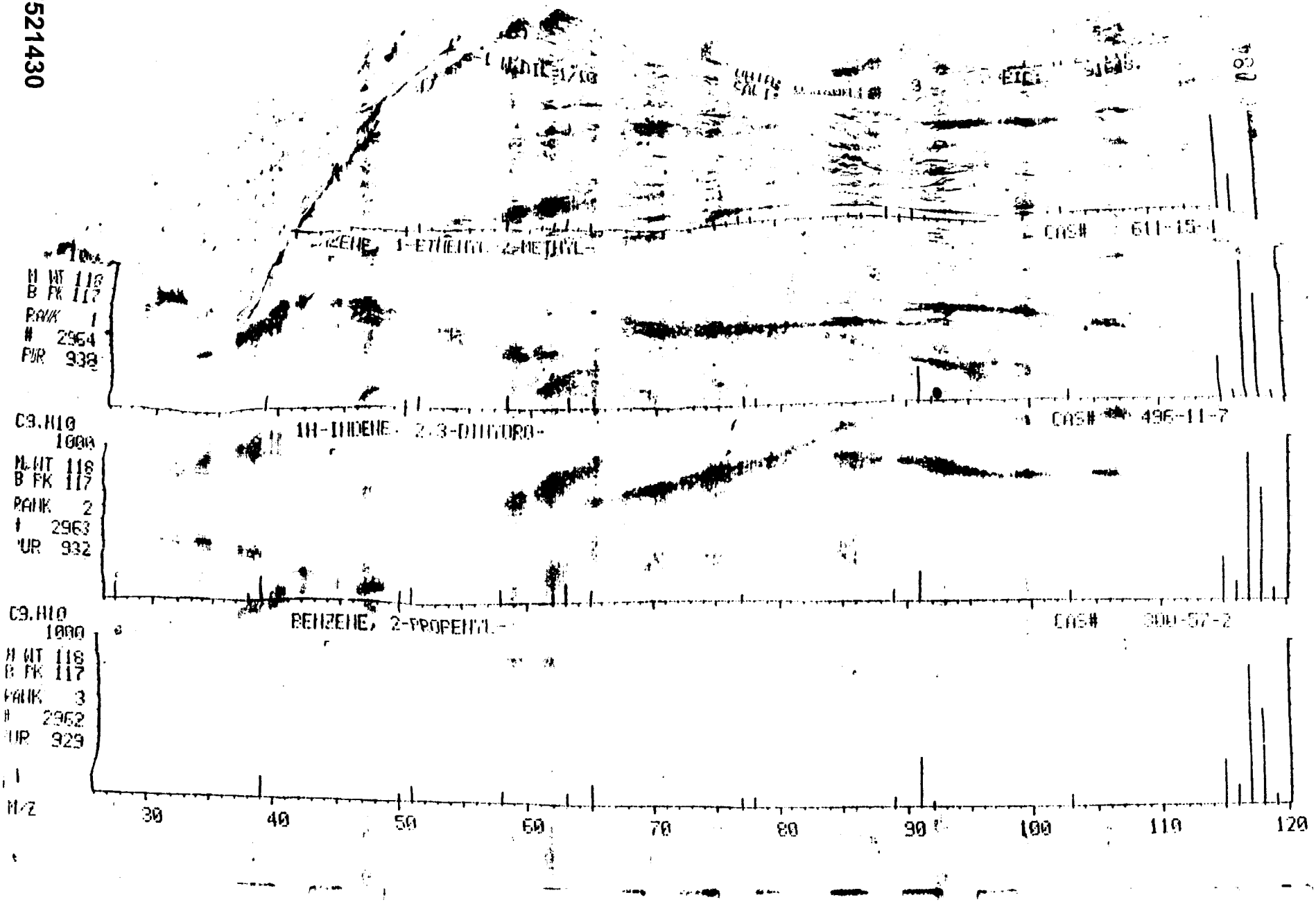
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M WT 118
B PK 117
RANK 1
2964
PUR 938
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C9.H10
1000
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B PK 117
RANK 2
2963
PUR 932
CAS# 496-11-7
C9.H10
1000
M WT 118
B PK 117
RANK 3
2962
PUR 929
CAS# 300-57-2
M/Z
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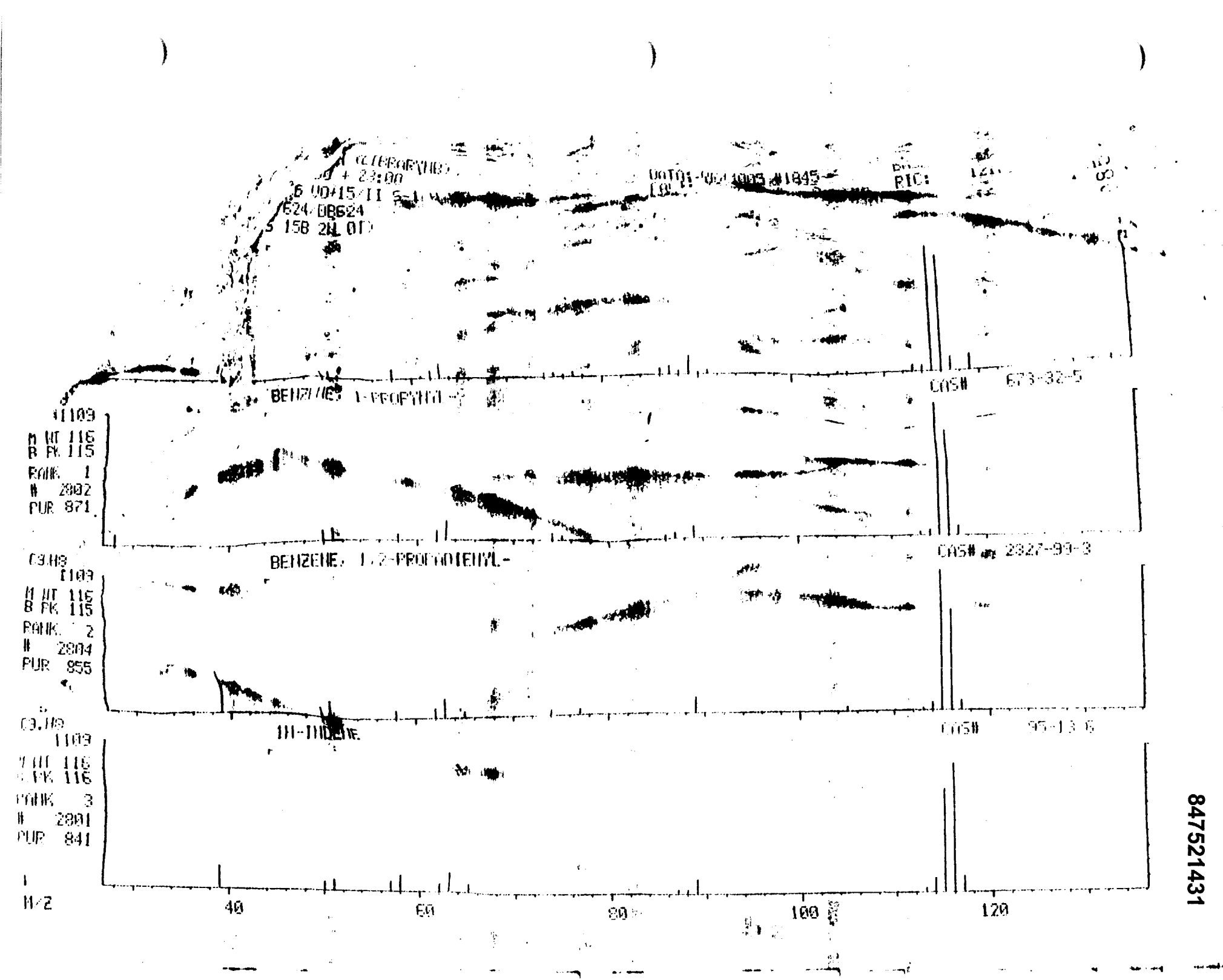
70
80
90
100
110
120


