October 29, 2002
Via Certified Mail

RECEIVED 10/31/02

Mr. Seth Ausubel
Remedial Project Manager
United States Environmental Protection Agency
Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor
New York. NY 10007-1866

RE: Request for Information Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601 et seq., re: the Berry's Creek Study Area, Bergen County, New Jersey.

Dear Seth:

Per our conversation today, enclosed is the completed Request for Information regarding the Pantone, Inc. site we previously leased at 55 Knickerbocker Road, Moonachie, New Jersey.

Also enclosed are copies of all of the documents we referenced when compiling this Request for Information, as well as other documents we have on file that may be useful to you. As you instructed when we spoke, because the volume of paper attached is extensive, I am sending Clay Monroe only a copy of our response to the Request for Information (without the attachments).

If you require any additional information, please let me know.

Sincerely,

Shellee S. Gero
Vice President

Attachments
cc: Clay Monroe, Esq. – without attachments
Lawrence Herbert, Chairman & CEO, Pantone, Inc.
Richard Herbert, President & COO, Pantone, Inc.

PANTONE®

82817

Pantone, Inc. 590 Commerce Boulevard Carlstadt New Jersey 07072-3098
Tel: (201) 935-5500 Fax: (201) 896-0242 www.pantone.com

PANTONE® is Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.

REGISTERED COMPANY ISO 9002 SGS

Pantone, Inc.'s Reponses to Request for Information – Page 1

1. a. Pantone, Inc., 590 Commerce Blvd., Carlstadt, NJ 07072.
   b. Corporation, incorporated in the State of Delaware
   c. Lawrence Herbert, Chairman & CEO; Richard Herbert, President and COO
   d. N/A
   e. N/A
   f. N/A

2. Facility leased: 55 Knickerbocker Road, Moonachie, NJ 07074
   County: Bergen; Tax Block: 67; Lot: 3
   Knickerbocker Road is off of Grand Avenue. The street behind the building is West Commercial Ave.

3. While at the Moonachie facility, Pantone's primary business was printing & publishing color communication publications, production of graphic arts materials, operated a textile lab. In 1979 when we ceased operation of the production of graphic arts materials, we added a mechanical bindery operation.

4. Pantone leased the Knickerbocker Road building and conducted business from August 1972 through December1992. We officially vacated the premises on January 31, 1993.

The landlord of the building was Knickerbocker Associates, Grand & Christiana Streets, Moonachie, NJ 07074. The owners were Mickey Fondo and Phil DeLeasa. The last phone numbers we have for them are 203-744-2090 and 201-939-3122, respectively. **Copy of lease attached – Exhibit A.**

5. Pantone, Inc. was the first tenant and primary operator at the facility since its construction in 1972 until it vacated the building in January 1993. Letraset leased a portion of the building for approximately six years (from 1973 to 1979). While operating at this facility, Letraset's primary business was the manufacturing of art materials. Esselte Letraset is now located in the U.K. Their address is: Letraset Ltd, Kingsnorth Industrial Estate, Wotton Road, Ashford, Kent TN23 6FL United Kingdom

6. a. Printer of color reference manuals/books, some commercial printing, mechanical bindery, textile laboratory, manufacturer of artist materials, shipping and fulfillment.

b. PANTONE MATCHING SYSTEM Publications, PANTONE TEXTILE Color System Publications, PANTONE Professional Color Guide, graphic arts publications, custom color cards, custom binding, color matching services.

c. R&D on textile lab dyeings

d. August 1972 – January 1993

7. Yes. January 31, 1973. Facility was too small. Moved to present facility in Carlstadt, NJ.

8. Yes, we did generate hazardous waste at this site, as well as at our present facility. Containerize in 55-gallon drums and disposed of in accordance with State regulations. Procedure followed in former and current facility.

9. Pantone secured the required permits at the time; however, as ten years has passed since we vacated the Moonachie premises, we no longer have these permits.

10. Refer to **Exhibit B** attached.

11. Refer to **Exhibit B** attached.

12. Containerize in 55-gallon drums and disposed of in accordance with State regulations. Vendors used: S&W Waste, 105 Jacobus Avenue, South Kearney, NJ 07032. Also, Northeast Environmental Services, Canal Road, Wampsville, NY 13163. Northeast Environmental Services is currently out-of-business.

13. Vendor made determination. Refer to #12.

14. N/A

15. N/A

16. Answered "No" to all chemicals listed on Page 5 of request.

17. We purchased only raw materials, not Industrial Waste.

18. N/A

19. See attached **Exhibits C through U.**

20. The following three individuals discussed all of the questions in this Request for Information: Shellee S. Gero, Vice President; Michael Garin, Vice President; Kenneth Niepokoy, Vice President. All three people work at Pantone, Inc., 590 Commerce Blvd., Carlstadt, NJ 07072.

21. All documents reviewed or assisted us in the preparation of the responses to this Request for Information are attached herewith.

Request for Information Regarding Chemical Releases to the Berry's Creek Study Area

* * *

Instructions: As instructed in Question 16, please complete this form by marking the appropriate spaces. Indicate whether each of the chemicals listed has ever been released from the Site to the Berry's Creek Study Area, including creeks, ditches, or other water bodies, or wetlands. Follow additional instructions below. Return the completed form along with your other responses to the Request for Information in the Matter of the Berry's Creek Study Area, Bergen County, New Jersey. N/A signifies no information available.

	Yes	No	N/A
acenaphthene		✓	
acenapthylene		✓	
anthracene		✓	
aluminum		✓	
antimony		✓	
arsenic		✓	
benz(a)anthracene		✓	
benzene		✓	
benzo(a)pyrene		✓	
benzo(b)fluoranthene		✓	
benzo(g,h,i)perylene		✓	
benzo(k)fluoranthene		✓	
bis(2-ethylhexyl)phthalate		✓	
butyl benzyl phthalate		✓	
cadmium		✓	
chlorinated dibenzo-p-dioxins (if "yes", please list specific dioxin compounds on a separate sheet)		✓	
chlorinated dibenzofurans (if "yes", please list specific compounds on a separate sheet)		✓	
chlorobenzene		✓	
chloroform		✓	
chromium		✓	
chrysene		✓	
copper		✓	
cyanide		✓	
dibenz(a,h)anthracene		✓	
dichlorobenzene		✓	
1,2-dichloroethene		✓	
di-n-butyl phthalate		✓	
1,2-dichlorobenzene		✓	
1,2-dichloroethane		✓	
dieldrin		✓	
di-n-octyl phthalate		✓	
ethylbenzene		✓	
fluoranthene		✓	

	Yes	No	N/A
fluorene		✓	
hexachlorobenzene		✓	
indeno(1,2,3-cd)pyrene		✓	
lead		✓	
manganese		✓	
mercury		✓	
methylene chloride		✓	
methyl ethyl ketone		✓	
methyl mercury		✓	
2-methylnaphthalene		✓	
naphthalene		✓	
nickel		✓	
pentachlorophenol		✓	
petroleum hydrocarbons		✓	
phenanthrene		✓	
phenol		✓	
polychlorinated biphenyls (if "yes" please list specific congeners and aroclors on a separate sheet)		✓	
polycyclic aromatic hydrocarbons (if "yes", please list specific compounds on a separate sheet, if not listed on this page)		✓	
pyrene		✓	
selenium		✓	
silver		✓	
1,1,2,2-tetrachloroethane		✓	
tetrachloroethylene		✓	
thallium		✓	
toluene		✓	
1,2-trans dichloroethylene		✓	
1,1,1-trichloroethane		✓	
trichloroethylene		✓	
vinyl chloride		✓	
xylene		✓	
zinc		✓	

Shellee Gero
Name of person completing form

Pantone, Inc.
Company

55 Knickerbocker Road
Site (as defined in the "Instructions")
Moonachie, NJ 07074

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New Jersey

County of Bergen :

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.

Billy Chien

NAME (print or type)

Director

TITLE (print or type)

SIGNATURE

Sworn to before me this

day of 29th, October 2002

Notary Public

BILLY CHIEN
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES MAY 5, 2004

Exhibit A

LEASE AMENDMENT

THIS LEASE AMENDMENT made this 4th day of April, 1972, by and between:

KNICKERBOCKER ENTERPRISES, INC., a corporation of the State of New Jersey, having its principal place of business at the corner of 20th and Broad Streets, Carlstadt, New Jersey, hereinafter referred to as "Landlord",

and

PANTONE, INC., a corporation of the State of New York, having its principal place of business place of business at 461 Eighth Avenue, New York, New York, hereinafter referred to as "Tenant".

WHEREAS, the parties have determined the exact amount of square feet to be leased hereunder; and

WHEREAS, the parties agree that the rent hereunder is to be adjusted in accordance with the mortgage commitment obtained by the landlord, pursuant to Article 36.

NOW, THEREFORE, the parties do hereby agree as follows:

ARTICLE 2 is hereby deleted and in its place and stead the following shall be substituted:

ARTICLE 2

The Tenant covenants to pay to the Landlord for each lease year during the original term hereof a net annual basic rental at the rate of Sixty-Four Thousand ($64,000.00) Dollars per annum.

Said net annual basic rental shall be payable in equal monthly installments of Five Thousand Three Hundred and Thirty-Three Dollars and Thirty Three ($5,333.33) Cents each in advance on the first day of each and every calendar month in lawful money

of the United States of America at the office of the Landlord or at such other place as may hereafter be designated by the Landlord. Rental for a period of less than one month shall be adjusted pro-rata. Said net annual basic rental is hereinafter sometimes referred to as the "basic rent" or the "basic rent expressly reserved hereunder".

ATTEST: KNICKERBOCKER ENTERPRISES, INC.

Philip J. Gibson Sec. BY Michael A. Fondo

ATTEST: PANTONE, INCORPORATED

Secretary BY President

THIS AGREEMENT made this day of 1972 by and between:

KNICKERBOCKER ENTERPRISES, INC., a New Jersey corporation with offices at Christiana and Grand Streets, Moonachie, New Jersey, hereinafter referred to as Landlord

and

PANTONE, INC., a New York corporation with offices at 461 Eighth Avenue, New York, New York, hereinafter referred to as Tenant

W I T N E S S E T H:

WHEREAS, a certain Lease Agreement was executed by and between Landlord and Tenant dated 1971, hereinafter referred to as the "Lease"; and

WHEREAS, the parties hereto mutually desire to modify and amend said Lease in certain respects in order to comply with the requirements of the United States Government, Small Business Administration;

NOW, THEREFORE, for and in consideration of the sum of One Dollar and other good and valuable consideration, it is understood and agreed by and between the parties hereto as follows:

1. Article 5, Section 1 of the Lease is hereby revised to delete the following language appearing in the 8th line,et seq. of the first full paragraph on page 3:

> "Except that no such endorsement shall be required for any mortgagee unless its mortgage shall provide for the application of such insurance proceeds for restoring the premises in accordance with this lease".

2. Article 13 is hereby deleted in its entirety and there is substituted therefor the following new Article 13:

> "This Lease may not be assigned nor the subject premises sublet at any time without Landlord's prior written consent thereto".

3. There is hereby added at the end of the first partial paragraph of Article 18 appearing on page 34 of the Lease, the following:

> "(c) Said mortgagee will agree to make the proceeds of any hazard or casualty insurance policies affecting the demised premises payable to it available for reconstruction of the demised premises".

4. Article 17, Section 1 of the Lease appearing on pages 31 and 32 thereof is hereby amended to add the following language at the end of Section 1:

> " Tenant shall, however, have the right to pursue any sublet award to which it may be entitled under applicable law for its moving expenses, taking of personal property, and business interruption".

5. Article 17, Section 2 appearing on pages 32 and 33 of the Lease are hereby amended to delete therefrom the following language commencing on the last line of page 32 of the Lease:

> "Subject to the approval and consent of the then mortgagee and the terms and conditions of any mortgage upon the premises".

The following language shall be deleted from the 11th, 12th and 13th lines of page 33 of the Lease:

> "Subject to the requirements of any mortgagee of the subject premises that same be applied in reduction of such mortgage balance".

6. With reference to the provisions of Article 19 of the Lease, Section 4 thereof shall be deleted in its entirety.

7. Article 29 is hereby amended to provide that in addition to the deposit payable to the Landlord, the Tenant will on or before _____ deposit with the Small Business Administration of the United States Government the sum of $15,562.50, which sum shall continue to be held by the said Small Business Administration for and during the entire term of this lease and any renewals and extensions hereof.

8. Article 41 of the Lease is hereby amended to substitute "Thirty (30) days" in place of the words, "Fifteen (15) days" appearing on the 6th and 9th lines thereof.

Except as hereinabove set forth, the aforesaid Lease Agreement shall remain unmodified and in full force and effect.

IN WITNESS WHEREOF, these presents have been executed the day and year first above written.

ATTEST:

KNICKERBOCKER ENTERPRISES, INC.

BY: _____
Michael A. Fondo, President

_____

PANTONE, INC.

ATTEST:

BY: _____

_____

LEASE AMENDMENT

THIS LEASE AMENDMENT made this 4th day of April, 1972, by and between:

KNICKERBOCKER ENTERPRISES, INC., a corporation of the State of New Jersey, having its principal place of business at the corner of 20th and Broad Streets, Carlstadt, New Jersey, hereinafter referred to as "Landlord",

and

PANTONE, INC., a corporation of the State of New York, having its principal place of business place of business at 461 Eighth Avenue, New York, New York, hereinafter referred to as "Tenant".

WHEREAS, the parties have determined the exact amount of square feet to be leased hereunder; and

WHEREAS, the parties agree that the rent hereunder is to be adjusted in accordance with the mortgage commitment obtained by the landlord, pursuant to Article 36.

NOW, THEREFORE, the parties do hereby agree as follows:

ARTICLE 2 is hereby deleted and in its place and stead the following shall be substituted:

ARTICLE 2

The Tenant covenants to pay to the Landlord for each lease year during the original term hereof a net annual basic rental at the rate of Sixty-Four Thousand ($64,000.00) Dollars per annum.

Said net annual basic rental shall be payable in equal monthly installments of Five Thousand Three Hundred and Thirty-Three Dollars and Thirty Three ($5,333.33) Cents each in advance on the first day of each and every calendar month in lawful money

of the United States of America at the office of the Landlord or at such other place as may hereafter be designated by the Landlord. Rental for a period of less than one month shall be adjusted pro-rata. Said net annual basic rental is hereinafter sometimes referred to as the "basic rent" or the "basic rent expressly reserved hereunder".

ATTEST: KNICKERBOCKER ENTERPRISES, INC.

Philip J. Delaney Sec BY Michael A. Fondo

ATTEST: PANTONE, INCORPORATED

Secretary BY President

PANTONE®*

September 18, 1989

Mr. Philip DeLeasa
Knickerbocker Enterprises, Inc.
Grand & Christiana Streets
Moonachie, NJ 07074

Dear Phil:

It was nice speaking with you on Thursday, September 14, 1989, at which time we discussed the terms of the Pantone, Inc. lease.

Enclosed is a copy of a letter dated June 21, 1972, signed by Lawrence Herbert and Michael Fondo. Based on the contents therein, we conclude that our current lease is due to expire on July 31, 1992.

If you want to discuss this matter further, please contact me.

Sincerely yours,

Shellee S. Gero
Vice President

Enclosure

Pantone, Inc. 55 Knickerbocker Road Moonachie, New Jersey 07074 (201) 935-5500
* Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.
TELEFAX: (201) 896-0242 TWX: 710-989-0114

PANTONE

INCORPORATED

June 21, 1972

Mr. Michael Fondo
President
Knickerbocker Enterprises, Inc.
Grand & Christiana Streets
Moonachie, N.J. 07074

RE: New Premises
55 Knickerbocker Road
Moonachie, N.J.

Dear Mike:

This letter will serve as an agreement that Pantone, Inc. will move in by August 1, 1972 and commence to pay rent as of August 1, 1972, providing the building has the necessary certificate of occupancy, ~~is essentially complete and automobile and truck access is satisfactory.~~ Mat

Very truly yours,

Lawrence Herbert, President

AGREED TO:
KNICKERBOCKER ENTERPRISES, INC.

By: Michael A. Fondo Pres
(Title)

Date 6/26/72

THIS INDENTURE made this 7/9 day of 1971, by and between:

KNICKERBOCKER ENTERPRISES, INC., A CORPORATION OF THE State of New Jersey, having its principal place of business at the corner of 20th and Broad Streets, Carlstadt, New Jersey, hereinafter referred to as "Landlord", and

PANTONE, INC., a corporation of the State of New York, having its principal place of business at 461 Eighth Avenue, New York, New York, hereinafter referred to as "Tenant".

W I T N E S S E T H:

That the Landlord, for and in consideration of the rents, covenants and agreements hereinafter reserved, mentioned and contained on the part of the Tenant, its successors and assigns, to be paid, kept and performed, has demised and leased, and by these presents does demise and lease, unto the Tenant, and the Tenant does hereby take and hire upon and subject to the conditions hereinafter expressed, the real property, together with the buildings and improvements thereon to be erected, bounded and described as follows:

ALL that lot or parcel of land (sometimes called "demised premises"), together with the buildings and improvements to be erected thereon, as hereinafter provided and described in Exhibit A hereto attached.

90,000 sq. ft. facility

Said demised premises and said buildings and improvements, including, without limitation, parking areas, paved areas, ingress, egress, access and adjoining roads and highways are more fully identified and set forth in preliminary plans attached hereto and incorporated herein as Exhibit B.

The above described ground, buildings and improvements are hereinafter referred to as the "demised premises".

TO HAVE AND TO HOLD the demised premises unto the Tenant, its successors and assigns, for a term of twenty (20) years, commencing on the first day of the month following the month in which the said demised premises shall be ready for occupancy as hereinafter defined.

The demised premises shall be considered as ready for occupancy and rent shall commence when:

1. There shall have been issued by proper governmental authorities and delivered to Landlord any required permits and licenses and certificates of occupancy (copy of which is to be delivered to Tenant.) necessary for Tenant's proper use and occupancy of demised premises under this Lease and in accordance with the plans and specifications referred to hereafter.

2. Adequate roadways are available to Tenant by which merchandise may be transported and delivered into the demised premises.

At the request of either, Landlord and Tenant agree to give each other written confirmation of the commencement date of the term of this Lease within ten (10) days after such commencement.

3. The Landlord agrees that on or before December 15, 1971 it will construct "a locked shell" subject to unavoidable delays as defined in Article 24 hereof.

4. Landlord agrees to install and construct roadways in accordance with the requirements of any governmental authority having jurisdiction over such roadways.

5. Landlord agrees that the demised premises will be completed on or before January 15, 1971 subject to unavoidable delays as defined in Article 24 hereof.

6. It is understood and agreed that in the event the premises are not ready for occupancy on or before March 1, 1972 subject to unavoidable delays as defined in this lease, then and in that event the Tenant shall have the right to cancel this lease by giving written notice to the Landlord. In the event the premises are not fully completed within 30 days after receipt of such written notice by the Landlord this lease shall be deemed to be of no force and effect and Landlord shall forthwith pay back to the Tenant the security deposited under [illegible]

Section 1. Landlord agrees to commission architects at its own cost and expense, to prepare plans, and Landlord agrees to prepare specifications for the building and other improvements to be constructed on the demised premises. Such plans and specifications are to be based on Exhibits A and B aforesaid hereto attached.

Landlord shall, within thirty (30) days of the execution of this Lease, submit to Tenant complete working drawings, plans and specifications of the said building and improvements to be constructed thereon, which shall be substantially consistent with the aforesaid preliminary plans and specifications for Tenant's approval, which Tenant agrees shall not be unreasonably withheld and which shall be deemed given unless Tenant notifies the Landlord no later than 10 (ten) days after receiving the plans that it does not approve the plans. If Tenant shall have objections to the plans and specifications, Tenant may submit the objections to the Landlord and the Landlord shall then have fifteen (15) days from the receipt of the objections to notify Tenant whether the plans and specifications will be changed to meet Tenant's objections. Unless Landlord notifies the Tenant that he will accept the suggested changes within fifteen (15) days of the delivery of the suggested changes, the same shall be considered rejected by the Landlord. Any dispute shall be submitted to arbitration. The plans and specifications so approved pursuant to this provision shall be final and may not be changed by either party in any manner without the written approval of the other. It is understood and agreed that the Landlord shall furnish all mechanical and engineering specifications and drawings to construct the subject building and any other material required by the applicable state, county and municipal statutes ordinances and regulations.

Section 2. Landlord will immediately after approval of the said plans and specifications, proceed diligently at its own cost and expense to construct and complete construction of building and improvements constituting the demised premises, with appropriate draining, grading, paving, curbing and landscaping incidental thereto, in accordance with and as required by said Exhibits attached hereto, and the plans and specifications approved as above provided, and Landlord will, at the same time, proceed diligently, at its own cost and expense, in accordance with and as required by the provisions of this Lease and Exhibits thereto.

a. Landlord covenants and agrees that it will construct said building and improvements and other areas on the demised premises in a good and workmanlike manner, and that Landlord will pay promptly all amounts due by it for labor and materials, and that the said demised premises shall, at all times, be free of mechancis' liens. If any mechanics' liens shall , at any time, be filed against the demised premises, or the buildings or improvements thereon, Landlord covenants that it will promptly take and diligently prosecute appropriate action to have the same discharged within a period of thirty (30) days from the filing of same, or that it will provide appropriate bond or assurance satisfactory to Tenant to cover payments of said liens. In the event the landlord fails to discharge or bond any such liens the tenant has the right to do so and charge the cost thereof to the Landlord.

(b) During the course of construction of the building and improvements, Tenant shall have the right, although no obligation, to have its representatives present, with authority to inspect the work of construction at any reasonable hour for the purpose of determining that the work done and the materials used are in compliance with the terms of this Lease. Inspection by the Tenant during the course of construction shall not be considered a waiver of any of the Tenant's rights under other provisions of this Lease.

(c) Landlord will comply with all laws and ordinances and the orders, rules, regulations and requirements of all federal, state and municipal governments and appropriate departments, commissions, boards and officers thereof and the orders, rules and regulations of the Board of Fire Underwriters where the demised premises are situated.

Section 3. Landlord agrees that Tenant shall have the right, during the course of construction of said building, improvements and other areas and as they approach completion, but only after the premises are enclosed, watertight and locked, to make measurements and begin the installation of such equipment, fixtures and furnishings as Tenant may desire to place in the building, employing only union help, if requested by Landlord, without cost to Landlord, without Tenant being deemed thereby to have taken possession or obligated itself to pay rent. Such installation by Tenant shall not unduly obstruct or delay or interfere with the workmen and contractors engaged in construction of said building, improvements and areas. Landlord shall not be liable to Tenant for any loss, damage, or destruction of any equipment, fixtures or furnishings placed upon the demised premises by Tenant.

Tenant shall have the right to take reasonable precautions to conserve and safeguard its property in or on the premises. Any dispute arising out of or relating to this section or the breach thereof shall be settled by arbitration in accordance with the provisions of this lease.

All equipment, fixtures and furnishings in the said building at any time installed by the Tenant (hereinafter called trade fixtures and equipment), shall remain the property of Tenant and Tenant may remove such property from the demised premises whenever Tenant desires to do so, it being the intention of the parties that all such equipment, fixtures and furnishings be considered as personal property, whether or not attached to any portion of the demised premises, provided, however, that Tenant shall repair any damage to the demised premises caused by said removal, reasonable wear and tear excepted.

A R T I C L E 2

The Tenant covenants to pay to the Landlord for each lease year during the original term hereof a net annual basic rental at the rate of Forty Eight Thousand Nine Hundred Dollars ($48,900.00).

Said net annual basic rental shall be payable in equal monthly installments of Four Thousand Seventy Five Dollars ($4,075.00). each in advance on the first day of each and every calendar month in lawful money of the United States of America at the office of the Landlord or at such other place as may hereafter be designated by the Landlord. Rental for a period of less than one month shall be adjusted pro-rata. Said net annual basic rental is hereinafter sometimes referred to as the "basic rent" or the "basic rent expressly reserved hereunder".

ARTICLE 3

The tenant agrees that the demised shall be used and occupied for printing, storage and manufacturing and any other lawful business uses in accordance with the zoning codes and other governmental rules and regulations, provided such use does not constitute a nuisance which creates offensive noise, smoke or odors.

ARTICLE 4

Section 1. Subsequent to the commencement of the term of the within lease as heretofore defined and the payment by Landlord of all costs of construction of the building and other improvements as specified in sections 1 and 2 of Article 1, the tenant covenants and agrees to pay as additional rent, before any fine or penalty may be added thereto for the nonpayment thereof, all real estate taxes, assessments, water rates and charges, and other governmental charges, general and special, ordinary and extraordinary, unforeseen as well as foreseen, of any kind and nature whatsoever, including, but not limited to, assessments for public improvements or benefits which shall during the term be laid, assessed, levied or imposed upon or become due and payable, and a lien upon the demised or any part thereof (all of which taxes, assessments, water rates or charges, levies or other governmental charges, which hereinafter are referred to as "Impositions"), provided, however, that if by law any such imposition is payable or may, at the option of the taxpayer, be paid in installments (whether or not

interest shall accure on the unpaid balance of such imposition), the Tenant may pay the same, together with any accrued interest on the unpaid balance of such imposition in installments as the same respectively become due and before any fine or penalty may be added thereto for the non-payment of any such installment of interest and provided, further, that any imposition relating to a fiscal period, a part of which is included within the term of this Lease, and a part of which be included in a period of time after the termination or prior to the commencement of the term of this Lease, shall (whether or not, during the term of this Lease, such imposition shall be laid, assessed, levied or imposed upon or become due and payable and a lien upon the demised premises or any part thereof) be adjusted as between the Landlord and the Tenant so that the Landlord shall pay that ratable proportion of such imposition which shall not be attributable to the term of the Lease.

With respect to any imposition for public improvements or benefits which by law is payable, or at the option of the taxpayer may be paid in installments, the Landlord shall pay the installments thereof which become due and payable subsequent to the termination and prior to the commencement of the term of this Lease, and the Tenant shall pay these installments which become due and payable during the term of this Lease, but notwithstanding the foregoing, the Landlord shall also pay all such impositions which arise out of initial public improvements or benefits regardless of when the same are imposed. Adjustments shall be prorated as set forth above.

Section 2. It is understood, however, that nothing herein shall be deemed to require payment by the Tenant of any income, franchise, gross receipts, corporation, inheritance, devolution, gift or estate tax, by whatsoever authority imposed, or howsoever designated, or any tax upon the sale, transfer and/or any assignment of the title or estate of the Landlord, which at any time may be assessed against or become a lien upon the demised premises, this leasehold, or the rental accruing therefrom except that if taxes upon rentals shall be substituted in whole or in part for the present general real estate taxes, then the Tenant shall pay the taxes on rental, but only to the extent to which they shall be substituted for such real estate taxes. Tenant shall not be obligated to pay both real estate and a tax upon rentals.

Section 3. Tenant shall, after notice to the Landlord, have the right at Tenant's sole cost and expense, to contest or review by legal proceedings or in such other manner as it may deem suitable, and if appropriate, in the name of the Landlord, any imposition, upon condition that before instituting any such legal proceeding, if the contested items shall not have been paid, Tenant shall furnish to Landlord and/or to the holder of any first mortgage of the fee (to which this Lease is subordinate), a surety company bond, a cash deposit, or other security sufficent to cover the amount of the contested items for the period which such

proceedings may reasonably be expected to take, securing payment of such contested items and of all charges in connection therewith. The legal proceedings herein referred to shall, without limiting the generality thereof, include appropriate certiorari proceedings and appeals from orders thereof and appeals from any judgments, decrees or orders.

In the event Tenant contests any such taxes or assessments, then Landlord shall cooperate with Tenant, shall execute any documents reasonably required or desirable in furtherance of such purpose, and shall not pay any taxes or assessments being contested. If there shall be any refund of taxes or other charges, whether as a result of contest or otherwise, Tenant shall be entitled to the same, subject to apportionment as provided in Section 1 of Article 4.

ARTICLE 5

Section 1. Tenant, at its own cost and expense, throughout the term of this Lease shall maintain the following insurance with respect to the premises.

Fire insurance with extended coverage, and use and occupancy, in an amount not less than eighty (80%) percent of the full insurable value of the improvements (excluding excavations, land and foundations) but in any event in an amount sufficient to prevent Landlord or Tenant from becoming a co-insurer within the terms of

the applicable policies. Such insurance shall be reviewed every two years and shall be in an amount not less than the amount required by the lending institution which shall advance a loan secured by a first mortgage on the land and improvements thereon.

All such insurance carried by Tenant shall be carried in favor of Landlord and Tenant, as their respective interests may appear, and shall expressly provide that any loss is to be payable to the Landlord and Tenant and, if requested by Landlord, to the holder of any mortgage to which this Lease is subordinate, as the interests of such holder may appear, and in such event shall contain standard mortgagee clauses, except that no such endorsement shall be required for any mortgagee unless its mortgage shall provide for the application of such insurance proceeds for restoring the premises in accordance with this Lease.

Section 2. The Tenant shall also, at the Tenant's sole cost and expense, but for the mutual benefit of Landlord and Tenant, maintain (a) general public liability insurance against claims for personal injury, death, or property damage occurring upon, in or about the demised premises, or in or about the adjoining street and passageways, such insurance to afford protection to the limit of not less than Three Hundred Thousand ($300,000.00) Dollars in respect of injury or death to a single person, and to the limit of not less than One Million ($1,000,000.00) Dollars, in respect of any one accident, and to the limit of not less than Fifty Thousand ($50,000.00) Dollars in respect to property

damage; (b) steam boiler insurance on all steam boilers, pressure boilers or other such apparatus or as would normally be insurable by customary usage under the trade and in such amounts as shall be reasonable; and (c) war damage insurance (whenever such insurance shall be written and a state of war or public emergency exists) upon all buildings and fixtures, to the full insurable value thereof; (d) water damage and sprinkler loss insurance to the full insurable value of Tenant's personal property and contents and (e) rent insurance.

All insurance policies required under the provisions of Section 2 may be carried under a blanket policy covering the demised premises and other locations and in such cases Tenant may deliver certificates of insurance instead of insurance policies; and shall contain waiver of subrogation as against Landlord.

Section 3. All policies of insurance shall be written by reputable companies authorized to do business in New Jersey or acceptable to Landlord's mortgagee. Such policies or certificates shall be delivered to Landlord and endorsed "premium paid" by the company or agency issuing the same or accompanied by other evidence satisfactory to the Landlord that the premiums thereon have been paid not less than ten (10) days prior to the expiration of any then current policy. It is the intention of the parties that the Landlord shall at all times during the term of this lease be in possession of paid up policies or certificates which are in full force and effect.

A R T I C L E 6

If Tenant fails to pay any imposition pursuant to the provisions of Article 4 hereof, or to take out, pay for, maintain or deliver any of the insurance policies provided for in Article 5 hereof, or shall fail to make any other payment, or perform any other act on its part to be made or performed, as in this Lease provided, then Landlord shall give notice to Tenant specifying the nature of the violation and if thereafter Tenant fails to comply with any such covenant, within thirty (30) days of receipt of such notice, then the Tenant shall be deemed in default and Landlord may, but shall not be obligated to do so, terminate this Lease upon written notice to the Tenant, or without notice or demand upon the Tenant, and without waiving or releasing the Tenant from any obligation of the Tenant in this Lease contained, pay any such imposition, effect any such insurance, cover and pay premiums therefor, and make any other payment or perform any other act on the part of the Tenant to be made and performed, as in this Lease provided, in such manner and to such extent as the Landlord may deem desirable and in exercising any such rights to pay necessary and incidental and reasonable costs and expenses, employ counsel and incur and pay reasonable attorneys' fees. All sums so paid by the Landlord and all necessary and incidental costs and

expenses in connection with the performance of any such act by the Landlord, together with interest thereon at the rate of six (6%) per cent per annum from the date of the making of such expenditure by the Landlord shall be deemed additional rent hereunder and, unless otherwise expressly provided, shall be payable to the Landlord upon demand or at the option of the Landlord may be added to basic or additional rent then due or thereafter becoming due under this Lease, and the Tenant covenants to pay any such sum or sums, with interest as aforesaid, and the Landlord shall have, in addition to any other right or remedy, the same rights and remedies in the event of the non-payment thereof by the Tenant as in the case of default by the Tenant in the payment of the basic rent.

In the event that Landlord or Tenant question whether the attorney's fees paid by the other were reasonable, such issue may be submitted to arbitration pursuant to the terms hereof.

ARTICLE 7

Section 1. The Tenant covenants throughout the term of this Lease, at its sole cost and expense, to take good care of the demised premises, including the buildings and improvements now or at any time erected thereon, the equipment, fixtures, motors and machinery thereof and the parking areas, fences and vaults, if any, after the first year and to keep the same in good tenantable order and condition, ordinary wear and tear excepted, and shall promptly, at the Tenant's own cost and expense, make all necessary interior and non-structural repairs, ordinary as well as extraordinary, foreseen as well as unforeseen, except repairs and replacements resulting from damage by fire or other casualty or condemnation (which shall be governed by the provisions of Article 16 and 17 of this Lease), or covered by any guarantee or warranty of any manufacturer or contractor or for which Landlord will be responsible, as provided in this Lease. When used in this Article, the term repairs shall include replacements or renewals when necessary. The Tenant shall keep and maintain all portions of the demised premises and the sidewalks adjoining same in a clean and orderly condition, free of accumulation of dirt, rubbish, snow and ice. The Tenant shall maintain all equipment in operable condition regardless of wear and tear.

Section 2. Landlord covenants throughout the term of this Lease, at Landlord's sole cost and expense,

to promptly make all repairs and replacements (as defined and provided in the foregoing paragraph), to the structural portions of the building only on the demised premises, ordinary wear and tear excepted, exterior, ordinary or extraordinary, foreseen or unforeseen, limited to the walls, roofing, floors, foundation and structural steel. Landlord shall not be responsible for any repairs or replacements caused by the negligence of Tenant, its agents or employees. Such repairs and replacements shall be made by the Landlord, as required from time to time, upon its own initiative or within thirty (30) days after the Landlord will have received notice in writing from the Tenant that such repairs and/or replacements are necessary. If the Landlord disputes that it has an obligation to make such repairs and replacements under the foregoing provisions of this lease it shall within five (5) days after its receipt of such notice give to the Tenant written notice of such dispute and the specific grounds and specific reasons for the same. If the Landlord then fails to make such structural repairs and/or replacements the Tenant shall have the right to make such repairs and/or replacements and, if the Landlord has not disputed its obligation therefor, to charge the reasonable cost thereof to the Landlord (which the Landlord shall pay promptly) and, if the Landlord has served such notice of dispute to enforce its legal remedies by appropriate legal action against the Landlord (which, if the Tenant is successful, shall include, among other things, the reasonable value of Tenant's legal expenses). If Landlord makes a repair pursuant to this Article which is unsatisfactory to Tenant, Tenant shall give Landlord ten (10) days' notice of its dissatisfaction and the reasons therefor. If Landlord fails to correct the repair to Tenant's satisfaction within thirty (30) days, Tenant may make the repair itself and charge the reasonable cost of the repair to the Landlord. Any dispute as to whether a repair is adequate shall be resolved by a competent architect or engineer to be selected by agreement by the parties hereto and his determination shall be final.

The Landlord's obligation to make repairs under this section shall cease at the end of the original term of this Lease.

ARTICLE 8.

Section 1. The Tenant covenants throughout the term of this Lease, at the Tenant's sole cost and expense, promptly to comply with all laws and ordinances and the orders, rules, regulations and requirements of all federal, state and municipal governments and appropriate departments, commissions, boards and officers thereof and the orders, rules and regulations of the Board of Fire Underwriters where the demised premises are situated, or any body, now or hereafter constituted, exercising similar functions, foreseen or unforeseen, ordinary or extraordinary, but only to the extent that such laws, ordinances, orders, rules, regulations and requirements, etc. relate to Tenant's obligations under this Lease. For example, and without fully stating what is meant to be excluded from Tenant's obligations hereunder, Tenant shall not be obligated to comply with any rules, laws, ordinances, regulations and requirements of all

federal, state and municipal governments and appropriate departments, commissions, boards and officers thereof, with respect to exterior and structural repairs or replacements, as provided for in Article 7 hereof, which may be applicable to the demised premises, the fixtures thereof, and the sidewalks, curbs and vaults if any, adjoining the demised premises except that if the Tenant shall be in possession after the original term, the Tenant shall be obligated to comply with any rules, laws, ordinances, regulations and requirements of all federal, state and municipal governments and appropriate departments and commissions, boards and officers thereof with respect to interior and also exterior and structural repairs or replacements which may be applicable to the demised premises, the fixtures thereof and the sidewalks, curbs and vaults if any, adjoining the demised premises.

The Tenant will observe and comply with the requirements of all policies of public liability, fire and all other policies of insurance at any time in force with respect to the buildings and improvements on the demised premises and the equipment thereof.

Section 2. The Tenant shall have the right to contest by appropriate legal proceedings, without cost or expense to the Landlord, the validity of any law, ordinance, order, rule, regulation or requirement of the nature herein referred to, and if, by the terms of any such law, ordinance, order, rule, regulation or requirement, compliance therewith may legally be held in abeyance without subjecting the Tenant or the Landlord to any

liability of whatsoever nature for failure to so comply therewith, the Tenant may postpone compliance therewith until the final determination of any such proceedings, provided that all such proceedings shall be prosecuted with all due diligence and dispatch. Landlord shall cooperate and join with Tenant at Tenant's request and sole cost in any such contest.

ARTICLE 9.

The Tenant shall have the right at any time and from time to time during the term of this Lease to make such alterations and improvements to the buildings, improvements and fixtures now or hereafter on the demised premises as the Tenant shall deem necessary or desirable in connection with the requirements of its business, which changes and alterations (other than changes or alterations of the Tenant's trade fixtures and equipment), shall be made in all cases subject to the following conditions which the Tenant covenants to observe and perform:

(a) No alteration or improvement shall be undertaken until the Tenant shall have procured and paid for, so far as the same may be required from time to time, all municipal permits and authorizations of the various

municipal departments having jurisdiction, and the Landlord agrees to join in the application for such permits or authorizations whenever such action is necessary.

(b) No alteration or improvement shall be undertaken until detailed plans and specifications have first been submitted to and approved in writing by the Landlord. But Landlord shall notunreasonably withhold approval and landlord shall act within 10 days of the submission of such plans and specifications. If the Landlord fails to act within such 10 day period it shall be deemed to have given its approval.

(c) All alterations and improvements involving an estimated cost of more than $10,000.00 shall be conducted under the supervision of a licensed architect or engineer.

(d) All alterations and improvements when completed shall be of such a character as not to reduce, or otherwise adversely affect the value of the demised premises, nor to reduce the cubic content of the building by moving the existing outer walls, roof or floor nor change the character of the building to uses other than described in Article 3. Tenant shall make all repairs and replacements of such alterations and improvements made by it in and to the demised premises.

(e) All work done in connection with any alterations and improvements shall be done promptly and in a good workmanlike manner and in compliance with the building and zoning laws of the place in which the demised premises are located and with all laws, ordinances, orders, rules, regulations and requirements of all federal, state and municipal governments and the appropriate departments, commissions, boards and officers thereof,

and in accordance with the orders, rules and regulations of the Board of Fire Underwriters where the demised premises are situated or any other body exercising similar functions and having jurisdiction thereof; said alteration or improvement shall be completed free of liens for labor and materials supplied or claimed to have been supplied to the demised premises; the work of any alteration or improvement shall be prosecuted with reasonable dispatch, unavoidable delays, as defined herein, excepted. Statutory workmen's compensation insurance covering all persons employed in connection with the work and with respect to whom death or injury claims could be asserted against the Landlord, the Tenant or the demised premises, general liability insurance for the mutual benefit of the Tenant and the Landlord with limits of not less than $300,000.00 in the event of injury to one person and of not less than $1,000,000.00 in the event of injury to any number of persons in any one accident, and with limits of not less than $50,000.00 for property damage shall be maintained by the Tenant at the Tenant's sole cost and expense at all times when any work is in process in connection with any alteration or improvements. All such insurance will be in a company or companies authorized to do business in New Jersey and satisfactory to the Landlord, and all such policies or certificates shall be delivered to the Landlord endorsed "Premium Paid" by the company or agency issuing the same or with other evidence of payment of the premium satisfactory to the Landlord, and such insurance policies required herein may be carried under a blanket

policy covering the demised premises and other locations and certificates of insurance rather than insurance policies may be delivered to the Landlord and to Landlord's mortgagee.

(f) All improvements and alterations (other than the Tenant's trade fixtures and equipment) made or installed by the Tenant shall be and become the property of the Landlord without payment therefrom by the Landlord, and shall be surrendered to the Landlord, upon the expiration or sooner termination of the term of this Lease.

(g) Without limiting the kinds of improvements or alterations as to which Landlord's approval shall be given, it is agreed that it will be unreasonable to withhold approval as to any alterations, improvements or additions which do not adversely affect the fair market value of the demised premises. If Tenant asserts that Landlord has unreasonably withheld approval as to any such matter, such dispute may be submitted to arbitration in accordance with the terms hereof.

(h) Notwithstanding the ownership of alterations or of improvements made to the demised premises, the Tenant shall retain all rights to utilize depreciation deductions with respect to all alterations or improvements made at Tenant's expense.

ARTICLE 10.

Neither Landlord nor Tenant shall suffer or permit any mechanics' liens to be filed against the demised

premises or any part thereof by reason of work, labor, services or materials supplied or claimed to have been supplied to either or anyone holding the demised premises or any part thereof through either. If any such mechanics' lien shall at any time be filed against the demised premises, the party responsible under this Lease for said work, labor, services or materials shall cause the same to be discharged of record within thirty (30) days after the date of filing the same, or shall post a surety bond providing for or securing due payment thereof. Nothing contained herein shall imply any consent or agreement on the part of the Landlord to subject the Landlord's estate to liability under any mechanics' lien law.

ARTICLE 11.

The Tenant covenants not to do or suffer any waste or damage, disfigurement or injury to any building or improvement now or hereafter on the demised premises, or the fixtures and equipment thereof, or permit or suffer any stationary overloading of the floors thereof. Landlord represents that the floor load capacity of premises shall be 500 pounds per square foot.

ARTICLE 12.

Section 1. The Tenant agrees to permit the Landlord and the authorized representatives of the Landlord to enter the demised premises at all times during usual business hours for the purpose of inspecting the same and making any necessary repairs to the demised

premises and performing any work therein that may be necessary, to comply with any laws, ordinances, rules, regulations or requirements of any public authority or of the Board of Fire Underwriters or any similar body or that the Landlord may deem necessary to prevent waste or deterioration in connection with the demised premises. Nothing herein shall imply any duty upon the part of the Landlord to do any such work which, under any provision of this Lease, the Tenant may be required to perform and the performance thereof by the Landlord shall not constitute a waiver of the Tenant's default in failing to perform the same. The Landlord may, during the progress of any work in the demised premises, keep and store upon the demised premises all necessary materials, tools and equipment. The Landlord shall not in any event be liable for inconvenience, annoyance, disturbance, loss of business or other damage of the Tenant by reason of making repairs or the performance of any work in the demised premises, or on account of bringing materials, supplies and equipment into or through the demised premises during the course thereof, and the obligations of the Tenant under this Lease shall not thereby be affected in any manner whatsoever. The Landlord agrees, however, in connection with the doing of any such work, to cause as little inconvenience, annoyance, disturbance, loss of business or other damage to the Tenant as may reasonably be possible in the circumstances. It is understood and agrees that the Landlord shall perform said work other than during business hours at the request of the Tenant.

Section 2. The Landlord is hereby given the right during usual business hours to enter the demised premises and to exhibit the same for the purposes of sale or mortgage and during the final nine (9) months of the term the Landlord shall be entitled to display on the demised premises in such manner as not unreasonably to interfere with the Tenant's business, the usual "For Sale" or "To Let" signs and the Tenant agrees that such signs may remain unmolested upon the demised premises.

ARTICLE 13.

Tenant may, at any time after it takes possession of the demised premises:

(a) Assign this Lease or sublet the demised premises to any parent or subsidiary corporation or to any subsidiary or affiliate of Tenant's parent corporation or to any successor corporation of any of the foregoing including a corporation which has merged with or is the successor of any of the foregoing companies, without the written consent of Landlord, provided that the Tenant herein shall remain primarily liable for the faithful performance of the covenants and conditions of this Lease.

(b) Assign this Lease to any assignee or sublet the demised premises or any part (other than to an assignee or subtenant described in (a) above), provided that the Tenant herein shall remain primarily liable for the faithful performance of the covenants and conditions of this Lease such assignment shall be with the written consent of the Landlord, which consent shall not be unreasonably withheld.

ARTICLE 14.

The Tenant agrees to pay or cause to be paid all charges for gas, electricity, light, heat or power, sewer, telephone or other communication service used, rendered or supplied upon and in connection with the demised premises throughout the term of this Lease, and to indemnify the Landlord and save it harmless against any liability or damages on such account. The Landlord shall, at its sole cost and expense, procure any and all necessary permits, licenses or other authorizations required for the lawful and proper installation and maintenance upon the demised premises of wires, pipes, conduits, tubes and other equipment and appliances for use in supplying any such service to and upon the demised premises. It is understood and agreed that the Landlord shall pay for the cost of the installations set forth hereinabove.

ARTICLE 15.

Section 1. The Tenant agrees to indemnify and save harmless the Landlord against and from any and all claims by or on behalf of any person or persons, firm or firms, corporation or corporations, arising from the use or occupancy of the demised premises and of any street, curb or sidewalk adjoining the demised premises or of any vaults, passageways, or spaces therein or appurtenant thereto, or arising from any breach or default on the part of the Tenant in the performance of any covenant or agreement on the part of the Tenant to be performed pursuant to the terms of this Lease, or arising from any act of negligence of the Tenant or Landlord, or any of their agents,

contractors, servants, employees or licensees or arising from any accident, injury or damage whatsoever caused to any person, firm or corporation occurring during the term of this Lease in or about the demised premises, or upon or under the sidewalks and the land adjacent thereto, and from and against all costs, counsel fees, expenses and liabilities incurred in or about any such claim or action or proceeding brought thereon and in case any action or proceeding be brought against the Landlord by reason of any such claim, the Tenant, upon notice from the Landlord, covenants to resist or defend such action. It is expressly agreed by and between the parties to this agreement that the Landlord shall not be liable for any damage or injury to person or property by or resulting from steam, electricity, gas, water, rain, ice or snow, or any leak or flow from or into any part of said building, or from any damage or injury resulting or arising from any other cause or happening whatsoever. The Landlord shall not be liable for injury or damage to any person or property for any acts of omission or commission, or any acts of ordinary or gross negligence, or for any repairs which the Landlord made, is required to make, may have failed to make, may have made voluntarily, or any other repairs made in a negligent manner.

Section 2. Notwithstanding the foregoing provisions of the Article 15, neither party shall be liable for any injuries, loss, expense, claim or damage of the other's property or interests in respect to which and to the extent that said property or interest is covered

by insurance, irrespective of whether occasioned by negligence of such party, its servants, agents or employees.

ARTICLE 16

In case of destruction during the term of this lease by fire or the elements or otherwise of the portion of said building or premises constructed by the Landlord or such partial destruction of such portion as to render the premises wholly or partially untenantable or unfit for beneficial occupancy, the Tenant shall give immediate written notice of such damage to the Landlord. Within fifteen (15) days of the notice of damage the Landlord shall notify the Tenant whether Landlord will repair and/or rebuild, which the Landlord shall be required to complete within 90 days. If Landlord notifies Tenant that Landlord will not repair and/or rebuild, Tenant shall have 90 days from receipt of such notice to inform Land-Lord that Tenant will repair and/or rebuild. If Landlord has not so informed Tenant of whether Landlord will repair and/or rebuild within the 90 days, Tenant shall have 90 days to notify Landlord of his intentions, commencing the last day on which Landlord may have notified Tenant. If both of the aforementioned periods expire and neither Landlord nor Tenant has informed the other that he will repair and/or rebuild, or if Tenant has informed Landlord that Tenant will not repair and/or re-build, or if such repair and/or rebuilding is prevented because of failure to obtain the consent and approval of the then mortgagee or because the repair and/or rebuilding is contrary to the terms and conditions of any mortgage upon the premises, both parties shall have 90 days in which to inform the other that he terminates this Lease. If neither party terminates this lease, this lease shall continue at the adjusted rental

provided in this Article.

The premises may be repaired and/or rebuilt only on the approval and consent of the then mortgagee and only subject to the terms and conditions of any mortgage upon the premises. Neither Landlord nor Tenant shall, in any case, be required to repair or rebuild any portion of the premises constructed by Tenant.

If Landlord or Tenant will repair and/or rebuild, the proceeds of any fire or other hazard insurance policies related to the injury which are received by the Landlord shall be kept in a separate fund and be earmarked for use in connection with the repair and/or rebuilding of the premises. If Landlord or Tenant repairs and/or rebuilds and if there is an excess of insurance proceeds over the cost of repair and/or rebuilding, the amount of such excess shall be paid over to and be retained by Tenant.

After Tenant has given Landlord written notice of damages, Tenant shall continue to pay rent only for such portion of the demised premises as may reasonably be occupied by Tenant, until the portion of the premises constructed by Landlord is restored to its pre-damage condition, at which time Tenant shall again pay the full amount of rent. If the Landlord and Tenant do not agree on the amount of such reduced rent, the same shall be determined by arbitration, as provided herein.

Any rebuilding of the premises shall be in accordance with the plans and specifications that were agreed to under Article 1 Section 1 of this Lease, unless the parties otherwise agree.

Any repair of the premises under this provision shall be done promptly and to the extent not otherwise covered by this Article shall be governed by the applicable provisions of Article 12 Section 1 hereof relating to the time and manner in which repairs are to be made, storage of tools and materials, and damage and annoyance to the Tenant because of the repairs.

The covenants and other provisions of Article 1 Section 2 and the representation in Article 11 shall apply to any repair and/or rebuilding of the premises under this Article, and shall be deemed to be given by the party undertaking the repair and/or rebuilding to the other party.

ARTICLE 17

Section 1. This lease and the term hereof shall terminate: (1) If the entire demised premises shall be taken; or (2) at Tenant's option (exercisable by notice given to Landlord within three (3) months after the date of taking), if a material part of the demised premises shall be taken, in any condemnation or eminent domain proceedings, and Tenant shall be liable only for the payment of rent and other charges herein prorated to the date of termiantion, and the Landlord shall refund any payment in excess thereof. A taking of a "material part of the demised premises" , as such quoted words are used

herein, shall mean without limitation, the condemning or taking by eminent domain in excess of thirty (30%) per cent of the building area of the demised premises, which area cannot be restored by Landlord. Any dispute as to whether a material part of the demised premises has been taken shall be determined by arbitration as herein provided. If, as a result of such condemnation or eminent domain proceedings, this Lease shall terminate as hereinabove provided, then the condemnation award shall be the sole property of the Landlord and the Tenant shall not participate therein.

Section 2. In the event that any part of the demised premises is taken under any condemnation or eminent domain proceedings and this Lease is not terminated pursuant to Section 1 hereof, then this Lease shall remain in full force and effect as to such remaining portion, except that from and after the date of taking, the Tenant shall be entitled to an equitable reduction in the fixed annual rent to be paid hereunder in accordance with the value of the leasehold before and after the partial condemnation. If the Landlord and Tenant do not agree on the amount of such reduced rent, the same shall be determined by arbitration, as herein provided. Subject

to the approval and consent of the then mortgagee and the terms and conditions of any mortgage upon the premises, Landlord shall promptly reconstruct and restore the portion of the premises remaining after such taking to a complete architectural unit, including making all necessary changes or installations of all plumbing, heating or wiring systems. To that end all condemnation proceeds shall be on deposit with the holder of any mortgage to which this Lease is subordinate (or, if none, with a bank or trust company under the joint control of Landlord and Tenant, as Trustees), and the amount thereof shall, subject to the requirements of any mortgagee of the subject premises that same be applied in reduction of such mortgage balance, at all times be available to Landlord for construction and restoration purposes. In such event, Landlord shall first be entitled to receive from the award an amount sufficient to rebuild or reconstruct the demised premises, as above provided, and thereafter Tenant shall be entitled from said award to an amount equal to the unamortized cost of its fixtures, equipment, leasehold improvements or other property so taken after considering the normal and usual depreciation thereon from the date of installation thereof, and any balance remaining in said award shall thereafter be paid to the Landlord. Anything herein contained notwithstanding, the tenant shall have the right to pursue any separate award to which it may be entitled under the applicable law. Tenant shall also be entitled to an award to the extent of any improvements made by it at its own expense.

ARTICLE 18

Tenant covenants that its rights under this lease agreement are hereby and will be subordinate to the

operation and effect of any institutional first mortgage now or hereafter placed upon the demised premises or any part or portion thereof without any further written document from Tenant, provided, however, that said subordination shall not be effective with respect to any such first mortgage until Landlord shall deliver to Tenant an agreement by the respective mortgagee, in form suitable for recording, providing substantially that so long as Tenant is not in default under this Lease and has not prepaid the rent except as provided in said Lease, (a) the right of possession of Tenant to the demised premises, and all other rights of Tenant under said Lease shall not be affected or disturbed by said mortgagee in the exercise of any of its rights under said mortgage, or the bond or debt secured thereby, or as otherwise provided by law, (b) said mortgagee will not join Tenant in summary of foreclosure proceedings to enforce said mortgage.

Tenant agrees to abide by such reasonable conditions and requirements for modifications hereof of any reputable lending institution, which conditions and requirements shall not, materially and adversely, affect the basic business terms hereof, and Tenant further agrees to execute such further documents and modifications of the terms hereof as may be reasonably requested by such lending institution.

ARTICLE 19.

Section 1. If during the term of this Lease, (a) the Tenant shall make an assignment for the benefit of creditors, or (b) a voluntary or involuntary petition be filed by or against the Tenant under any law having for its purpose the adjudication of the Tenant, a bankrupt, or the extension of time of payment, composition, adjustment, modification, settlement or satisfaction of the liabilities of the Tenant or the reorganization or liquidation of the Tenant, or (c) a receiver be appointed for the property of the Tenant by reason of the insolvency or alleged insolvency of the Tenant, or (d) any department of the state or federal government, or any officer thereof duly authorized, shall take possession of the business or property of the Tenant by reason of the insolvency or alleged insolvency of the Tenant and Tenant shall not within sixty (60) days thereafter, remove or cure any of the foregoing or undertake action to correct same, then the Landlord shall give Tenant notice of a default under this Lease and if, within thirty (30) days after such notice, Tenant shall still not have removed or cured any of the foregoing or undertaken an action to correct same, then the occurrence of any such contingency shall be deemed a breach of this Lease and this Lease shall ipso facto upon the happening of any of said contingencies, be terminated and the same shall expire as if the day of the happening of such contingency were the date herein specifically fixed for the expiration of the term

and the Tenant will then quit and surrender the demised premises to the Landlord, but the Tenant shall remain liable as hereinafter provided. In the event Landlord and Tenant have a dispute concerning the question of whether Tenant has undertaken any action to correct the default, such dispute shall be submitted as speedily as possible to arbitration pursuant to the terms hereof. Landlord reserves the right to file a claim against any assignee, receiver or trustee as a result of the foregoing provisions, for any damages for loss of rent, for the full term of the Lease or otherwise which Landlord may suffer, as a result of the foregoing.

Section 2. If, during the term of this Lease, the Tenant shall make default in any of the covenants of this Lease (other than the covenants for the payment of basic rent, additional rent or other charges payable by the Tenant hereunder), the Landlord may give to the Tenant notice of any default or of the happening of any contingency in this Section referred to, and if at the expiration of thirty (30) days after receipt of such notice the default or the contingency upon which said notice was based shall continue to exist or in the case of a default or contingency which cannot with due diligence be cured within a period of thirty (30) days, if the Tenant fails to proceed promptly after receipt of such notice and with all due diligence to cure the same.

and thereafter to prosecute the curing of such default with all due diligence (it being intended that in connection with a default not susceptible of being cured with due diligence within thirty (30) days that the time within which the Tenant is to cure the same shall be extended for such period as may be necessary to complete the same with all due diligence), the Landlord, at its option, may terminate this Lease and upon such termination the Tenant will quit and surrender the demised premises to the Landlord, but the Tenant shall remain liable. If there is a question as to whether Tenant is using all due diligence, that question shall be submitted to arbitration pursuant to the terms hereof.

Section 3. If the Tenant shall make default in the payment of the basic rent expressly reserved hereunder, or any part of the same, and such default shall continue for thirty (30) days after receipt of notice thereof from the Landlord, or shall make default in the payment of any item of additional rent, or any other charge required to be paid by the Tenant hereunder or any part of the same and such default shall continue for thirty (30) days after receipt of notice thereof from the Landlord, or if said additional rent or charge may not be paid within said thirty (30) days, if Tenant fails to proceed promptly with due diligence to cure same as provided in Section 2 of this Article, the Landlord or the Landlord's agents and servants may immediately or at any time thereafter re-enter the demised premises and remove all persons and all or any property

therefrom either by summary dispossess proceedings or by any suitable action or proceeding at law or by force or otherwise, without being liable to indictment, prosecution or damages therefore, and repossess and enjoy said premises together with all additions, alterations and improvements, without such re-entry and repossession working a forfeiture or waiver of the rents to be paid and the covenants to be performed by the Tenant during the full term hereof. Upon the expiration of the term of this Lease by reason of the happening of any of the events hereinabove described in Section 1 or Section 2, or in the event of the termination of this Lease by summary dispossess proceedings or under any provision of law now or at any time hereafter in force by reason of or based upon or arising out of a default under or breach of this Lease on the part of the Tenant, or upon the Landlord recovering possession of the demised premises in the manner or in any of the circumstances whatsoever, whether with or without legal proceedings, by reason of or based upon or arising out of a default under or breach of this Lease on the part of the Tenant, the Landlord may, at its option, at any time and from time to time relet the demised premises, or any part or parts thereof, for the account of the Tenant or otherwise, and receive and collect the rents therefor, applying the same first to the payment of such expenses as the Landlord may have incurred in recovering possession of the demised premises, including the legal expenses and attorneys' fees, and for putting the same into good order

or condition or preparing or altering the same for re-rental and all other expense, commissions and charges paid, assumed or incurred by the Landlord in or about reletting the premises and then to the fulfillment of the covenants of the Tenant hereunder. Any such reletting herein provided for may be for the remainder term of this Lease or for a longer or shorter period. In any such case and whether or not the demised premises, or any part thereof be relet, the Tenant shall pay to the Landlord the basic rent and all other charges required to be paid by the Tenant up to the time of such termination of this Lease, or of such recovery of possession of the demised premises by the Landlord, as the case may be, and thereafter, except in a case in which the liability of the Tenant as hereinafter provided arises by reason of the happening of any of the contingencies referred to in Section 1. hereof, the Tenant covenants and agrees, if required by the Landlord, to pay to the Landlord until the end of the term of this Lease, the equivalent of the amount of all the basic rent reserved herein and all other charges required to be paid by the Tenant, less the net avails of reletting, if any, and the same shall be due and payable by the Tenant to the Landlord on the several rent days herein specified, that is to say, upon each of such rent days the Tenant shall pay to the Landlord the amount of the deficiency then existing.

Section 4. If this Lease shall terminate by reason of the occurrence of any contingency mentioned in

Section 1. of this Article, the Landlord shall be entitled, notwithstanding any other provision of this Lease, or any present or future law, to recover from the Tenant or the Tenant's estate (in lieu of all claims against the Tenant relating to unpaid basic or additional rent), as damages for loss of the bargain and not as a penalty, a lump sum which at the time of such termination of this Lease equals the then present worth of the basic rent and all other charges payable by the Tenant hereunder that were unpaid or would have accrued for the balance of the term less the actual rental value of the demised premises for the balance of such term, unless any statute or rule of law governing the proceeding in which such damages are to be proved shall limit the amount of such claim capable of being so proved, in which case the Landlord shall be entitled to prove as and for liquidated damages by reason of such breach and termination of this Lease, the maximum amount which may be allowed by or under any such statute or rule of law. Nothing herein contained shall limit or prejudice the Landlord's right to prove and obtain as liquidated damages arising out of such breach or termination the maximum amount which may be allowed by or under any such statute or rule of law which may govern the proceedings in which such damages are to be proved whether or not such amount be greater, equal to, or less than the amount of the excess of the basic rent over the rental value referred to above.

Section 5. The Tenant hereby expressly waives the service of notice of intention to re-enter as provided for in any statute or to institute legal proceedings

to that end and also waives any and all right of redemption in case the Tenant shall be dispossessed by a court. The terms "enter", "re-enter", "entry", or "re-entry", as used in this Lease are not restricted to their technical legal meaning.

ARTICLE 20

All notices, demands and requests which may or are required to be given by either party to the other shall be in writing. All notices, demands and requests by the Landlord to the Tenant shall be sent to the Tenant at the demised premises or at such other place as the Tenant may from time to time designate in a written notice to the Landlord. All notices, demands and requests by the Tenant to the Landlord shall be sent to the Landlord at Corner of 20th and Broad Streets, Carlstadt, New Jersey,

or at such other place as the Landlord may from time to time designate in a written notice to the Tenant. All notices, demands and requests shall be sent by registered mail, return receipt requested.

ARTICLE 21.

The Tenant, in the use and occupation of the demised premises and in the prosecution or conduct of any business therein, shall comply with the requirements of all laws, orders, ordinances, rules and regulations of the federal, state, county and municipal authorities. The Tenant covenants that it will not use or permit to be

used any part of the demised premises for any dangerous, noxious or offensive trade or business and will not cause or maintain any nuisance in, at or on the demised premises.

The Tenant shall, upon termination of this Lease, for any reason whatsoever, surrender to the Landlord the building, structures, fixtures and building equipment upon the demised premises, together with all additions, alterations and replacements thereof (except the Tenant's trade fixtures or other installations made by the Tenant, machinery and equipment), in good tenantable order, condition and repair except for reasonable wear and tear, casualty, fire or eminent domain.

ARTICLE 22

Section 1. Landlord covenants and warrants that it is and will be at the commencement of the term of this Lease fee owner of the demised premises and is in possession thereof and has full right and power to execute and perform this Lease and to grant the estate demised herein; that it has good and marketable and fee title to said demised premises, free and clear of liens, encumbrances, and restrictions except easements for storm and sanitary sewers and drainage ditches, mortgages which shall be recorded after the recording of this Lease or a memorandum thereof.

Section 2. Landlord further covenants and warrants that it will deliver to the Tenant exclusive possession of

said demised premises with improvements and appurtenances in accordance with the exhibits hereto attached and the plans and specifications as hereinbefore provided, in safe, clean and tenantable condition and in good order, repair and completed in accordance with the aforesaid exhibits, plans and specifications.

Section 3. Landlord covenants that in the event of a default or breach under any institutional first mortgage other restriction, lien or encumbrance which shall affect the possession of the Tenant with respect to the demised premises, it shall give notice immediately thereafter to the Tenant within sufficient time for Tenant to cure said breach or default before any rights or remedies ensue to the holders of said mortgage, lien or encumbrance and Tenant shall have the right to cure said breach or default and to charge all reasonable costs thereof, plus interest at six (6%) per cent per annum, including reasonable attorneys' fees, against any rentals due or to become due under this Lease, provided that Tenant's right to charge or set-off against the rentals hereunder shall not apply in the event a mortgagee elects to enforce its rights under any assignment of rentals to it.

Landlord covenants that the demised premises shall be free of all violations, charges or notices of all violations of any public or quasi-public authority or of any zoning restrictions.

Section 4. Landlord covenants and warrants that the Tenant upon paying the basic rent and all charges herein provided for and observing and keeping the covenants, agreements and conditions of this Lease on its part to be kept, shall lawfully and quietly hold, occupy and enjoy said demised premises during the term of this Lease, without hindrance or molestation of the Landlord or of any person or persons claiming under the Landlord, or any other person, company or corporation and Landlord covenants and warrants that it will defend Tenant in such peaceful and quiet use and possession against the claims of all persons and corporations.

ARTICLE 23.

In each case where the Lease provides for a settlement of a dispute or question by arbitration the same shall be settled by arbitration under the auspices of the American Arbitration Association. The Rules of the American Arbitration Association from time to time in effect shall apply (except where inapplicable). Any award shall be enforceable by proper proceedings in any court having jurisdiction. The arbitrator, regardless how appointed, may determine how the expense of the arbitration, including reasonable attorneys' fees, and the dis-

bursements of the successful party, shall be borne as between the Landlord and the Tenant. Such arbitration hearings shall be conducted in the City of Newark, State of New Jersey.

ARTICLE 24

"Landlord" as used in this Lease so far as covenants and/or obligations on the part of the Landlord are concerned, shall be limited to mean and include only the owner or owners at the time in question of the fee of the demised premises and, in the event of any transfer or transfers of the title to such fee, the Landlord herein named (and in case of any subsequent transfers or conveyances), the then grantor shall be automatically freed and relieved from and after the date of such transfer or conveyance of all personal liability as respects the performance of any covenants or obligations on the part of the Landlord contained in this lease thereafter to be performed provided the conveyance is to a bona fide purchaser for full value, also provided that the grantee shall first, in writing to the Tenant, assume all covenants and obligations of the Landlord under this Lease, and that any funds in the hands of such Landlord or the then grantor at the time of such transfer, in which the Tenant has an interest, shall be turned over to the grantee and any amount then due and payable to the Tenant by the Landlord or the then grantor under any provisions of this Lease, shall be paid to the Tenant, it being intended hereby that the covenants and obligations contained in this Lease on the part of the Landlord shall, subject as aforesaid, be binding on the Landlord, its

successors and assigns, only during and in respect of their respective successive periods of ownership. Anything herein contained notwithstanding, the liability of the Landlord hereunder shall be limited to the Landlord's interest in the demised premises. In no event shall Landlord be liable for any deficiency of any kind or nature.

"Unavoidable delays", as used in this Lease, shall mean delays which occur during or prior to the term due to (1) any strikes, lockouts or labor disputes, or (2) Acts of God, weather conditions interfering with or delaying construction, governmental restrictions, regulations or controls, enemy or hostile governmental action, civil commotion, insurrection revolution, sabotage or fire or other casualty or other condition similar to those enumerated in (2) hereof. If either Landlord or Tenant shall as a result of any such event be delayed and fail punctually to perform any Lease obligation, then the time to perform such obligation shall be extended by the delay caused by such event. If Landlord or Tenant shall, as a result of any such event, be unable to exercise any right or option within any time limit provided for in this Lease, such time limit shall be deemed extended for a period equal to the duration of such event.

ARTICLE 25.

The Tenant agrees at any time and from time to time upon not less than ten (10) days' prior written request by the Landlord to execute, acknowledge and deliver to the Landlord a statement in writing certifying that this Lease is unmodified and in full force and effect

(or if there have been modifications that the same is in full force and effect as modified and stating the modifications), and the dates to which the basic rent and other charges have been paid in advance, if any, it being intended that any such statement delivered pursuant to this Article may be relied upon by any prospective purchaser of the fee or mortgagee or assignee of any mortgage upon the fee of the demised premises. The tenant shall at all times have the right to assign or encumber by mortgage or other proper instrument in the nature thereof as security for any actual bona fide debt this lease and all rights thereunder; but any and all such assignments and encumbrances shall at all times be inferior,subordinate and subject to the prior right, title and interest of any present or future landlord and any present or future mortgagee and in the event of foreclosure of any such mortgage of the tenant's interes hereunder the tenant shall nevertheless remain liable to the landlord under all of the covenants and conditions of this lease.

ARTICLE 26

The specified remedies to which the Landlord and Tenant may resort under the terms of this Lease are cumulative and are not intended to be exclusive of any other remedies or means of redress to which the Landlord or Tenant may be lawfully entitled in case of any breach or threatened breach by the Landlord or Tenant of any provision of this Lease. The failure of the Landlord or Tenant to insist in any one or more cases upon the strict performance of any of the covenants of the Lease or to exercise any option herein contained shall not be construed as a waiver or a relinquishment for the future of such covenant or option. A receipt by the Landlord of rent with knowledge of the breach of any covenant hereof shall not be deemed a waiver of such breach, and no waiver by the Landlord or Tenant of any provision of this Lease shall be deemed to have been made unless expressed in writing and signed by the Landlord or Tenant. In addition to the other remedies in this Lease provided, the Landlord or Tenant

shall be entitled to the restraint by injunction of the violation or attempted or threatened violation of any of the covenants, conditions or provisions of this lease.

ARTICLE 27

Landlord and Tenant hereto agree to execute at or prior to the commencement of the term, in form suitable for recording, a short form lease which shall be the document recorded in the records of the county in which the demised premises are located.

ARTICLE 28

The covenants and agreements herein contained shall bind and inure to the benefit of the Landlord, its successors and assigns, and the Tenant, its successors and assigns, to the extent this Lease is assignable by the terms hereof.

ARTICLE 29

As security for the faithful performance by Tenant of all of the terms and conditions upon Tenant's part to be performed, Tenant shall deposit with the Landlord, as hereinafter provided, the sum of $16,300.00, which shall be returned to the Tenant on the day set forth for the expiration of the term hereof; provided, however, that Tenant has fully and faithfully carried out all of the terms, covenants and conditions on its part to be performed. Commencing with the date which is six (6) months after the day on which the escrowee, hereinafter named, has delivered the balance of such security to the Landlord, the Landlord shall pay to the Tenant interest on the said sum of $16,300.00 at the rate of five (5%) per cent per annum and semi-annually thereafter, such interest to accrue from the dates on

which the security, and any part thereof, is delivered to the Landlord as hereinafter provided. In the event of any default by Tenant, Landlord may, but shall not be obligated to, apply all or part of said security for the payment of any obligations of Tenant hereunder. The security deposited under this lease shall not be mortgaged, assigned or encumbered by Tenant in any wise without the prior written consent of the Landlord being obtained. The aforesaid sum of $16,300.00 shall be delivered to Lawson Bernstein, Esq., as escrowee upon the execution and delivery of the within lease. The said escrow agent shall hold the money in security and deliver 1/2 thereof upon certification to him by the Landlord that the steel for the demised premises has been erected and the balance of said monies shall be delivered to the Landlord upon certification by the Landlord in writing that a "locked shell" has been constructed upon the demised premises.

ARTICLE 30

The index captions are inserted for convenience only and are not to be construed as a part of this Lease nor as affecting the meaning of the text of any paragraph hereof.

ARTICLE 31

If any provision of this Lease or the application thereof to any person or circumstances shall be invalid or unenforcable, the remainder of this Lease shall not be affected thereby.

ARTICLE 32

Whenever herein the singular number is used, the same shall include the plural, and the masculine

gender shall include the feminine and neuter genders.

The enumeration anywhere in this Lease of any right or remedy or either party shall not be construed as an exclusion or substitution of any other rights or remedies conferred under this Lease or applicable by law.

This agreement shall not be modified or cancelled except by writing subscribed by the parties.

Landlord and Tenant hereby waive trial by jury in any action or proceeding brought by either of them against the other on any matters whatsoever arising out of, under, or by virtue of the terms of this Lease.

ARTICLE 33

The parties do hereby recognize Archie Schwartz, 7 Glenwood Avenue, East Orange, New Jersey, as the sole procuring broker of the within Lease and the Landlord does hereby agree to pay any and all commissions which may be due to the said Archie Schwartz, pursuant to a separate agreement. Tenant represents that it has dealt with no other real estate broker in reference to the demised premises or any other premises located in Landlord's industrial park.

ARTICLE 34

It is agreed that, if at any time, after Landlord has substantially completed all of the improvements to be made by Landlord under this Lease, the Landlord shall sell or convey its interest in the demised premises, Landlord shall be

entirely free, relieved and released and discharged of all future obligations and liability for the performance of the terms, covenants, conditions and provisions of this lease, for the balance of the term of this lease and any renewals or extensions thereof, and of and under the covenants of quiet enjoyment, effective from the date of said sale and the assumption in writing by the purchaser of Landlord's obligations under this Lease, a copy of which assumption documents shall be provided to Tenant, and provided that said purchaser or purchasers do covenant and agree to perform all of the terms, covenants and conditions of this Lease that the Landlord hereunder has agreed to perform under the terms of this Lease provided further that such conveyance is made to a bona fide purchaser for full value.

ARTICLE 35

Tenant represents and warrants to Landlord that it has a net worth of not less than $, as of the date hereof.

ARTICLE 36

This Lease is contingent and conditioned upon Landlord obtaining a mortgage loan for the demised premises and the proposed building, in an amount of not less than $375,000.00 for a period of 20 years, with a constant rate (interest and amortization) not greater than 9.5% per annum. It is understood and agreed that in the event the said constant rate for said mortgage is greater than 9.5% per annum, the Tenant will pay, as additional annual rent, the difference between the mortgage at 9.5% and the constant rate obtained not to exceed 10.0% per annum. The Tenant agrees to cooperate with the Landlord in obtaining mortgage financing, and in connection therewith shall execute any and all documents which may be required by the lending institution and furnish financial and other information as may be required, provided such documents do not alter the material terms of this lease including but not limited to rent, security deposit, size of premises and other material provisions of it.

If a mortgage is not obtained within thirty (30) days from the date hereof, the Tenant shall have the option for a period of thirty (30) days to seek to obtain such mortgage. If no mortgage is obtained by Tenant, then Landlord shall have the right to terminate and cancel this Lease. Said right of cancellation to be exercised within ten (10) days thereafter and if not exercised, this Lease shall remain in full force and effect. In the event this Lease is cancelled by reason of the foregoing, neither party shall have any further liability to the other except that Landlord shall direct the escrow holder to return to the Tenant the security deposit made hereunder. Landlord shall mail a copy of its mortgage commitment to Tenant immediately upon receipt of sam

ARTICLE 37

The Tenant shall have the right to erect signs upon the demised premises provided that such signs comply with all applicable laws, statutes, ordinances, rules and regulations. The size, location and type of sign shall be subject to the prior written consent of the Landlord, which consent shall not be unreasonably withheld.

ARTICLE 38

The Tenant shall not provide any outside storage facilities, except with the prior written consent of the Landlord, upon such terms and conditions as the Landlord may reasonably impose.

ARTICLE 39

It is understood and agreed that in the event the Tenant requests and the Landlord agrees to construct or install any item not set forth in the plans and specifications attached hereto and made a part hereof, the Tenant shall pay to the Landlord, for such extra, the cost thereof, together with fifteen (15%) per cent of such cost for Landlord's overhead expenses in connection therewith, and an additional ten (10%) per cent of such cost, said amount to represent Landlord's profit in connection therewith. Landlord shall not be obligated to make any changes, amendments or alterations not set forth in the plans and specifications attached hereto until it has received a written request for same from the Tenant and has accepted such request and agreed to do the work referred to therein.

ARTICLE 40

It is understood and agreed that the final measurements of the building to be constructed hereunder may vary. The parties agree that in the event there is a variation not in excess of 300 square feet, the rental hereunder shall be adjusted upward or downward as the case may be, at the rate of $1.63 per square foot. Said adjustment shall be based upon outside measurements which shall be certified by Landlord's architect or engineer at the Landlord's cost and expense.

ARTICLE 41

In the event the Landlord receives a bona fide offer from a bona fide prospective purchaser to purchase the demised premises, then, and in such event, the Landlord shall first offer to the Tenant, in writing, the right to purchase such premises upon the same terms and conditions as such offer. The Tenant within fifteen (15) days of the receipt of such offer from the Landlord shall notify the Landlord of Tenant's acceptance or rejection of such offer. In the event the Tenant fails to respond within fifteen (15) days after the receipt of such offer from the Landlord, Tenant shall be deemed to have rejected said offer, and Landlord shall have the right to sell the demised premises upon such terms and conditions to said bona fide purchaser, and the right of the Tenant to purchase thereunder shall terminate provided, however, that said premises are thereafter sold to said bona fide prospective purchaser upon the same terms and conditions as those submitted as aforesaid to the Tenant. In the event Tenant accepts said offer in writing within the aforesaid time period, Tenant shall, within fifteen (15) days after acceptance of said offer, enter into an agreement in writing with the Landlord upon the aforesaid terms and conditions for the purchase of the demised premises, which said contract shall provide, among other things, for a closing thereunder not later than sixty (60) days after the date of said contract.

IN WITNESS WHEREOF, the respective parties have signed and sealed these presents and have caused their corporate seals to be hereunto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

ATTEST: KNICKERBOCKER ENTERPRISES, INC.

By

ATTEST: PANTONE INCORPORATED

Sec. By Pres.

liability of whatsoever nature for failure to so comply therewith, the Tenant may postpone compliance therewith until the final determination of any such proceedings, provided that all such proceedings shall be prosecuted with all due diligence and dispatch. Landlord shall cooperate and join with Tenant at Tenant's request and sole cost in any such contest.

ARTICLE 9.

The Tenant shall have the right at any time and from time to time during the term of this Lease to make such alterations and improvements to the buildings, improvements and fixtures now or hereafter on the demised premises as the Tenant shall deem necessary or desirable in connection with the requirements of its business, which changes and alterations (other than changes or alterations of the Tenant's trade fixtures and equipment), shall be made in all cases subject to the following conditions which the Tenant covenants to observe and perform:

(a) No alteration or improvement shall be undertaken until the Tenant shall have procured and paid for, so far as the same may be required from time to time, all municipal permits and authorizations of the various

municipal departments having jurisdiction, and the Landlord agrees to join in the application for such permits or authorizations whenever such action is necessary.

(b) No alteration or improvement shall be undertaken until detailed plans and specifications have first been submitted to and approved in writing by the Landlord. But Landlord shall notunreasonably withhold approval and landlord shall act within 10 days of the submission of such plans and specifications. If the Landlord fails to act within such 10 day period it shall be deemed to have given its approval.

(c) All alterations and improvements involving an estimated cost of more than $10,000.00 shall be conducted under the supervision of a licensed architect or engineer.

(d) All alterations and improvements when completed shall be of such a character as not to reduce, or otherwise adversely affect the value of the demised premises, nor to reduce the cubic content of the building by moving the existing outer walls, roof or floor nor change the character of the building to uses other than described in Article 3. Tenant shall make all repairs and replacements of such alterations and improvements made by it in and to the demised premises.

(e) All work done in connection with any alterations and improvements shall be done promptly and in a good workmanlike manner and in compliance with the building and zoning laws of the place in which the demised premises are located and with all laws, ordinances, orders, rules, regulations and requirements of all federal, state and municipal governments and the appropriate departments, commissions, boards and officers thereof,

and in accordance with the orders, rules and regulations of the Board of Fire Underwriters where the demised premises are situated or any other body exercising similar functions and having jurisdiction thereof; said alteration or improvement shall be completed free of liens for labor and materials supplied or claimed to have been supplied to the demised premises; the work of any alteration or improvement shall be prosecuted with reasonable dispatch, unavoidable delays, as defined herein, excepted. Statutory workmen's compensation insurance covering all persons employed in connection with the work and with respect to whom death or injury claims could be asserted against the Landlord, the Tenant or the demised premises, general liability insurance for the mutual benefit of the Tenant and the Landlord with limits of not less than $300,000.00 in the event of injury to one person and of not less than $1,000,000.00 in the event of injury to any number of persons in any one accident, and with limits of not less than $50,000.00 for property damage shall be maintained by the Tenant at the Tenant's sole cost and expense at all times when any work is in process in connection with any alteration or improvements. All such insurance will be in a company or companies authorized to do business in New Jersey and satisfactory to the Landlord, and all such policies or certificates shall be delivered to the Landlord endorsed "Premium Paid" by the company or agency issuing the same or with other evidence of payment of the premium satisfactory to the Landlord, and such insurance policies required herein may be carried under a blanket

policy covering the demised premises and other locations and certificates of insurance rather than insurance policies may be delivered to the Landlord and to Landlord's mortgagee.

(f) All improvements and alterations (other than the Tenant's trade fixtures and equipment) made or installed by the Tenant shall be and become the property of the Landlord without payment therefrom by the Landlord, and shall be surrendered to the Landlord, upon the expiration or sooner termination of the term of this Lease.

(g) Without limiting the kinds of improvements or alterations as to which Landlord's approval shall be given, it is agreed that it will be unreasonable to withhold approval as to any alterations, improvements or additions which do not adversely affect the fair market value of the demised premises. If Tenant asserts that Landlord has unreasonably withheld approval as to any such matter, such dispute may be submitted to arbitration in accordance with the terms hereof.

(h) Notwithstanding the ownership of alterations or of improvements made to the demised premises, the Tenant shall retain all rights to utilize depreciation deductions with respect to all alterations or improvements made at Tenant's expense.

ARTICLE 10.

Neither Landlord nor Tenant shall suffer or permit any mechanics' liens to be filed against the demised

Exhibit B

ATTACHMENT 5
HAZARDOUS WASTE/SUBSTANCE INVENTORY

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Acetic Acid	.75 liter	Textile Laboratory	Glass reagent bottle	0.4 liters	No
Ammonium Sulfate	2.0 pounds	Textile Laboratory	Plastic bottle	0*	No
Barium	10-4 oz. samples	Technical service laboratory	Metal cans/Plastic bottle	0*	No
2-Butoxy ethenol	3.7 gallons	Press room/textile laboratory	Glass and plastic bottle	11.1 gallons	No
Carbon black	4-4 oz. samples	Technical service laboratory	Metal can	0*	No
Cobalt	>.2 gallon	Ink room/Technical service laboratory	Plastic bottle	.06 gallon	No
Copper	10-4 oz. samples	Ink room/technical service laboratory	Metal can	0*	No
Cyclohexanone	.04 gallons	Press room	Plastic bottle	.1 gallon	No
Dimethylformamide	1.0-1.5 gallon	Textile laboratory	Glass reagent bottle	0	No
Ethyl butyl ketone	.06 gallon	Press room	Glass reagent bottle	.4 gallons	No
Ethylene glycol	4.0 gallon	Press room/Textile service laboratory	Plastic bottles and metal cans	.8 gallons	No

* Small quantities utilized in lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Formic acid	500 ml	Textile laboratory	Glass reagent bottle	0*	No
Gum arabic	10 gallons	Press room	Plastic bottles	1.1 gallon	No
Hydrogen chloride	2.5 liters	Textile laboratory	Glass reagent bottle	0*	No
Hydrogen peroxide	400 cc	Textile laboratory	Plastic bottle	100cc*	No
Inks/Printers	avg.-12,500 pounds	Ink room	Metal cans	8,045 pounds	No
Iodine	500 grams	Textile laboratory	Glass reagent bottle	0*	No
Isopropyl alcohol	55 gallons	Press room	Steel drum, plastic jugs	110.6 gallons	No
Kerosene	.14 gallons	Press room	Steel drum	.4 gallons	No
Liquid ketones	33 gallons	Press room	Steel drum	132 gallons	No
Methylene chloride	1.6 gallons	Press room	Glass reagent bottles/ metal cans	2.7 gallons	No
Petroleum distillates	25.6 gallons	Press room, ink room	Metal cans	25 gallons	No
Petroleum oil	2-12 gallons	Press room, ink room	Metal cans	2 gallons	No

* Small quantities utilized in lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Phenol flex glue	500-600 pounds	Bindery	Box	1,800 pounds	No
Phosphoric acid	.08 gallons	Press room	Plastic jugs	.2 gallons	No
Pine oil	.9 gallons	Press room	Metal cans	4.4 gallons	No
Potassium dichromate	500 grams	Textile laboratory	Plastic bottles	0*	No
Polyethylene glycol	25 gallons	Warehouse/textile laboratory	Steel drums	4 gallons	No
Rags, oily	200 pounds	Ubiquitous	Steel drums	Sent to cleaning service	No
Sodium dithionite	1.0-1.5 gallons	Textile laboratory	Glass reagent bottles	0*	No
Sodium hydroxide	2-12 gallons	Textile laboratory	Plastic bottles	1 gallon*	No
Sodium nitrate	500 grams	Textile laboratory	Glass reagent bottles	0*	No
Sodium sulfate	100 pounds	Textile laboratory	Glass reagent bottles	75-100 pounds	No
Solvents/aliphatic hydrocarbons	120 gallons	Press room, warehouse	Metal cans/steel drums	940 gallons	No
Solvents/aromatic hydrocarbons	2.9 gallons	Press room	Metal cans	3.8 gallons	No

* Small quantiites utilized lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Stoddard solvent	.05 gallons	Press room	Plastic bottles	.1 gallon	No
Sulfuric acid	2.5 liters	Textile laboratory	Glass reagent bottles	.5 liter *	No
Trichloroethane resin glue	500-600 pounds	Bindery	5-gallon plastic containers	1,800 pounds	No
Vinyl acetate resin glue	500-600 pounds	Bindery	5-gallon plastic containers	1,800 pounds	No
Xylenes	2.1 gallons	Press room	Metal cans	3.6 gallons	No

* Small quantities utilized in lab only

ck92528d

Exhibit C

APPENDIX D

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

LABORATORY DATA SHEETS

ENVIRO SCIENCES, INC

273 Franklin Road, Randolph, New Jersey 07869
Telephone: (201) 361-4252 • Fax: (201) 989-5288

ECRA
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

December 30, 1992

Enviro-Sciences, Inc.
111 Howard Blvd.
Suite 108
Mt. Arlington, NJ 07856
Attn: Mr. Chirs Klein

Project: Knickerbocker **Project Number: 92-032**

Dear Mr. Klein:

This report presents the analyses of two (2) samples submitted to Environmental Consultants Research and Analytical (ECRA) Laboratories, Inc. on December 3, 1992. The following analyses were performed:

Total Petroleum Hydrocarbons (1)
Metals (1)
Volatile Organics + Library Search (2)
Base and Neutrals (1)

For your convenience, we have prepared a separate results summary section immediately following this letter that provides copies of all analytical data sheets for this project. The full laboratory report (i.e., including the analytical data sheets and required QA/QC) follows the results summary section.

Thank you for the opportunity to be of service. If you have any questions, please do not hesitate to call.

Very truly yours,

ENVIRONMENTAL CONSULTANTS RESEARCH
AND ANALYTICAL LABORATORIES, INC.

Elisabeth R. Cepero

Elisabeth R. Cepero
Project Manager

ERC/djt

Report No. 212-0858

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Telephone: (201) 361-4252 • Fax: (201) 989-5288

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Total Petroleum Hydrocarbons - EPA Method 418.1

Project: KNICKERBOCKER ID#: 92-032 Lab ID #: 212-0858

Sampled: 12-03-92 Case#: N/A Matrix: SOIL
Received: 12-04-92 Contract#: N/A Extraction: SOXH
Extracted: 12-04-92 Lab Code: N/A Units: mg/Kg
Analyzed: 12-04-92 Decanted: N/A

	Laboratory ID #	Sample ID No.	Results	Sample Wt.	Dil. Fct.	MDL
1:	METHOD BLANK	---	18	30.78	1	8
2:	212-0858-01	92-032-A01	111	30.29	1	8
3:						
4:						
5:						
6:						
7:						
8:						
9:						
10:						
11:						
12:						
13:						
14:						
15:						

DWB = Dry weight basis

PHC results are reported as gross numbers. To obtain true values, subtract the Method Blank from the gross number.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Inorganics by Atomic Absorption - EPA Methods Series 7000

Project: ESI/KNICKERBOCKER ID#: 92-032-A01 Lab ID #: 212-0858-01

Sampled:	12/3/92	Case#:	N/A	Matrix:	SOIL
Received:	12/4/92	Contract# :	N/A	Sample Wt.:	2.22/1.23g
Digested:	12/8/92	Lab Code:	N/A	Units:	mg/Kg
Analyzed:	12/17-24/92				

CAS #	Parameter	Result	Dilution Factor	MDL
7440-36-0	Antimony:	U	1	0.215
7440-38-2	Arsenic:	0.808	1	0.215
7440-41-7	Beryllium:	2.32	1	0.539
7440-43-9	Cadmium:	1.78	1	0.539
7440-47-3	Chromium:	18.9	1	1.08
7440-50-8	Copper:	26.5	1	1.08
7439-92-1	Lead:	24.8	1	2.15
7439-97-6	Mercury:	0.214	1	0.049
7440-02-0	Nickel:	29.6	1	2.15
7782-49-2	Selenium:	U	1	0.215
7440-22-4	Silver:	U	1	0.539
7440-28-0	Thallium:	U	1	0.215
7440-66-6	Zinc:	72.3	1	0.539

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 8240

Project: ESI/KNICKERBOCKER ID#: 92-032-A01 Lab ID#: 212-0858-01

Sampled:	12/03/92	Case#:	N/A*	Matrix:	SOIL
Received:	12/04/92	Contract#:	N/A*	Extraction:	N/A
Extracted:	N/A	Lab Code:	N/A*	Sample Vol:	5.0G
Analyzed:	12/11/92 19:00	Decanted:	NO	Dil. Fct.	1.0700
Data File:	>I1635			MDL:	5

CAS NO.	COMPOUND	CONCENTRATION UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	17.	B
75-69-4	Trichlorofluoromethane	3.	J
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	3.	J
540-59-0	Trans-1,2-Dichloroethylene	7.	
67-66-3	Chloroform	5.	J
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	2.	J
56-23-5	Carbon Tetrachloride	2.	J
75-27-4	Bromodichloromethane	7.	
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	11.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	JB
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
108-38-3	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The

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ECRA
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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: 92-032-A01 LAB ID #: 212-0858-01

Data File: >I1635

Methanol Ext.

EPA METHOD #8240

Dilution Factor: 1.0700

Concentration Units: UG/KG

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed FORM I VOA-TIC 1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 8240

Project: ESI/KNICKERBOCKER ID#: 92-032-FB Lab ID#: 212-0858-02

Sampled:	12/03/92	Case#:	-----N/A	Matrix:	--Water
Received:	12/04/92	Contract#:	----N/A	Extraction:	----N/A
Extracted:	N/A	Lab Code:	----N/A	Sample Vol:	5 ml
Analyzed:	12/09/92 12:37	Decanted:	NO	Dil. Fct.	1.0000
Data File:	>G5623			MDL:	5.0000

CAS NO.	COMPOUND	CONCENTRATION UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	7.	B
75-69-4	Trichlorofluoromethane	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	Trans-1,2-Dichloroethylene	5.	U
67-66-3	Chloroform	5.	U
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
133-02-7	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The reported concentration is magnified by the dilution factor.

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ENVIRONMENTAL CONSULTANTS & RESEARCH AND ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: 92-032-FB

LAB ID #: 212-0858-02

Data File: >G5623

Methanol Ext.

EPA METHOD #624

Dilution Factor: 1.0000

Concentration Units: UG/L

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed

FORM I VOA-TIC

1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client	ESI/KNICKERBOCKER	Lab Sample ID:	212-0858-01
Sample ID:	92-032- A01	Date Sampled:	12/03/92
Matrix	SOIL	Date Received:	12/04/92
Sample Wt/Vol	30g	Date Extracted:	12/09/92
Data File	A0137.D	Date Analyzed	12/15/92
Extraction:	SONIC	DF	39.8
		UNITS:	UG/KG

CAS	Compound	Conc	Q	MDL
62-75-9	n-Nitrosodimethylamine	U		199
111-44-4	bis(2-Chloroethyl)ether	190	J	199
541-73-1	1,3-Dichlorobenzene	U		199
106-46-7	1,4-Dichlorobenzene	U		199
95-50-1	1,2-Dichlorobenzene	U		199
39638-32-9	bis(2-chloroisopropyl)ether	U		199
621-64-7	n-Nitroso-di-n-propylamine	U		199
67-72-1	Hexachloroethane	U		199
98-95-3	Nitrobenzene	U		199
78-59-1	Isophorone	U		199
111-91-1	bis(2-Chloroethoxy)methane	U		199
120-82-1	1,2,4-Trichlorobenzene	U		199
91-20-3	Naphthalene	U		199
106-47-8	4-Chloroaniline	U		199
87-68-3	Hexachlorobutadiene	U		199
77-47-4	Hexachlorocyclopentadiene	U		199
91-58-7	2-Chloronaphthalene	U		199
131-11-3	Dimethylphthalate	U		199
606-20-2	2,6-Dinitrotoluene	U		199
208-96-8	Acenaphthylene	141	J	199
83-32-9	Acenaphthene	U		199
132-64-9	Dibenzofuran	U		199
121-14-2	2,4-Dinitrotoluene	U		199
84-66-2	Diethylphthalate	U		199
70005-72-3	4-Chlorophenyl-phenylether	U		199
86-73-7	Fluorene	U		199
86-30-6	n-Nitrosodiphenylamine	U		199
101-55-3	4-Bromophenyl-phenylether	U		199
118-74-1	Hexachlorobenzene	U		199

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client ESI/KNICKERBOCKER Lab Sample ID: 212-0858-01

Sample ID: 92-032- A01 Date Sampled: 12/03/92

Matrix SOIL Date Received: 12/04/92

Sample Wt/Vol 30g Date Extracted: 12/09/92

Data File A0137.D Date Analyzed 12/15/92

Extraction: SONIC DF 39.8

UNITS: UG/KG

CAS	Compound	Conc	Q	MDL
85-01-8	Phenanthrene	131	J	199
120-12-7	Anthracene	102	J	199
84-74-2	Di-n-butylphthalate	U		199
206-44-0	Fluoranthene	389		199
92-87-5	Benzidine	U		199
129-00-0	Pyrene	637		199
85-68-7	Butylbenzylphthalate	U		199
91-94-1	3,3'-Dichlorobenzidine	U		199
117-81-7	bis(2-Ethylhexyl)phthalate	532		199
56-55-3	Benzo[a]anthracene	365		199
218-01-9	Chyrsene	398		199
227-84-0	Di-n-octylphthalate	U		199
205-99-2	Benzo[b]fluoranthene	372		199
207-08-09	Benzo[k]fluoranthene	338		199
50-32-8	Benzo[a]pyrene	333		199
193-395	Indeno[1,2,3-cd]pyrene	91	J	199
53-70-3	Dibenz[a,h]anthracene	U		199
191-24-2	Benzo[g,h,i]perylene	107	J	199

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

1F
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES, INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: A01 LAB ID # 212-0858-01

Data File: A0137

Extraction: N/A

EPA METHOD # 8240

Dilution Factor: 39.8

Concentration Units: UG/KG

NUMBER OF TIC'S DETECTED: 15

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 79345	Tetrachloroethane	8.32	1000.	**
2.	Unknown Phenol Containing Compound	19.91	1100.	
3.	Tetramethylbutyl Phenol Isomer	20.02	2200.	
4.	Unknown Phenol Containing Compound	20.09	3600.	
5.	Unknown Phenol Containing Compound	20.19	2800.	
6.	Unknown Phenol Containing Compound	20.26	1400.	
7.	Unknown Phenol Containing Compound	20.32	1500.	
8.	Unknown Phenol Containing Compound	20.42	930.	
9.	Unknown Phenol Containing Compound	20.49	3100.	
10.	Tetramethylbutyl Phenol Isomer	20.54	3200.	
11.	Unknown	20.67	1200.	
12.	Unknown	25.55	600.	
13.	Unknown	25.61	910.	
14.	Benzofluorene Isomer	25.69	1200.	
15.	Unknown	25.80	920.	

NR = Not reviewed

APPENDIX E

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

LABORATORY RESULTS AND QA/QC DOCUMENTATION

ENVIRO SCIENCES, INC.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

ANALYTICAL DATA REPORT

ESI/KNICKERBOCKER

212-0858

DECEMBER 30, 1992

SAMPLING DATE: DECEMBER 3, 1992

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

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LABORATORY CHRONICLE(S)	04
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ANALYTICAL DATA RESULTS with QA/QC SUMMARY as listed:

CASE SUMMARY (IF REQUIRED)	____
RESULT SUMMARY	____
PERCENT SOLIDS	13
PH	____
TDS/TSS/TEMP	____
BOD/COD/DO	____
TURBIDITY	____
CONDUCTIVITY	____
TOTAL COLIFORM/TOTAL FECAL COLIFORM	____
FLUORESCEIN	____
CYANIDES	____
PHENOLS	____
FLASH POINT	____
CORROSIVITY	____
IGNITABILITY	____
REACTIVITY	____
PCB	____
HERBICIDES	____
EPTOX/TCLP PEST	____
EPTOX/TCLP HERB	____
EPTOX/TCLP METAL	____
TCLP-VOA	____
TCLP-AEBN	____
PHC	15
PHC BY GC/FID	____
OIL & GREASE	____
METALS	34
BTEX	____
VOA	46
VOA/TBA/MTBE	____
PAH	____
AE	____
BN	177
ABN	____
RADIOLOGICAL	____
AMBIENT AIR ANALYSIS	____
STACK TESTING AIR ANALYSIS	____
APPENDIX I - SUB CONTRACTED RESULTS	____

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ECRA
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

ANALYTICAL DATA REPORT PACKAGE FOR:

PROJECT NAME: ESI/KNICKERBOCKER

PROJECT NUMBER: 92-032

	FIELD SAMPLE NUMBER	LABORATORY SAMPLE NUMBER
01:	92-032-A01	212-0858-01
02:	92-032-FB	212-0858-02
03:		
04:		
05:		
06:		
07:		
08:		
09:		
10:		
11:		
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15:		
16:		
17:		
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23:		
24:		
25:		
26:		

NAME OF LABORATORY ECRA LABORATORIES, INC.

NJDEPE CERTIFICATION NO. 14580

QUALITY ASSURANCE DEPT. Regina Pittenger

LABORATORY DIRECTOR.: STEPHEN J. FLEISCHACKER

SIGNATURE.: Stephen J. Fleischacker (SJ)

DATE SUBMITTED: 12-30-92

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

LABORATORY DELIVERABLES

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT AND ACCOMPANY ALL DATA SUBMISSIONS

The following laboratory deliverables shall be included in the data submission. All deviations from the accepted methodology and procedures, or performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete packages may be returned or held without review until the data package is completed.

		Check if Complete
I.	Cover Page, Format, and Laboratory Certification (Include Cross Reference Table of Field I.D. # and Laboratory I.D. #)	✓
II.	Chain of Custody	✓
III.	Results Summary Sheets Listing Analytical Data Results Including QA Data Information	✓
IV.	Laboratory Chronicle and Methodology Summary	✓
V.	Initial Calibration and/or Continuing Calibrations	✓
VI.	Tune Summary (MS only)	✓
VII.	Blanks (Method, Field, Trip)	✓
VIII.	Surrogate Recovery Summary (as required)	✓
IX.	Chromatographs Labelled/Compound Identification (as required)	✓
X.	Non-Conformance Summary	✓

Regina Pittenger
Quality Assurance Department

December 30, 1992
Date

REV-01
12-7-92

12/91

CHAIN OF CUSTODY

NO. 212-0858
(LAB USE ONLY)

ENVIRO SCIENCES, INC.
111 HOWARD BLVD SUITE 108
MOUNT ARLINGTON, NJ 07856
PHONE#: 201-398-8183

DELIVERABLES (CIRCLE)
STANDARD TIER II TIER I

CLIENT: KNICKERBOCKER ENTERPRISES

PROJECT NAME: PANTONE INC.
PROJECT #: 92-032

ADDRESS: 55 KNICKERBOCKER RD. MOONACHIE NJ.
PHONE #:

SEND REPORT TO: CHRIS KLEIN

SAMPLER(S): CHRIS Klein

NAME:
SIGNATURE: Chris Klein

	SAMPLE IDENTIFICATION LAB	ESI	SAMPLING LOCATION POINT	SAMPLING DATE	SAMPLING TIME	AM	PM	SAMPLE MATRIX	SAMPLE TYPE COMP.	GRAB	ANALYSES REQUIRED (CODE #)	NO. OF CONTAINERS
2-0858	212-~~0857~~-01	Floor Drain Discharge Pt.	A01	12/3/92	3:10		X	SOIL		X	02, 03, 04, 20	2
12-0858	↓ 02		FB	12/3/92	3:05		X	WATER		X	03	2

METHOD OF RELINQUISHMENT

NAME OF LABORATORY:

RELINQUISHED BY: (SIGN): Chris Klein	RECEIVED BY: (SIGN.) Refridgerator	DATE/TIME 12/3/92 5:15 PM.
RELINQUISHED BY: (SIGN): Chris Refridgerator	RECEIVED BY: (SIGN.) Chris Klein	DATE/TIME 12/4/92 8:00 AM
RELINQUISHED TO LABORATORY BY (SIGN): Chris Klein	RECEIVED FOR LABORATORY BY: (SIGN.) [signature]	DATE/TIME 12/4/92 8:17 AM

ANALYSIS	CODE	ANALYSIS	CODE	ANALYSIS	CODE	ANALYSIS	CODE
PRIORITY POLLUTANT+40	01	CADMIUM	10	ZINC	19	TCLP PEST.HERB	28
PETROLEUM HYDROCARBONS	02	CHROMIUM	11	13 PP METALS	20	TCLP ACID&BASE/NEUTRALS	29
VOLATILE ORGANICS+15 (VO+15)	03	COPPER	12	BARIUM	21	TCLP ZHS VO	30
BASE NEUTRALS+15	04	LEAD	13	CYANIDE	22	IGNITABILITY	31
ACID&BASE/NEUTRALS+25	05	MERCURY	14	PCB	23	CORROSIVITY	32
VO+15 + MTBE/TBA	06	NICKEL	15	pH	24	REACTIVITY(CN&SULFIDE)	33
ANTIMONY	07	SELENIUM	16	TSS	25	WASTE CHAR(02,23,27-33)	34
ARSENIC	08	SILVER	17	TDS	26	OTHER (SEE BELOW)	35
BERYLLIUM	09	THALLIUM	18	TCLP METALS	27	OTHER (SEE BELOW)	36

OTHER ANALYSES, SPECIAL HANDLING AND/OR GENERAL COMMENTS

Handard Turnaround Time.

SAMPLES STORED AT 4°C — CK INIT.

SAMPLES CHEMICALLY PRESERVED, AS REQUIRED — CK INIT.

LAB # CORRECTED 12/7/92

00 03

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

LAB CHRONICLE

CLIENT: Knickerbocker Enterprises

SAMPLING DATES: 12-3-92

DATES RECEIVED @ LAB: 12-4-92

NUMBER OF SAMPLES: 1

SAMPLE I.D. NO.	ANALYTICAL PARAMETER	PREPARATION DATE	ANALYSIS DATE	INITIALS
92-032-A01	PHC	12-4-92	12-8-92	JLS

DEPARTMENT SUPERVISOR Donna Brewster

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES INC

LAB CHRONICLE

CLIENT: ESI / KNICKER BOCKER ENT

SAMPLING DATES: 12-3-92

DATES RECEIVED @ LAB: 12-4-92

NUMBER OF SAMPLES: 1

SAMPLE I.D. NO.	ANALYTICAL PARAMETER	PREPARATION DATE	ANALYSIS DATE	INITIALS
92-032-A01	Metals	12-8-92	12-17/12-24-92	F.F

DEPARTMENT SUPERVISOR

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

LAB CHRONICLE

CLIENT: ESI/KNICKERBOCKER

SAMPLING DATE: 12/03/92

DATE RECEIVED @ LAB: 12/04/92

NUMBER OF SAMPLES: 2

SAMPLE I.D. NO.	ANALYTICAL PARAMETER	EXTRACTION DATE	ANALYSIS DATE	INITIALS
1. 92-032-A01	VOA	N/A	12/11/92	MKR
2. 92-032-FB	VOA	N/A	12/09/92	MKR

DEPARTMENT SUPERVISOR Maurie T. Power.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

LAB CHRONICLE

CLIENT: ESI/KNICKERBOCKER

SAMPLING DATE: 12/03/92

DATE RECEIVED @ LAB: 12/04/92

NUMBER OF SAMPLES: 1

SAMPLE I.D. NO.	ANALYTICAL PARAMETER	EXTRACTION DATE	ANALYSIS DATE	INITIALS
92-032-1. A01	BN	12/09/92	12/15/92	POB

DEPARTMENT SUPERVISOR Maurice L. Romeo

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES INC

PETROLEUM HYDROCARBONS ANALYSIS
CONFORMANCE SUMMARY

CLIENT: Kuchibachs Enterprises DATE: 12-8-92

1. FT/IR INITIALIZED [✓]

2. FT/IR ALIGNED [✓]

3. FT/IR MAXIMUM ENERGY CHECK [✓]

4. FT/IR CALIBRATION CHECK [✓]

5. SAMPLE BACKGROUND CHECK [✓]

6. TEN PERCENT (10%) DUPLICATE REQUIREMENTS MET [✓]

   IF NOT: _____

7. SPIKE RECOVERY CRITERIA MET [✓]

   IF NOT: _____

8. SAMPLE HOLDING TIMES MET [✓]

   IF NOT: _____

9. ADDITIONAL COMMENTS: _____

DEPARTMENT SUPERVISOR: Donna Brewster

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

INORGANICS BY ATOMIC ADSORPTION ANALYSIS CONFORMANCE SUMMARY

CLIENT: ESI KNICKERBOCKER ENTERPRISES DATE: 12-28-92

1. INSTRUMENT TUNED AND ALIGNED FOR EACH PARAMETER [✓]
   (WAVELENGTH, HEAD ALIGN., FURNACE ALIGN., ETC)

2. INITAL CALIBRATION CURVE RUN PER PARAMETER [✓]

3. QC SAMPLE MEET REQUIRED PERCENT RECOVERIES [✓]

4. BLANK CONTAMINATION - COMPOUNDS LISTED BELOW: [✓]
   A. FURNACE: _____
   B. FLAME _____

5. SPIKE RECOVERIES MEET CRITERIA [✓]
   A. FURNACE: _____
   B. FLAME: _____

6. SAMPLE HOLDING TIMES MET. (IF NOT CHECKED, REFER TO INDIVIDUAL REPORTS) [✓]

7. MINIMUM DETECTION LIMITS MET (IF NOT CHECKED REFER TO INDIVIDUAL REPORTS) [✓]

8. ADDITIONAL COMMENTS: _____

DEPARTMENT SUPERVISOR: _____

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

VOLATILE ANALYSIS CONFORMANCE SUMMARY

CLIENT: ESI/KNICKERBOCKER DATE: 12/17/92

1) GC/MS TUNE SPECIFICATIONS

BFB PASSED EVERY 12 HOURS |_X_|

2) GC/MS TUNING FREQUENCY

PERFORMED EVERY 12 HOURS |_X_|

3) GC/MS CALIBRATION

INITIAL CALIBRATION CURVE OR
CALIBRATION CHECK STANDARD RUN EVERY 12 HOURS |_X_|

4) GC/MS CALIBRATION REQUIREMENTS MET

a) CALIBRATION CHECK COMPOUNDS |_X_|

b) SYSTEM PERFORMANCE CHECK COMPOUNDS |_X_|

5) BLANK CONTAMINATION - COMPOUNDS LISTED

LOW LEVEL METHYLENE CHLORIDE AND TOLUENE

6) SURROGATE RECOVERIES MEET CRITERIA (IF NOT MET, REFER TO INDIVIDUAL SURROGATE RECOVERY FORMS FOR ACTUAL RECOVERIES) |_X_|

7) SAMPLE HOLDING TIMES MET YES |_X_| NO |___|

8) MINIMUM DETECTION LIMITS AT IFB LEVELS. (IF NOT CHECKED REFER TO INDIVIDUAL ANALYSIS REPORT FOR THE ACTUAL MDL'S) |_X_|

9) ADDITIONAL COMMENTS:

DEPT. SUPERVISOR: Maurice K. Romeo.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SEMI-VOLATILE ANALYSIS CONFORMANCE SUMMARY

CLIENT: ESI/KNICKERBOCKER DATE: 12/29/92

1) GC/MS TUNE SPECIFICATIONS

DFTPP PASSED EVERY 12 HOURS |_X_|

2) GC/MS TUNING FREQUENCY

PERFORMED EVERY 12 HOURS |_X_|

3) GC/MS CALIBRATION

INITIAL CALIBRATION CURVE OR
CALIBRATION CHECK STANDARD RUN EVERY 12 HOURS |_X_|

4) GC/MS CALIBRATION REQUIREMENTS MET

a) CALIBRATION CHECK COMPOUNDS |_X_|

b) SYSTEM PERFORMANCE CHECK COMPOUNDS |_X_|

5) BLANK CONTAMINATION - COMPOUNDS LISTED

NONE DETECTED

6) SURROGATE RECOVERIES MEET CRITERIA (IF NOT MET, REFER TO INDIVIDUAL SURROGATE RECOVERY FORMS FOR ACTUAL RECOVERIES) |_X_|

7) SAMPLE HOLDING TIMES MET YES |_X_| NO |___|

8) MINIMUM DETECTION LIMITS AT IFB LEVELS. (IF NOT CHECKED REFER TO INDIVIDUAL ANALYSIS REPORT FOR THE ACTUAL MDL'S) |_X_|

9) ADDITIONAL COMMENTS:

DEPT. SUPERVISOR: Maurice K. Rowes.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUALIFIERS

MDL	=	METHOD DETECTION LIMIT. (FOR SOIL SAMPLES ACTUAL MDL MAY VARY AS A FUNCTION OF MOISTURE LEVEL.)
ug/L	=	MICROGRAMS PER LITER OR PARTS PER BILLION [PPB (WT/VOL)].
mg/L	=	MILLIGRAMS PER LITER OR PARTS PER MILLION [PPM (WT/VOL)].
ug/Kg	=	MICROGRAMS PER KILOGRAM OR PARTS PER BILLION [PPB (WT/WT)].
mg/Kg	=	MILLIGRAMS PER KILOGRAM OR PARTS PER MILLION [PPM (WT/WT)].
N/A	=	NOT APPLICABLE.
NR	=	NOT REQUESTED.
U	=	INDICATES A COMPOUND WAS ANALYZED FOR BUT NOT DETECTED AT THAT SPECIFIED METHOD DETECTION LIMIT.
J	=	INDICATES AN ESTIMATED VALUE. IT IS UTILIZED WHEN THE ANALYTICAL RESULTS FOR THE SPECIFIED ANALYTE MEET THE IDENTIFICATION CRITERIA. THE CONCENTRATION LISTED IS LESS THAN THE SPECIFIED METHOD DETECTION LIMIT BUT GREATER THAN ZERO.
B	=	INDICATES THAT THE ANALYTE WAS FOUND IN THE METHOD BLANK AS WELL AS THE SAMPLE. THE REPORTED CONCENTRATION IS MAGNIFIED BY THE DILUTION FACTOR.
<	=	LESS THAN.
>	=	GREATER THAN.
DWB	=	DRY WEIGHT BASIS.
SONC	=	SONIFICATION EXTRACTION (EPA METHOD 3550, SW-846, THIRD EDITION).
SEPF	=	SEPARATORY EXTRACTION (EPA METHOD 3510, SW-846, THIRD EDITION.
DUP	=	INDICATES THAT THE SAMPLE MATRIX WAS ANALYZED A SECOND TIME FOR QA/QC PURPOSES.
TRIP	=	INDICATES THAT THE SAMPLE MATRIX WAS ANALYZED A THIRD TIME FOR QA/QC PURPOSES.
E	=	ESTIMATED VALUE; RESULTS EXCEEDS INSTRUMENT CALIBRATION CURVE RANGE; REFER TO AN ALTERNATE RESULT.
DL	=	SIGNIFIES SAMPLE ANALYZED AT A DILUTED CONCENTRATION.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

PERCENT SOLIDS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

PERCENT SOLIDS DATA SHEET

CLIENT: ESI/KNICKERBOCKER

PROJECT NO.: 92-032

FACILITY: MT. ARLINGTON, NJ

SAMPLING DATE: 12-03-92

CON:

LABORATORY SAMPLE ID NO.	% SOLIDS	DATE ANALYZED
01: 212-0858-01	83.62	12-03-92
02:		
03:		
04:		
05:		
06:		
07:		
08:		
09:		
10:		
11:		
12:		
13:		
14:		
15:		
16:		
17:		
18:		
19:		
20:		

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

KNICKERBOCKER ENTERPRISES

212-0858

PETROLEUM HYDROCARBONS

FT/IR

(PHC)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

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1.0 SAMPLE ANALYSIS REPORTS

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I.R. CHARTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

METHODOLOGY SUMMARY

This summary is based upon ECRA Laboratories, Inc. Standard Operating Procedure No. SOP-EL-013

1.0 Parameter: Petroleum Hydrocarbons, Total Recoverable in Soil

2.0 Reference: EPA-600/4-79--020 Methods for Chemical Analysis of Water and Wastes - modification of Method #418.1.

3.0 Method Description:

3.1 Sample Preparation: A sample of approximately 30 grams of soil is homogenized with sodium sulfate and placed into a cellulose extraction thimble. The soil matrix is extracted with 1,1,2-trichloro-1,2,2-trifluoroethane in a soxhlet extraction apparatus for a period of four hours. The extract is mixed with a silica gel absorbent and filtered through filter paper to remove any polar, organic impurities that may interfere with the FT/IR analysis.

3.2 Calibration: The FT/IR spectrophotometer is calibrated by determining the absorbance of a series of PHC standards. The concentration of the standards range from 1 mg/L to 50 mg/L. A calibration curve of absorbance versus concentration is plotted for standards run at a wave number range of 2958 cm^{-1} - 2880 cm^{-1}.

3.3 Sample Analysis: Analysis of the extract is performed by a Fourier Transform Infrared spectrophotometer. The spectrum range is scanned 32 times to measure the intensity of C-H stretches. The corresponding spectra are averaged, and the peak height is integrated to give a single measure of absorption.

3.4 Calculation: A linear regression analysis is performed on the calibration curve and the concentration of total PHC is calculated from the slope/intercept values obtained from the calibration curve.

4.0 MDL: 8.0 mg/Kg [PPM]

Where:
mg/Kg = milligrams per kilogram

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SECTION 1.0

METHOD BLANK RESULTS

SAMPLE ANALYSIS REPORTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Total Petroleum Hydrocarbons - EPA Method 418.1

Project: KNICKERBOCKER
ID#: 92-032
Lab ID #: 212-0858

Sampled: 12-03-92
Received: 12-04-92
Extracted: 12-04-92
Analyzed: 12-04-92

Case#: N/A
Contract#: N/A
Lab Code: N/A
Decanted: N/A

Matrix: SOIL
Extraction: SOXH
Units: mg/Kg

	Laboratory ID #	Sample ID No.	Results	Sample Wt.	Dil. Fct.	MDL
1:	METHOD BLANK	---	18	30.78	1	8
2:	212-0858-01	92-032-A01	111	30.29	1	8
3:						
4:						
5:						
6:						
7:						
8:						
9:						
10:						
11:						
12:						
13:						
14:						
15:						

DWB = Dry weight basis

PHC results are reported as gross numbers. To obtain true values, subtract the Method Blank from the gross number.

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UNKNOWNS Table for Method MET10 13:41 92/12/08

UNKN No.	Filid	LOT NO.	Pathlength	Dil. Factor	WET WT	MOISTURE
1	SB104	METHODBLK	10.0000	1.00000	30.78000	0.00100
2	85801	212085801	10.0000	1.00000	30.29000	16.38000

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ENVI
UNKNOWNS RESULTS Table MG/100ML Method MET10 13:44 92/12/08

Unknown	Lot No.	MG/100ML	DRY WT	MOISTURE	MG/KG(DWB)
1	METHODBLK	0.2244	30.7797	0.0010	18.2281
2	212085801	1.1242	25.3285	16.3800	110.9650

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SECTION 2.0

QA/QC DATA SUMMARY

MATRIX SPIKE RESULTS
INITIAL AND CONTINUING CALIBRATION CURVES
I.R. CHARTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Total Petroleum Hydrocarbons - EPA Method 418.1
Matrix Spike(MS)/Matrix Spike Duplicate(MSD)Recovery
(Combination of n-Hexadecane/2,2,4-Trimethylpentane/Chlorobenzene)

Project: KNICKERBOCK ID#: MS, MSD Lab ID #: 212-0858-MS, MSD

Sampled:	12-02-92	Case#:	N/A	Matrix:	SOIL
Received:	12-02-92	Contract#:	N/A	Extraction:	SOXHT
Extracted:	12-04-92	Lab Code:	N/A	Sample Vol.:	30.58g
Analyzed:	12-08-92	Decanted:	NO	Dil. Fct.:	1
Method Blank:	18	Units:	mg/Kg	MDL:	---

	Sample ID #	Spike Conc. Added	Sample Result	Conc. MS	Percent Recovery	Conc. MSD	Percent Recovery	RPD
1.0:	MS, MSD	170	18	95	45	101	49	6.1
2.0:								

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UNKNOWNS Table for Method MET10 13:32 92/12/08

UNKN No.	Filid	LOT NO.	Pathlength	Dil. Factor	WET WT	MOISTURE
1	SB104	METHODBLK	10.0000	1.00000	30.78000	0.00100
2	SM104	MATRIXSPK	10.0000	1.00000	30.58000	0.00100
3	SM204	MTXSPKDUP	10.0000	1.00000	30.58000	0.00100

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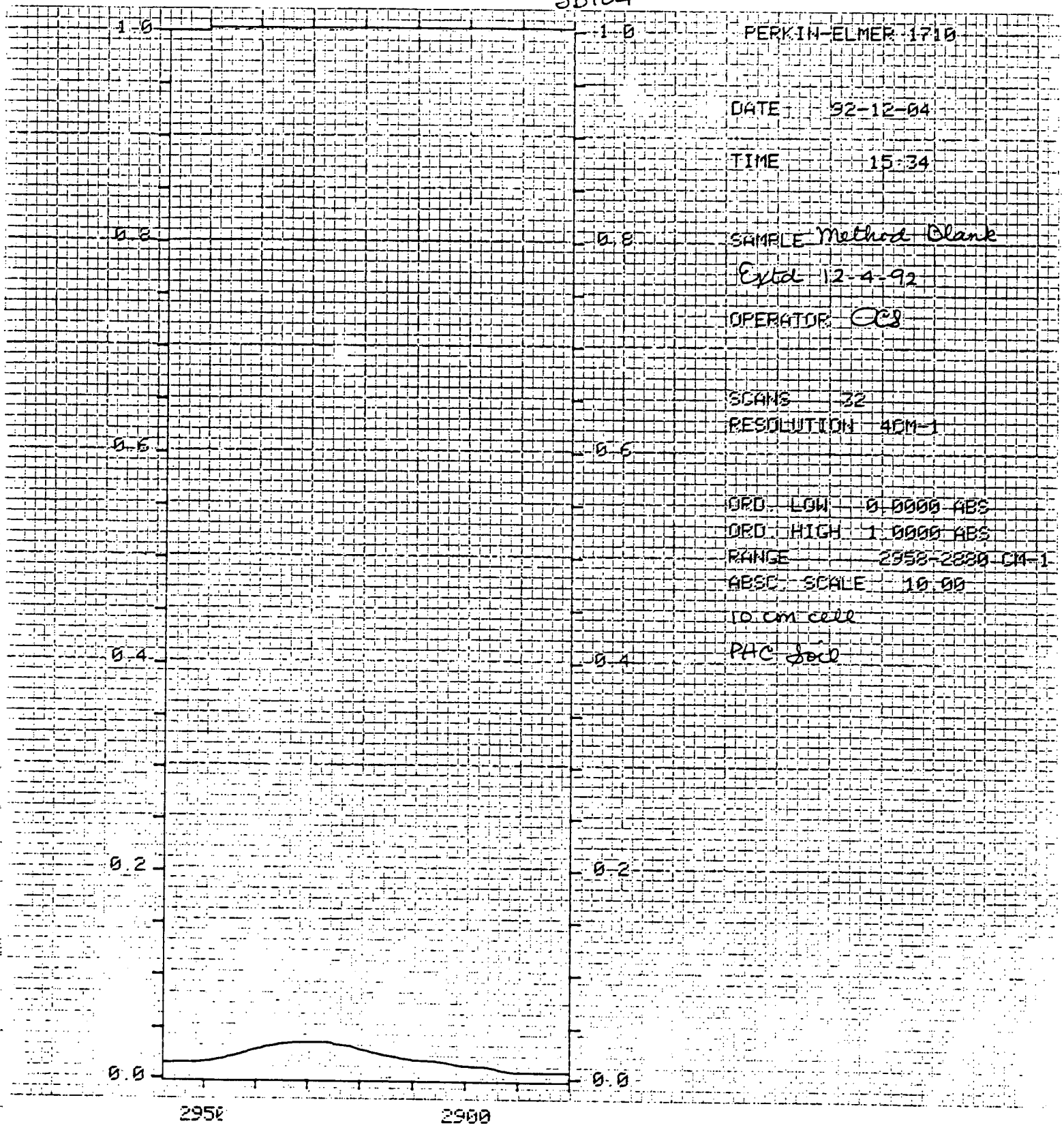
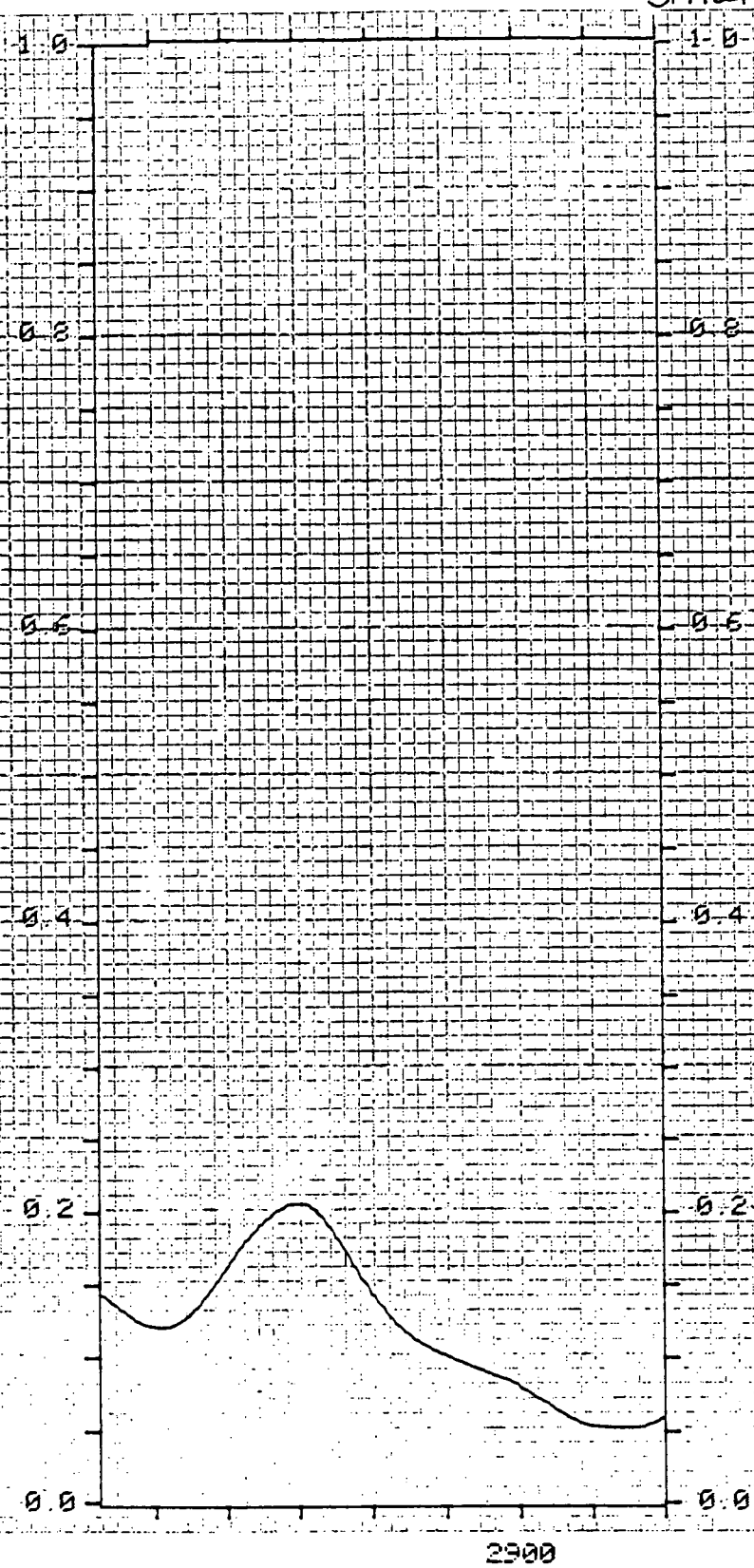
UNKNOWNS RESULTS Table MG/100ML Method MET10 13:39 92/12/08

Unknown	Lot No.	MG/100ML	DRY WT	MOISTURE	MG/KG(DWB)
1	METHODBLK	0.2244	30.7797	0.0010	18.2281
2	MATRIXSPK	1.1587	30.5797	0.0010	94.7318
3	MTXSPKDUP	1.2326	30.5797	0.0010	100.7700

SB104


PERKIN-ELMER 1710
DATE 92-12-04
TIME 15:34
SAMPLE Method Blank
Extd 12-4-92
OPERATOR CS
SCANS 32
RESOLUTION 4CM-1
ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2830 CM-1
ABSC. SCALE 10.00
10 cm cell
PHC Soil
1.0
0.8
0.6
0.4
0.2
0.0
2950
2900

SM104



PERKIN-ELMER 1710

DATE 92-12-04

TIME 15:45

SAMPLE Matrix Spike
Extd 12-4-92

OPERATOR CG

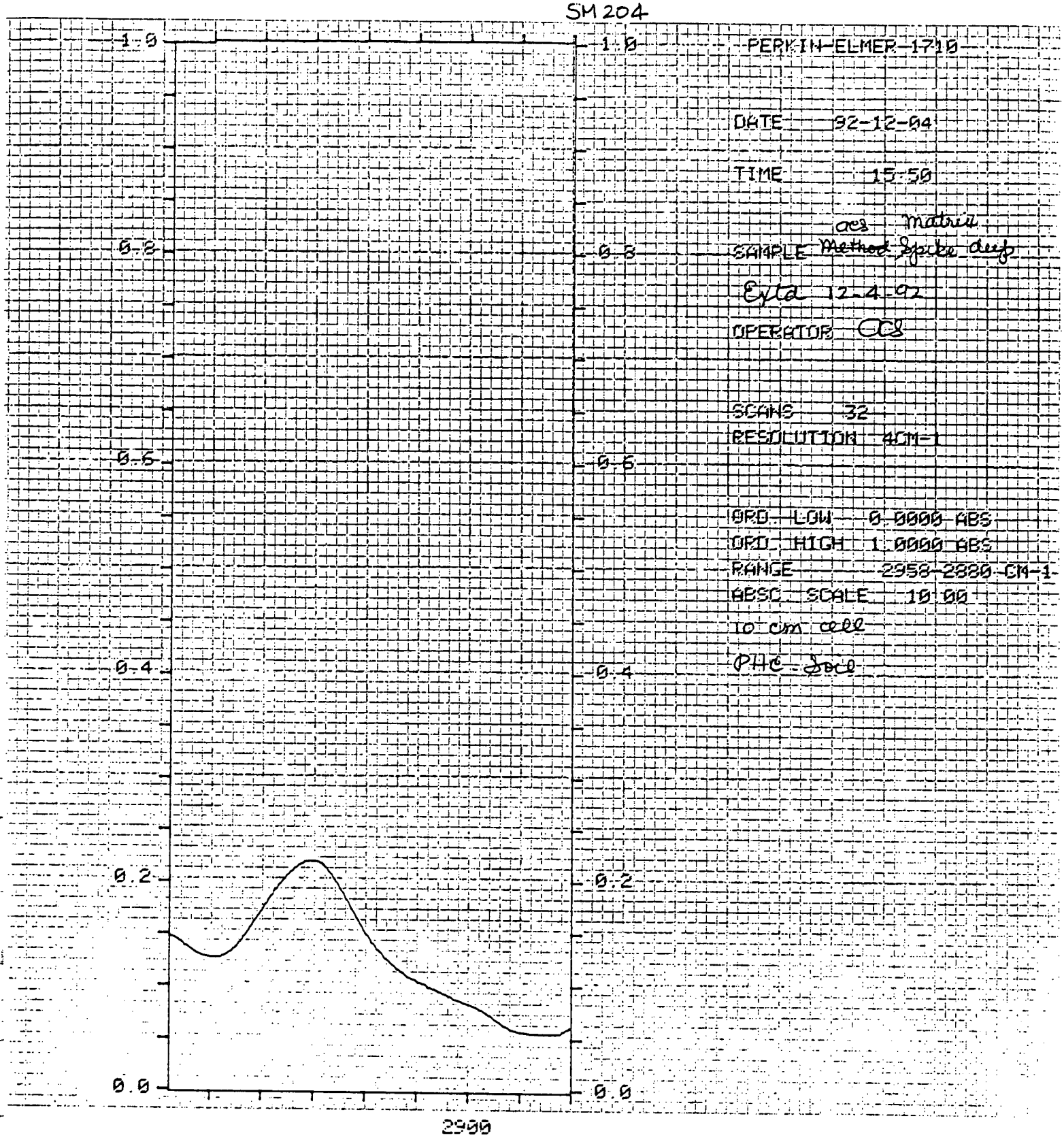
SCANS 32
RESOLUTION 4CM-1

ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00

10 cm cell
PHC Soil

00 25

SM 204


PERKIN-ELMER-1710
DATE 92-12-04
TIME 15:50
SAMPLE ~~Method~~ acs matrix Spike dup
Extd 12-4-92
OPERATOR CCS
SCANS 32
RESOLUTION 4CM-1
ORD LOW 0.0000 ABS
ORD HIGH 1.0000 ABS
RANGE 2958-2830 CM-1
ABSC SCALE 10.00
10 cm cell
PHC-Soil
1.0
0.8
0.6
0.4
0.2
0.0
2900

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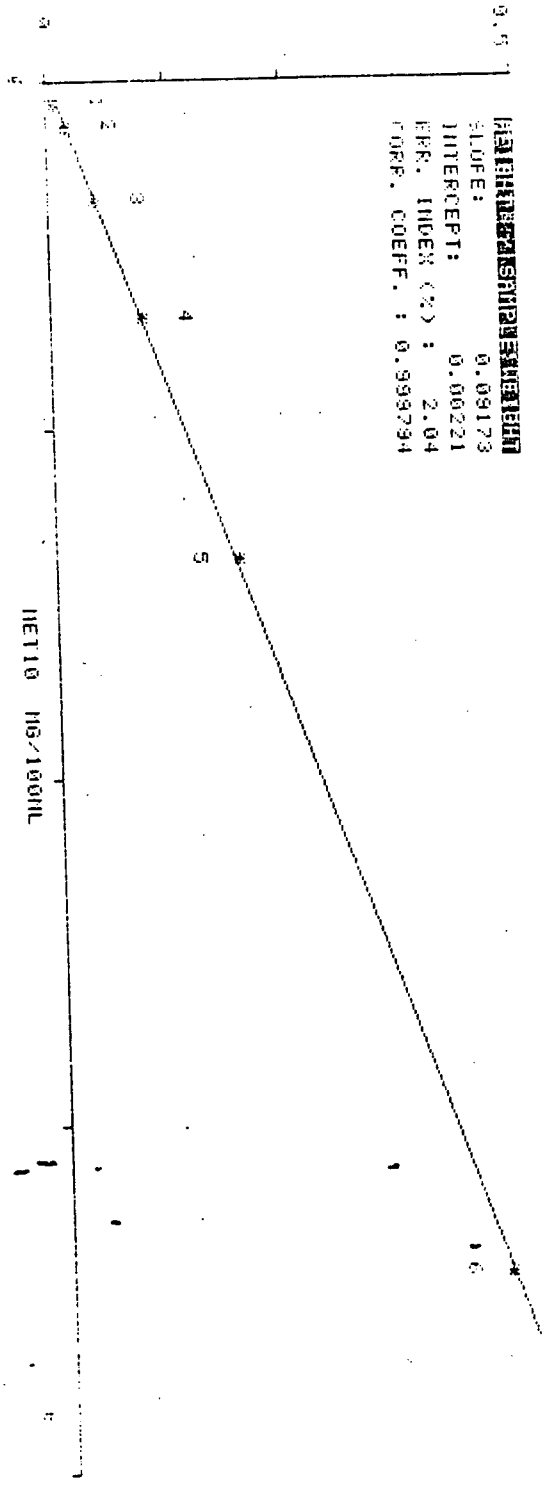
16:12 92/09/10

STANDARDS Table for Method MET10

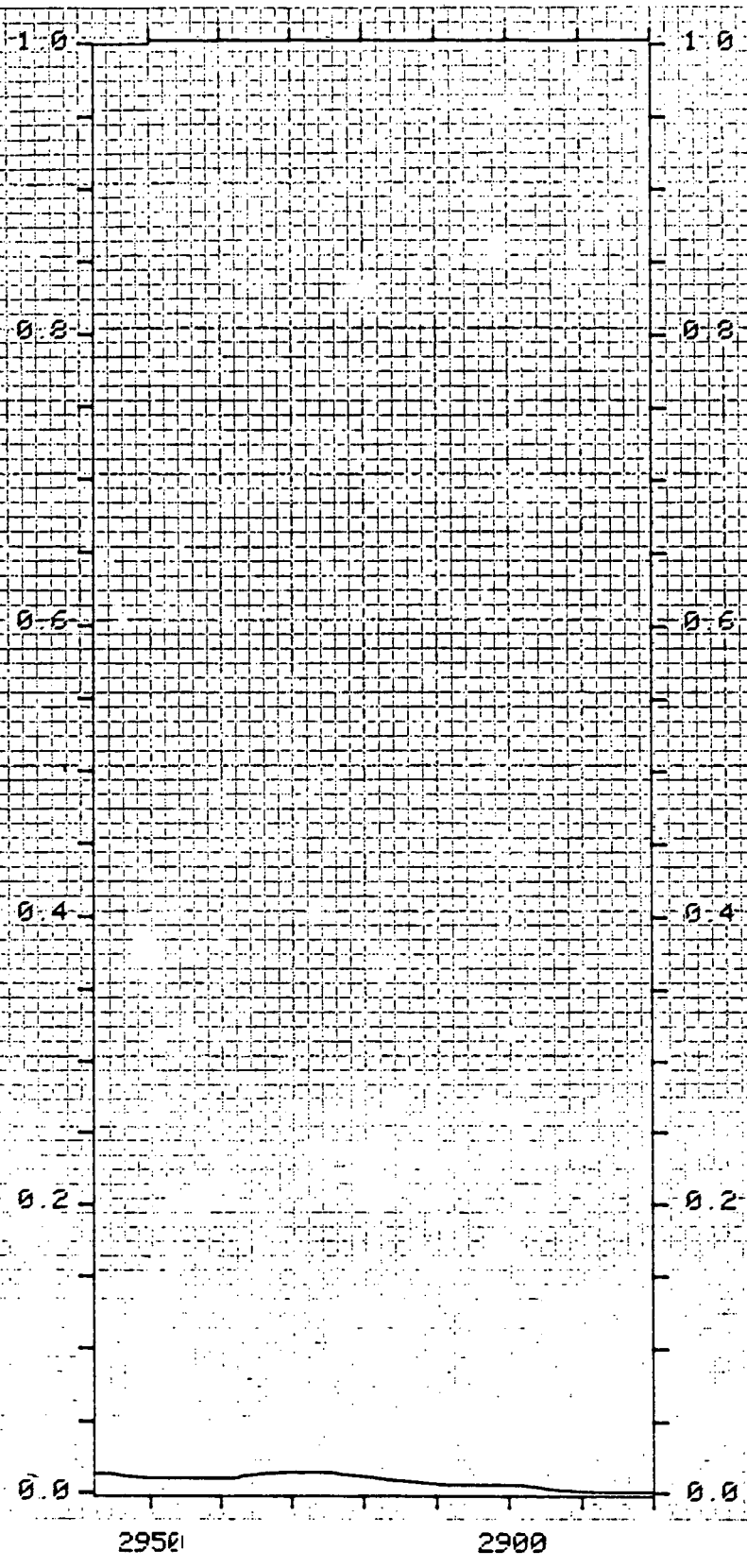
Stnd No.	Filid	Pathlength	Conc (MG/100ML)
1	STD01	10.0000	0.10300
2	STD02	10.0000	0.20600
3	STD03	10.0000	0.51500
4	STD04	10.0000	1.03000
5	STD05	10.0000	2.06000
6	STD06	10.0000	5.15000



Donna Brewer 00 27

CHART NO. WGPE-L103-1433

STD01



PERKIN-ELMER 1710

DATE 92-09-10

TIME 15:44

SAMPLE 0-103 mg/100ml
9-10-92

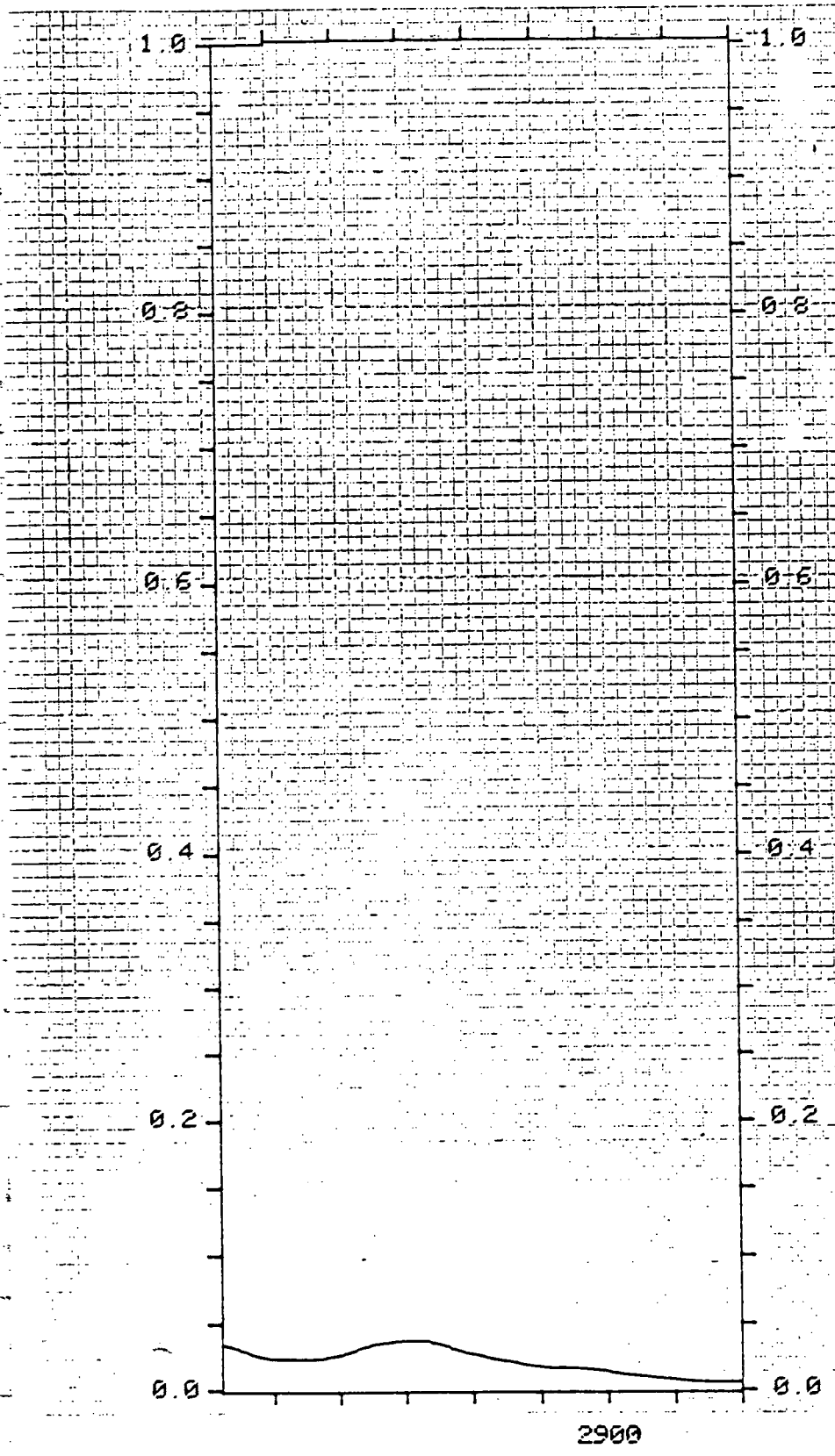
OPERATOR Jo

SCANS 32
RESOLUTION 4CM-1

ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00

10cm cell
Calibration
Std

STD 02



PERKIN-ELMER 1710

DATE 92-09-10

TIME 15:49

SAMPLE 0.206 mg/100 ml
9-10-92

OPERATOR Jo

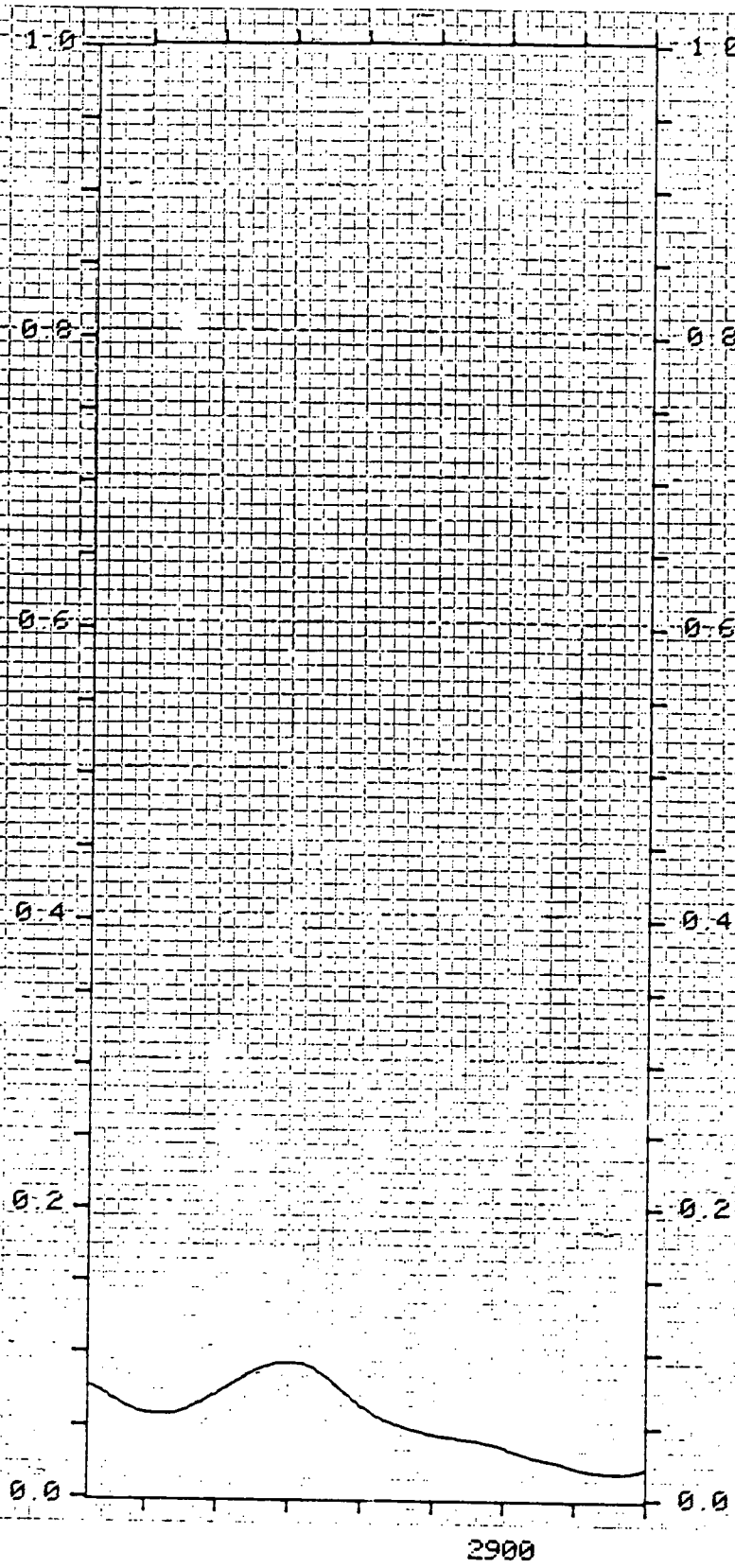
SCANS 32
RESOLUTION 4CM-1

ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00

10cm cell
Calib. std

WILMAD GLASS CO., INC. BUENA, N.J. 08310 CHART NO. WGPE-L106-1100

STD 03



PERKIN-ELMER 1710

DATE 92-09-10

TIME 15:53

SAMPLE 0.515 mg/100 ml
9-10-92

OPERATOR JS

SCANS 32
RESOLUTION 4CM-1

ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00

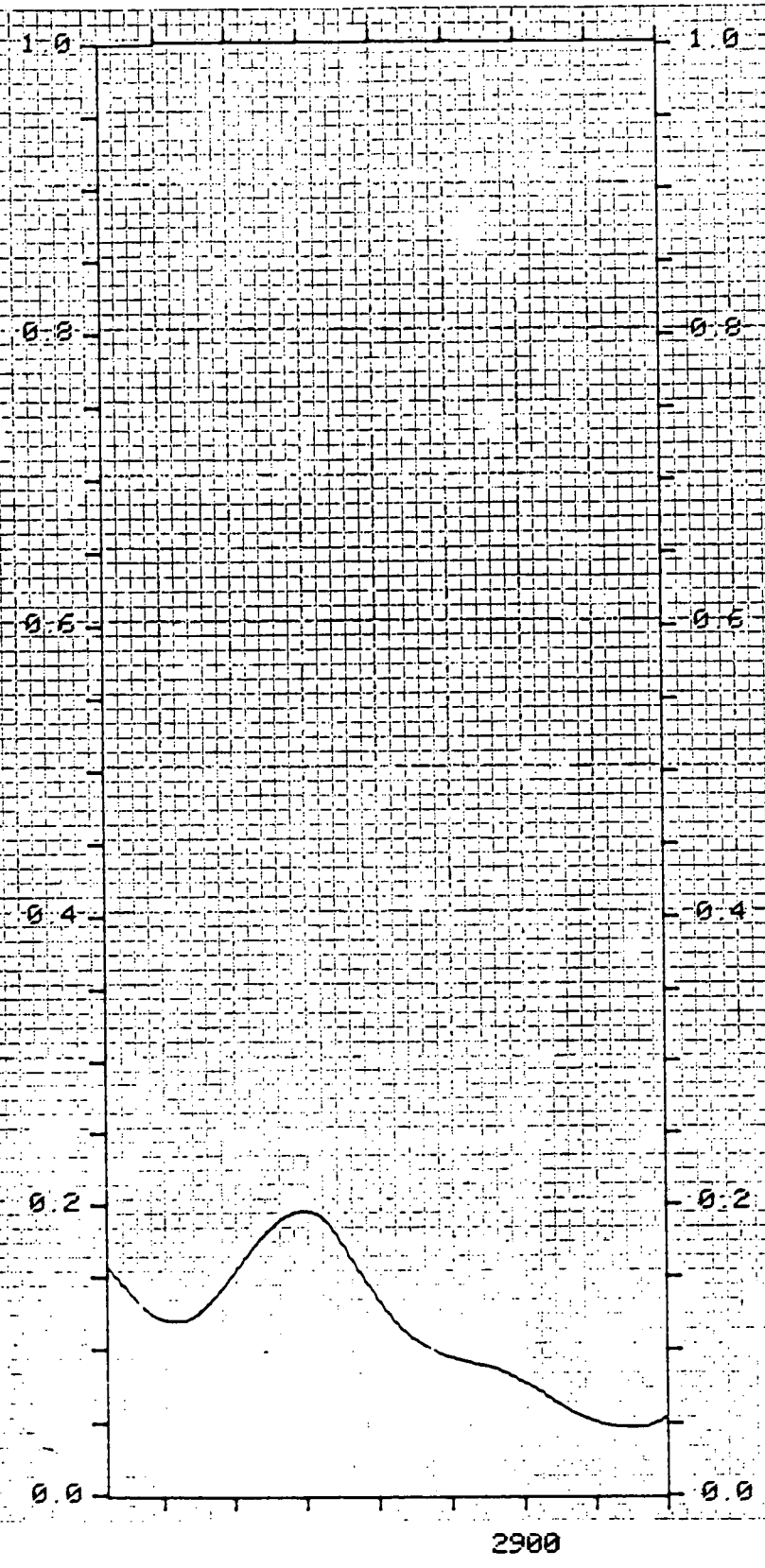
10 cm cell

Calib std

WILMAD GLASS CO., INC. BUENA, N.J. 08310

A.N.J. 08310 CHART NO. WGPE-L108-1403

SD 04



PERKIN-ELMER 1710

DATE 92-09-10

TIME 15:58

SAMPLE 1.03 mg/100 ml
9-10-92

OPERATOR [illegible]

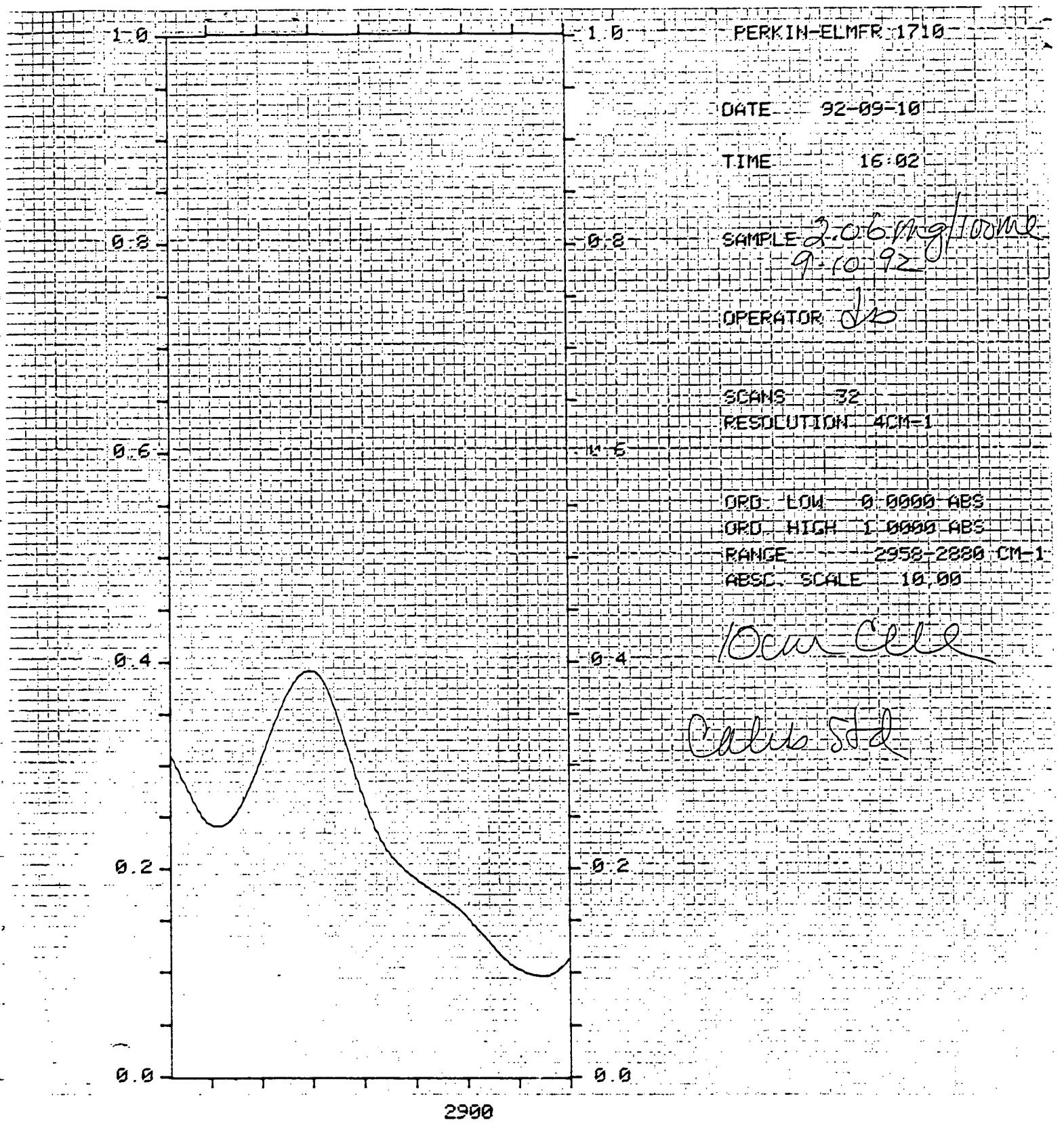
SCANS 32
RESOLUTION 4CM-1

ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00

10cm cell

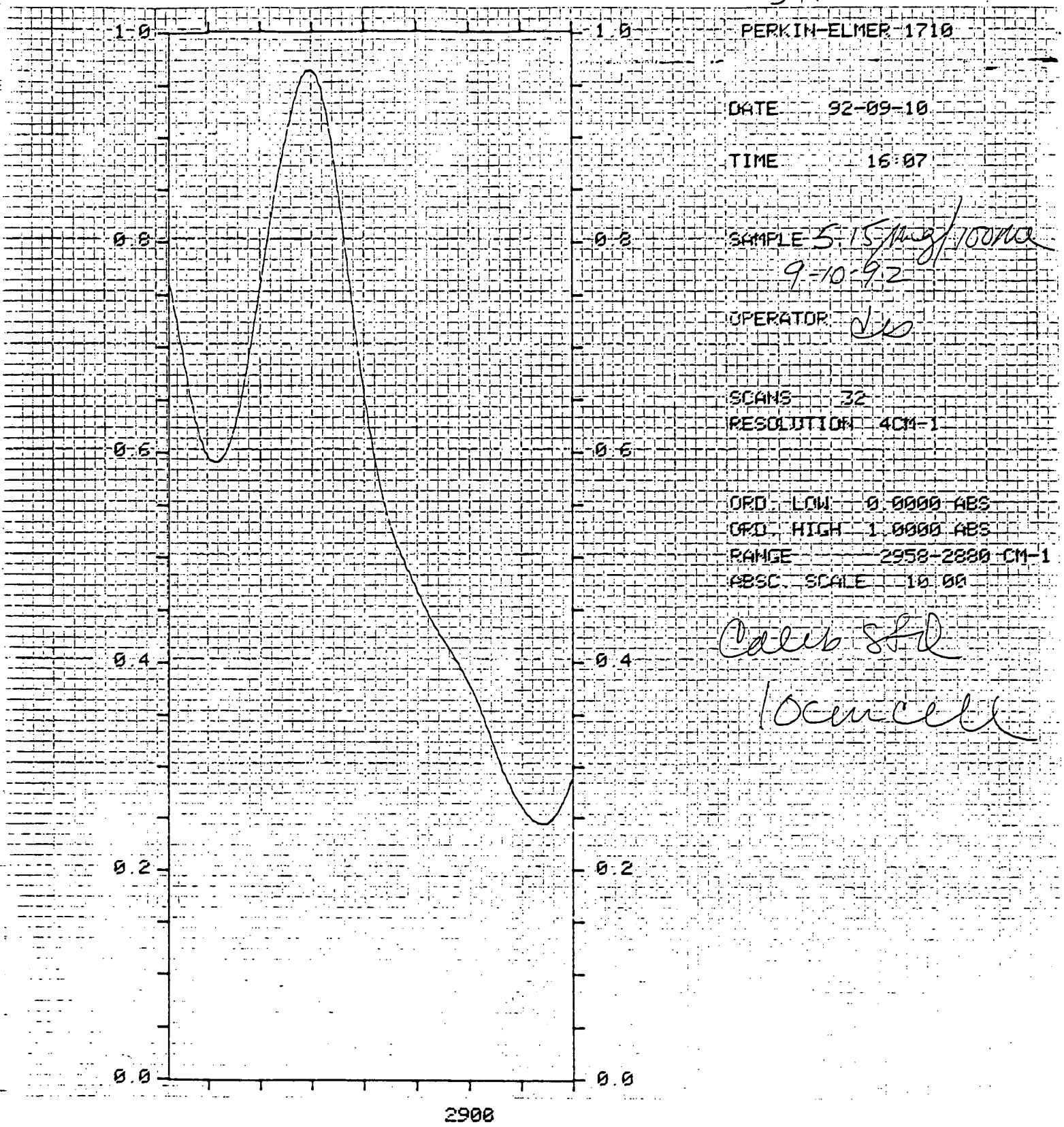
Calib std

STD 05


PERKIN-ELMER 1710
DATE 92-09-10
TIME 16:02
SAMPLE 2.06 mg/10cm
9-10-92
OPERATOR JD
SCANS 32
RESOLUTION 4CM-1
ORD. LOW 0.0000 ABS
ORD. HIGH 1.0000 ABS
RANGE 2958-2880 CM-1
ABSC. SCALE 10.00
10cm Cell
Calib Std
1.0
0.8
0.6
0.4
0.2
0.0
2900

WILMAD GLASS CO., INC. BUENA, N.J. 08310 CHART NO. WGPE-L106

STD 06



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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

ESI/KNICKERBOCKER

212-0858

INORGANICS BY ATOMIC ABSORPTION

AA

(METALS)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

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2.0 QA/QC DATA SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION
MATRIX SPIKE AND SPIKE DUPLICATE RESULTS

METHODOLOGY SUMMARY

This summary is based upon ECRA Labs, Inc. Standard Operating Procedure No. SOP-EL-027.

1.0 Parameter: Analysis of Metals in Soil by Atomic Absorption.

2.0 Reference: Test Methods for Evaluating Solid Waste SW-846, 3rd Edition, Rev.0., EPA Method Series 7000.

3.0 Method Description:

3.1 Sample Preparation: 2.0 to 2.5 grams of soil sample is digested with 5 ml of concentrated HNO_3. The mixture is placed on a hot plate and heated to 95°C for 15 min. The mixture is cooled and the process is repeated two more times. The sample is then evaporated to 5 ml and hydrogen peroxide is added until the effervescence ceases. The sample preparation is complete when the digestate is diluted to 100 ml with deionized water.

3.2 Calibration: For each metal to be analyzed, calibration of the Atomic Absorption Spectrophotometer is achieved by analyzing a series of standards. A reference lamp emitting a light beam specific to each element is used and a computer detects, acquires, and stores all absorption data aquired during the program. A calibration curve of absorbance versus concentration of standard is plotted and a least squares linear regression analysis is performed.

3.3 Sample Analysis: The sample is analyzed by either direct aspiration or a graphite furnace technique (graphite furnace is used for lower sensitivity). In either case the concentration of the metal is proportional to the amount of energy that is absorbed from the emission radiation.

3.4 Calculations: Qualitative determination of the metal in the sample is directly associated with the wavelength of light that is used to detect the excited atoms in the sample. The concentration of the metal is quantitated by using the measured absorbance along with the slope/intercept values obtained from the calibration curve.

4.0 MDL: The MDL varies due the sensitivity of different elements and soil factor.

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METHODOLOGY SUMMARY

This summary is based upon ECRA Labs, Inc. Standard Operating Procedure No. SOP-EL-029

1.0 Parameter: **Analysis of Mercury is Soil, by Cold Vapor Technique.**

2.0 Reference: Test Methods for Evaluating Solid Waste, SW-846, 3rd Edition. (Revised November 1986), EPA Method #7471

3.0 Method Description:

3.1 Sample Preparation: Approximately 1.0 gram of soil sample is digested with concentrated HNO_3, 1:1 H_2SO_4, and $KMnO_4$. After 15 minutes $K_2S_2O_8$ is added. The samples are placed in an oven and heated to 95°C for two hours. Samples are allowed to cool and if the purple color doesn't persist, additional $KMnO_4$ is added and a final volume of 130 ml is achieved with deionized water. Immediately prior to sample analysis $NH_2OH \cdot HCl$ and $SnCl_2$ are added.

3.2 Calibration: The cold vapor mercury analyzer system is calibrated by analyzing a series of mercury standards. Absorbance is measured as a function of mercury concentration and the corresponding calibration curve is plotted. A least squares linear regression analysis is performed on the curve.

3.3 Sample Analysis: The free elemental mercury that exists in solution is aerated by means of a bubbler. The mercury, which now exits in a vapor form, passes through a cell positioned in the path of a light beam wavelength 253.7 nm. Percent transmittance is measured and the absorbance is calculated.

3.4 Calculation: The concentration of the metal is quantitated by using the calculated absorbance along with the slope/intercept values obtained from the calibration curve.

4.0 MDL: The MDL is a function of the moisture content and weight of sample.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 1.0

SAMPLE ANALYSIS REPORTS

METHOD BLANK RESULTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Inorganics by Atomic Absorption - EPA Methods Series 7000

Project: ESI/KNICKERBOCKER ID#: 92-032-A01 Lab ID #: 212-0858-01

Sampled: 12/3/92
Received: 12/4/92
Digested: 12/8/92
Analyzed: 12/17-24/92

Case#: N/A
Contract# : N/A
Lab Code: N/A

Matrix: SOIL
Sample Wt.: 2.22/1.23g
Units: mg/Kg

CAS #	Parameter	Result	Dilution Factor	MDL
7440-36-0	Antimony:	U	1	0.215
7440-38-2	Arsenic:	0.808	1	0.215
7440-41-7	Beryllium:	2.32	1	0.539
7440-43-9	Cadmium:	1.78	1	0.539
7440-47-3	Chromium:	18.9	1	1.08
7440-50-8	Copper:	26.5	1	1.08
7439-92-1	Lead:	24.8	1	2.15
7439-97-6	Mercury:	0.214	1	0.049
7440-02-0	Nickel:	29.6	1	2.15
7782-49-2	Selenium:	U	1	0.215
7440-22-4	Silver:	U	1	0.539
7440-28-0	Thallium:	U	1	0.215
7440-66-6	Zinc:	72.3	1	0.539

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Inorganics by Atomic Absorption - EPA Methods 202.1-289.2

Project: ESI/KNICKERBOCKE ID#: METHOD BLANK Lab ID #: 212-0858-MB

Sampled: N/A
Received: N/A
Digested: 12/8/92
Analyzed: 12/17-22/92

Case#: N/A
Contract#: N/A
Lab Code: N/A
Decanted: N/A

Matrix: WATER
Sample Vol: 100 ml
Units: mg/l

CAS #	Parameter	Result	Dilution Factor	MDL
7440-36-0	Antimony:	U	1	0.004
7440-38-2	Arsenic:	U	1	0.004
7440-41-7	Beryllium:	U	1	0.010
7440-43-9	Cadmium:	U	1	0.010
7440-47-3	Chromium:	U	1	0.020
7440-50-8	Copper:	U	1	0.020
7439-92-1	Lead:	U	1	0.040
7439-97-6	Mercury:	U	1	0.0005
7440-02-0	Nickel:	U	1	0.040
7782-49-2	Selenium:	U	1	0.004
7440-22-4	Silver:	U	1	0.010
7440-28-0	Thallium:	U	1	0.004
7440-66-6	Zinc:	U	1	0.010

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 2.0

QA/QC DATA SUMMARY

MATRIX SPIKE/SPIKE DUPLICATE RESULTS

INITIAL AND CONTINUING CALIBRATION VERIFICATION

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Laboratory Report - Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recovery
Inorganics by Atomic Absorption - EPA Methods Series 7000

Project: ESI/KNICKERBOCKER ID#: SMP16 Lab ID #: 209-0615-13

Sampled: 9-09-92 Case#: N/A Matrix: SOIL
Received: 9-09-92 Contract#: N/A Sample Wt.: N/A
Digested: 9-14-92 Lab Code: N/A Units: mg/Kg
Analyzed: 9-17/9-22-92 Decanted: N/A

	Sample Result	Spike Conc. Added	Spike Result	Percent Recovery	Spike Dup Result	Percent Recovery	RPD
Antimony:	U	2.20	2.07	94	2.12	96	2.4
Arsenic:	U	2.20	2.16	98	2.12	96	1.9
Beryllium:	U	22.0	15.5	70	15.5	70	0
Cadmium:	1.06	22.0	24.7	107	23.8	103	3.7
Chromium:	2.16	22.0	17.2	68	17.0	67	1.2
Copper:	14.8	22.0	40.9	119	40.1	115	2.0
Lead:	U	22.0	22.5	102	22.5	102	0
Mercury:	NR						
Nickel:	9.72	22.0	35.3	116	34.5	113	2.3
Selenium:	U	2.20	1.32	60	1.46	66	10
Silver:	U	22.0	20.1	91	22.7	103	12
Thallium:	U	2.20	2.03	92	2.03	92	0
Zinc:	14.6	22.0	44.2	134	43.3	130	2.1
Iron:	NR						

N.C. = Non-Calculable due to high concentration of appropriate parameter

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recovery
Inorganics by Atomic Absorption - EPA Methods Series 7000

Project: J H CROW
ID#: C07
Lab ID #: 208-0555-07

Sampled: 8-20-92
Received: 8-20-92
Digested: 8-28-92
Analyzed: 9-8/9-14-92

Case#: N/A
Contract#: N/A
Lab Code: N/A
Decanted: N/A

Matrix: SOIL
Sample Wt.: 2.09g
Units: mg/Kg

	Sample Result	Spike Conc. Added	Spike Result	Percent Recovery	Spike Dup Result	Percent Recovery	RPD
Antimony:	NR						
Arsenic:	NR						
Beryllium:	NR						
Cadmium:	NR						
Chromium:	NR						
Copper:	NR						
Lead:	NR						
Mercury:	0.050	0.251	0.271	88	0.287	94	5.7
Nickel:	NR						
Selenium:	NR						
Silver:	NR						
Thallium:	NR						
Zinc:	NR						
Iron:	NR						

N.C. = Non-Calculable due to high concentration of appropriate parameter

INITIAL AND CONTINUING CALIBRATION VERIFICATION

LABORATORY NAME: ECRA LABS LABORATORY CODE: N/A DATE OF INITIAL CALIBRATION: 12/17-24/92

CONTRACT NUMBER: N/A TIME OF INITIAL CALIBRATION: N/A DATA RELEASE AUTHORIZED BY: F. FATRAS

	INITIAL CALIBRATION (UNITS: PPM) STANDARD CONCENTRATION						CONTINUING CALIBRATION VERIFICATION							BLANK ANALYSIS CONTINUING CALIBRATION		
PARAMETER	BLANK	1	2	3	4	5	TRUE VALUE	REPORTED VALUE 1	% RECOVERY	REPORTED VALUE 2	% REC.	FINAL REPORTED VALUE	FINAL % REC.	1	2	FINAL
ALUMINUM																
ANTIMONY	U	0.025	0.050	0.075	0.100		0.050	0.052	104			0.052	104	U		
ARSENIC	U	0.025	0.050	0.075	0.100		0.050	0.047	94	0.045	90	0.048	95	U		
BARIUM																
BERYLLIUM	U	0.100	0.500	1.000	2.000		0.100	0.096	96			0.085	85	U		
CADMIUM	U	0.100	0.500	1.000	2.000		0.100	0.111	111	0.112	112	0.109	109	U		
CALCIUM																
CHROMIUM	U	0.200	0.500	1.000	2.000		0.100	0.100	100	0.100	100	0.099	99	U		
COLBALT																
COPPER	U	0.200	0.500	1.000	2.000		0.100	0.103	103			0.101	101	U		
IRON																
LEAD	U	0.10	0.20	0.50	1.00	2.00	0.50	0.47	94			0.48	96	U		

INITIAL AND CONTINUING CALIBRATION VERIFICATION

LABORATORY NAME: ECRA LABS LABORATORY CODE: N/A DATE OF INITIAL CALIBRATION: 12/17-24/92
CONTRACT NUMBER: N/A TIME OF INITIAL CALIBRATION: N/A DATA RELEASE AUTHORIZED BY: F. FATRAS

	INITIAL CALIBRATION (UNITS: PPM) STANDARD CONCENTRATION						CONTINUING CALIBRATION VERIFICATION							BLANK ANALYSIS CONTINUING CALIBRATION		
PARAMETER	BLANK	1	2	3	4	5	TRUE VALUE	REPORTED VALUE 1	% RECOVERY	REPORTED VALUE 2	% REC.	FINAL REPORTED VALUE	FINAL % REC.	1	2	FINAL
MANGANESE																
MERCURY	U	0.0005	0.0020	0.0040	0.0080	0.0100	0.0050	0.0051	102			0.0044	88	U		
NICKEL	U	0.100	0.500	1.000	2.000		0.500	0.570	114			0.590	118	U		
POTASSIUM																
SELENIUM	U	0.025	0.050	0.075	0.100		0.050	0.054	108	0.057	114	0.059	118	U		
SILVER	U	0.100	0.200	0.500	1.000	2.000	0.100	0.097	97	0.095	95	0.095	95	U		
SODIUM																
THALLIUM	U	0.025	0.050	0.075	0.100		0.050	0.054	108			0.059	118	U		
TIN																
VANADIUM																
ZINC	U	0.100	0.200	0.500	1.000	2.000	0.100	0.118	118	0.112	112	0.117	117	U		

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

KNICKERBOCKER ENTERPRISES

212-0858

PRIORITY POLLUTANT VOLATILES

(VOA)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

METHODOLOGY SUMMARY

This summary is based upon ECRA Labs, Inc. Standard Operating Procedure No. SOP-EL-022-A.

1.0 Parameter: Gas Chromatography/Mass Spectrometry for Volatile Organics in Water.

2.0 Reference: Code of Federal Regulation 40,Pt. 136; Appendix A, EPA Method #624/#524.1

3.0 Method Description:

3.1 Calibration: Calibration is achieved by running a series of volatile organic standards on a Gas Chromatograph/Mass Spectrometer which is interfaced with an HP-1000 RTE-6/VM computer system. The computer detects, acquires, and stores all mass spectral data aquired during the program and calculates a response factor for each volatile contaminant purged. The computer identifies the peaks by comparing the retention time and the extracted ion current profile to that which is stored in a library file.

3.2 Sample Analysis: An inert gas (helium) is purged through a purge chamber containing a 5 ml/25 ml aliquot of water sample. The purgeable analytes are then transferred from the aqueous phase to the vapor phase and absorbed onto a multi-component trap. The trap is heated and backfushed with helium, and the analytes are desorbed onto a Gas Chromatograph equipped with a SP-1000 Supelco packed column. The gas chromatograph undergoes a temperature ramp from 45°C to 220°C at a rate of 20°C for the complete separation of volatile contaminants.

3.3 Calculation: Qualitative identification is obtained by the same method as described in 3.1. Quantitation is achieved by comparing one characteristic mass (m/z) abundance of a specific analyte with a characteristic mass (m/z) abundance of an internal QA/QC standards.

4.0 MDL: The MDL for volatile organics is dependant upon any interferences that may appear in the chromatogram. A typical MDL is 1-10 PPB micrograms per liter [PPB].

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

METHODOLOGY SUMMARY

This summary is based upon ECRA Labs, Inc. Standard Operating Procedure No. SOP-EL-023.

1.0 Parameter: Gas Chromatography/Mass Spectrometry for Volatile Organics in Soil.

2.0 Reference: Test Methods for Evaluating Solid Waste SW-846, 3rd Edition, Rev.0., EPA Method #8240.

3.0 Method Description:

3.1 Calibration: Calibration is a achieved by running a series of volatile organic standards on a Gas Chromatograph/Mass Spectrometer which is interfaced with an HP- 1000 RTE-6/VM computer system. The computer detects, acquires, and stores all mass spectial data acquired during the program and calculates a response factor for each volatile contaminant purged. The computer identifies the peaks by comparing the retention time and the extracted ion current profile to that which is stored in a library file.

3.2 Sample Analysis: An inert gas (helium) is purged through a purge chamber containing a 5 gram aliquot of soil sample. The purgeable analytes are then transferred from the aqueous phase to the vapor phase and absorbed onto a multi-component trap. The trap is heated, backflushed with helium, and the analytes are desorbed into a Gas Chromatograph equipped with a SP-1000 Supelco packed column. The gas chromatograph undergoes a temperature ramp from 45°C to 220°C at a rate of 20°C/min for the complete separation of volatile contaminants.

3.3 Calculation: Qualitative identification is obtained by the same method as described in 3.1. Quantitation is achieved by comparing one characteristic mass (m/z) abundance of a specific analyte with a characteristic mass (m/z) abundance of an internal QA/QC standard.

4.0 MDL: The MDL for volatile organics is a function of the moisture content, the weight of the sample, and any interferences that may appear in the chromatogram. A typical MDL is 5-10 PPB.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 1.0

SAMPLE ANALYSIS REPORTS

QUANT REPORTS WITH TOTAL ION CHROMATOGRAMS AND MASS SPECTRAL DATA

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 8240

Project: ESI/KNICKERBOCKER ID#: 92-032-A01 Lab ID#: 212-0858-01

Sampled:	12/03/92	Case#:	N/A*	Matrix:	SOIL
Received:	12/04/92	Contract#:	N/A*	Extraction:	N/A
Extracted:	N/A	Lab Code:	N/A*	Sample Vol:	5.0G
Analyzed:	12/11/92 19:00	Decanted:	NO	Dil. Fct.	1.0700
Data File:	>I1635			MDL:	5

CAS NO.	COMPOUND	CONCENTRATION UG/KG	Q
74-87-3	Chloromethane	11.	U
74-83-9	Bromomethane	11.	U
75-01-4	Vinyl Chloride	11.	U
75-00-3	Chloroethane	11.	U
75-09-2	Methylene Chloride	17.	B
75-69-4	Trichlorofluoromethane	3.	J
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	3.	J
540-59-0	Trans-1,2-Dichloroethylene	7.	
67-66-3	Chloroform	5.	J
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	2.	J
56-23-5	Carbon Tetrachloride	2.	J
75-27-4	Bromodichloromethane	7.	
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	11.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	JB
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
108-38-3	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: 92-032-A01 LAB ID #: 212-0858-01

Data File: >I1635

Methanol Ext.

EPA METHOD #8240

Dilution Factor: 1.0700

Concentration Units: UG/KG

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed FORM I VOA-TIC 1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 921211 19:39
Output File: ^I1635::QT Injected at: 921211 19:00
Data File: >I1635::I3 Dilution Factor: 1.07000
Name: ESI/KNICKERBOCKER
Misc: A01,92-032,,12/3,12/4,212-0858-01,5.0G

ID File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.56	208	43315	50.00	UG/KG	95
6)	METHYLENE CHLORIDE	6.65	133	21865	17.31	UG/KG B	100
7)	TRICHLOROFLUOROMETHANE	8.55	182	7706	2.65	UG/KG J	100
9)	1,1-DICHLOROETHANE	10.38	229	4249	3.27	UG/KG J	89
10)	TRANS-1,2-DICHLOROETHYLENE	11.15	249	4494	6.75	UG/KG	81
11)	CHLOROFORM	11.54	259	9574	4.62	UG/KG J	88
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.24	277	72444	63.65	UG/KG 119	93
14)	*1,4-DIFLUOROBENZENE	19.73	470	107117	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.48	309	5796	2.16	UG/KG J	94
16)	CARBON TETRACHLORIDE	13.83	318	4378	1.53	UG/KG J	80
17)	BROMODICHLOROMETHANE	14.37	332	13682	7.00	UG/KG	98
27)	*CHLOROBENZENE-D5	24.62	596	79093	50.00	UG/KG	100
29)	TOLUENE-D8 (SURG.)	23.45	566	89660	59.14	UG/KG 111	79
31)	TOLUENE	23.65	571	4216	5.11	UG/KG JB	84
34)	BROMOFLUOROBENZENE (SURG.)	29.04	710	104336	48.92	UG/KG 97	88

* Compound is ISTD

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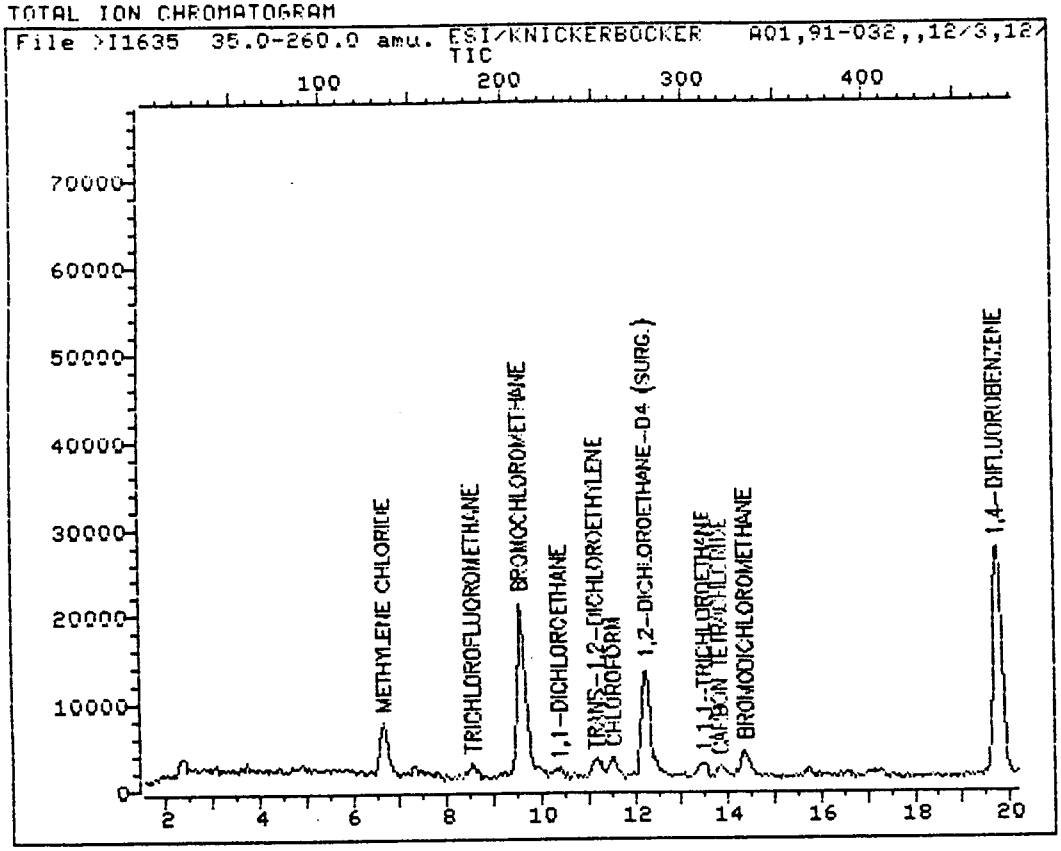
TOTAL ION CHROMATOGRAM



Data File: >I1635::I3 Quant Output File: ^I1635::QT
Name: ESI/KNICKERBOCKER
Misc: A01,91-032,,12/3,12/4,212-0858-01,5.0G

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 19:39
Injected at: 921211 19:00

TIC page 1 of 2

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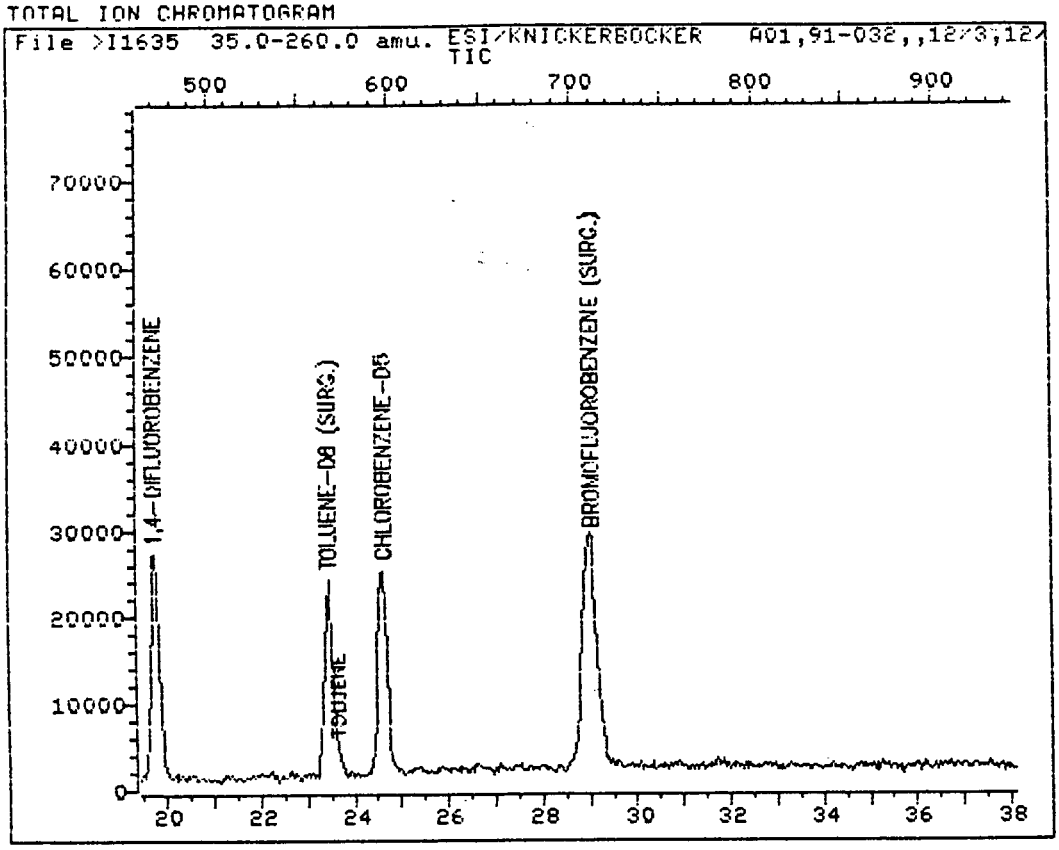
TOTAL ION CHROMATOGRAM



Data File: >I1635::I3 Quant Output File: ^I1635::QT
Name: ESI/KNICKERBOCKER
Misc: A01,91-032,,12/3,12/4,212-0858-01,5.0G

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 19:39
Injected at: 921211 19:00

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

MS data file header from : >I1635

Sample: ESI/KNICKERBOCKER Operator: MANAGER MS 12/11/92 19:00
Misc : A01,91-032,,12/3,12/4,212-0858-01,5.0G
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: VOAI Tuning file: MTI001 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 290 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	20.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>I1635 ESI/KNICKERBOCKER A01,91-032,,12/3,12/4,212-0858-01,5.0G
35.0| 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 15 Bunching: 1
Dnslope: 0.00 Results File II1635 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	2.34	18	22	25	2385	33330	23827	100.00	18.043
2	2.61	27	29	32	1090	18607	9007	37.80	6.821
3	7.31	147	150	152	1133	17157	7240	30.39	5.482
4	7.82	160	163	166	920	9619	8292	34.80	6.279
5	15.73	361	367	370	1110	14752	9158	38.44	6.935
6	16.59	386	389	393	829	9334	8487	35.62	6.427
7	21.36	506	512	515	706	13337	8979	37.68	6.799
8	22.25	532	535	538	1107	11972	9388	39.40	7.109
9	25.39	613	616	618	901	17741	6844	28.72	5.183
10	26.64	646	648	650	1034	17759	6702	28.13	5.075
11	27.10	659	660	663	1189	15611	6793	28.51	5.144
12	31.88	781	783	786	1207	23424	6945	29.15	5.259
13	32.11	788	789	793	929	20781	5631	23.63	4.264
14	35.25	867	870	871	1037	17275	6114	25.66	4.630
15	36.19	891	894	897	1167	24929	8650	36.30	6.550

Sum of corrected areas: 132057.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	250714.	9.56	1.53 - 14.64
2	50.0	332066.	19.73	14.64 - 22.17
3	50.0	327365.	24.62	22.17 - 38.09

Dilution Factor (DF) = .93 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1.00 Amount Used (AU) = 1.00

Correction Factor = 1.07 = (AM / AU) / (DF * FS)

00 56

Unknown Concentration = $\frac{\text{Conc Int Std}}{}$ * Area Unk * Correction Factor

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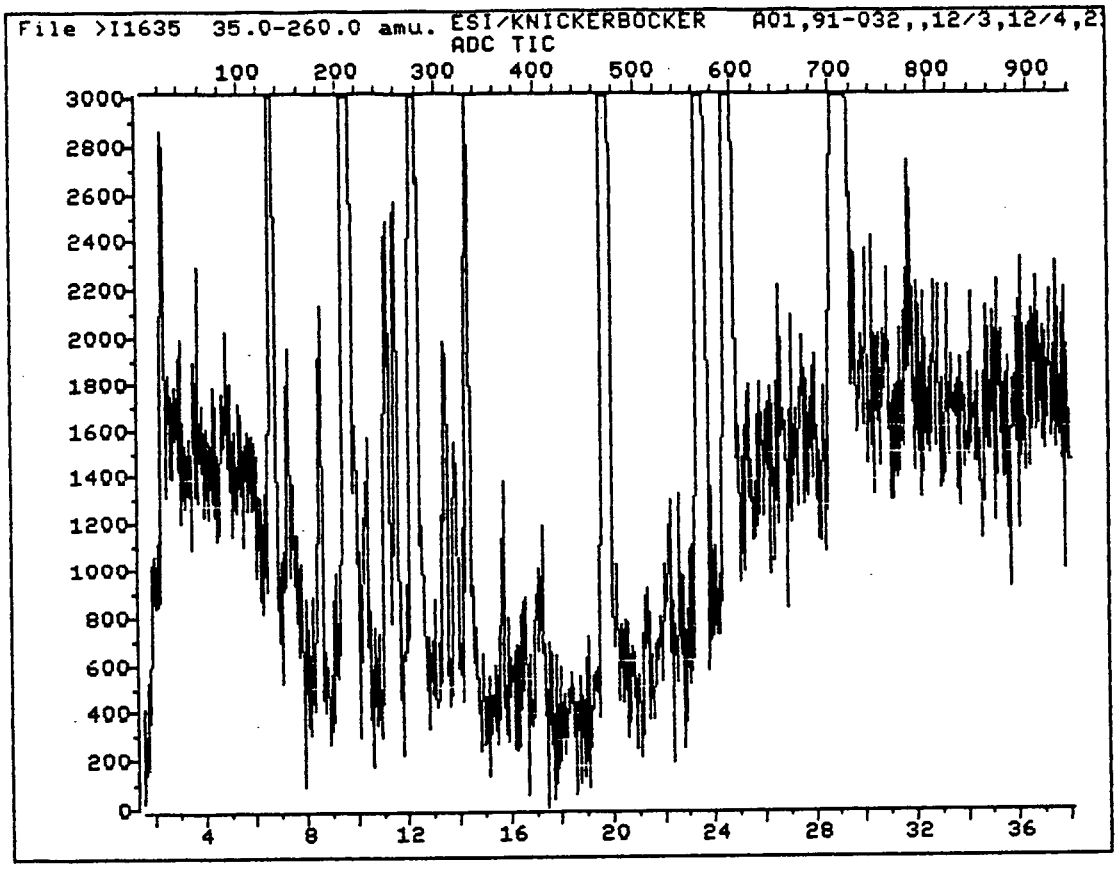
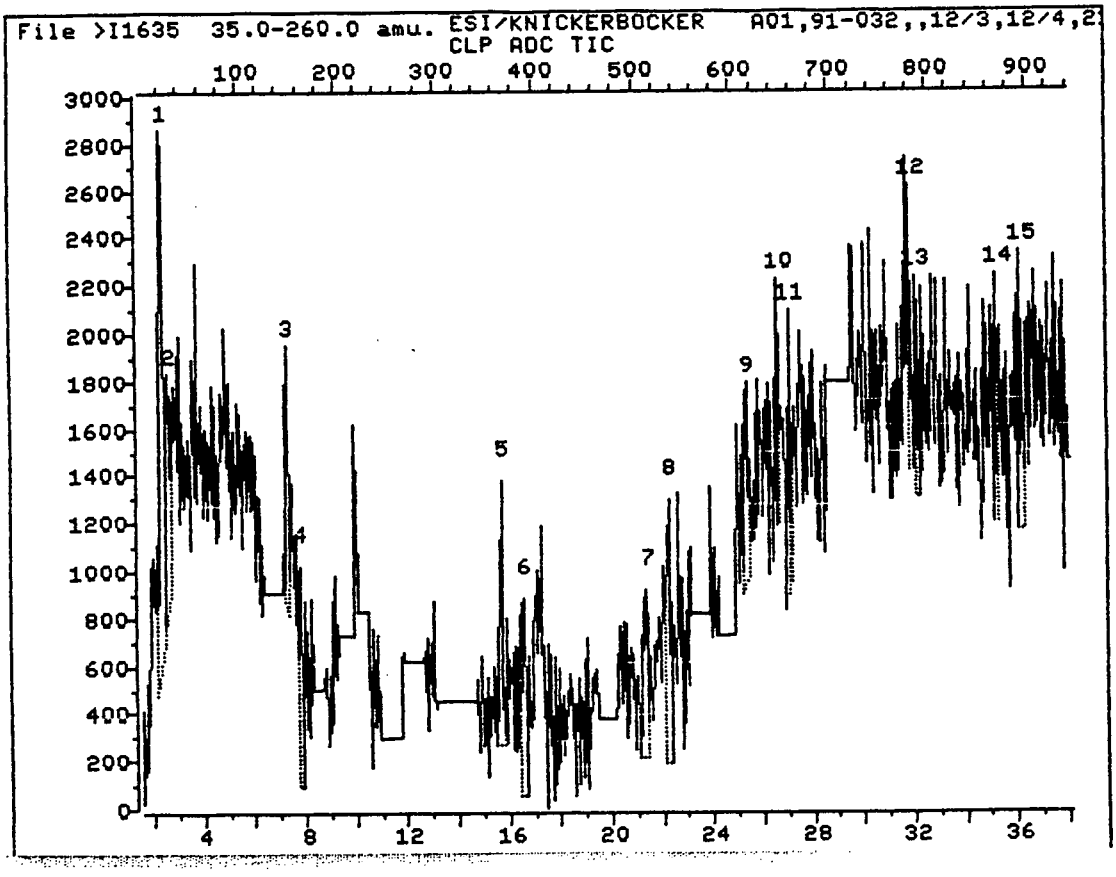
2:00 AM WED., 16 DEC., 1992


File >I1635 35.0-260.0 amu. ESI/KNICKERBOCKER A01,91-032,,12/3,12/4,2
ADC TIC
100 200 300 400 500 600 700 800 900
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
4 8 12 16 20 24 28 32 36


File >I1635 35.0-260.0 amu. ESI/KNICKERBOCKER A01,91-032,,12/3,12/4,2
CLP ADC TIC
100 200 300 400 500 600 700 800 900
3000 2800 2600 2400 2200 2000 1800 1600 1400 1200 1000 800 600 400 200 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
4 8 12 16 20 24 28 32 36

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 8240

Project: ESI/KNICKERBOCKER ID#: 92-032-FB Lab ID#: 212-0858-02

Sampled:	12/03/92	Case#:	-----N/A	Matrix:	--Water
Received:	12/04/92	Contract#:	----N/A	Extraction:	----N/A
Extracted:	N/A	Lab Code:	----N/A	Sample Vol:	5 ml
Analyzed:	12/09/92 12:37	Decanted:	NO	Dil. Fct.	1.0000
Data File:	>G5623			MDL:	5.0000

CAS NO.	COMPOUND	CONCENTRATION UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	7.	B
75-69-4	Trichlorofluoromethane	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	Trans-1,2-Dichloroethylene	5.	U
67-66-3	Chloroform	5.	U
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
133-02-7	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The reported concentration is magnified by the dilution factor.