BENZENE, 1-PROPYNYL-
CAS# 673-32-5
1109
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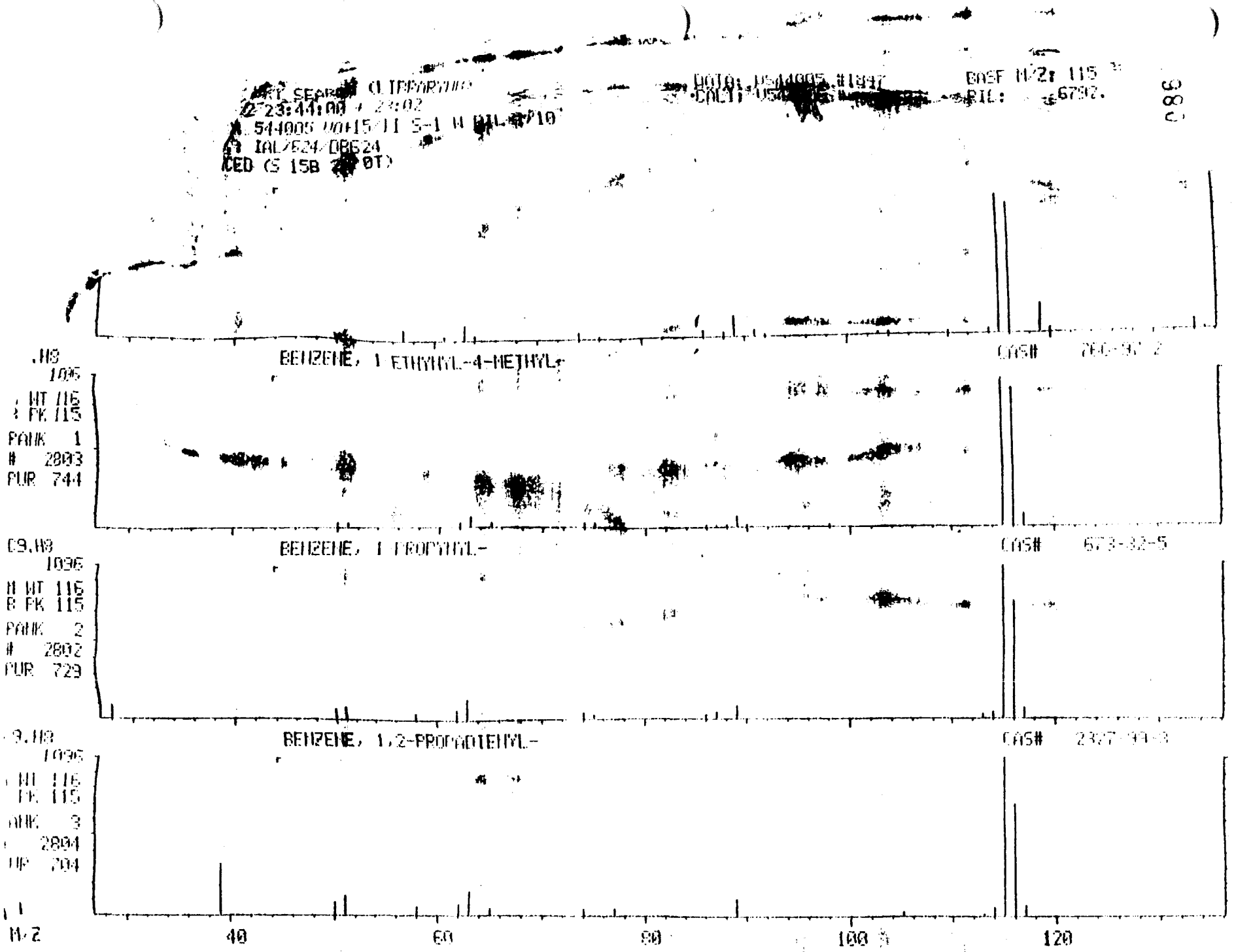
B PK 115
RANK 1
2802
PUR 871
BENZENE, 1,2-PROPADIENYL-
CAS# 2827-99-3
1109
M WT 116
B PK 115
RANK 2
2804
PUR 855
1109
RANK 3
2801
PUR 841
M/Z
40
60
80
100
120