00 59

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ECRA
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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: 92-032-FB

LAB ID #: 212-0858-02

Data File: >G5623

Methanol Ext.

EPA METHOD #624

Dilution Factor: 1.0000

Concentration Units: UG/L

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed

FORM I VOA-TIC

1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921209 13:18
Output File: ^G5623::QT Injected at: 921209 12:37
Data File: >G5623::B1 Dilution Factor: 1.00000
Name: ESI/KNICKERBOCKER
Misc: 92-032-FB/12/03-04/QV0009/212-0858-02 5CC

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.68	222	25608	50.00	UG/L	91
7)	METHYLENE CHLORIDE	6.60	143	4520	6.50	UG/L B	100
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.62	297	34968	43.40	UG/L 87	90
21)	*1,4-DIFLUOROBENZENE	20.55	500	67489	50.00	UG/L	100
42)	*CHLOROBENZENE-D5	25.48	626	60225	50.00	UG/L	100
44)	TOLUENE-D8 (SURG.)	24.30	596	62560	45.90	UG/L 92	94
49)	BROMOFLUOROBENZENE (SURG.)	30.40	752	46530	50.89	UG/L 102	98

* Compound is ISTD

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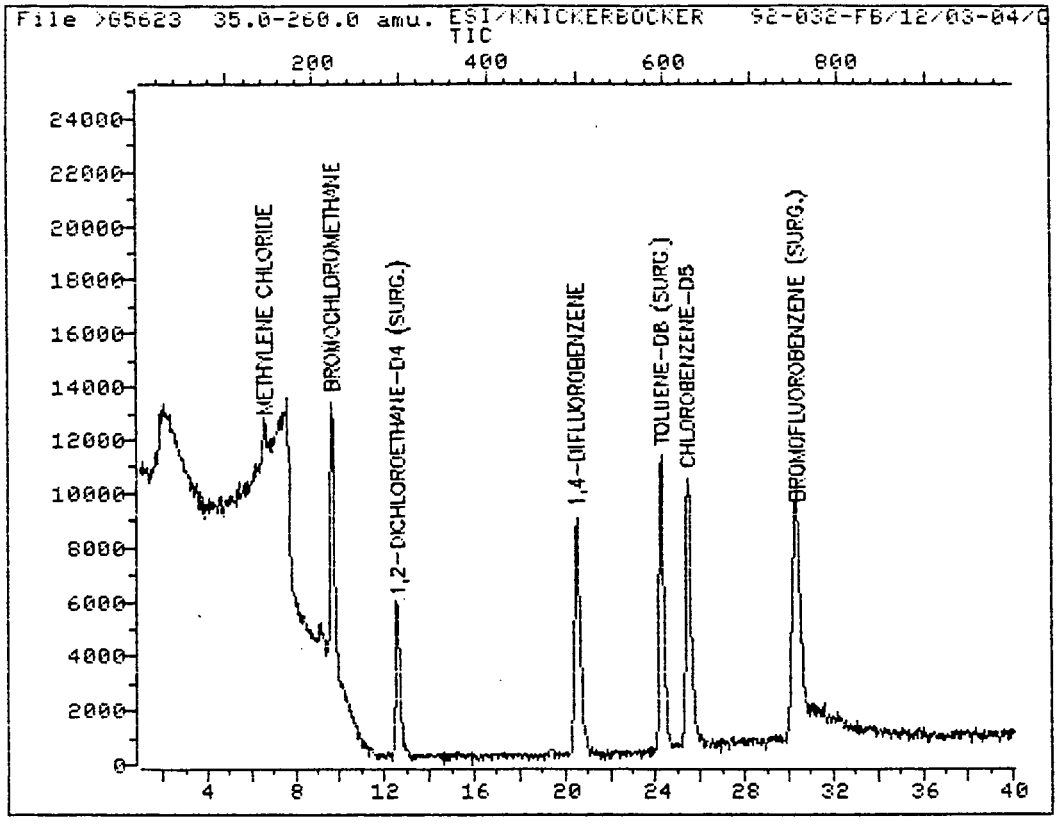
TOTAL ION CHROMATOGRAM



Data File: >G5623::B1 Quant Output File: ^G5623::QT
Name: ESI/KNICKERBOCKER
Misc: 92-032-FB/12/03-04/QV0009/212-0858-02 5CC

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921209 13:18
Injected at: 921209 12:37

Unknown Concentration =

MS data file header from : >G5623

Sample: ESI/KNICKERBOCKER Operator: MAURIE MS
Misc : 92-032-FB/12/03-04/QW0009/212-0858-02 5CC
Sys. #: 1 MS model: 70 SW/HW rev.: 1A ALS # :
Method file: VOA1 Tuning file: MTG001 No. of
Source temp.: 0 Analyzer temp.: 290 Transfe

Chromatographic temperatures : 45. 220. 0
Chromatographic times, min. : 3.0 16.0 0.
Chromatographic rate, deg/min: 8.0 0.0 0.

>G5623 ESI/KNICKERBOCKER 92-032-FB/12/03-04/0

35.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 18
Dnslope: 0.00 Results File 1G5623 Sorted by Tim

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area
1	10.90	251	253	257	633	13699
2	11.40	263	266	271	312	9647
3	15.94	381	382	389	435	5517
4	18.17	438	439	444	244	5243
5	21.84	530	533	536	329	5939
6	26.10	640	642	644	520	8728
7	26.30	644	647	651	302	13526
8	27.00	664	665	669	418	10277
9	28.49	700	703	707	273	14982
10	29.03	714	717	718	463	8403
11	31.03	766	768	770	1399	19357
12	31.62	781	783	786	732	21378
13	31.85	786	789	790	398	16783
14	34.12	844	847	850	301	17300
15	34.31	850	852	855	355	15192
16	36.07	896	897	901	549	12487
17	38.30	950	954	957	531	19307
18	39.55	982	986	988	431	15492

Sum of corrected areas:

Summary of Unknowns PBM Library Search and Quan

Standard	Concentration	Area	Retention Time
1	50.0	138877.	9.68
2	50.0	148276.	20.55
3	50.0	167415.	25.48

Dilution Factor (DF) = 1.00 Fractional Soli
Amount Method (AM) = 1.00 Amount Used

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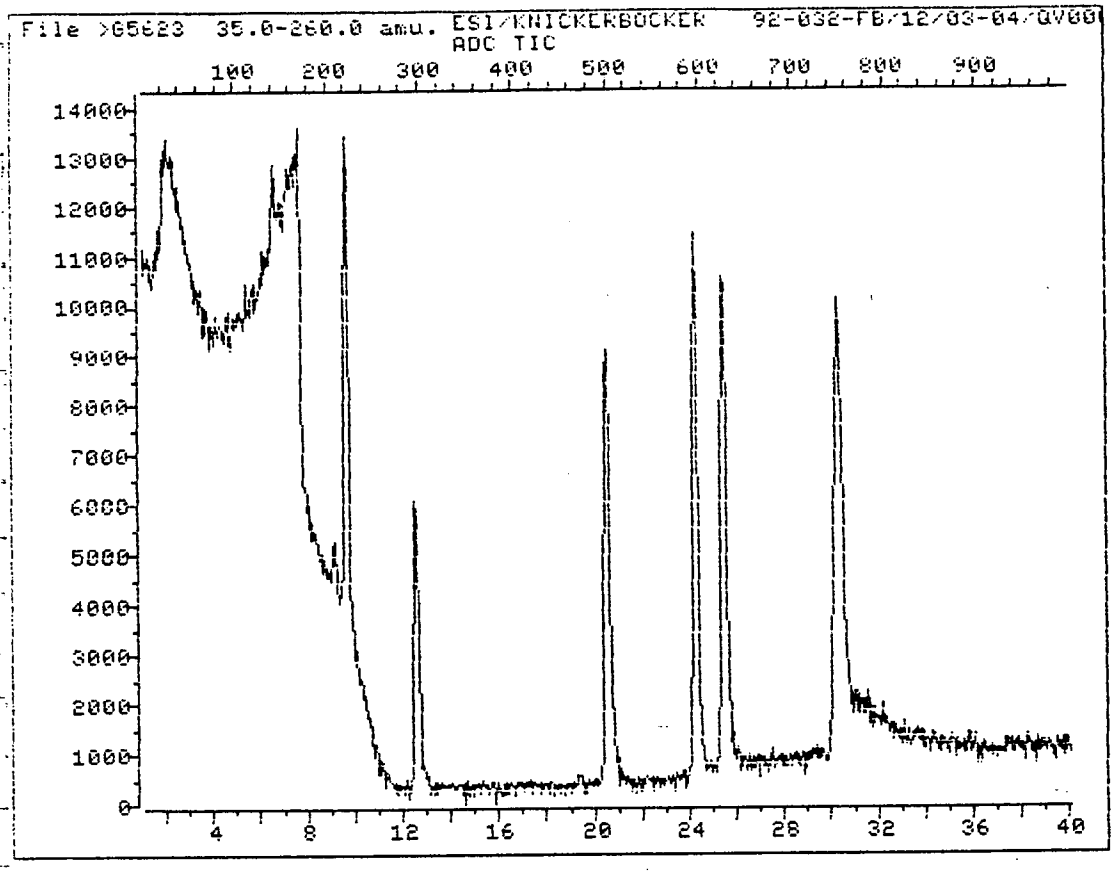

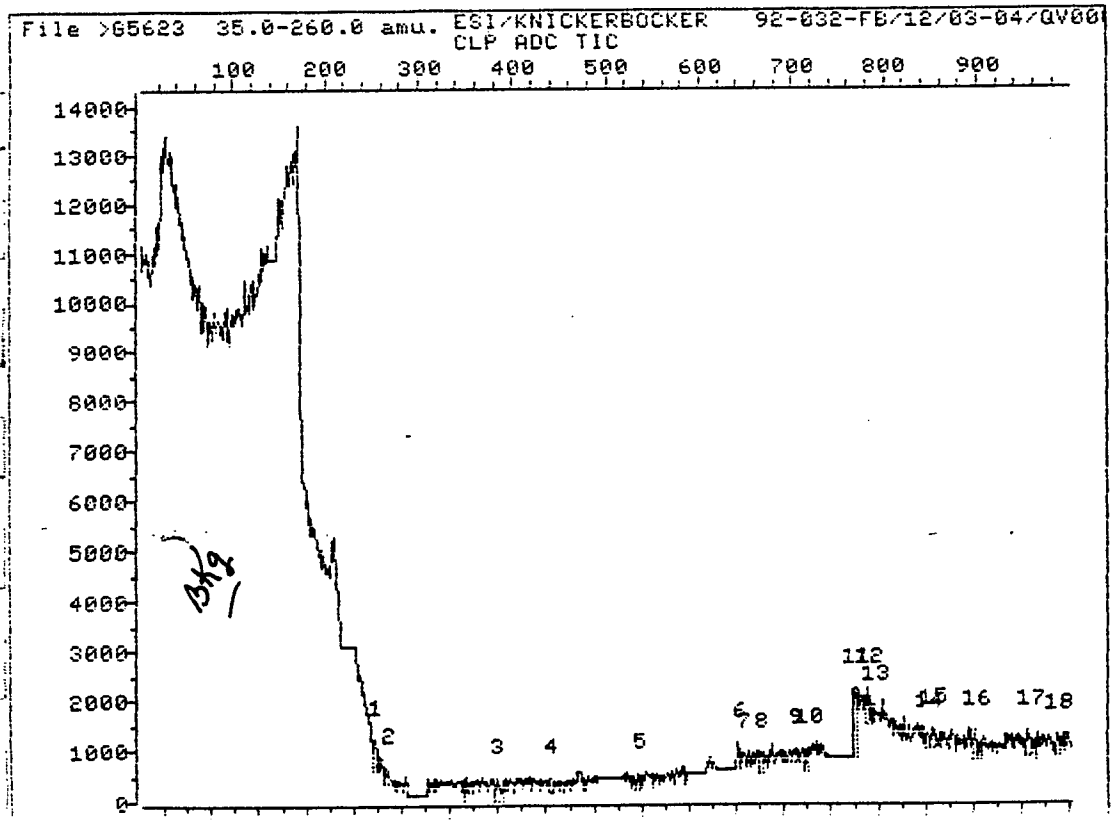

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 2.0

GC/MS TUNING AND MASS CALIBRATION

CALIBRATION STANDARD QUANT REPORT/

CHROMATOGRAMS

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ECRA

ENVIRONMENTAL CONSULTANTS, RESEARCH, AND ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >G5531

BFB Injection Date: 12/02/92

Instrument ID: HPMSD(G)

BFB Injection Time: 12/02/92 7:34

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	25.9
75	30.0 - 60.0% OF MASS 95	55.0
95	Base peak, 100% relative abundance	100.
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	84.5
175	5.0 - 9.0% of mass 174	7.0 (8.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.0 (98.2)1
177	5.0 - 9.0% of mass 176	5.1 (6.2)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	N/A	STD 100 PPB	>G5532	12/02/92	7:50
02	N/A	STD 50 PPB	>G5533	12/02/92	8:55
03	N/A	STD 20 PPB	>G5534	12/02/92	9:47
04	N/A	STD 150 PPB	>G5535	12/02/92	10:50
05	N/A	STD 200 PPB	>G5536	12/02/92	11:43
06	N/A	211-0827-04-MS	>G5537	12/02/92	12:35
07	N/A	METHOD BLANK	>G5538	12/02/92	14:06
08	N/A	211-0827-04	>G5539	12/02/92	14:54
09	N/A	211-0827-05	>G5540	12/02/92	15:42
10	N/A	211-0827-06	>G5541	12/02/92	16:29
11	N/A	METHOD BLANK	>G5542	12/02/92	17:17
12	N/A	211-0832-05	>G5543	12/02/92	18:05
13	N/A	REF STD	>G5544	12/02/92	18:52
14	N/A	BLANK	>G5545	12/02/92	19:41
15	N/A	BLANK	>G5546	12/02/92	20:28
16					
17					
18					
19					
20					
21					
22					

FORM V VOA

1/87 Rev.

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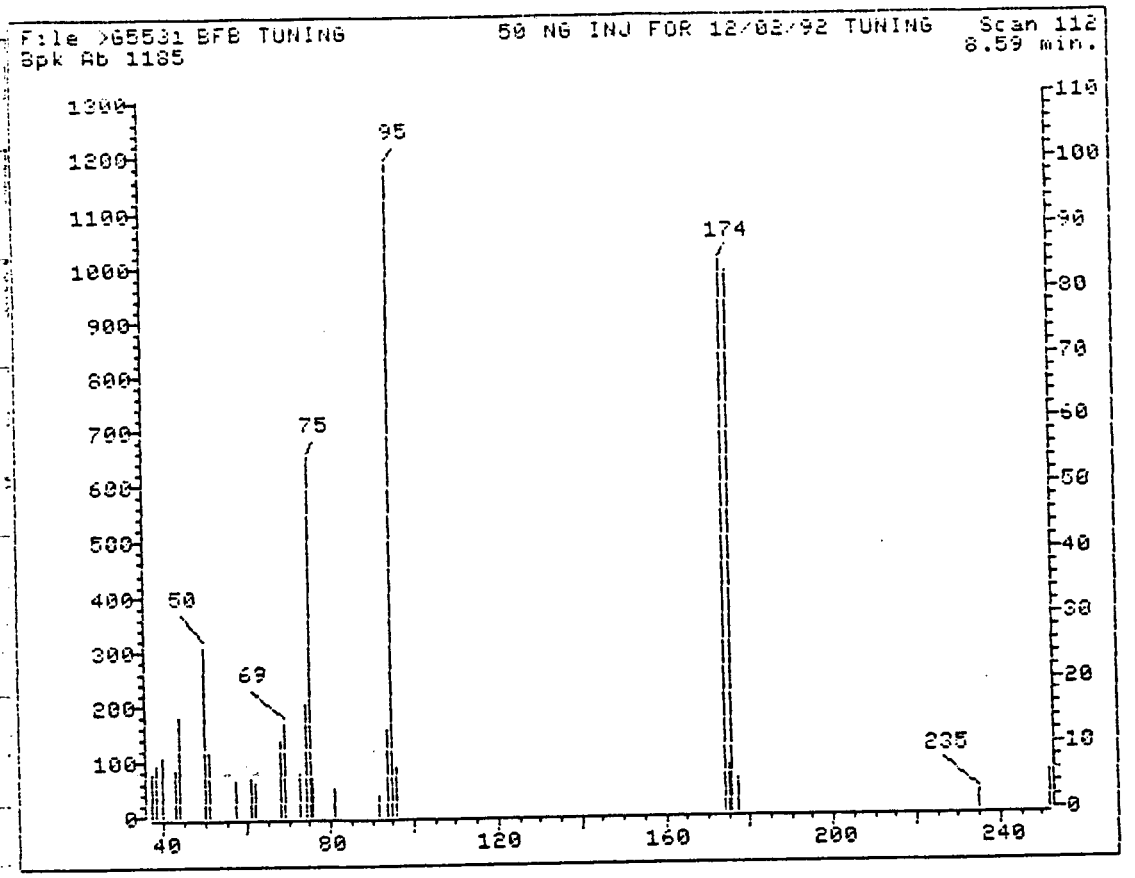
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.



GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	25.91	25.91	Ok
75	30-60% of mass 95	55.02	55.02	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.34	7.34	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	84.47	84.47	Ok
175	5-9% of mass 174	7.00	8.29	Ok
176	95-101% of mass 174	82.95	98.20	Ok
177	5-9% of mass 176	5.15	6.21	Ok

Injection Date: 12/02/92
Injection Time: 07:34
Data File: >G5531 Scan: 112

Analyst Signature: Maurice L. Lopez

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

>G5531 BFB TUNING 50 NG INJ FOR 12/02/92 TUNING
112 NRM1

File: >G5531 Scan #: 112 Retn. time: 8.59

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.95	6.498	51.05	9.789	72.95	6.498	91.90	2.954	174.95	7.004
38.05	7.679	57.10	5.401	74.05	17.046	94.05	13.249	175.90	82.954
39.95	8.945	60.95	5.907	75.05	55.021	95.05	100.000	177.00	5.148
43.00	7.089	62.05	5.232	76.00	5.654	96.05	7.342	235.00	2.700
44.00	15.190	68.00	11.477	81.00	4.051	173.95	84.473	251.95	5.654
49.95	25.907	69.00	14.177						

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >G5598 BFB Injection Date: 12/08/92

Instrument ID: HPMSD(G) BFB Injection Time: 12/08/92 6:59

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	50.6
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	97.5
175	5.0 - 9.0% of mass 174	7.2 (7.4)1
176	Greater than 95.0%, but less than 101.0% of mass 174	97.2 99.7)1
177	5.0 - 9.0% of mass 176	7.1(7.4)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	N/A	STD 100 PPB	>G5599	12/08/92	7:15
02	N/A	METHOD BLANK	>G5600	12/08/92	8:18
03	N/A	212-0851-06	>G5601	12/08/92	9:13
04	N/A	212-0857-09	>G5602	12/08/92	10:01
05	N/A	212-0859-01	>G5603	12/08/92	10:49
06	N/A	212-0859-02	>G5604	12/08/92	11:38
07	N/A	212-0859-01-MS	>G5605	12/08/92	12:26
08	N/A	212-0859-01-MSD	>G5606	12/08/92	13:14
09	N/A	212-0850-01	>G5607	12/08/92	14:02
10	N/A	212-0850-02	>G5608	12/08/92	14:50
11	N/A	212-0850-04	>G5609	12/08/92	15:38
12	N/A	212-0850-03	>G5610	12/08/92	16:27
13	N/A	212-0866-04-SC	>G5611	12/08/92	17:15
14	N/A	212-0866-03-SC	>G5612	12/08/92	18:03
15		MLR 12/09/92			
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FORM V VOA 1/87 Rev

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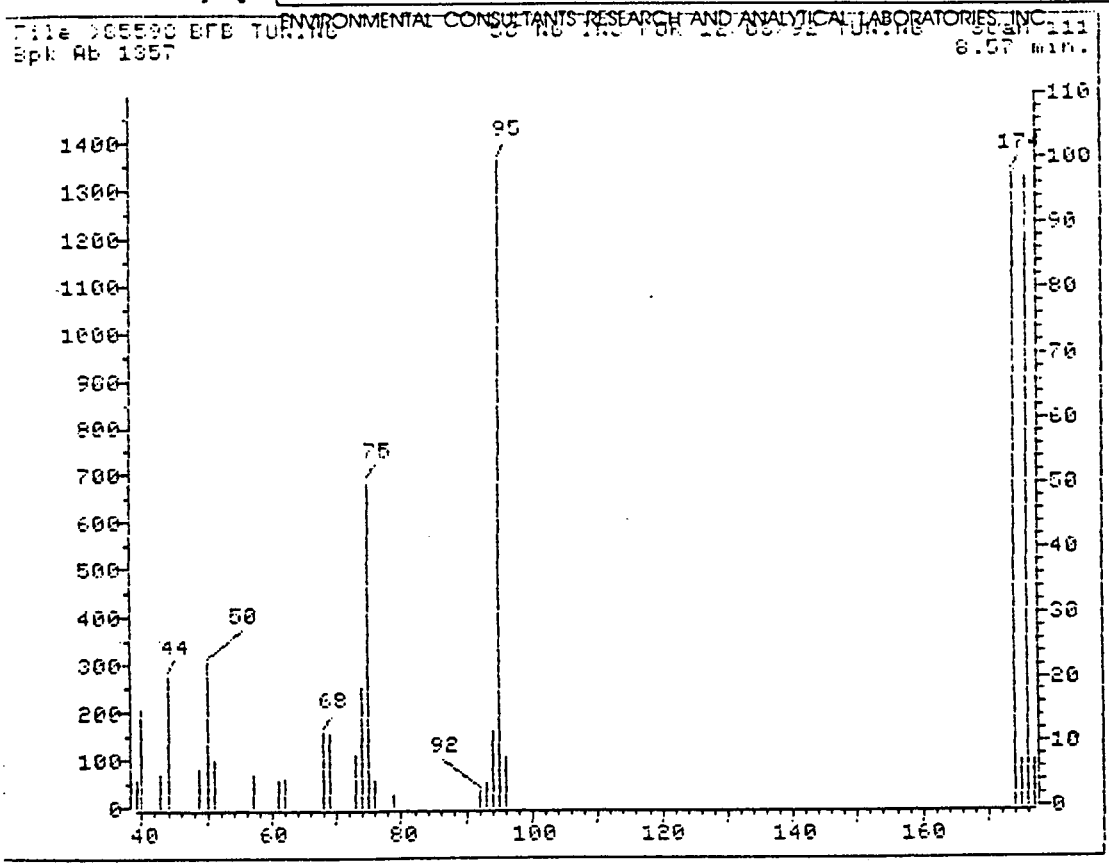

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	22.48	22.48	Ok
75	30-60% of mass 95	50.55	50.55	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.89	7.89	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	97.49	97.49	Ok
175	5-9% of mass 174	7.22	7.41	Ok
176	95-101% of mass 174	97.20	99.70	Ok
177	5-9% of mass 176	7.15	7.35	Ok

Injection Date: 12/08/92
Injection Time: 06:59
Data File: >G5598 Scan: 111

Analyst Signature: [signature]

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>G5598 BFB TUNING 50 NG INJ FOR 12/08/92 TUNING
111 NRM

File: >G5598 Scan #: 111 Retn. time: 8.57

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
39.05	4.053	51.05	7.369	69.00	11.422	78.90	2.137	96.05	7.885
39.95	15.107	57.00	5.158	72.95	8.253	92.00	2.284	173.95	97.494
42.90	5.011	61.05	3.906	74.05	18.644	92.95	3.758	175.05	7.222
44.00	20.265	61.95	4.348	75.05	50.553	94.05	11.938	175.90	97.200
48.95	6.043	68.00	11.643	76.00	4.053	95.05	100.000	177.00	7.148
50.05	22.476								

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ECRA

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >G5615

BFB Injection Date: 12/09/92

Instrument ID: HPMSD(G)

BFB Injection Time: 12/09/92 7:01

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	22.0
75	30.0 - 60.0% OF MASS 95	52.5
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	92.9
175	5.0 - 9.0% of mass 174	6.8 (7.3)1
176	Greater than 95.0%, but less than 101.0% of mass 174	92.2 (99.3)1
177	5.0 - 9.0% of mass 176	7.4 (8.0)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	N/A	STD 100 PPB	>G5616	12/09/92	7:14
02	N/A	METHOD BLANK	>G5618	12/09/92	8:37
03	N/A	212-0866-04	>G5619	12/09/92	9:24
04	N/A	212-0866-03	>G5620	12/09/92	10:13
05	N/A	BLANK	>G5621	12/09/92	11:00
06	N/A	212-0867-07	>G5622	12/09/92	11:49
07	N/A	212-0858-02	>G5623	12/09/92	12:37
08	N/A	212-0856-01	>G5624	12/09/92	13:28
09	N/A	212-0856-02-SC	>G5625	12/09/92	14:16
10	N/A	212-0856-03	>G5626	12/09/92	15:04
11	N/A	212-0856-04-SC	>G5627	12/09/92	15:52
12	N/A	212-0856-01-MS	>G5628	12/09/92	16:40
13	N/A	212-0856-01-MSD	>G5629	12/09/92	17:28
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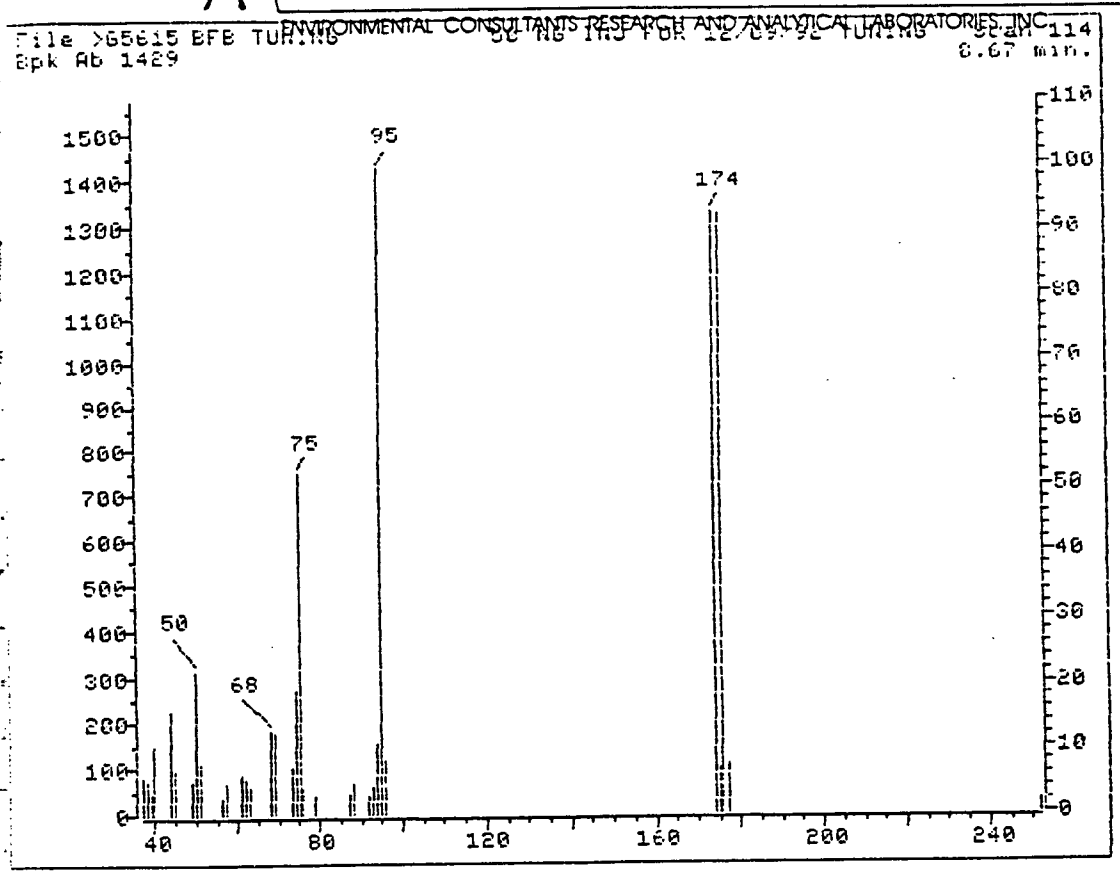

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	21.97	21.97	Ok
75	30-60% of mass 95	52.48	52.48	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.47	8.47	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	92.86	92.86	Ok
175	5-9% of mass 174	6.79	7.31	Ok
176	95-101% of mass 174	92.23	99.32	Ok
177	5-9% of mass 176	7.42	8.04	Ok

Injection Date: 12/09/92
Injection Time: 07:01
Data File: >G5615 Scan: 114

Analyst Signature: Maurice F. Romeo

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>G5615 BFB TUNING 50 NG INJ FOR 12/09/92 TUNING
114 NRM

File: >G5615 Scan #: 114 Retn. time: 8.67

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.95	5.738	50.05	21.973	68.00	12.806	87.00	3.149	96.05	8.467
38.05	5.108	51.05	7.628	69.00	12.526	88.10	4.689	173.95	92.862
39.05	3.289	56.00	2.309	73.05	7.138	92.00	2.589	174.95	6.788
39.95	10.497	57.10	4.759	74.05	18.754	92.95	4.129	175.90	92.232
44.00	15.815	60.95	6.228	75.05	52.484	94.05	10.707	177.00	7.418
45.00	6.788	61.95	5.458	75.90	4.899	95.05	100.000	251.95	2.099
48.95	5.178	63.05	4.129	78.90	2.659				

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >11542 BFB Injection Date: 12/07/92

Instrument ID: HPMSD(G) BFB Injection Time: 12/07/92 6:26

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	23.5
75	30.0 - 60.0% OF MASS 95	50.2
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	5.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	73.8
175	5.0 - 9.0% of mass 174	6.2 (8.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	71.4 (96.7)1
177	5.0 - 9.0% of mass 176	4.2 (5.8)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	N/A*	STD 200 PPB	>11543	12/07/92	7:08
02	N/A*	STD 150 PPB	>11544	12/07/92	8:07
03	N/A*	STD 100 PPB	>11545	12/07/92	8:53
04	N/A*	STD 50 PPB	>11546	12/07/92	9:40
05	N/A*	STD 20 PPB	>11547	12/07/92	10:26
06	N/A*	METHOD BLANK	>11548	12/07/92	11:18
07	N/A*	211-0837-17	>11549	12/07/92	12:16
08	N/A*	211-0839-01	>11550	12/07/92	13:01
09	N/A*	211-0839-02	>11551	12/07/92	13:48
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FORM V VOA

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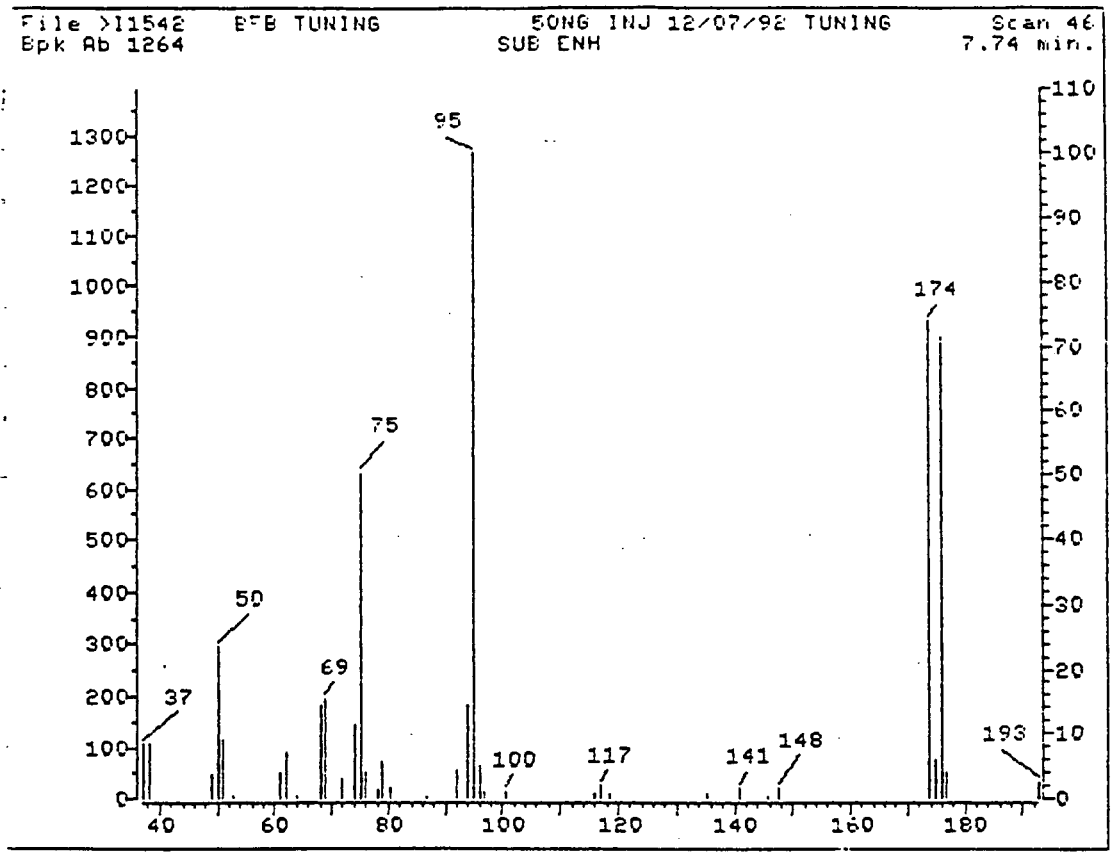

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	23.47	23.47	Ok
75	30-60% of mass 95	50.19	50.19	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	5.19	5.19	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	73.77	73.77	Ok
175	5-9% of mass 174	6.24	8.45	Ok
176	95-101% of mass 174	71.37	96.74	Ok
177	5-9% of mass 176	4.16	5.83	Ok

Injection Date: 12/07/92
Injection Time: 06:26
Data File: >I1542 Scan: 46

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>I1542 BFB TUNING 50NG INJ 12/07/92 TUNING
46 SUB NRM ENH

File: >I1542 Scan #: 46 Retn. time: 7.74

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.90	8.389	64.10	.412	78.80	5.825	96.95	.886	145.95	.380
38.10	8.325	67.90	14.498	80.60	1.852	100.55	1.140	147.75	1.646
49.00	3.862	68.90	15.527	86.90	.491	115.95	.744	173.90	73.773
50.00	23.473	71.90	2.991	92.00	4.305	116.95	1.884	174.90	6.236
51.00	9.133	74.00	11.491	93.95	14.451	118.65	.696	175.90	71.368
52.70	.427	75.00	50.190	94.95	100.000	135.35	.586	176.90	4.163
61.00	4.084	76.00	4.115	95.95	5.192	140.95	1.678	192.90	2.469
62.00	6.980	78.10	1.504						

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ECRA
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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >I1608 BFB Injection Date: 12/10/92

Instrument ID: HPMSD(I) BFB Injection Time: 12/10/92 8:22

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	30.5
75	30.0 - 60.0% OF MASS 95	58.5
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	90.0
175	5.0 - 9.0% of mass 174	7.8 (8.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.8 (96.4)1
177	5.0 - 9.0% of mass 176	5.2 (6.0)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	N/A*	STD 100 PPB	>I1609	12/10/92	8:45
02	N/A*	METHOD BLANK	>I1610	12/10/92	9:50
03	N/A*	211-0846-11	>I1611	12/10/92	10:38
04	N/A*	211-0846-22	>I1613	12/10/92	12:11
05	N/A*	211-0846-11-MS	>I1614	12/10/92	12:58
06	N/A*	211-0846-11-MSD	>I1615	12/10/92	13:43
07	N/A*	211-0846-23-SC	>I1616	12/10/92	14:30
08	N/A*	211-0851-02	>I1617	12/10/92	15:17
09	N/A*	211-0851-03	>I1618	12/10/92	16:04
10	N/A*	211-0851-04-SC	>I1619	12/10/92	16:51
11	N/A*	211-0837-15	>I1620	12/10/92	17:38
12	N/A*	212-0872-01-SC	>I1621	12/10/92	18:24
13	N/A*	212-0872-02	>I1622	12/10/92	19:12
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SCREEN =SC

FORM V VOA 1/87 Rev. 79

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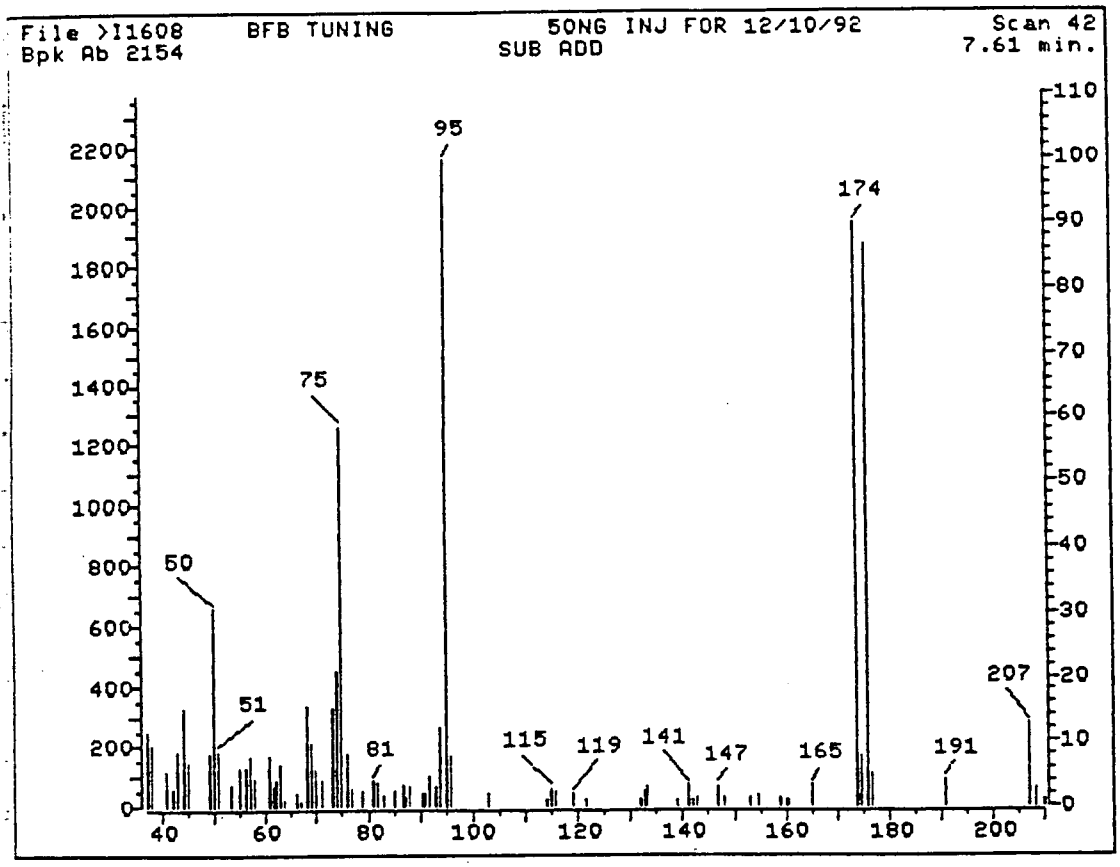

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	30.45	30.45	Ok
75	30-60% of mass 95	58.50	58.50	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.89	7.89	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	89.97	89.97	Ok
175	5-9% of mass 174	7.85	8.72	Ok
176	95-101% of mass 174	86.77	96.44	Ok
177	5-9% of mass 176	5.20	5.99	Ok

Injection Date: 12/10/92
Injection Time: 08:22
Data File: >I1608 Scan: 42

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>I1608 BFB TUNING 50NG INJ FOR 12/10/92
42 SUB ADD NRM

File: >I1608 Scan #: 42 Retn. time: 7.61

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.90	11.421	61.70	3.110	80.90	3.946	95.95	7.892	148.05	1.393
38.00	9.517	62.00	3.946	82.00	3.853	102.85	1.996	153.05	1.253
40.90	5.571	62.90	6.360	82.90	1.811	113.95	.975	154.85	1.764
41.90	2.600	63.70	1.068	85.10	2.507	114.95	2.786	159.00	1.532
43.00	8.542	66.10	1.950	86.70	1.671	115.85	2.321	160.10	1.161
44.00	14.995	67.00	.557	87.00	3.482	118.95	1.950	160.70	1.207
45.00	6.917	68.00	15.599	87.20	1.393	121.75	1.161	165.10	3.343
49.00	8.078	69.00	9.935	87.90	3.018	131.95	1.207	173.90	89.972
50.00	30.455	70.00	5.664	88.20	2.136	132.75	2.461	174.70	7.843
50.90	8.542	71.00	3.946	90.60	1.950	133.05	3.110	175.80	86.769
53.10	3.482	73.00	15.042	91.00	1.996	139.05	1.021	176.90	5.200
55.00	5.989	73.90	20.799	91.90	4.782	141.05	3.389	191.00	4.085
56.00	6.035	75.00	58.496	93.00	3.064	141.85	.929	207.10	12.721
57.00	7.707	75.90	8.124	93.95	12.256	142.85	1.393	208.10	2.786
58.00	4.318	77.00	2.693	94.95	100.000	146.95	3.110	209.90	.929
60.90	7.660	78.80	2.414						

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5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name: ECRA LABORATORIES, INC.

Lab File ID: >I1626 BFB Injection Date: 12/11/92

Instrument ID: HPMSD(I) BFB Injection Time: 12/11/92 10:25

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% OF MASS 95	23.3
75	30.0 - 60.0% OF MASS 95	58.6
95	Base peak, 100% relative abundance	100.
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	83.3
175	5.0 - 9.0% of mass 174	7.2 (8.7)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.9(100.7)1
177	5.0 - 9.0% of mass 176	6.2 (7.3)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	N/A*	STD 100 PPB	>I1627	12/11/92	11:22
02	N/A*	METHOD BLANK-SC	>I1628	12/11/92	12:44
03	N/A*	METHOD BLANK	>I1629	12/11/92	13:45
04	N/A*	211-0846-23-SC	>I1630	12/11/92	14:46
05	N/A*	212-0851-04	>I1631	12/11/92	15:51
06	N/A*	212-0851-05	>I1632	12/11/92	16:38
07	N/A*	212-0872-01	>I1633	12/11/92	17:25
08	N/A*	212-0863-08	>I1634	12/11/92	18:13
09	N/A*	212-0858-01	>I1635	12/11/92	19:00
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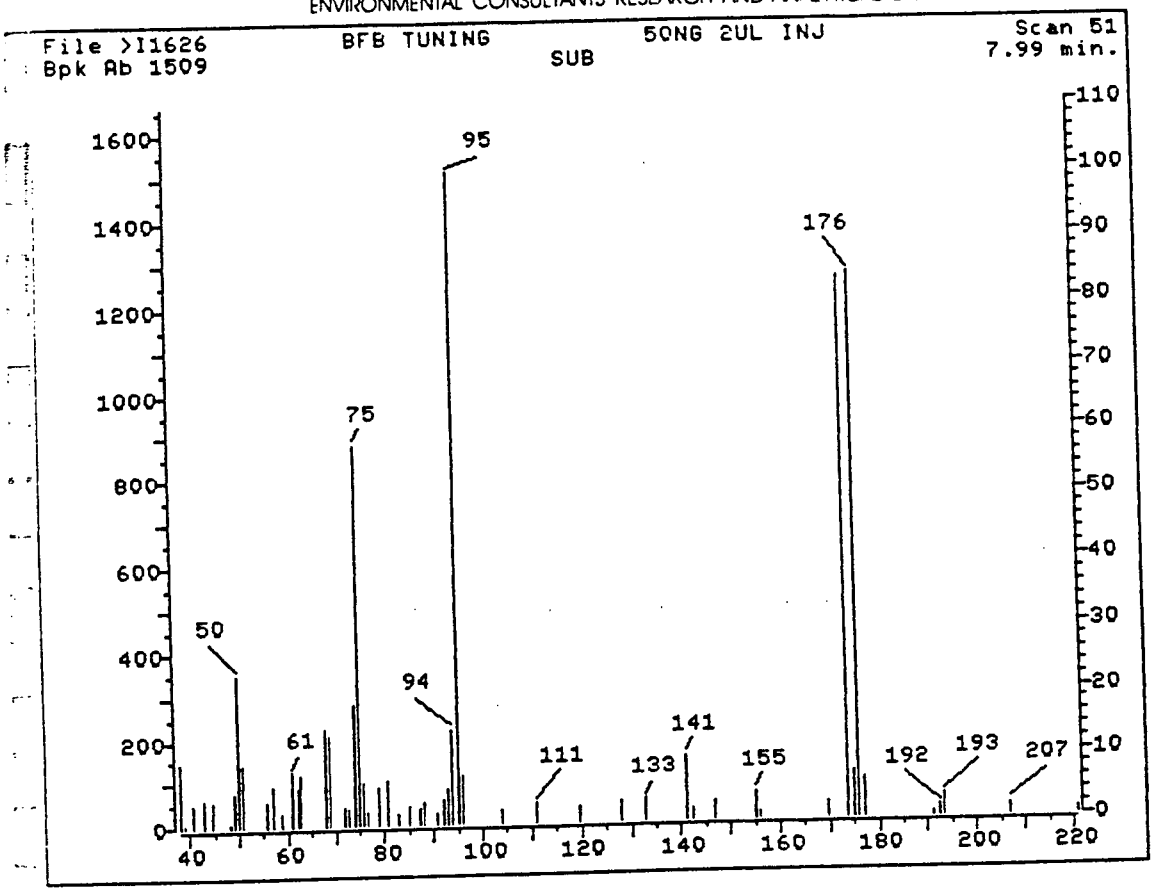

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	23.26	23.26	Ok
75	30-60% of mass 95	58.58	58.58	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.49	7.49	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	83.30	83.30	Ok
175	5-9% of mass 174	7.22	8.67	Ok
176	95-101% of mass 174	83.90	100.72	Ok
177	5-9% of mass 176	6.16	7.35	Ok

Injection Date: 12/11/92
Injection Time: 10:25
Data File: >I1626 Scan: 51

00 83

Analyst Signature: [illegible]

273 Franklin Road, Randolph, New Jersey 07869
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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

>I1626 BFB TUNING 50NG 2UL INJ
51 SUB NRM

File: >I1626 Scan #: 51 Retn. time: 7.99

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.00	9.675	61.00	8.350	78.90	5.765	95.95	7.488	169.60	2.452
39.00	.464	62.10	5.832	80.70	6.892	103.85	2.121	169.80	2.386
41.00	3.446	62.90	7.621	82.80	1.856	111.05	3.048	173.80	83.300
43.00	4.175	68.00	14.778	85.10	2.783	119.65	2.253	174.90	7.223
44.90	3.711	68.90	13.651	87.10	2.452	127.95	3.048	175.90	83.897
48.20	.530	71.90	2.651	88.00	3.446	132.85	3.380	176.90	6.163
49.20	4.904	73.00	2.319	90.80	1.657	140.95	9.874	190.90	.795
50.00	23.260	74.00	18.489	92.00	3.645	142.55	1.723	192.60	1.657
51.00	9.344	75.00	58.582	93.00	5.302	147.05	2.651	193.10	3.247
55.90	3.844	76.00	6.561	93.95	14.579	155.05	4.175	207.00	1.856
57.00	6.163	76.70	2.054	94.95	100.000	156.10	1.060	220.95	1.127
59.00	2.121								

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ECRA
ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

HSL Compounds

Case No: _____ Instrument ID: HPMSD-VOA

Contractor: ECRA LABS Calibration Date: 12/02/92

Contract No: _____

Minimum $\overline{RF}$ for SPCC is .30 Maximum % RSD for CCC is 30%

Laboratory ID:	>G5534	>G5533	>G5532	>G5535	>G5536					
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
CHLOROMETHANE	.60738	.52116	.49768	.42750	.50822	.155	.51239	12.550		**
BROMOMETHANE	1.24628	1.15133	1.06834	.94521	.99382	.261	1.08099	11.184		
VINYL CHLORIDE	.81635	.80929	.77278	.76656	.81264	.342	.79552	2.996	*	
CHLOROETHANE	.50455	.46999	.49901	.44663	.52716	.467	.48947	6.424		
ETHANOL	-	-	-	-	-	-	-	-		(Conc=2000.0,4000.0,600.
METHYLENE CHLORIDE	1.79730	1.33447	1.21905	1.17699	1.26117	.677	1.35780	18.595		
ACROLEIN	-	-	-	-	-	-	-	-		(Conc=200.0,300.0,400.0,
ACRYLONITRILE	-	-	-	-	-	-	-	-		(Conc=200.0,300.0,400.0,
ACETONE	-	-	-	-	-	-	-	-		
CARBON DISULFIDE	-	-	-	-	-	-	-	-		
TRICHLOROFLUOROMETHANE	3.39481	3.05111	2.46322	2.72412	2.70471	.898	2.86759	12.601		
1,1-DICHLOROETHENE	1.90610	1.75145	1.47293	1.60770	1.71704	.976	1.69104	9.585	*	
2-PROPANOL	-	-	-	-	-	-	-	-		(Conc=100.0,300.0,500.0,
T-BUTYL ALCOHOL	.08990	.05906	.05477	.05342	.05935	1.191	.06330	23.850		
1,1-DICHLOROETHANE	1.89081	1.75196	1.51770	1.59071	1.77217	1.099	1.70467	8.769		**
TRANS-1,2-DICHLOROETHYLENE	1.00635	.90825	.82127	.86781	.93038	1.184	.90681	7.661		
CHLOROFORM	3.40038	3.06937	2.69535	2.65597	2.80859	1.222	2.92593	10.610	*	
1,2-DICHLOROETHANE	2.16978	1.80294	1.70340	1.61620	1.74823	1.314	1.80811	11.804		
1,2-DICHLOROETHANE-D4 (SURG.)	1.64543	1.59671	1.52350	1.44517	1.65586	1.304	1.57333	5.637		(Conc=50.0,50.0,50.0,50.
1,1,1-TRICHLOROETHANE	.93898	.82937	.81147	.90380	.76641	.677	.85001	8.258		
METHYL T-BUTYL ETHER	.16723	.16172	.12611	.13345	.15589	.677	.14888	12.143		
1,4-DIOXANE	-	-	-	-	-	-	-	-		(Conc=200.0,500.0,1000..
2-BUTANONE	.18918	.17480	.15080	.14535	.19112	.632	.17025	12.505		
CARBON TETRACHLORIDE	.90361	.84699	.76801	.87811	.74534	.697	.82841	8.324		
VINYL ACETATE	-	-	-	-	-	-	-	-		
BROMODICHLOROMETHANE	.91659	.83297	.84925	.89621	.81917	.719	.86284	4.844		
1,2-DICHLOROPROPANE	.24251	.22686	.23040	.26184	.25327	.796	.24298	6.104	*	
CIS-1,3-DICHLOROPROPENE	.37890	.33672	.35843	.42995	.43471	.809	.38774	11.189		
TRICHLOROETHYLENE	.51398	.42987	.42708	.47160	.44280	.837	.45707	7.958		
DIBROMOCHLOROMETHANE	.76337	.61848	.64051	.60973	.59115	.860	.64465	10.656		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

HSL Compounds

Case No:

Instrument ID: HPMSD-VOA

Contractor: ECRA LABS

Calibration Date: 12/02/92

Contract No:

Minimum $\overline{RF}$ for SPCC is .30 Maximum % RSD for CCC is 30%

Laboratory ID:	>G5534	>G5533	>G5532	>G5535	>G5536						
Compound	RF 20.00	RF 50.00	RF 100.00	RF 150.00	RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
1,1,2-TRICHLOROETHANE	.31169	.25987	.22570	.21867	.21013	.870	.24521	16.999			
BENZENE	.96883	.77541	.74948	.85260	.80148	.870	.80956	6.240			
TRANS-1,3-DICHLOROPROPENE	.25368	.27235	.31628	.32808	.37134	.875	.30835	15.129			
1,2-DIBROMOETHANE-EDB	-	-	-	-	-	-	-	-			(Conc=20.0,50.0,100.0,15
DIISOPROPYL ETHER	-	-	-	-	-	-	-	-			
2-CHLOROETHYL VINYL ETHER	.11060	.09099	.09923	.10360	.10888	.946	.10266	7.709			
BROMOFORM	.53593	.48391	.45418	.42133	.43227	1.000	.46552	9.892		**	
4-METHYL-2-PENTANONE	-	-	-	-	-	-	-	-			
2-HEXANONE	-	-	-	-	-	-	-	-			
TETRACHLOROETHYLENE	.60295	.54794	.50357	.54685	.55824	.902	.55191	6.421			
TOLUENE-D8 (SURG.)	1.11736	1.07761	1.13569	1.13473	1.19194	.954	1.13147	3.640			(Conc=50.0,50.0,50.0,50.
1,1,2,2-TETRACHLOROETHANE	.30097	.30193	.32542	.32993	.35399	.902	.32245	6.834		**	
TOLUENE	.71642	.62340	.62574	.68857	.70299	.961	.67142	6.538	*		
CHLOROBENZENE	.99055	.86957	.84337	.89105	.89662	1.006	.89823	6.200		**	
ETHYLBENZENE	.48751	.43474	.41964	.44217	.44584	1.088	.44598	5.671	*		
BROMOFLUOROBENZENE (SURG.)	.82088	.74940	.78572	.72384	.71559	1.189	.75908	5.801			(Conc=50.0,50.0,50.0,50.
STYRENE	-	-	-	-	-	-	-	-			
M-XYLENE	.60003	.54093	.54920	.52850	.52966	1.269	.54966	5.352			
O,P-XYLENE	.58551	.55146	.55946	.52529	.54901	1.311	.55415	3.910			(Conc=40.0,100.0,200.0,3
1,2-DICHLOROBENZENE	1.66129	1.44187	1.49201	1.38505	1.33206	1.498	1.46246	8.638			
1,3-DICHLOROBENZENE	1.50091	1.37631	1.32572	1.27043	1.22581	1.460	1.33983	7.942			
1,4-DICHLOROBENZENE	1.70662	1.59997	1.41584	1.43375	1.21979	1.530	1.47519	12.664			

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE
Output File: ^G5534::QT
Data File: >G5534::B1
Name: VOA STD 20 PPB
Misc: FOR 12/02/92 TUNING

Quant Rev: 6
Quant Time: 921202 10:54
Injected at: 921202 09:47
Dilution Factor: 1.00000

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.59	221	31895M	50.00	UG/L	
2)	CHLOROMETHANE	1.50	14	7749	28.38	UG/L	100
3)	BROMOMETHANE	2.51	40	15900	19.15	UG/L	91
4)	VINYL CHLORIDE	3.30	60	10415	23.62	UG/L	92
5)	CHLOROETHANE	4.51	91	6437	27.88	UG/L	86
7)	METHYLENE CHLORIDE	6.54	143	22930	28.28	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.62	196	43311	16.83	UG/L	100
13)	1,1-DICHLOROETHENE	9.40	216	24318	22.09	UG/L	93
15)	T-BUTYL ALCOHOL	11.63	273	1147	31.33	UG/L	100
16)	1,1-DICHLOROETHANE	10.57	246	24123	23.17	UG/L	95
17)	TRANS-1,2-DICHLOROETHYLENE	11.39	267	12839	23.49	UG/L	78
18)	CHLOROFORM	11.74	276	43382	21.48	UG/L	93
19)	1,2-DICHLOROETHANE	12.64	299	27682	19.56	UG/L	93
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.53	296	52481	41.05	UG/L	94
21)	*1,4-DIFLUOROBENZENE	20.42	498	97830	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.85	330	36744	18.07	UG/L	96
23)	METHYL T-BUTYL ETHER	13.85	330	6544	17.47	UG/L	60
25)	2-BUTANONE	12.96	307	7403	388.70	UG/L	91
26)	CARBON TETRACHLORIDE	14.25	340	35360	17.86	UG/L	89
28)	BROMODICHLOROMETHANE	14.72	352	35868	19.18	UG/L	96
29)	1,2-DICHLOROPROPANE	16.28	392	9490	22.75	UG/L	95
30)	CIS-1,3-DICHLOROPROPENE	16.59	400	14827	20.42	UG/L	92
31)	TRICHLOROETHYLENE	17.14	414	20113	22.08	UG/L	78
32)	DIBROMOCHLOROMETHANE	17.65	427	29872	20.93	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.84	432	12197	23.41	UG/L	93
34)	BENZENE	17.80	431	33999	25.81	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.96	435	9927	16.25	UG/L	85
38)	2-CHLOROETHYL VINYL ETHER	19.37	471	4328	4.39	UG/L	100
39)	BROMOFORM	20.46	499	20972	23.02	UG/L	95
42)	*CHLOROBENZENE-D5	25.39	625	84004	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.89	561	20260	24.21	UG/L	86
44)	TOLUENE-D8 (SURG.)	24.22	595	93863	50.35	UG/L	98
45)	1,1,2,2-TETRACHLOROETHANE	22.97	563	10113	19.81	UG/L	98
46)	TOLUENE	24.37	599	24073	24.43	UG/L	97
47)	CHLOROBENZENE	25.51	628	33284	21.81	UG/L	98
48)	ETHYLBENZENE	27.62	682	16381	21.10	UG/L	88
49)	BROMOFLUOROBENZENE (SURG.)	30.16	747	68957	44.49	UG/L	98
51)	M-XYLENE	32.24	800	20162M	18.31	UG/L	92
52)	O,P-XYLENE	33.25	826	39348	36.53	UG/L	81
53)	1,2-DICHLOROBENZENE	38.14	951	55822M	21.08	UG/L	96
54)	1,3-DICHLOROBENZENE	37.09	924	50433M	21.25	UG/L	99

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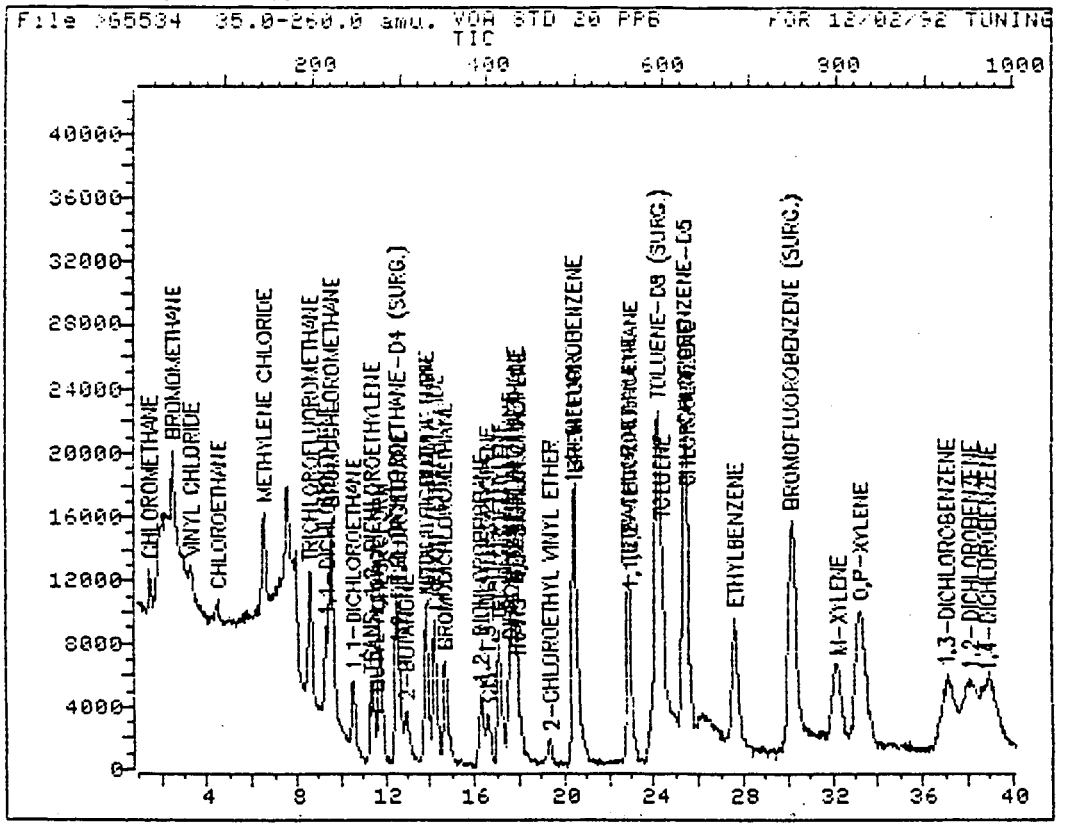
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >G5534::B1 Quant Output File: ^G5534::QT
Name: VOA STD 20 PPB
Misc: FOR 12/02/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

Operator ID: MAURIE
Quant Time: 921202 10:54
Injected at: 921202 09:47

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MANAGER
Output File: ^G5533::QT
Data File: >G5533::B1
Name: VOA STD 50 PPB
Misc: FOR 12/02/92 TUNING

Quant Rev: 6
Quant Time: 921202 09:46
Injected at: 921202 08:55
Dilution Factor: 1.00000

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.64	221	31052	50.00	UG/L	70
2)	CHLOROMETHANE	1.47	12	16183	60.87	UG/L	100
3)	BROMOMETHANE	2.48	38	35751	44.22	UG/L	95
4)	VINYL CHLORIDE	3.27	58	25130	58.53	UG/L	97
5)	CHLOROETHANE	4.48	89	14594	64.93	UG/L	92
7)	METHYLENE CHLORIDE	6.51	141	41438	52.49	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.66	196	94743	37.81	UG/L	100
13)	1,1-DICHLOROETHENE	9.41	215	54386	50.75	UG/L	97
15)	T-BUTYL ALCOHOL	11.40	266	1834	51.46	UG/L	100
16)	1,1-DICHLOROETHANE	10.58	245	54402	53.66	UG/L	96
17)	TRANS-1,2-DICHLOROETHYLENE	11.40	266	28203	53.00	UG/L	83
18)	CHLOROFORM	11.75	275	95310	48.48	UG/L	91
19)	1,2-DICHLOROETHANE	12.65	298	55985	40.63	UG/L	99
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.54	295	49581	39.84	UG/L	99
21)	*1,4-DIFLUOROBENZENE	20.44	497	94802	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.86	329	78626	39.89	UG/L	90
23)	METHYL T-BUTYL ETHER	13.86	329	15331	42.23	UG/L	90
25)	2-BUTANONE	12.97	306	16571	897.86	UG/L	94
26)	CARBON TETRACHLORIDE	14.26	339	80296	41.85	UG/L	95
28)	BROMODICHLOROMETHANE	14.73	351	78967	43.59	UG/L	97
29)	1,2-DICHLOROPROPANE	16.29	391	21507	53.21	UG/L	96
30)	CIS-1,3-DICHLOROPROPENE	16.60	399	31922	45.36	UG/L	99
31)	TRICHLOROETHYLENE	17.11	412	40753	46.16	UG/L	82
32)	DIBROMOCHLOROMETHANE	17.62	425	58633	42.39	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.85	431	24636	48.80	UG/L	80
34)	BENZENE	17.81	430	73510	57.58	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.93	433	25819	43.61	UG/L	87
38)	2-CHLOROETHYL VINYL ETHER	19.38	470	8626	9.02	UG/L	100
39)	BROMOFORM	20.47	498	45876	51.96	UG/L	93
42)	*CHLOROBENZENE-D5	25.36	623	82881	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.90	560	45414	55.00	UG/L	84
44)	TOLUENE-D8 (SURG.)	24.19	593	89313	48.56	UG/L	86
45)	1,1,2,2-TETRACHLOROETHANE	22.90	560	25024M	49.69	UG/L	98
46)	TOLUENE	24.39	598	51668	53.14	UG/L	94
47)	CHLOROBENZENE	25.52	627	72071	47.86	UG/L	99
48)	ETHYLBENZENE	27.59	680	36032	47.05	UG/L	87
49)	BROMOFLUOROBENZENE (SURG.)	30.17	746	62111	40.61	UG/L	97
51)	M-XYLENE	32.21	798	44833M	41.26	UG/L	96
52)	O,P-XYLENE	33.23	824	91411	86.01	UG/L	95
53)	1,2-DICHLOROBENZENE	38.00	946	119504M	45.74	UG/L	94
54)	1,3-DICHLOROBENZENE	37.02	921	114070M	48.71	UG/L	99
55)	1,4-DICHLOROBENZENE	38.86	968	132607M	49.04	UG/L	[illegible]

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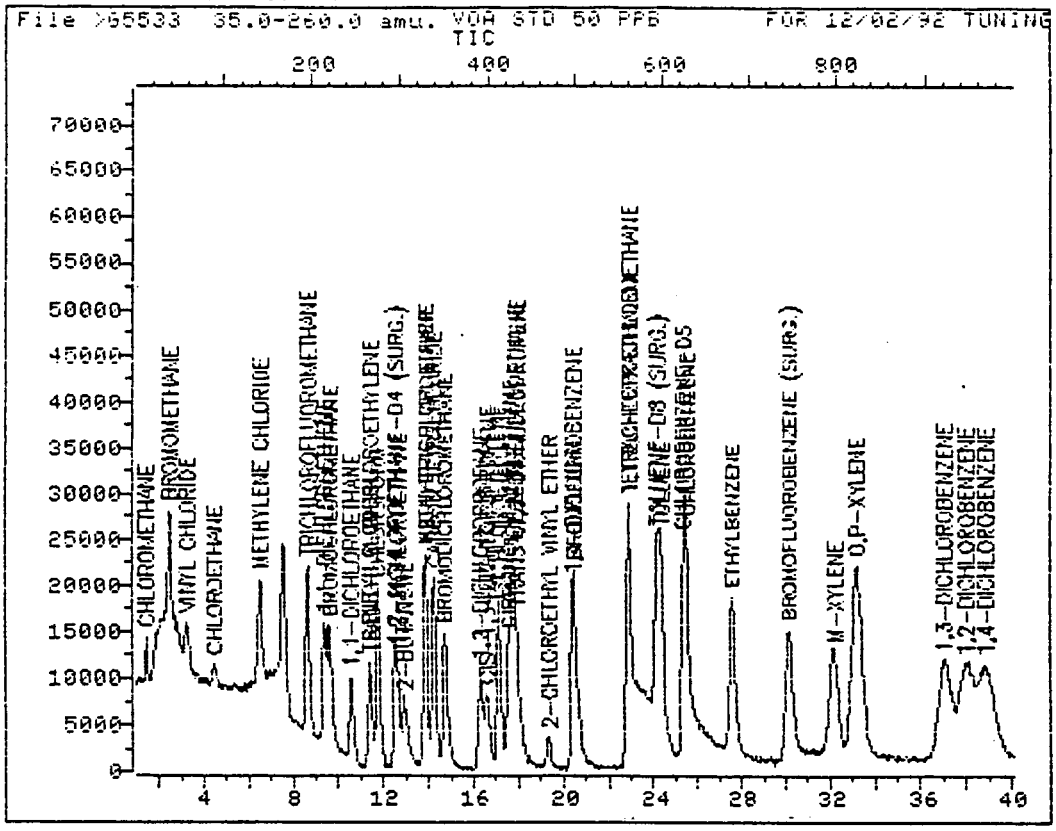
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >G5533::B1 Quant Output File: ^G5533::QT
Name: VOA STD 50 PPB
Misc: FOR 12/02/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

Operator ID: MANAGER
Quant Time: 921202 09:46
Injected at: 921202 08:55

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE
Output File: ^G5532::QT
Data File: >G5532::B1
Name: VOA STD 100 PPB
Misc: FOR 12/02/92 TUNING

Quant Rev: 6
Quant Time: 921202 08:39
Injected at: 921202 07:50
Dilution Factor: 1.00000

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.64	220	33780M	50.00	UG/L	
2)	CHLOROMETHANE	1.50	12	33623	116.25	UG/L	100
3)	BROMOMETHANE	2.52	38	72177	82.06	UG/L	97
4)	VINYL CHLORIDE	3.26	57	52209	111.78	UG/L	99
5)	CHLOROETHANE	4.47	88	33713	137.87	UG/L	91
7)	METHYLENE CHLORIDE	6.51	140	82359	95.90	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.66	195	166415	61.05	UG/L	100
13)	1,1-DICHLOROETHENE	9.40	214	99511	85.36	UG/L	98
15)	T-BUTYL ALCOHOL	11.40	265	3700	95.44	UG/L	100
16)	1,1-DICHLOROETHANE	10.58	244	102536	92.98	UG/L	96
17)	TRANS-1,2-DICHLOROETHYLENE	11.40	265	55485	95.86	UG/L	84
18)	CHLOROFORM	11.75	274	182098	85.14	UG/L	97
19)	1,2-DICHLOROETHANE	12.61	296	115082	76.77	UG/L	92
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.53	294	51464	38.01	UG/L	94
21)	*1,4-DIFLUOROBENZENE	20.47	497	92199	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.86	328	149634	78.06	UG/L	99
23)	METHYL T-BUTYL ETHER	13.82	327	23254	65.86	UG/L	95
25)	2-BUTANONE	12.92	304	27808	1549.24	UG/L	98
26)	CARBON TETRACHLORIDE	14.25	338	141620	75.90	UG/L	94
28)	BROMODICHLOROMETHANE	14.72	350	156600	88.88	UG/L	97
29)	1,2-DICHLOROPROPANE	16.29	390	42486	108.08	UG/L	98
30)	CIS-1,3-DICHLOROPROPENE	16.56	397	66093	96.56	UG/L	96
31)	TRICHLOROETHYLENE	17.11	411	78752	91.72	UG/L	76
32)	DIBROMOCHLOROMETHANE	17.58	423	118109	87.80	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.77	428	41619	84.77	UG/L	88
34)	BENZENE	17.77	428	138203	111.32	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.89	431	58321	101.30	UG/L	79
38)	2-CHLOROETHYL VINYL ETHER	19.34	468	18298	19.68	UG/L	100
39)	BROMOFORM	20.51	498	83749	97.53	UG/L	96
42)	*CHLOROBENZENE-D5	25.36	622	80236	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.90	559	80809	101.09	UG/L	85
44)	TOLUENE-D8 (SURG.)	24.19	592	91123	51.18	UG/L	89
45)	1,1,2,2-TETRACHLOROETHANE	22.82	557	52221	107.12	UG/L	72
46)	TOLUENE	24.34	596	100414	106.69	UG/L	97
47)	CHLOROBENZENE	25.48	625	135338	92.84	UG/L	98
48)	ETHYLBENZENE	27.55	678	67341	90.83	UG/L	89
49)	BROMOFLUOROBENZENE (SURG.)	30.17	745	63043	42.58	UG/L	95
51)	M-XYLENE	32.13	795	88131	83.78	UG/L	93
52)	O,P-XYLENE	33.23	823	179556	174.51	UG/L	94
53)	1,3-DICHLOROBENZENE	37.92	943	239424M	94.44	UG/L	97

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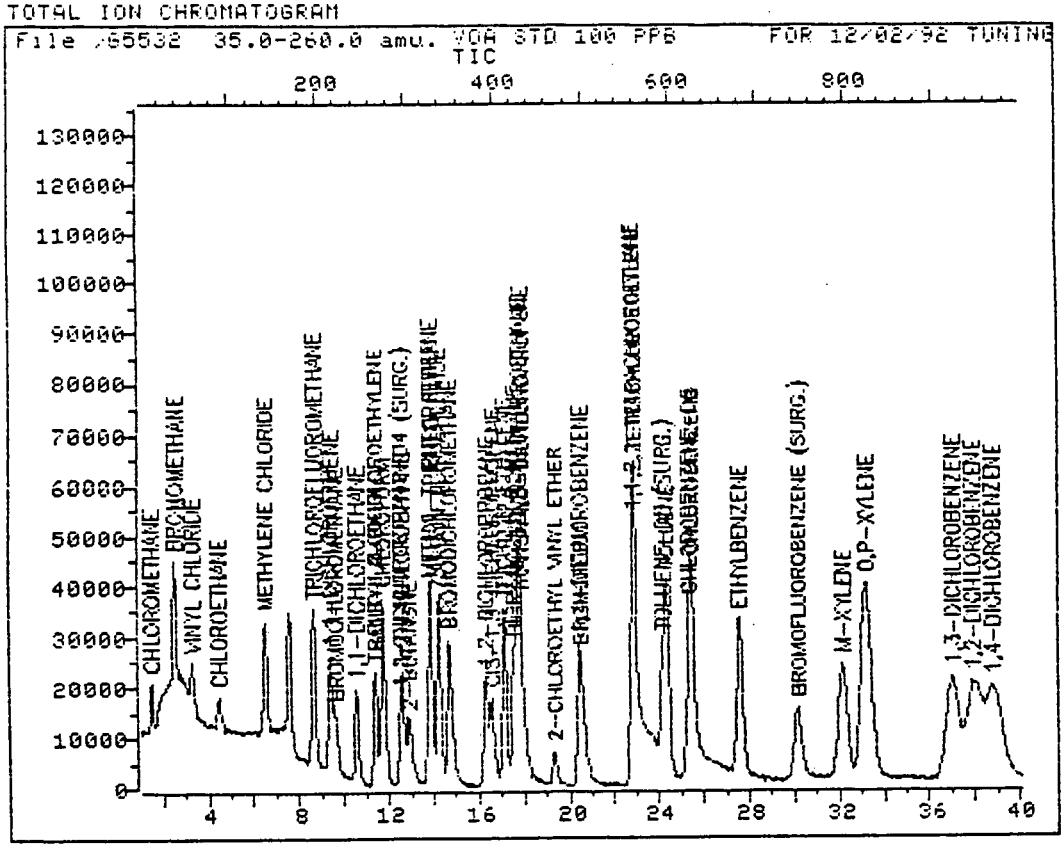
TOTAL ION CHROMATOGRAM



Data File: >G5532::B1 Quant Output File: ^G5532::QT
Name: VOA STD 100 PPB
Misc: FOR 12/02/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

Operator ID: MAURIE
Quant Time: 921202 08:39
Injected at: 921202 07:50

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QUANT REPORT

Operator ID: MAURIE
Output File: ^G5535::QT
Data File: >G5535::B1
Name: VOA STD 150 PPB
Misc: FOR 12/02/92 TUNING

Quant Rev: 6
Quant Time: 921202 11:43
Injected at: 921202 10:50
Dilution Factor: 1.00000

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.60	220	35254	50.00	UG/L	66
2)	CHLOROMETHANE	1.51	13	45213	149.79	UG/L	100
3)	BROMOMETHANE	2.52	39	99967	108.91	UG/L	97
4)	VINYL CHLORIDE	3.31	59	81073	166.32	UG/L	98
5)	CHLOROETHANE	4.48	89	47236	185.10	UG/L	94
7)	METHYLENE CHLORIDE	6.47	140	124481	138.89	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.63	195	288108	101.27	UG/L	100
13)	1,1-DICHLOROETHENE	9.37	214	170034	139.75	UG/L	98
15)	T-BUTYL ALCOHOL	11.40	266	5650	139.65	UG/L	100
16)	1,1-DICHLOROETHANE	10.54	244	168237	146.17	UG/L	98
17)	TRANS-1,2-DICHLOROETHYLENE	11.36	265	91781	151.93	UG/L	83
18)	CHLOROFORM	11.75	275	280901	125.85	UG/L	93
19)	1,2-DICHLOROETHANE	12.61	297	170933	109.27	UG/L	99
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.54	295	50948	36.05	UG/L	87
21)	*1,4-DIFLUOROBENZENE	20.48	498	89948	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.87	329	243885	130.41	UG/L	97
23)	METHYL T-BUTYL ETHER	13.87	329	36010	104.53	UG/L	96
25)	2-BUTANONE	12.93	305	39221	2239.77	UG/L	97
26)	CARBON TETRACHLORIDE	14.26	339	236952	130.17	UG/L	94
28)	BROMODICHLOROMETHANE	14.69	350	241836	140.69	UG/L	95
29)	1,2-DICHLOROPROPANE	16.25	390	70656	184.25	UG/L	96
30)	CIS-1,3-DICHLOROPROPENE	16.53	397	116020	173.74	UG/L	97
31)	TRICHLOROETHYLENE	17.11	412	127259	151.92	UG/L	76
32)	DIBROMOCHLOROMETHANE	17.54	423	164533	125.38	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.78	429	59006	123.19	UG/L	96
34)	BENZENE	17.78	429	230069	189.95	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.90	432	88530	157.62	UG/L	77
38)	2-CHLOROETHYL VINYL ETHER	19.34	469	27955	30.82	UG/L	100
39)	BROMOFORM	20.44	497	113694	135.71	UG/L	93
42)	*CHLOROBENZENE-D5	25.33	622	80870	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.86	559	132672	164.67	UG/L	82
44)	TOLUENE-D8 (SURG.)	24.15	592	91766	51.14	UG/L	87
45)	1,1,2,2-TETRACHLOROETHANE	22.82	558	80045	162.90	UG/L	79
46)	TOLUENE	24.35	597	167053	176.10	UG/L	97
47)	CHLOROBENZENE	25.49	626	216177	147.14	UG/L	99
48)	ETHYLBENZENE	27.56	679	107275	143.55	UG/L	90
49)	BROMOFLUOROBENZENE (SURG.)	30.10	744	58537M	39.23	UG/L	93
51)	M-XYLENE	32.17	797	128220	120.94	UG/L	91
52)	O,P-XYLENE	33.23	824	254882	245.78	UG/L	94
53)	1,2-DICHLOROBENZENE	37.97	945	336028M	131.81	UG/L	

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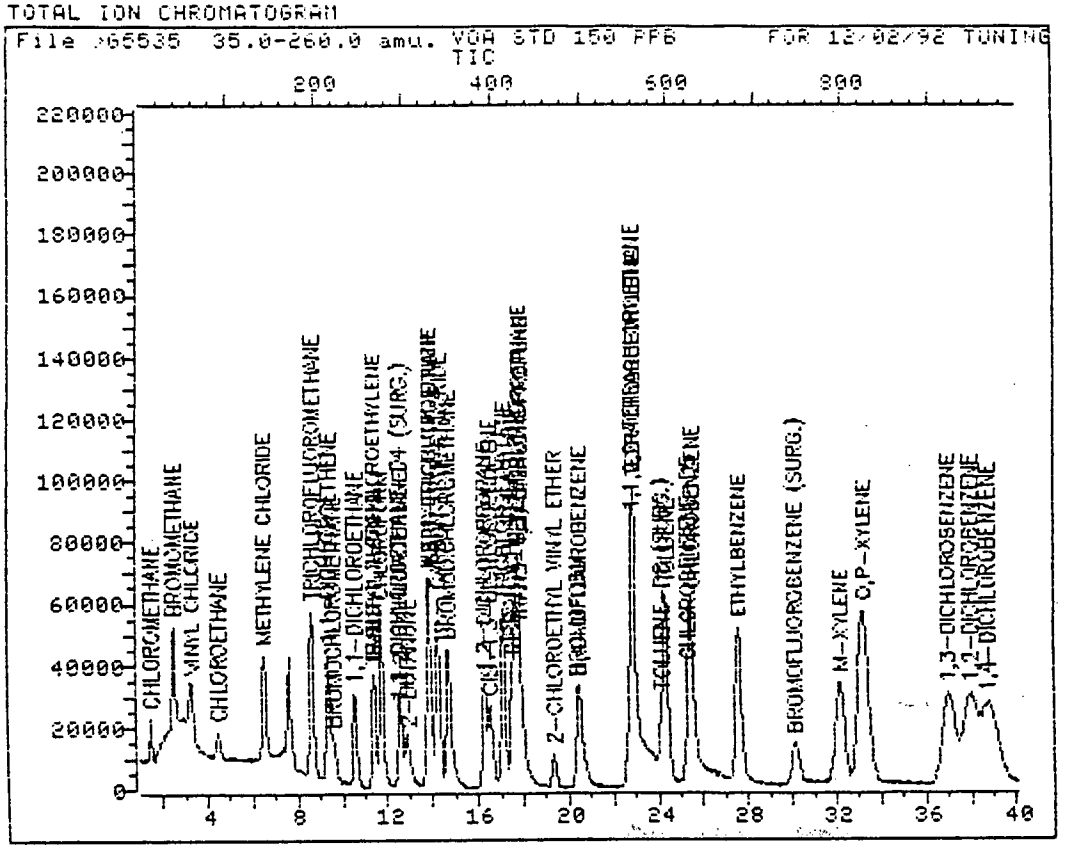
TOTAL ION CHROMATOGRAM



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Name: VOA STD 150 PPB
Misc: FOR 12/02/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

Operator ID: MAURIE
Quant Time: 921202 11:43
Injected at: 921202 10:50

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE
Output File: ^G5536::QT
Data File: >G5536::B1
Name: VOA STD 200 PPB
Misc: FOR 12/02/92 TUNING

Quant Rev: 6
Quant Time: 921202 12:29
Injected at: 921202 11:43
Dilution Factor: 1.00000

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.53	218	34480M	50.00	UG/L	
2)	CHLOROMETHANE	1.47	12	70094	237.43	UG/L	100
3)	BROMOMETHANE	2.49	38	137067	152.68	UG/L	99
4)	VINYL CHLORIDE	3.27	58	112080	235.10	UG/L	96
5)	CHLOROETHANE	4.49	89	72706	291.30	UG/L	93
7)	METHYLENE CHLORIDE	6.48	140	173941	198.43	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.56	193	373033	134.07	UG/L	100
13)	1,1-DICHLOROETHENE	9.30	212	236814	199.01	UG/L	98
15)	T-BUTYL ALCOHOL	11.33	264	8186	206.87	UG/L	100
16)	1,1-DICHLOROETHANE	10.47	242	244418	217.13	UG/L	96
17)	TRANS-1,2-DICHLOROETHYLENE	11.29	263	128318	217.18	UG/L	89
18)	CHLOROFORM	11.69	273	387361	177.44	UG/L	92
19)	1,2-DICHLOROETHANE	12.55	295	241116	157.59	UG/L	95
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.47	293	57094	41.31	UG/L	91
21)	*1,4-DIFLUOROBENZENE	20.41	496	103389	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.76	326	316953	147.45	UG/L	95
23)	METHYL T-BUTYL ETHER	13.80	327	64468	162.81	UG/L	97
25)	2-BUTANONE	12.82	302	79039	3926.83	UG/L	96
26)	CARBON TETRACHLORIDE	14.19	337	308239	147.32	UG/L	92
28)	BROMODICHLOROMETHANE	14.62	348	338773	171.46	UG/L	98
29)	1,2-DICHLOROPROPANE	16.22	389	104741	237.62	UG/L	97
30)	CIS-1,3-DICHLOROPROPENE	16.46	395	179777	234.22	UG/L	96
31)	TRICHLOROETHYLENE	17.08	411	183123	190.19	UG/L	79
32)	DIBROMOCHLOROMETHANE	17.48	421	244475	162.08	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.71	427	86902	157.84	UG/L	94
34)	BENZENE	17.71	427	331458	238.08	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.79	429	153571	237.87	UG/L	80
38)	2-CHLOROETHYL VINYL ETHER	19.28	467	45026	43.19	UG/L	100
39)	BROMOFORM	20.37	495	178768	185.65	UG/L	93
42)	*CHLOROBENZENE-D5	25.30	621	87682	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.84	558	195792	224.14	UG/L	84
44)	TOLUENE-D8 (SURG.)	24.17	592	104512	53.71	UG/L	99
45)	1,1,2,2-TETRACHLOROETHANE	22.76	556	124155	233.04	UG/L	98
46)	TOLUENE	24.32	596	246557	239.71	UG/L	98
47)	CHLOROBENZENE	25.46	625	314469	197.41	UG/L	99
48)	ETHYLBENZENE	27.53	678	156367	192.99	UG/L	92
49)	BROMOFLUOROBENZENE (SURG.)	30.11	744	62744	38.78	UG/L	93
51)	M-XYLENE	32.15	796	185765	161.60	UG/L	93
52)	O,P-XYLENE	33.17	822	385104M	342.50	UG/L	92
53)	1,2-DICHLOROBENZENE	37.90	943	467189M	169.03	UG/L	
54)	1,3-DICHLOROBENZENE	37.00	920	429925M	173.53	UG/L	94

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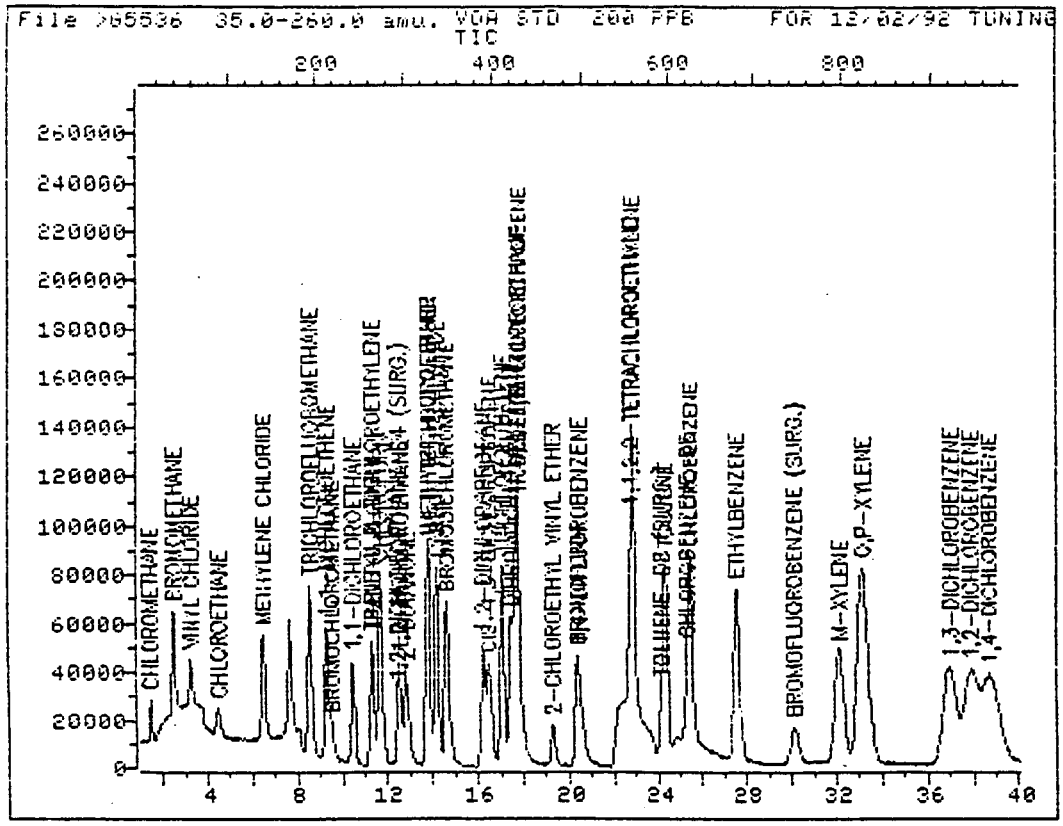
TOTAL ION CHROMATOGRAM



Data File: >G5536::B1 Quant Output File: ^G5536::QT
Name: VOA STD 200 PPB
Misc: FOR 12/02/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921125 10:00

Operator ID: MAURIE
Quant Time: 921202 12:29
Injected at: 921202 11:43

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No: Calibration Date: 12/08/92

Contractor: ECRA LABS Time: 07:15

Contract No: Laboratory ID: >G5599

Instrument ID: HPMSD-VOA Initial Calibration Date: 12/02/92

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.51239	.41941	18.15		**	
BROMOMETHANE	1.08099	.76005	29.69			
VINYL CHLORIDE	.79552	.61192	23.08	*		
CHLOROETHANE	.48947	.44555	8.97			
ETHANOL	-	-	-			(Conc=6000.00)
METHYLENE CHLORIDE	1.35780	1.13011	16.77			
ACROLEIN	-	-	-			(Conc=400.00)
ACRYLONITRILE	-	-	-			(Conc=400.00)
ACETONE	-	-	-			
CARBON DISULFIDE	-	-	-			
TRICHLOROFLUOROMETHANE	2.86759	1.89356	33.97			
1,1-DICHLOROETHENE	1.69104	1.38351	18.19	*		
2-PROPANOL	-	-	-			(Conc=500.00)
T-BUTYL ALCOHOL	.06330	.04407	30.38			(Conc=100.00)
1,1-DICHLOROETHANE	1.70467	1.49201	12.48		**	
TRANS-1,2-DICHLOROETHYLENE	.90681	.82434	9.09			
CHLOROFORM	2.92593	2.21405	24.33	*		
1,2-DICHLOROETHANE	1.80811	1.24606	31.09			
1,2-DICHLOROETHANE-D4 (SURG.)	1.57333	1.17177	25.52			(Conc=50.00)
1,1,1-TRICHLOROETHANE	.85001	.64829	23.73			
METHYL T-BUTYL ETHER	.14888	.1[illegible]434	3.67			(Conc=100.00)
1,4-DIOXANE	-	-	-			(Conc=1000.00)
2-BUTANONE	.17025	.13991	17.82			
CARBON TETRACHLORIDE	.82841	.63745	23.05			
VINYL ACETATE	-	-	-			
BROMODICHLOROMETHANE	.86284	.73486	14.83			
1,2-DICHLOROPROPANE	.24298	.26869	10.58	*		
CIS-1,3-DICHLOROPROPENE	.38774	.37206	4.04			
TRICHLOROETHYLENE	.45707	.43663	4.47			
DIBROMOCHLOROMETHANE	.64465	.54000	16.23			
1,1,2-TRICHLOROETHANE	.24521	.21402	12.72			
BENZENE	.80956	.87511	8.10			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/08/92

Contractor: ECRA LABS

Time: 07:15

Contract No:

Laboratory ID: >G5599

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/02/92

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
TRANS-1,3-DICHLOROPROPENE	.30835	.28663	7.04			(Conc=100.00)
1,2-DIBROMOETHANE-EDB	-	-	-			
DIISOPROPYL ETHER	-	-	-			(Conc=100.00)
2-CHLOROETHYL VINYL ETHER	.10266	.10909	6.26			
BROMOFORM	.46552	.37699	19.02		**	
4-METHYL-2-PENTANONE	-	-	-			
2-HEXANONE	-	-	-			
TETRACHLOROETHYLENE	.55191	.52702	4.51			
TOLUENE-D8 (SURG.)	1.13147	1.15854	2.39			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.32245	.31555	2.14		**	
TOLUENE	.67142	.67624	.72	*		
CHLOROBENZENE	.89823	.84262	6.19		**	
ETHYLBENZENE	.44598	.41278	7.44	*		
BROMOFLUOROBENZENE (SURG.)	.75908	.70723	6.83			(Conc=50.00)
STYRENE	-	-	-			
M-XYLENE	.54966	.48470	11.82			
O,P-XYLENE	.55415	.49043	11.50			(Conc=200.00)
1,2-DICHLOROBENZENE	1.46246	1.16674	20.22			
1,3-DICHLOROBENZENE	1.33983	1.17450	12.34			
1,4-DICHLOROBENZENE	1.47519	1.31964	10.54			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921208 08:01
Output File: ^G5599::QT Injected at: 921208 07:15
Data File: >G5599::B2 Dilution Factor: 1.00000
Name: VOA STD 100 PPB
Misc: FOR 12/08/92 TUNING

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.57	220	49968M	50.00	UG/L	
2)	CHLOROMETHANE	1.51	14	41914	81.85	UG/L	100
3)	BROMOMETHANE	2.53	40	75956	70.31	UG/L	94
4)	VINYL CHLORIDE	3.31	60	61153	76.92	UG/L	97
5)	CHLOROETHANE	4.48	90	44526	91.03	UG/L	88
7)	METHYLENE CHLORIDE	6.56	143	112939	83.23	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.63	196	189235	66.03	UG/L	100
13)	1,1-DICHLOROETHENE	9.37	215	138262	81.81	UG/L	95
15)	T-BUTYL ALCOHOL	11.41	267	4404	69.62	UG/L	100
16)	1,1-DICHLOROETHANE	10.55	245	149106	87.52	UG/L	98
17)	TRANS-1,2-DICHLOROETHYLENE	11.37	266	82381	90.91	UG/L	85
18)	CHLOROFORM	11.72	275	221263	75.67	UG/L	94
19)	1,2-DICHLOROETHANE	12.62	298	124526	68.91	UG/L	99
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.50	295	58551	37.24	UG/L	96
21)	*1,4-DIFLUOROBENZENE	20.48	499	119851	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.87	330	155396	76.27	UG/L	98
23)	METHYL T-BUTYL ETHER	13.87	330	36996	103.67	UG/L	85
25)	2-BUTANONE	12.93	306	33536	82.18	UG/L	97
26)	CARBON TETRACHLORIDE	14.26	340	152798	76.95	UG/L	94
28)	BROMODICHLOROMETHANE	14.69	351	176147	85.17	UG/L	96
29)	1,2-DICHLOROPROPANE	16.30	392	64406	110.58	UG/L	97
30)	CIS-1,3-DICHLOROPROPENE	16.57	399	89184	95.96	UG/L	95
31)	TRICHLOROETHYLENE	17.12	413	104660	95.53	UG/L	72
32)	DIBROMOCHLOROMETHANE	17.59	425	129438	83.77	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.78	430	51301	87.28	UG/L	99
34)	BENZENE	17.82	431	209766	108.10	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.90	433	68705	92.96	UG/L	74
38)	2-CHLOROETHYL VINYL ETHER	19.39	471	26149	106.26	UG/L	100
39)	BROMOFORM	20.52	500	90366	80.98	UG/L	93
42)	*CHLOROBENZENE-D5	25.41	625	98153	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.95	562	103457	95.49	UG/L	81
44)	TOLUENE-D8 (SURG.)	24.24	595	113714	51.20	UG/L	91
45)	1,1,2,2-TETRACHLOROETHANE	22.87	560	61945	97.86	UG/L	97
46)	TOLUENE	24.43	600	132750	100.72	UG/L	96
47)	CHLOROBENZENE	25.53	628	165412	93.81	UG/L	97
48)	ETHYLBENZENE	27.64	682	81032	92.56	UG/L	88
49)	BROMOFLUOROBENZENE (SURG.)	30.26	749	69417	46.58	UG/L	94
51)	M-XYLENE	32.26	800	95149	88.18	UG/L	91
52)	O,P-XYLENE	33.31	827	192550	177.01	UG/L	89
53)	1,2-DICHLOROBENZENE	38.16	951	229038M	79.7[illegible]	UG/L	95
54)	1,3-DICHLOROBENZENE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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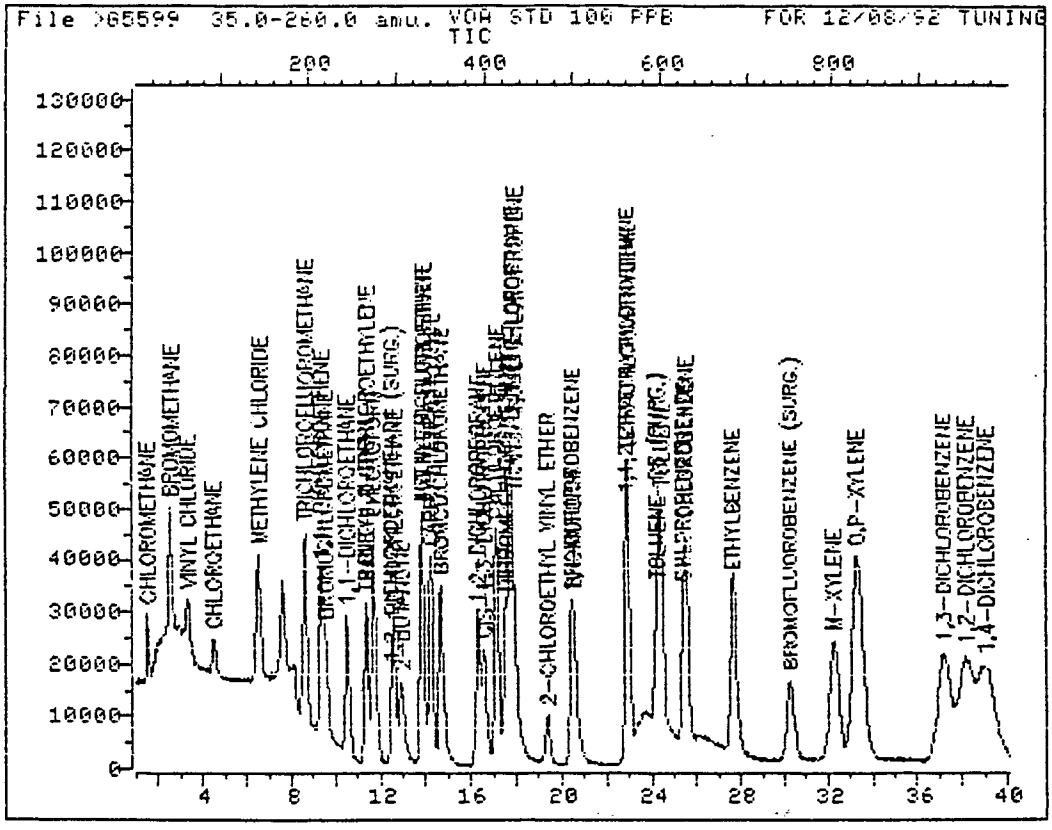
TOTAL ION CHROMATOGRAM



Data File: >G5599::B2 Quant Output File: ^G5599::QT
Name: VOA STD 100 PPB
Misc: FOR 12/08/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921208 08:01
Injected at: 921208 07:15

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ECRA

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/09/92

Contractor: ECRA LABS

Time: 07:14

Contract No:

Laboratory ID: >G5616

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/02/92

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.51239	.45283	11.62		**	
BROMOMETHANE	1.08099	.89981	16.76			
VINYL CHLORIDE	.79552	.67883	14.67	*		
CHLOROETHANE	.48947	.47593	2.76			
ETHANOL	-	-	-			(Conc=6000.00)
METHYLENE CHLORIDE	1.35780	1.15248	15.12			
ACROLEIN	-	-	-			(Conc=400.00)
ACRYLONITRILE	-	-	-			(Conc=400.00)
ACETONE	-	-	-			
CARBON DISULFIDE	-	-	-			
TRICHLOROFLUOROMETHANE	2.86759	1.84604	35.62			
1,1-DICHLOROETHENE	1.69104	1.50884	10.77	*		
2-PROPANOL	-	-	-			(Conc=500.00)
T-BUTYL ALCOHOL	.06330	.05395	14.78			(Conc=100.00)
1,1-DICHLOROETHANE	1.70467	1.65990	2.63		**	
TRANS-1,2-DICHLOROETHYLENE	.90681	.97957	8.02			
CHLOROFORM	2.92593	2.62397	10.32	*		
1,2-DICHLOROETHANE	1.80811	1.41731	21.61			
1,2-DICHLOROETHANE-D4 (SURG.)	1.57333	1.34556	14.48			(Conc=50.00)
1,1,1-TRICHLOROETHANE	.85001	.65445	23.01			
METHYL T-BUTYL ETHER	.14888	.13351	10.32			(Conc=100.00)
1,4-DIOXANE	-	-	-			(Conc=1000.00)
2-BUTANONE	.17025	.12921	24.10			
CARBON TETRACHLORIDE	.82841	.63115	23.81			
VINYL ACETATE	-	-	-			
BROMODICHLOROMETHANE	.86284	.72391	16.10			
1,2-DICHLOROPROPANE	.24298	.25324	4.22	*		
CIS-1,3-DICHLOROPROPENE	.38774	.37902	2.25			
TRICHLOROETHYLENE	.45707	.43019	5.88			
DIBROMOCHLOROMETHANE	.64465	.53058	17.69			
1,1,2-TRICHLOROETHANE	.24521	.21863	10.84			
BENZENE	.80956	.81828	1.08			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/09/92

Contractor: ECRA LABS

Time: 07:14

Contract No:

Laboratory ID: >G5616

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/02/92

Minimum $\overline{RF}$ for SPCC is .30

Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
TRANS-1,3-DICHLOROPROPENE	.30835	.27714	10.12			(Conc=100.00)
1,2-DIBROMOETHANE-EDB	-	-	-			
DIISOPROPYL ETHER	-	-	-			(Conc=100.00)
2-CHLOROETHYL VINYL ETHER	.10266	.10714	4.36			
BROMOFORM	.46552	.35737	23.23		**	
4-METHYL-2-PENTANONE	-	-	-			
2-HEXANONE	-	-	-			
TETRACHLOROETHYLENE	.55191	.53545	2.98			
TOLUENE-D8 (SURG.)	1.13147	1.18104	4.38			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.32245	.31636	1.89		**	
TOLUENE	.67142	.68700	2.32	*		
CHLOROBENZENE	.89823	.87879	2.16		**	
ETHYLBENZENE	.44598	.42449	4.82	*		
BROMOFLUOROBENZENE (SURG.)	.75908	.71127	6.30			(Conc=50.00)
STYRENE	-	-	-			
M-XYLENE	.54966	.50507	8.11			
O,P-XYLENE	.55415	.51887	6.37			(Conc=200.00)
1,2-DICHLOROBENZENE	1.46246	1.20410	17.67			
1,3-DICHLOROBENZENE	1.33983	1.15444	13.84			
1,4-DICHLOROBENZENE	1.47519	1.22567	16.91			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

00102

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE
Output File: ^G5616::QT
Data File: >G5616::B1
Name: VOA STD 100 PPB
Misc: FOR 12/09/92 TUNING

Quant Rev: 6
Quant Time: 921209 08:06
Injected at: 921209 07:14
Dilution Factor: 1.00000

ID File: MSDX::E2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.57	220	39993	50.00	UG/L	85
2)	CHLOROMETHANE	1.47	13	36220	88.38	UG/L	100
3)	BROMOMETHANE	2.53	40	71972	83.24	UG/L	99
4)	VINYL CHLORIDE	3.31	60	54297	85.33	UG/L	94
5)	CHLOROETHANE	4.52	91	38068	97.24	UG/L	88
7)	METHYLENE CHLORIDE	6.56	143	92182	84.88	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.63	196	147657	64.38	UG/L	100
13)	1,1-DICHLOROETHENE	9.37	215	120686	89.23	UG/L	93
15)	T-BUTYL ALCOHOL	11.37	266	4315	85.22	UG/L	100
16)	1,1-DICHLOROETHANE	10.55	245	132769	97.37	UG/L	98
17)	TRANS-1,2-DICHLOROETHYLENE	11.37	266	78352	108.02	UG/L	80
18)	CHLOROFORM	11.72	275	209881	89.68	UG/L	94
19)	1,2-DICHLOROETHANE	12.62	298	113365	78.39	UG/L	97
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.50	295	53813	42.76	UG/L	95
21)	*1,4-DIFLUOROBENZENE	20.48	499	118163	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.87	330	154664	76.99	UG/L	96
23)	METHYL T-BUTYL ETHER	13.87	330	31552	89.68	UG/L	98
25)	2-BUTANONE	12.93	306	30536	75.90	UG/L	94
26)	CARBON TETRACHLORIDE	14.22	339	149156	76.19	UG/L	98
28)	BROMODICHLOROMETHANE	14.69	351	171079	83.90	UG/L	98
29)	1,2-DICHLOROPROPANE	16.30	392	59848	104.22	UG/L	96
30)	CIS-1,3-DICHLOROPROPENE	16.57	399	89573	97.75	UG/L	97
31)	TRICHLOROETHYLENE	17.16	414	101665	94.12	UG/L	80
32)	DIBROMOCHLOROMETHANE	17.59	425	125391	82.31	UG/L	100
33)	1,1,2-TRICHLOROETHANE	17.78	430	51669	89.16	UG/L	97
34)	BENZENE	17.82	431	193382	101.08	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	17.90	433	65496	89.88	UG/L	72
38)	2-CHLOROETHYL VINYL ETHER	19.39	471	25319	104.36	UG/L	100
39)	BROMOFORM	20.48	499	84457	76.77	UG/L	94
42)	*CHLOROBENZENE-D5	25.41	625	95658	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.91	561	102440	97.02	UG/L	82
44)	TOLUENE-D8 (SURG.)	24.24	595	112976	52.19	UG/L	86
45)	1,1,2,2-TETRACHLOROETHANE	22.87	560	60525M	98.11	UG/L	83
46)	TOLUENE	24.43	600	131435	102.32	UG/L	97
47)	CHLOROBENZENE	25.53	628	168127	97.84	UG/L	96
48)	ETHYLBENZENE	27.68	683	81212	95.18	UG/L	90
49)	BROMOFLUOROBENZENE (SURG.)	30.26	749	68039	46.85	UG/L	96
51)	M-XYLENE	32.30	801	96628	91.89	UG/L	86
52)	O,P-XYLENE	33.35	828	198537	187.27	UG/L	94
53)	1,2-DICHLOROBENZENE	38.12	950	230363M	82.33	UG/L	98
54)	1,3-DICHLOROBENZENE	37.22	927	220863	86.16	UG/L	96
55)	1,4-DICHLOROBENZENE	38.99	972	234491M	87.09	UG/L	

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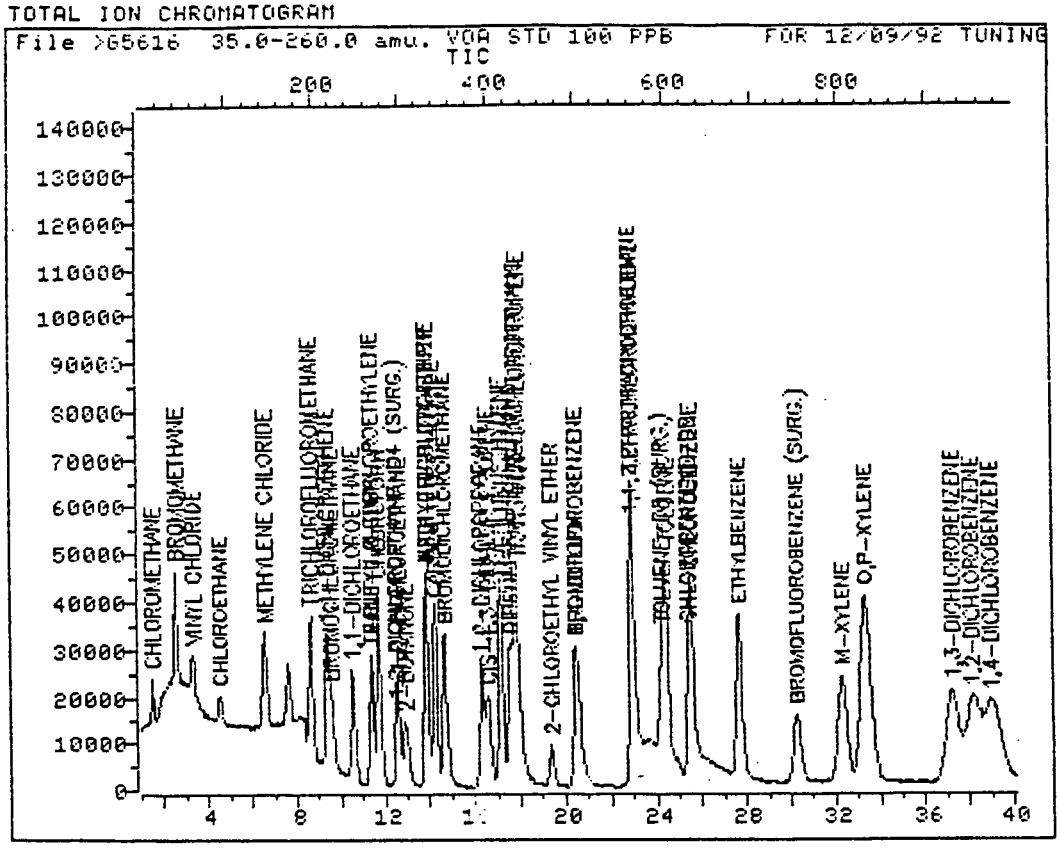
TOTAL ION CHROMATOGRAM



Data File: >G5616::B1 Quant Output File: ^G5616::QT
Name: VOA STD 100 PPB
Misc: FOR 12/09/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921209 08:06
Injected at: 921209 07:14

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: HPMSD-VOA

Contractor: ECRA LAES Calibration Date: 12/07/92

Contract No:

Minimum $\overline{RF}$ for SPCC is .30 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >11547 RF 20.00	>11546 RF 50.00	>11545 RF 100.00	>11544 RF 150.00	>11543 RF 200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
CHLOROMETHANE	.68579	.60947	.65473	.52563	.44097	.223	.58332	17.116		**	
BROMOMETHANE	1.78421	1.63582	1.91311	1.74915	1.96673	.323	1.80980	7.304			
VINYL CHLORIDE	1.26755	1.13733	1.34376	1.33710	1.45936	.394	1.30902	9.022	*		
CHLOROETHANE	.71394	.64907	.68962	.69480	.72371	.503	.69423	4.149			
METHYLENE CHLORIDE	2.51595	1.77374	1.42315	1.52986	1.57265	.694	1.76307	24.936			
TRICHLOROFLUOROMETHANE	4.55921	4.04323	4.25161	4.01591	4.23149	.893	4.22029	5.152			
1,1-DICHLOROETHENE	2.22827	1.91126	2.03607	1.92624	2.09599	.964	2.03957	6.398	*		
1,1-DICHLOROETHANE	1.96786	1.75574	1.70525	1.71888	1.70791	1.079	1.77113	6.313		**	
TRANS-1,2-DICHLOROETHYLENE	1.21206	1.04193	1.08074	1.02204	.99055	1.160	1.06946	8.057			
CHLOROFORM	3.00896	2.61745	2.53988	2.64807	2.57616	1.201	2.67810	7.074	*		
1,2-DICHLOROETHANE	1.66212	1.41987	1.23909	1.40721	1.31444	1.284	1.40855	11.337			
1,2-DICHLOROETHANE-D4 (SURG.)	1.41314	1.32472	1.20722	1.38225	1.34213	1.274	1.33389	5.905			(Conc=50.0,50.0,50.0,5
1,1,1-TRICHLOROETHANE	1.18813	1.06638	1.26061	1.11489	1.24327	.682	1.17465	7.068			
CARBON TETRACHLORIDE	1.16603	1.11861	1.36215	1.18307	1.30764	.701	1.22750	8.364			
BROMODICHLOROMETHANE	.92663	.84538	.88313	.88157	.91592	.725	.89053	3.605			
1,2-DICHLOROPROPANE	.25670	.25754	.27420	.26400	.26487	.796	.26346	2.673	*		
CIS-1,3-DICHLOROPROPENE	.35461	.41373	.40191	.42160	.42827	.810	.40402	7.255			
TRICHLOROETHYLENE	.50481	.47401	.51167	.48961	.49471	.840	.49496	2.934			
DIBROMOCHLOROMETHANE	1.18883	1.02194	.97230	.91380	.84960	.861	.98930	13.022			
1,1,2-TRICHLOROETHANE	.29818	.27016	.26849	.26103	.23619	.870	.26680	8.329			
BENZENE	.82087	.77478	.82719	.79799	.85490	.871	.81515	3.722			
TRANS-1,3-DICHLOROPROPENE	.51218	.46645	.47410	.45538	.45035	.874	.47169	5.187			
2-CHLOROETHYL VINYL ETHER	.09496	.08677	.06901	.09359	.08792	.932	.08645	11.992			
BROMOFORM	1.37148	1.18097	1.16945	1.03454	.89773	.995	1.13083	15.665		**	
TETRACHLOROETHYLENE	1.23312	.78635	.74738	.70041	.66885	.993	.82722	27.959			
TOLUENE-D8 (SURG.)	1.00426	1.01387	.96294	1.01422	1.05793	.954	1.01065	3.346			(Conc=50.0,50.0,50.0,5
1,1,2,2-TETRACHLOROETHANE	.58559	.55818	.56284	.56092	.53230	.894	.55997	3.381		**	
TOLUENE	.61314	.57875	.53706	.57655	.57054	.961	.57521	4.706	*		
CHLOROBENZENE	.99671	.91634	.90345	.91432	.90531	1.005	.92723	4.232		**	
ETHYLBENZENE	.46170	.43737	.42709	.42777	.41595	1.083	.43398	3.976	*		

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Initial Calibration Data
HSL Compounds

Case No: Instrument ID: HPMSD-VOA

Contractor: ECRA LABS Calibration Date: 12/07/92

Contract No:

Minimum $\overline{RF}$ for SPCC is .30 Maximum % RSD for CCC is 30%

Laboratory ID:	>11547	>11546	>11545	>11544	>11543						
	RF	RF	RF	RF	RF						
Compound	20.00	50.00	100.00	150.00	200.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC	
BROMOFLUOROBENZENE (SURG.)	1.34471	1.34922	1.34743	1.32764	1.26320	1.179	1.32644	2.743			(Conc=50.0,50.0,50.0,5
M-XYLENE	.62525	.58080	.57061	.57045	.56306	1.257	.58203	4.290			
O,P-XYLENE	.62588	.58002	.56967	.57248	.58456	1.294	.58652	3.884			(Conc=40.0,100.0,200.0
1,3-DICHLOROBENZENE	1.87036	1.73541	1.86386	1.75051	1.71837	1.431	1.78770	4.107			
1,2-DICHLOROBENZENE	1.95516	1.71815	1.68642	1.66655	1.59249	1.467	1.72375	7.969			
1,4-DICHLOROBENZENE	1.84426	1.78906	1.88991	1.72812	1.58669	1.495	1.76801	6.624			

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RRT}$ - Average Relative Retention Time (RT Std/RT Istd)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MANAGER
Output File: ^11547::QT
Data File: >11547::12
Name: STD 20 PPB
Misc: 12/07/92 TUNING

Quant Rev: 6
Quant Time: 921207 11:10
Injected at: 921207 10:26
Dilution Factor: 1.00000

Log File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.60	209	36673	50.00	UG/KG	94
2)	CHLOROMETHANE	2.15	17	10060	27.16	UG/KG	100
3)	BROMOMETHANE	3.12	42	26173	24.83	UG/KG	96
4)	VINYL CHLORIDE	3.78	59	18594	25.87	UG/KG	98
5)	CHLOROETHANE	4.83	86	10473	25.56	UG/KG	88
6)	METHYLENE CHLORIDE	6.69	134	36907	40.74	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.55	182	66880	27.24	UG/KG	100
8)	1,1-DICHLOROETHENE	9.25	200	32687	25.85	UG/KG	96
9)	1,1-DICHLOROETHANE	10.38	229	28867	24.66	UG/KG	96
10)	TRANS-1,2-DICHLOROETHYLENE	11.15	249	17780	28.38	UG/KG	96
11)	CHLOROFORM	11.54	259	44139	25.15	UG/KG	87
12)	1,2-DICHLOROETHANE	12.32	279	24382	23.72	UG/KG	88
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.24	277	51824	53.35	UG/KG	97
14)	*1,4-DIFLUOROBENZENE	19.77	471	99989	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.48	309	47520	21.97	UG/KG	86
16)	CARBON TETRACHLORIDE	13.83	318	46636	21.20	UG/KG	92
17)	BROMODICHLOROMETHANE	14.34	331	37061	21.76	UG/KG	93
18)	1,2-DICHLOROPROPANE	15.74	367	10267	18.12	UG/KG	89
19)	CIS-1,3-DICHLOROPROPENE	16.01	374	14183	15.47	UG/KG	93
20)	TRICHLOROETHYLENE	16.59	389	20190	21.18	UG/KG	96
21)	DIBROMOCHLOROMETHANE	17.02	400	47548	27.96	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.21	405	11926	20.81	UG/KG	88
23)	BENZENE	17.21	405	32831	19.37	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.29	407	20485	19.84	UG/KG	94
25)	2-CHLOROETHYL VINYL ETHER	18.41	436	3798	14.25	UG/KG	100
26)	BROMOFORM	19.66	468	54853	32.72	UG/KG	97
27)	*CHLOROBENZENE-D5	24.59	595	87741	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.22	534	43278	40.10	UG/KG	86
29)	TOLUENE-D8 (SURG.)	23.46	566	88115	47.27	UG/KG	82
30)	1,1,2,2-TETRACHLOROETHANE	21.98	528	20192	20.98	UG/KG	92
31)	TOLUENE	23.61	570	21519	20.77	UG/KG	81
32)	CHLOROBENZENE	24.70	598	34481	21.46	UG/KG	99
33)	ETHYLBENZENE	25.60	617	15204	21.33	UG/KG	85
34)	BROMOFLUOROBENZENE (SURG.)	28.97	708	117786	52.46	UG/KG	84
35)	M-XYLENE	30.87	757	21944	20.73	UG/KG	93
36)	O,P-XYLENE	31.[illegible]	7[illegible]	43[illegible]	42.77	UG/KG	92
37)	1,3-DICHLOROBENZENE	34.16	838	65[illegible]	24.12	UG/KG	
38)	1,2-DICHLOROBENZENE	36.08	881	68[illegible]	25.21	UG/KG	[illegible]
39)	1,4-DICHLOROBENZENE	36.76	90[illegible]	64[illegible]	25.93	UG/KG	93

* Compound is ISTD

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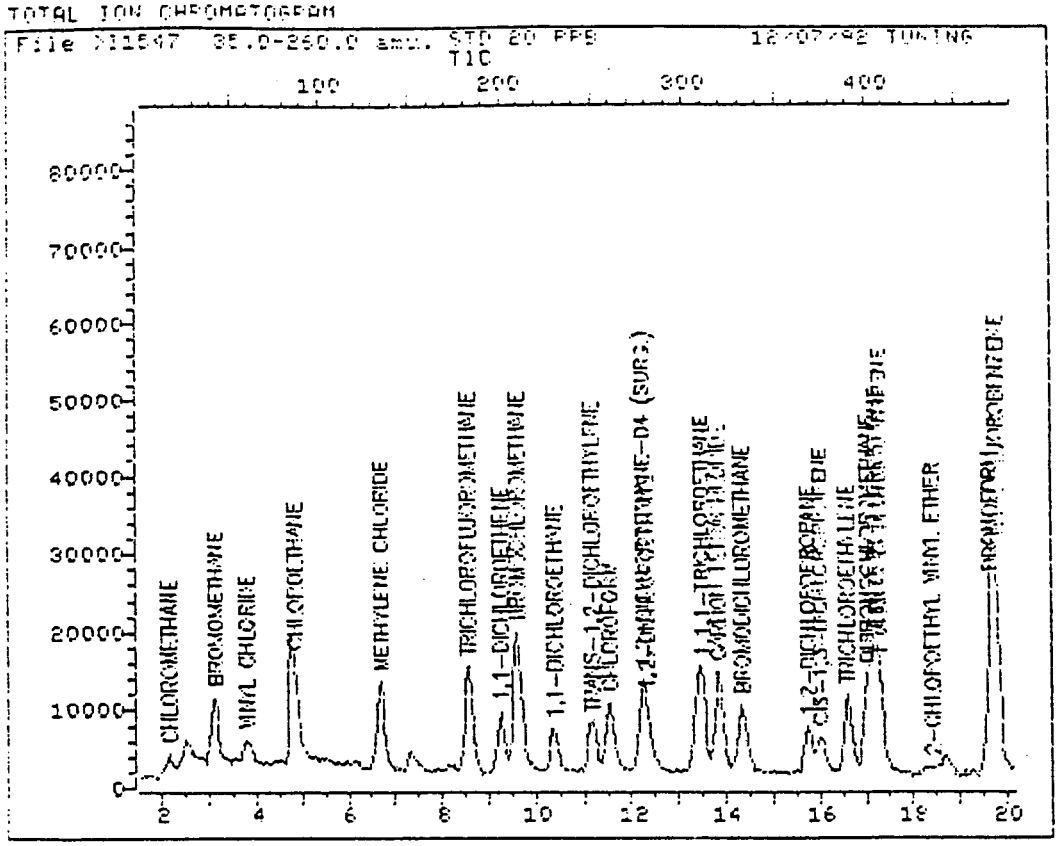
TOTAL ION CHROMATOGRAM



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Misc: 12/07/92 TUNING

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 11:10
Injected at: 921207 10:26

TIC page 1 of 2

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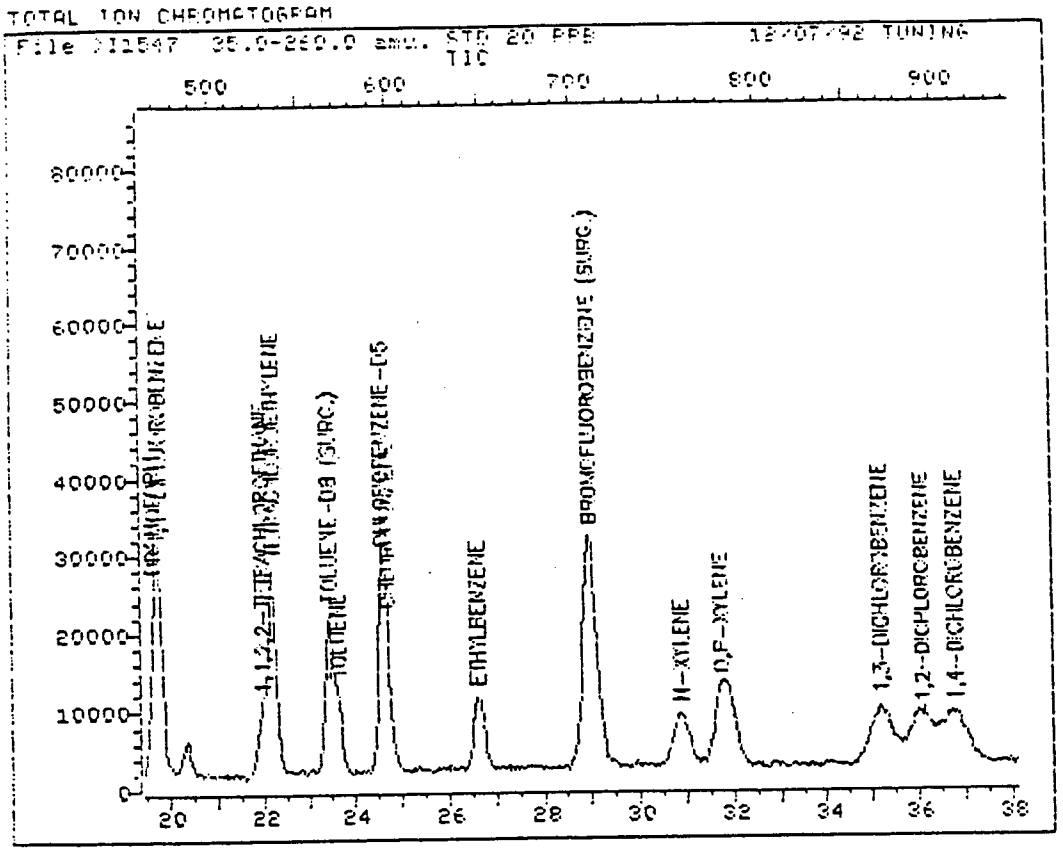
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



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Misc: 12/07/92 TUNING

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Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 11:10
Injected at: 921207 10:26

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER
utput File: ^11546::QT
ata File: >11546::12
ame: STD 50 PPB
isc: 12/07/92 TUNING

Quant Rev: 6 Quant Time: 921207 10:19
Injected at: 921207 09:40
Dilution Factor: 1.00000

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.59	208	40829	50.00	UG/KG	99
2)	CHLOROMETHANE	2.14	16	24884	60.33	UG/KG	100
3)	BROMOMETHANE	3.11	41	66789	56.92	UG/KG	99
4)	VINYL CHLORIDE	3.81	59	46436	58.03	UG/KG	99
5)	CHLOROETHANE	4.82	85	26501	58.10	UG/KG	90
6)	METHYLENE CHLORIDE	6.64	132	72420	71.80	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.55	181	165081	60.39	UG/KG	100
8)	1,1-DICHLOROETHENE	9.24	199	78035	55.42	UG/KG	96
9)	1,1-DICHLOROETHANE	10.33	227	71685	55.01	UG/KG	95
0)	TRANS-1,2-DICHLOROETHYLENE	11.11	247	42541	61.00	UG/KG	95
1)	CHLOROFORM	11.50	257	106868	54.69	UG/KG	87
2)	1,2-DICHLOROETHANE	12.31	278	57972	50.67	UG/KG	90
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.20	275	54087	50.01	UG/KG	99
4)	*1,4-DIFLUOROBENZENE	19.73	469	105203	50.00	UG/KG	100
5)	1,1,1-TRICHLOROETHANE	13.48	308	112186	49.30	UG/KG	87
6)	CARBON TETRACHLORIDE	13.83	317	117681	50.84	UG/KG	92
7)	BROMODICHLOROMETHANE	14.29	329	88936	49.64	UG/KG	97
8)	1,2-DICHLOROPROPANE	15.73	366	27094	45.45	UG/KG	92
9)	CIS-1,3-DICHLOROPROPENE	16.00	373	43526	45.11	UG/KG	98
0)	TRICHLOROETHYLENE	16.58	388	49867	49.72	UG/KG	94
1)	DIBROMOCHLOROMETHANE	17.01	399	107511	60.06	UG/KG	100
2)	1,1,2-TRICHLOROETHANE	17.16	403	28424	47.14	UG/KG	96
3)	BENZENE	17.16	403	81509	45.71	UG/KG	100
4)	TRANS-1,3-DICHLOROPROPENE	17.24	405	49072	45.18	UG/KG	89
5)	2-CHLOROETHYL VINYL ETHER	18.41	435	9128	32.54	UG/KG	100
6)	BROMOFORM	19.65	467	124242	70.43	UG/KG	91
7)	*CHLOROBENZENE-D5	24.54	593	92037	50.00	UG/KG	100
8)	TETRACHLOROETHYLENE	22.17	532	72373	63.93	UG/KG	89
9)	TOLUENE-D8 (SURG.)	23.41	564	93314	47.72	UG/KG	83
0)	1,1,2,2-TETRACHLOROETHANE	21.94	526	51373	49.99	UG/KG	98
1)	TOLUENE	23.61	569	53266	49.01	UG/KG	89
2)	CHLOROBENZENE	24.69	597	84337	49.32	UG/KG	99
3)	ETHYLBENZENE	26.60	646	40254	50.51	UG/KG	90
4)	BROMOFLUOROBENZENE (SURG.)	28.93	706	124178	52.64	UG/KG	83
5)	M-XYLENE	30.87	756	53455	48.13	UG/KG	85
6)	O,P-XYLENE	31.80	780	106767	99.09	UG/KG	94
7)	1,3-DICHLOROBENZENE	35.[illegible]	867	159722M	55.94	UG/KG	87
8)	1,2-DICHLOROBENZENE	35.[illegible]	888	158133M	55.83	UG/KG	76
9)	1,4-DICHLOROBENZENE	36.73	907	164660M	62.[illegible]	UG/KG	79

00110

* Compound is ISTD

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER
utput File: >11546::QT
ata File: >11546::12
ame: STD 50 PPB
isc: 12/07/92 TUNING

Quant Rev: 6 Quant Time: 921207 10:19
Injected at: 921207 09:40
Dilution Factor: 1.00000

Q File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
est Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.59	208	40829	50.00	UG/KG	99
2)	CHLOROMETHANE	2.14	16	24884	60.33	UG/KG	100
3)	BROMOMETHANE	3.11	41	66789	56.92	UG/KG	99
4)	VINYL CHLORIDE	3.81	59	46436	58.03	UG/KG	99
5)	CHLOROETHANE	4.82	85	26501	58.10	UG/KG	90
6)	METHYLENE CHLORIDE	6.64	132	72420	71.80	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.55	181	165081	60.39	UG/KG	100
8)	1,1-DICHLOROETHENE	9.24	199	78035	55.42	UG/KG	96
9)	1,1-DICHLOROETHANE	10.33	227	71685	55.01	UG/KG	95
10)	TRANS-1,2-DICHLOROETHYLENE	11.11	247	42541	61.00	UG/KG	95
11)	CHLOROFORM	11.50	257	106868	54.69	UG/KG	87
12)	1,2-DICHLOROETHANE	12.31	278	57972	50.67	UG/KG	90
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.20	275	54087	50.01	UG/KG	99
14)	*1,4-DIFLUOROBENZENE	19.73	469	105203	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.48	308	112186	49.30	UG/KG	87
16)	CARBON TETRACHLORIDE	13.83	317	117681	50.84	UG/KG	92
17)	BROMODICHLOROMETHANE	14.29	329	88936	49.64	UG/KG	97
18)	1,2-DICHLOROPROPANE	15.73	366	27094	45.45	UG/KG	92
19)	CIS-1,3-DICHLOROPROPENE	16.00	373	43526	45.11	UG/KG	98
20)	TRICHLOROETHYLENE	16.58	388	49867	49.72	UG/KG	94
21)	DIBROMOCHLOROMETHANE	17.01	399	107911	60.06	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.16	403	28424	47.14	UG/KG	96
23)	BENZENE	17.16	403	81509	49.71	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.24	405	49072	45.18	UG/KG	89
25)	2-CHLOROETHYL VINYL ETHER	18.41	435	9128	32.54	UG/KG	100
26)	BROMOFORM	19.65	467	124242	70.43	UG/KG	91
27)	*CHLOROBENZENE-D5	24.54	593	92037	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.17	532	72373	63.93	UG/KG	89
29)	TOLUENE-D8 (SURG.)	23.41	564	93314	47.72	UG/KG	83
30)	1,1,2,2-TETRACHLOROETHANE	21.94	526	51373	49.99	UG/KG	98
31)	TOLUENE	23.61	569	53266	49.01	UG/KG	89
32)	CHLOROBENZENE	24.69	597	84337	49.92	UG/KG	99
33)	ETHYLBENZENE	26.60	646	40254	50.51	UG/KG	90
34)	BROMOFLUOROBENZENE (SURG.)	28.93	706	124178	52.64	UG/KG	83
35)	M-XYLENE	30.87	756	5245[illegible]	48.1[illegible]	UG/KG	89
36)	O,P-XYLENE	31.90	780	106[illegible]	99.09	UG/KG	94
37)	1,3-DICHLOROBENZENE	35.[illegible]	867	[illegible]21M	50.94	UG/KG	87
38)	1,2-DICHLOROBENZENE	35.[illegible]	888	198133M	55.83	UG/KG	76
39)	1,4-DICHLOROBENZENE	36.[illegible]	907	164660M	62.[illegible]	UG/KG	99

00110

* Compound is STD

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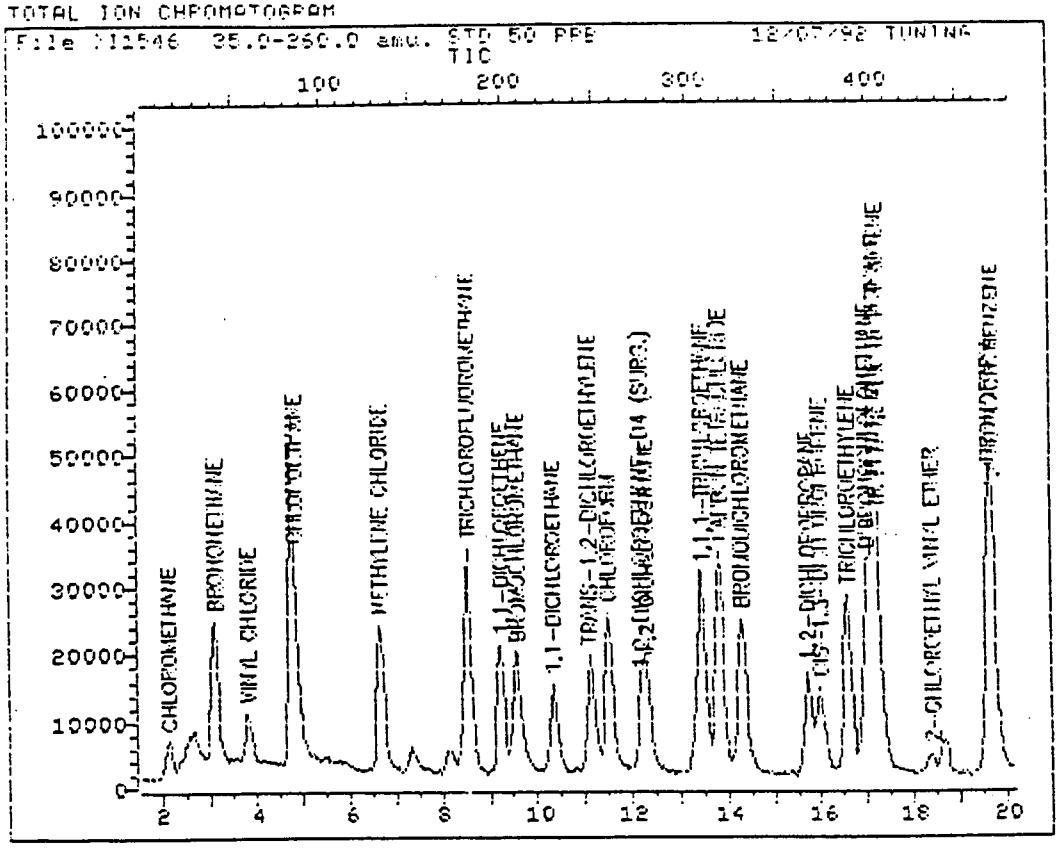
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMOTOGRAM



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Name: STD 50 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 10:19
Injected at: 921207 09:40

TIC page 1 of 2

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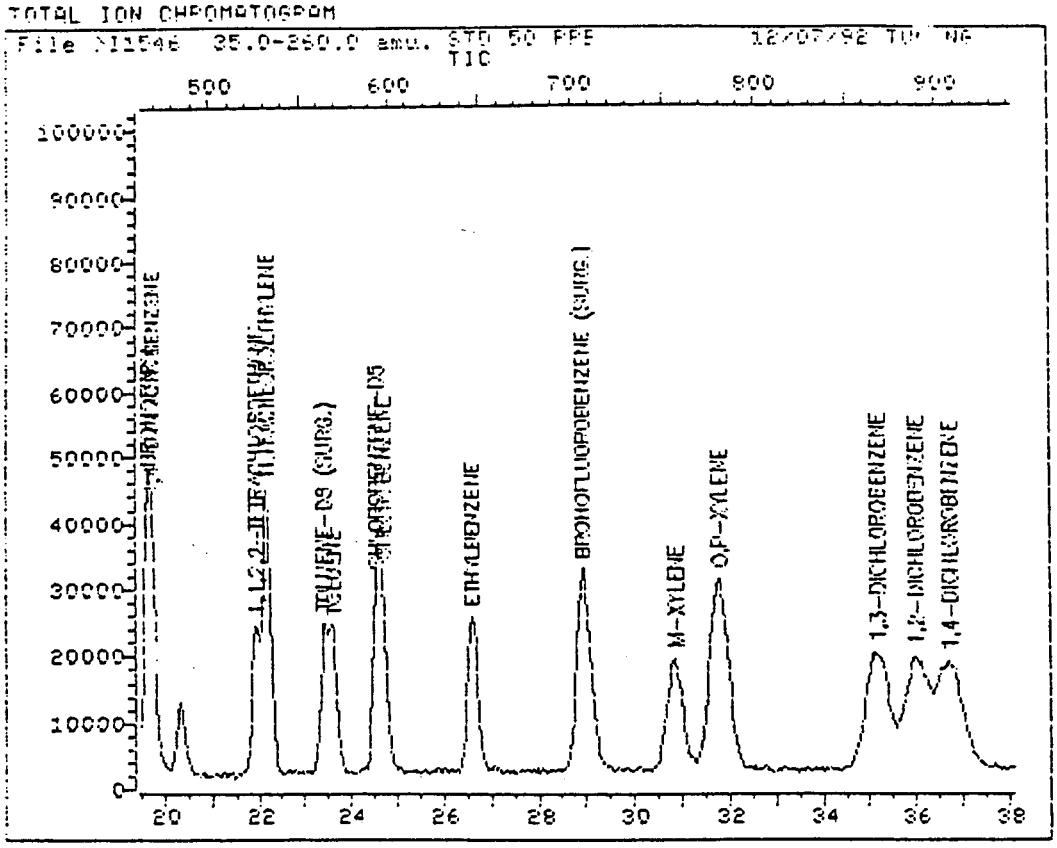
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



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Misc: 12/07/92 TUNING

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Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 10:19
Injected at: 921207 09:40

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER
utput File: ^11545::QT
ata File: >11545::12
ame: STD 100 PPB
isc: 12/07/92 TUNING

Quant Rev: 6
Quant Time: 921207 09:32
Injected at: 921207 08:53
Dilution Factor: 1.00000

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
est Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.64	205	42317	50.00	UG/KG	97
2)	CHLOROMETHANE	2.30	16	55412	129.63	UG/KG	100
3)	BROMOMETHANE	3.23	40	161914	133.13	UG/KG	95
4)	VINYL CHLORIDE	3.93	58	113728	137.11	UG/KG	99
5)	CHLOROETHANE	4.94	84	58365	123.46	UG/KG	92
6)	METHYLENE CHLORIDE	6.73	130	120447	115.21	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.63	179	359831	127.01	UG/KG	100
8)	1,1-DICHLOROETHENE	9.29	196	172321	118.09	UG/KG	94
9)	1,1-DICHLOROETHANE	10.38	224	144322	106.86	UG/KG	97
0)	TRANS-1,2-DICHLOROETHYLENE	11.15	244	91467	126.54	UG/KG	96
1)	CHLOROFORM	11.54	254	214960	106.14	UG/KG	90
2)	1,2-DICHLOROETHANE	12.32	274	104869	88.43	UG/KG	96
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.24	272	51086	45.58	UG/KG	99
4)	*1,4-DIFLUOROBENZENE	19.73	465	93170	50.00	UG/KG	100
5)	1,1,1-TRICHLOROETHANE	13.48	304	234902	116.57	UG/KG	80
6)	CARBON TETRACHLORIDE	13.87	314	253823	123.82	UG/KG	92
7)	BROMODICHLOROMETHANE	14.33	326	164563	103.71	UG/KG	96
8)	1,2-DICHLOROPROPANE	15.73	362	51095	96.77	UG/KG	98
9)	CIS-1,3-DICHLOROPROPENE	16.00	369	74891	87.64	UG/KG	98
0)	TRICHLOROETHYLENE	16.59	384	95344	107.34	UG/KG	93
1)	DIBROMOCHLOROMETHANE	17.01	395	181179	114.28	UG/KG	100
2)	1,1,2-TRICHLOROETHANE	17.21	400	50030	93.69	UG/KG	98
3)	BENZENE	17.21	400	154138	97.60	UG/KG	100
4)	TRANS-1,3-DICHLOROPROPENE	17.29	402	88344	91.84	UG/KG	92
5)	2-CHLOROETHYL VINYL ETHER	18.32	430	12859	51.77	UG/KG	100
6)	BROMOFORM	19.65	463	217916	139.48	UG/KG	98
7)	*CHLOROBENZENE-D5	24.58	590	90671	50.00	UG/KG	100
8)	TETRACHLOROETHYLENE	22.22	529	135532	121.52	UG/KG	81
9)	TOLUENE-D8 (SURG.)	23.46	561	87311	45.33	UG/KG	85
0)	1,1,2,2-TETRACHLOROETHANE	21.98	523	102067	100.82	UG/KG	99
1)	TOLUENE	23.61	565	97391	90.95	UG/KG	87
2)	CHLOROBENZENE	24.70	593	163833	97.26	UG/KG	98
3)	ETHYLBENZENE	26.64	643	77449	98.64	UG/KG	91
4)	BROMOFLUOROBENZENE (SURG.)	28.97	703	122173	52.57	UG/KG	86
5)	M-XYLENE	30.87	752	103476	9[illegible].57	UG/KG	99
6)	O,P-XYLENE	31.77	775	206609	1[illegible].64	UG/KG	85
7)	1,3-DICHLOROBENZENE	34.14	862	337997	110.16	UG/KG	90
8)	1,2-DICHLOROBENZENE	35.96	882	3098190	[illegible]	UG/KG	99
9)	1,4-DICHLOROBENZENE	36.70	902	3427200	1[illegible].66	UG/KG	99

* Compound is ISTD

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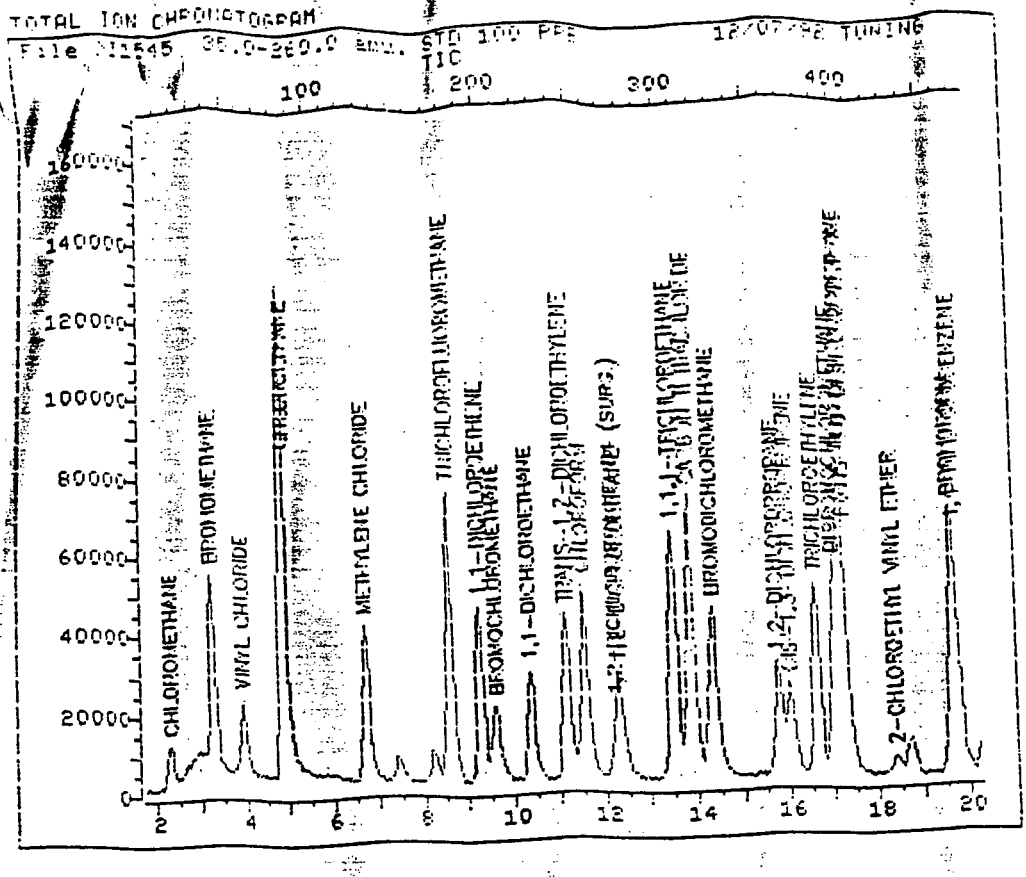
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.



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Name: STD 100 PPB
Misc: 12/07/92 TUNING

Quant Output File: ^11545::QT

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240.
Last Calibration: 921116 18:32

Operator ID: MANAGER
Quant Time: 921207 09:32
Injected at: 921207 08:53

TIC page 1 of 2

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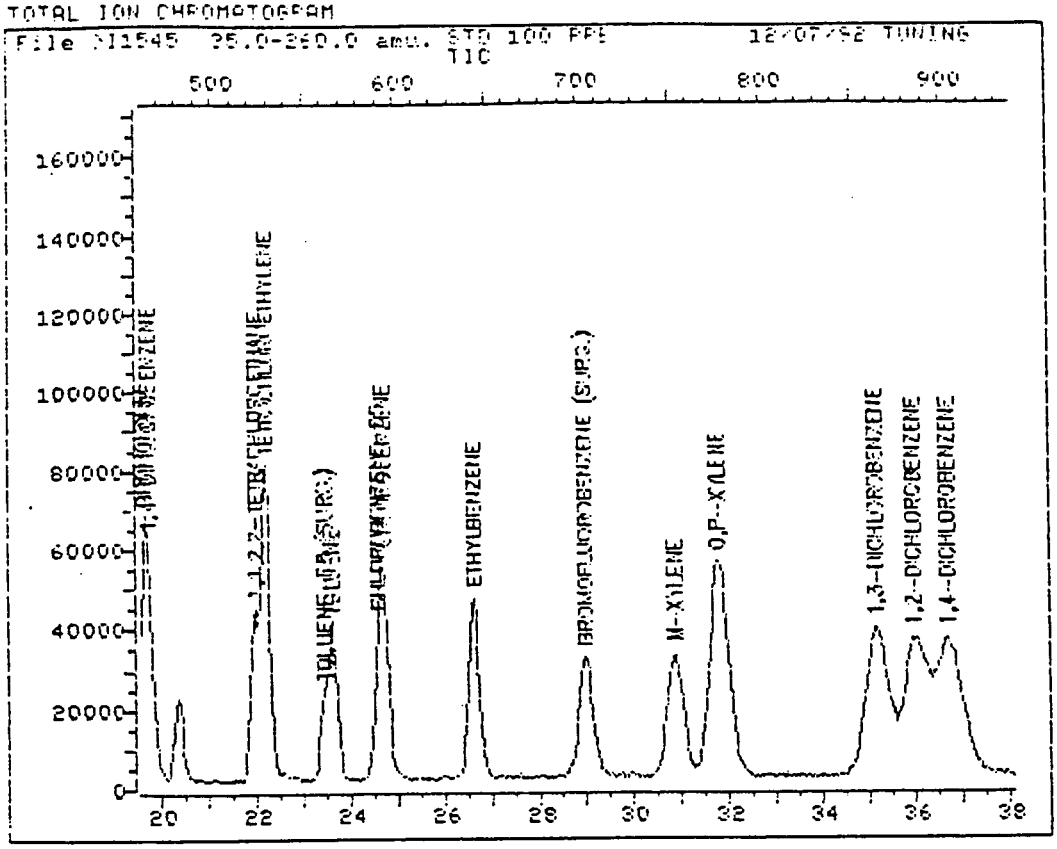
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >I1545::I2 Quant Output File: ^I1545::QT
Name: STD 100 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 09:32
Injected at: 921207 08:53

TIC page 2 of 2

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Telephone: (201) 361-4252 • Fax: (201) 989-5285

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 921207 08:46
utput File: ^11544::Q1 Injected at: 921207 08:07
ata File: >11544::12 Dilution Factor: 1.00000
ame: STD 150 PPB
isc: 12/07/92 TUNING

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.56	208	42470	50.00	UG/KG	96
2)	CHLOROMETHANE	2.06	15	66971	156.10	UG/KG	100
3)	BROMOMETHANE	3.00	39	222859	182.58	UG/KG	96
4)	VINYL CHLORIDE	3.70	57	170360	204.65	UG/KG	94
5)	CHLOROETHANE	4.74	84	88524	186.58	UG/KG	95
6)	METHYLENE CHLORIDE	6.61	132	194919	185.77	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.55	182	511667	179.95	UG/KG	100
8)	1,1-DICHLOROETHENE	9.21	199	245422	167.58	UG/KG	99
9)	1,1-DICHLOROETHANE	10.33	228	219002	161.57	UG/KG	95
10)	TRANS-1,2-DICHLOROETHYLENE	11.07	247	130218	179.50	UG/KG	96
11)	CHLOROFORM	11.50	258	337390	165.99	UG/KG	94
12)	1,2-DICHLOROETHANE	12.28	278	179293	150.65	UG/KG	93
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.20	276	58704	52.19	UG/KG	94
14)	*1,4-DIFLUOROBENZENE	19.73	470	105131	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.44	308	351627	154.64	UG/KG	93
16)	CARBON TETRACHLORIDE	13.83	318	373132	161.31	UG/KG	93
17)	BROMODICHLOROMETHANE	14.29	330	278042	155.29	UG/KG	98
18)	1,2-DICHLOROPROPANE	15.69	366	83263	139.76	UG/KG	98
19)	CIS-1,3-DICHLOROPROPENE	15.96	373	132971	137.91	UG/KG	98
20)	TRICHLOROETHYLENE	16.55	388	154418	154.06	UG/KG	92
21)	DIBROMOCHLOROMETHANE	16.97	399	288206	161.11	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.17	404	82328	136.63	UG/KG	99
23)	BENZENE	17.17	404	291681	141.23	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.25	406	143623	132.33	UG/KG	94
25)	2-CHLOROETHYL VINYL ETHER	18.37	435	29518	105.31	UG/KG	100
26)	BROMOFORM	19.61	467	326287	185.09	UG/KG	98
27)	*CHLOROBENZENE-D5	24.54	594	92679	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.18	533	194740	170.82	UG/KG	92
29)	TOLUENE-D8 (SURG.)	23.42	565	93997	47.74	UG/KG	94
30)	1,1,2,2-TETRACHLOROETHANE	21.94	527	155957	150.71	UG/KG	97
31)	TOLUENE	23.61	570	160302	146.46	UG/KG	89
32)	CHLOROBENZENE	24.66	597	254215	147.64	UG/KG	95
33)	ETHYLBENZENE	26.60	647	118936	148.20	UG/KG	91
34)	BROMOFLUOROBENZENE (SURG.)	28.93	707	123044	51.80	UG/KG	91
35)	M-XYLENE	30.87	757	158605	141.82	UG/KG	90
36)	O,P-XYLENE	31.80	781	318339	29[illegible].39	UG/KG	88
37)	1,3-DICHLOROBENZENE	35.14	867	466706	164.28	UG/KG	86
38)	1,2-DICHLOROBENZENE	36.04	890	4[illegible]63M	162.[illegible]5	UG/KG	88
39)	1,4-DICHLOROBENZENE	36.74	908	480482M	182.2[illegible]	UG/KG	89

* Compound is ISTD

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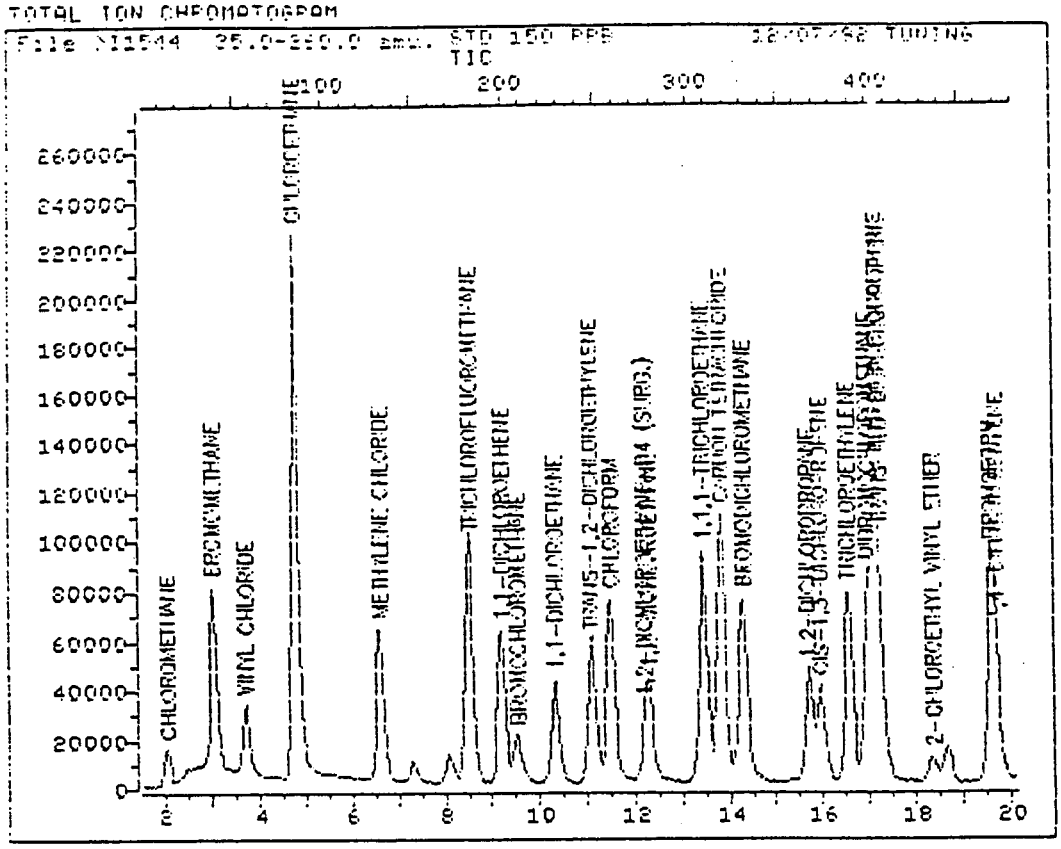
TOTAL ION CHROMATOGRAM



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Name: STD 150 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 08:46
Injected at: 921207 08:07

TIC page 1 of 2

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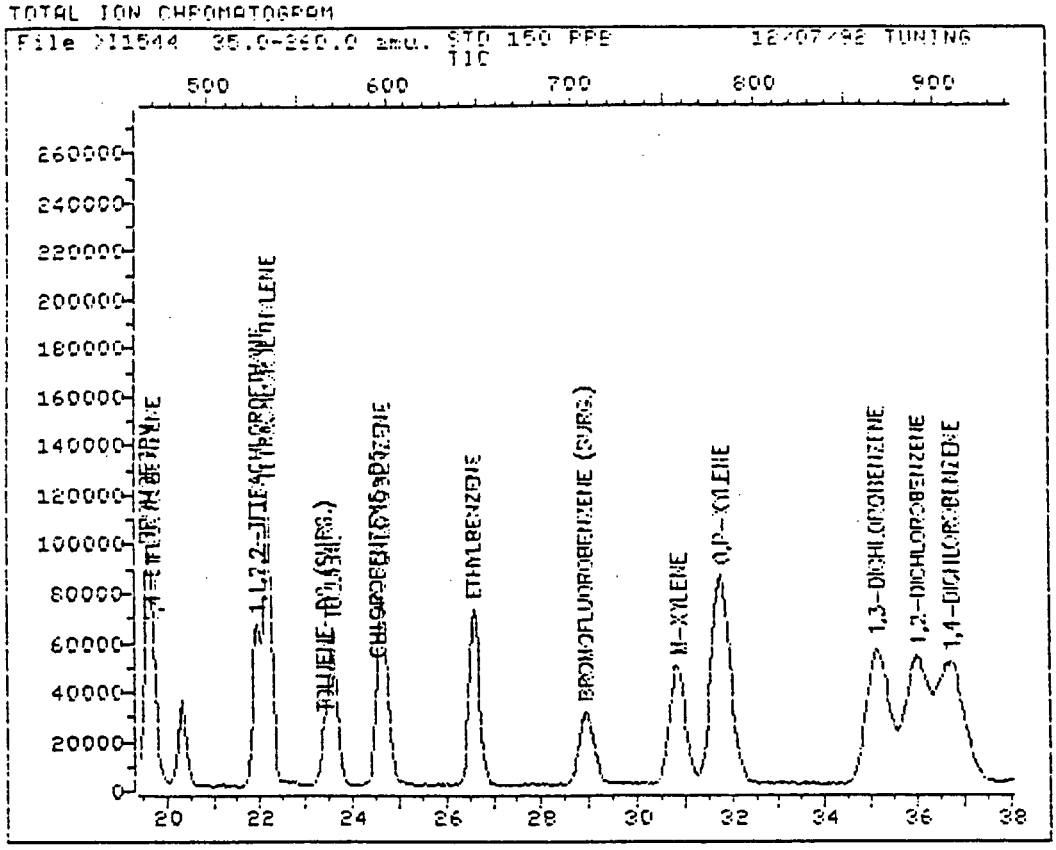
275 Franklin Road, Randolph, New Jersey 07869
Telephone (201) 361-4252 • Fax (201) 989-5288

TOTAL ION CHROMATOGRAM



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Name: STD 150 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 08:46
Injected at: 921207 08:07

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

erator ID: MANAGER Quant Rev: 6 Quant Time: 921207 07:47
tput File: ^I1543::QT Injected at: 921207 07:08
ata File: >I1543::I2 Dilution Factor: 1.00000
eme: STD 200 PPB
isc: 12/07/92 TUNING

D File: MSDS::I3
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
est Calibration: 921116 16:32

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.53	208	41586	50.00	UG/KG	92
2)	CHLOROMETHANE	2.03	15	73353	174.61	UG/KG	100
3)	BROMOMETHANE	3.01	40	327154	273.72	UG/KG	96
4)	VINYL CHLORIDE	3.67	57	242756	297.82	UG/KG	99
5)	CHLOROETHANE	4.76	85	120384	259.12	UG/KG	94
6)	METHYLENE CHLORIDE	6.58	132	261601	254.62	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.52	182	703883	252.82	UG/KG	100
8)	1,1-DICHLOROETHENE	9.18	199	348656	243.13	UG/KG	99
9)	1,1-DICHLOROETHANE	10.31	228	284100	214.05	UG/KG	97
0)	TRANS-1,2-DICHLOROETHYLENE	11.08	248	164772	231.95	UG/KG	94
1)	CHLOROFORM	11.47	258	428528	215.31	UG/KG	95
2)	1,2-DICHLOROETHANE	12.29	279	218649	187.62	UG/KG	99
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.17	276	55814	50.67	UG/KG	93
4)	*1,4-DIFLUOROBENZENE	19.74	471	92708	50.00	UG/KG	100
5)	1,1,1-TRICHLOROETHANE	13.45	309	461044	229.93	UG/KG	90
6)	CARBON TETRACHLORIDE	13.80	318	484913	237.73	UG/KG	92
7)	BROMODICHLOROMETHANE	14.27	330	339652	215.11	UG/KG	99
8)	1,2-DICHLOROPROPANE	15.70	367	98223	186.96	UG/KG	96
9)	CIS-1,3-DICHLOROPROPENE	15.98	374	158815	186.78	UG/KG	95
0)	TRICHLOROETHYLENE	16.56	389	183454	207.56	UG/KG	98
1)	DIBROMOCHLOROMETHANE	16.95	399	315060	199.72	UG/KG	100
2)	1,1,2-TRICHLOROETHANE	17.14	404	87553	164.77	UG/KG	99
3)	BENZENE	17.18	405	317026	201.74	UG/KG	100
4)	TRANS-1,3-DICHLOROPROPENE	17.22	406	167003	174.49	UG/KG	99
5)	2-CHLOROETHYL VINYL ETHER	18.38	436	32604	131.91	UG/KG	100
6)	BROMOFORM	19.63	468	332906	214.15	UG/KG	97
7)	*CHLOROBENZENE-D5	24.56	595	82963	50.00	UG/KG	100
8)	TETRACHLOROETHYLENE	22.15	533	221958	217.50	UG/KG	91
9)	TOLUENE-D8 (SURG.)	23.43	566	87769	49.80	UG/KG	84
0)	1,1,2,2-TETRACHLOROETHANE	21.96	528	176646	190.70	UG/KG	95
1)	TOLUENE	23.63	571	189334	193.24	UG/KG	91
2)	CHLOROBENZENE	24.67	598	300429	194.92	UG/KG	98
3)	ETHYLBENZENE	26.62	648	138035	192.14	UG/KG	95
4)	BROMOFLUOROBENZENE (SURG.)	28.98	709	104799	49.28	UG/KG	96
5)	M-XYLENE	30.85	757	186854	186.64	UG/KG	86
6)	O,P-XYLENE	31.78	781	387974	399.45	UG/KG	89
7)	1,3-DICHLOROBENZENE	35.12	867	570245M	221.56	UG/KG	92
8)	1,2-DICHLOROBENZENE	36.05	891	528470M	206.98	UG/KG	86
9)	1,4-DICHLOROBENZENE	36.71	908	527209M	223.37	UG/KG	87

* Compound is ISTD

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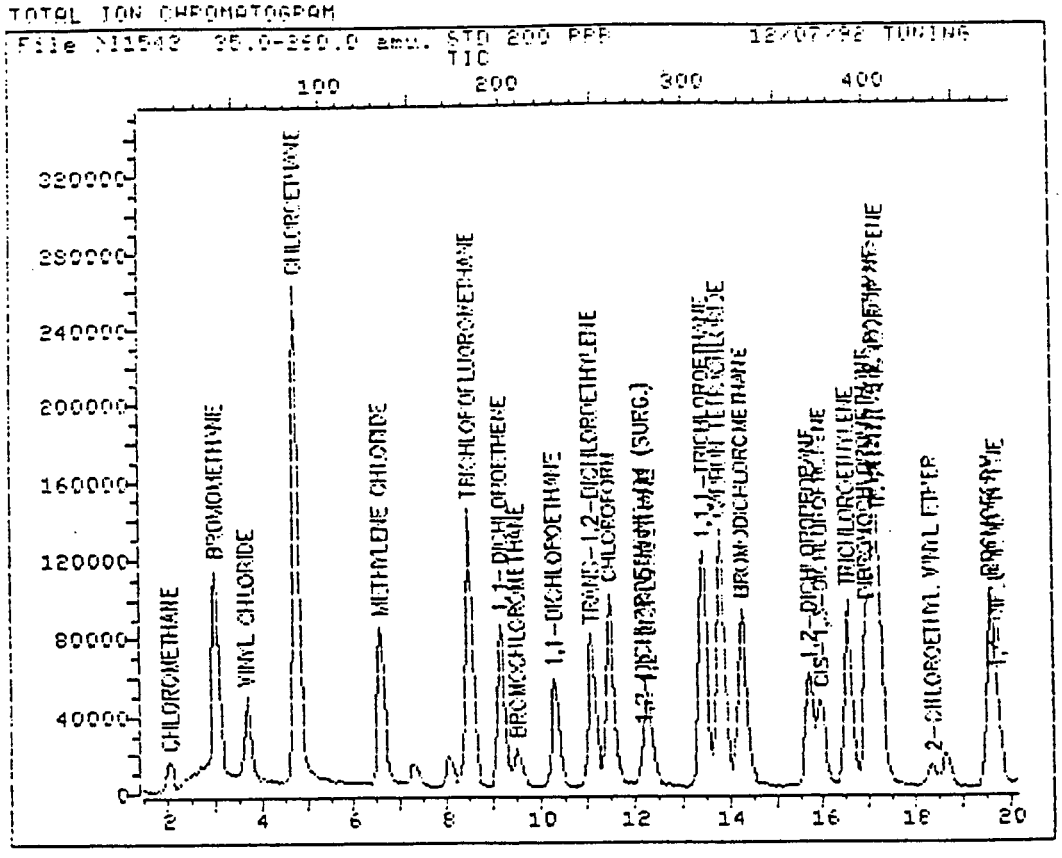
TOTAL ION CHROMATOGRAM



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Name: STD 200 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 07:47
Injected at: 921207 07:08

TIC page 1 of 2

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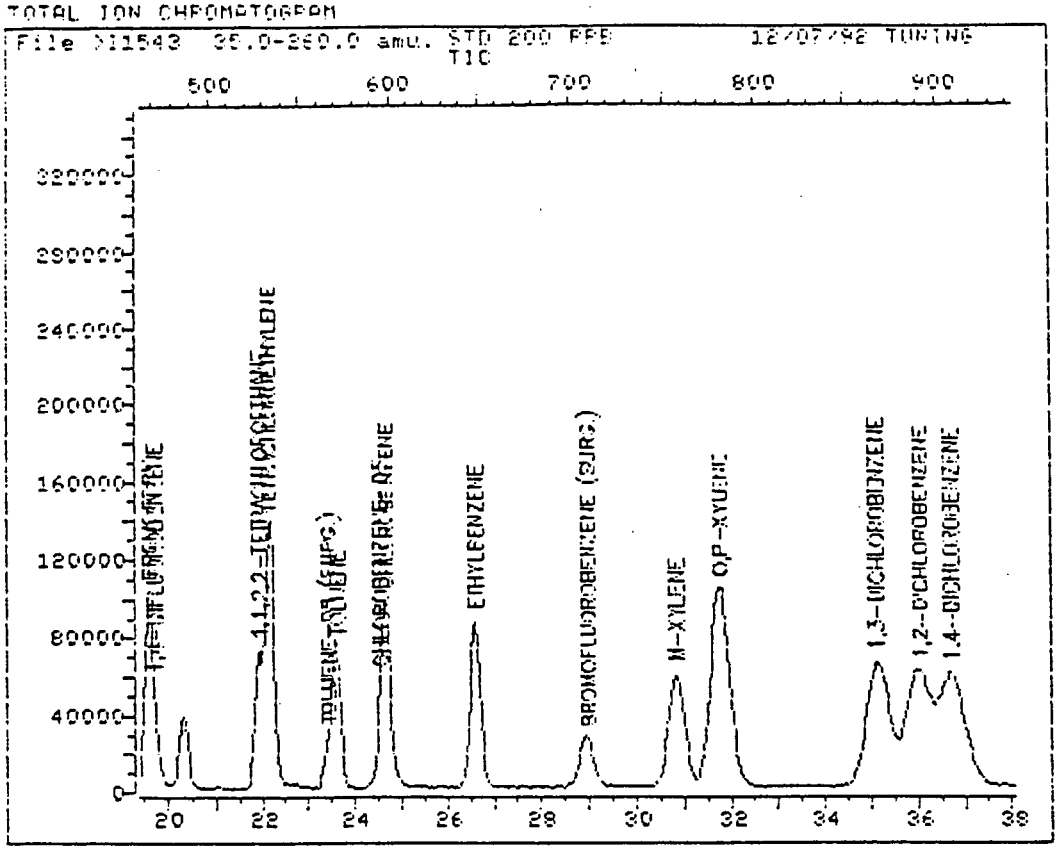
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >11543::12 Quant Output File: ^11543::Q1
Name: STD 200 PPB
Misc: 12/07/92 TUNING

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921116 16:32

Operator ID: MANAGER
Quant Time: 921207 07:47
Injected at: 921207 07:08

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/10/92

Contractor: ECRA LABS

Time: 08:45

Contract No:

Laboratory ID: >I1609

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/07/92

Minimum $\overline{RF}$ for SPCC is .30

Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.58332	.46280	20.66		**	
BROMOMETHANE	1.80980	1.87043	3.35			
VINYL CHLORIDE	1.30902	1.22674	6.29	*		
CHLOROETHANE	.69423	.66854	3.70			
METHYLENE CHLORIDE	1.76307	1.56048	11.49			
TRICHLOROFLUOROMETHANE	4.22029	3.59462	14.83			
1,1-DICHLOROETHENE	2.03957	1.73117	15.12	*		
1,1-DICHLOROETHANE	1.77113	1.60722	9.25		**	
TRANS-1,2-DICHLOROETHYLENE	1.06946	.82208	23.13			
CHLOROFORM	2.67810	2.55814	4.48	*		
1,2-DICHLOROETHANE	1.40855	1.51390	7.48			
1,2-DICHLOROETHANE-D4 (SURG.)	1.33389	1.40576	5.39			(Conc=50.00)
1,1,1-TRICHLOROETHANE	1.17465	1.34023	14.10			
CARBON TETRACHLORIDE	1.22750	1.42896	16.41			
BROMODICHLOROMETHANE	.89053	.97631	9.63			
1,2-DICHLOROPROPANE	.26346	.26154	.73	*		
CIS-1,3-DICHLOROPROPENE	.40402	.45481	12.57			
TRICHLOROETHYLENE	.49496	.50098	1.22			
DIBROMOCHLOROMETHANE	.98930	.91440	7.57			
1,1,2-TRICHLOROETHANE	.26680	.27094	1.55			
BENZENE	.81515	.81942	.52			
TRANS-1,3-DICHLOROPROPENE	.47169	.49860	5.70			
2-CHLOROETHYL VINYL ETHER	.08645	.11664	34.92			
BROMOFORM	1.13083	1.01317	10.40		**	
TETRACHLOROETHYLENE	.82722	.67707	18.15			
TOLUENE-D8 (SURG.)	1.01065	1.02552	1.47			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.55997	.58016	3.61		**	
TOLUENE	.57521	.55793	3.00	*		
CHLOROBENZENE	.92723	.90566	2.33		**	
ETHYLBENZENE	.43398	.43937	1.24	*		
BROMOFLUOROBENZENE (SURG.)	1.32644	1.44281	8.77			(Conc=50.00)
M-XYLENE	.58203	.58402	.34			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/10/92

Contractor: ECRA LABS

Time: 08:45

Contract No:

Laboratory ID: >I1609

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/07/92

Minimum $\overline{RF}$ for SPCC is .30

Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
O,P-XYLENE	.58652	.61779	5.33			(Conc=200.00)
1,3-DICHLOROBENZENE	1.78770	1.75542	1.81			
1,2-DICHLOROBENZENE	1.72375	1.77631	3.05			
1,4-DICHLOROBENZENE	1.76801	1.60258	9.36			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 921210 09:31
utput File: ^I1609::QT Injected at: 921210 08:45
ata File: >I1609::13 Dilution Factor: 1.00000
ame: STD 100 PPB
isc: 12/10/92 TUNING, QV0011

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921207 11:27

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.55	208	36756	50.00	UG/KG	89
2)	CHLOROMETHANE	2.05	15	34021	79.34	UG/KG	100
3)	BROMOMETHANE	3.02	40	137499	103.35	UG/KG	99
4)	VINYL CHLORIDE	3.72	58	90180	93.71	UG/KG	97
5)	CHLOROETHANE	4.77	85	49146	96.30	UG/KG	91
6)	METHYLENE CHLORIDE	6.60	132	114714	88.51	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.54	182	264248	85.17	UG/KG	100
8)	1,1-DICHLOROETHENE	9.20	199	127262	84.88	UG/KG	93
9)	1,1-DICHLOROETHANE	10.32	228	118150	90.75	UG/KG	99
10)	TRANS-1,2-DICHLOROETHYLENE	11.10	248	60433	76.87	UG/KG	87
11)	CHLOROFORM	11.49	258	188054	95.52	UG/KG	89
12)	1,2-DICHLOROETHANE	12.26	278	111290	107.48	UG/KG	98
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.18	276	51670	52.69	UG/KG	94
14)	*1,4-DIFLUOROBENZENE	19.75	471	75657	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.47	309	202795	114.10	UG/KG	80
16)	CARBON TETRACHLORIDE	13.81	318	216224	116.41	UG/KG	89
17)	BROMODICHLOROMETHANE	14.28	330	147729	109.63	UG/KG	99
18)	1,2-DICHLOROPROPANE	15.72	367	39574	99.27	UG/KG	99
19)	CIS-1,3-DICHLOROPROPENE	15.99	374	68819	112.57	UG/KG	96
20)	TRICHLOROETHYLENE	16.57	389	75805	101.22	UG/KG	94
21)	DIBROMOCHLOROMETHANE	17.00	400	138362	92.43	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.15	404	40997	101.55	UG/KG	98
23)	BENZENE	17.19	405	123990	100.52	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.27	407	75445	105.70	UG/KG	95
25)	2-CHLOROETHYL VINYL ETHER	18.40	436	17649	134.92	UG/KG	100
26)	BROMOFORM	19.64	468	153307	89.60	UG/KG	95
27)	*CHLOROBENZENE-D5	24.57	595	70688	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.20	534	95722	81.85	UG/KG	94
29)	TOLUENE-D8 (SURG.)	23.44	566	72492	50.74	UG/KG	87
30)	1,1,2,2-TETRACHLOROETHANE	21.97	528	82021	103.61	UG/KG	97
31)	TOLUENE	23.64	571	78878	97.00	UG/KG	91
32)	CHLOROBENZENE	24.69	598	128039	97.67	UG/KG	96
33)	ETHYLBENZENE	26.63	648	62117	101.24	UG/KG	98
34)	BROMOFLUOROBENZENE (SURG.)	28.96	708	101989	54.39	UG/KG	99
35)	M-XYLENE	30.82	756	82567	100.34	UG/KG	89
36)	O,P-XYLENE	31.79	781	174680	210.66	UG/KG	84
37)	1,3-DICHLOROBENZENE	35.06	865	248174M	98.19	UG/KG	91
38)	1,2-DICHLOROBENZENE	35.91	887	251128M	103.05	UG/KG	96
39)	1,4-DICHLOROBENZENE	36.77	909	226567M	90.64	UG/KG	95

* Compound is ISTD

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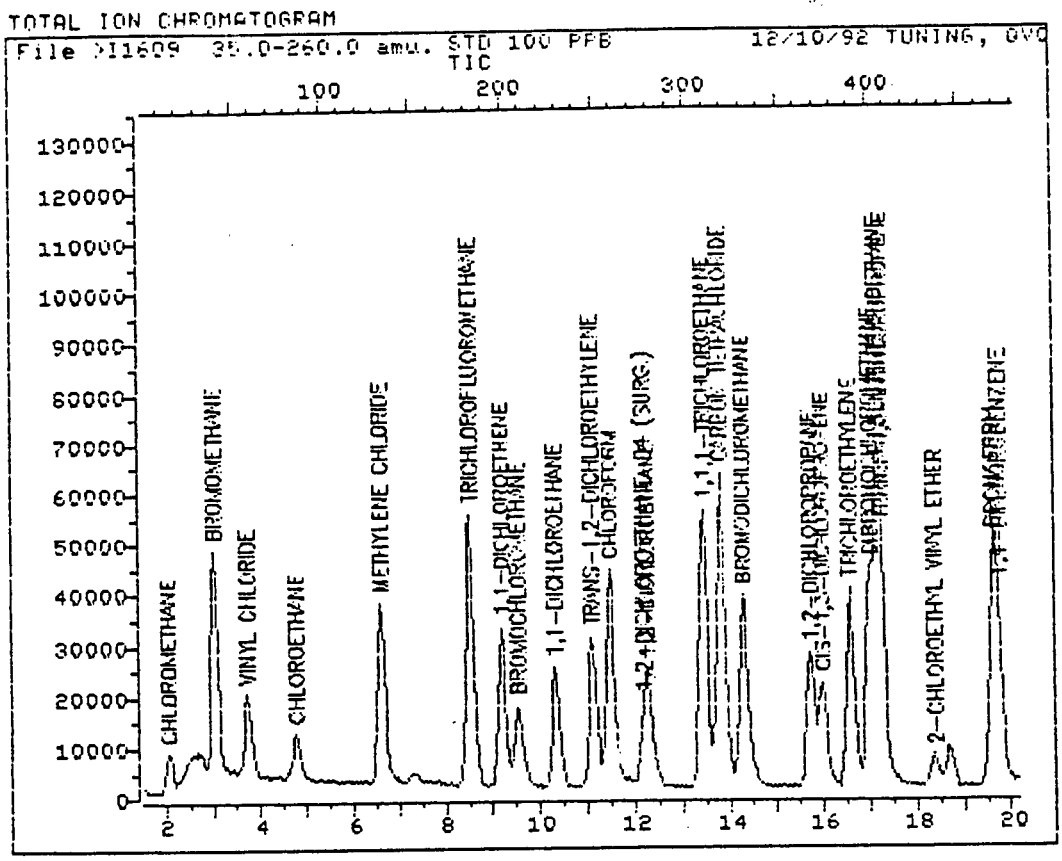
TOTAL ION CHROMATOGRAM



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Name: STD 100 PPB
Misc: 12/10/92 TUNING, QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921207 11:27

Operator ID: MANAGER
Quant Time: 921210 09:31
Injected at: 921210 08:45

TIC page 1 of 2

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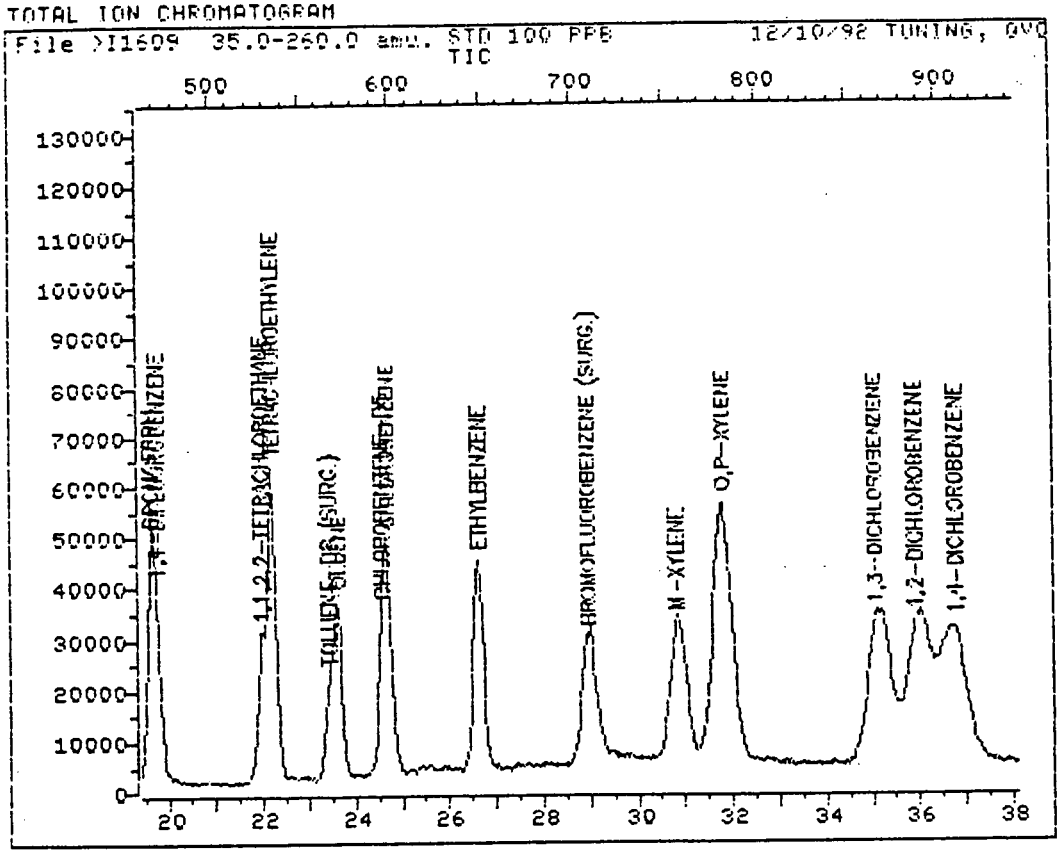
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >I1609::I3 Quant Output File: ^I1609::QT
Name: STD 100 PPB
Misc: 12/10/92 TUNING, QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921207 11:27

Operator ID: MANAGER
Quant Time: 921210 09:31
Injected at: 921210 08:45

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/11/92

Contractor: ECRA LABS

Time: 11:22

Contract No:

Laboratory ID: >I1627

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/07/92

Minimum $\overline{RF}$ for SPCC is .30 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
CHLOROMETHANE	.58332	.46197	20.80		**	
BROMOMETHANE	1.80980	1.72881	4.48			
VINYL CHLORIDE	1.30902	1.14465	12.56	*		
CHLOROETHANE	.69423	.66405	4.35			
METHYLENE CHLORIDE	1.76307	1.43858	18.40			
TRICHLOROFLUOROMETHANE	4.22029	3.36431	20.28			
1,1-DICHLOROETHENE	2.03957	1.79823	11.83	*		
1,1-DICHLOROETHANE	1.77113	1.57444	11.11		**	
TRANS-1,2-DICHLOROETHYLENE	1.06946	.86960	18.69			
CHLOROFORM	2.67810	2.52001	5.90	*		
1,2-DICHLOROETHANE	1.40855	1.41726	.62			
1,2-DICHLOROETHANE-D4 (SURG.)	1.33389	1.38153	3.57			(Conc=50.00)
1,1,1-TRICHLOROETHANE	1.17465	1.45942	24.24			
CARBON TETRACHLORIDE	1.22750	1.57956	28.68			
BROMODICHLOROMETHANE	.89053	.99386	11.60			
1,2-DICHLOROPROPANE	.26346	.27972	6.17	*		
CIS-1,3-DICHLOROPROPENE	.40402	.45347	12.24			
TRICHLOROETHYLENE	.49496	.49867	.75			
DIBROMOCHLOROMETHANE	.98930	.99859	.94			
1,1,2-TRICHLOROETHANE	.26680	.29229	9.56			
BENZENE	.81515	.82300	.96			
TRANS-1,3-DICHLOROPROPENE	.47169	.53202	12.79			
2-CHLOROETHYL VINYL ETHER	.08645	.12373	43.13			
BROMOFORM	1.13083	1.10486	2.30		**	
TETRACHLOROETHYLENE	.82722	.69623	15.84			
TOLUENE-D8 (SURG.)	1.01065	1.02937	1.85			(Conc=50.00)
1,1,2,2-TETRACHLOROETHANE	.55997	.55605	.70		**	
TOLUENE	.57521	.54762	4.80	*		
CHLOROBENZENE	.92723	.92633	.10		**	
ETHYLBENZENE	.43398	.43480	.19	*		
BROMOFLUOROBENZENE (SURG.)	1.32644	1.42498	7.43			(Conc=50.00)
M-XYLENE	.58203	.58776	.98			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ECRA

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Continuing Calibration Check
HSL Compounds

Case No:

Calibration Date: 12/11/92

Contractor: ECRA LABS

Time: 11:22

Contract No:

Laboratory ID: >I1627

Instrument ID: HPMSD-VOA

Initial Calibration Date: 12/07/92

Minimum $\overline{RF}$ for SPCC is .30

Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
O,P-XYLENE	.58652	.61645	5.10			(Conc=200.00)
1,3-DICHLOROBENZENE	1.78770	1.89287	5.88			
1,2-DICHLOROBENZENE	1.72375	1.40157	18.69			
1,4-DICHLOROBENZENE	1.76801	1.71581	2.95			

RF - Response Factor from daily standard file at 100.00 UG/L

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: JOHN
utput File: ^I1627::QT
ata File: >I1627::13
ame: VSTD 100
isc: TUNING STD

Quant Rev: 6
Quant Time: 921211 12:01
Injected at: 921211 11:22
Dilution Factor: 1.00000

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921211 10:11

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.55	208	34681	50.00	UG/KG	95
2)	CHLOROMETHANE	2.06	15	32043	99.82	UG/KG	100
3)	BROMOMETHANE	3.03	40	119914	92.43	UG/KG	93
4)	VINYL CHLORIDE	3.73	58	79395	93.31	UG/KG	97
5)	CHLOROETHANE	4.82	86	46060	99.33	UG/KG	92
6)	METHYLENE CHLORIDE	6.60	132	99783	92.19	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.54	182	233355	93.59	UG/KG	100
8)	1,1-DICHLOROETHENE	9.24	200	124729	103.87	UG/KG	91
9)	1,1-DICHLOROETHANE	10.33	228	109206	97.96	UG/KG	99
10)	TRANS-1,2-DICHLOROETHYLENE	11.10	248	60317	105.78	UG/KG	94
11)	CHLOROFORM	11.49	258	174793	98.51	UG/KG	88
12)	1,2-DICHLOROETHANE	12.31	279	98304	93.62	UG/KG	99
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.19	276	47913	49.14	UG/KG	95
14)	*1,4-DIFLUOROBENZENE	19.76	471	68922	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.47	309	201172	108.89	UG/KG	89
16)	CARBON TETRACHLORIDE	13.86	319	217733	110.54	UG/KG	96
17)	BROMODICHLOROMETHANE	14.32	331	136997	101.80	UG/KG	96
18)	1,2-DICHLOROPROPANE	15.72	367	38558	106.95	UG/KG	97
19)	CIS-1,3-DICHLOROPROPENE	15.99	374	62508	99.71	UG/KG	96
20)	TRICHLOROETHYLENE	16.58	389	68738	99.54	UG/KG	92
21)	DIBROMOCHLOROMETHANE	17.00	400	137650	109.21	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.16	404	40291	107.88	UG/KG	91
23)	BENZENE	17.20	405	113446	100.44	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.28	407	73336	106.70	UG/KG	99
25)	2-CHLOROETHYL VINYL ETHER	18.36	435	17056	106.08	UG/KG	100
26)	BROMOFORM	19.64	468	152299	109.05	UG/KG	95
27)	*CHLOROBENZENE-D5	24.57	595	66537	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.17	533	92650	102.83	UG/KG	85
29)	TOLUENE-D8 (SURG.)	23.45	566	68491	50.19	UG/KG	87
30)	1,1,2,2-TETRACHLOROETHANE	21.97	528	73996	95.84	UG/KG	99
31)	TOLUENE	23.64	571	72874	98.15	UG/KG	89
32)	CHLOROBENZENE	24.69	598	123270	102.28	UG/KG	99
33)	ETHYLBENZENE	26.67	649	57860	98.96	UG/KG	92
34)	BROMOFLUOROBENZENE (SURG.)	29.00	709	94814	49.38	UG/KG	93
35)	M-XYLENE	30.86	757	78216	100.64	UG/KG	86
36)	O,P-XYLENE	31.80	781	164067	199.57	UG/KG	84
37)	1,3-DICHLOROBENZENE	35.17	868	251892	107.83	UG/KG	91
38)	1,2-DICHLOROBENZENE	36.15	893	186513M	78.90	UG/KG	91
39)	1,4-DICHLOROBENZENE	36.65	906	228330M	107.07	UG/KG	92

* Compound is ISTD

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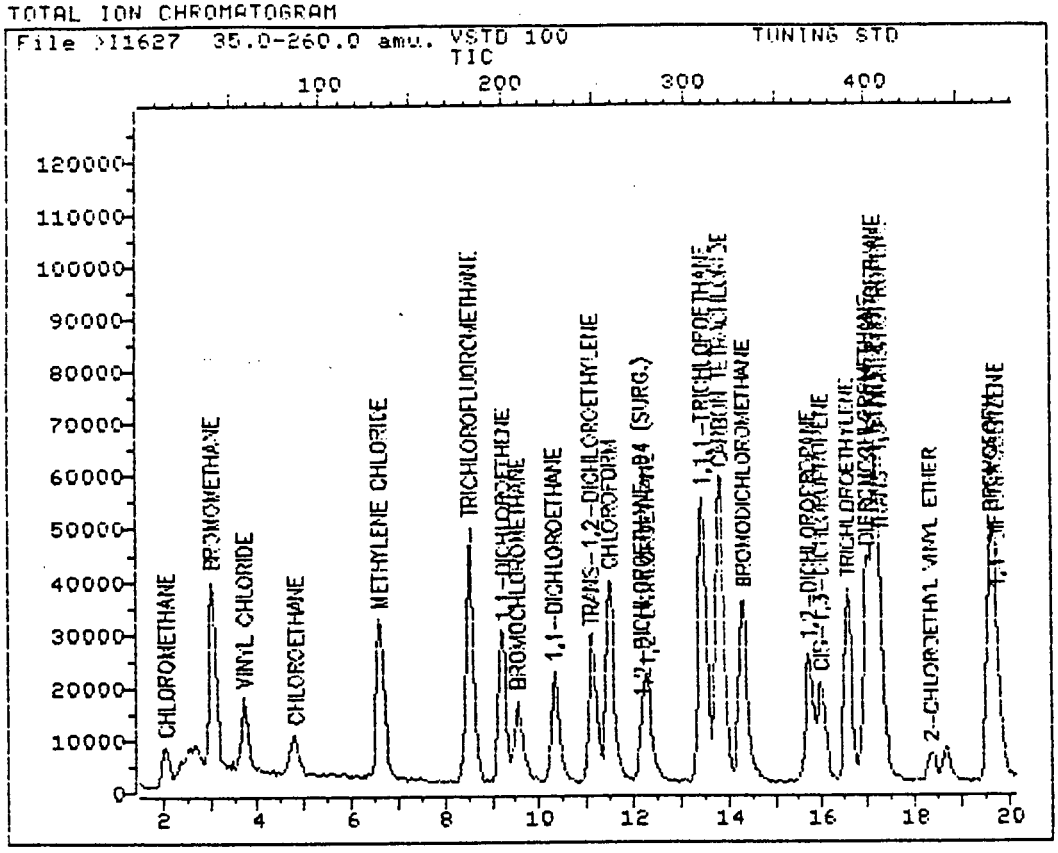
TOTAL ION CHROMATOGRAM



Data File: >I1627::13 Quant Output File: ^I1627::QT
Name: VSTD 100
Misc: TUNING STD

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: JOHN
Quant Time: 921211 12:01
Injected at: 921211 11:22

TIC page 1 of 2

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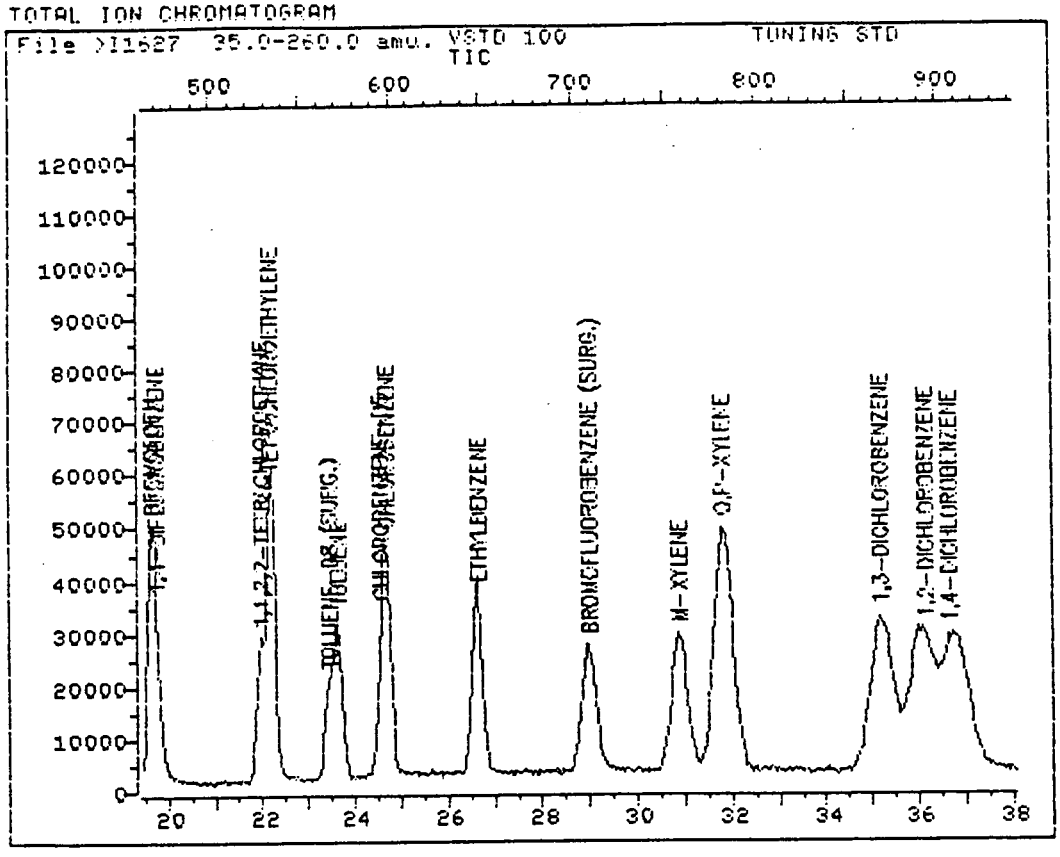
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >I1627::13, Quant Output File: ^I1627::QT
Name: VSTD 100
Misc: TUNING STD

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: JOHN
Quant Time: 921211 12:01
Injected at: 921211 11:22

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 3.0

QA/QC DATA SUMMARY

TARGETED COMPOUND LIST
SURROGATE RECOVERY RESULTS
METHOD BLANK RESULTS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

PRACTICAL QUANTITATIVE LIMITS (PQL) FOR VOLATILE ORGANICS

		Ground Water	Low Soil/ Sediment	Drinking Water
	EPA Method -	624	8240	524.1
Volatiles	CAS #	ug/L	ug/Kg	ug/L
1. Chloromethane	74-87-3	10	10	0.5
2. Bromomethane	74-83-9	10	10	0.5
3. Vinyl Chloride	75-01-4	10	10	0.3
4. Chloroethane	75-00-3	10	10	0.5
5. Methylene Chloride	75-09-2	5	5	1.
6.@ Acetone	67-64-1	100	100	N/A
7.@ Carbon Disulfide	75-15-0	5	5	N/A
8. 1,1-Dichloroethene	75-35-4	5	5	0.2
9. 1,1-Dichloroethane	75-35-3	5	5	0.2
10. trans-1,2-Dichloroethene (*)	156-60-5	5	5	0.2
11. cis-1,2-Dichloroethene (*)	156-59-4	5	5	.2
12. Chloroform	67-66-3	5	5	0.2
13. 1,2-Dichloroethane	107-06-2	5	5	0.2
14.@2-Butanone/MEK	78-93-3	100	100	N/A
15. 1,1,1-Trichloroethane	71-55-6	5	5	0.3
16. Carbon Tetrachloride	56-23-5	5	5	0.3
17.@Vinyl Acetate	108-05-4	50	50	N/A
18. Bromodichloromethane	75-27-4	5	5	0.5
19. 1,1,2,2,-Tetrachloroethane	79-34-5	5	5	0.4
20. 1,2-Dichloropropane	78-87-5	5	5	0.5
21. Trichloroethene	79-01-6	5	5	0.4
22. Dibromochloromethane	124-48-1	5	5	0.4
23. 1,1,2-Trichloroethane	79-00-5	5	5	0.5
24. Benzene	71-43-2	5	5	0.1
25. cis-1,3-Dichloropropene	0061-01-5	5	5	0.5
26. 2-Chloroethyl Vinyl Ether	110-75-8	10	10	N/A
27. Bromoform	75-25-2	5	5	0.7
28.@2-Hexanone	591-78-6	50	50	N/A
29.@4-Methyl-2-pentanone/MIBK	108-10-1	50	50	N/A
30. Tetrachloroethene	127-18-4	5	5	0.3

@ - Hazardous substance list compounds.
* - Analytes co-elute based on above referenced EPA method.