847521431


BENZENE, 1-ETHYL-4-METHYL-
CAS#
BENZENE, 1-PROPYL-
CAS#
BENZENE, 1,2-PROPANDIETHYL-
CAS#
M/Z
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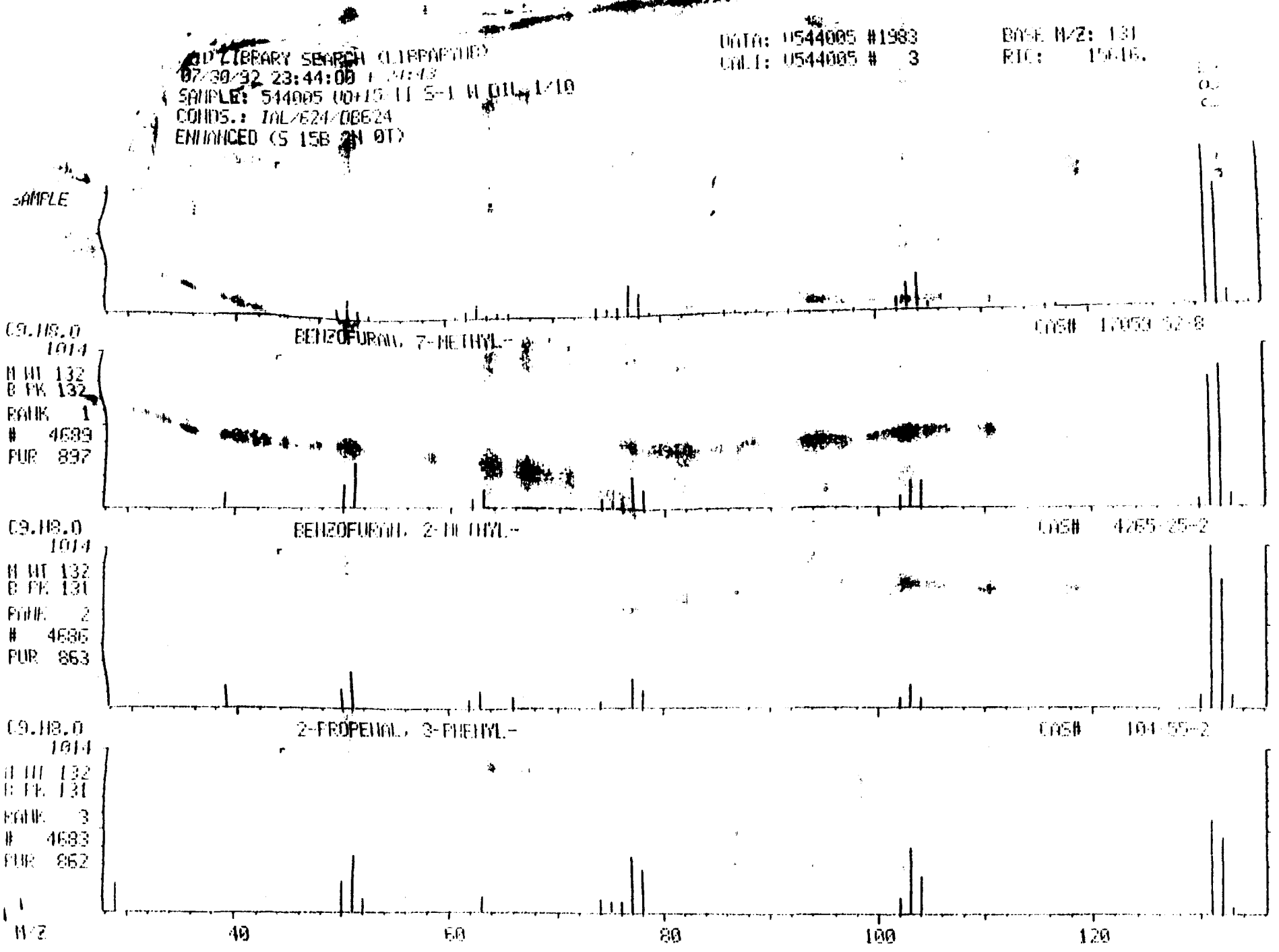
60
80
100
120

847521432



LIBRARY SEARCH (LIBRARYNB)
07/30/92 23:44:00
SAMPLE: 544005 VO+15 II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544005 #1983
CALI: V544005 # 3
BASE M/Z: 131
RIC: 15616.
SAMPLE
C9.H8.O
1014
M WT 132
B PK 132
RANK 1
4689
PUR 897
BENZOFURAN, 7-METHYL-
CAS# 17059-52-8
C9.H8.O
1014
M WT 132
B PK 131
RANK 2
4686
PUR 863
BENZOFURAN, 2-METHYL-
CAS# 4265-25-2
C9.H8.O
1014
M WT 132
B PK 131
RANK 3
4683
PUR 862
2-PROPENAL, 3-PHENYL-
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M/Z
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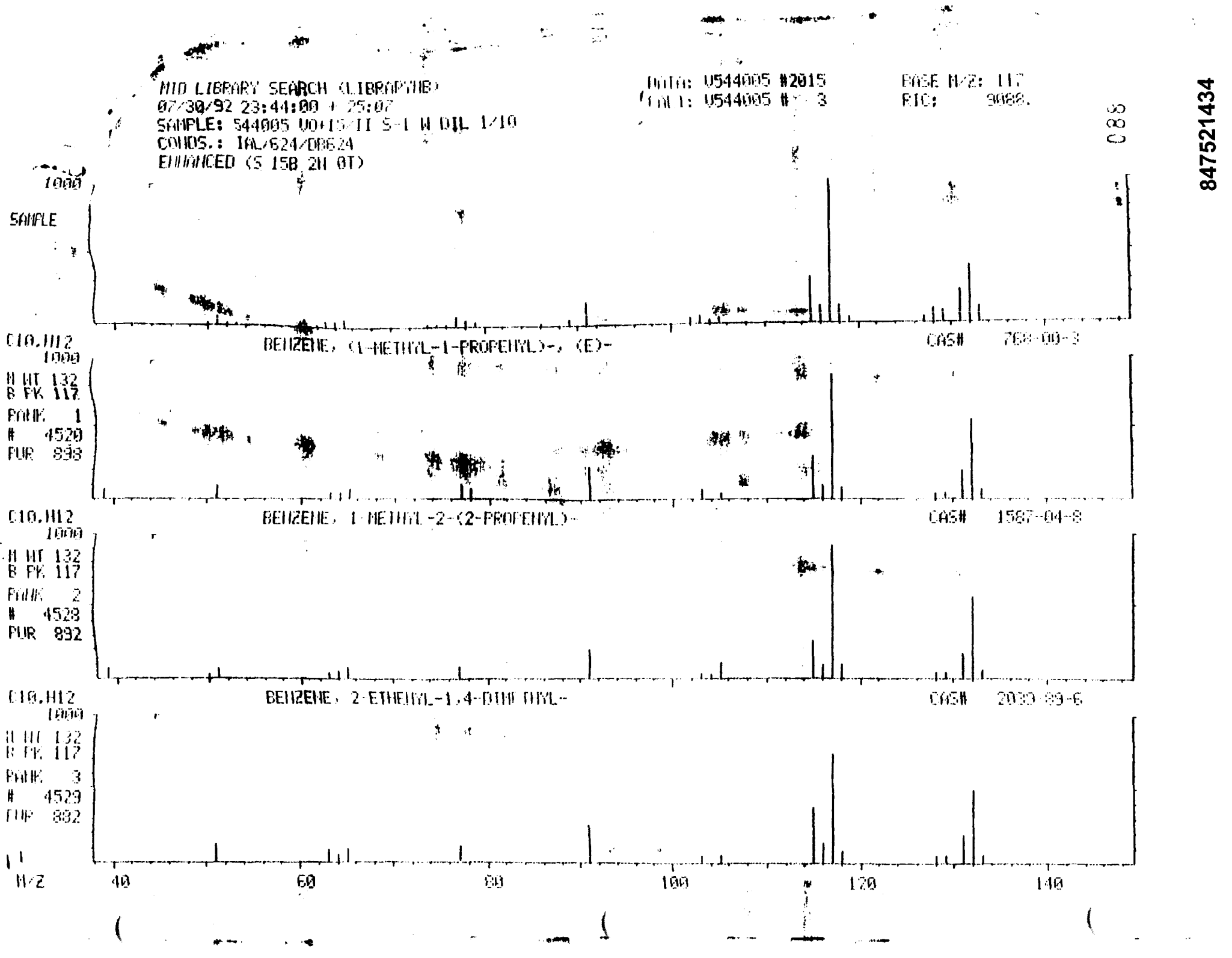
60
80
100
120