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		Ground Water	Low Soil/ Sediment	Drinking Water
	EPA Method -	624	8240	524.1
Volatiles	CAS Number	ug/L	ug/Kg	
31. Toluene	108-88-3	5	5	0.1
32. Chlorobenzene	108-90-7	5	5	0.1
33. Ethylbenzene	100-41-4	5	5	0.5
34.@Styrene	100-42-5	5	5	0.2
35. M-Xylene	133-02-7	5	5	0.5
36.@O-Xylene (*)	95-47-6	5	5	0.5
37. P-Xylene (*)	106-42-3	5	5	0.5
38. Trichlorofluoromethane	75-69-4	10	10	0.2
39. 1,3-Dichlorobenzene	541-73-1	10	10	1.0
40. 1,4-Dichlorobenzene	106-46-7	10	10	2.0
41. 1,2-Dichlorobenzene	95-50-1	10	10	1.0
42. Dichlorodifluromethane	75-71-8	N/A	N/A	2.
43. Dibromomethane	74-95-3	N/A	N/A	0.3
44. 2,2-Dichloropropane	590-20-7	N/A	N/A	0.5
45. 1,1-Dichloropropene (*)	563-58-6	N/A	N/A	0.5
46. trans-1,3-Dichloro- (*) propene	10061-02-6	5	5	0.5
47. 1,3-Dichloropropane	142-28-9	N/A	N/A	0.1
48. 1,2,3-Trichloropropane	96-18-4	N/A	N/A	0.5
49. 1,2-Dibromo-3-chloropropane	96-12-8	N/A	N/A	2.
50. Bromobenzene	108-86-1	N/A	N/A	0.1
51. 2-Chlorotoluene	95-49-8	N/A	N/A	0.5
52. 4-Chlorotoluene	106-43-4	N/A	N/A	0.5
53. Bromochloromethane	74-97-5	N/A	N/A	0.5
54. 1,1,1,2-Tetrachloroethane	630-20-6	N/A	N/A	0.5
55. 1,2-Dibromomethane (EDB)	106-93-4	N/A	N/A	0.4

Sample PQL's are highly matrix-dependent. The PQL's listed herein are provided for guidance and may not always be achieveable. See the following information for further guidance on matrix-dependent PQL's.

PQL's listed for soil/sediment are based on wet weight. Normally data is reported on a dry weight basis; therefore, PQL's will be higher, based on the % moisture in each sample.

@ - Hazardous substance list compounds.
* - Analytes co-elute based on obove referenced EPA Method.

Other Matrices	Possible Factor
Water miscible liquid waste	50
High-level soil and sludges	125
Non-water miscible waste	500

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Surrogate Percent Recovery Summary

Project: ESI/KNICKERBOCKER Project Number: 92-032

Sample ID No.	Matrix	File ID	1,2 Dichloro-Ethane-D4	Toluene-D8	Bromofluoro-Benzene
01: METHOD BLANK	WATER	G5600	77	99	103
02: METHOD BLANK	WATER	G5618	81	95	103
03: METHOD BLANK	WATER	I1610	107	98	96
04: METHOD BLANK	WATER	I1629	106	102	103
05: MATRIX SPIKE	WATER	G5605	93	92	102
06: MATRIX SPIKE DUP	WATER	G5606	88	96	106
07: MATRIX SPIKE	SOIL	I1614	108	111	95
08: MATRIX SPIKE DUP	SOIL	I1615	116	114	94
09: 92-032-A01	SOIL	I1635	119	111	91
10: 92-032-FB	WATER	I1625	87	92	102
11:					
12:					
13:					
14:					
15:					
16:					
17:					
18:					
19:					
20:					
Soil QA/QC Limits			(70-121)	(81-117)	(74-121)
Water QA/QC Limits			(76-114)	(88-110)	(86-115)

NO.: 0 Out Of: 30 ; Outside of QC Limits

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 624

Project: .

ID#: METHOD BLANK

Lab ID#: N/A

Sampled: N/A
Received: N/A
Extracted: N/A
Analyzed: 12/10/92 9:50
Data File: >I1610

Case#: N/A*
Contract#: N/A*
Lab Code: N/A*
Decanted: NO

Matrix: SOIL
Extraction: N/A
Sample Vol: 5ML
Dil. Fct. 1.0000
MDL: 5

CAS NO.	COMPOUND	CONCENTRATION UG/KG	Q
74-87-3	Chloromethane	10.	IU
74-83-9	Bromomethane	10.	IU
75-01-4	Vinyl Chloride	10.	IU
75-00-3	Chloroethane	10.	IU
75-09-2	Methylene Chloride	5.	IJB
75-69-4	Trichlorofluoromethane	5.	IU
75-35-4	1,1-Dichloroethene	5.	IU
75-34-3	1,1-Dichloroethane	5.	IU
540-59-0	Trans-1,2-Dichloroethylene	5.	IU
67-66-3	Chloroform	5.	IU
107-02-2	1,2-Dichloroethane	5.	IU
71-55-6	1,1,1-Trichloroethane	5.	IU
56-23-5	Carbon Tetrachloride	5.	IU
75-27-4	Bromodichloromethane	5.	IU
78-87-5	1,2-Dichloropropane	5.	IU
10061-01-5	cis-1,3-Dichloropropene	5.	IU
110-75-8	2-Chloroethyl vinyl ether	10.	IU
79-01-6	Trichloroethylene	5.	IU
124-48-1	Dibromochloromethane	5.	IU
79-00-5	1,1,2-Trichloroethane	5.	IU
71-43-2	Benzene	5.	IU
10061-02-6	trans-1,3-Dichloropropene	5.	IU
75-25-2	Bromoform	5.	IU
127-18-4	Tetrachloroethylene	5.	IU
79-34-5	1,1,2,2-Tetrachloroethane	5.	IU
108-88-3	Toluene	5.	IU
108-90-7	Chlorobenzene	5.	IU
100-41-4	Ethylbenzene	5.	IU
108-38-3	M-Xylene	5.	IU
95-47-6	O,P-Xylene	5.	IU
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	IU
541-73-1	1,3-Dichlorobenzene	5.	IU
106-46-7	1,4-Dichlorobenzene	5.	IU

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the [illegible]

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ECRA
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1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES, INC.

Client Name: .

SAMPLE ID #: METHOD BLANK

LAB ID # N/A

Data File: >I1610

Extraction: N/A

EPA METHOD # 624

Dilution Factor: 1.00

Concentration Units: UG/KG

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
	NO PEAKS DETECTED			

NR = Not reviewed

FORM I SV-TIC

1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 921211 10:12
utput File: ^I1610::QT Injected at: 921210 09:50
ata File: >I1610::I3 Dilution Factor: 1.00000
ame: .
isc: METHOD BLANK 12/10/92 TUNING, QV0011

D File: MSDS::I3
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921211 10:11

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.60	210	35767	50.00	UG/KG	90
6)	METHYLENE CHLORIDE	6.69	135	5122	4.59	UG/KGJ	100
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.20	277	53778	53.48	UG/KG 107	93
4)	*1,4-DIFLUOROBENZENE	19.73	471	88592	50.00	UG/KG	100
7)	*CHLOROBENZENE-D5	24.54	595	83228	50.00	UG/KG	100
9)	TOLUENE-D8 (SURG.)	23.42	566	83577	48.96	UG/KG 98	91
4)	BROMOFLUOROBENZENE (SURG.)	28.89	707	114842	47.82	UG/KG 96	86

* Compound is ISTD

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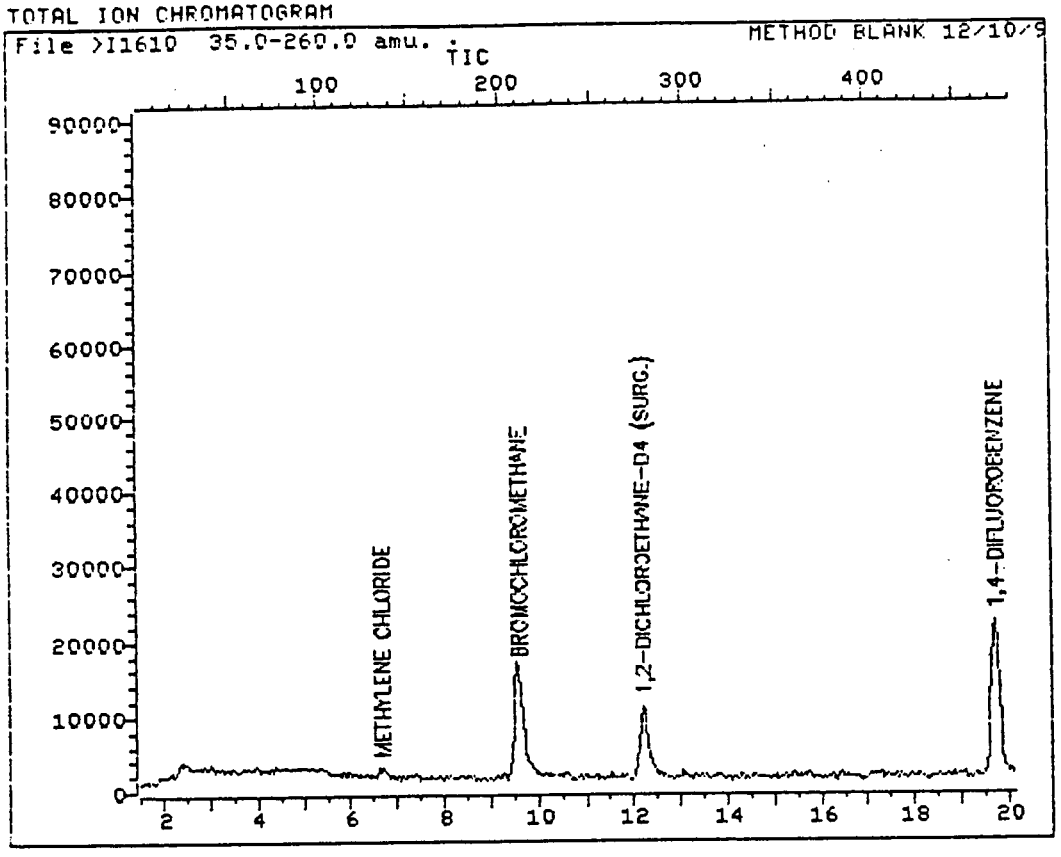
TOTAL ION CHROMATOGRAM



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Name: .
Misc: METHOD BLANK 12/10/92 TUNING, QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:12
Injected at: 921210 09:50

TIC page 1 of 2

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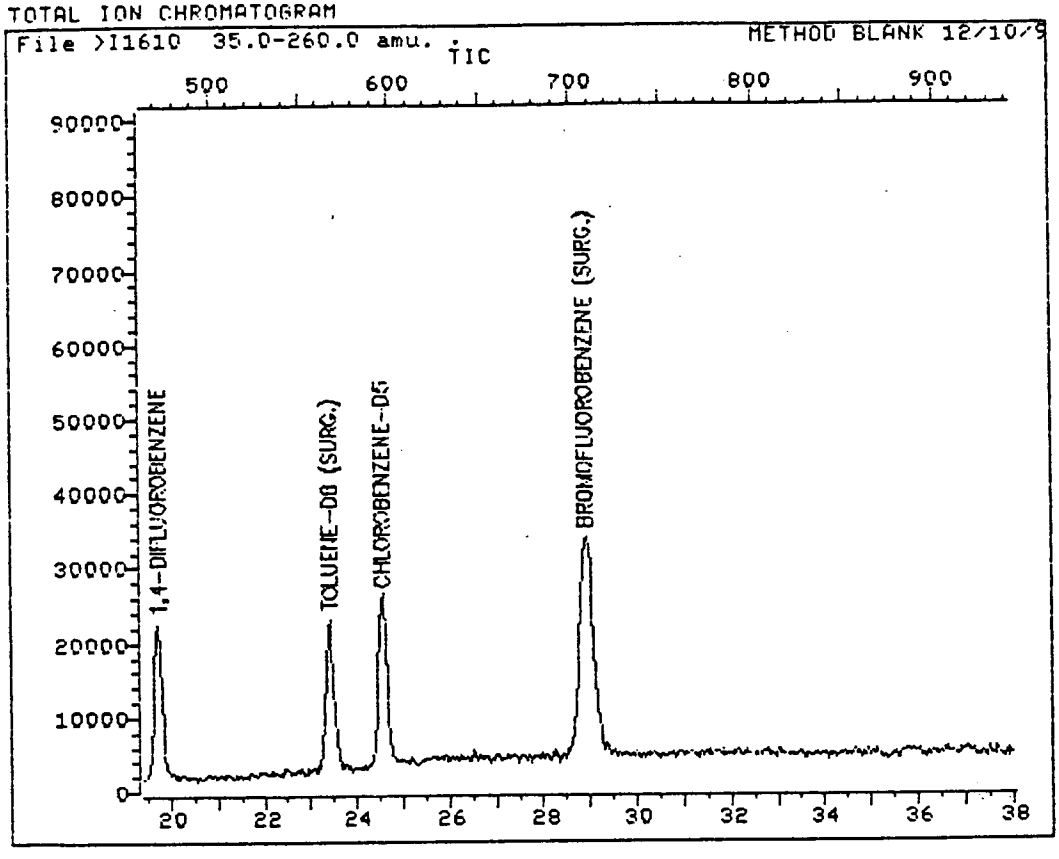
TOTAL ION CHROMATOGRAM



Data File: >I1610::I3 Quant Output File: ^I1610::QT
Name: .
Misc: METHOD BLANK 12/10/92 TUNING, QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:12
Injected at: 921210 09:50

TIC page 2 of 2

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MS data file header from : >I1610

Sample: . Operator: MANAGER MS 12/10/92 9:50
Misc : METHOD BLANK 12/10/92 TUNING, QV0011
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: VOAI Tuning file: MTI001 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 290 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	20.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>I1610 . METHOD BLANK 12/10/92 TUNING, QV0011
35.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 15 Bunching: 1
Dnslope: 0.00 Results File I1610 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	2.04	9	15	16	977	12258	12258	28.32	6.504
2	2.15	16	18	20	1207	11464	8730	20.17	4.632
3	2.42	20	25	30	2574	53811	43282	100.00	22.967
4	2.70	30	32	35	1634	23154	15916	36.77	8.446
5	2.85	35	36	38	1629	13673	8699	20.10	4.616
6	3.01	38	40	42	1864	18522	11148	25.76	5.915
7	4.36	72	75	78	1034	27572	8624	19.93	4.576
8	7.39	147	153	156	902	17284	12359	28.55	6.558
9	17.09	398	403	404	894	9441	9175	21.20	4.869
10	25.01	606	607	610	1411	27173	10297	23.79	5.464
11	25.17	610	611	615	1341	34676	7830	18.09	4.155
12	27.57	671	673	675	1172	32195	7417	17.14	3.936
13	28.23	688	690	693	1720	44226	12469	28.81	6.616
14	34.14	840	842	845	1195	43178	7617	17.60	4.042
15	35.77	880	884	886	1230	59048	12634	29.19	6.704

baseline

Sum of corrected areas: 188455.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	215242.	9.60	1.49 - 14.67
2	50.0	255304.	19.73	14.67 - 22.14
3	50.0	316188.	24.54	22.14 - 38.06

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1.00 Amount Used (AU) = 1.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

00141

Unknown Concentration = $\frac{\text{Conc Int Std}}{}$ * Area Unk * Correction Factor

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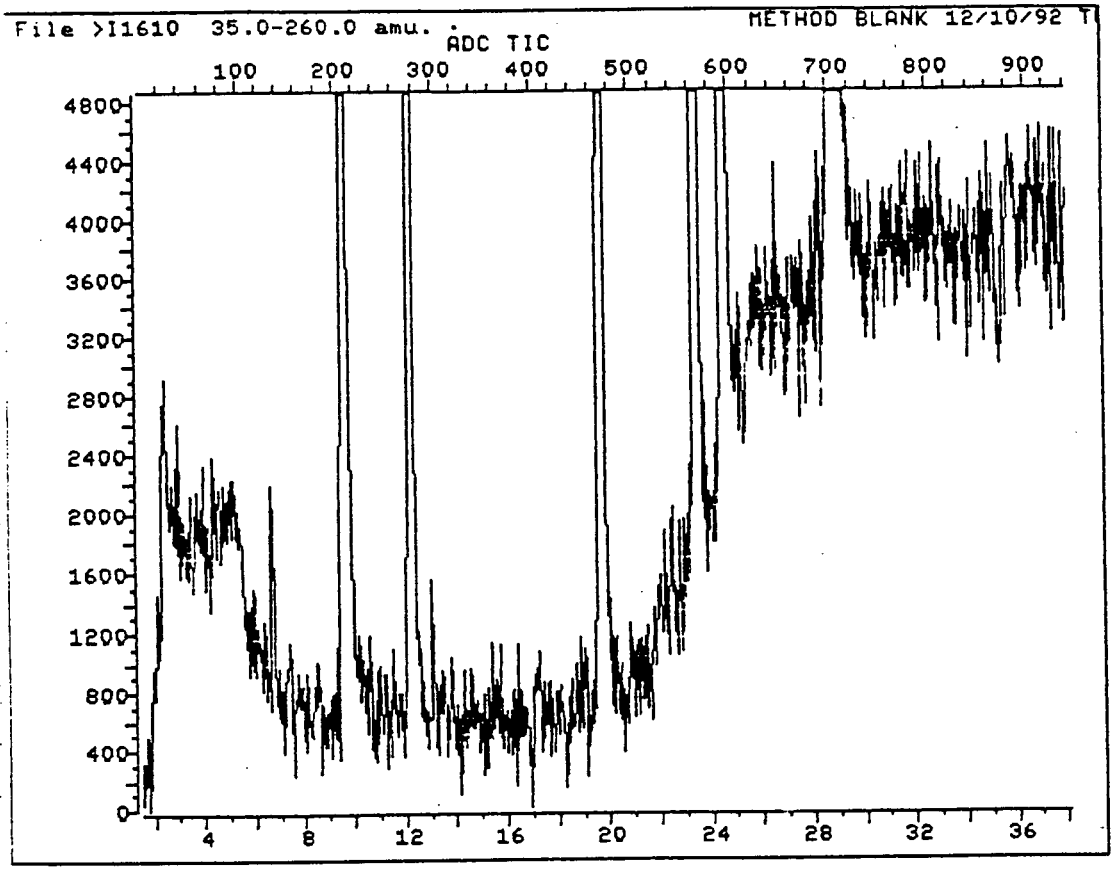

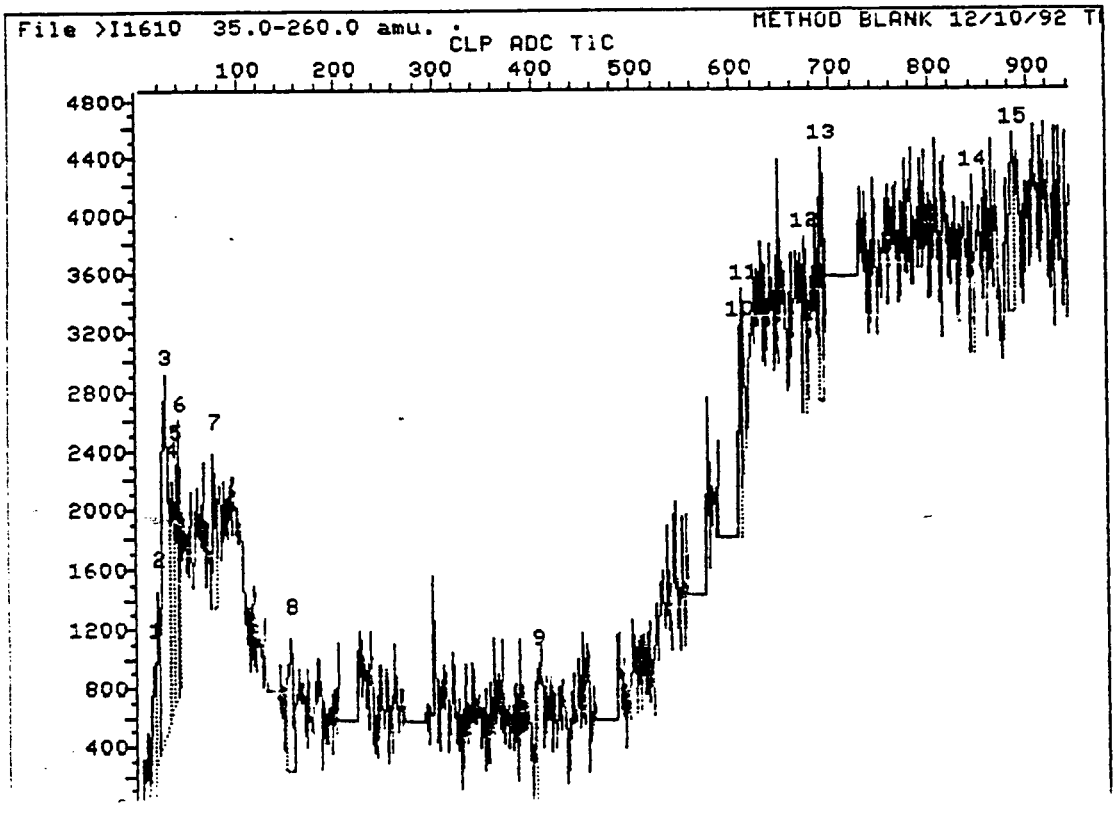

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 624

Project: .

ID#: METHOD BLANK

Lab ID#: N/A

Sampled: N/A
Received: N/A
Extracted: N/A
Analyzed: 12/09/92 8:37
Data File: >G5618

Case#: -----N/A
Contract#: ----N/A
Lab Code: ----N/A
Decanted: NO

Matrix: --Water
Extraction: ----N/A
Sample Vol: 5 ml
Dil. Fct. 1.0000
MDL: 5.0000

CAS NO.	COMPOUND	CONCENTRATION UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	2.	J
75-69-4	Trichlorofluoromethane	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	Trans-1,2-Dichloroethylene	5.	U
67-66-3	Chloroform	5.	U
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
133-02-7	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The reported concentration is magnified by the dilution factor.

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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: .

SAMPLE ID #: METHOD BLANK

LAB ID #: N/A

Data File: >G5618

Methanol Ext.

EPA METHOD #624

Dilution Factor: 1.0000

Concentration Units: UG/L

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed

FORM I VOA-TIC

1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921209 09:18
Output File: ^G5618::QT Injected at: 921209 08:37
Data File: >G5618::B1 Dilution Factor: 1.00000
Name: .
Misc: METHOD BLANK-12/09/92 TUNING

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.68	222	32146	50.00	UG/L	93
7)	METHYLENE CHLORIDE	6.63	144	1438	1.65	UG/L J	100
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.61	297	40898	40.43	UG/L 81	97
21)	*1,4-DIFLUOROBENZENE	20.55	500	91260	50.00	UG/L	100
42)	*CHLOROBENZENE-D5	25.51	627	74878	50.00	UG/L	100
44)	TOLUENE-D8 (SURG.)	24.30	596	80183	47.32	UG/L 95	97
49)	BROMOFLUOROBENZENE (SURG.)	30.40	752	58478	51.44	UG/L 103	97

* Compound is ISTD

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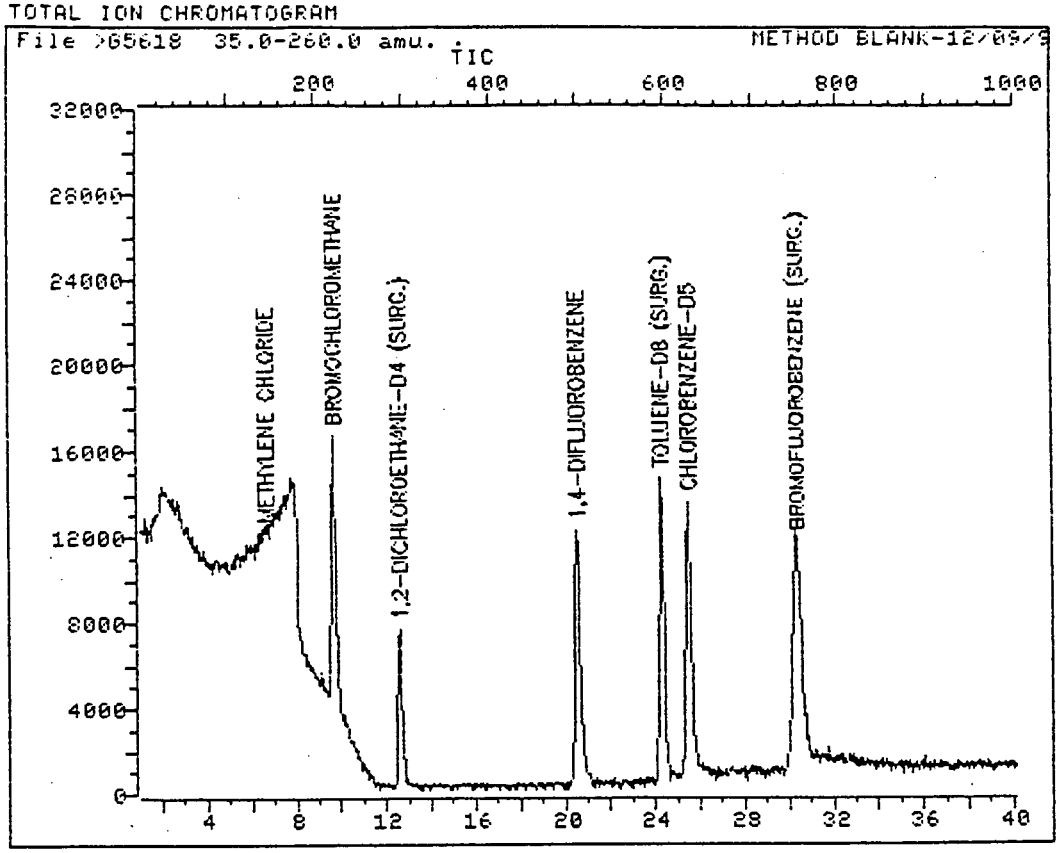
TOTAL ION CHROMATOGRAM



Data File: >G5618::B1 Quant Output File: ^G5618::QT
Name: .
Misc: METHOD BLANK-12/09/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921209 09:18
Injected at: 921209 08:37

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

MS data file header from : >G5618

Sample: . Operator: MAURIE MS 12/09/92 8:37
Misc : METHOD BLANK-12/09/92 TUNING
Sys. #: 1 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: VOA1 Tuning file: MTG001 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 290 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	16.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

G5618 . METHOD BLANK-12/09/92 TUNING
35.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 18 Bunching: 1
Onslope: 0.00 Results File 1G5618 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	10.97	254	255	261	670	16579	6746	100.00	9.128
2	11.24	261	262	268	597	9743	6329	93.82	8.564
3	19.26	463	467	469	369	4469	4258	63.12	5.761
4	23.60	575	578	580	341	5066	2967	43.98	4.015
5	25.00	611	614	615	525	5870	3656	54.20	4.947
6	26.14	641	643	644	606	8267	3666	54.34	4.960
7	26.57	652	654	656	521	7469	3434	50.90	4.647
8	27.39	671	675	678	402	14718	4159	61.65	5.627
9	28.13	693	694	697	392	8114	3441	51.01	4.656
10	31.18	769	772	774	596	19775	5112	75.78	6.917
11	34.97	867	869	872	564	13736	4293	63.64	5.809
12	35.17	872	874	877	561	14178	4736	70.20	6.408
13	35.37	877	879	882	628	14290	5048	74.83	6.830
14	36.03	894	896	898	693	11733	3108	46.07	4.205
15	36.27	901	902	905	447	11047	2986	44.26	4.040
16	37.56	934	935	940	464	16719	3826	56.72	5.177
17	38.38	952	956	957	360	13808	3056	45.30	4.135
18	38.49	957	959	962	463	13782	3084	45.72	4.173

Sum of corrected areas: 73905.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	181191.	9.68	1.04 - 15.11
2	50.0	203362.	20.55	15.11 - 23.03
3	50.0	226305.	25.61	23.03 - 40.10

Dilution Factor (DF = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1.00 Amount Used (AU) = 1.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

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Unknown Conc ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC. Correction Factor
Area Int Std

4:48 PM WED., 9 DEC., 1992

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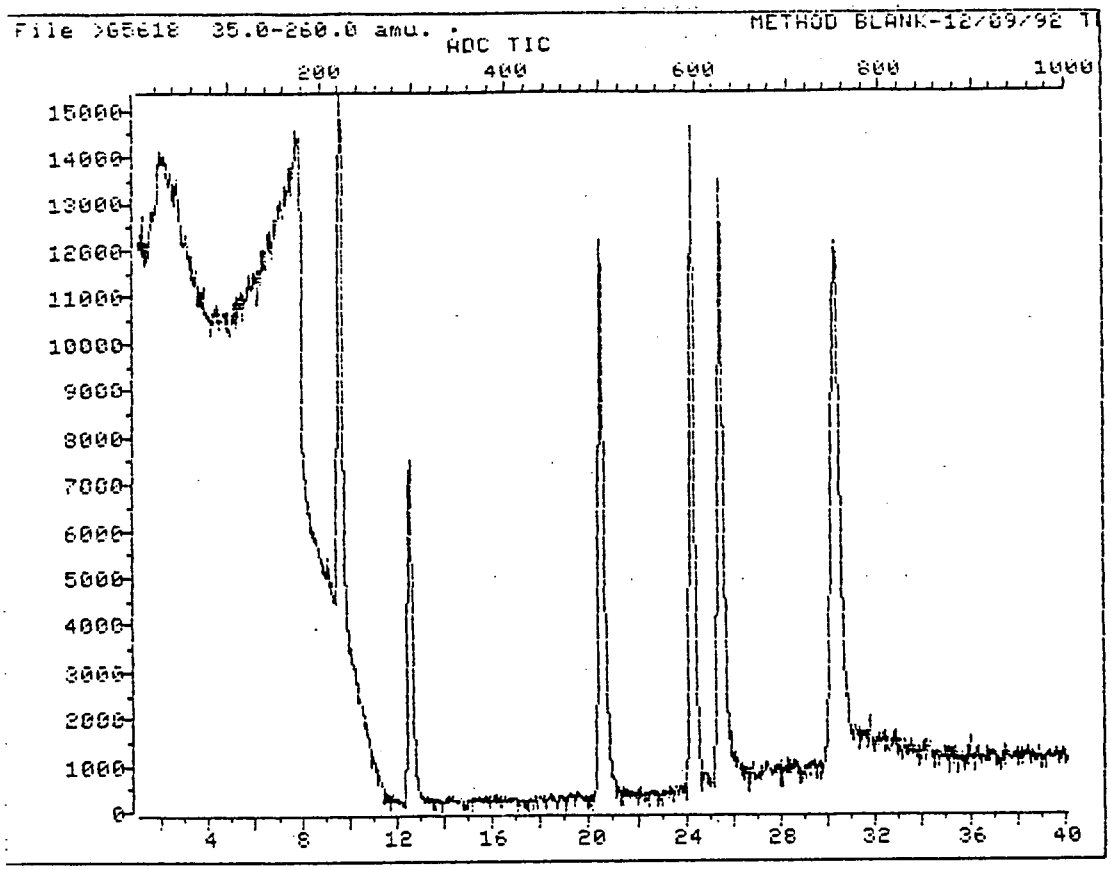
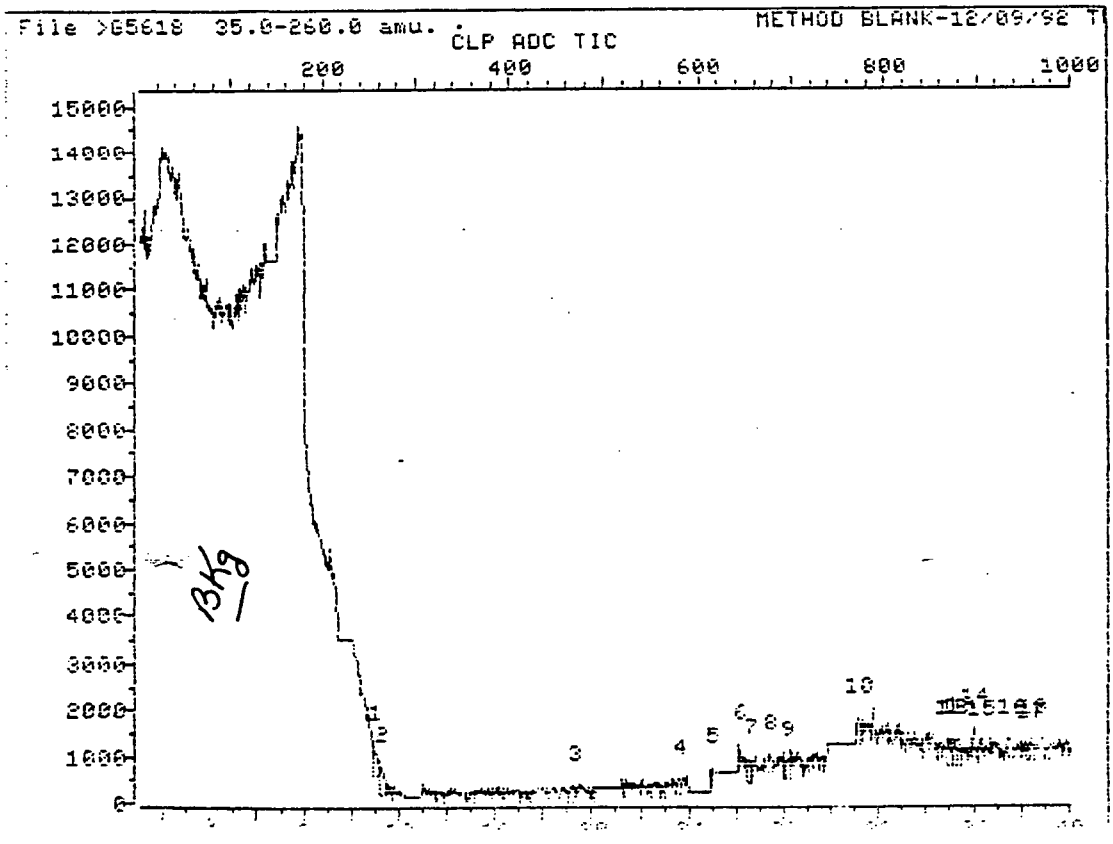
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.





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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 624

Project: . | ID#: METHOD BLANK | Lab ID#: N/A

Sampled: N/A
Received: N/A
Extracted: N/A
Analyzed: 12/08/92 8:18
Data File: >G5600

Case#: -----N/A
Contract#: ----N/A
Lab Code: ----N/A
Decanted: NO

Matrix: --Water
Extraction: ----N/A
Sample Vol: 5 ml
Dil. Fct. 1.0000
MDL: 5.0000

CAS NO.	COMPOUND	CONCENTRATION UG/L	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	5.	U ✗ MLR 12/17/92
75-69-4	Trichlorofluoromethane	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	Trans-1,2-Dichloroethylene	5.	U
67-66-3	Chloroform	5.	U
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	5.	U
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
133-02-7	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U
1634-04-4	Methyl-t-Butyl Ether	5.	U
75-65-0	t-Butyl Alcohol	10.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).
B = Analyte is found in the corresponding method blank. The reported concentration is magnified by the dilution factor.

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES, INC.

Client Name: .

SAMPLE ID #: METHOD BLANK LAB ID #: N/A

Data File: >G5600

Methanol Ext.

EPA METHOD #624

Dilution Factor: 1.0000

Concentration Units: UG/L

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

NUMBER OF TIC'S DETECTED: 0

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed FORM I VOA-TIC 1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921208 09:39
Output File: ^G5600::QT Injected at: 921208 08:18
Data File: >G5600::B2 Dilution Factor: 1.00000
Name: .
Misc: METHOD BLANK FOR 12/08/92 TUNING

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.65	221	38922	50.00	UG/L	99
7)	METHYLENE CHLORIDE	6.64	144	5308	5.02	UG/L	100
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.58	296	46896	38.29	UG/L 77	94
21)	*1,4-DIFLUOROBENZENE	20.52	499	99043	50.00	UG/L	100
42)	*CHLOROBENZENE-D5	25.48	626	77064	50.00	UG/L	100
44)	TOLUENE-D8 (SURG.)	24.31	596	86411	49.55	UG/L 99	90
49)	BROMOFLUOROBENZENE (SURG.)	30.37	751	60422	51.64	UG/L 103	83

* Compound is ISTD

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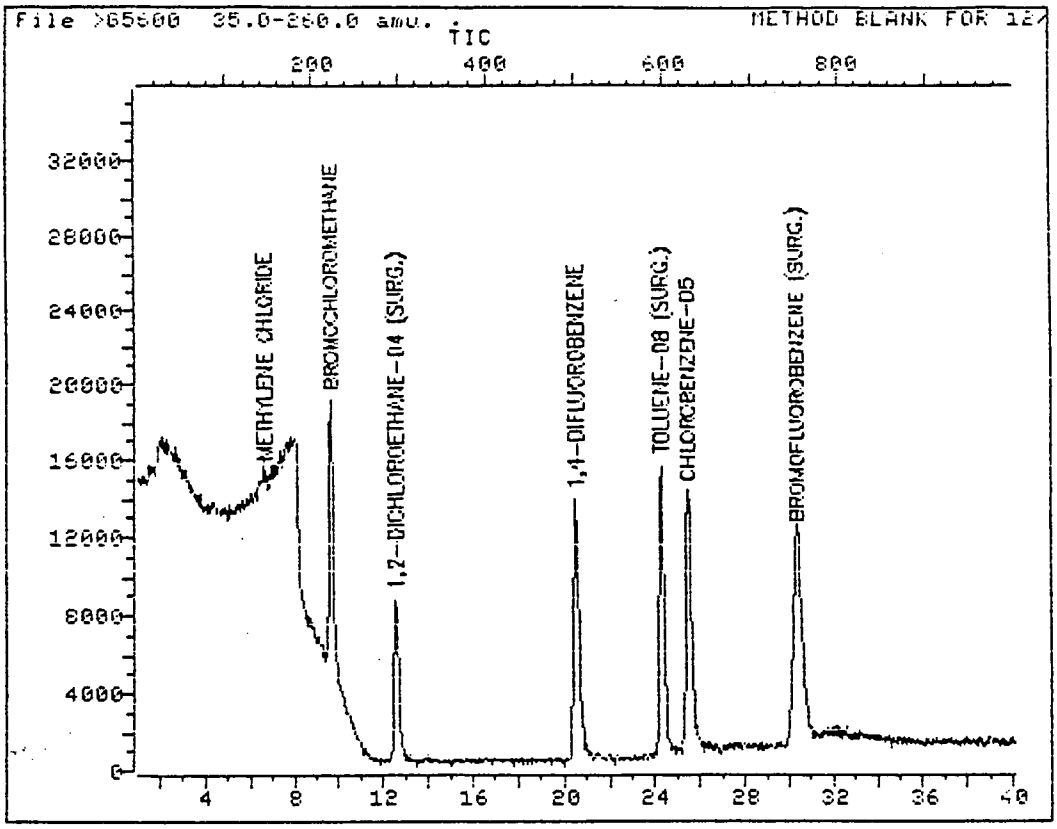
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >G5600::B2 Quant Output File: ^G5600::QT
Name: .
Misc: METHOD BLANK FOR 12/08/92 TUNING

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921208 09:39
Injected at: 921208 08:18

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

'S data file header from : >G5600

Sample: . Operator: MAURIE MS 12/08/92 8:18
Misc : METHOD BLANK FOR 12/08/92 TUNING
Sys. #: 1 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: VOA1 Tuning file: MIG001 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 290 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	16.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

G5600 . METHOD BLANK FOR 12/08/92 TUNING
35.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 18 Bunching: 1
Dnslope: 0.00 Results File 1G5600 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	13.99	328	332	336	405	7565	3953	75.00	6.092
2	17.90	429	432	434	396	4080	3705	70.29	5.710
3	18.09	434	437	439	343	4152	2832	53.73	4.365
4	20.12	486	489	491	409	4256	3963	75.18	6.108
5	22.31	542	545	548	471	5921	4472	84.84	6.892
6	26.03	639	640	643	543	9271	3293	62.47	5.075
7	26.18	643	644	647	619	10188	4211	79.89	6.490
8	27.20	667	670	671	480	9010	3178	60.29	4.898
9	29.00	712	716	718	389	14148	3056	57.98	4.710
10	29.98	738	741	742	598	12199	3678	69.78	5.668
11	31.70	783	785	787	487	16843	2829	53.67	4.360
12	32.32	800	801	804	522	15806	2892	54.87	4.457
13	33.22	823	824	830	458	25902	5040	95.62	7.768
14	34.71	859	862	866	510	20790	5271	100.00	8.124
15	35.02	866	870	871	403	15204	2969	56.33	4.576
16	35.37	876	879	881	370	15201	2768	52.51	4.266
17	37.09	920	923	926	324	18687	3486	66.14	5.373
18	38.50	957	959	962	437	15218	3289	62.40	5.069

Sum of corrected areas: 64885.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	256522.	9.65	1.05 - 15.08
2	50.0	219244.	20.51	15.08 - 23.00
3	50.0	251007.	25.48	23.00 - 40.07

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1.00 Amount Used (AU) = 1.00

00154

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

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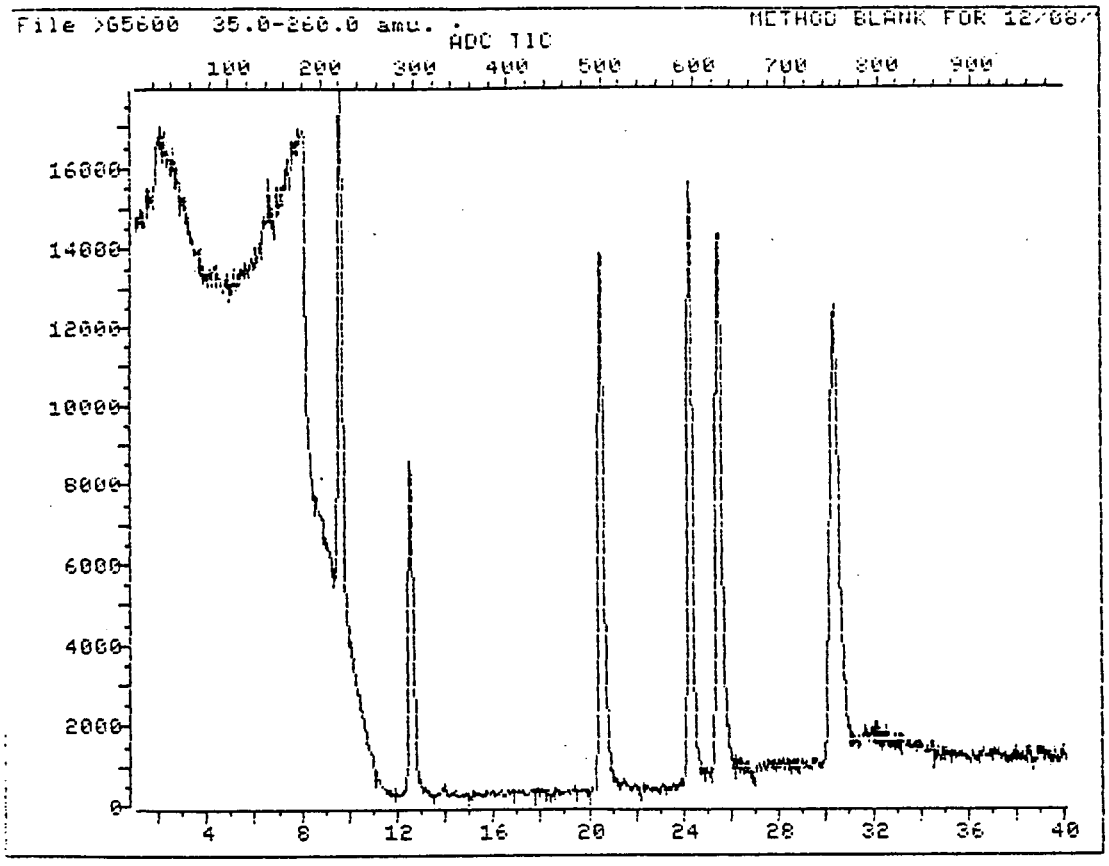
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

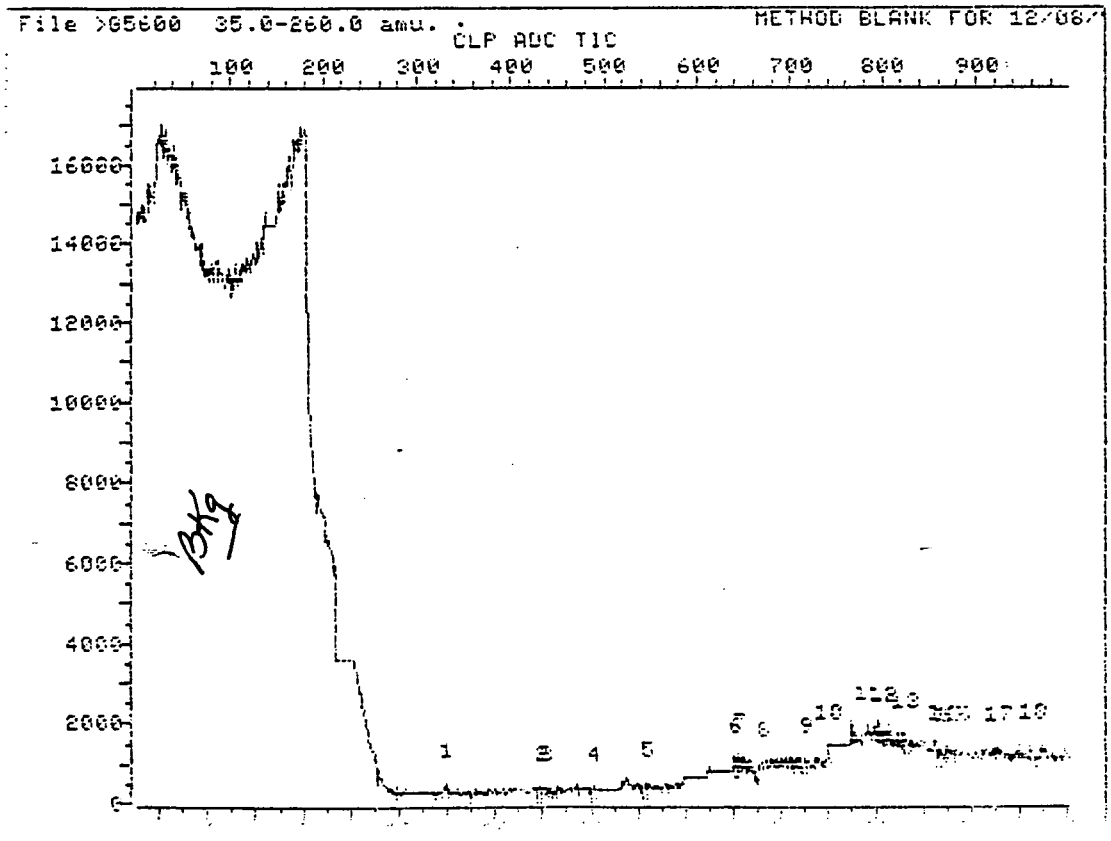
Unknown Concentration Correction Factor
Area Int Std

11:16 PM TUE., 8 DEC., 1992

273 Franklin Road, Randolph, New Jersey 07869
Telephone: (201) 361-4252 • Fax: (201) 989-5288

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.





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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Volatile Organics Analysis - EPA Method 624

Project: .

ID#: METHOD BLANK

Lab ID#: N/A

Sampled:	N/A	Case#:	N/A*	Matrix:	WATER*
Received:	N/A	Contract#:	N/A*	Extraction:	N/A
Extracted:	N/A	Lab Code:	N/A*	Sample Vol:	5ML
Analyzed:	12/11/92 13:45	Decanted:	NO	Dil. Fct.	1.0000
Data File:	>I1629			MDL:	5

CAS NO.	COMPOUND	CONCENTRATION UG/KG	Q
74-87-3	Chloromethane	10.	U
74-83-9	Bromomethane	10.	U
75-01-4	Vinyl Chloride	10.	U
75-00-3	Chloroethane	10.	U
75-09-2	Methylene Chloride	8.	
75-69-4	Trichlorofluoromethane	5.	U
75-35-4	1,1-Dichloroethene	5.	U
75-34-3	1,1-Dichloroethane	5.	U
540-59-0	Trans-1,2-Dichloroethylene	5.	U
67-66-3	Chloroform	5.	U
107-02-2	1,2-Dichloroethane	5.	U
71-55-6	1,1,1-Trichloroethane	5.	U
56-23-5	Carbon Tetrachloride	5.	U
75-27-4	Bromodichloromethane	5.	U
78-87-5	1,2-Dichloropropane	5.	U
10061-01-5	cis-1,3-Dichloropropene	5.	U
110-75-8	2-Chloroethyl vinyl ether	10.	U
79-01-6	Trichloroethylene	5.	U
124-48-1	Dibromochloromethane	5.	U
79-00-5	1,1,2-Trichloroethane	5.	U
71-43-2	Benzene	5.	U
10061-02-6	trans-1,3-Dichloropropene	5.	U
75-25-2	Bromoform	5.	U
127-18-4	Tetrachloroethylene	5.	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	U
108-88-3	Toluene	3.	JB
108-90-7	Chlorobenzene	5.	U
100-41-4	Ethylbenzene	5.	U
108-38-3	M-Xylene	5.	U
95-47-6	O,P-Xylene	5.	U
106-42-3			
95-50-1	1,2-Dichlorobenzene	5.	U
541-73-1	1,3-Dichlorobenzene	5.	U
106-46-7	1,4-Dichlorobenzene	5.	U

QUALIFIERS

U = Analyte is not detected at the Method Detection Limit (MDL).
J = Analyte concentration is an estimated value (<MDL).

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES,INC.

Client Name: .

SAMPLE ID #: METHOD BLANK LAB ID #: N/A

Data File: >I1629

Methanol Ext.

EPA METHOD #624

Dilution Factor: 1.0000

Concentration Units: UG/L

NUMBER OF TIC'S DETECTED: 0

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	No Peaks Detected			

NR = Not reviewed FORM I VOA-TIC 1/87 Rev.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 921211 14:24
utput File: ^I1629::QT Injected at: 921211 13:45
ata File: >I1629::13 Dilution Factor: 1.00000
ame: .
:sc: METHOD BLANK 12/11/92

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921211 10:11

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.62	49.0	30516	50.00	UG/KG	97
6)	METHYLENE CHLORIDE	6.71	49.0	7686	8.07	UG/KG	100
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.26	65.0	45648	53.21	UG/KG 106	86
4)	*1,4-DIFLUOROBENZENE	19.75	114.0	69656	50.00	UG/KG	100
7)	*CHLOROBENZENE-D5	24.60	117.0	66713	50.00	UG/KG	100
9)	TOLUENE-D8 (SURG.)	23.44	98.0	69886	51.07	UG/KG 102	84
1)	TOLUENE	23.67	92.0	2322	3.12	UG/KG J	85
4)	BROMOFLUOROBENZENE (SURG.)	28.99	95.0	98744	51.29	UG/KG 103	80

* Compound is ISTD

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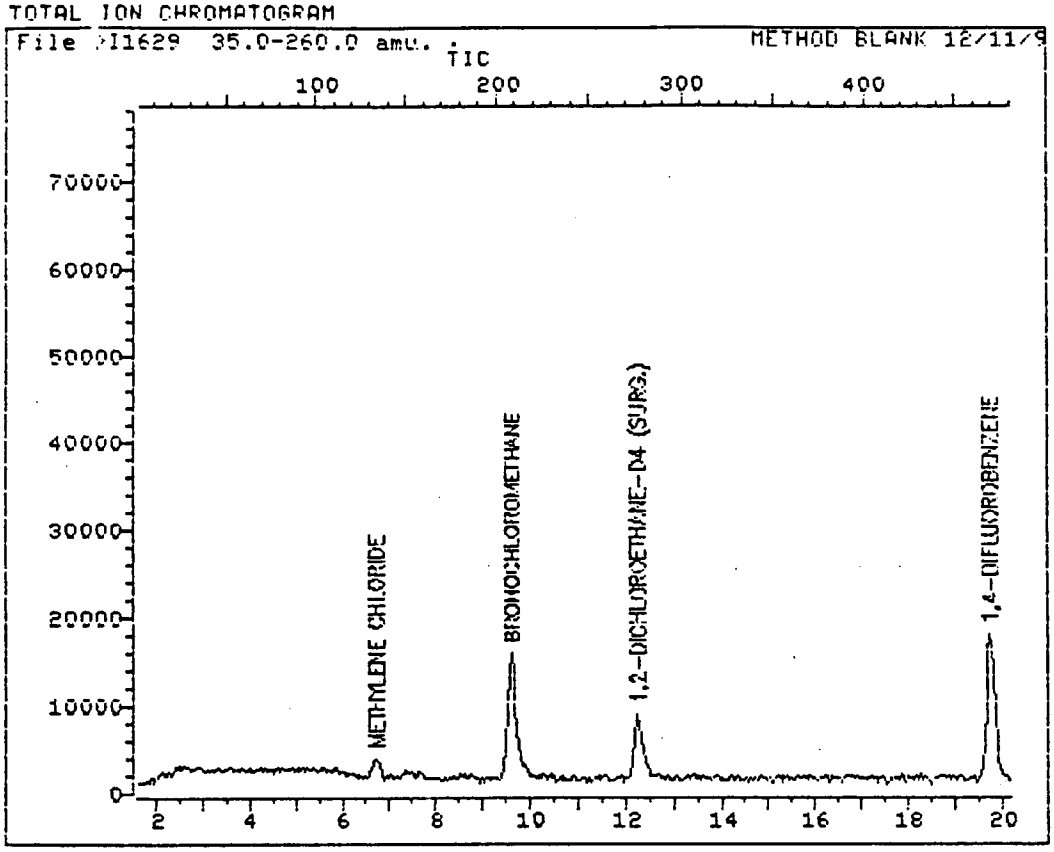
TOTAL ION CHROMATOGRAM



Data File: >I1629::I3 Quant Output File: ^I1629::QT
Name: .
Misc: METHOD BLANK 12/11/92

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 14:24
Injected at: 921211 13:45

TIC page 1 of 2

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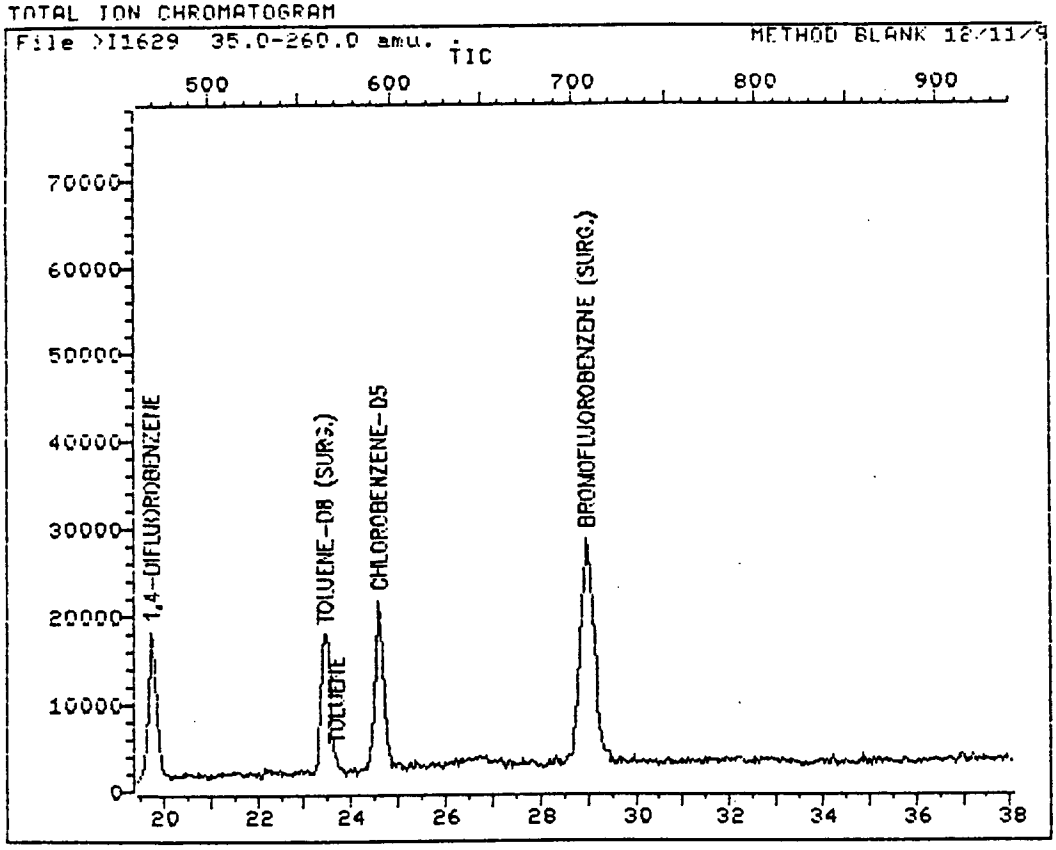
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TOTAL ION CHROMATOGRAM



Data File: >I1629::13 Quant Output File: ^I1629::QT
Name: .
Misc: METHOD BLANK 12/11/92

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 14:24
Injected at: 921211 13:45

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

MS data file header from : >I1629

Sample: . Operator: MANAGER MS 12/11/92 13:45
Misc : METHOD BLANK 12/11/92
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: VOAI Tuning file: MTI001 No. of extra records: 2
Source temp.: 0 Analyzer temp.: 290 Transfer line temp. : 0

Chromatographic temperatures :	45.	220.	0.	0.	0.
Chromatographic times, min. :	3.0	20.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	8.0	0.0	0.0	1.0	0.0

>I1629 . METHOD BLANK 12/11/92
35.01 260.0 CLP ADC TIC
Upslope: .20 Area Reject: 5.00 % Max Peaks: 15 Bunching: 1
Dnslope: 0.00 Results File II1629 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	2.13	10	15	17	1127	14043	10115	69.73	8.222
2	2.48	20	24	26	1579	23979	14506	100.00	11.792
3	2.59	26	27	31	1266	20945	10897	75.12	8.858
4	2.90	33	35	39	999	24467	8888	61.27	7.225
5	7.37	146	150	152	983	16737	7817	53.89	6.354
6	7.68	155	158	161	929	14333	6202	42.75	5.042
7	18.35	432	433	437	879	6124	6043	41.66	4.912
8	24.29	582	586	587	1076	16166	9075	62.56	7.377
9	25.38	612	614	616	1053	17952	6072	41.86	4.936
10	26.07	629	632	635	788	29628	8862	61.09	7.204
11	27.82	676	677	683	946	32207	8617	59.40	7.005
12	28.33	688	690	693	1157	25336	6237	43.00	5.070
13	32.21	788	790	794	783	33614	6263	43.18	5.091
14	36.99	911	913	915	1151	24918	6454	44.49	5.246
15	37.22	915	919	921	1281	35001	6969	48.04	5.665

Baseline

Sum of corrected areas: 123017.

Summary of Unknowns PBM Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	50.0	179778.	9.62	1.59 - 14.68
2	50.0	221461.	19.75	14.68 - 22.17
3	50.0	251429.	24.60	22.17 - 38.07

Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1.00 Amount Used (AU) = 1.00

00162

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

Unknown Concentration = $\frac{\text{Conc Int Std}}{}$ * Area Unk * Correction Factor

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

9:16 PM MON., 14 DEC., 1992

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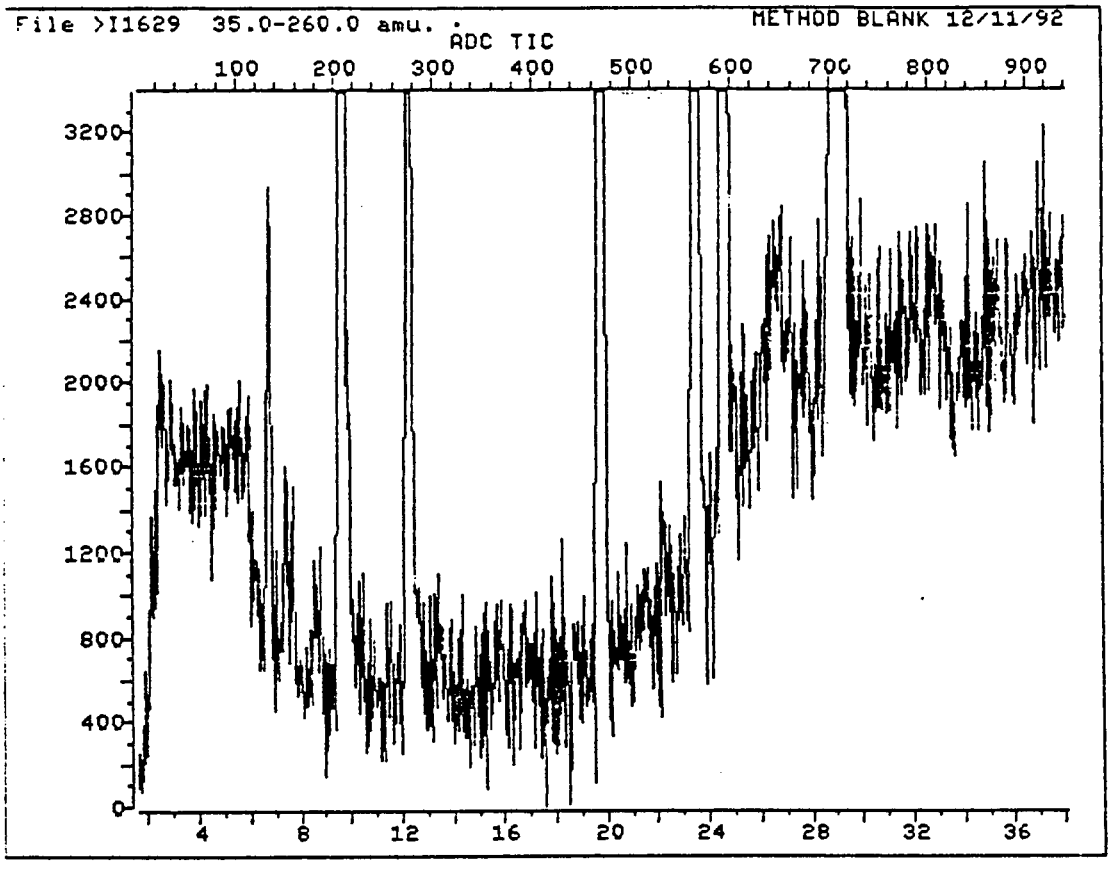
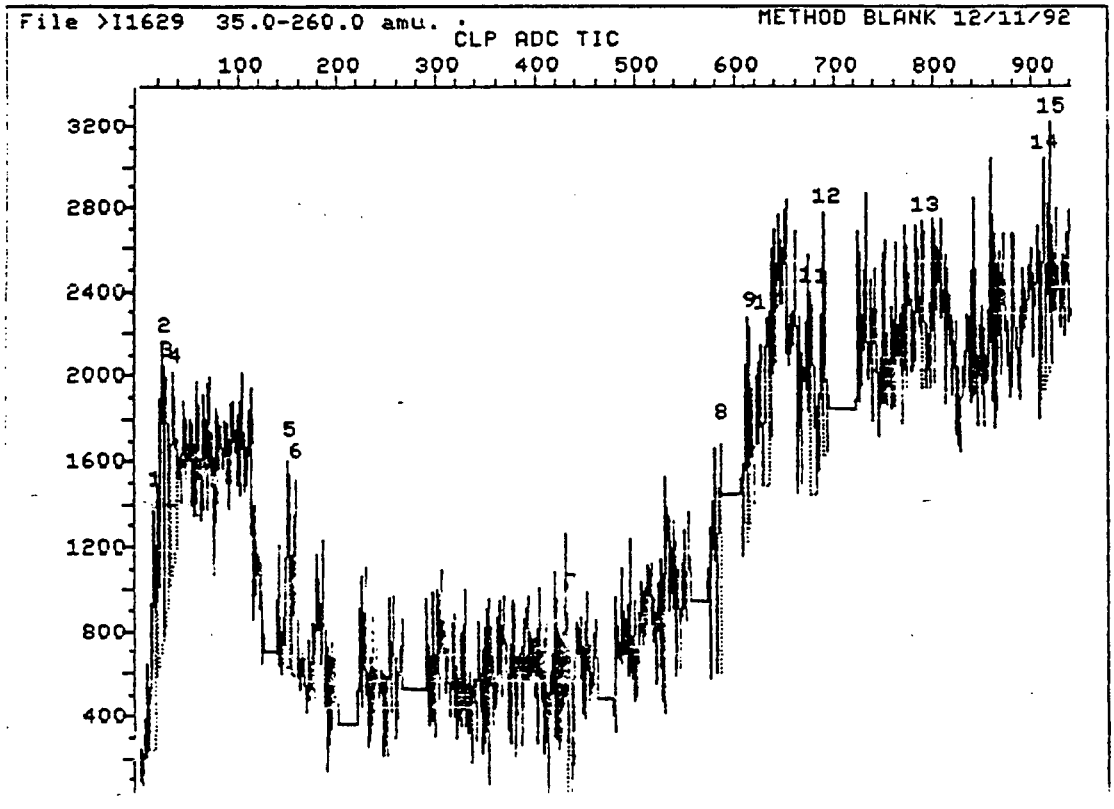
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.





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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Water Spike Matrix/Matrix Spike Duplicate Summary

Project: KNICKERBOCKER ID#: 90-05-22-MW-4 Lab ID #: 212-0859-01

Sampled:	12-03-92	Case#:	N/A	Matrix:	WATER
Received:	12-03-92	Contract#:	N/A	Extraction:	N/A
Extracted:	N/A	Lab Code:	N/A	Sample Vol.:	5ml
Analyzed:	12-08-92	Decanted:	NO	Dil. Fct.:	1.00
		Units:	ug/L	MDL:	5.00

Compound	Conc. Spike Added	Sample Result	Conc. MS	Percent Recovery	Conc. MSD	Percent Recovery	RPD	QC Limits	
VOA									
1,1 DICHLORO-ETHENE:	50.0	U	42.8	86	40.2	80	6.3	14	61-145
TRICHLOROETHENE:	50.0	U	48.0	96	52.2	104	8.4	14	71-120
CHLOROBENZENE:	50.0	U	53.3	107	58.3	117	9.0	13	75-130
TOLUENE:	50.0	U	46.2	92	51.4	103	11	13	76-125
BENZENE**:	50.0	U	52.1	104	54.9	110	5.2	11	76-127
B/N									
1,2,4-TRICHLORO-BENZENE*:								28	39--98
ACENAPHTHENE:								31	46-118
2,4 DINITRO--TOLUENE:								38	24--96
PYRENE:								31	26-127
N NITROSODI-n-PROPYLAMINE:								38	41-118
1,4-DICHLORO-BENZENE:								28	36--97
ACID									
PENTACHLOROPHENOL:								50	9--103
PHENOL*:								42	12--89
2 CHLOROPHENOL:								40	27-123
4 CHLORO 3 METHYL-PHENOL:								42	23--97
4 NITROPHENOL:								50	10--80
PEST									
LINDANE:								15	56-123
HEPTACHLOR:								20	40-131
ALDRIN:								22	40-120
DIELDRIN:								18	52-128
ENDRIN:								21	58-121
4,4 DDT:								27	38-127

RPD

VOA'S: 0 OUT OF: 5 OUTSIDE QC LIMITS
A/E'S: ____ OUT+OF: ____ OUTSIDE QC LIMITS
B/N'S: ____ OUT^OF: ____ OUTSIDE QC LIMITS
PEST : ____ OUT~OF: ____ OUTSIDE QC LIMITS

RECOVERY

VOA*: 0 OUT-OF: 10 OUTSIDE QC LIMIT
A/E*: ____ OUT|OF: ____ OUTSIDE QC LIMIT
B/N*: ____ OUT=OF: ____ OUTSIDE QC LIMIT
PEST: ____ OUT"OF: ____ OUTSIDE QC LIMIT

COMMENTS: NONE.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921208 13:07
Output File: ^G5605::QT Injected at: 921208 12:26
Data File: >G5605::B1 Dilution Factor: 1.00000
Name: MATRIX SPIKE WATER
Misc: 90-05-22-MW-4-MS/12/03-03/QV0009/212-0859-01 5ML

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.73	223	20465	50.00	UG/L	91
2)	CHLOROMETHANE	1.51	13	14298	68.18	UG/L	100
3)	BROMOMETHANE	2.53	39	23847	53.90	UG/L	98
4)	VINYL CHLORIDE	3.35	60	15617	47.96	UG/L	98
5)	CHLOROETHANE	4.56	91	10012	49.98	UG/L	83
7)	METHYLENE CHLORIDE	6.60	143	28466	51.22	UG/L	100
12)	TRICHLOROFLUOROMETHANE	8.75	198	37980	32.36	UG/L	100
13)	1,1-DICHLOROETHENE	9.49	217	29607	42.78	UG/L	90
16)	1,1-DICHLOROETHANE	10.66	247	35285	50.57	UG/L	98
17)	TRANS-1,2-DICHLOROETHYLENE	11.52	269	18668	50.30	UG/L	82
18)	CHLOROFORM	11.84	277	52319	43.69	UG/L	94
19)	1,2-DICHLOROETHANE	12.74	300	35454	47.91	UG/L	97
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.62	297	29979	46.55	UG/L 93	95
21)	*1,4-DIFLUOROBENZENE	20.60	501	59979	50.00	UG/L	100
22)	1,1,1-TRICHLOROETHANE	13.95	331	40696	39.91	UG/L	97
26)	CARBON TETRACHLORIDE	14.34	341	43263	43.54	UG/L	95
28)	BROMODICHLOROMETHANE	14.85	354	47501	45.89	UG/L	94
29)	1,2-DICHLOROPROPANE	16.37	393	15652	53.70	UG/L	99
30)	CIS-1,3-DICHLOROPROPENE	16.76	403	16439	35.34	UG/L	96
31)	TRICHLOROETHYLENE	17.23	415	26325	48.01	UG/L	73
32)	DIBROMOCHLOROMETHANE	17.78	429	38447	49.72	UG/L	100
33)	1,1,2-TRICHLOROETHANE	18.05	436	16567	56.32	UG/L	99
34)	BENZENE	17.90	432	50577	52.08	UG/L	100
35)	TRANS-1,3-DICHLOROPROPENE	18.17	439	6139M	16.60	UG/L	
38)	2-CHLOROETHYL VINYL ETHER	19.46	472	5792	47.03	UG/L	100
39)	BROMOFORM	20.63	502	25142	45.02	UG/L	93
42)	*CHLOROBENZENE-D5	25.48	626	52809	50.00	UG/L	100
43)	TETRACHLOROETHYLENE	22.98	562	29412	50.46	UG/L	88
44)	TOLUENE-D8 (SURG.)	24.27	595	54829	45.88	UG/L 92	94
45)	1,1,2,2-TETRACHLOROETHANE	23.02	563	13769	40.43	UG/L	97
46)	TOLUENE	24.51	601	32777	46.22	UG/L	98
47)	CHLOROBENZENE	25.60	629	50569	53.30	UG/L	97
48)	ETHYLBENZENE	27.71	683	23069	48.98	UG/L	79
49)	BROMOFLUOROBENZENE (SURG.)	30.41	752	40944	51.07	UG/L 102	89
52)	O,P-XYLENE	33.38	828	27689M	47.31	UG/L	
53)	1,2-DICHLOROBENZENE	38.31	954	73024M	47.28	UG/L	86
54)	1,3-DICHLOROBENZENE	37.37	930	69913M	49.40	UG/L	78
55)	1,4-DICHLOROBENZENE	39.09	974	84729M	54.38	UG/L	

* Compound is ISTD

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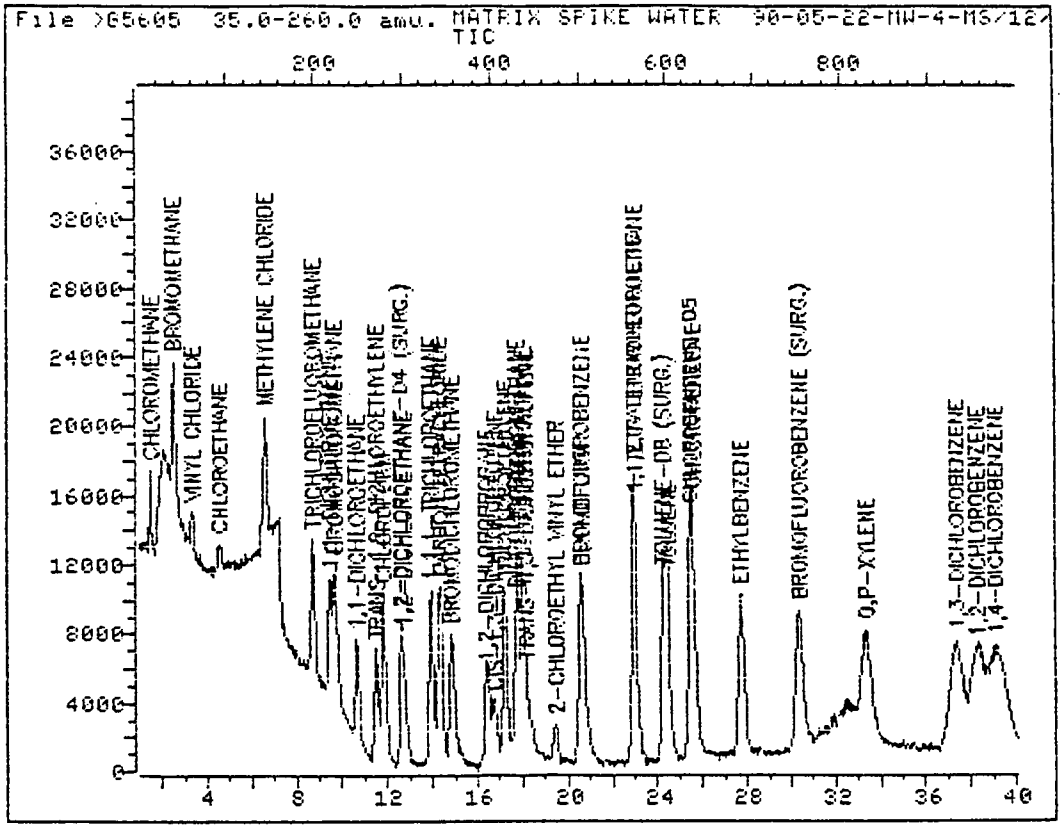
TOTAL ION CHROMATOGRAM



Data File: >G5605::B1 Quant Output File: ^G5605::QT
Name: MATRIX SPIKE WATER
Misc: 90-05-22-MW-4-MS/12/03-03/QV0009/212-0859-01 5ML

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921208 13:07
Injected at: 921208 12:26

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MAURIE Quant Rev: 6 Quant Time: 921208 14:02
Output File: ^G5606::QT Injected at: 921208 13:14
Data File: >G5606::B1 Dilution Factor: 1.00000
Name: MATRIX SPK DUP WATER
Misc: 90-05-22-MW-4-MSD/12/03-03/QV0009/212-0859-01 5ML

ID File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

	Compound	R.T.	Scan#	Area	Conc	Units		q
1)	*BROMOCHLOROMETHANE	9.72	223	19566	50.00	UG/L		95
2)	CHLOROMETHANE	1.47	12	11148	55.60	UG/L		100
3)	BROMOMETHANE	2.53	39	18417	43.54	UG/L		99
4)	VINYL CHLORIDE	3.35	60	12736	40.91	UG/L		96
5)	CHLOROETHANE	4.56	91	9051	47.25	UG/L		95
7)	METHYLENE CHLORIDE	6.59	143	27024	50.86	UG/L		100
12)	TRICHLOROFLUOROMETHANE	8.74	198	32481	28.95	UG/L		100
13)	1,1-DICHLOROETHENE	9.49	217	26621	40.23	UG/L		98
16)	1,1-DICHLOROETHANE	10.66	247	33101	49.62	UG/L		98
17)	TRANS-1,2-DICHLOROETHYLENE	11.52	269	16975	47.84	UG/L		82
18)	CHLOROFORM	11.87	278	49028	52.82	UG/L		92
19)	1,2-DICHLOROETHANE	12.73	300	34677	49.01	UG/L		93
20)	1,2-DICHLOROETHANE-D4 (SURG.)	12.62	297	27034	43.91	UG/L	88	89
21)	*1,4-DIFLUOROBENZENE	20.55	500	51375	50.00	UG/L		100
22)	1,1,1-TRICHLOROETHANE	13.98	332	38259	43.81	UG/L		96
26)	CARBON TETRACHLORIDE	14.34	341	36686	43.10	UG/L		86
28)	BROMODICHLOROMETHANE	14.84	354	45082	50.85	UG/L		98
29)	1,2-DICHLOROPROPANE	16.45	395	15722	62.97	UG/L		96
30)	CIS-1,3-DICHLOROPROPENE	16.76	403	19190	48.17	UG/L		94
31)	TRICHLOROETHYLENE	17.27	416	24520	52.21	UG/L		80
32)	DIBROMOCHLOROMETHANE	17.74	428	38086	57.50	UG/L		100
33)	1,1,2-TRICHLOROETHANE	18.01	435	19044	75.58	UG/L		98
34)	BENZENE	17.93	433	45637	54.86	UG/L		100
35)	TRANS-1,3-DICHLOROPROPENE	18.17	439	6285	19.84	UG/L		73
38)	2-CHLOROETHYL VINYL ETHER	19.42	471	5705	54.09	UG/L		100
39)	BROMOFORM	20.71	504	24445	51.11	UG/L		95
42)	*CHLOROBENZENE-D5	25.48	626	45696	50.00	UG/L		100
43)	TETRACHLOROETHYLENE	22.98	562	27972	55.46	UG/L		79
44)	TOLUENE-D8 (SURG.)	24.27	595	49472	47.84	UG/L	96	88
45)	1,1,2,2-TETRACHLOROETHANE	23.02	563	14748	50.05	UG/L		94
46)	TOLUENE	24.46	600	31531	51.38	UG/L		98
47)	CHLOROBENZENE	25.64	630	47879	58.32	UG/L		98
48)	ETHYLBENZENE	27.71	683	20652	50.67	UG/L		89
49)	BROMOFLUOROBENZENE (SURG.)	30.41	752	36623	52.79	UG/L	106	99
52)	O,P-XYLENE	33.34	827	24049	47.49	UG/L		86
53)	1,2-DICHLOROBENZENE	38.39	956	66364M	49.65	UG/L		94
54)	1,3-DICHLOROBENZENE	37.33	929	60216M	49.18	UG/L		99
55)	1,4-DICHLOROBENZENE	39.13	975	76173M	56.50	UG/L		

* Compound is ISTD

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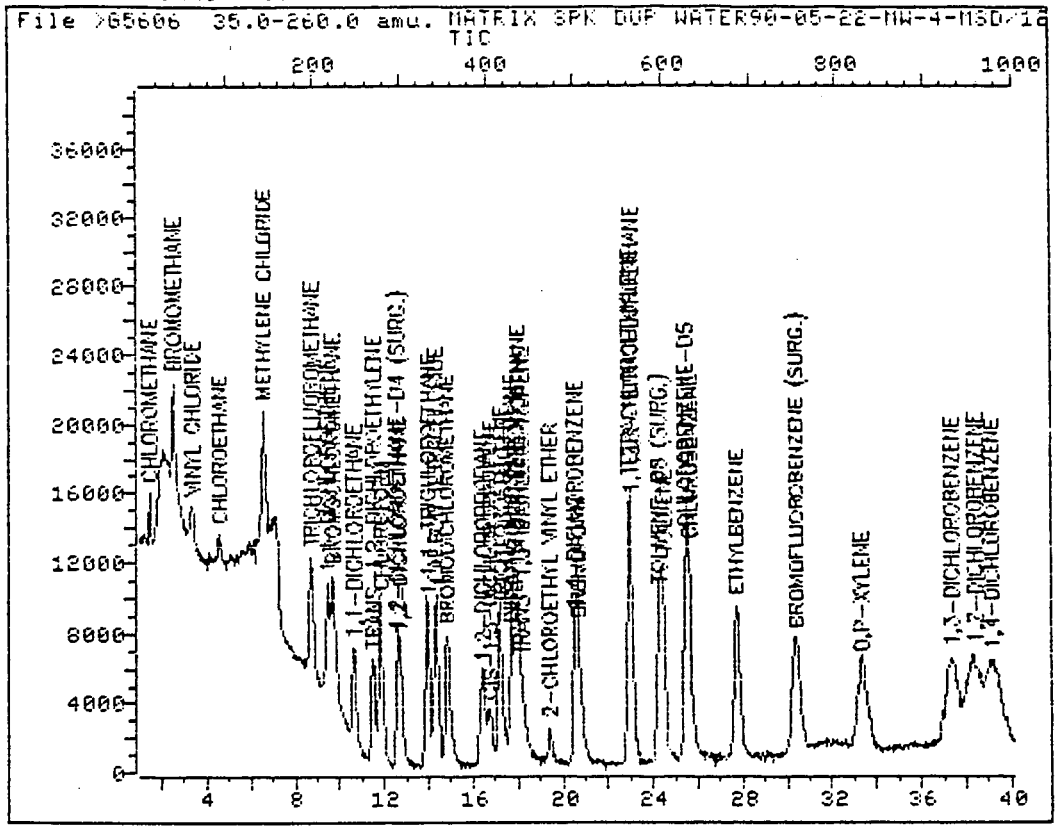
TOTAL ION CHROMATOGRAM



Data File: >G5606::B1 Quant Output File: ^G5606::QT
Name: MATRIX SPK DUP WATER
Misc: 90-05-22-MW-4-MSD/12/03-03/QV0009/212-0859-01 5ML

Id File: MSDX::B2
Title: VOLATILE ORGANIC ANALYSIS BY EPA 624
Last Calibration: 921202 13:07

Operator ID: MAURIE
Quant Time: 921208 14:02
Injected at: 921208 13:14

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Laboratory Report - Soil Spike Matrix Spike/Matrix Spike Duplicate Recovery

Project: KNICKERBOCKER ID#: Y-39-1 Lab ID #: 211-0846-13

Sampled:	11-30-92	Case#:	N/A	Matrix:	SOIL
Received:	11-30-92	Contract#:	N/A	Extraction:	N/A
Extracted:	N/A	Lab Code:	N/A	Sampl Wt.:	5.0
Analyzed:	12-10-92	Decanted:	NO	Dil. Fct.:	1.54
		Units:	ug/Kg	MDL:	8

Compound	Conc. Spike Added	Sample Result	Conc. MS	Percent Recovery	Conc. MSD	Percent Recovery	RPD	QC Limits RPD	QC Limits Recovery
VOA									
1,1 DICHLORO-ETHENE:	77.0	U	61.9	80	61.5	80	0.6	22	59-172
TRICHLOROETHENE:	77.0	U	78.4	102	81.9	106	4.4	24	62-137
CHLOROBENZENE:	77.0	U	87.0	113	92.2	120	5.8	21	60-133
TOLUENE:	77.0	U	84.7	110	85.4	111	0.8	21	59-139
BENZENE**:	77.0	U	61.0	79	61.3	80	0.5	21	66-142
B/N									
1,2,4-TRICHLORO-BENZENE*:								23	38-107
ACENAPHTHENE:								19	31-137
2,4 DINITRO--TOLUENE:								47	28-89
PYRENE:								36	35-142
N NITROSODI-n-PROPYLAMINE:								38	41-126
1,4-DICHLORO-BENZENE:								27	28-104
ACID									
PENTACHLOROPHENOL:								47	17-109
PHENOL*:								35	26-90
2 CHLOROPHENOL:								50	25-102
4 CHLORO 3 METHYL-PHENOL:								33	26-103
4 NITROPHENOL:								50	11-114
PEST									
LINDANE:								50	48-127
HEPTACHLOR:								31	35-130
ALDRIN:								43	34-132
DIELDRIN:								38	31-134
ENDRIN:								45	42-139
4,4 DDT:								50	23-134

RPD

VOA'S: 0 OUT OF: 5 OUTSIDE QC LIMITS
A/E'S: ____ OUT/OF: ____ OUTSIDE QC LIMITS
B/N'S: ____ OUT^OF: ____ OUTSIDE QC LIMITS
PEST : ____ OUT~OF: ____ OUTSIDE QC LIMITS

RECOVERY

VOA*: 2 OUT-OF: 10 OUTSIDE QC LIMITS
A/E*: ____ OUT*OF: ____ OUTSIDE QC LIMITS
B/N*: ____ OUT\OF: ____ OUTSIDE QC LIMITS
PEST: ____ OUT"OF: ____ OUTSIDE QC LIMITS

COMMENTS:

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

perator ID: MANAGER Quant Rev: 6 Quant Time: 921211 10:19
utput File: ^11614::QT Injected at: 921210 12:58
ata File: >11614::13 Dilution Factor: 1.54000
ame: SOIL MATRIX SPIKE
isc: Y39-1-MS/11/30-30, 5.00G, (211-0846-11), QV0011

D File: MSDS::13
itle: VOLATILE ORGANIC ANALYSIS BY EPA 8240
ast Calibration: 921211 10:11

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.59	209	27392	50.00	UG/KG	85
6)	METHYLENE CHLORIDE	6.64	133	41562	74.87	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.50	181	40880	31.97	UG/KG	100
8)	1,1-DICHLOROETHENE	9.20	199	38147	61.94	UG/KG	93
9)	1,1-DICHLOROETHANE	10.33	228	38456	67.26	UG/KG	92
0)	TRANS-1,2-DICHLOROETHYLENE	11.14	249	16493	56.40	UG/KG	93
1)	CHLOROFORM	11.49	258	69773	76.67	UG/KG	89
2)	1,2-DICHLOROETHANE	12.31	279	46786	86.87	UG/KG	96
3)	1,2-DICHLOROETHANE-D4 (SURG.)	12.19	276	41614	83.21	UG/KG 108	97
4)	*1,4-DIFLUOROBENZENE	19.72	470	55104	50.00	UG/KG	100
5)	1,1,1-TRICHLOROETHANE	13.43	308	74209	77.37	UG/KG	93
6)	CARBON TETRACHLORIDE	13.82	318	75828	74.15	UG/KG	92
7)	BROMODICHLOROMETHANE	14.32	331	66088	94.59	UG/KG	99
8)	1,2-DICHLOROPROPANE	15.72	367	15728	84.03	UG/KG	91
9)	CIS-1,3-DICHLOROPROPENE	15.99	374	25822	79.34	UG/KG	95
0)	TRICHLOROETHYLENE	16.57	389	28105	78.39	UG/KG	88
1)	DIBROMOCHLOROMETHANE	17.00	400	58432	89.29	UG/KG	100
2)	1,1,2-TRICHLOROETHANE	17.16	404	18960	97.73	UG/KG	93
3)	BENZENE	17.20	405	35759	60.98	UG/KG	100
4)	TRANS-1,3-DICHLOROPROPENE	17.23	406	27264	76.41	UG/KG	95
5)	2-CHLOROETHYL VINYL ETHER	18.71	444	3171	37.99	UG/KG	100
6)	BROMOFORM	19.64	468	67371	92.92	UG/KG	94
7)	*CHLOROBENZENE-D5	24.57	595	42847	50.00	UG/KG	100
8)	TETRACHLOROETHYLENE	22.16	533	47136	125.11	UG/KG	88
9)	TOLUENE-D8 (SURG.)	23.45	566	48746	85.42	UG/KG 117	84
0)	1,1,2,2-TETRACHLOROETHANE	21.97	528	30746	95.24	UG/KG	95
1)	TOLUENE	23.60	570	26321	84.78	UG/KG	96
2)	CHLOROBENZENE	24.65	597	43846	87.00	UG/KG	96
3)	ETHYLBENZENE	26.59	647	18817	76.96	UG/KG	96
4)	BROMOFLUOROBENZENE (SURG.)	28.96	708	58804	73.24	UG/KG 95	88
5)	~~M-XYLENE~~	~~31.68~~	~~778~~	~~21975~~	~~67.62~~	~~UG/KG~~ MLG	83
6)	O,P-XYLENE	31.68	778	21975	63.92	UG/KG 12/14/92	
7)	1,3-DICHLOROBENZENE	35.17	868	63462	64.97	UG/KG	92
8)	1,2-DICHLOROBENZENE	36.07	891	62589M	63.32	UG/KG	98
9)	1,4-DICHLOROBENZENE	36.77	909	73273M	82.17	UG/KG	66

* Compound is ISTD

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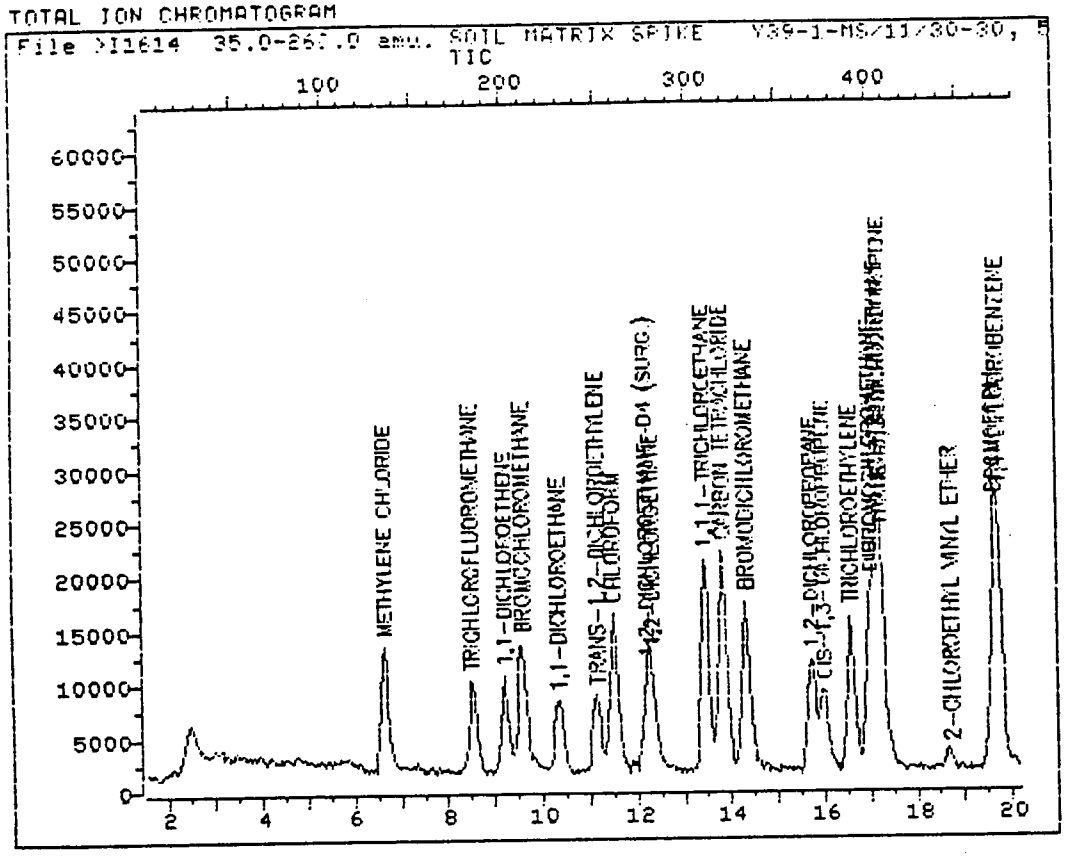
TOTAL ION CHROMATOGRAM



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Misc: Y39-1-MS/11/30-30, 5.00G, (211-0846-11), QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:19
Injected at: 921210 12:59

TIC page 1 of 2

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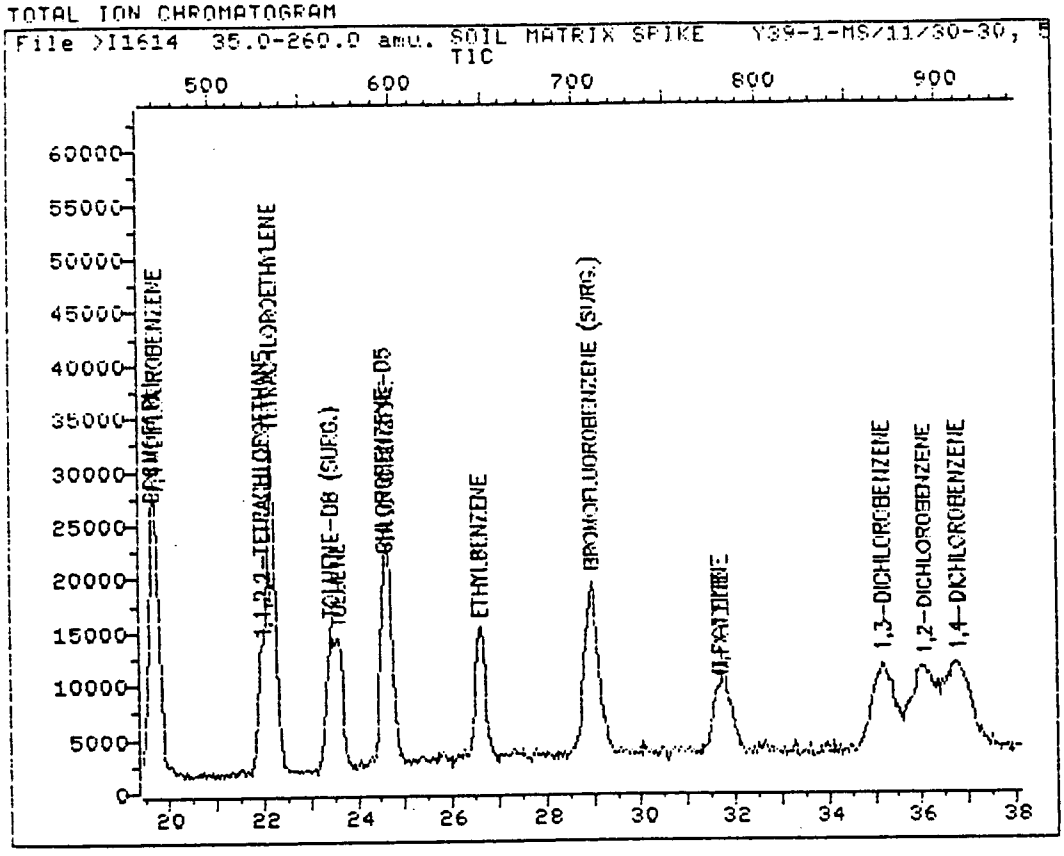
TOTAL ION CHROMATOGRAM



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Name: SOIL MATRIX SPIKE
Misc: Y39-1-MS/11/30-30, 5.00G, (211-0846-11), QV0011

Id File: MSDS::13
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:19
Injected at: 921210 12:58

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: MANAGER Quant Rev: 6 Quant Time: 921211 10:21
Output File: ^I1615::QT Injected at: 921210 13:43
Data File: >I1615::I3 Dilution Factor: 1.54000
Name: SOIL MATRIX SPK DUP
Misc: Y39-1-MSD/11/30-30, 5.00G, (211-0846-11), QV0011

ID File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.55	208	26338	50.00	UG/KG	95
6)	METHYLENE CHLORIDE	6.64	133	42072	78.82	UG/KG	100
7)	TRICHLOROFLUOROMETHANE	8.51	181	44920	36.53	UG/KG	100
8)	1,1-DICHLOROETHENE	9.21	199	36425	61.51	UG/KG	93
9)	1,1-DICHLOROETHANE	10.33	228	40847	74.30	UG/KG	97
10)	TRANS-1,2-DICHLOROETHYLENE	11.15	249	17930	63.76	UG/KG	92
11)	CHLOROFORM	11.50	258	77075	88.08	UG/KG	94
12)	1,2-DICHLOROETHANE	12.31	279	53545	103.40	UG/KG	98
13)	1,2-DICHLOROETHANE-D4 (SURG.)	12.19	276	43064M	89.56	UG/KG 116	97
14)	*1,4-DIFLUOROBENZENE	19.72	470	63220	50.00	UG/KG	100
15)	1,1,1-TRICHLOROETHANE	13.44	308	75281	68.41	UG/KG	94
16)	CARBON TETRACHLORIDE	13.82	318	80869	68.93	UG/KG	86
17)	BROMODICHLOROMETHANE	14.29	330	79439	99.10	UG/KG	98
18)	1,2-DICHLOROPROPANE	15.73	367	19058	88.75	UG/KG	99
19)	CIS-1,3-DICHLOROPROPENE	16.00	374	34290	91.83	UG/KG	98
20)	TRICHLOROETHYLENE	16.54	388	33672	81.86	UG/KG	89
21)	DIBROMOCHLOROMETHANE	17.01	400	73758	98.24	UG/KG	100
22)	1,1,2-TRICHLOROETHANE	17.16	404	22096	99.33	UG/KG	97
23)	BENZENE	17.20	405	41208	61.25	UG/KG	100
24)	TRANS-1,3-DICHLOROPROPENE	17.24	406	34438	84.12	UG/KG	94
25)	2-CHLOROETHYL VINYL ETHER	18.68	443	4338	45.30	UG/KG	100
26)	BROMOFORM	19.61	467	74615	89.70	UG/KG	95
27)	*CHLOROBENZENE-D5	24.58	595	49395	50.00	UG/KG	100
28)	TETRACHLOROETHYLENE	22.17	533	40683	93.67	UG/KG	94
29)	TOLUENE-D8 (SURG.)	23.41	565	57619	87.58	UG/KG 114	80
30)	1,1,2,2-TETRACHLOROETHANE	21.94	527	34091	91.60	UG/KG	96
31)	TOLUENE	23.57	569	30573	85.42	UG/KG	92
32)	CHLOROBENZENE	24.65	597	53551	92.17	UG/KG	99
33)	ETHYLBENZENE	26.64	648	23120	82.03	UG/KG	93
34)	BROMOFLUOROBENZENE (SURG.)	28.96	708	66779	72.15	UG/KG 94	95
~~35)~~	~~M-XYLENE~~	~~31.68~~	~~778~~	~~25405~~	~~67.81~~	~~UG/KG~~ MC 12/18/92	~~89~~
36)	O,P-XYLENE	31.68	778	25405	64.10	UG/KG	
37)	1,3-DICHLOROBENZENE	35.06	865	36918	32.78	UG/KG	86
38)	1,2-DICHLOROBENZENE	36.03	890	67704M	59.42	UG/KG	97
39)	1,4-DICHLOROBENZENE	36.69	907	68834M	66.96	UG/KG	96

* Compound is ISTD

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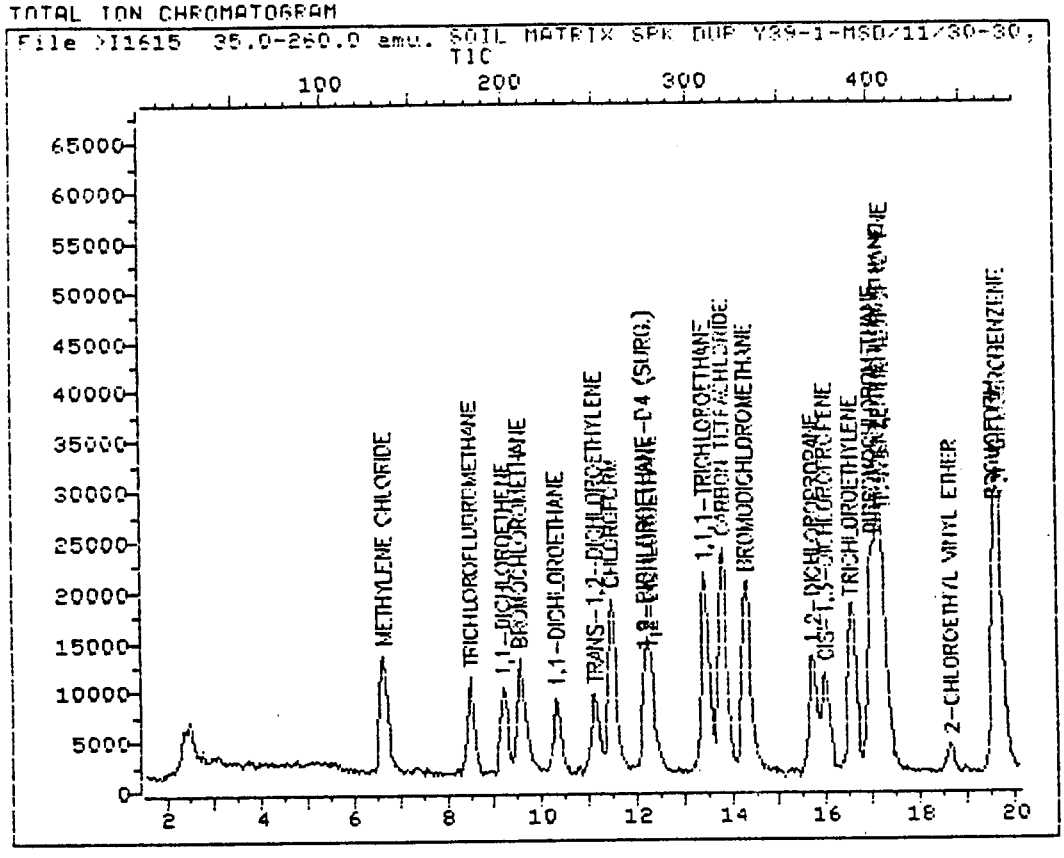
TOTAL ION CHROMATOGRAM



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Name: SOIL MATRIX SPK DUP
Misc: Y39-1-MSD/11/30-30, 5.00G, (211-0846-11), QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:21
Injected at: 921210 13:43

TIC page 1 of 2

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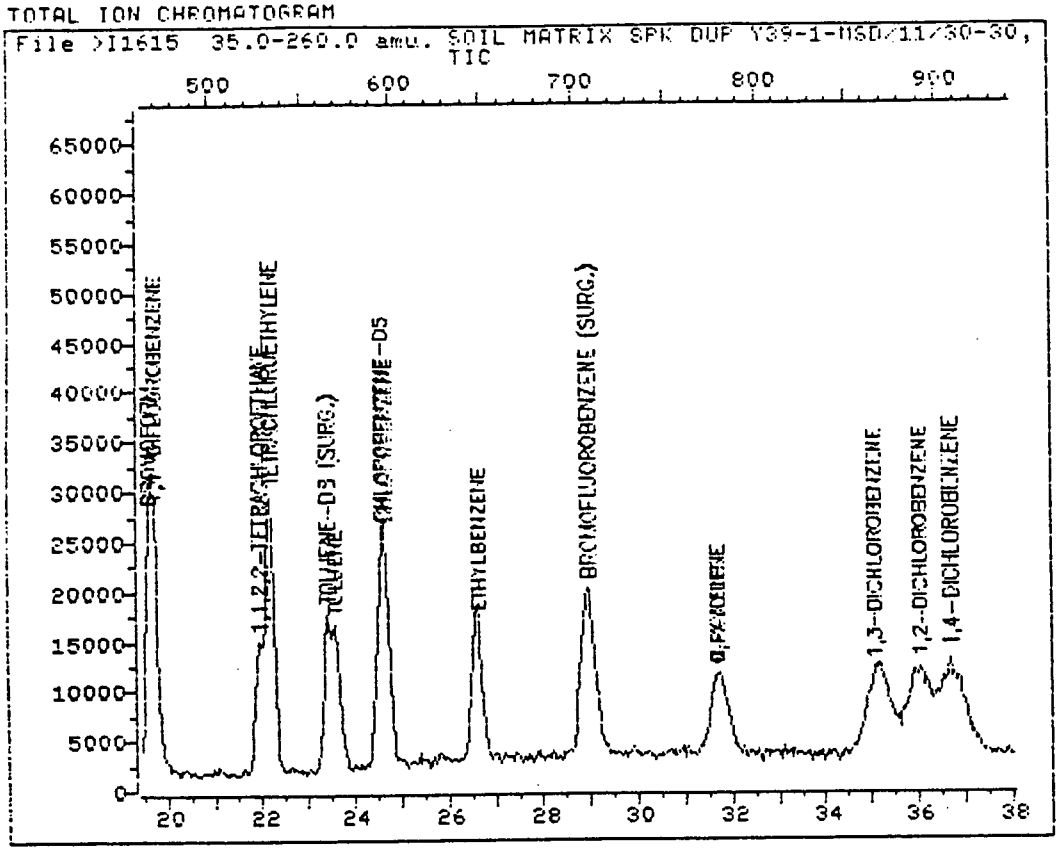
TOTAL ION CHROMATOGRAM



Data File: >I1615::I3 Quant Output File: ^I1615::QT
Name: SOIL MATRIX SPK DUP
Misc: Y39-1-MSD/11/30-30, 5.00G, (211-0846-11), QV0011

Id File: MSDS::I3
Title: VOLATILE ORGANIC ANALYSIS BY EPA 8240
Last Calibration: 921211 10:11

Operator ID: MANAGER
Quant Time: 921211 10:21
Injected at: 921210 13:43

TIC page 2 of 2

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

KNICKERBOCKER ENTERPRISES/ESI

212-0858

BASE NEUTRAL EXTRACTABLES

SEMI - VOLATILES

(BN)

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

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3.0 QA/QC DATA SUMMARY

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

METHODOLOGY SUMMARY

This summary is based upon ECRA Labc, Inc. Standard Operating Procedure No. SOP-EL-025.

1.0 Parameter: **Semi-Volatile Analysis- Base/Neutrals and Acids in Soil**

2.0 Reference:

2.1 Extraction Method: Test Methods for Evaluating Solid Waste SW-846, 3rd Edition, Rev.O., EPA Method #354.0

2.2 Analytical Method: EPA SW-846, 3rd Edition, Rev.O.,EPA Method #8270.

3.0 Method Description:

3.1 Sample Preparation: Approximately 30 grams of soil is extracted by sonication with Methylene Chloride. This process is repeated twice, draining the extract through sodium sulfate, into a Kuderna-Danish Apparatus. The apparatus is placed on a water bath and the extract is concentrated to a volume of 1 ml.

3.2 Calibration: Calibration is achieved by running a series of semi-volatile organic standards on a Gas Chromatograph/Mass Spectrometer which is interfaced with an HP-1000 RTE-6/VM computer system. The computer detects, acquires, and stores all data generated during the program and calculates a response factor for each contaminant injected. The computer identifies the peaks by comparing the retention time and the extracted ion current profile to that which is stored in a library file.

3.3 Sample Analysis: 2 ul of the extract is injected into a Gas Chromatograph/Mass Spectrometer equipped with a J & W-DB5/ capillary column. The gas chromatograph undergoes a temperature ramp from 50°C to 300°C at a rate of 8°C/min. for the complete separation of semi-volatile contaminants.

3.4 Calculation: Qualitative identification is obtained by the same method as described in 3.2. Quantitation is achieved by comparison of one characteristic mass (m/z) abundance of a specific analyte with a characteristic mass (m/z) abundance of an internal QA/QC standards.

4.0 MDL: The MDL for semi-volatile organics is a function of the moisture content, the weight of the sample, and any interferences that may appear in the chromatogram. A typical MDL is 330 micrograms per kilogram [PPB].

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 1.0

SAMPLE ANALYSIS REPORTS

QUANT REPORTS WITH TOTAL ION CHROMATOGRAMS AND MASS SPECTRAL DATA

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client ESI/KNICKERBOCKER Lab Sample ID: 212-0858-01

Sample ID: 92-032- A01 Date Sampled: 12/03/92

Matrix SOIL Date Received: 12/04/92

Sample Wt/Vol 30g Date Extracted: 12/09/92

Data File A0137.D Date Analyzed 12/15/92

Extraction: SONIC DF 39.8

UNITS: UG/KG

CAS	Compound	Conc	Q	MDL
62-75-9	n-Nitrosodimethylamine	U		199
111-44-4	bis(2-Chloroethyl)ether	190	J	199
541-73-1	1,3-Dichlorobenzene	U		199
106-46-7	1,4-Dichlorobenzene	U		199
95-50-1	1,2-Dichlorobenzene	U		199
39638-32-9	bis(2-chloroisopropyl)ether	U		199
621-64-7	n-Nitroso-di-n-propylamine	U		199
67-72-1	Hexachloroethane	U		199
98-95-3	Nitrobenzene	U		199
78-59-1	Isophorone	U		199
111-91-1	bis(2-Chloroethoxy)methane	U		199
120-82-1	1,2,4-Trichlorobenzene	U		199
91-20-3	Naphthalene	U		199
106-47-8	4-Chloroaniline	U		199
87-68-3	Hexachlorobutadiene	U		199
77-47-4	Hexachlorocyclopentadiene	U		199
91-58-7	2-Chloronaphthalene	U		199
131-11-3	Dimethylphthalate	U		199
606-20-2	2,6-Dinitrotoluene	U		199
208-96-8	Acenaphthylene	141	J	199
83-32-9	Acenaphthene	U		199
132-64-9	Dibenzofuran	U		199
121-14-2	2,4-Dinitrotoluene	U		199
84-66-2	Diethylphthalate	U		199
70005-72-3	4-Chlorophenyl-phenylether	U		199
86-73-7	Fluorene	U		199
86-30-6	n-Nitrosodiphenylamine	U		199
101-55-3	4-Bromophenyl-phenylether	U		199
118-74-1	Hexachlorobenzene	U		199

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client	ESI/KNICKERBOCKER	Lab Sample ID:	212-0858-01
Sample ID:	92-032- A01	Date Sampled:	12/03/92
Matrix	SOIL	Date Received:	12/04/92
Sample Wt/Vol	30g	Date Extracted:	12/09/92
Data File	A0137.D	Date Analyzed	12/15/92
Extraction:	SONIC	DF	39.8
		UNITS:	UG/KG

CAS	Compound	Conc	Q	MDL
85-01-8	Phenanthrene	131	J	199
120-12-7	Anthracene	102	J	199
84-74-2	Di-n-butylphthalate	U		199
206-44-0	Fluoranthene	389		199
92-87-5	Benzidine	U		199
129-00-0	Pyrene	637		199
85-68-7	Butylbenzylphthalate	U		199
91-94-1	3,3'-Dichlorobenzidine	U		199
117-81-7	bis(2-Ethylhexyl)phthalate	532		199
56-55-3	Benzo[a]anthracene	365		199
218-01-9	Chyrsene	398		199
227-84-0	Di-n-octylphthalate	U		199
205-99-2	Benzo[b]fluoranthene	372		199
207-08-09	Benzo[k]fluoranthene	338		199
50-32-8	Benzo[a]pyrene	333		199
193-395	Indeno[1,2,3-cd]pyrene	91	J	199
53-70-3	Dibenz[a,h]anthracene	U		199
191-24-2	Benzo[g,h,i]perylene	107	J	199

00182

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ECRA
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

1F
SEMI-VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES, INC.

Client Name: ESI/KNICKERBOCKER

SAMPLE ID #: A01

LAB ID # 212-0858-01

Data File: A0137

Extraction: N/A

EPA METHOD # 8240

Dilution Factor: 39.8

Concentration Units: UG/KG

NUMBER OF TIC'S DETECTED: 15

* COMMON LABORATORY CONTAMINANT
** ALSO FOUND IN METHOD BLANK
*** MANUALLY INTEGRATED AND SEARCHED

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 79345	Tetrachloroethane	8.32	1000.	**
2.	Unknown Phenol Containing Compound	19.91	1100.	
3.	Tetramethylbutyl Phenol Isomer	20.02	2200.	
4.	Unknown Phenol Containing Compound	20.09	3600.	
5.	Unknown Phenol Containing Compound	20.19	2800.	
6.	Unknown Phenol Containing Compound	20.26	1400.	
7.	Unknown Phenol Containing Compound	20.32	1500.	
8.	Unknown Phenol Containing Compound	20.42	930.	
9.	Unknown Phenol Containing Compound	20.49	3100.	
10.	Tetramethylbutyl Phenol Isomer	20.54	3200.	
11.	Unknown	20.67	1200.	
12.	Unknown	25.55	600.	
13.	Unknown	25.61	910.	
14.	Benzofluorene Isomer	25.69	1200.	
15.	Unknown	25.80	920.	

NR = Not reviewed

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QUANT REPORT

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 15 Dec 92 3:35 pm
Data File: E:\12-15-92\A0137.D
Name: ESI/KNICKERBOCKER
Misc: AO1,212-0858-01,30,12/3/92,12/4/92,12/9/92
Method: ABN0002F.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 09:01:30 1992
Quantitated using Multiple Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.25	152	76816	50.00	UG/KG	-0.01
26) Naphthalene-d8	13.24	136	260827	50.00	UG/KG	-0.01
42) Acenaphthene-d10	17.60	164	122456	50.00	UG/KG	-0.02
58) Phenanthrene-d10	21.26	188	209330	50.00	UG/KG	-0.01
71) Chyrsene-d12	27.93	240	125486	50.00	UG/KG	-0.02
77) Perylene-d12	33.51	264	57023	50.00	UG/KG	-0.03

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	0	0.00	UG/KG	0.00%
3) Phenol-d5	9.42	99	0	0.00	UG/KG	0.00%
17) Nitrobenzene-d5	11.54	82	109318	47.69	UG/KG	95.37%
35) 2-Fluorobiphenyl	15.88	172	178640	50.25	UG/KG	100.51%
54) 2,4,6-Tribromophenol	0.00	330	0	0.00	UG/KG	0.00%
66) Terphenyl-d14	25.19	244	194902	75.02	UG/KG	150.04%

Target Compounds						ISTD#
5) bis(2-Chloroethyl)ether	9.57	93	12698	4.77	UG/KG	001#
40) Acenaphthylene	17.22	152	23334	3.55	UG/KG	003
59) Phenanthrene	21.31	178	19406	3.29	UG/KG	004
60) Anthracene	21.43	178	15458	2.55	UG/KG	004
63) Fluoranthene	24.29	202	64154	9.77	UG/KG	004#
65) Pyrene	24.86	202	70804	16.01	UG/KG	005#
69) bis(2-Ethylhexyl)phthalate	27.88	149	56875	13.36	UG/KG	005#
70) Benzo[a]anthracene	27.88	228	36387	9.17	UG/KG	005#
72) Chyrsene	27.99	228	37613	10.01	UG/KG	005m
74) Benzo[b]fluoranthene	31.72	252	22098	9.36	UG/KG	006
75) Benzo[k]fluoranthene	31.78	252	18091	8.48	UG/KG	006#
76) Benzo[a]pyrene	33.23	252	17691	8.36	UG/KG	006#
78) Indeno[1,2,3-cd]pyrene	39.68	276	5245	2.28	UG/KG	006#
80) Benzo[g,h,i]perylene	41.27	276	5244	2.68	UG/KG	006#

C0184

(#) = qualifier out of range

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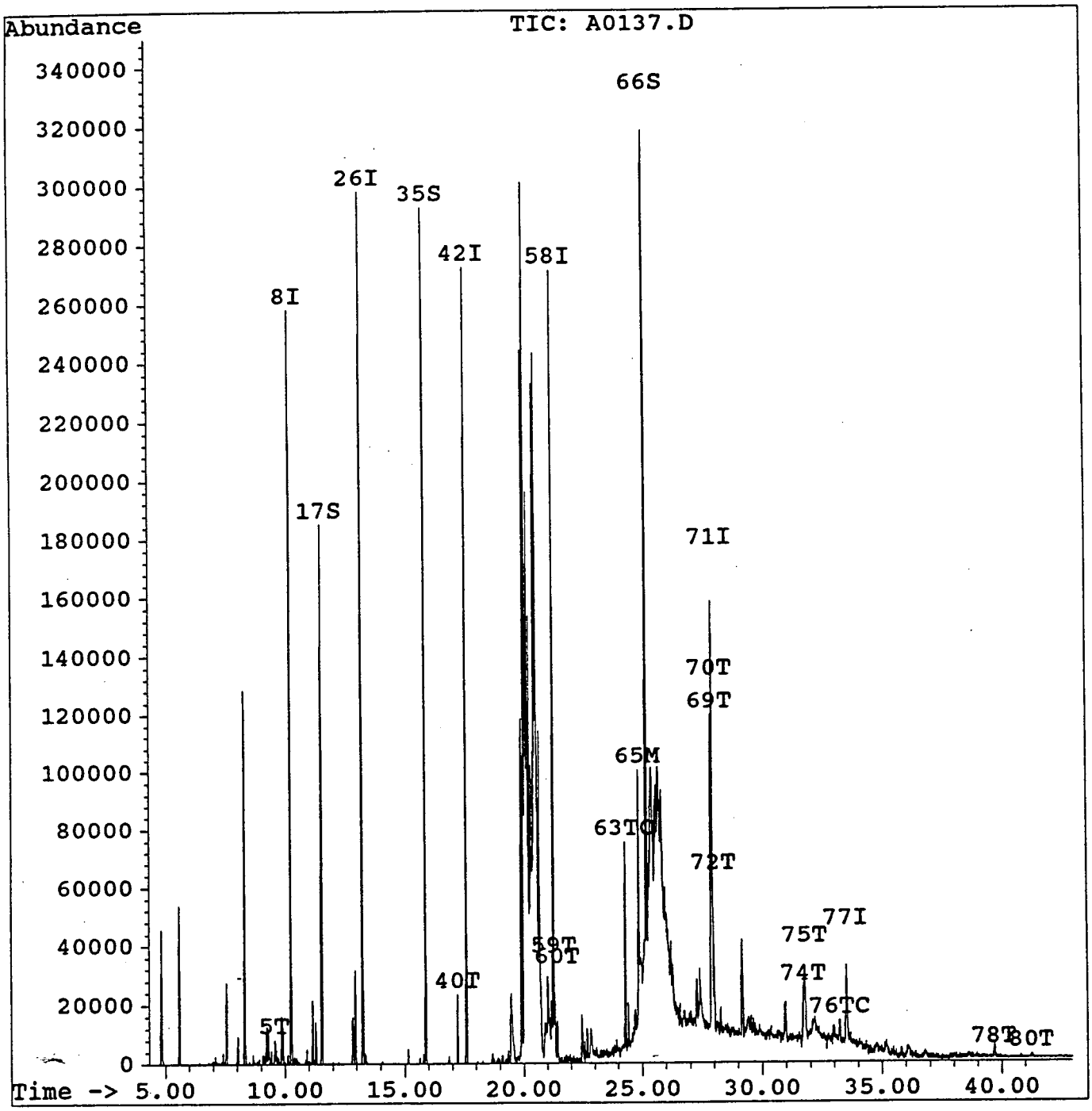
QUANT REPORT

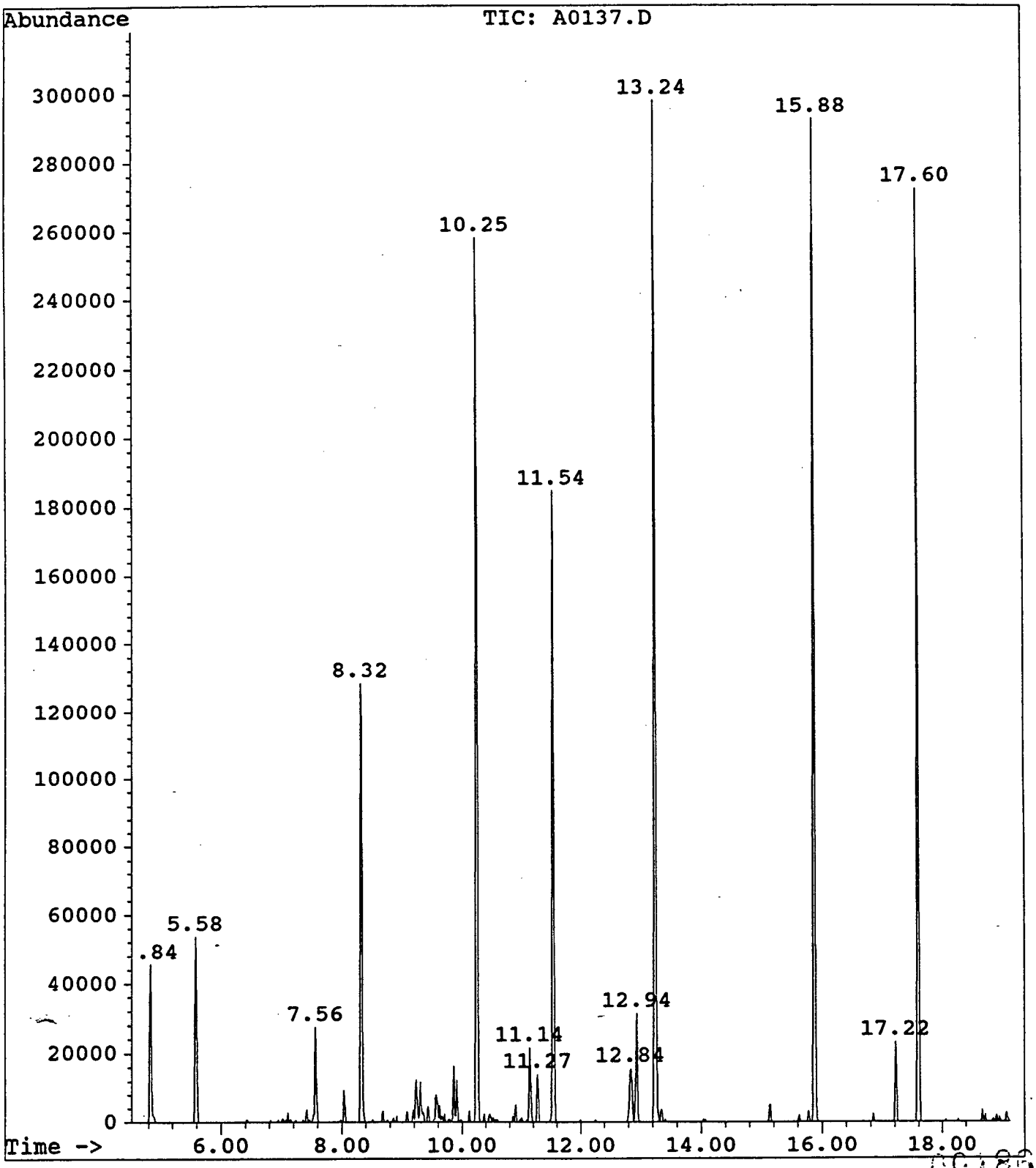
Operator ID: POB Date Acquired: 15 Dec 92 3:35 pm
Data File: E:\12-15-92\A0137.D
Name: ESI/KNICKERBOCKER
Misc: AO1,212-0858-01,30,12/3/92,12/4/92,12/9/92
Method: ABN0002F.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 09:01:30 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

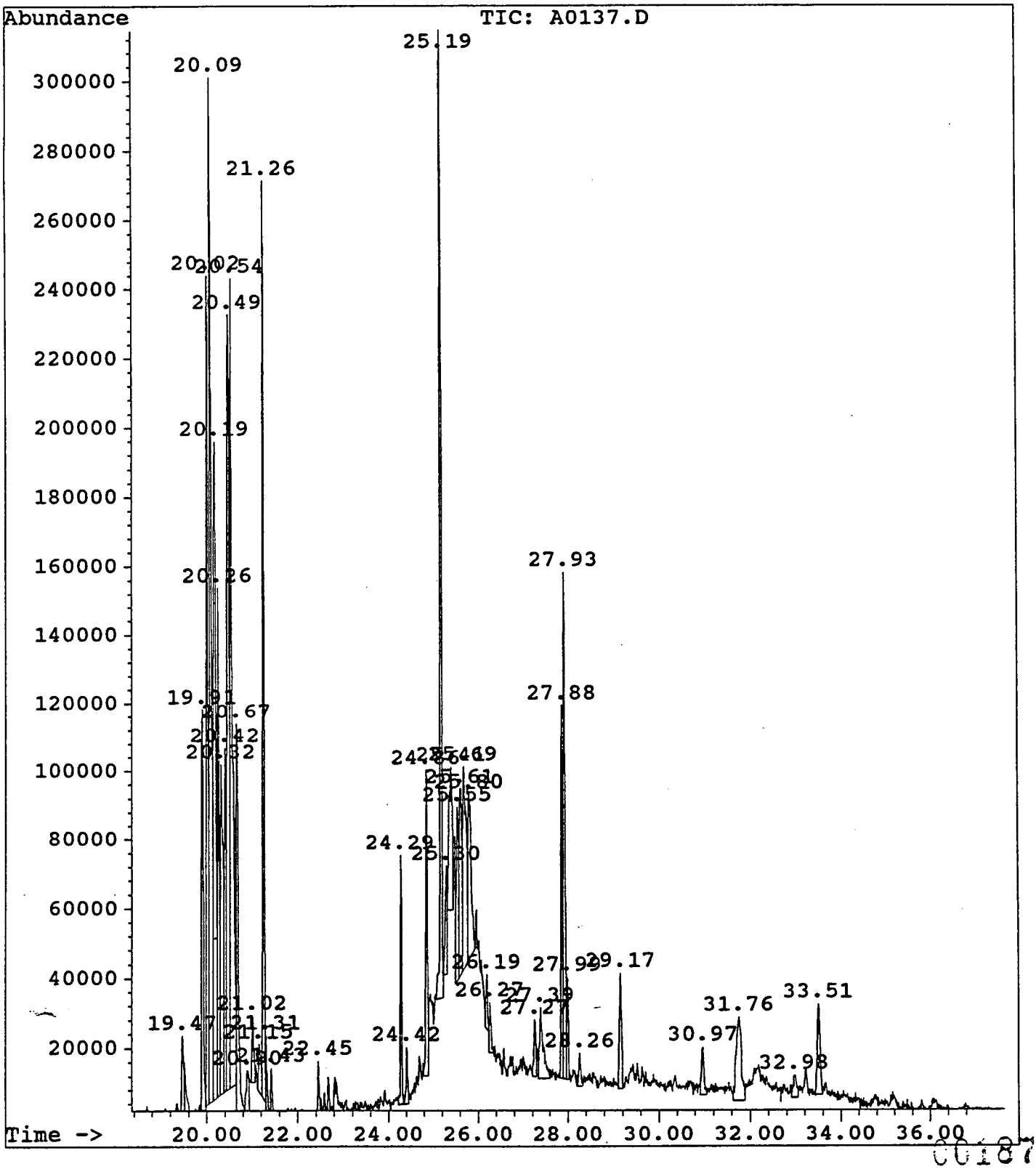


00185

File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
ALS vial: 8



File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
ALS vial: 8



00187

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ERA

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

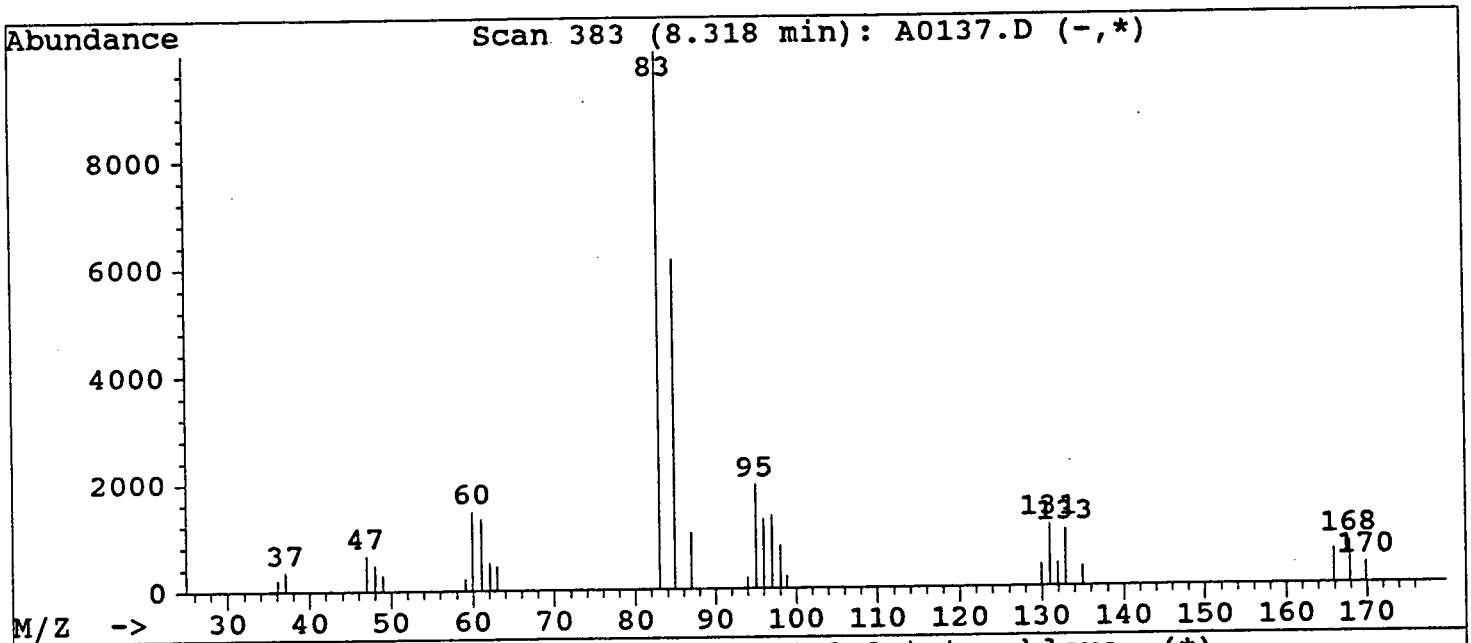
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

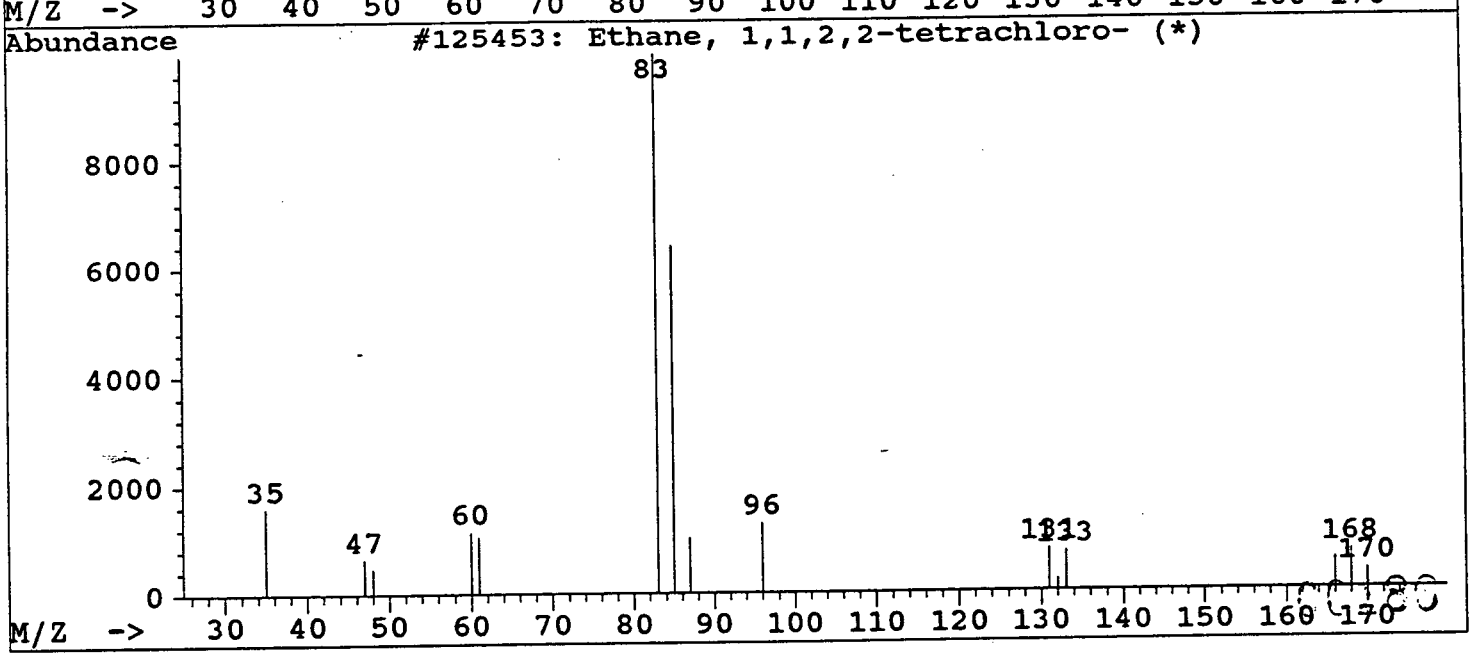
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak Conc. 1000 (B)
Integration Events: AutoIntegrate

$\left(\frac{232794 \times 50 \times 39.8}{443310}\right)$

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
3	8.32	1.57	C:\DATABASE\WILEY138.L			
			2 Ethane, 1,1,2,2-tetrachloro-	125453	000079-34-5	96
			Ethane, 1,1,2,2-tetrachloro-	125456	000079-34-5	95
			Ethane, 1,1,2,2-tetrachloro-	125452	000079-34-5	94





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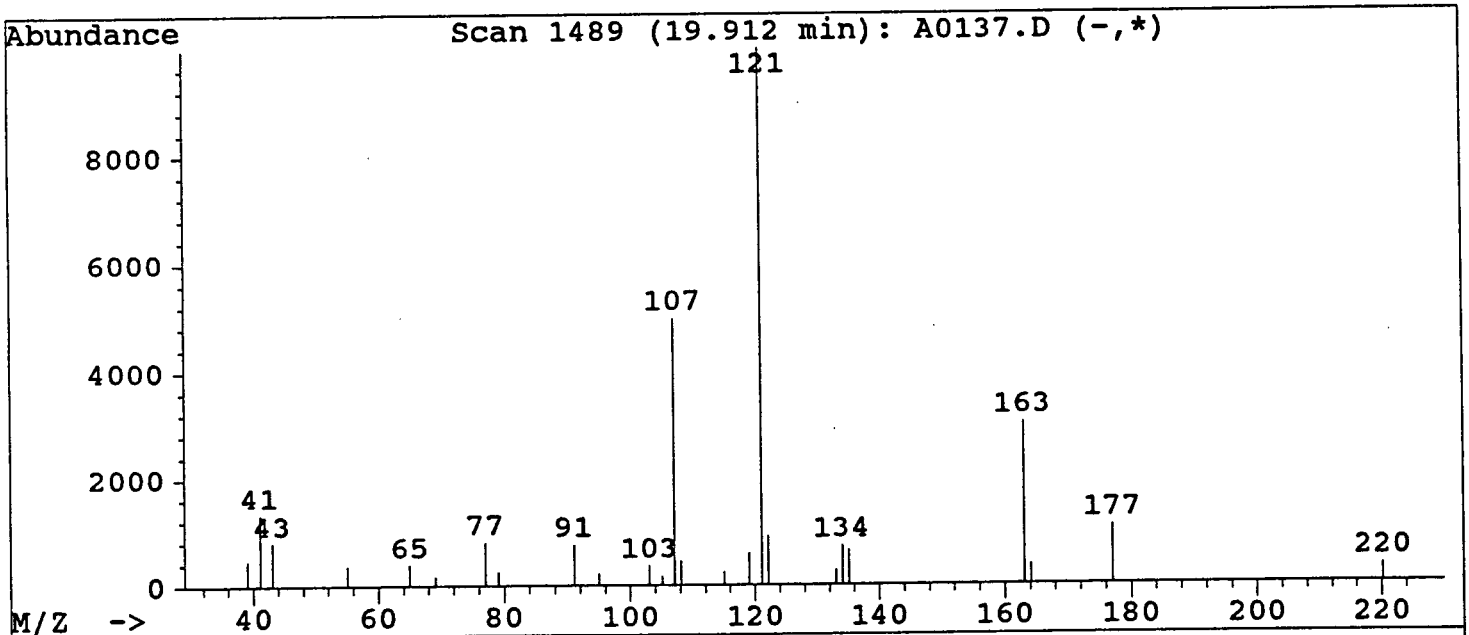
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

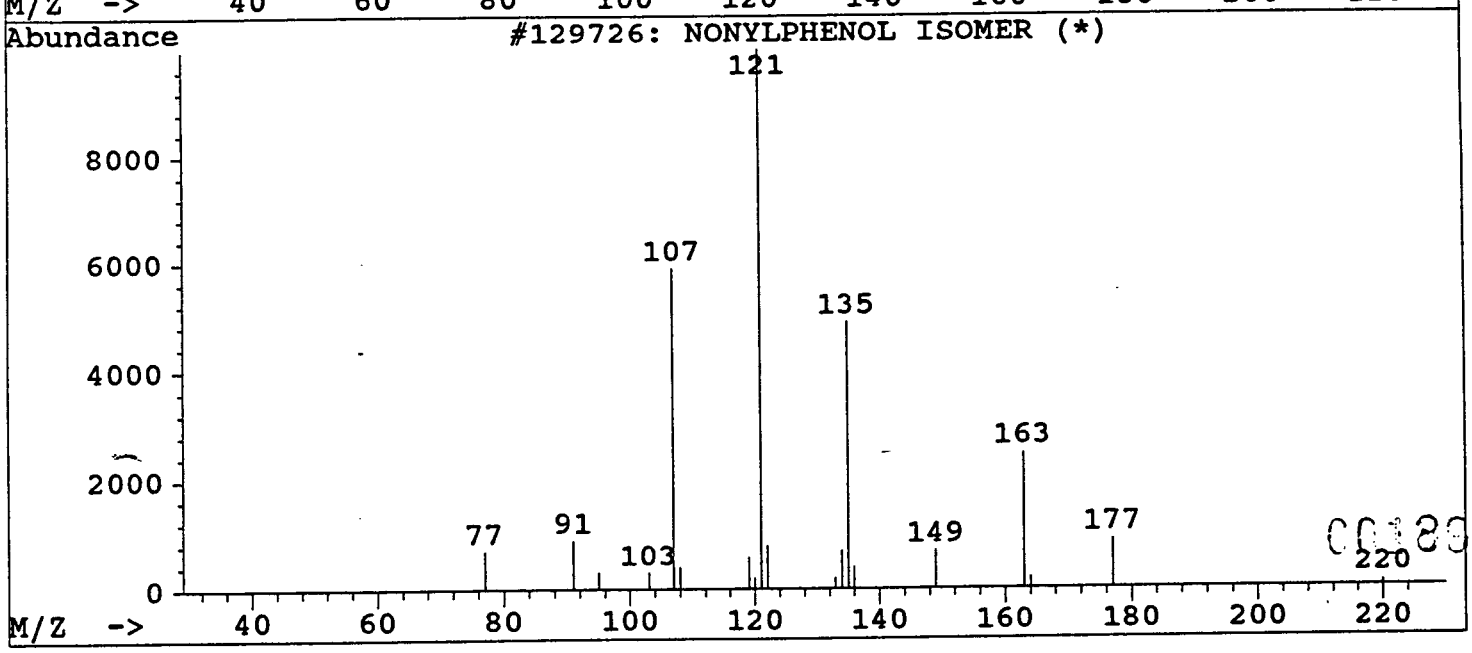
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

UNKNOWN PHENOL CONTAINING COMPOUND.
CONC = 1100

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
12	19.91	1.89	C:\DATABASE\WILEY138.L			
			NONYLPHENOL ISOMER	129726	000000-00-0	59
			Acetamide, N-(2,6-dimethylphenyl)-	18071	002198-53-0	52
			Anisole, p-octyl-	43906	003307-19-5	43





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Information from Data File:

File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

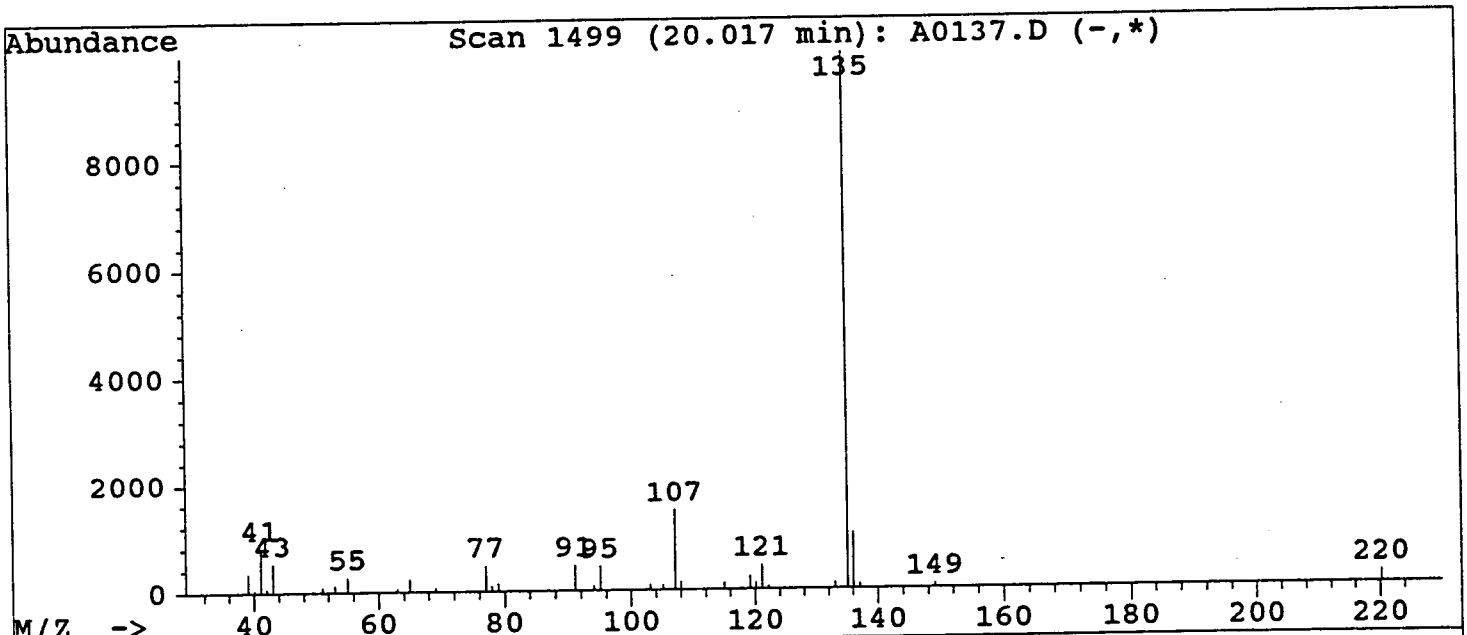
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

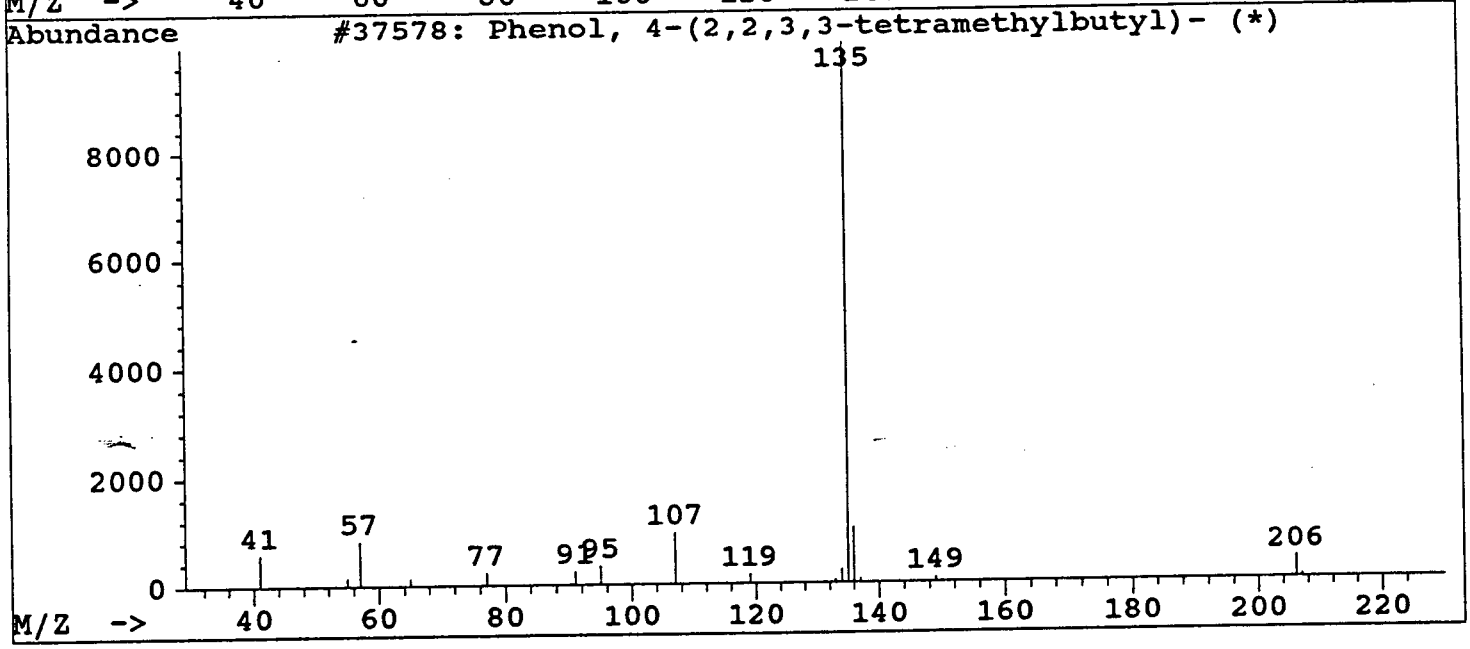
Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

~~Unknown Phenol~~ ~~Contaminant~~ Conc = 2200 VP 12/29/92

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
13	20.02	3.75	C:\DATABASE\WILEY138.L			
			Phenol, 4-(2,2,3,3-tetramethylbuty	37578	054932-78-4	78
			Phenol, 4-(1,1,3,3-tetramethylbuty	128870	000140-66-9	78
			Phenol, 4-(1,1,3,3-tetramethylbuty	37577	000140-66-9	78

Isomer





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ENVIRONMENTAL SOLUTIONS RESEARCH AND ANALYTICAL LABORATORIES, INC.

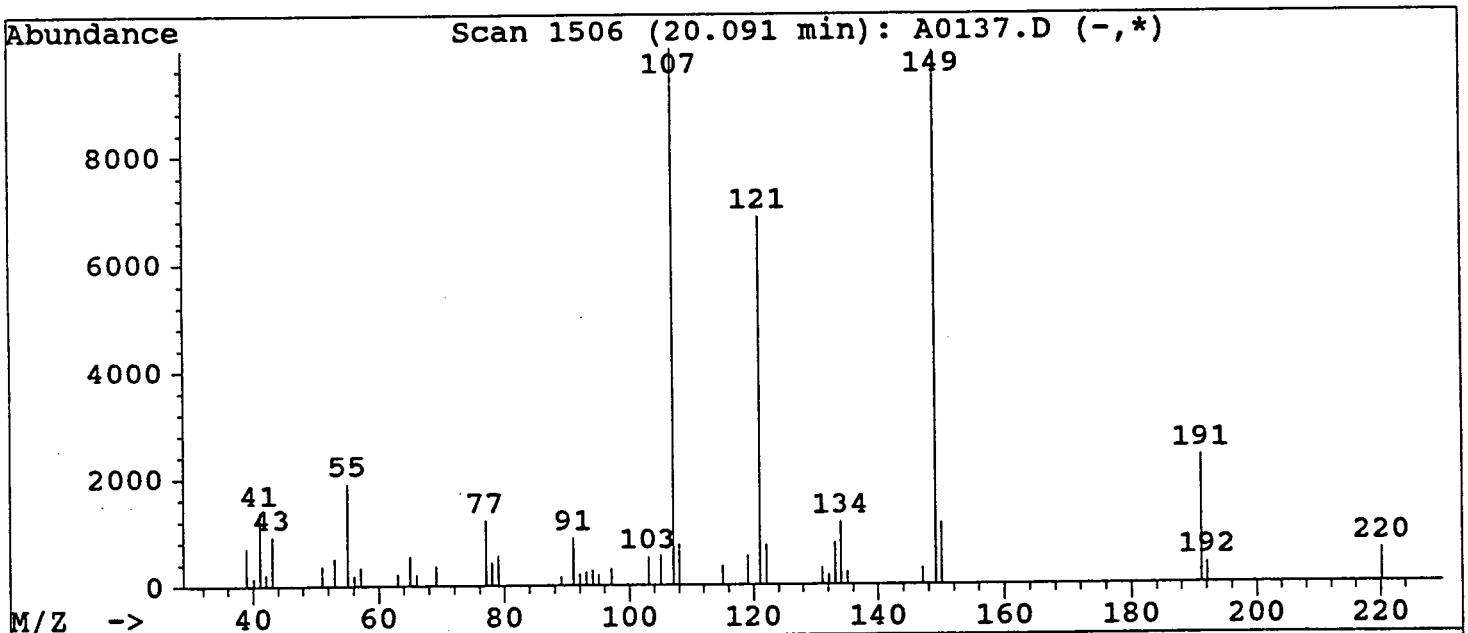
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:39 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

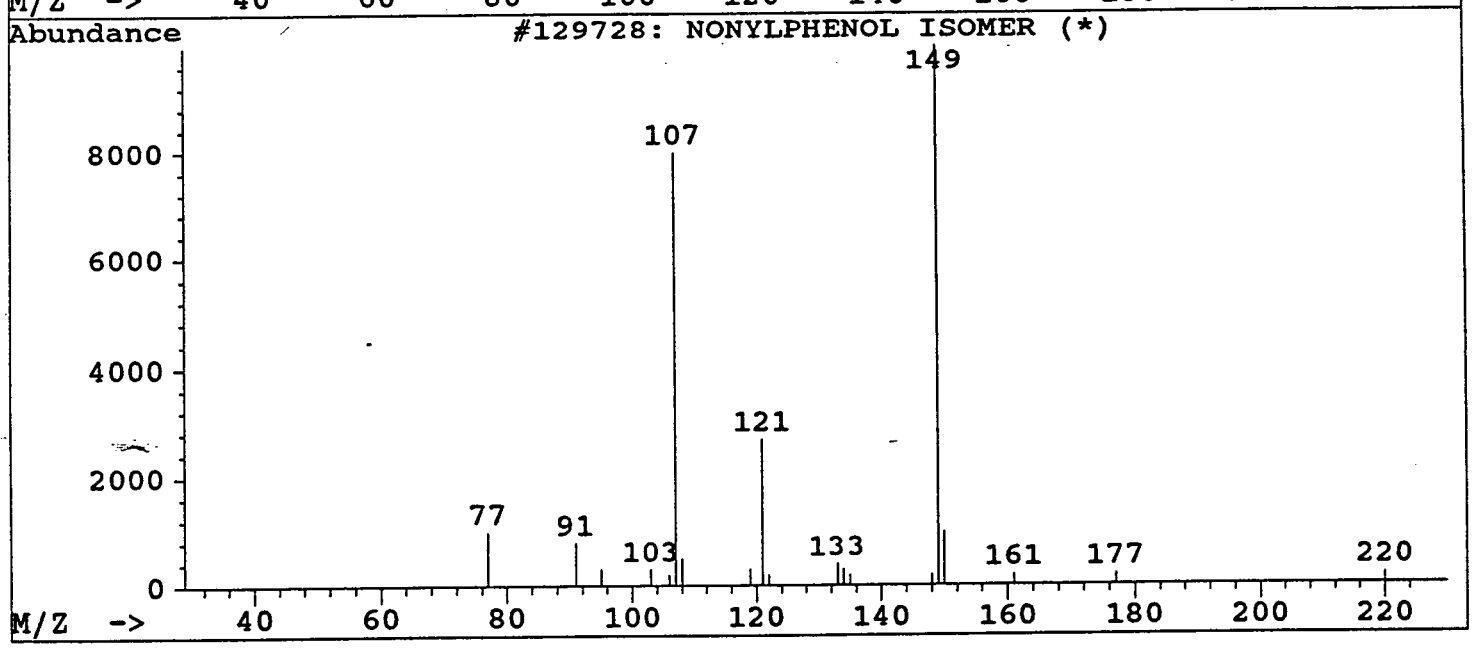
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

UNKNOWN PHENOL CONTAINING COMPOUND
CONC = 3600

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
14	20.09	6.29	C:\DATABASE\WILEY138.L			
			NONYLPHENOL ISOMER	129728	000000-00-0	64
			Phenol, nonyl-	129725	025154-52-3	64
			Acetamide, N-(3-methylphenyl)-	123489	000537-92-8	53





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ENVIRONMENTAL SCIENCE RESEARCH AND ANALYTICAL LABORATORIES, INC.

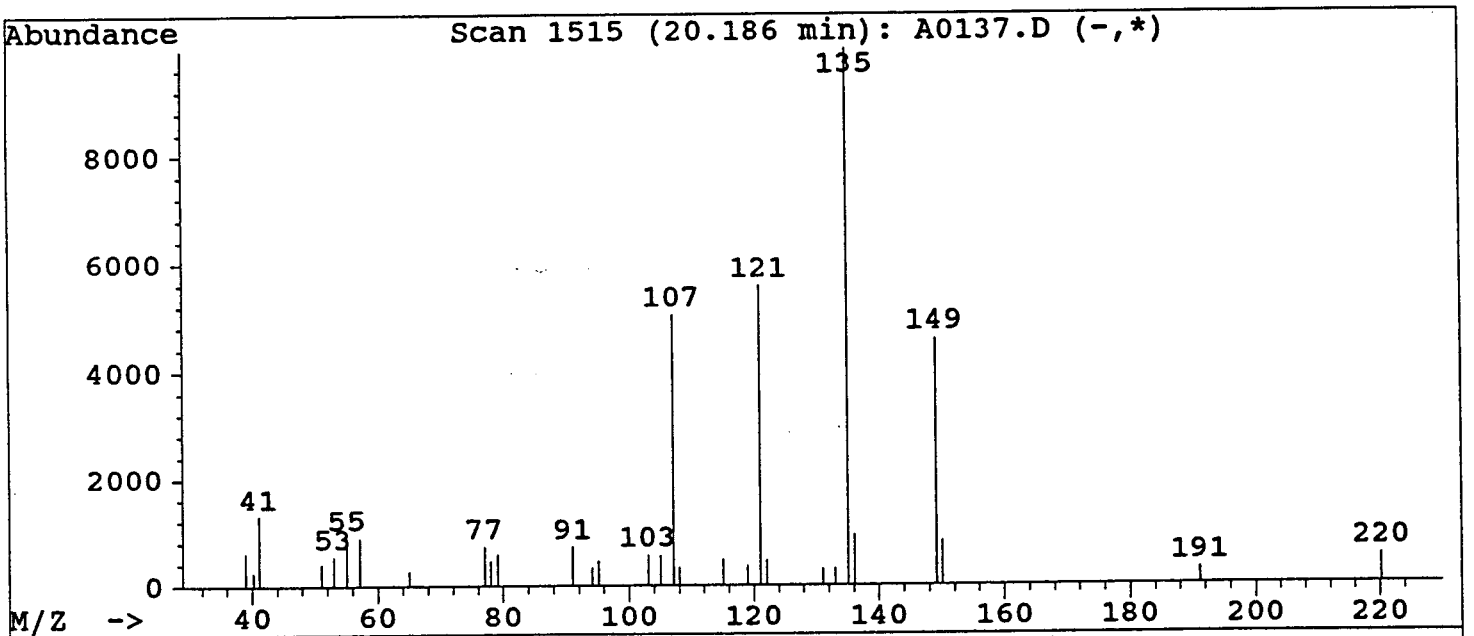
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

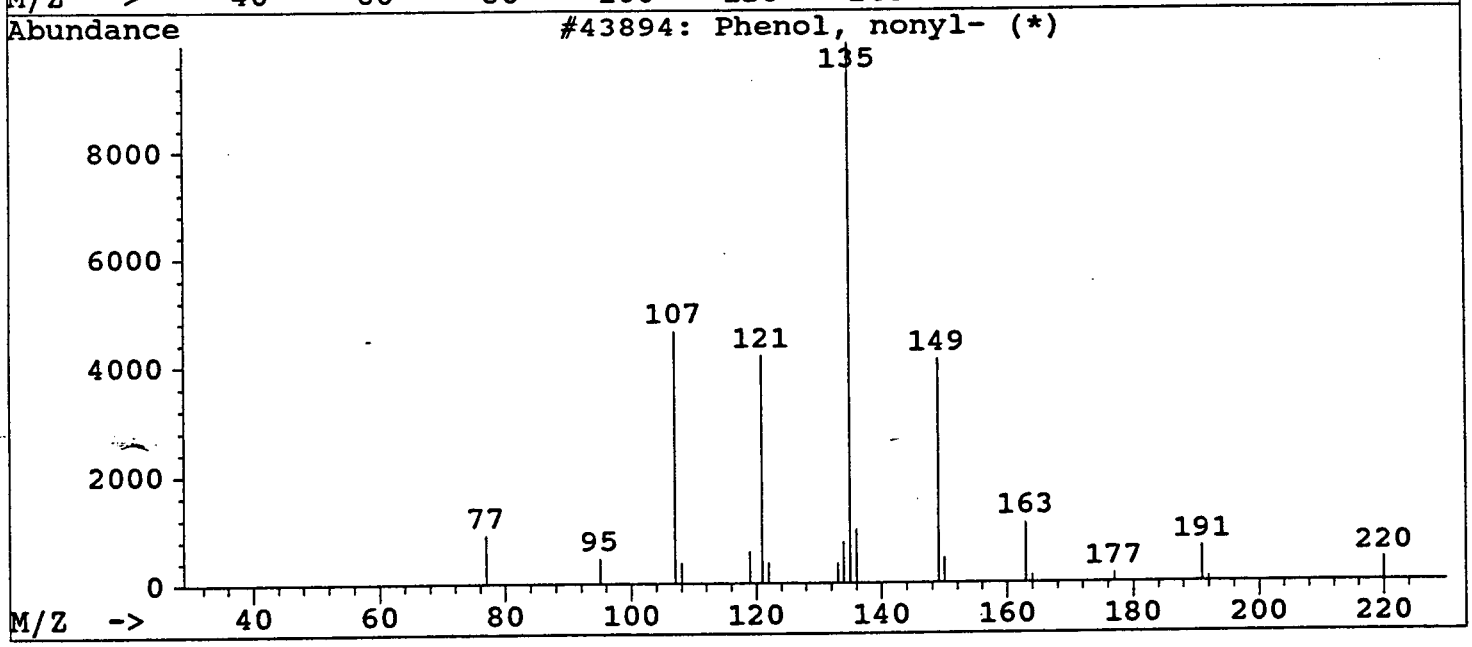
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

UNKNOWN PHENOL CONTAINING COMPOUND.
Conc = 28000

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
15	20.19	4.88	C:\DATABASE\WILEY138.L			
			Phenol, nonyl-	43894	025154-52-3	91
			Phenol, 4-nonyl-	129724	000104-40-5	83
			NONYLPHENOL ISOMER	43895	000000-00-0	81





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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

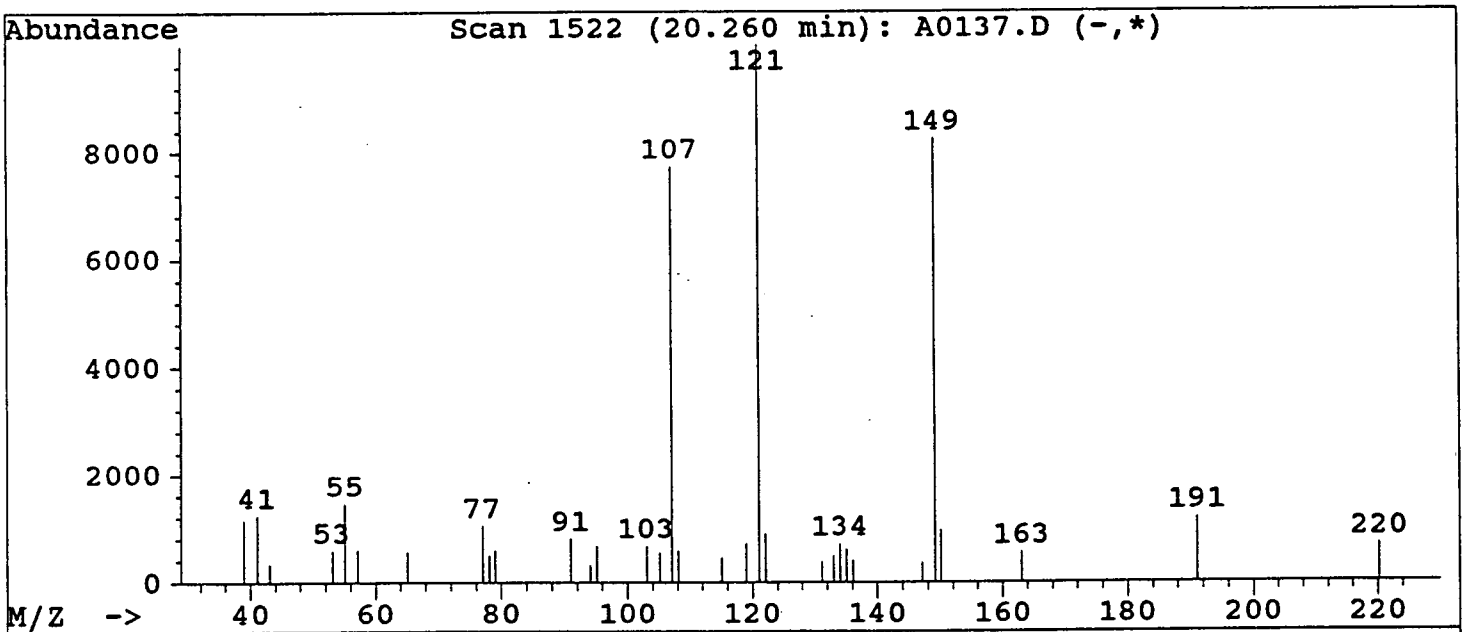
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:45 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

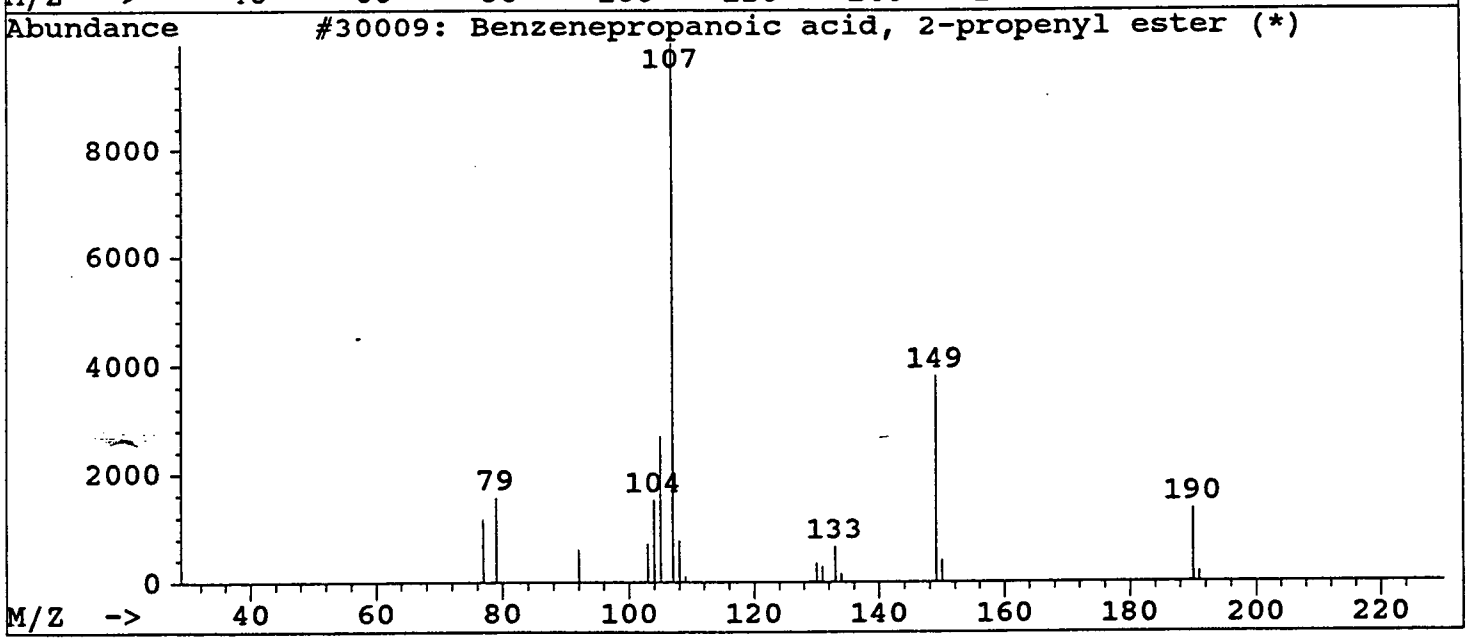
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

UNKNOWN PHENOL CONTAINING COMPOUND.
CONC = 1400

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
16	20.26	2.35	C:\DATABASE\WILEY138.L			
			Benzenepropanoic acid, 2-propenyl	30009	015814-45-6	47
			NONYLPHENOL ISOMER	129728	000000-00-0	47
			Phenol, nonyl-	129725	025154-52-3	47





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ENVIRONMENTAL SCIENCE AND RESEARCH AND ANALYTICAL LABORATORIES, INC.

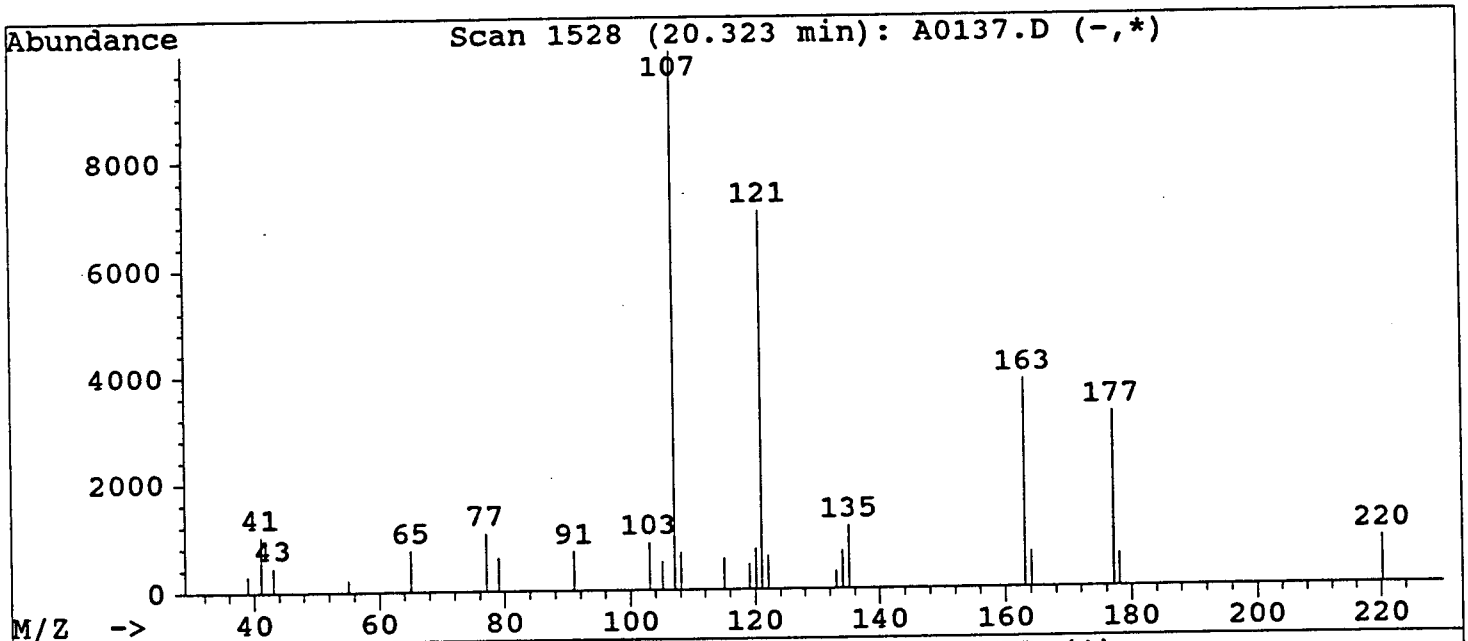
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:25 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

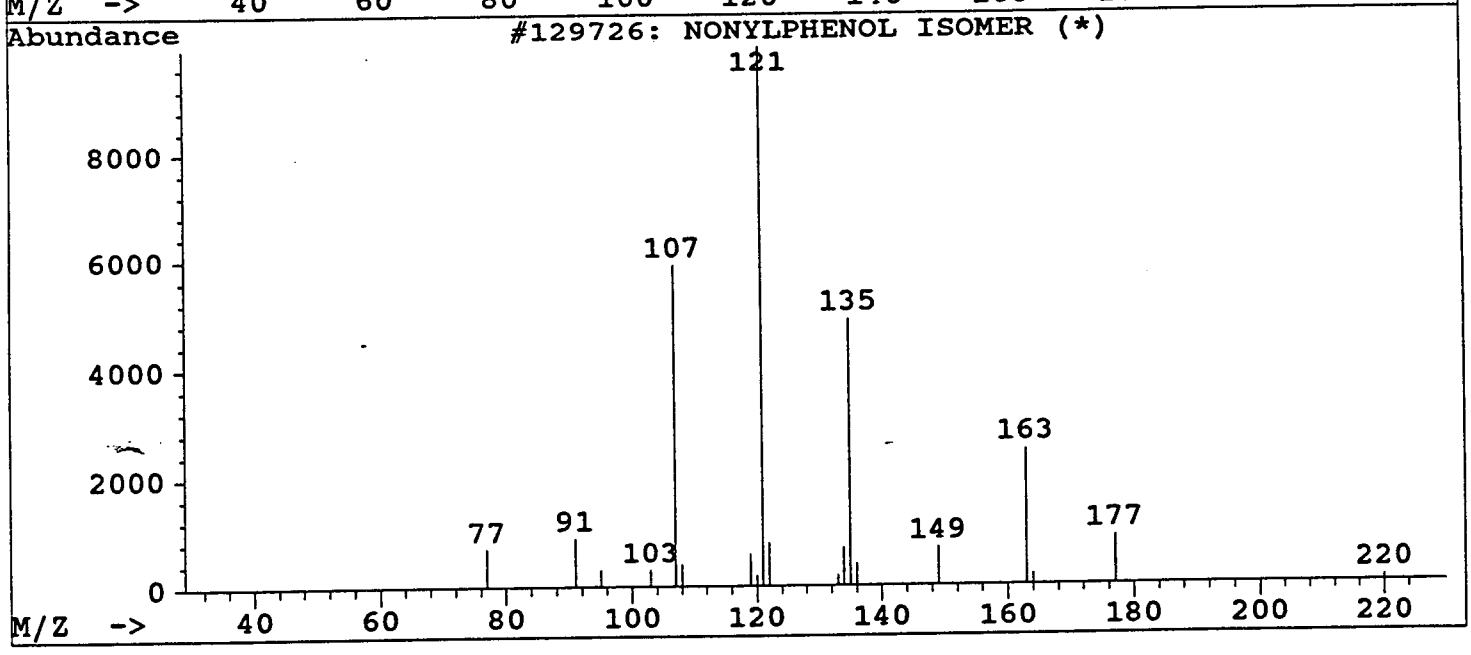
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

UNKNOWN PHENOL CONTAINING COMPOUND
CONC = 1500

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
17	20.32	2.61	C:\DATABASE\WILEY138.L			
			NONYLPHENOL ISOMER	129726	000000-00-0	87
			Benzeneamine, 3-hexyl-	24324	036042-29-2	50
			N-(P-TOLYL)-PROPIONIC ACID AMIDE	18067	000000-00-0	50





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ENVIRONMENTAL CONSULTANTS, RESEARCH, ANALYTICAL LABORATORIES, INC.