847521433


MID LIBRARY SEARCH (LIBRARY.LIB)
07/30/92 23:44:00 + 25:07
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CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)
DATA: V544005 #2015
CAL: V544005 #: 3
BASE M/Z: 117
RIC: 9088.
SAMPLE
C10.H12
BENZENE, (1-METHYL-1-PROPENYL)-, (E)-
CAS# 768-00-3
N WT 132
B PK 117
PANK 1
4520
PUR 838
C10.H12
BENZENE, 1-METHYL-2-(2-PROPENYL)-
CAS# 1587-04-8
N WT 132
B PK 117
PANK 2
4528
PUR 832
C10.H12
BENZENE, 2-ETHENYL-1,4-DIMETHYL-
CAS# 2039-89-6
N WT 132
B PK 117
PANK 3
4529
PUR 832
M/Z
40
60
80
100
120
140

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MID LIBRARY SEARCH (LIBRARY#)
07/30/92 23:44:00 + 25:20
SAMPLE: 544005 VO+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: U544005 #2032
CAL: U544005 # 3

BASE M/Z: 117
RIC: 13648.

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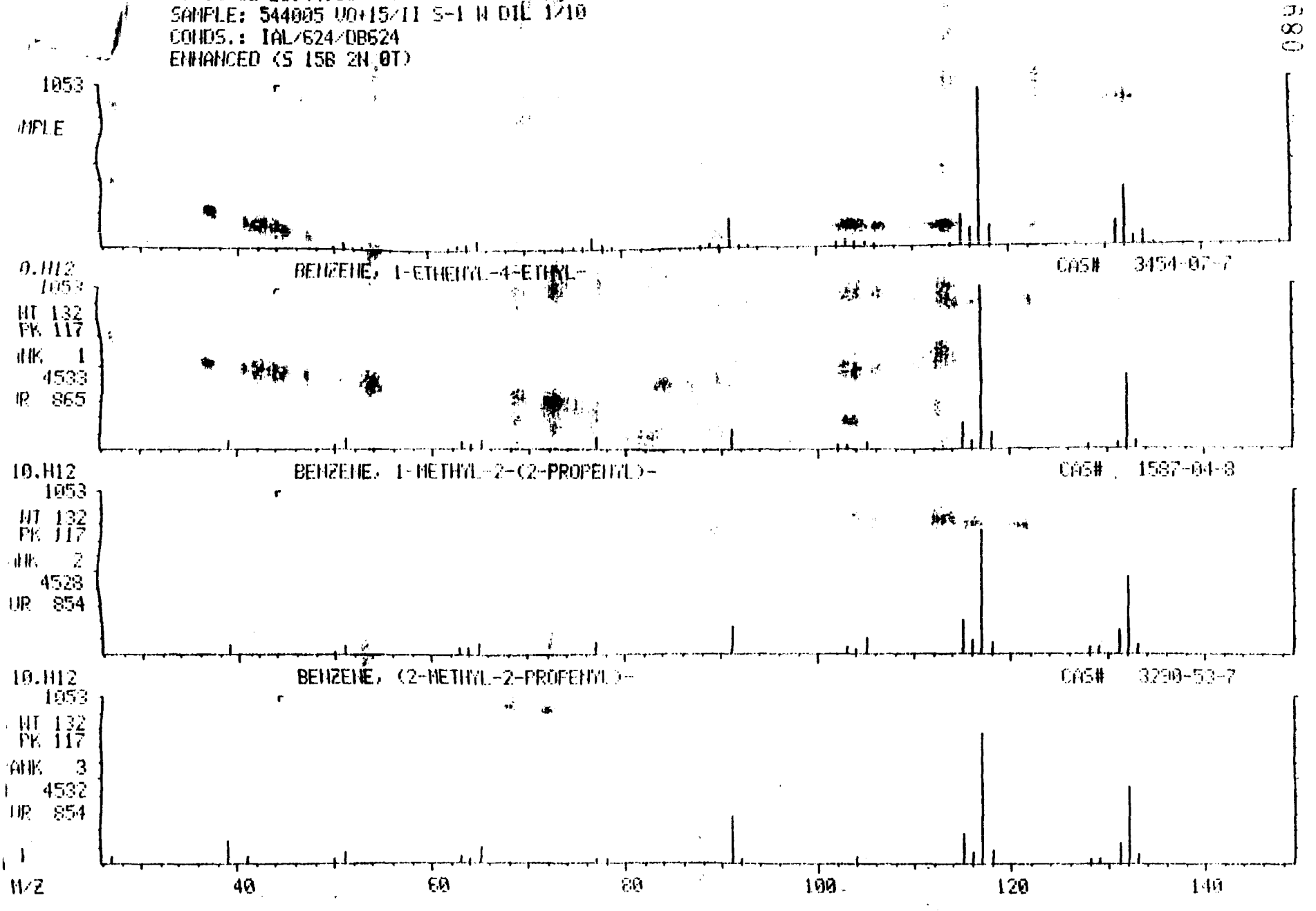

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07/30/92 23:44:00 + 25:22
SAMPLE: 544005 UQ+15/II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

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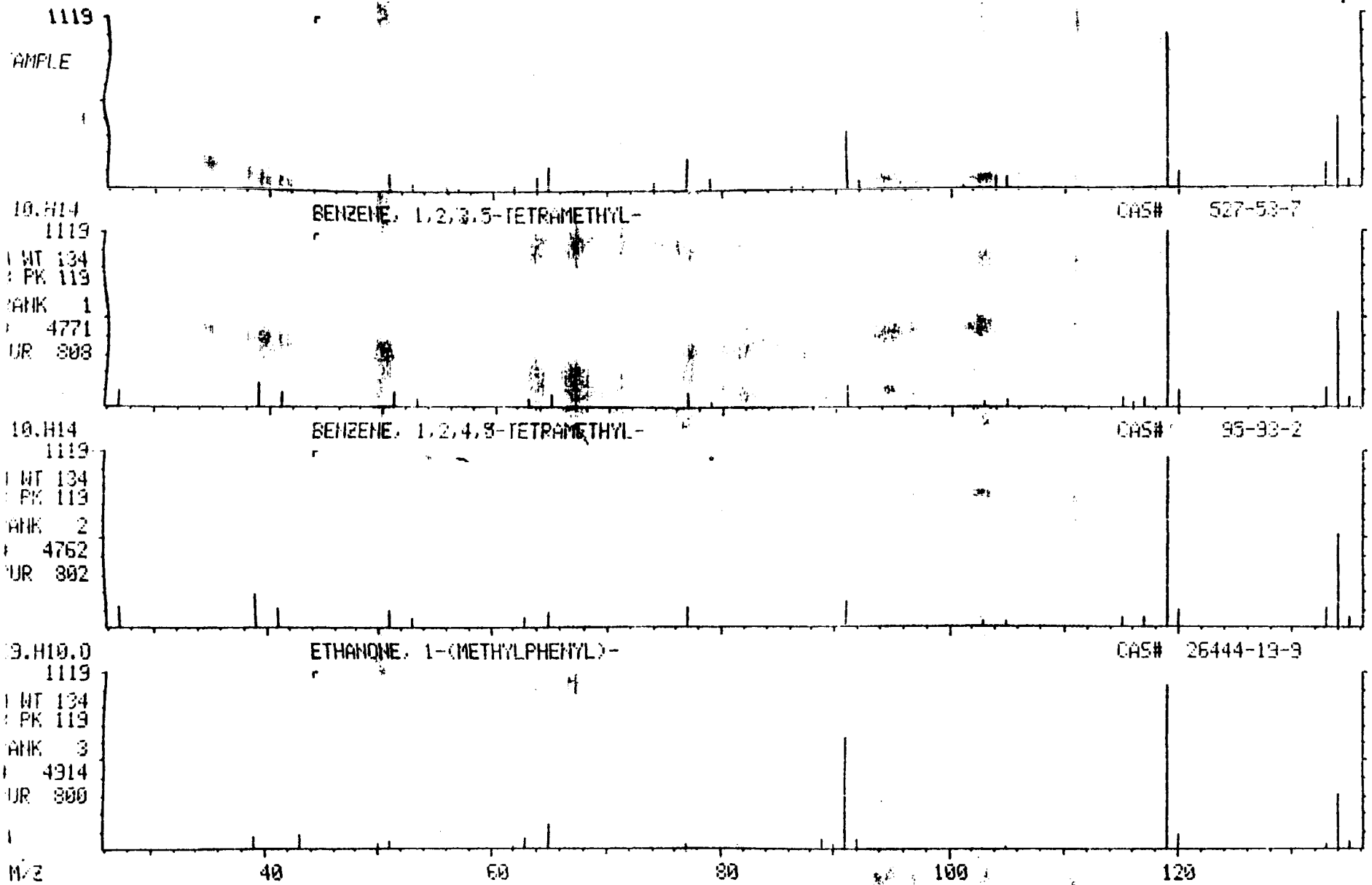
CALI: U544005 # 3

BASE M/Z: 119
RIC: 5056.