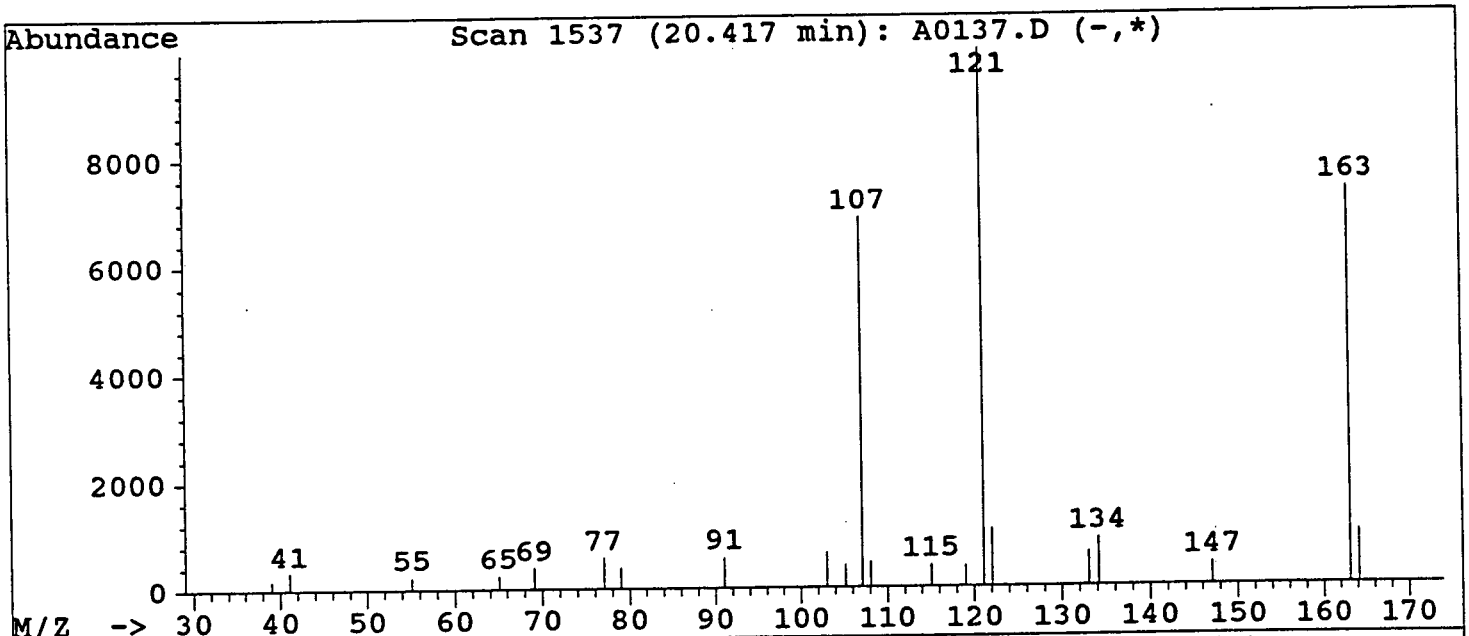
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

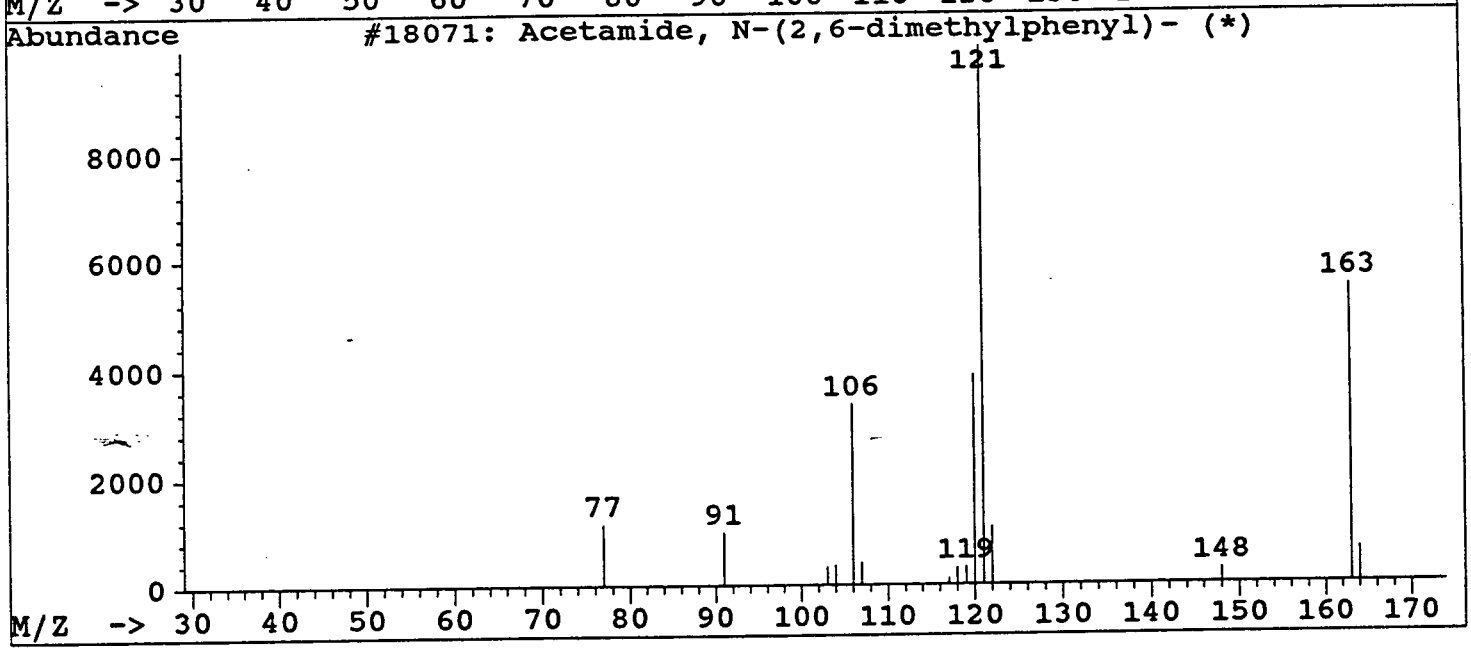
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

UNKNOWN PHENOL CONTAINING COMPOUNDS.
CONC = 950

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
18	20.42	1.61	C:\DATABASE\WILEY138.L			
			Acetamide, N-(2,6-dimethylphenyl)-	18071	002198-53-0	59
			Ether, .alpha.,.alpha.-dimethylben	24834	024142-78-7	36
			Ether, .alpha.,.alpha.-dimethylben	24833	024142-77-6	36





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ENVIRONMENTAL SCIENCE AND RESEARCH AND ANALYTICAL LABORATORIES, INC.

Information from Data File:

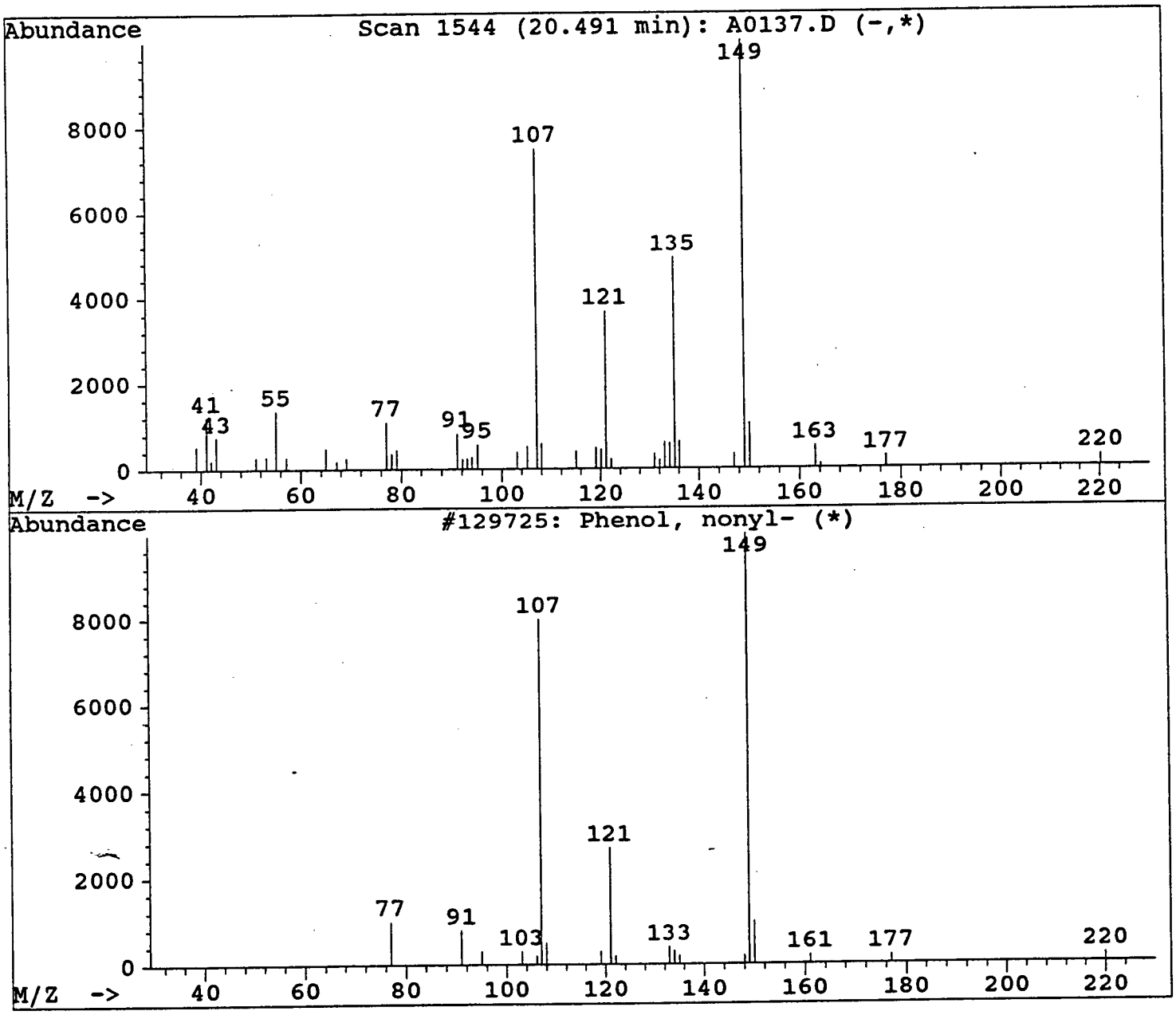
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:45 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

UNKNOWN PHENOL CONTAINING COMPOUND
Conc - 3100

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
19	20.49	5.36	C:\DATABASE\WILEY138.L			
			Phenol, nonyl-	129725	025154-52-3	96
			NONYLPHENOL ISOMER	129728	000000-00-0	96
			Acetamide, N-(2-methylphenyl)-	123488	000120-66-1	53



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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Information from Data File:

File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:55 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

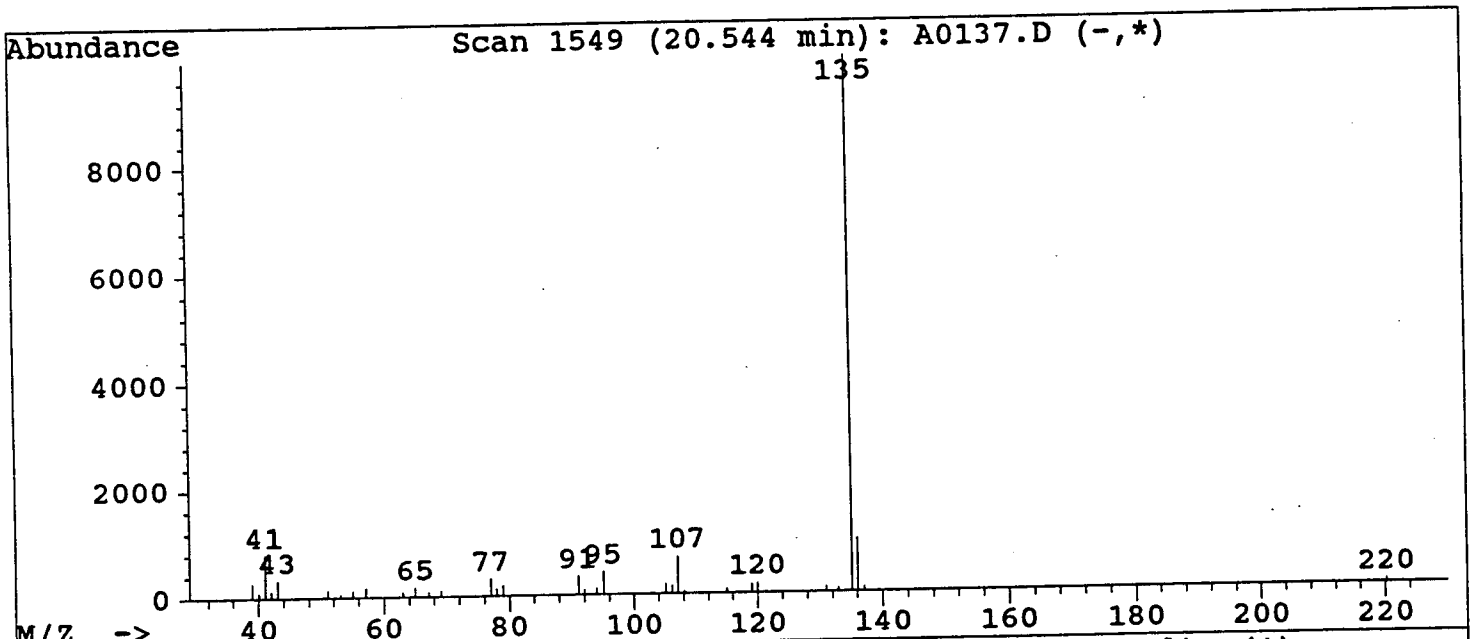
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

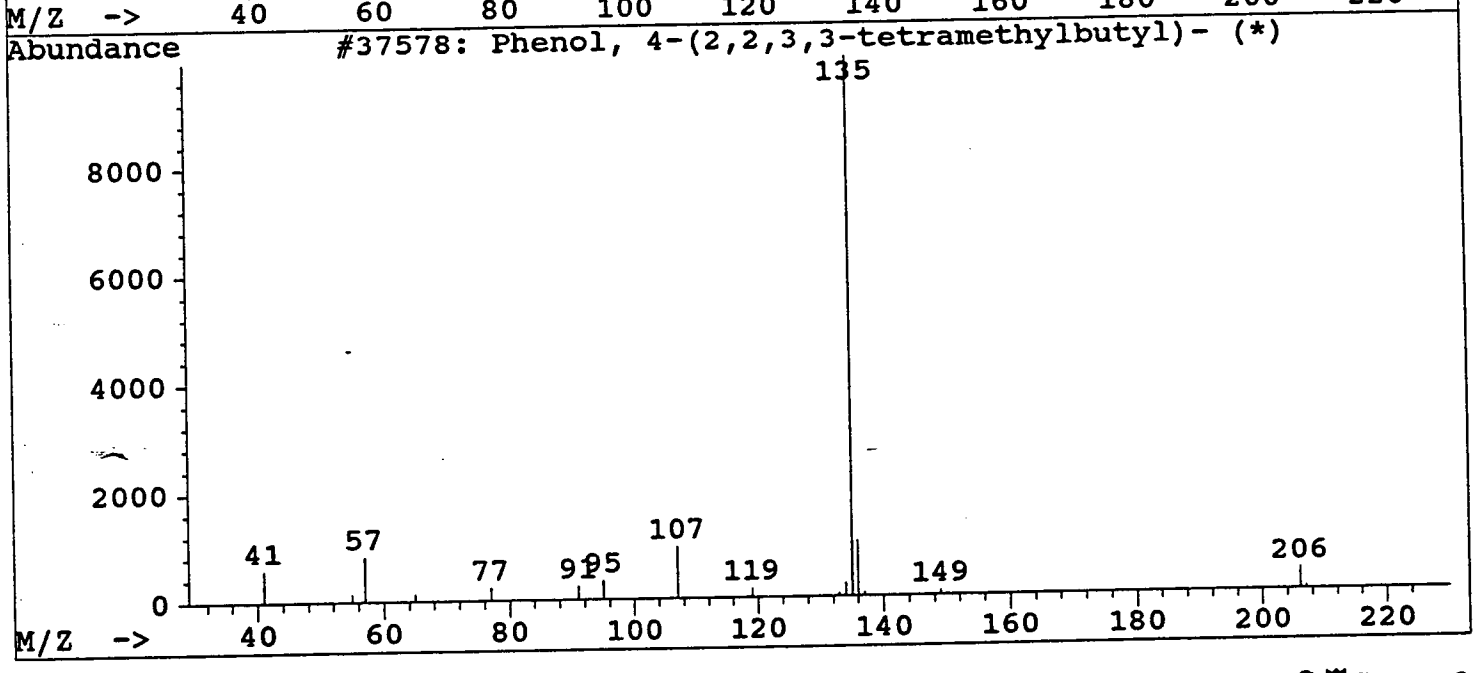
Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Cove = 3200

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
20	20.54	5.47	C:\DATABASE\WILEY138.L			
			Phenol, 4-(2,2,3,3-tetramethylbuty	37578	054932-78-4	78
			Phenol, 4-(1,1,3,3-tetramethylbuty	37577	000140-66-9	78
			NONYLPHENOL ISOMER	129727	000000-00-0	72

Isomer.





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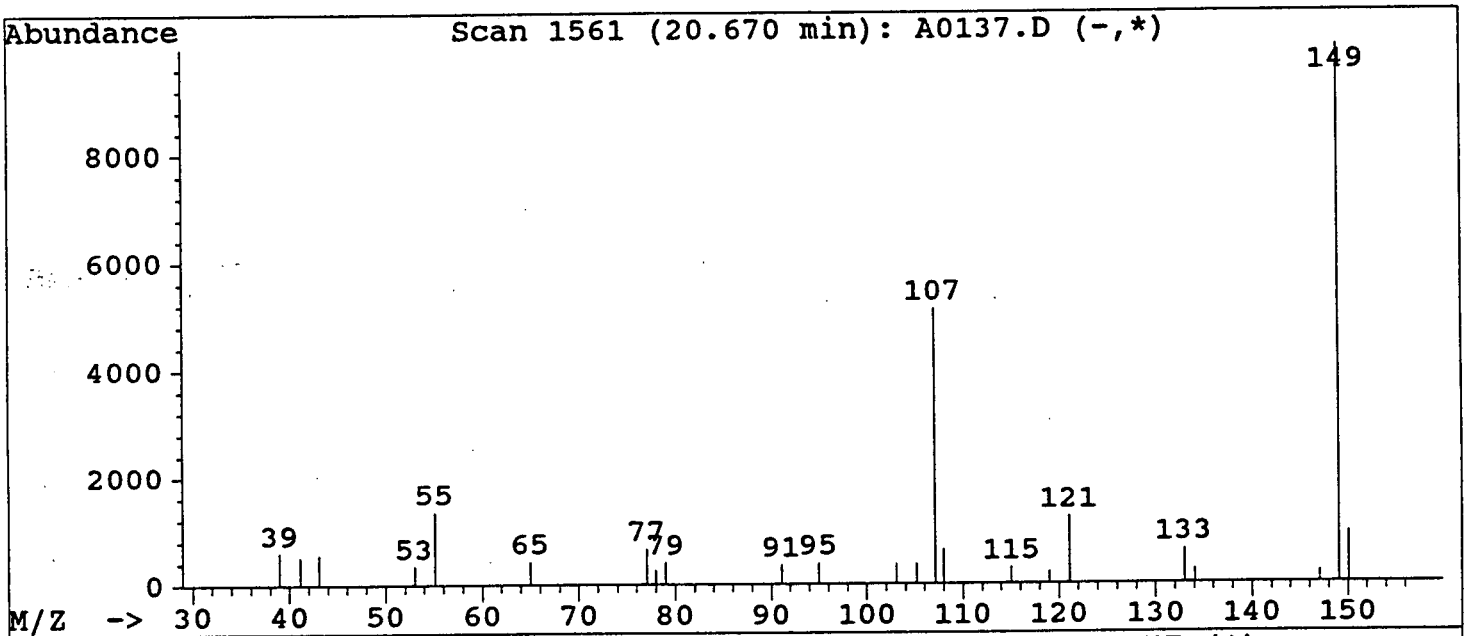
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

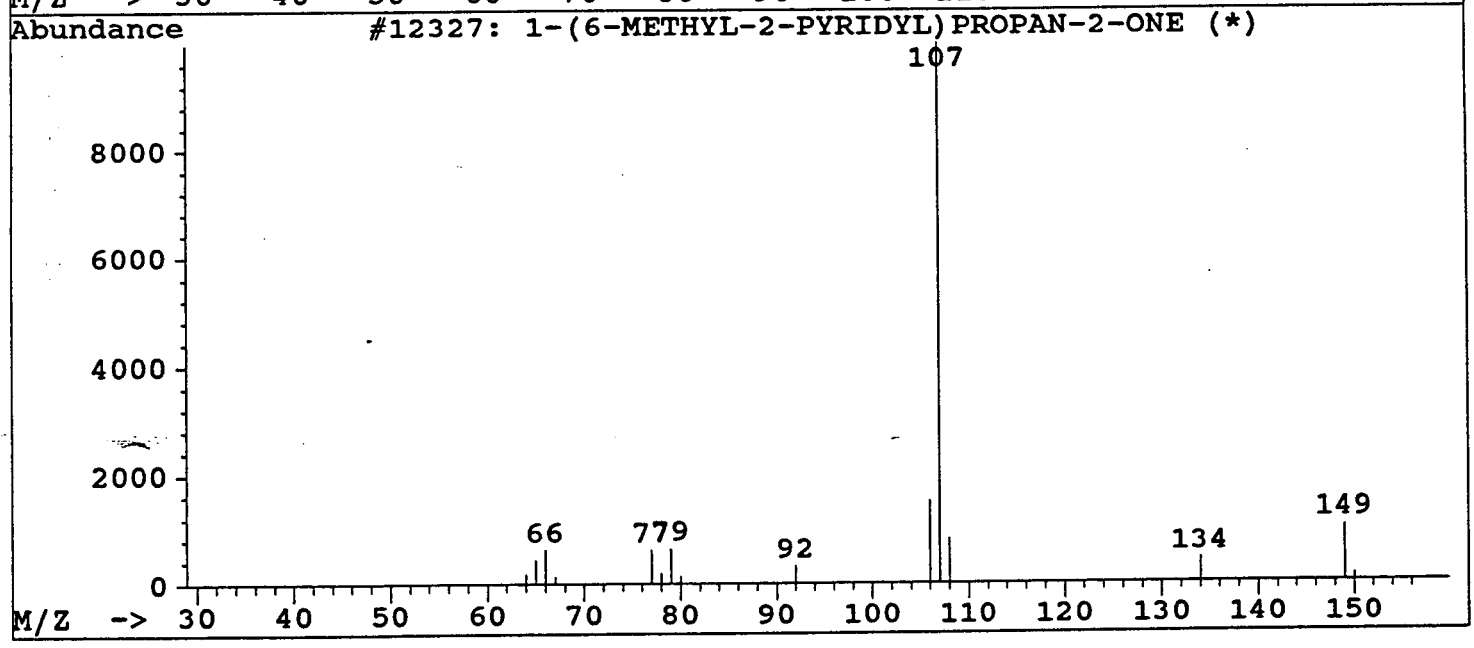
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Unknown
Conc = 12000

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
21	20.67	2.11	C:\DATABASE\WILEY138.L			
			1-(6-METHYL-2-PYRIDYL)PROPAN-2-ONE	12327	065702-08-1	64
			Acetamide, N-(2-methylphenyl)-	123488	000120-66-1	50
			2,3,4,5,6-Pentamethylpyridine	12343	003748-83-2	47





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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

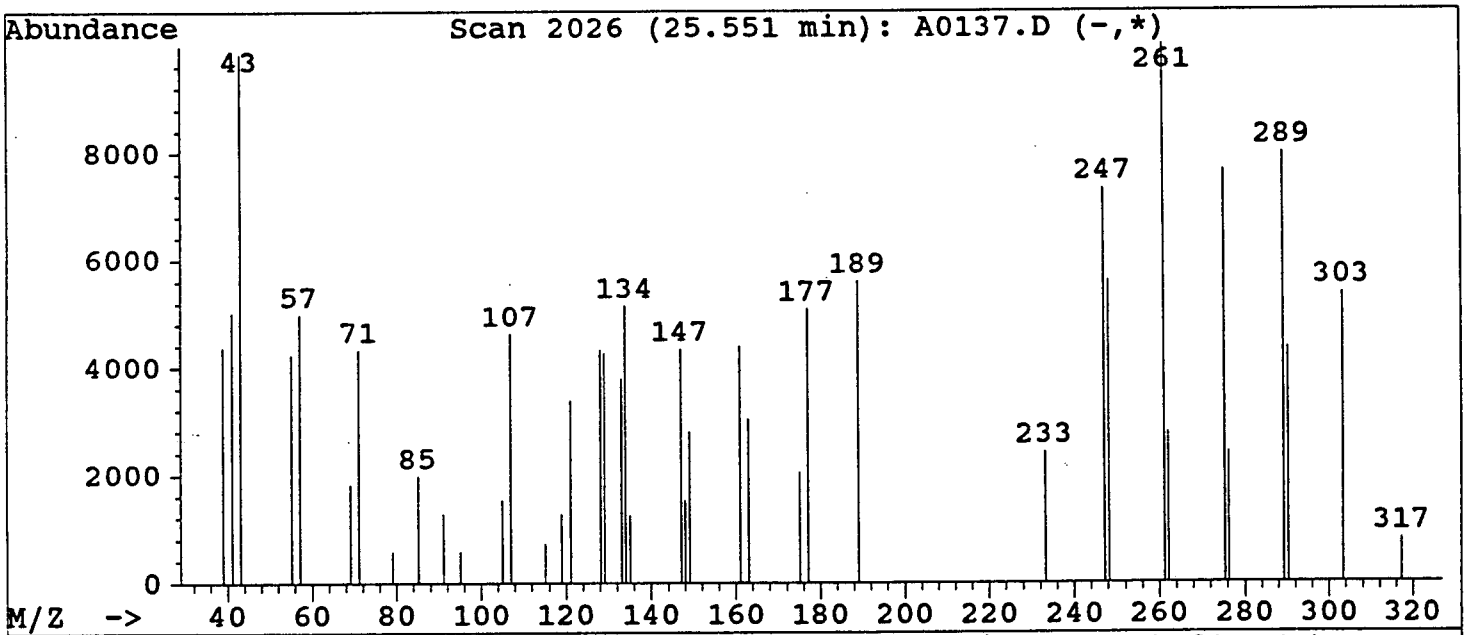
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:35 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

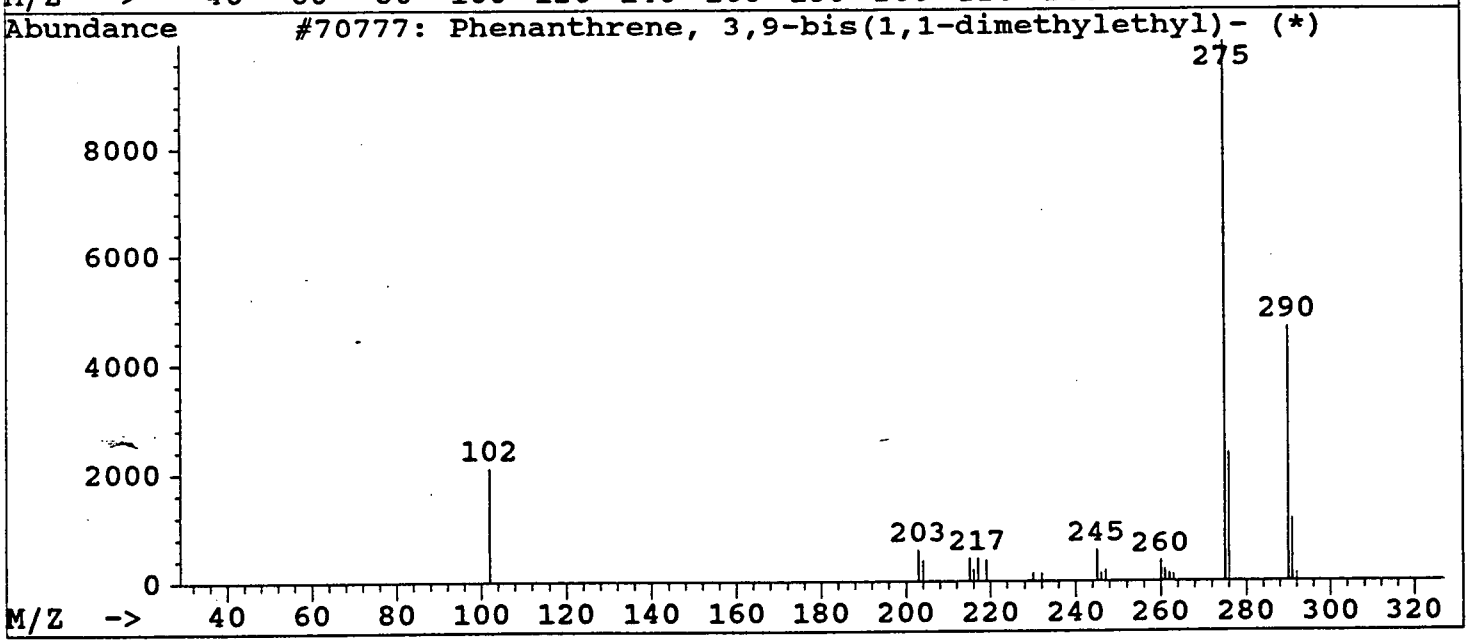
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Unknown
Conc = 600

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
34	25.55	1.67	C:\DATABASE\WILEY138.L			
			Phenanthrene, 3,9-bis(1,1-dimethyl	70777	055125-03-6	10
			1',1'-DIMETHYL-4'-PHENYL-SPIRO[CYC	65895	000000-00-0	10
			Copper, bis(2,4-pentanedionato-O,O	131770	013395-16-9	10





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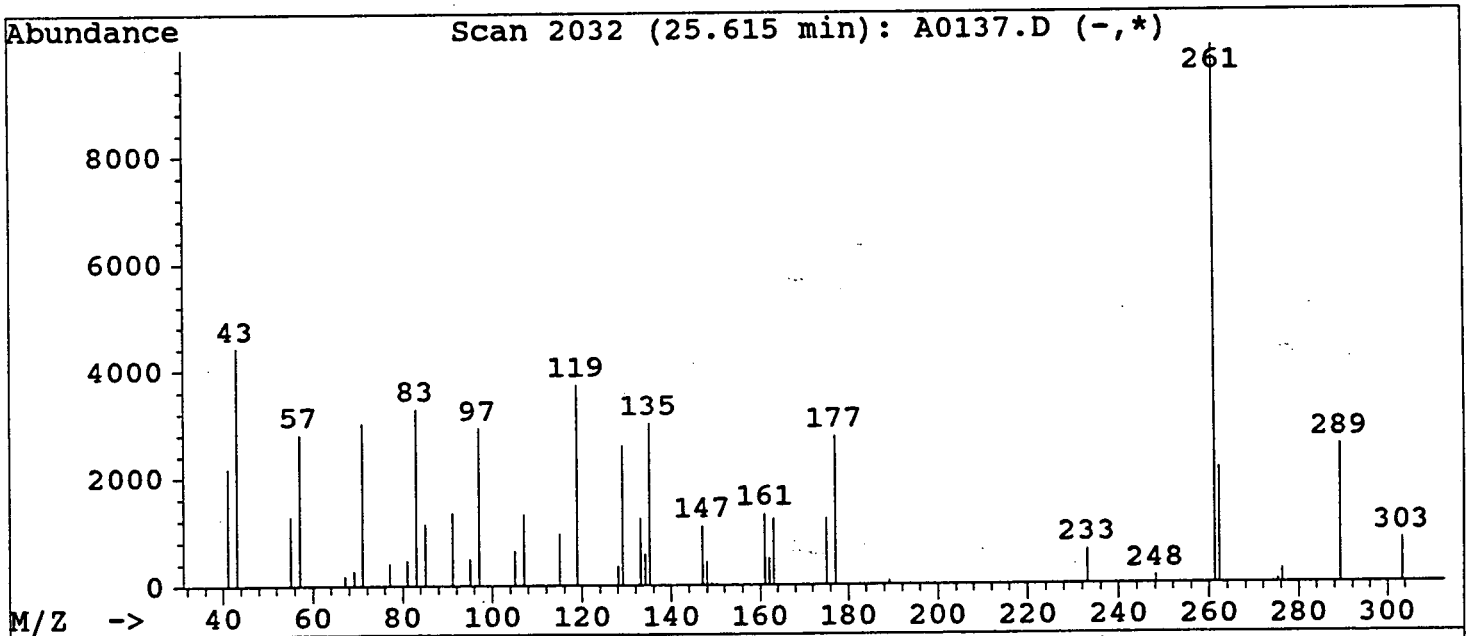
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:55 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

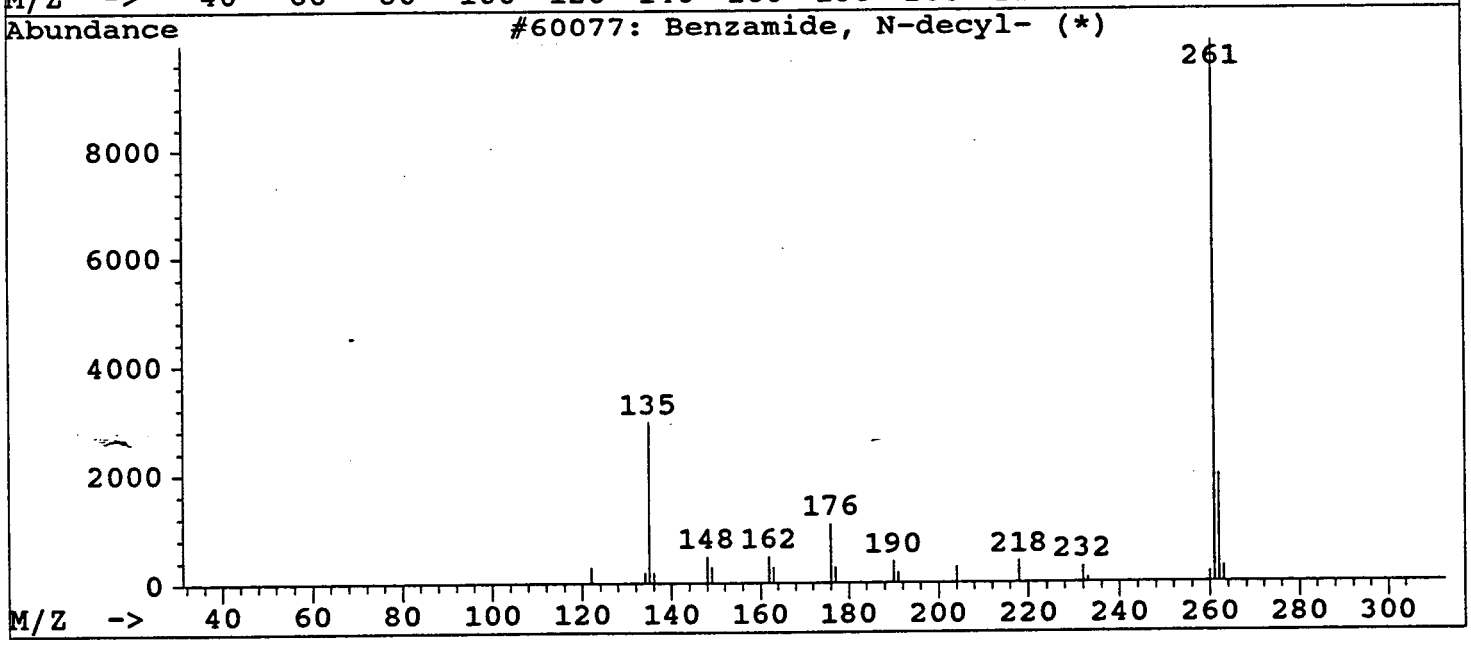
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Unknown
Conc = 910

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
35	25.61	2.48	C:\DATABASE\WILEY138.L			
			Benzamide, N-decyl-	60077	053044-19-2	43
			16-NORISOPIMAR-7-EN-15-OL	65863	000000-00-0	32
			4,4,6-TRIMETHYL-2-(N-METHYL-p-METH	65672	037489-66-0	17





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ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Information from Data File:

File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:36 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

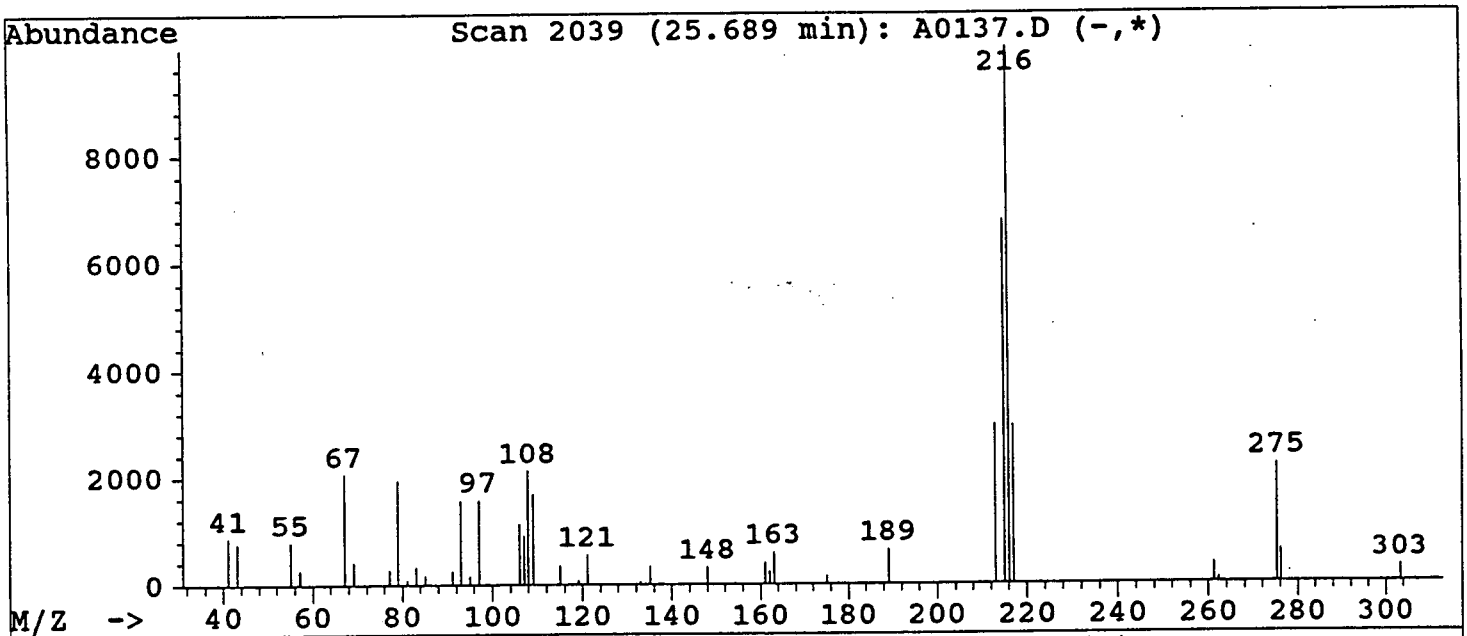
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

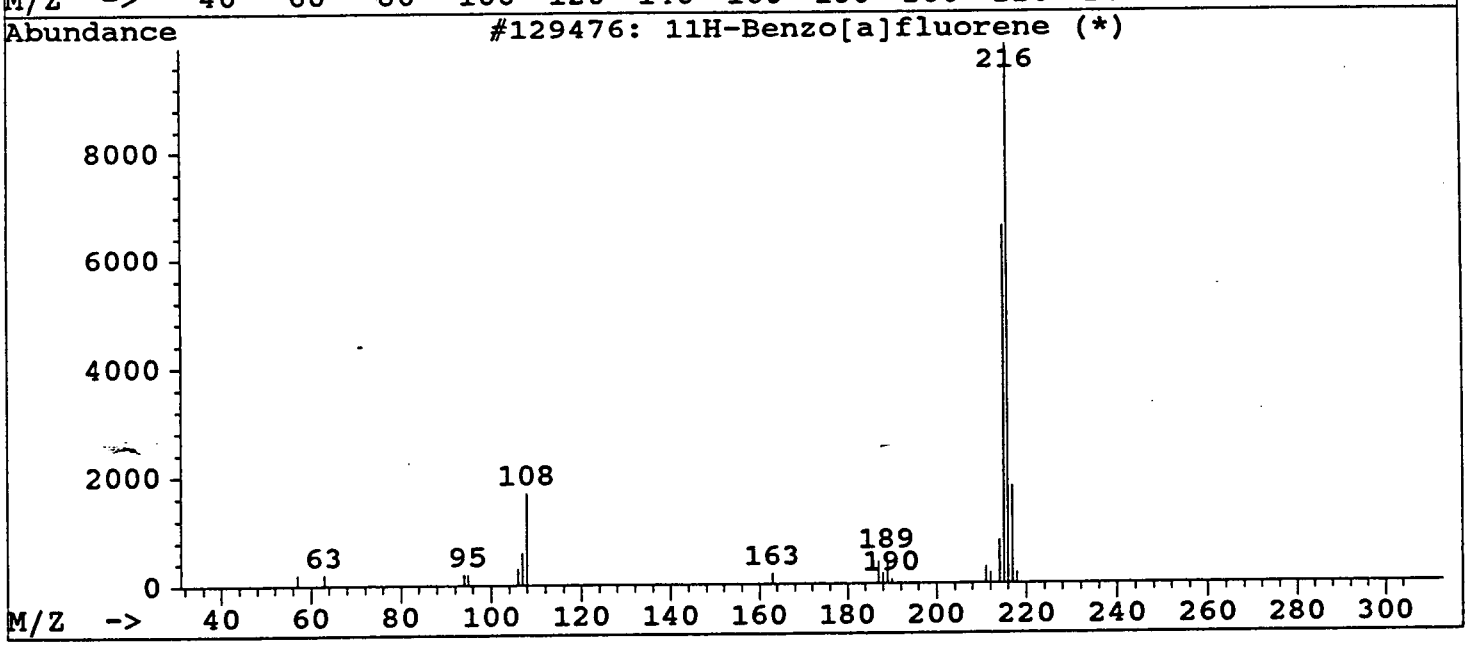
Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Conc = 12000

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
36	25.69	3.45	C:\DATABASE\WILEY138.L			
			11H-Benzo[a]fluorene	129476	000238-84-6	58
			Pyrene, 1-methyl-	42193	002381-21-7	53
			11H-Benzo[b]fluorene	129477	000243-17-4	53

Isomer.





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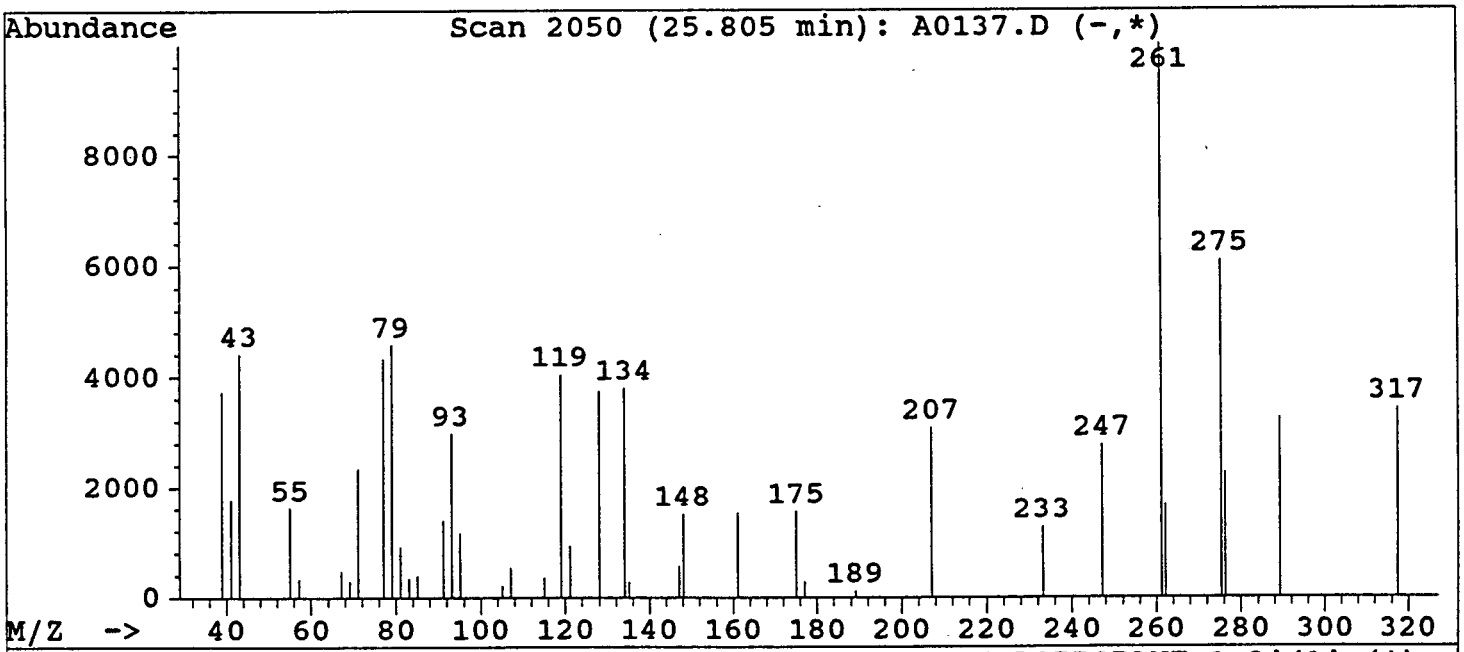
Information from Data File:
File: E:\12-15-92\A0137.D
Operator: POB
Date Acquired: 15 Dec 92 3:55 pm
Method File: ABN0002F.M
Sample Name: ESI/KNICKERBOCKER
Misc Info: A01,212-0858-01,30,12/3/92,12/4/92,12/9/92
Vial Number: 8

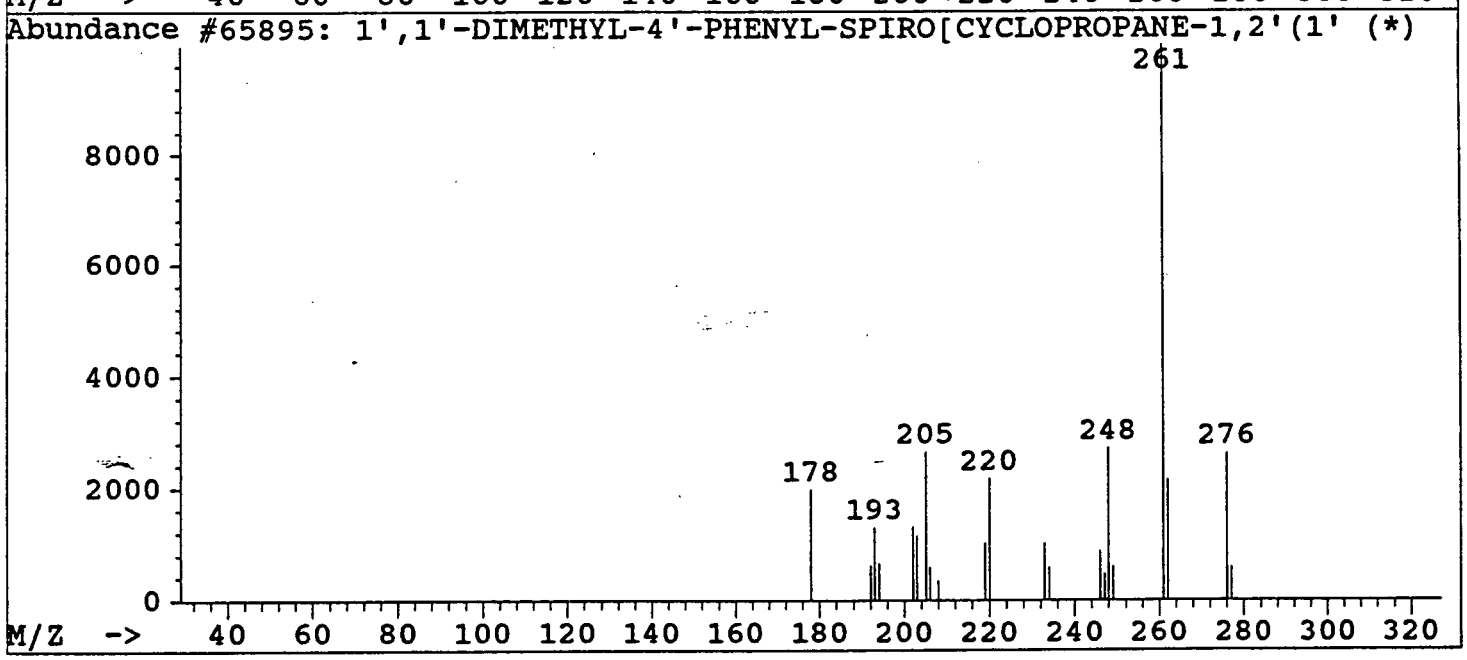
Search Libraries: C:\DATABASE\WILEY138.L Minimum Quality: 0

Unknown Spectrum: Apex minus start of peak
Integration Events: AutoIntegrate

Unknown
Conc = 920.

Pk#	RT	Area%	Library/ID	Ref#	CAS#	Qual
37	25.80	3.68	C:\DATABASE\WILEY138.L			
			1',1'-DIMETHYL-4'-PHENYL-SPIRO[CYC	65895	000000-00-0	35
			2-Propylphenanthro[9,10-d]oxazole	60092	088090-61-3	16





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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 2.0

GC/MS TUNING AND MASS CALIBRATION

CALIBRATION STANDARD QUANT REPORT/

CHROMATOGRAMS

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A0124F5.XLS

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab Name: ECRA LABORATORIES, INC.

Lab File ID A0124 DFTPP inj date 12/10/92

Inst ID 5971A DFTPP inj time 9:26

m/e	ION CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0 % of mass 198	33.4
68	Less than 2.0 % of mass 69	0.0
69	Mass 69 relative abundance	59.6
70	Less than 2.0 % of mass 69	0.0
127	40.0 - 60.0 % of mass 198	44.5
197	Less than 1.0 % of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0 % of mass 198	5.9
275	10.0 - 30.0 % of mass 198	17.0
365	Greater than 1.0 % of mass 198	1.0
441	0 - 100 % of mass 443	0.0
442	40.0 - 100.0 of mass 198	54.1
443	17.0 - 23.0 % of mass 442	18.8

This check applies to the following SAMPLES, MS, MSD, BLANKS, AND STANDARDS

Sample No	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
N/A	BNA STD 160	A0125	12/10/92	9:42
N/A	BNA STD 12[illegible]	A0126	12/10/92	10:55
N/A	BNA STD 80	A0127	12/10/92	11:45
N/A	BNA STD 50	A0128	12/10/92	12:34
N/A	BNA STD 20	A0129	12/10/92	13:24

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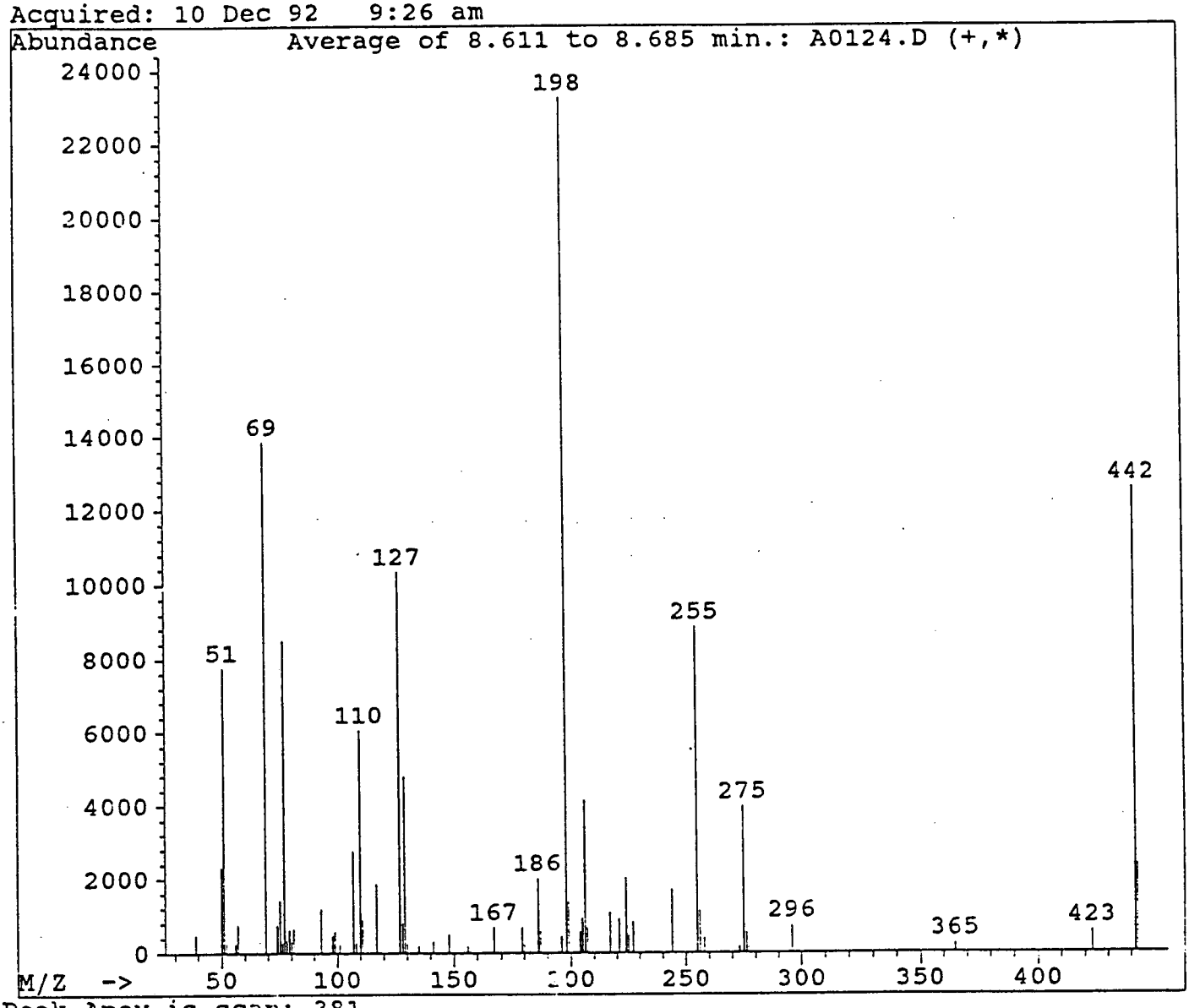
DFTPP Results

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

File E:\12-10-92\A0124.D
Acquired: 10 Dec 92 9:26 am



Peak Apex is scan: 381

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
51	198	30	60	33.4	PASS
68	69	0	2	0.0	PASS
69	198	0	100	59.6	PASS
70	69	0	2	0.0	PASS
127	198	40	60	44.5	PASS
197	198	0	1	0.0	PASS
198	198	100	100	100.0	PASS
199	198	5	9	5.9	PASS
275	198	10	30	17.0	PASS
365	198	1	100	1.0	PASS
441	443	0	100	0.0	PASS
442	198	40	100	54.1	PASS
443	442	17	23	18.8	PASS

E:\12-10-92\A0124.D Mon Dec 21 17:38:59 1992

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CERA
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Average of 8.611 to 8.685 min.: A0124.D
DFTPP STD 50NG INJ
Modified:added scaled

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
39.00	480	78.00	375	114.00	902	179.00	687
50.05	2305	79.00	625	116.95	1855	179.95	251
51.00	7772	80.00	329	126.95	10353	186.05	2011
52.00	291	81.00	642	128.00	807	186.90	599
56.00	261	92.95	1171	128.95	4794	195.95	437
57.00	764	98.00	474	129.95	250	197.95	23260
69.00	13864	98.95	579	135.00	190	198.95	1368
74.00	739	100.95	229	140.95	300	204.00	561
74.95	1422	107.00	2757	147.95	497	205.00	925
76.05	286	107.90	265	155.95	198	206.00	4134
77.05	8504	110.00	6062	166.95	693	207.00	676

Average of 8.611 to 8.685 min.: A0124.D
DFTPP STD 50NG INJ
Modified:added scaled

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
216.90	1085	276.00	541				
220.95	909	276.95	168				
224.05	2000	295.90	737				
224.95	487	364.90	241				
226.95	809	423.10	579				
244.00	1687	442.05	12594				
255.00	8864	443.05	2366				
255.90	1131						
258.00	399						
273.00	155						
274.95	3956						

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A0130F5.XLS

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab Name: ECRA LABORATORIES, INC.

Lab File ID A0130 DFTPP inj date 12/15/92

Inst ID 5971A DFTPP inj time 10:16

m/e	ION CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0 % of mass 198	32.9
68	Less than 2.0 % of mass 69	0.0
69	Mass 69 relative abundance	59.0
70	Less than 2.0 % of mass 69	0.0
127	40.0 - 60.0 % of mas 198	44.6
197	Less than 1.0 % of mass 198	0.0
198	Base Peak, 100 % relative abundance	100.0
199	5.0 - 9.0 % of mass 198	6.1
275	10.0 - 30.0 % of mass 198	17.0
365	Greater than 1.0 % of mass 198	1.0
441	0 - 100 % of mass 443	0.0
442	40.0 - 100.5 of mass 198	51.9
443	17.0 - 23.0 % of mass 442	19.3

This check applies to the following SAMPLES, MS, MSD, BLANKS, AND STANDARDS

Sample No	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
N/A	BNA STD 50	A0131	12/15/92	10:35
N/A	METHOD BLANK	A0132	12/15/92	11:25
N/A	MATRIX SPIKE	A0133	12/15/92	12:15
N/A	MATRIX SPIKE DUP	A0134	12/15/92	13:05
N/A	212-0851-01A	A0135	12/15/92	13:55
N/A	212-0851-07	A0136	12/15/92	14:45
N/A	212-0858-01	A0137	12/15/92	15:35
N/A	212-0855-02	A0139	12/15/92	17:36
N/A	METHOD BLANK	A0140	12/15/92	18:26

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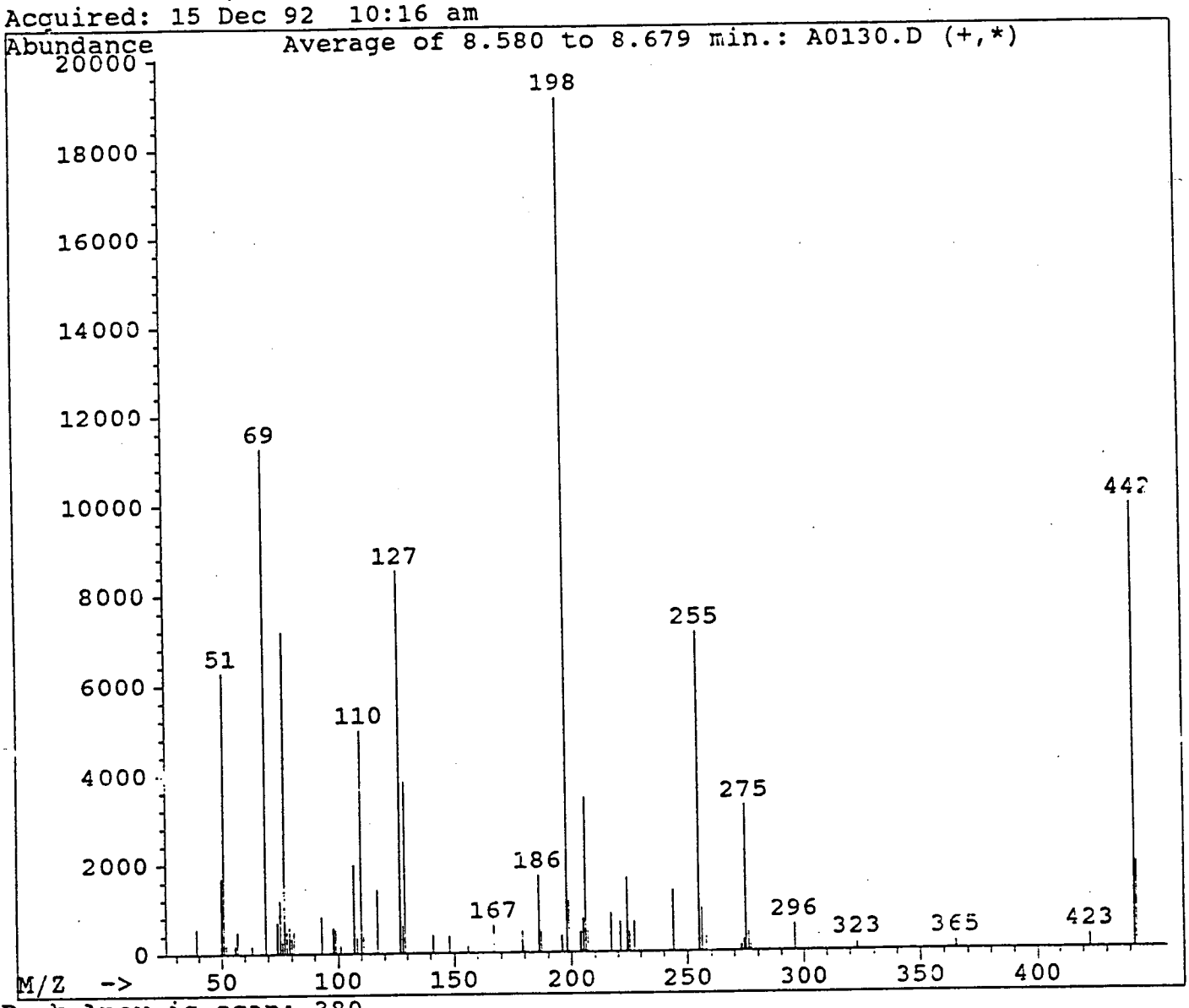
DFTPP Results

ENVIRONMENTAL CONSULTING, RESEARCH AND ANALYTICAL LABORATORIES, INC.

File E:\12-15-92\A0130.D
Acquired: 15 Dec 92 10:16 am



Peak Apex is scan: 380

Target Mass	Comparison Mass	Lower Limit,%	Upper Limit,%	Relative Abundance,%	Result Pass/Fail
51	198	30	60	32.9	PASS
68	69	0	2	0.0	PASS
69	198	0	100	59.0	PASS
70	69	0	2	0.0	PASS
127	198	40	60	44.6	PASS
197	198	0	1	0.0	PASS
198	198	100	100	100.0	PASS
199	198	5	9	6.1	PASS
275	198	10	30	17.0	PASS
365	198	1	100	1.0	PASS
441	443	0	100	0.0	PASS
442	198	40	100	51.9	PASS
443	442	17	23	19.3	PASS

E:\12-15-92\A0130.D Mon Dec 21 17:20:54 1992

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Average of 8.580 to 8.679 min.: A0130.D
DFTPP STD 50NG INJ

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Modified:added scaled

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
39.00	552	77.05	718	110.00	5004	179.95	165
50.05	1697	78.00	514	111.00	635	186.05	1728
51.00	6284	79.00	589	116.95	1416	186.95	478
52.00	193	79.95	352	126.95	8530	195.95	380
56.00	185	81.00	491	128.05	628	197.95	19105
57.00	486	93.00	816	128.95	3849	198.95	1167
63.05	176	98.00	568	140.95	397	204.00	450
69.00	11275	98.95	534	147.95	368	205.10	754
74.00	703	100.95	176	155.95	150	206.00	3458
75.00	1195	107.00	1980	166.95	622	207.00	482
76.05	266	108.00	350	178.90	500	216.90	870

Average of 8.580 to 8.679 min.: A0130.D
DFTPP STD 50NG INJ

Modified:added scaled

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
220.95	671	275.95	430				
223.95	1657	276.95	148				
225.05	449	295.95	587				
226.95	667	323.00	181				
244.00	1374	364.90	187				
255.00	7145	423.00	307				
255.90	971	442.05	9914				
258.00	343	443.05	1909				
273.00	135						
274.10	261						
274.95	3254						

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Calibration Table Status Report

Method: BNA0002S.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 08:52:44 1992
max % rsd for (*) is 30
min RF for (**) is .05

Calibration Files

20	=A0129.D	160	=A0125.D	120	=A0126.D
80	=A0127.D	50	=A0128.D		

Compound	20	160	120	80	50	Avg	%RSD	
8) 1,4-Dichlorobenzene-d4	ISTD							
1) n-Nitrosodimethylamine	1.300	0.857	0.919	0.937	1.024	1.005	17.44	
2) 2-Fluorophenol	1.234	1.240	1.195	1.284	1.276	1.246	2.87	
3) Phenol-d5	1.490	1.502	1.476	1.567	1.532	1.513	2.42	
4) Phenol	2.697	1.811	1.926	1.888	2.015	2.067	17.38	*
5) bis(2-Chloroethyl)ether	2.272	1.490	1.580	1.585	1.737	1.733	18.13	
6) 2-Chlorophenol	2.550	1.767	1.862	1.785	1.935	1.980	16.43	
7) 1,3-Dichlorobenzene	2.489	1.791	1.845	1.788	1.926	1.968	15.08	
9) 1,4-Dichlorobenzene	2.556	1.769	1.860	1.796	1.916	1.979	16.53	*
10) Benzyl Alcohol	1.886	1.570	1.923	1.838	1.792	1.802	7.69	
11) 1,2-Dichlorobenzene	2.483	1.693	1.784	1.732	1.884	1.915	16.98	
12) 2-Methylphenol	1.034	1.064	1.057	0.838	0.793	0.957	13.67	
13) bis(2-chloroisopropyl)ethe	2.204	1.402	1.521	1.533	1.679	1.668	18.92	
14) 4-Methylphenol	1.280	1.274	1.307	0.998	0.976	1.167	14.13	
15) n-Nitroso-di-n-propylamine	1.747	1.158	1.244	1.216	1.341	1.341	17.63	**
16) Hexachloroethane	1.175	0.828	0.887	0.857	0.921	0.934	14.92	
22) Benzoic Acid	0.641	0.953	0.957	0.704	0.622	0.776	21.49	
26) Naphthalene-d8	ISTD							
17) Nitrobenzene-d5	0.444	0.424	0.424	0.453	0.453	0.439	3.33	
18) Nitrobenzene	0.693	0.459	0.498	0.475	0.541	0.533	17.75	
19) Isophorone	1.242	0.831	0.895	0.859	0.956	0.956	17.42	
20) 2-Nitrophenol	0.498	0.364	0.384	0.362	0.396	0.401	14.00	*
21) 2,4-Dimethylphenol	0.638	0.456	0.489	0.465	0.514	0.512	14.36	
23) bis(2-Chloroethoxy)methane	0.787	0.510	0.548	0.530	0.605	0.596	18.84	
24) 2,4-Dichlorophenol	0.539	0.399	0.420	0.387	0.429	0.435	13.97	*
25) 1,2,4-Trichlorobenzene	0.579	0.414	0.441	0.410	0.453	0.459	15.05	
27) Naphthalene	1.746	1.213	1.283	1.215	1.354	1.362	16.30	
28) 4-Chloroaniline	0.896	0.691	0.843	0.816	0.832	0.815	9.33	
29) Hexachlorobutadiene	0.363	0.248	0.266	0.251	0.283	0.282	16.76	*
30) 4-Chloro-3-methylphenol	0.565	0.426	0.450	0.429	0.463	0.466	12.27	*
31) 2-Methylnaphthalene	0.466	0.350	0.368	0.345	0.387	0.383	12.80	
42) Acenaphthene-d10	ISTD							
32) Hexachlorocyclopentadiene	0.430	0.506	0.514	0.433	0.447	0.466	8.69	**
33) 2,4,6-Trichlorophenol	0.788	0.563	0.611	0.556	0.617	0.627	15.00	*
34) 2,4,5-Trichlorophenol	0.554	0.606	0.616	0.452	0.441	0.534	15.53	
35) 2-Fluorobiphenyl	1.451	1.426	1.416	1.482	1.483	1.451	2.12	
36) 2-Chloronaphthalene	2.204	1.585	1.696	1.582	1.741	1.761	14.57	
37) 2-Nitroaniline	0.893	0.689	0.857	0.813	0.828	0.816	9.47	
38) Dimethylphthalate	2.732	1.890	2.056	1.918	2.137	2.147	15.95	
39) 2,6-Dinitrotoluene	0.664	0.472	0.511	0.485	0.528	0.512	14.44	

00210

ERA
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40) Acenaphthylene	3.432	2.371	2.554	2.393	2.664	2.683	16.24	
41) 3-Nitroaniline	0.934	0.687	0.857	0.830	0.860	0.834	10.85	
43) Acenaphthene	2.100	1.494	1.617	1.502	1.655	1.674	14.84	*
44) 2,4-Dinitrophenol	0.251	0.320	0.342	0.294	0.290	0.299	11.41	**
45) 4-Nitrophenol	0.380	0.314	0.333	0.305	0.325	0.331	8.74	**
46) Dibenzofuran	3.387	2.638	3.307	3.133	3.148	3.123	9.33	
47) 2,4-Dinitrotoluene	0.934	0.673	0.732	0.686	0.736	0.752	13.96	
48) Diethylphthalate	2.954	2.030	2.212	2.081	2.300	2.[illegible]5	16.09	
49) 4-Chlorophenyl-phenylether	1.244	0.863	0.927	0.872	0.958	0.973	16.10	
50) Fluorene	2.232	1.569	1.684	1.598	1.744	1.765	15.29	
51) 4-Nitroaniline	0.932	0.702	0.861	0.837	0.869	0.840	10.07	
	----------ISTD----------							
58) Phenanthrene-d10								
52) 4,6-Dinitro-2-methylphenol	0.279	0.256	0.280	0.255	0.265	0.267	4.50	
53) n-Nitrosodiphenylamine	0.943	0.668	0.712	0.660	0.734	0.743	15.56	*
54) 2,4,6-Tribromophenol	0.160	0.171	0.168	0.171	0.168	0.168	2.64	
55) 4-Bromophenyl-phenylether	0.434	0.296	0.325	0.301	0.338	0.339	16.55	
56) Hexachlorobenzene	0.524	0.340	0.375	0.358	0.398	0.399	18.30	
57) Pentachlorophenol	0.328	0.263	0.281	0.263	0.282	0.283	9.47	*
59) Phenanthrene	1.765	1.248	1.339	1.284	1.401	1.407	14.79	
60) Anthracene	1.820	1.283	1.381	1.315	1.433	1.447	14.99	
61) Carbazole	2.043	1.420	1.538	1.453	1.603	1.612	15.62	
62) Di-n-butylphthalate	2.933	2.018	2.198	2.064	2.286	2.300	16.07	
63) Fluoranthene	2.035	1.333	1.486	1.422	1.567	1.569	17.49	*
64) Benzidine	0.660	0.394	0.450	0.378	0.481	0.473	23.87	
	----------ISTD----------							
71) Chyrsene-d12								
65) Pyrene	2.272	1.553	1.638	1.580	1.767	1.762	16.84	
66) Terphenyl-d14	1.048	1.014	1.001	1.059	1.054	1.035	2.52	
67) Butylbenzylphthalate	1.515	1.055	1.106	1.055	1.168	1.180	16.37	
68) 3,3'-Dichlorobenzidine	0.802	0.561	0.607	0.583	0.639	0.638	15.05	
69) bis(2-Ethylhexyl)phthalate	2.131	1.515	1.621	1.537	1.679	1.697	14.82	
70) Benzo[a]anthracene	2.103	1.323	1.444	1.428	1.604	1.5[illegible]1	19.55	
72) Chyrsene	1.944	1.300	1.402	1.342	1.501	1.498	17.39	
	----------ISTD----------							
77) Perylene-d12								
73) Di-n-octylphthalate	4.844	3.315	3.575	3.479	3.780	3.799	16.01	*
74) Benzo[b]fluoranthene	2.667	1.846	1.949	1.843	2.047	2.071	16.61	
75) Benzo[k]fluoranthene	2.503	1.452	1.744	1.750	1.903	1.870	20.81	
76) Benzo[a]pyrene	2.41[illegible]	1.572	1.735	1.697	[illegible] 863	1.856	17.64	*
78) Indeno[1,2,3-cd]pyrene	2.619	1.705	1.905	1.842	2.018	2.018	17.58	
79) Dibenz[a,h]anthracene	2.121	1.395	1.539	1.502	1.650	1.641	17.25	
80) Benzo[g,h,i]perylene	2.187	1.454	1.617	1.580	1.727	1.713	16.49	

Tue Dec 15 09:04:48 1992

CCC - CALIBRATION CHECK COMPOUNDS (*)

SPCC - SYSTEM PERFORMANCE CHECK COMPOUNDS (**)

00211

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QUANT REPORT

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 10 Dec 92 1:24 pm
Data File: E:\12-10-92\A0129.D
Name: BNA STD 20
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Multiple Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.26	152	64451	50.00	UG/L	-0.00
26) Naphthalene-d8	13.26	136	221861	50.00	UG/L	-0.00
42) Acenaphthene-d10	17.61	164	103995	50.00	UG/L	-0.00
58) Phenanthrene-d10	21.27	188	182304	50.00	UG/L	-0.00
71) Chyrsene-d12	27.94	240	163579	50.00	UG/L	-0.00
77) Perylene-d12	33.54	264	129604	50.00	UG/L	-0.00

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	159055	99.05	UG/L	99.05%
3) Phenol-d5	9.41	99	192021	98.43	UG/L	98.43%
17) Nitrobenzene-d5	11.55	82	98405	50.46	UG/L	100.93%
35) 2-Fluorobiphenyl	15.89	172	150880	49.98	UG/L	99.96%
54) 2,4,6-Tribromophenol	19.57	330	58435	95.60	UG/L	95.60%
66) Terphenyl-d14	25.19	244	171475	50.63	UG/L	101.26%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	4.99	74	33523	25.87	UG/L	001
4) Phenol	9.44	94	69521	26.09	UG/L	001#
5) bis(2-Chloroethyl)ether	9.65	93	58580	26.22	UG/L	001#
6) 2-Chlorophenol	9.85	128	65729	25.75	UG/L	001#
7) 1,3-Dichlorobenzene	10.18	146	64162	25.30	UG/L	001
9) 1,4-Dichlorobenzene	10.30	146	65888	25.82	UG/L	001
10) Benzyl Alcohol	10.53	79	48614	20.93	UG/L	001
11) 1,2-Dichlorobenzene	10.73	146	64013	25.93	UG/L	001
12) 2-Methylphenol	10.78	108	30919	22.20	UG/L	001m
13) bis(2-chloroisopropyl)ethe	10.89	45	56832	26.43	UG/L	001#
14) 4-Methylphenol	11.10	107	39804	21.73	UG/L	001m
15) n-Nitroso-di-n-propylamine	11.20	70	45045	26.06	UG/L	001#
16) Hexachloroethane	11.45	117	30288	25.17	UG/L	001
18) Nitrobenzene	11.59	77	61525	26.00	UG/L	002
19) Isophorone	12.12	82	110261	25.98	UG/L	002#
20) 2-Nitrophenol	12.36	139	44170	24.85	UG/L	002
21) 2,4-Dimethylphenol	12.37	107	56581	24.89	UG/L	002
22) Benzoic Acid	12.52	122	16524	16.53	UG/L	001
23) bis(2-Chloroethoxy)methane	12.60	93	69820	26.40	UG/L	002
24) 2,4-Dichlorophenol	12.90	162	47826	24.81	UG/L	002
25) 1,2,4-Trichlorobenzene	13.14	180	51353	25.20	UG/L	002
27) 4-Chloroaniline	13.40	127	79524	100.00	UG/L	002m
28) Naphthalene	13.30	128	154922	25.63	UG/L	002
29) Hexachlorobutadiene	13.73	225	32232	25.73	UG/L	002
30) 4-Chloro-3-methylphenol	14.54	107	50142	24.23	UG/L	002
31) 2-Methylnaphthalene	14.54	142	41322	24.31	UG/L	002#
32) Hexachlorocyclopentadiene	15.53	237	17884	18.45	UG/L	003
33) 2,4,6-Trichlorophenol	15.70	196	32772	25.13	UG/L	003

(#) = qualifier out of range

00212

275 Franklin Road, Randolph, New Jersey 07869
Telephone: (201) 361-4252 • Fax: (201) 989-5288

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 1:24 pm
Data File: E:\12-10-92\A0129.D
Name: BNA ID 20
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.80	196	23050	20.76	UG/L	003
36) 2-Chloronaphthalene	16.17	162	91665	25.02	UG/L	003
37) 2-Nitroaniline	16.44	65	37151	21.89	UG/L	003
38) Dimethylphthalate	16.93	163	113660	25.46	UG/L	003
39) 2,6-Dinitrotoluene	17.11	165	27603	24.95	UG/L	003
40) Acenaphthylene	17.23	152	142759	25.58	UG/L	003
41) 3-Nitroaniline	17.45	138	38838	22.40	UG/L	003
43) Acenaphthene	17.68	153	87341	25.09	UG/L	003
44) 2,4-Dinitrophenol	17.72	184	10454	16.79	UG/L	003#
45) 4-Nitrophenol	17.81	109	15794	22.92	UG/L	003#
46) Dibenzofuran	18.07	168	140897	21.69	UG/L	003
47) 2,4-Dinitrotoluene	18.08	165	38833	24.82	UG/L	003#
48) Diethylphthalate	18.67	149	122877	25.52	UG/L	003
49) 4-Chlorophenyl-phenylether	18.88	204	51738	25.58	UG/L	003
50) Fluorene	18.93	166	92837	25.28	UG/L	003
51) 4-Nitroaniline	18.98	138	38754	22.18	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.11	198	20363	20.92	UG/L	004
53) n-Nitrosodiphenylamine	19.17	169	68748	25.36	UG/L	004
55) 4-Bromophenyl-phenylether	20.10	248	31672	25.63	UG/L	004
56) Hexachlorobenzene	20.52	284	38197	26.26	UG/L	004
57) Pentachlorophenol	20.93	266	23948	23.17	UG/L	004
59) Phenanthrene	21.32	178	128716	25.08	UG/L	004
60) Anthracene	21.44	178	132738	25.17	UG/L	004
61) Carbazole	21.80	167	149007	25.36	UG/L	004
62) Di-n-butylphthalate	22.69	149	213872	25.51	UG/L	004
63) Fluoranthene	24.30	202	148390	25.95	UG/L	004#
64) Benzidine	24.53	184	48146	27.94	UG/L	004
65) Pyrene	24.87	202	148646	25.79	UG/L	005#
67) Butylbenzylphthalate	26.41	149	99154	25.68	UG/L	005
68) 3,3'-Dichlorobenzidine	27.76	252	52483	25.13	UG/L	005#
69) bis(2-Ethylhexyl)phthalate	27.89	149	139415	25.12	UG/L	005#
70) Benzo[a]anthracene	27.89	228	137632	26.62	UG/L	005
72) Chyrsene	28.01	228	127173	25.95	UG/L	005
73) Di-n-octylphthalate	29.84	149	251117	25.50	UG/L	006
74) Benzo[b]fluoranthene	31.72	252	138276	25.76	UG/L	006
75) Benzo[k]fluoranthene	31.83	252	129739	26.69	UG/L	006
76) Benzo[a]pyrene	33.25	252	125007	25.99	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.73	276	135785	25.96	UG/L	006#
79) Dibenz[a,h]anthracene	39.80	278	109959	25.54	UG/L	006#
80) Benzo[g,h,i]perylene	41.34	276	113393	25.54	UG/L	006#

00213

(#) = qualifier out of range

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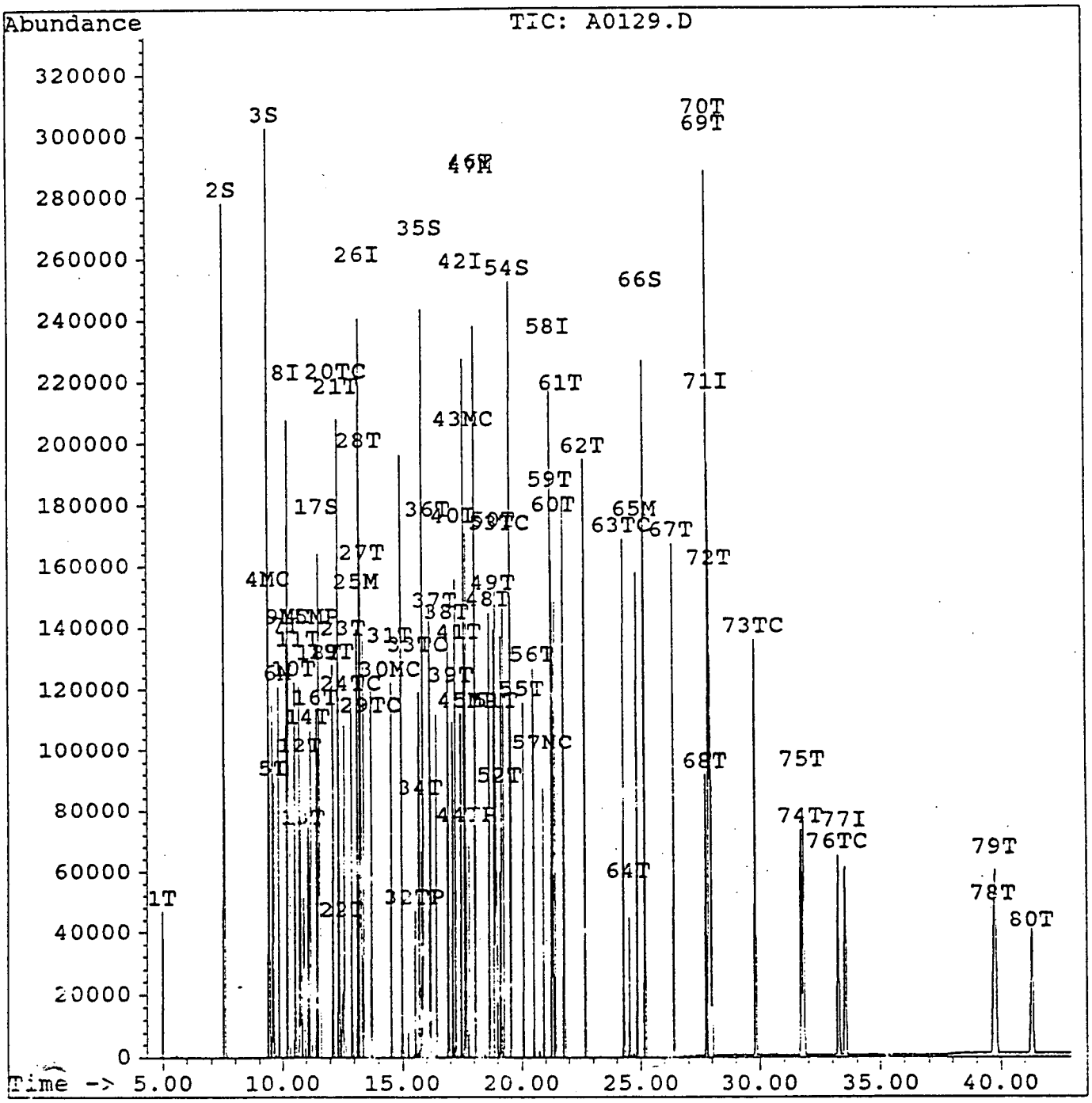
Telephone: (201) 361-4252 • Fax: (201) 989-5288

QUANT REPORT

ENVIRONMENTAL CONSULTING, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 10 Dec 92 1:24 pm
Data File: E:\12-10-92\A0129.D
Name: BNA STD 20
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Multiple Level Calibration



00214

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.
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QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 12:34 pm
Data File: E:\12-10-92\A0128.D
Name: BNA STD 50
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.26	152	70979	50.00	UG/L	0.00
26) Naphthalene-d8	13.26	136	240765	50.00	UG/L	0.00
42) Acenaphthene-d10	17.61	164	113562	50.00	UG/L	0.00
58) Phenanthrene-d10	21.27	188	199806	50.00	UG/L	-0.00
71) Chyrsene-d12	27.95	240	179048	50.00	UG/L	0.01
77) Perylene-d12	33.54	264	141587	50.00	UG/L	0.01

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	181117	103.40	UG/L	103.40%
3) Phenol-d5	9.42	99	217489	102.85	UG/L	102.85%
17) Nitrobenzene-d5	11.55	82	109025	51.05	UG/L	102.09%
35) 2-Fluorobiphenyl	15.89	172	168376	51.10	UG/L	102.19%
54) 2,4,6-Tribromophenol	19.57	330	66966	104.56	UG/L	104.56%
66) Terphenyl-d14	25.19	244	188640	50.25	UG/L	100.51%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	4.99	74	72654	39.36	UG/L	001
4) Phenol	9.44	94	143031	37.36	UG/L	001
5) bis(2-Chloroethyl)ether	9.66	93	123298	38.22	UG/L	001#
6) 2-Chlorophenol	9.85	128	137379	37.96	UG/L	001#
7) 1,3-Dichlorobenzene	10.18	146	136707	38.69	UG/L	001
9) 1,4-Dichlorobenzene	10.30	146	136032	37.49	UG/L	001
10) Benzyl Alcohol	10.54	79	127186	47.51	UG/L	001
11) 1,2-Dichlorobenzene	10.73	146	133757	37.95	UG/L	001
12) 2-Methylphenol	10.78	107	56258	38.33	UG/L	001
13) bis(2-chloroisopropyl)ethe	10.89	45	119162	38.08	UG/L	001#
14) 4-Methylphenol	11.11	108	69298	38.12	UG/L	001#
15) n-Nitroso-di-n-propylamine	11.20	70	95161	38.37	UG/L	001#
16) Hexachloroethane	11.45	117	65382	39.20	UG/L	001
18) Nitrobenzene	11.60	77	130279	39.02	UG/L	002
19) Isophorone	12.14	82	230131	38.47	UG/L	002#
20) 2-Nitrophenol	12.36	139	95325	39.77	UG/L	002
21) 2,4-Dimethylphenol	12.37	107	123756	40.31	UG/L	002
22) Benzoic Acid	12.57	122	44172	48.55	UG/L	001
23) bis(2-Chloroethoxy)methane	12.61	93	145608	38.43	UG/L	002
24) 2,4-Dichlorophenol	12.91	162	102196	39.77	UG/L	002
25) 1,2,4-Trichlorobenzene	13.14	180	109072	39.14	UG/L	002
27) 4-Chloroaniline	13.42	127	200426	179.01	UG/L	002m
28) Naphthalene	13.31	128	326022	38.78	UG/L	002
29) Hexachlorobutadiene	13.72	225	68253	39.03	UG/L	002
30) 4-Chloro-3-methylphenol	14.54	107	111520	40.99	UG/L	002
31) 2-Methylnaphthalene	14.54	142	93133	41.54	UG/L	002#
32) Hexachlorocyclopentadiene	15.54	237	50313	52.04	UG/L	003
33) 2,4,6-Trichlorophenol	15.70	196	70088	39.17	UG/L	003

(#) = qualifier out of range

00215

273 Franklin Road, Randolph, New Jersey 07869
Telephone (201) 361-4252 • Fax (201) 989-5285

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 12:34 pm
Data File: E:\12-10-92\A0128.D
Name: BNASTD 50
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.80	196	50132	39.83	UG/L	003
36) 2-Chloronaphthalene	16.18	162	197693	39.50	UG/L	003
37) 2-Nitroaniline	16.45	65	94057	46.37	UG/L	003
38) Dimethylphthalate	16.93	163	242655	39.10	UG/L	003
39) 2,6-Dinitrotoluene	17.12	165	59961	39.79	UG/L	003
40) Acenaphthylene	17.24	152	302552	38.82	UG/L	003
41) 3-Nitroaniline	17.48	138	97696	46.07	UG/L	003
43) Acenaphthene	17.70	153	187921	39.41	UG/L	003
44) 2,4-Dinitrophenol	17.72	184	32907	57.65	UG/L	003#
45) 4-Nitrophenol	17.81	109	36868	42.75	UG/L	003#
46) Dibenzofuran	18.09	168	357457	46.47	UG/L	003
47) 2,4-Dinitrotoluene	18.10	165	83619	39.44	UG/L	003#
48) Diethylphthalate	18.68	149	261242	38.94	UG/L	003
49) 4-Chlorophenyl-phenylether	18.89	204	108752	38.50	UG/L	003
50) Fluorene	18.93	166	198106	39.08	UG/L	003
51) 4-Nitroaniline	19.01	138	98693	46.64	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.12	198	52965	47.46	UG/L	004
53) n-Nitrosodiphenylamine	19.19	169	146727	38.95	UG/L	004
55) 4-Bromophenyl-phenylether	20.10	248	67627	38.96	UG/L	004
56) Hexachlorobenzene	20.53	284	79504	37.98	UG/L	004
57) Pentachlorophenol	20.93	266	56421	42.99	UG/L	004
59) Phenanthrene	21.33	178	279917	39.68	UG/L	004
60) Anthracene	21.44	178	286317	39.36	UG/L	004
61) Carbazole	21.80	167	320309	39.23	UG/L	004
62) Di-n-butylphthalate	22.69	149	456740	38.97	UG/L	004
63) Fluoranthene	24.30	202	313037	38.49	UG/L	004#
64) Benzidine	24.53	184	96108	36.43	UG/L	004
65) Pyrene	24.88	202	316390	38.89	UG/L	005#
67) Butylbenzylphthalate	26.41	149	209167	38.55	UG/L	005
68) 3,3'-Dichlorobenzidine	27.77	252	114329	39.80	UG/L	005
69) bis(2-Ethylhexyl)phthalate	27.88	149	300645	39.40	UG/L	005
70) Benzo[a]anthracene	27.89	228	287140	38.12	UG/L	005
72) Chyrsene	28.02	228	268729	38.61	UG/L	005
73) Di-n-octylphthalate	29.85	149	535192	39.02	UG/L	006
74) Benzo[b]fluoranthene	31.74	252	289770	38.36	UG/L	006
75) Benzo[k]fluoranthene	31.86	252	269493	38.03	UG/L	006
76) Benzo[a]pyrene	33.28	252	263788	38.63	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.77	276	285707	38.52	UG/L	006#
79) Dibenz[a,h]anthracene	39.85	278	233576	38.89	UG/L	006
80) Benzo[g,h,i]perylene	41.38	276	244584	39.49	UG/L	006#

00216

(#) = qualifier out of range

273 Franklin Road, Randolph, New Jersey 07869
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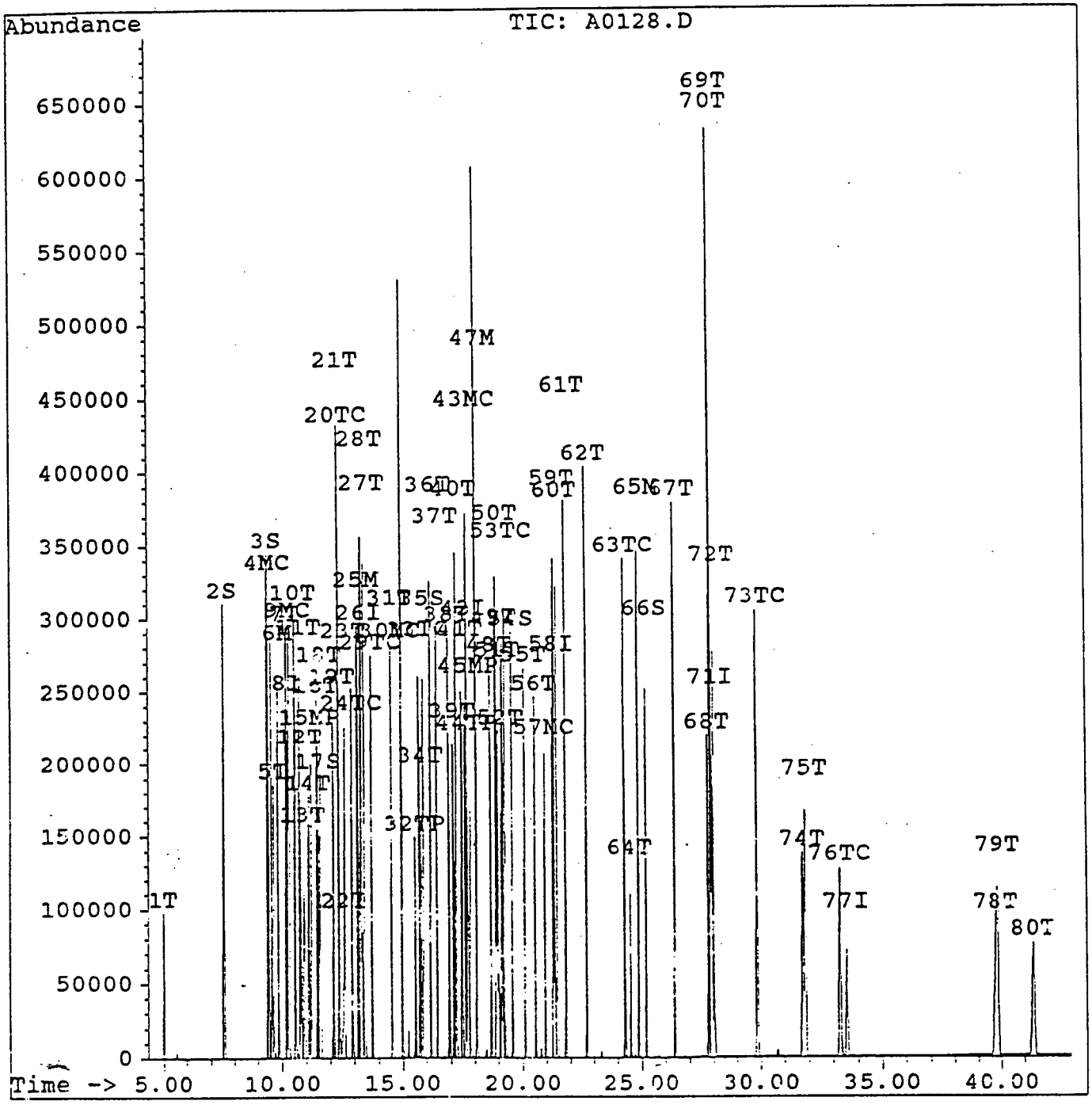
ENVIRONMENTAL CONSULTANTS, STANDARDS AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 12:34 pm
Data File: E:\12-10-92\A0128.D
Name: BNA STD 50
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration



00217

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QUANT REPORT

ENVIRONMENTAL CONSULTANTS AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 10 Dec 92 11:45 am
Data File: E:\12-10-92\A0127.D
Name: BNA8080
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.26	152	68391	50.00	UG/L	0.00
26) Naphthalene-d8	13.26	136	239113	50.00	UG/L	0.00
42) Acenaphthene-d10	17.62	164	112183	50.00	UG/L	0.00
58) Phenanthrene-d10	21.27	188	196148	50.00	UG/L	-0.00
71) Chyrsene-d12	27.95	240	176864	50.00	UG/L	0.01
77) Perylene-d12	33.55	264	136960	50.00	UG/L	0.01

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	175628	104.06	UG/L	104.06%
3) Phenol-d5	9.42	99	214391	105.22	UG/L	105.22%
17) Nitrobenzene-d5	11.56	82	108318	51.07	UG/L	102.13%
35) 2-Fluorobiphenyl	15.89	172	166204	51.06	UG/L	102.12%
54) 2,4,6-Tribromophenol	19.58	330	66996	106.56	UG/L	106.56%
66) Terphenyl-d14	25.19	244	187322	50.52	UG/L	101.04%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	5.01	74	101425	57.02	UG/L	001#
4) Phenol	9.45	94	206548	56.00	UG/L	001
5) bis(2-Chloroethyl)ether	9.66	93	173480	55.82	UG/L	001#
6) 2-Chlorophenol	9.86	128	195316	56.01	UG/L	001#
7) 1,3-Dichlorobenzene	10.18	146	195664	57.48	UG/L	001
9) 1,4-Dichlorobenzene	10.30	146	196567	56.23	UG/L	001
10) Benzyl Alcohol	10.55	79	201155	77.99	UG/L	001
11) 1,2-Dichlorobenzene	10.73	146	189552	55.81	UG/L	001
12) 2-Methylphenol	10.78	107	91729	64.85	UG/L	001
13) bis(2-chloroisopropyl)ethe	10.90	45	167751	55.63	UG/L	001#
14) 4-Methylphenol	11.12	108	109203	62.35	UG/L	001#
15) n-Nitroso-di-n-propylamine	11.21	70	133050	55.67	UG/L	001#
16) Hexachloroethane	11.45	117	93807	58.37	UG/L	001
18) Nitrobenzene	11.60	77	181839	54.85	UG/L	002
19) Isophorone	12.14	82	328503	55.29	UG/L	002#
20) 2-Nitrophenol	12.37	139	138491	58.18	UG/L	002
21) 2,4-Dimethylphenol	12.38	107	177868	58.34	UG/L	002
22) Benzoic Acid	12.61	122	77062	87.90	UG/L	001
23) bis(2-Chloroethoxy)methane	12.61	93	202808	53.90	UG/L	002#
24) 2,4-Dichlorophenol	12.91	162	147876	57.38	UG/L	002
25) 1,2,4-Trichlorobenzene	13.14	180	156780	56.65	UG/L	002
27) 4-Chloroaniline	13.42	127	311999	280.58	UG/L	002m
28) Naphthalene	13.31	128	465021	55.70	UG/L	002
29) Hexachlorobutadiene	13.72	225	96217	55.40	UG/L	002
30) 4-Chloro-3-methylphenol	14.54	107	163999	60.69	UG/L	002
31) 2-Methylnaphthalene	14.54	142	131922	59.24	UG/L	002#
32) Hexachlorocyclopentadiene	15.54	237	77753	80.61	UG/L	003
33) 2,4,6-Trichlorophenol	15.70	196	99835	56.48	UG/L	003

00218

(#) = qualifier out of range

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QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 11:45 am
Data File: E:\12-10-92\A0127.D
Name: BNASTD 80
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

ENVIRONMENTAL CONSULTANTS, METEOROLOGICAL AND ANALYTICAL LABORATORIES, INC.