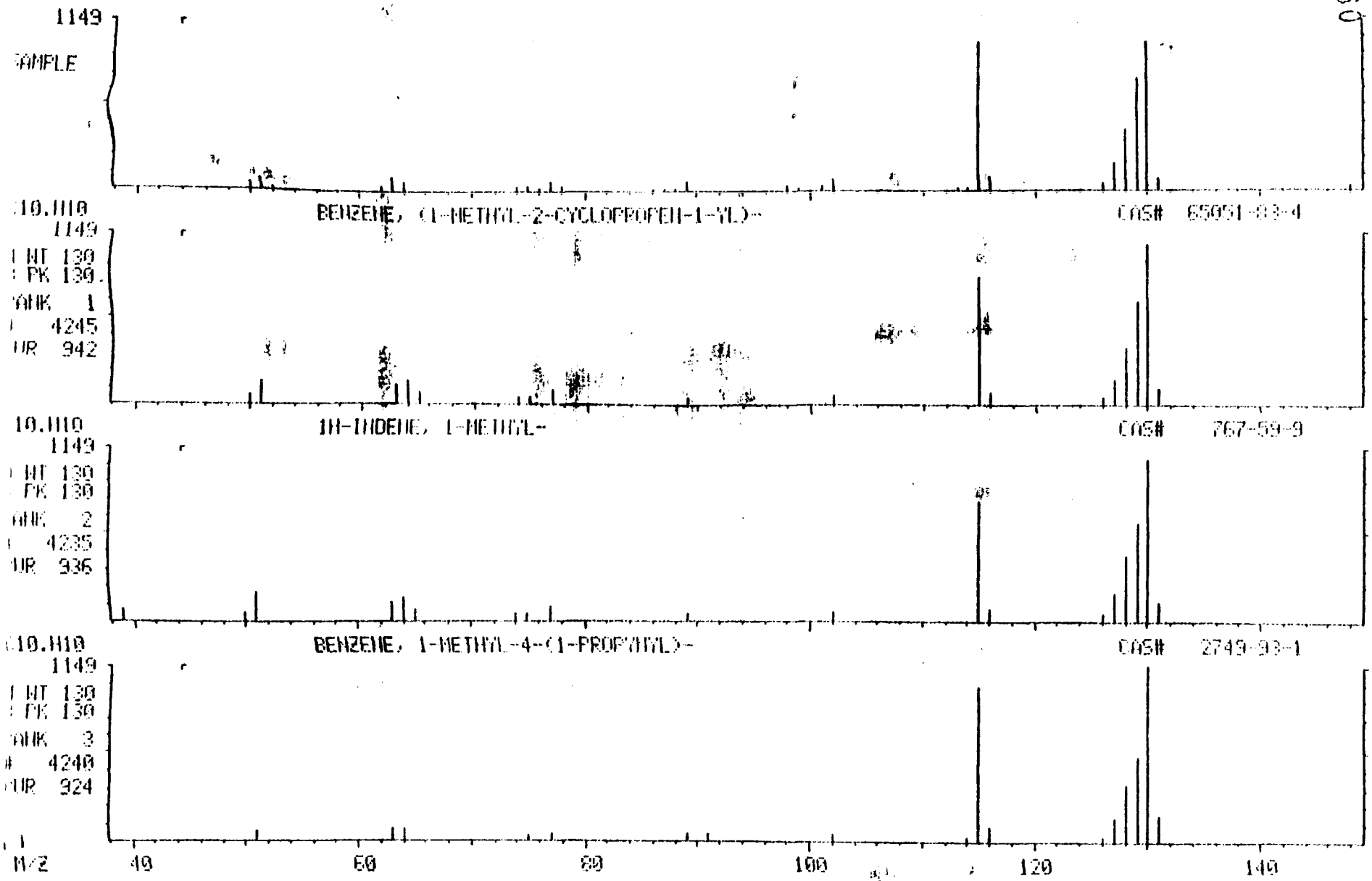
847521436



MID LIBRARY SEARCH (LIBRARYNB)
07/30/92 23:44:00 + 25:25
SAMPLE: 544005 VO+15-II S-1 W DIL 1/10
CONDS.: IAL/624/DB624
ENHANCED (S 15B 2N 0T)

DATA: V544005 #2038
CALI: V544005 # 3

BASE M/Z: 115
RIC: 5200.



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QUESTION 14

847521438

APPENDIX 14

PLEASE REFER TO APPENDIX 1 FOR A COPY OF THE DEEDS CONVEYING TITLE TO ELAN.

QUESTION 15

847521440

CERTIFICATE OF INCORPORATION

OF

ELAN ACQUISITION CORPORATION

FILED AND RECORDED
SEP 27 1977
DONALD LAN
SECRETARY OF STATE

The undersigned, of the age of eighteen years or over, for the purpose of forming a corporation pursuant to the provisions of Title 14A, Corporations, General, of the New Jersey Statutes, does hereby execute the following Certificate of Incorporation:

FIRST: The name of the corporation is ELAN ACQUISITION CORPORATION.

SECOND: The name of the corporation's registered agent is Paul S. Feinberg, and the address of such registered agent is 744 Broad Street, Newark, New Jersey 07102.

THIRD: The corporation may engage in any activity within the purposes for which corporations may be organized under Title 14A, Corporations, General, of the New Jersey Statutes.

FOURTH: The aggregate number of shares which the corporation shall have the authority to issue is 2,500 shares, all of one class, without par value.

FIFTH: The Board of Directors of this corporation, in addition to all other powers, shall have the power:

(a) to enter into contracts on behalf of this corporation with any other corporation notwithstanding that such other

corporation may have a director or directors, officer or officers, or stockholder or stockholders, in common with this corporation; and

(b) to enter into contracts on behalf of this corporation with one or more persons or corporations who are officers, directors or stockholders of this corporation, or with any firm, association or corporation, in which one or more officers, directors or stockholders of this corporation shall be interested as members or stockholders.

SIXTH: The number of directors constituting the initial Board of Directors shall be four, and their names and addresses are as follows:

Name	Address
Ira B. Kapp	599 Johnson Avenue Brooklyn, New York 11237
Peter B. Brumberg	599 Johnson Avenue Brooklyn, New York 11237
Philip Rosner	599 Johnson Avenue Brooklyn, New York 11237
David R. Weisman	599 Johnson Avenue Brooklyn, New York 11237

SEVENTH: The name and address of the incorporator is as follows:

Name	Address
Jeffrey M. Schwartz	744 Broad Street Newark, New Jersey 07102

IN WITNESS WHEREOF, the undersigned, the incorporator of

847521442

the above-named corporation, has hereunto signed this Certificate of Incorporation on this 26th day of September, 1977.

Jeffrey M. Schwartz

(Jeffrey M. Schwartz)

847521443

CERTIFICATE OF AMENDMENT

OF THE

CERTIFICATE OF INCORPORATION

OF

ELAN ACQUISITION CORPORATION

JAN 4 - 1978.
DONALD LAN
SECRETARY OF STATE.

Pursuant to the provisions of Section 14A:9-4(3) of the New Jersey Business Corporation Act, the undersigned hereby certifies as follows:

FIRST: The name of the corporation is ELAN ACQUISITION CORPORATION.

SECOND: The Certificate of Incorporation of the corporation is hereby amended to change the name of the corporation from ELAN ACQUISITION CORPORATION to ELAN CHEMICAL COMPANY INC. and such change is effected by amending Article FIRST of the Certificate of Incorporation of the corporation to read in its entirety as follows:

"FIRST: The name of the corporation is ELAN CHEMICAL COMPANY INC.

THIRD: There were 100 shares of the corporation outstanding and entitled to vote at the time of the adoption of the foregoing amendment to the Certificate of Incorporation. Such amendment was authorized by the written consent dated December 30, 1977 of the holder of all of such outstanding shares of the corporation.

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IN WITNESS WHEREOF, the corporation has caused this Certificate to be executed on its behalf by its Chairman of the Board.

Dated: December 30, 1977

ELAN ACQUISITION CORPORATION

By Peter Brumberg
Peter Brumberg, Chairman
of the Board

847521445

FILED

DEC 29 1993

DANIEL J. DALTON
Secretary of State

AMENDMENT TO THE
CERTIFICATE OF INCORPORATION OF
ELAN CHEMICAL COMPANY INC.

Elan Chemical Company Inc., a New Jersey corporation, does hereby certify as follows:

1. The name of the corporation is: Elan Chemical Company Inc. (the "Corporation").

2. The Corporation is hereby amending its certificate of incorporation as follows:

Article FOURTH is deleted in its entirety, and in place therefore the following is substituted:

"FOURTH: (a) The total authorized capital stock of the Corporation shall be 204,000 shares, consisting of 4,000 shares of Class A Common Stock and 200,000 shares of Class B Common Stock, in each case with no par value.

(b) Except as hereinafter provided with respect to voting powers, the Class A Common stock and the Class B Common Stock of the Corporation shall be identical in all respects.

(c) The holders of Class A Common Stock shall possess all voting powers for all purposes, including but not limited to the election of directors. The holders of Class B Common Stock shall have no voting power, shall not vote on or otherwise participate in any proceedings in which actions shall be taken by the shareholders, and shall not be entitled to notice of any meeting of shareholders, except as otherwise required by the New Jersey Business Corporation Act."

3. There were 90 shares of common stock of the Corporation outstanding and entitled to vote at the time of adoption of the foregoing amendment to the Certificate of Incorporation. The amendment was adopted by unanimous written consent of the holders of all such shares, dated December 29, 1993, in lieu of a meeting of shareholders of the Corporation.

IN WITNESS WHEREOF, Jerry Guerrera, President of the Corporation, has executed this certificate on behalf of the Corporation on this 29th day of December, 1993.

ELAN CHEMICAL COMPANY INC.

By: _____
Jerry Guerrera, President

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