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.80	196	81135	65.26	UG/L	003
36) 2-Chloronaphthalene	16.19	162	283874	57.42	UG/L	003
37) 2-Nitroaniline	16.46	65	145830	72.78	UG/L	003
38) Dimethylphthalate	16.94	163	344344	56.17	UG/L	003
39) 2,6-Dinitrotoluene	17.12	165	87037	58.46	UG/L	003
40) Acenaphthylene	17.24	152	429559	55.79	UG/L	003
41) 3-Nitroaniline	17.49	138	149050	71.15	UG/L	003
43) Acenaphthene	17.70	153	269690	57.25	UG/L	003
44) 2,4-Dinitrophenol	17.72	184	52695	93.45	UG/L	003#
45) 4-Nitrophenol	17.83	109	54791	64.32	UG/L	003#
46) Dibenzofuran	18.09	168	562322	73.99	UG/L	003
47) 2,4-Dinitrotoluene	18.10	165	123103	58.77	UG/L	003#
48) Diethylphthalate	18.69	149	373508	56.36	UG/L	003
49) 4-Chlorophenyl-phenylether	18.90	204	156445	56.06	UG/L	003
50) Fluorene	18.95	166	286774	57.27	UG/L	003
51) 4-Nitroaniline	19.02	138	150275	71.89	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.14	198	80126	73.14	UG/L	004
53) n-Nitrosodiphenylamine	19.19	169	207142	56.01	UG/L	004
55) 4-Bromophenyl-phenylether	20.10	248	94569	55.50	UG/L	004
56) Hexachlorobenzene	20.52	284	112213	54.61	UG/L	004
57) Pentachlorophenol	20.93	266	82469	64.01	UG/L	004
59) Phenanthrene	21.33	178	402858	58.18	UG/L	004
60) Anthracene	21.45	178	412791	57.81	UG/L	004
61) Carbazole	21.81	167	456111	56.90	UG/L	004
62) Di-n-butylphthalate	22.69	149	647639	56.29	UG/L	004
63) Fluoranthene	24.32	202	446246	55.90	UG/L	004#
64) Benzidine	24.54	184	118612	45.79	UG/L	004
65) Pyrene	24.89	202	447052	55.63	UG/L	005#
67) Butylbenzylphthalate	26.42	149	298569	55.70	UG/L	005
68) 3,3'-Dichlorobenzidine	27.78	252	164854	58.10	UG/L	005
69) bis(2-Ethylhexyl)phthalate	27.89	149	434971	57.71	UG/L	005
70) Benzo[a]anthracene	27.91	228	404205	54.33	UG/L	005
72) Chyrsene	28.03	228	379733	55.23	UG/L	005
73) Di-n-octylphthalate	29.86	149	762349	57.46	UG/L	006
74) Benzo[b]fluoranthene	31.77	252	403838	55.27	UG/L	006
75) Benzo[k]fluoranthene	31.87	252	383457	55.94	UG/L	006
76) Benzo[a]pyrene	33.30	252	371791	56.29	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.79	276	403656	56.26	UG/L	006
79) Dibenz[a,h]anthracene	39.88	278	329201	56.66	UG/L	006
80) Benzo[g,h,i]perylene	41.43	276	346323	57.80	UG/L	006#

00219

(#) = qualifier out of range

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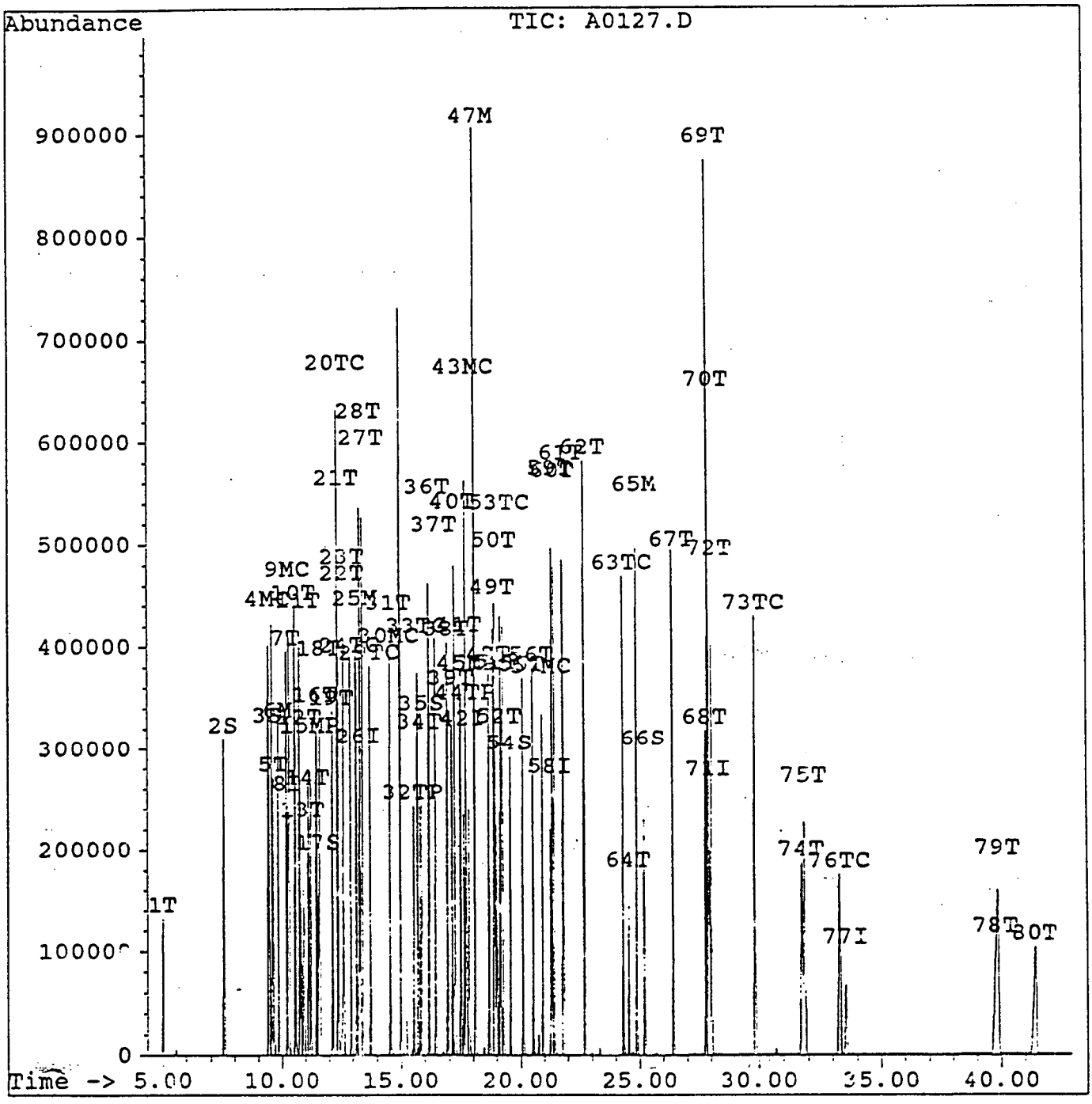
QUANT REPORT

ENVIRONMENTAL CONSULTING, TECHNOLOGY AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 10 Dec 92 11:45 am
Data File: E:\12-10-92\A0127.D
Name: BNA STD
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration



00220

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QUANT REPORT

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 10 Dec 92 10:55 am
Data File: E:\12-10-92\A0126.D
Name: BNA STD-20
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.27	152	66550	50.00	UG/L	0.01
26) Naphthalene-d8	13.26	136	229499	50.00	UG/L	0.00
42) Acenaphthene-d10	17.62	164	107983	50.00	UG/L	0.01
58) Phenanthrene-d10	21.28	188	189327	50.00	UG/L	0.01
71) Chyrsene-d12	27.97	240	172737	50.00	UG/L	0.03
77) Perylene-d12	33.57	264	135965	50.00	UG/L	0.04

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	159054	96.85	UG/L	96.85%
3) Phenol-d5	9.43	99	196406	99.06	UG/L	99.06%
17) Nitrobenzene-d5	11.56	82	97279	47.78	UG/L	95.57%
35) 2-Fluorobiphenyl	15.90	172	152954	48.82	UG/L	97.63%
54) 2,4,6-Tribromophenol	19.59	330	63702	104.97	UG/L	104.97%
66) Terphenyl-d14	25.20	244	172836	47.72	UG/L	95.45%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	5.02	74	146860	84.85	UG/L	001#
4) Phenol	9.46	94	307682	85.72	UG/L	001
5) bis(2-Chloroethyl)ether	9.67	93	252402	83.46	UG/L	001#
6) 2-Chlorophenol	9.86	128	297461	87.66	UG/L	001#
7) 1,3-Dichlorobenzene	10.20	146	294656	88.95	UG/L	001
9) 1,4-Dichlorobenzene	10.30	146	297120	87.34	UG/L	001
10) Benzyl Alcohol	10.56	79	307210	122.40	UG/L	001
11) 1,2-Dichlorobenzene	10.73	146	284978	86.23	UG/L	001
12) 2-Methylphenol	10.79	107	168780	122.63	UG/L	001
13) bis(2-chloroisopropyl)ethe	10.90	45	242975	82.81	UG/L	001#
14) 4-Methylphenol	11.13	108	208796	122.51	UG/L	001#
15) n-Nitroso-di-n-propylamine	11.24	70	198687	85.43	UG/L	001#
16) Hexachloroethane	11.47	117	141609	90.56	UG/L	001
18) Nitrobenzene	11.61	77	274044	86.12	UG/L	002
19) Isophorone	12.16	82	492767	86.41	UG/L	002#
20) 2-Nitrophenol	12.37	139	211558	92.60	UG/L	002
21) 2,4-Dimethylphenol	12.39	107	269451	92.07	UG/L	002
22) Benzoic Acid	12.68	122	152850	179.17	UG/L	001
23) bis(2-Chloroethoxy)methane	12.62	93	301904	83.60	UG/L	002#
24) 2,4-Dichlorophenol	12.93	162	231254	93.49	UG/L	002
25) 1,2,4-Trichlorobenzene	13.16	180	242675	91.37	UG/L	002
27) 4-Chloroaniline	13.43	127	464160	43[illegible].90	UG/L	002m
28) Naphthalene	13.33	128	706650	88.19	UG/L	002
29) Hexachlorobutadiene	13.73	225	146377	87.80	UG/L	002
30) 4-Chloro-3-methylphenol	14.55	107	247808	95.55	UG/L	002
31) 2-Methylnaphthalene	14.55	142	202834	94.91	UG/L	002#
32) Hexachlorocyclopentadiene	15.55	237	133080	143.33	UG/L	002
33) 2,4,6-Trichlorophenol	15.72	196	158296	93.04	UG/L	003

00221

(#) = qualifier out of range

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ENVIRONMENTAL CONSULTING, RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 10:55 am
Data File: E:\12-10-92\A0126.D
Name: BNASTD 120
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.81	196	159525	133.30	UG/L	003
36) 2-Chloronaphthalene	16.20	162	439576	92.37	UG/L	003
37) 2-Nitroaniline	16.47	65	222142	115.17	UG/L	003
38) Dimethylphthalate	16.95	163	532814	90.29	UG/L	003
39) 2,6-Dinitrotoluene	17.14	165	132375	92.37	UG/L	003
40) Acenaphthylene	17.26	152	661892	89.30	UG/L	003
41) 3-Nitroaniline	17.51	138	222137	110.17	UG/L	003
43) Acenaphthene	17.71	153	419080	92.42	UG/L	003
44) 2,4-Dinitrophenol	17.75	184	88565	163.18	UG/L	003#
45) 4-Nitrophenol	17.85	109	86173	105.09	UG/L	003#
46) Dibenzofuran	18.10	168	857054	117.16	UG/L	003
47) 2,4-Dinitrotoluene	18.12	165	189710	94.10	UG/L	003#
48) Diethylphthalate	18.70	149	573247	89.86	UG/L	003
49) 4-Chlorophenyl-phenylether	18.91	204	240330	89.47	UG/L	003
50) Fluorene	18.96	166	436346	90.53	UG/L	003
51) 4-Nitroaniline	19.05	138	223054	110.86	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.16	198	127009	120.12	UG/L	004
53) n-Nitrosodiphenylamine	19.21	169	323636	90.66	UG/L	004
55) 4-Bromophenyl-phenylether	20.11	248	147486	89.68	UG/L	004
56) Hexachlorobenzene	20.54	284	170309	85.87	UG/L	004
57) Pentachlorophenol	20.94	266	127689	102.68	UG/L	004
59) Phenanthrene	21.35	178	608454	91.04	UG/L	004
60) Anthracene	21.47	178	627572	91.05	UG/L	004
61) Carbazole	21.82	167	698685	90.30	UG/L	004
62) Di-n-butylphthalate	22.70	149	998711	89.93	UG/L	004#
63) Fluoranthene	24.33	202	675311	87.64	UG/L	004#
64) Benzidine	24.55	184	204475	81.79	UG/L	004
65) Pyrene	24.90	202	679115	86.53	UG/L	005#
67) Butylbenzylphthalate	26.43	149	458663	87.61	UG/L	005
68) 3,3'-Dichlorobenzidine	27.80	252	251778	90.86	UG/L	005
69) bis(2-Ethylhexyl)phthalate	27.91	149	671830	91.27	UG/L	005#
70) Benzo[a]anthracene	27.92	228	598586	82.37	UG/L	005
72) Chyrsene	28.05	228	581227	86.56	UG/L	005
73) Di-n-octylphthalate	29.88	149	1166718	88.57	UG/L	006
74) Benzo[b]fluoranthene	31.80	252	636156	87.71	UG/L	006
75) Benzo[k]fluoranthene	31.92	252	569115	83.63	UG/L	006m
76) Benzo[a]pyrene	33.34	252	566239	86.35	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.85	276	621475	87.26	UG/L	006
79) Dibenz[a,h]anthracene	39.95	278	502143	87.06	UG/L	006
80) Benzo[g,h,i]perylene	41.50	276	527499	88.69	UG/L	006#

00222

(#) = qualifier out of range

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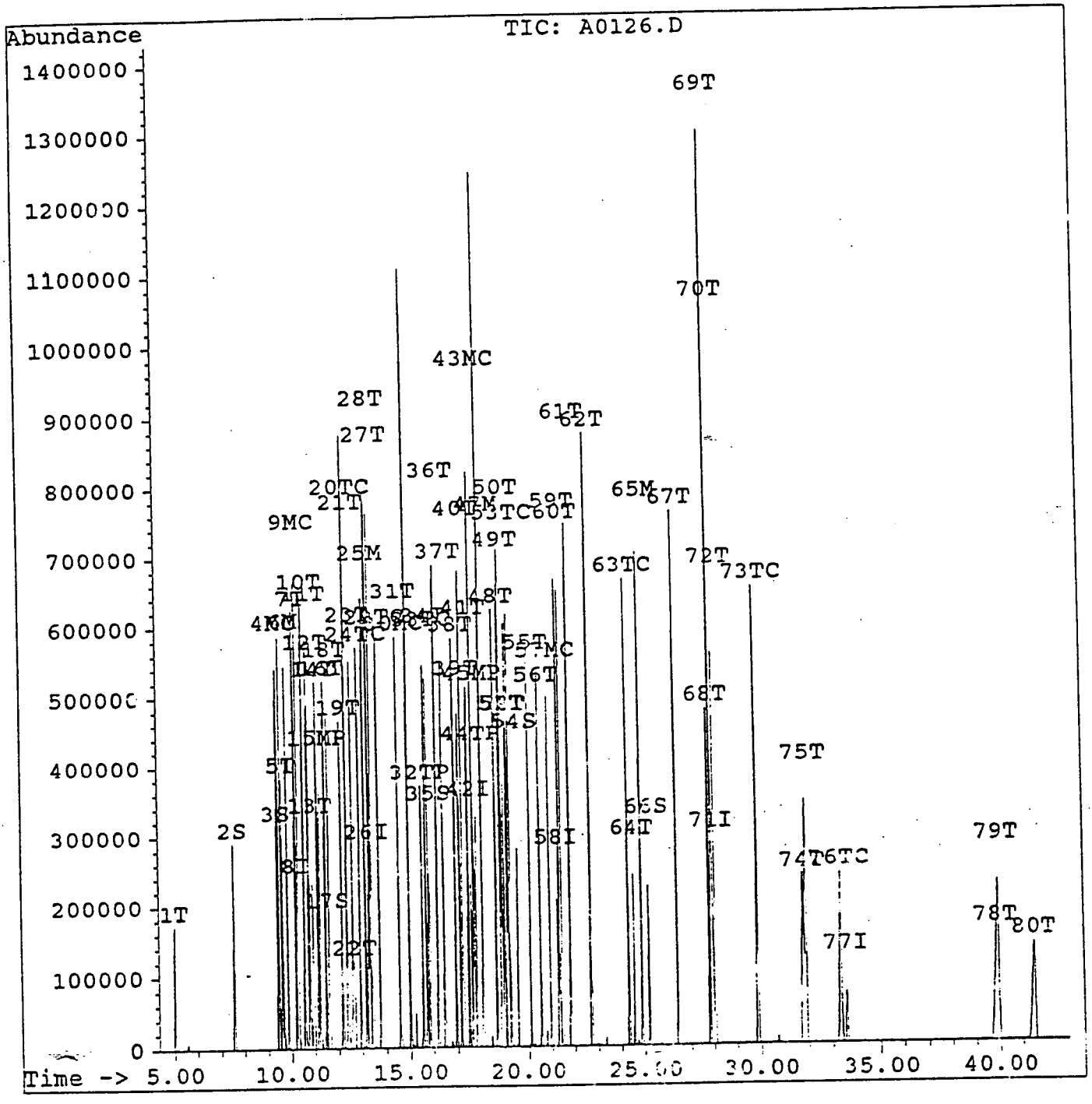
ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 10:55 am
Data File: E:\12-10-92\A0126.D
Name: BNA STD 120
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration



00223

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ERA
ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 9:42 am
Data File: E:\12-10-92\A0125.D
Name: BNASTD150
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.27	152	66585	50.00	UG/L	0.01
26) Naphthalene-d8	13.27	136	232441	50.00	UG/L	0.02
42) Acenaphthene-d10	17.62	164	109899	50.00	UG/L	0.01
58) Phenanthrene-d10	21.28	188	190670	50.00	UG/L	0.01
71) Chyrsene-d12	27.97	240	169868	50.00	UG/L	0.03
77) Perylene-d12	33.58	264	135073	50.00	UG/L	0.04

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.55	112	165107	100.48	UG/L	100.48%
3) Phenol-d5	9.43	99	200063	100.85	UG/L	100.85%
17) Nitrobenzene-d5	11.56	82	98562	47.80	UG/L	95.60%
35) 2-Fluorobiphenyl	15.90	172	156682	49.13	UG/L	98.27%
54) 2,4,6-Tribromophenol	19.59	330	65335	106.90	UG/L	106.90%
66) Terphenyl-d14	25.20	244	172307	48.38	UG/L	96.76%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	5.02	74	182532	105.41	UG/L	001#
4) Phenol	9.47	94	385936	107.47	UG/L	001
5) bis(2-Chloroethyl)ether	9.67	93	317505	104.93	UG/L	001#
6) 2-Chlorophenol	9.86	128	376599	110.92	UG/L	001#
7) 1,3-Dichlorobenzene	10.20	146	381550	115.12	UG/L	001
9) 1,4-Dichlorobenzene	10.30	146	376831	110.72	UG/L	001
10) Benzyl Alcohol	10.56	79	334583	133.24	UG/L	001
11) 1,2-Dichlorobenzene	10.73	146	360758	109.10	UG/L	001
12) 2-Methylphenol	10.81	107	226726	164.65	UG/L	001
13) bis(2-chloroisopropyl)ethe	10.91	45	298092	101.75	UG/L	001#
14) 4-Methylphenol	11.14	108	271369	159.14	UG/L	001#
15) n-Nitroso-di-n-propylamine	11.25	70	246727	106.04	UG/L	001#
16) Hexachloroethane	11.47	117	176369	112.73	UG/L	001
18) Nitrobenzene	11.61	77	341356	105.91	UG/L	002
19) Isophorone	12.17	82	617910	106.98	UG/L	002#
20) 2-Nitrophenol	12.38	139	270420	116.87	UG/L	002#
21) 2,4-Dimethylphenol	12.40	107	339114	114.41	UG/L	002
22) Benzoic Acid	12.72	122	203107	237.95	UG/L	001
23) bis(2-Chloroethoxy)methane	12.62	93	379566	103.78	UG/L	002#
24) 2,4-Dichlorophenol	12.93	162	296492	118.34	UG/L	002
25) 1,2,4-Trichlorobenzene	13.16	180	308125	114.54	UG/L	002
27) 4-Chloroaniline	13.43	127	513649	475.18	UG/L	002m
28) Naphthalene	13.33	128	902379	111.19	UG/L	002
29) Hexachlorobutadiene	13.74	225	184304	109.16	UG/L	002
30) 4-Chloro-3-methylphenol	14.55	107	316525	120.50	UG/L	002
31) 2-Methylnaphthalene	14.55	142	260184	120.20	UG/L	002#
32) Hexachlorocyclopentadiene	15.54	237	177[illegible]61	188.22	UG/L	003
33) 2,4,6-Trichlorophenol	15.72	196	197905	114.29	UG/L	003

00224

(#) = qualifier out of range

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QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 9:42 am
Data File: E:\12-10-92\A0125.D
Name: BNA STD-160
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration

ENVIRONMENTAL CONSULTANTS AND ANALYTICAL LABORATORIES, INC.

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.81	196	213065	174.94	UG/L	003
36) 2-Chloronaphthalene	16.20	162	557470	115.10	UG/L	003
37) 2-Nitroaniline	16.48	65	242360	123.46	UG/L	003
38) Dimethylphthalate	16.96	163	664742	110.69	UG/L	003
39) 2,6-Dinitrotoluene	17.15	165	166019	113.83	UG/L	003
40) Acenaphthylene	17.25	152	833858	110.54	UG/L	003
41) 3-Nitroaniline	17.50	138	241627	117.74	UG/L	003
43) Acenaphthene	17.71	153	525376	113.84	UG/L	003
44) 2,4-Dinitrophenol	17.75	184	112650	203.94	UG/L	003#
45) 4-Nitrophenol	17.86	109	110517	132.43	UG/L	003#
46) Dibenzofuran	18.10	168	927782	124.62	UG/L	003
47) 2,4-Dinitrotoluene	18.12	165	236843	115.43	UG/L	003
48) Diethylphthalate	18.70	149	713887	109.95	UG/L	003
49) 4-Chlorophenyl-phenylether	18.91	204	303417	110.99	UG/L	003
50) Fluorene	18.96	166	551758	112.48	UG/L	003
51) 4-Nitroaniline	19.06	138	246999	120.62	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.17	198	155964	146.46	UG/L	004
53) n-Nitrosodiphenylamine	19.22	169	407316	113.30	UG/L	004
55) 4-Bromophenyl-phenylether	20.12	248	180438	108.94	UG/L	004
56) Hexachlorobenzene	20.54	284	207677	103.97	UG/L	004
57) Pentachlorophenol	20.95	266	160351	128.04	UG/L	004
59) Phenanthrene	21.35	178	761496	113.13	UG/L	004
60) Anthracene	21.46	178	783063	112.81	UG/L	004
61) Carbazole	21.83	167	866707	111.23	UG/L	004
62) Di-n-butylphthalate	22.71	149	1231358	110.10	UG/L	004#
63) Fluoranthene	24.34	202	813471	104.83	UG/L	004#
64) Benzidine	24.56	184	240392	95.48	UG/L	004
65) Pyrene	24.90	202	844238	109.38	UG/L	005#
67) Butylbenzylphthalate	26.42	149	573565	111.41	UG/L	005
68) 3,3'-Dichlorobenzidine	27.81	252	304778	111.84	UG/L	005
69) bis(2-Ethylhexyl)phthalate	27.90	149	823793	113.80	UG/L	005#
70) Benzo[a]anthracene	27.92	228	719427	100.67	UG/L	005
72) Chyrsene	28.06	228	706696	107.02	UG/L	005
73) Di-n-octylphthalate	29.88	149	1432969	109.51	UG/L	006
74) Benzo[b]fluoranthene	31.81	252	798104	110.76	UG/L	006
75) Benzo[k]fluoranthene	31.93	252	627765	92.86	UG/L	006 m
76) Benzo[a]pyrene	33.35	252	679649	104.34	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.90	276	736908	104.15	UG/L	006#
79) Dibenz[a,h]anthracene	39.99	278	602972	105.23	UG/L	006
80) Benzo[g,h,i]perylene	41.52	276	628453	106.36	UG/L	006#

00025

(#) = qualifier out of range

273 Franklin Road, Randolph, New Jersey 07869
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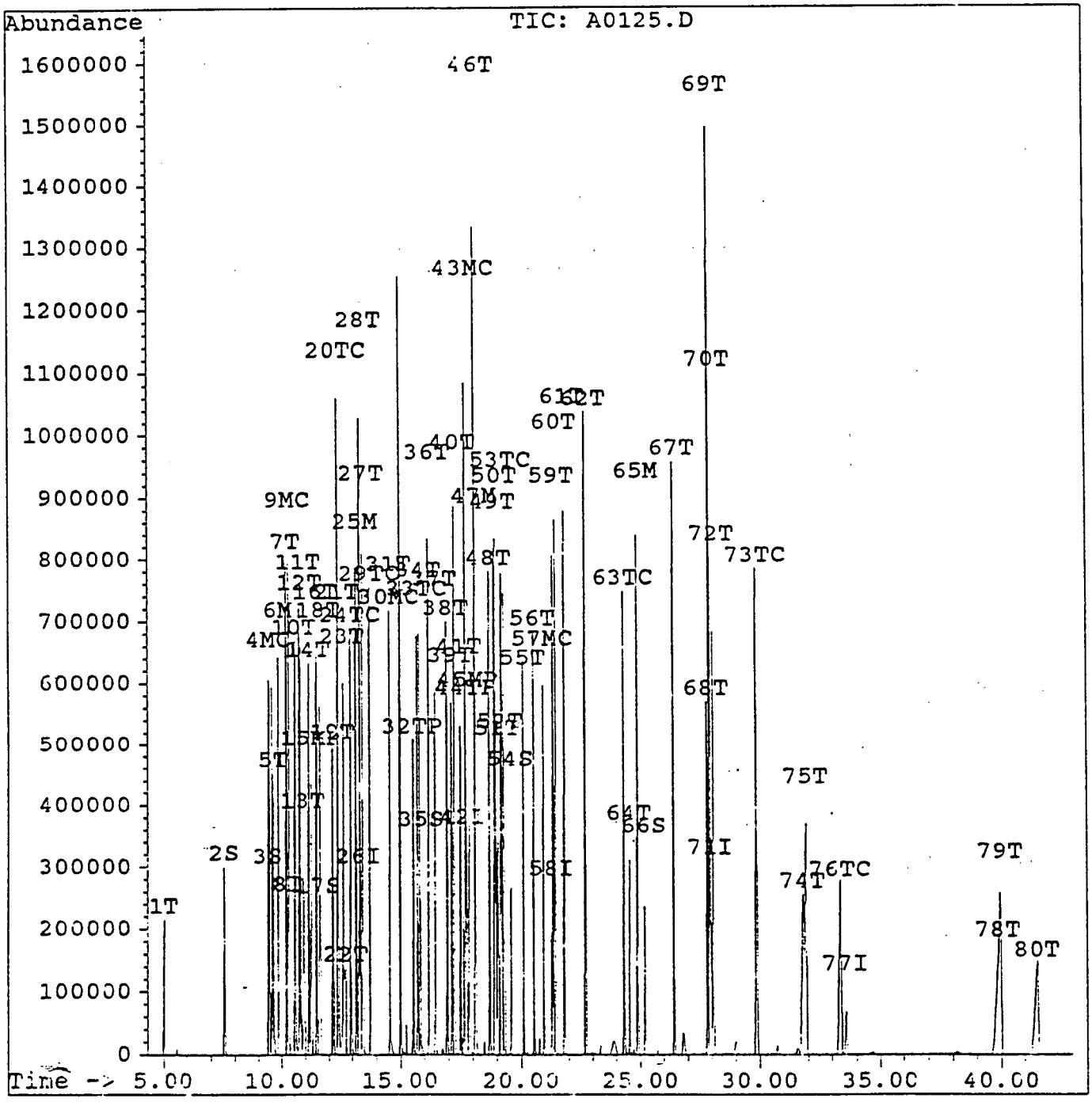
ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

QUANT REPORT

Operator ID: POB Date Acquired: 10 Dec 92 9:42 am
Data File: E:\12-10-92\A0125.D
Name:
Misc: mw-1,211-0827-01,11/20/92,11/23/92,11/24/92
Method: bna0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Wed Dec 09 17:03:13 1992
Quantitated using Single Level Calibration



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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

CONTINUING CALIBRATION REPORT

Operator ID: POB Date Acquired: 15 Dec 92 10:35 am
Data File: E:\12-15-92\A0131.D
Name: BNASTD 50
Misc:
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 09:01:30 1992 CCC max is 25%
SPCC min RF is .05

Max Dev = 25% Min Area = 50% Max Area = 150% Max Time Dev = 0.50min

PK#	Compound	AvgRRF	CCRRF	%Dev	Area%	Dev(Min)	
8	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	87	-0.02	
1	n-Nitrosodimethylamine	1.005	1.071	6.5	91	-0.01	
2	2-Fluorophenol	1.246	1.287	3.3	88	-0.02	
3	Phenol-d5	1.513	1.513	0.0	86	-0.02	
4	Phenol	2.067	2.005	3.0	87	-0.01	CCC
5	bis(2-Chloroethyl)ether	1.733	1.689	2.6	85	-0.01	
6	2-Chlorophenol	1.980	1.933	2.4	87	-0.01	
7	1,3-Dichlorobenzene	1.968	1.955	0.7	89	-0.01	
9	1,4-Dichlorobenzene	1.979	1.915	3.3	87	-0.02	CCC
10	Benzyl Alcohol	1.802	1.781	1.2	87	-0.02	
11	1,2-Dichlorobenzene	1.915	1.865	2.6	87	-0.02	
12	2-Methylphenol	0.957	0.755	21.1	83	-0.01	
13	bis(2-chloroisopropyl)ether	1.668	1.643	1.5	86	-0.01	
14	4-Methylphenol	1.167	0.927	20.6	83	-0.02	
15	n-Nitroso-di-n-propylamine	1.341	1.274	5.0	83	-0.01	SPCC
16	Hexachloroethane	0.934	0.907	2.8	86	-0.01	
22	Benzoic Acid	0.776	0.537	30.7*	75	-0.02	
26	Naphthalene-d8	1.000	1.000	0.0	83	-0.01	
17	Nitrobenzene-d5	0.439	0.460	4.6	85	-0.01	
18	Nitrobenzene	0.533	0.542	1.6	83	-0.02	
19	Isophorone	0.956	0.973	1.7	85	-0.02	
20	2-Nitrophenol	0.401	0.396	1.2	83	-0.01	CCC
21	2,4-Dimethylphenol	0.512	0.505	1.4	82	-0.01	
23	bis(2-Chloroethoxy)methane	0.596	0.595	0.1	82	-0.02	
24	2,4-Dichlorophenol	0.435	0.427	1.7	83	-0.02	CCC
25	1,2,4-Trichlorobenzene	0.459	0.468	2.0	86	-0.01	
27	Naphthalene	1.362	1.349	1.0	83	-0.02	
28	4-Chloroaniline	0.815	0.791	3.0	79	-0.02	
29	Hexachlorobutadiene	0.282	0.305	8.0	90	-0.01	CCC
30	4-Chloro-3-methylphenol	0.466	0.455	2.4	82	-0.01	CCC
31	2-Methylnaphthalene	0.383	0.368	3.8	79	-0.01	
42	Acenaphthene-d10	1.000	1.000	0.0	82	-0.02	
32	Hexachlorocyclopentadiene	0.466	0.529	13.6	97	-0.02	SPCC
33	2,4,6-Trichlorophenol	0.627	0.616	1.7	82	-0.02	CCC
34	2,4,5-Trichlorophenol	0.534	0.436	18.4	81	-0.02	

00227

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35	2-Fluorobiphenyl	1.451	1.460	0.6	81	-0.02	
36	2-Chloronaphthalene	1.761	1.717	2.5	81	-0.01	
37	2-Nitroaniline	0.816	0.855	4.8	85	-0.01	
38	Dimethylphthalate	2.147	2.157	0.5	83	-0.01	
39	2,6-Dinitrotoluene	0.532	0.531	0.2	83	-0.02	
40	Acenaphthylene	2.683	2.584	3.7	80	-0.01	
41	3-Nitroaniline	0.834	0.843	1.1	80	-0.02	
43	Acenaphthene	1.674	1.642	1.9	81	-0.02	CCC
44	2,4-Dinitrophenol	0.299	0.272	9.2	77	-0.02	SPCC
45	4-Nitrophenol	0.331	0.339	2.4	86	-0.02	SPCC
46	Dibenzofuran	3.123	3.085	1.2	80	-0.02	
47	2,4-Dinitrotoluene	0.752	0.749	0.4	84	-0.02	
48	Diethylphthalate	2.315	2.328	0.6	83	-0.02	
49	4-Chlorophenyl-phenylether	0.973	0.965	0.8	83	-0.02	
50	Fluorene	1.765	1.723	2.4	81	-0.01	
51	4-Nitroaniline	0.840	0.848	0.9	80	-0.02	
58	Phenanthrene-d10	1.000	1.000	0.0	81	-0.02	
52	4,6-Dinitro-2-methylphenol	0.267	0.270	1.1	83	-0.01	
53	n-Nitrosodiphenylamine	0.743	0.722	2.8	80	-0.01	CCC
54	2,4,6-Tribromophenol	0.168	0.183	9.1	88	-0.01	
55	4-Bromophenyl-phenylether	0.339	0.345	1.9	83	-0.02	
56	Hexachlorobenzene	0.399	0.418	4.9	85	-0.02	
57	Pentachlorophenol	0.283	0.279	1.7	80	-0.02	CCC
59	Phenanthrene	1.407	1.394	1.0	81	-0.02	
60	Anthracene	1.447	1.405	2.9	79	-0.01	
61	Carbazole	1.612	1.534	4.8	78	-0.02	
62	Di-n-butylphthalate	2.300	2.295	0.2	81	-0.01	
63	Fluoranthene	1.569	1.568	0.0	81	-0.02	CCC
64	Benzidine	0.473	0.268	43.2*	45*	-0.02	
71	Chyrsene-d12	1.000	1.000	0.0	82	-0.02	
65	Pyrene	1.762	1.769	0.4	82	-0.02	
66	Terphenyl-d14	1.035	1.069	3.3	83	-0.02	
67	Butylbenzylphthalate	1.180	1.184	0.3	83	-0.01	
68	3,3'-Dichlorobenzidine	0.638	0.596	6.6	77	-0.02	
69	bis(2-Ethylhexyl)phthalate	1.697	1.720	1.4	84	-0.02	
70	Benzo[a]anthracene	1.581	1.626	2.9	83	-0.02	
72	Chyrsene	1.498	1.514	1.1	83	-0.02	
77	Perylene-d12	1.000	1.000	0.0	84	-0.04	
73	Di-n-octylphthalate	3.799	3.725	2.0	83	-0.03	CCC
74	Benzo[b]fluoranthene	2.071	2.001	3.4	82	-0.04	
75	Benzo[k]fluoranthene	1.870	1.920	2.7	85	-0.04	
76	Benzo[a]pyrene	1.8[illegible]	1.829	1.5	82	-0.04	CCC
78	Indeno[1,2,3-cd]pyrene	2.018	2.030	0.6	85	-0.07	
79	Dibenz[a,h]anthracene	1.641	1.665	1.4	85	-0.06	
80	Benzo[g,h,i]perylene	1.713	1.756	2.5	85	-0.05	

(*) = Out of Range Tue Dec 15 16:09:41 1992

00228

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QUANT REPORT

ENVIRONMENTAL CONSULTANTS, STANDARD AND ANALYTICAL LABORATORIES, INC.

Operator ID: POB Date Acquired: 15 Dec 92 10:35 am
Data File: E:\12-15-92\A0131.D
Name: BNA STD 50
Misc:
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.24	152	62072	50.00	UG/L	-0.02
26) Naphthalene-d8	13.24	136	200402	50.00	UG/L	-0.01
42) Acenaphthene-d10	17.60	164	93261	50.00	UG/L	-0.02
58) Phenanthrene-d10	21.25	188	161898	50.00	UG/L	-0.02
71) Chyrsene-d12	27.93	240	147091	50.00	UG/L	-0.02
77) Perylene-d12	33.50	264	118963	50.00	UG/L	-0.04

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.53	112	159802	103.33	UG/L	103.33%
3) Phenol-d5	9.40	99	187868	99.99	UG/L	99.99%
17) Nitrobenzene-d5	11.53	82	92140	52.31	UG/L	104.62%
35) 2-Fluorobiphenyl	15.88	172	136182	50.30	UG/L	100.61%
54) 2,4,6-Tribromophenol	19.56	330	59197	109.06	UG/L	109.06%
66) Terphenyl-d14	25.18	244	157278	51.65	UG/L	103.29%

Target Compounds						ISTD#
1) n-Nitrosodimethylamine	4.98	74	66453	53.24	UG/L	001#
4) Phenol	9.43	94	124449	48.49	UG/L	001
5) bis(2-Chloroethyl)ether	9.65	93	104813	48.72	UG/L	001#
6) 2-Chlorophenol	9.83	128	119963	48.81	UG/L	001#
7) 1,3-Dichlorobenzene	10.18	146	121333	49.67	UG/L	001
9) 1,4-Dichlorobenzene	10.28	146	118861	48.37	UG/L	001
10) Benzyl Alcohol	10.52	79	110554	49.42	UG/L	001
11) 1,2-Dichlorobenzene	10.71	146	115755	48.68	UG/L	001
12) 2-Methylphenol	10.77	107	46861	39.44	UG/L	001
13) bis(2-chloroisopropyl)ethe	10.88	45	101971	49.25	UG/L	001#
14) 4-Methylphenol	11.09	108	57529	39.70	UG/L	001#
15) n-Nitroso-di-n-propylamine	11.19	70	79087	47.50	UG/L	001#
16) Hexachloroethane	11.44	117	56295	48.58	UG/L	001
18) Nitrobenzene	11.59	77	108588	50.81	UG/L	002
19) Isophorone	12.12	82	194947	50.85	UG/L	002#
20) 2-Nitrophenol	12.35	139	79347	49.41	UG/L	002
21) 2,4-Dimethylphenol	12.36	107	101187	49.28	UG/L	002
22) Benzoic Acid	12.55	122	33339	34.63	UG/L	001
23) bis(2-Chloroethoxy)methane	12.59	93	119288	49.94	UG/L	002
24) 2,4-Dichlorophenol	12.89	162	85589	49.15	UG/L	002
25) 1,2,4-Trichlorobenzene	13.13	180	93850	50.98	UG/L	002
27) Naphthalene	13.30	128	270286	49.50	UG/L	003
28) 4-Chloroaniline	13.40	127	158540	48.51	UG/L	00[illegible]#
29) Hexachlorobutadiene	13.51	225	61112	54.00	UG/L	00[illegible]
30) 4-Chloro-3-methylphenol	14.33	107	91270	48.82	UG/L	00[illegible]
31) 2-Methylnaphthalene	14.53	142	73918	48.08	UG/L	002#
32) Hexachlorocyclopentadiene	15.52	237	49357	56.79	UG/L	003
33) 2,4,6-Trichlorophenol	15.69	196	57489	49.16	UG/L	003

(#) = qualifier out of range

00229

Telephone: (201) 361-4252 • Fax (201) 989-5286

QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 10:35 am
Data File: E:\12-15-92\A0131.D
Name: BNA STD 50
Misc:
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
34) 2,4,5-Trichlorophenol	15.78	196	40633	40.81	UG/L	003
36) 2-Chloronaphthalene	16.17	162	160172	48.75	UG/L	003
37) 2-Nitroaniline	16.44	65	79756	52.40	UG/L	003
38) Dimethylphthalate	16.92	163	201124	50.23	UG/L	003
39) 2,6-Dinitrotoluene	17.10	165	49490	49.89	UG/L	003
40) Acenaphthylene	17.22	152	240972	48.15	UG/L	003
41) 3-Nitroaniline	17.46	138	78585	50.53	UG/L	003
43) Acenaphthene	17.68	153	153155	49.06	UG/L	003
44) 2,4-Dinitrophenol	17.70	184	25351	45.40	UG/L	003#
45) 4-Nitrophenol	17.80	109	31624	51.18	UG/L	003#
46) Dibenzofuran	18.07	168	287745	49.40	UG/L	003
47) 2,4-Dinitrotoluene	18.08	165	69884	49.81	UG/L	003#
48) Diethylphthalate	18.66	149	217151	50.28	UG/L	003
49) 4-Chlorophenyl-phenylether	18.87	204	89974	49.60	UG/L	003
50) Fluorene	18.92	166	160647	48.79	UG/L	003
51) 4-Nitroaniline	18.99	138	79097	50.47	UG/L	003
52) 4,6-Dinitro-2-methylphenol	19.11	198	43710	50.57	UG/L	004
53) n-Nitrosodiphenylamine	19.17	169	116943	48.58	UG/L	004
55) 4-Bromophenyl-phenylether	20.08	248	55884	50.93	UG/L	004
56) Hexachlorobenzene	20.51	284	67728	52.44	UG/L	004
57) Pentachlorophenol	20.92	266	45109	49.14	UG/L	004
59) Phenanthrene	21.31	178	225652	49.52	UG/L	004
60) Anthracene	21.43	178	227494	48.57	UG/L	004
61) Carbazole	21.78	167	248370	47.60	UG/L	004
62) Di-n-butylphthalate	22.68	149	371481	49.89	UG/L	004
63) Fluoranthene	24.29	202	253919	49.99	UG/L	004#
64) Benzidine	24.52	184	43446	28.39	UG/L	004
65) Pyrene	24.86	202	260163	50.19	UG/L	005#
67) Butylbenzylphthalate	26.40	149	174134	50.16	UG/L	005
68) 3,3'-Dichlorobenzidine	27.75	252	87730	46.72	UG/L	005#
69) bis(2-Ethylhexyl)phthalate	27.87	149	253048	50.70	UG/L	005
70) Benzo[a]anthracene	27.88	228	239235	51.45	UG/L	005
72) Chyrsene	28.00	228	222761	50.56	UG/L	005
73) Di-n-octylphthalate	29.82	149	443085	49.02	UG/L	006
74) Benzo[b]fluoranthene	31.71	252	238064	48.32	UG/L	006
75) Benzo[k]fluoranthene	31.82	252	228427	51.33	UG/L	006
76) Benzo[a]pyrene	33.24	252	217546	49.27	UG/L	006
78) Indeno[1,2,3-cd]pyrene	39.70	276	241448	50.29	UG/L	006#
79) Dibenz[a,h]anthracene	39.79	278	198081	50.72	UG/L	006
80) Benzo[g,h,i]perylene	41.33	276	208866	51.24	UG/L	006#

(#) = qualifier out of range

00230

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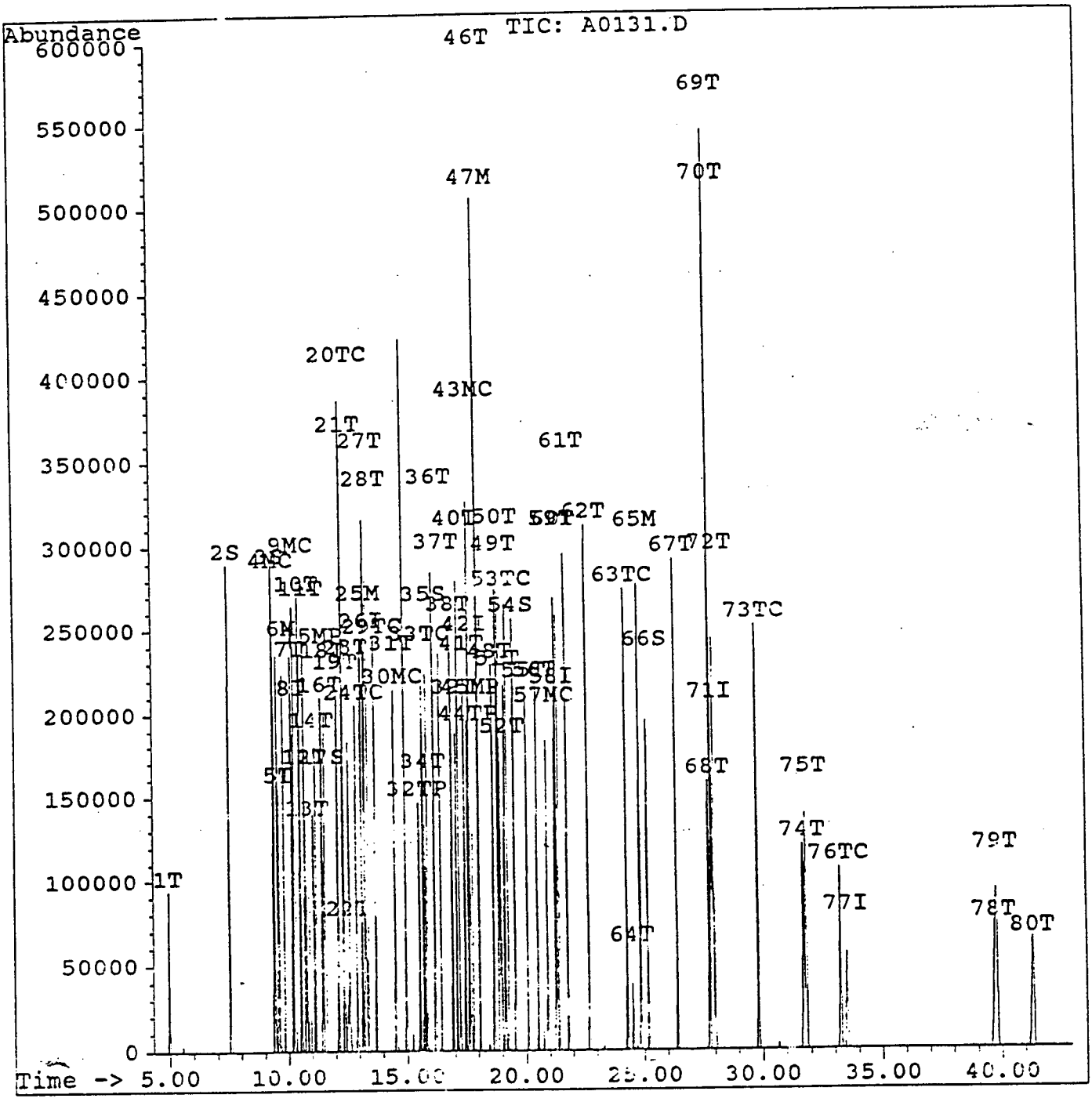
QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 10:35 am
Data File: E:\12-15-92\A0131.D
Name:
Misc:
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration



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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SECTION 3.0

QA/QC DATA SUMMARY

TARGETED COMPOUND LIST
SURROGATE RECOVERY RESULTS
METHOD BLANK RESULTS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)*

		Practical Quantitation Limits **	
		Ground Water	Low Soil/Sediment(b)
Semivolatiles	CAS Number	ug/L	ug/Kg
Phenol	108-95-2	10	330
bis(2-Chloroethyl)ether	111-44-4	10	330
2-Chlorophenol	95-57-8	10	330
1,3-Dichlorobenzene	541-73-1	10	330
1,4-Dichlorobenzene	106-46-7	10	330
2-Chloronaphthalene	91-58-7	10	330
1,2-Dichlorobenzene	95-50-1	10	330
Benzidine	92-87-5	80	2600
bis(2-Chloroisopropyl)ether	39638-32-9	10	330
N-Nitrosodimethylamine	62-75-9	10	330
N-Nitrosodi-N-propylamine	621-64-7	10	330
Hexachloroethane	67-72-1	10	330
Nitrobenzene	98-95-3	10	330
Isophorone	78-59-1	10	330
2-Nitrophenol	88-75-5	10	330
2,4-Dimethylphenol	105-67-9	10	330
1,2 Diphenylhydrazine	-------	10	330
bis(2-Chloroethoxy)methane	111-91-1	10	330
2,4-Dichlorophenol	120-83-2	10	330
1,2,4-Trichlorobenzene	120-82-1	10	330
Naphthalene	91-20-3	10	330
Hexachlorobutadiene	87-68-3	10	330
4-Chloro-3-methylphenol	59-50-7	10	330
Hexachlorocyclopentadiene	77-47-4	10	330
2,4,6-Trichlorophenol	88-06-2	10	330

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)*

Semivolatiles	CAS Number	Practical Quantitative Limits** Ground Water ug/L	Low Soil/Sediment(b) ug/Kg
Dimethylphthalate	131-11-3	10	330
Acenaphthylene	208-96-8	10	330
Acenaphthene	83-32-9	10	330
2,4-Dinitrophenol	51-28-5	50	1600
4-Nitrophenol	100-02-7	50	1600
2,4-Dinitrotoluene	121-14-2	10	330
2,6-Dinitrotoluene	606-20-2	10	330
Diethylphthalate	84-66-2	10	330
4-Chlorophenylphenylether	7005-72-3	10	330
Fluorene	86-73-7	10	330
4,6-Dinitro-2-methylphenol	534-52-1	50	1600
N-Nitrosodiphenylamine	86-30-6	10	330
4-Bromophenylphenylether	101-55-3	10	330
Hexachlorobenzene	118-74-1	10	330
Pentachlorophenol	87-86-5	50	1600
Phenathrene	85-01-8	10	330
Anthracene	120-12-7	10	330
Di-n-butylphthalate	84-74-2	10	330
Fluoranthene	206-44-0	10	330
Pyrene	129-00-0	10	330
Butylbenzylphthalate	85-68-7	10	330
3,3-Dichlorobenzidine	91-94-1	20	660
Benzo(a)anthracene	56-55-3	10	330
bis(2-ethylhexyl)phthalate	117-81-7	10	330

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

TARGET COMPOUND LIST (TCL) AND CONTRACT REQUIRED QUANTITATION LIMITS (CRQL)*

		Practical Quantitation Limits**	
		Ground Water	Low Soil/Sediment(b)
Semivolatiles	CAS Number	ug/L	ug/Kg
Chrysene	218-01-9	10	330
Di-n-octylphthalate	117-84-0	10	330
Benzo(b)fluoranthene	205-99-2	10	330
Benzo(k)fluoranthene	207-08-9	10	330
Benzo(a)pyrene	50-32-8	10	330
Indeno(1,2,3-cd)pyrene	193-39-5	10	330
Dibenzo(a,h)anthracene	53-70-3	10	330
Benzo(g,h,i)perylene	191-24-2	10	330

(b) Medium soil/sediment contract required Quantitation Limits (CRQL) for Semi-Volatile TCL Compounds are 60 times the individual Low Soil/Sediment CRQL.

* Specific quantitation limits are highly matrix dependent. The quantitation limits listed herein are provided for guidance and may not always be achievable.

** Quantitation limits listed for soil/sediment are based on wet weight. The quantitation limits calculated by the laboratory for soil/sediment, calculated on dry weight basis as required by the contract, will be higher.

FOOTNOTE: Chart is taken from USEPA Contract Laboratory Program Manual, Attachment C , TCL and CRQL lists, October, 1986.

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Semivolatile Surrogate Percent Recovery Summary

Project: ESI/KNICKERBOCKER Project Number: 92-032

Sample ID No.	Matrix	File ID	Nitrobenzene-D5	2-Fluoro-Biphenyl	Terphenyl-D14
01: METHOD BLANK	SOIL	A0132	91	98	115
02: MATRIX SPIKE	SOIL	A0133	80	83	100
03: MATRIX SPIKE DUP	SOIL	A0134	81	85	97
04: 92-032-A01	SOIL	A0137	95	101	150
05:					
06:					
07:					
08:					
09:					
10:					
11:					
12:					
13:					
14:					
15:					
16:					
17:					
18:					
19:					
Soil QA/QC Limits			(23-120)	(30-115)	(18-137)
Water QA/QC Limits			(35-114)	(43-116)	(33-141)

NO.: 1 Out of: 12 ; Outside of QC Limits

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client N/A

Lab Sample ID: METHOD BLANK

Sample ID: N/A

Date Sampled: N/A

Matrix soil

Date Received: N/A

Sample Wt/V 30g

Date Extracted: 12/9/92

Data File A0132

Date Analyzed 12/15/92

Extraction: SONIC

DF 1

UNITS: UG/KG

CAS	Compound	Conc	Q	MDL
62-75-9	n-Nitrosodimethylamine	U		170
108-95-2	Phenol	U		330
111-44-4	bis(2-Chloroethyl)ether	U		170
95-57-8	2-Chlorophenol	U		330
541-73-1	1,3-Dichlorobenzene	U		170
106-46-7	1,4-Dichlorobenzene	U		170
100-51-6	Benzyl Alcohol	U		170
95-50-1	1,2-Dichlorobenzene	U		170
106-44-5	2-Methylphenol	U		330
39638-32-9	bis(2-chloroisopropyl)ether	U		170
95-48-7	4-Methylphenol	U		330
621-64-7	n-Nitroso-di-n-propylamine	U		170
67-72-1	Hexachloroethane	U		170
98-95-3	Nitrobenzene	U		170
78-59-1	Isophorone	U		170
88-75-5	2-Nitrophenol	U		330
105-67-9	2,4-Dimethylphenol	U		330
65-85-0	Benzoic Acid	U		330
111-91-1	bis(2-Chloroethoxy)methane	U		170
120-83-2	2,4-Dichlorophenol	U		330
120-82-1	1,2,4-Trichlorobenzene	U		170
91-20-3	Naphthalene	U		170
106-47-8	4-Chloroaniline	U		170
87-68-3	Hexachlorobutadiene	U		170
59-50-7	4-Chloro-3-methylphenol	U		330
91-57-6	2-Methylnaphthalene	U		170
77-47-4	Hexachlorocyclopentadiene	U		170
88-06-2	2,4,6-Trichlorophenol	U		330
95-95-4	2,4,5-Trichlorophenol	U		330
91-58-7	2-Chloronaphthalene	U		170
88-74-4	2-Nitroaniline	U		170
131-11-3	Dimethylphthalate	U		170
606-20-2	2,6-Dinitrotoluene	U		330
208-96-8	Acenaphthylene	U		170

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ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Semivolatile Organics Data Sheet

Client N/A

Lab Sample ID: METHOD BLANK

Sample ID: N/A

Date Sampled: N/A

Matrix soil

Date Received: N/A

Sample Wt/V 30g

Date Extracted: 12/09/92

Data File A0132

Date Analyzed 12/15/92

Extraction: SONIC

DF 1

UNITS: UG/KG

CAS	Compound	Conc	Q	MDL
99-09-2	3-Nitroaniline	U		170
83-32-9	Acenaphthene	U		170
51-28-5	2,4-Dinitrophenol	U		330
100-02-7	4-Nitrophenol	U		330
132-64-9	Dibenzofuran	U		170
121-14-2	2,4-Dinitrotoluene	U		170
84-66-2	Diethylphthalate	U		170
70005-72-3	4-Chlorophenyl-phenylether	U		170
86-73-7	Fluorene	U		170
100-01-6	4-Nitroaniline	U		170
534-52-1	4,6-Dinitro-2-methylphenol	U		330
86-30-6	n-Nitrosodiphenylamine	U		170
101-55-3	4-Bromophenyl-phenylether	U		170
118-74-1	Hexachlorobenzene	U		170
87-86-5	Pentachlorophenol	U		330
85-01-8	Phenanthrene	U		170
120-12-7	Anthracene	U		170
86-74-8	Carbazole	U		170
84-74-2	Di-n-butylphthalate	U		170
206-44-0	Fluoranthene	U		170
92-87-5	Benzidine	U		170
129-00-0	Pyrene	U		170
85-68-7	Butylbenzylphthalate	U		170
91-94-1	3,3'-Dichlorobenzidine	U		170
117-81-7	bis(2-Ethylhexyl)phthalate	U		170
56-55-3	Benzo[a]anthracene	U		170
218-01-9	Chyrsene	U		170
227-84-0	Di-n-octylphthalate	U		170
205-99-2	Benzo[b]fluoranthene	U		170
207-08-9	Benzo[k]fluoranthene	U		170
50-32-8	Benzo[a]pyrene	U		170
193-395	Indeno[1,2,3-cd]pyrene	U		170
53-70-3	Dibenz[a,h]anthracene	U		170
191-24-2	Benzo[g,h,i]perylene	U		170

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ECRA
ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: ECRA LABORATORIES ,INC

Client Name: N/A

Sample ID #: N/A

Lab ID #: METHOD BLANK

Data File: A0132

EPA Method # 8240

Dil Factor: 1

Concentration Units: UG/KG

Number Of TIC'S Found: 4

* Common Laboratory Contaminant
** Found in Method Blank
*** Manually Intergrated and Searched

	CAS NUMBER	COMPOUND NAME	R.T.	SCAN	CONC.	Q
1		Unknown	5.58	122	6	
2		Column Bleed	6.43	204	24	
3	79-34-5	Tetrachloroethane	8.32	384	16	
4	556-67-2	Octamethyltetra-	9.62	509	8	
5		siloxane				
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
25						

QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS, INC. ANALYTICAL LABORATORIES, INC.

Internal Standards

Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.24	152	52994	50.00	UG/KG	-0.02
26) Naphthalene-d8	13.24	136	179141	50.00	UG/KG	-0.02
42) Acenaphthene-d10	17.59	164	80451	50.00	UG/KG	-0.02
58) Phenanthrene-d10	21.25	188	143730	50.00	UG/KG	-0.02
71) Chyrsene-d12	27.91	240	133384	50.00	UG/KG	-0.04
77) Perylene-d12	33.51	264	143330	50.00	UG/KG	-0.04

System Monitoring Compounds

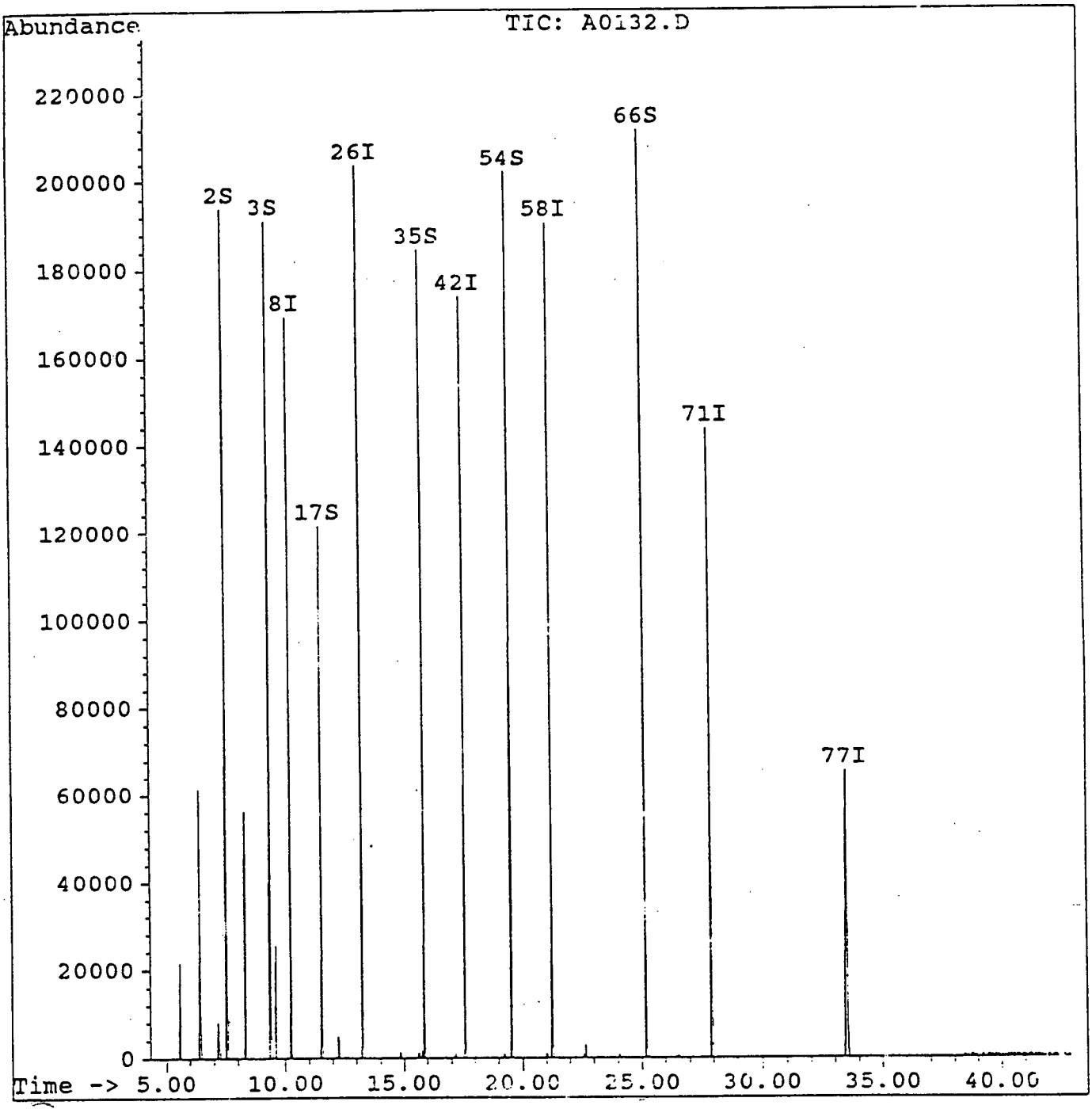
						%Recovery
2) 2-Fluorophenol	7.53	112	101349	76.76	UG/KG	76.76%
3) Phenol-d5	9.39	99	117663	73.35	UG/KG	73.35%
17) Nitrobenzene-d5	11.54	82	71777	45.59	UG/KG	91.17%
35) 2-Fluorobiphenyl	15.88	172	114921	49.21	UG/KG	98.42%
54) 2,4,6-Tribromophenol	19.55	330	47718	99.02	UG/KG	99.02%
66) Terphenyl-d14	25.18	244	158589	57.43	UG/KG	114.86%

Target Compounds ISTD#

(#) = qualifier out of range

QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration



00241

Tentatively Identified Compound (LSC)

Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992

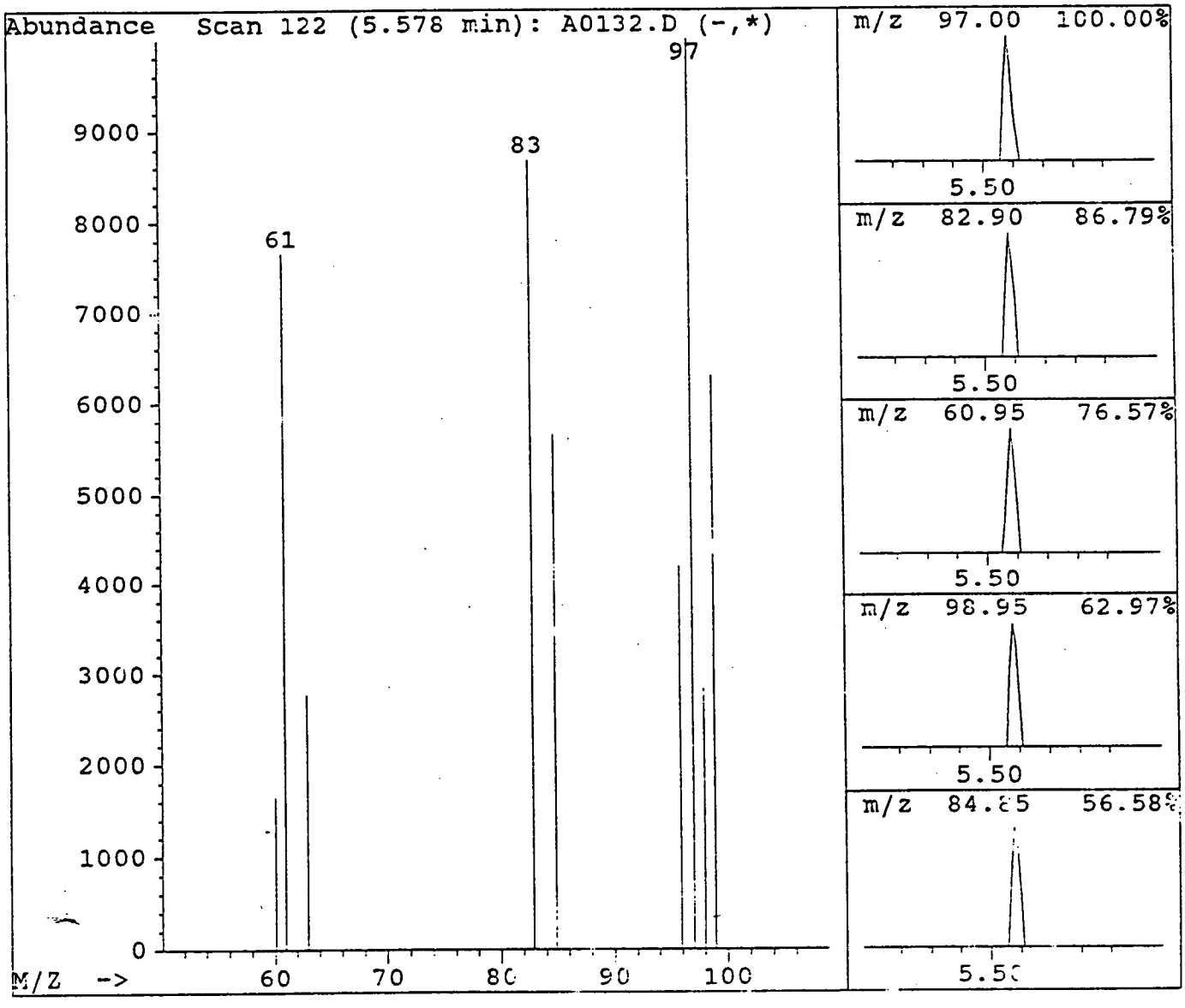
ENVIRONMENTAL CONSULTANTS, RESEARCH AND ANALYTICAL LABORATORIES, INC.

Library Searched: WILEY138.L

R.T.	Conc	Area	Relative to ISTD	R.T.
5.58	6.48 UG/KG	37307	1,4-Dichlorobenzene-d4	10.24

Hit# of 0	Tentative ID	Ref#	CAS#	Qual
1	No Hits From WILEY138.L	0	000000-00-0	0

UNKNOWN



Tentatively Identified Compound (LSC)

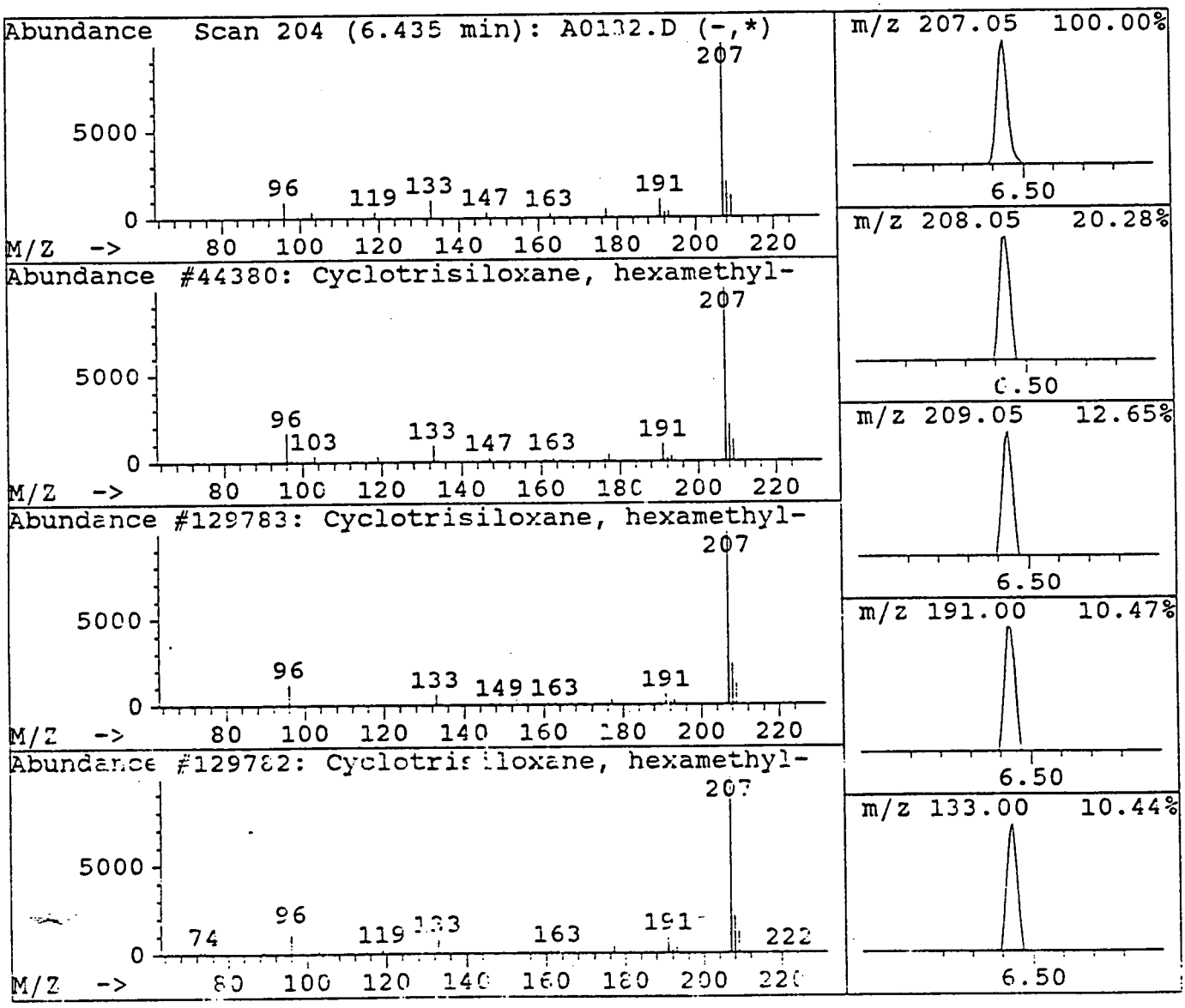
Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Library Searched: WILEY138.L

R.T.	Conc	Area	Relative to ISTD	R.T.
6.43	24.24 UG/KG	139581	1,4-Dichlorobenzene-d4	10.24

Hit# of 6 Column Bleed	Tentative ID	Ref#	CAS#	Qual
1	Cyclotrisiloxane, hexamethyl-	44380	000541-05-9	86
2	Cyclotrisiloxane, hexamethyl-	129783	000541-05-9	83
3	Cyclotrisiloxane, hexamethyl-	129782	000541-05-9	83
4	Arsenous acid, tris(trimethylsilyl)	85890	055429-29-3	56
5	5-NITROBENZOFURAN-2-CARBOXYLIC ACID	37851	000000-00-0	39



Tentatively Identified Compound (LSC)

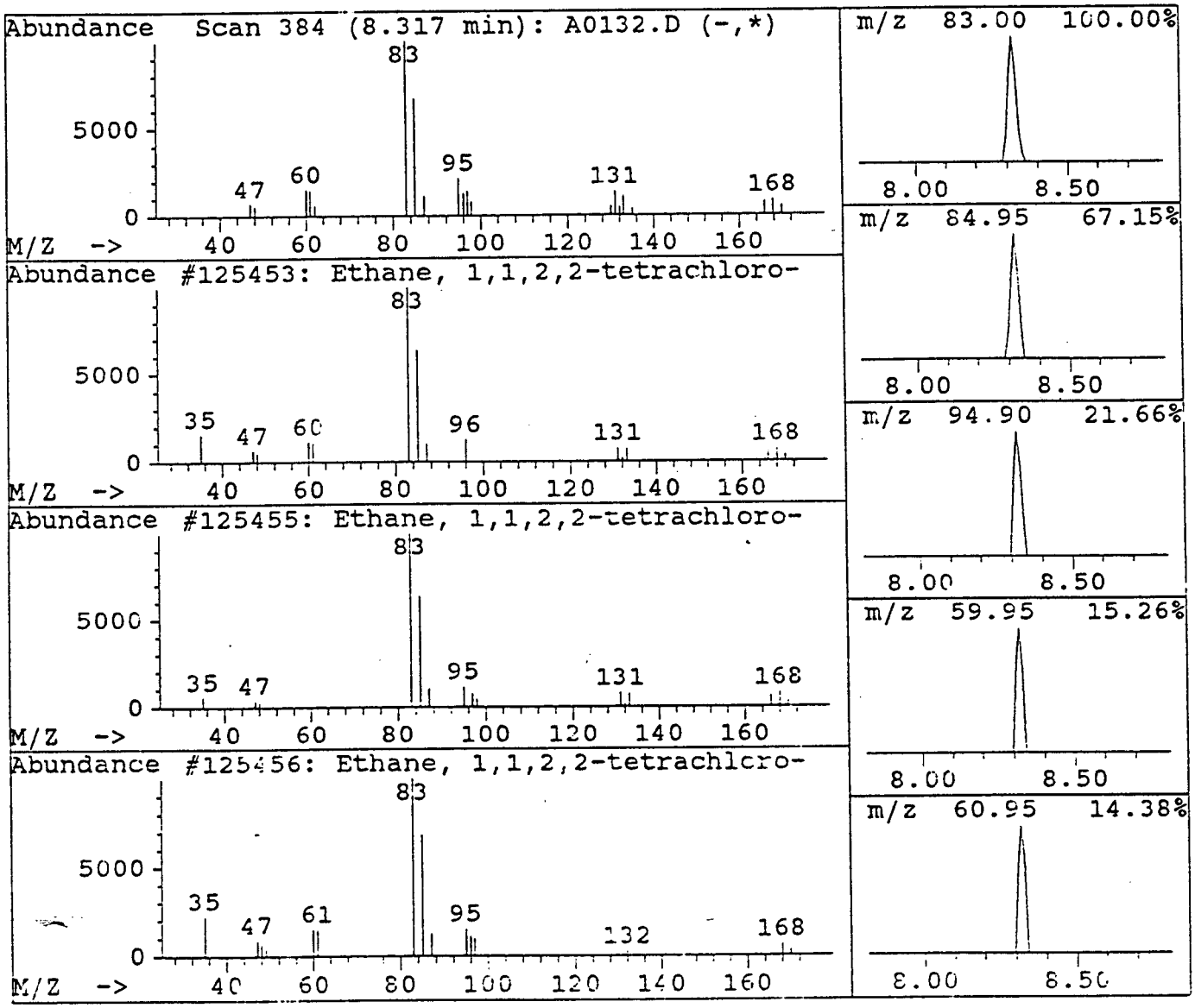
Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992

ENVIRONMENTAL CONSULTANTS, INC. ANALYTICAL LABORATORIES, INC.

Library Searched: WILEY138.L

R.T.	Conc	Area	Relative to ISTD	R.T.
8.32	15.59 UG/KG	89741	1,4-Dichlorobenzene-d4	10.24

Hit# of 17	Tentative ID	Ref#	CAS#	Qual
1	Ethane, 1,1,2,2-tetrachloro-	125453	000079-34-5	96
2	Ethane, 1,1,2,2-tetrachloro-	125455	000079-34-5	93
3	Ethane, 1,1,2,2-tetrachloro-	125456	000079-34-5	93
4	Ethane, 1,1,2,2-tetrachloro-	125452	000079-34-5	93
5	Ethane, 1,1,2,2-tetrachloro-	125454	000079-34-5	87



Tentatively Identified Compound (LSC)

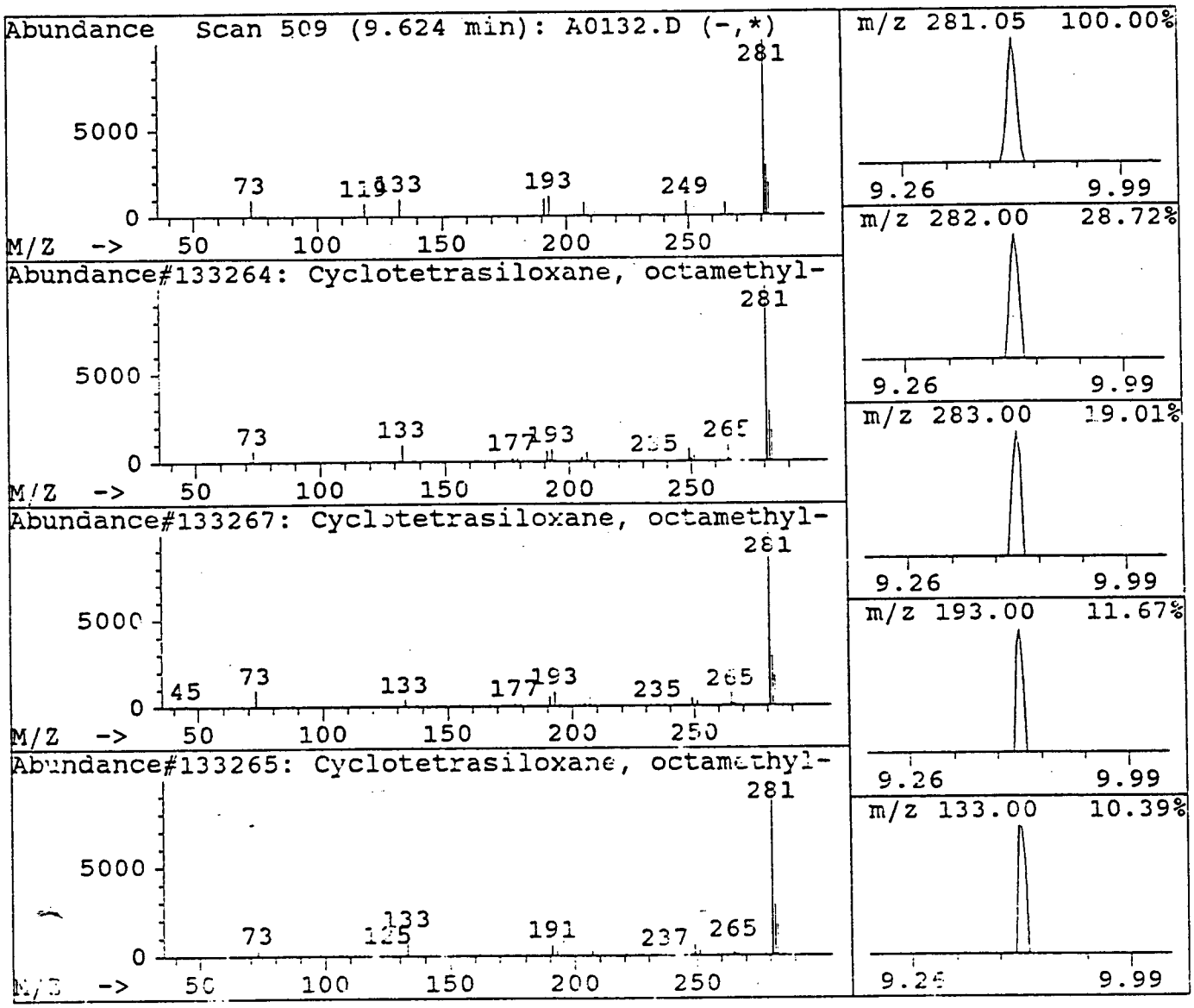
Operator ID: POB Date Acquired: 15 Dec 92 11:25 am
Data File: E:\12-15-92\A0132.D
Name: METHOD BLANK
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992

ENVIRONMENTAL CONSULTANTS, INCORPORATED ANALYTICAL LABORATORIES, INC.

Library Searched: WILLY138.L

R.T.	Conc	Area	Relative to ISTD	R.T.
9.62	8.13 UG/KG	46830	1,4-Dichlorobenzene-d4	10.24

Hit# of 5	Tentative ID	Ref#	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	133264	000556-67-2	90
2	Cyclotetrasiloxane, octamethyl-	133267	000556-67-2	83
3	Cyclotetrasiloxane, octamethyl-	133265	000556-67-2	83
4	Cyclotetrasiloxane, octamethyl-	133263	000556-67-2	83
5	Cyclotetrasiloxane, octamethyl-	72213	000556-67-2	83



273 Franklin Road, Randolph, New Jersey 07869
Telephone: (201) 361-4252 • Fax: (201) 989-5288

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Laboratory Report - Soil Spike Matrix Spike/Matrix Spike Duplicate Recovery

Project: ESI/KNICKERBOCKER ID#: A01 Lab ID #: 212-0858-01

Sampled: 12/2/92
Received: 12/2/92
Extracted: 12/9/92
Analyzed: 12/15/92

Case#: N/A
Contract#: N/A
Lab Code: N/A
Decanted: N/A
Units: mg/Kg

Matrix: SOIL
Extraction: SONIC
Sample Vol/Wt: 30 g
Dil. Fct.: 33.20
MDL: 170

Compound	Conc. Spike Added	Sample Result	Conc. MS	Percent Recovery	Conc. MSD	Percent Recovery	RPD	QC RPD	QC Limits Recovery
VOA									
1,1 DICHLORO-ETHENE:								22	59-172
TRICHLOROETHENE:								24	62-137
CHLOROBENZENE:								21	60-133
TOLUENE:								21	59-139
BENZENE**:								21	66-142
B/N									
1,2,4-TRICHLORO-BENZENE*:	1660	U	1095	66	1120	67	2.3	23	38-107
ACENAPHTHENE:	1660	U	1146	69	1149	69	0.3	19	31-137
2,4 DINITRO--TOLUENE:	1660	U	1334	80	1330	80	0.3	47	28-89
PYRENE:	1660	U	1404	85	1330	80	5.4	36	35-142
N NITROSODI-n-PROPYLAMINE:	1660	U	1117	67	1097	66	1.8	38	41-126
1,4-DICHLORO-BENZENE:	1660	U	1061	64	1083	65	2.1	27	28-104
ACID									
PENTACHLOROPHENOL:								47	17-109
PHENOL*:								35	26-90
2 CHLOROPHENOL:								50	25-102
4 CHLORO 3 METHYL-PHENOL:								33	26-103
4 NITROPHENOL:								50	11-114
PEST									
LINDANE:								50	48-127
HEPTACHLOR:								31	35-130
ALDRIN:								43	34-132
DIELDRIN:								38	31-134
ENDRIN:								45	42-139
4,4 DDT:								50	23-134

RPD

VOA'S: ____ OUT OF: ____ OUTSIDE QC LIMITS
A/E'S: ____ OUT/OF: ____ OUTSIDE QC LIMITS
B/N'S: 0 OUT^OF: 5 OUTSIDE QC LIMITS
PEST : ____ OUT~OF: ____ OUTSIDE QC LIMITS

RECOVERY

VOA*: ____ OUT-OF: ____ OUTSIDE QC LIMITS
A/E*: ____ OUT*OF: ____ OUTSIDE QC LIMITS
B/N*: 0 OUT\OF: 10 OUTSIDE QC LIMITS
PEST: ____ OUT"OF: ____ OUTSIDE QC LIMITS

COMMENTS:

Telephone: (201) 351-4252 • Fax (201) 9[illegible]

QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 12:15 pm
Data File: E:\12-15-92\A0133.D
Name: MATRIX SPIKE
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.

Internal Standards Compound	R.T.	Qion	Area	Conc	Unit	Dev(Min)
8) 1,4-Dichlorobenzene-d4	10.25	152	64246	50.00	UG/L	-0.01
26) Naphthalene-d8	13.24	136	222208	50.00	UG/L	-0.01
42) Acenaphthene-d10	17.60	164	102522	50.00	UG/L	-0.02
58) Phenanthrene-d10	21.25	188	178496	50.00	UG/L	-0.02
71) Chyrsene-d12	27.92	240	163726	50.00	UG/L	-0.03
77) Perylene-d12	33.51	264	174682	50.00	UG/L	-0.03

System Monitoring Compounds						%Recovery
2) 2-Fluorophenol	7.53	112	108612	67.86	UG/L	67.86%
3) Phenol-d5	9.39	99	134279	69.05	UG/L	69.05%
17) Nitrobenzene-d5	11.54	82	77953	39.91	UG/L	79.83%
35) 2-Fluorobiphenyl	15.88	172	123371	41.45	UG/L	82.91%
54) 2,4,6-Tribromophenol	19.56	330	52361	87.49	UG/L	87.49%
66) Terphenyl-d14	25.18	244	169265	49.93	UG/L	99.87%

Target Compounds						ISTD#
4) Phenol	9.43	94	129960	48.92	UG/L	001
6) 2-Chlorophenol	9.83	128	123721	48.63	UG/L	001#
9) 1,4-Dichlorobenzene	10.28	146	81352	31.98	UG/L	001
15) n-Nitroso-di-n-propylamine	11.18	70	57985	33.65	UG/L	001#
25) 1,2,4-Trichlorobenzene	13.13	180	67309	32.98	UG/L	002
30) 4-Chloro-3-methylphenol	14.52	107	113178	54.60	UG/L	002
31) 2-Methylnaphthalene	14.52	142	91676	53.85	UG/L	002#
43) Acenaphthene	17.68	153	118423	34.51	UG/L	003
45) 4-Nitrophenol	17.81	109	46115	67.89	UG/L	003#
47) 2,4-Dinitrotoluene	18.08	165	61996	40.19	UG/L	003
57) Pentachlorophenol	20.92	266	64857	64.09	UG/L	004
65) Pyrene	24.87	202	244043	42.30	UG/L	005#

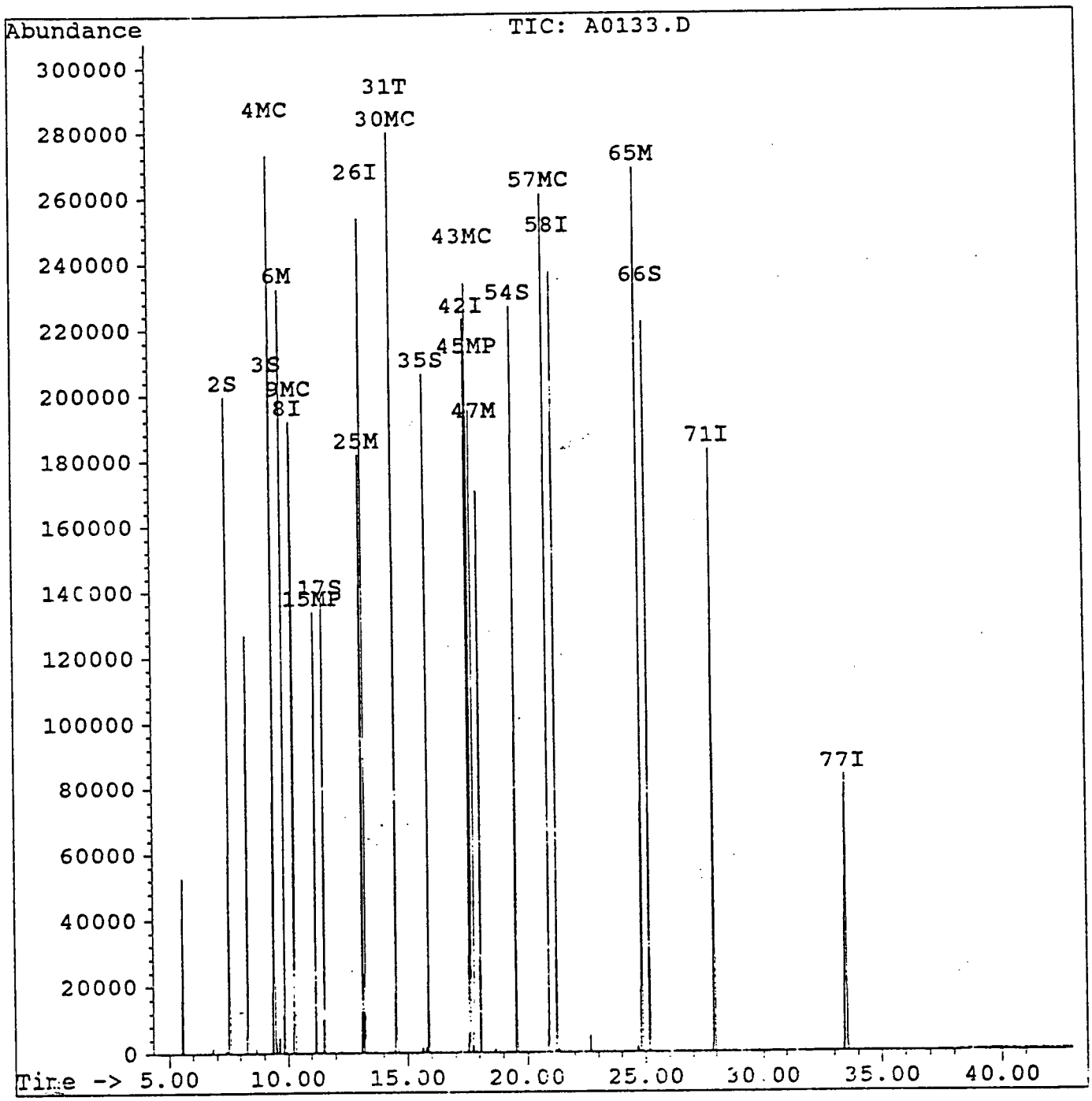
(#) = qualifier out of range

Telephone (201) 361-4252 • Fax (201) 984-[illegible]

QUANT REPORT

Operator ID: POB Date Acquired: 15 Dec 92 12:15 pm
Data File: E:\12-15-92\A0133.D
Name: MATRIX SPIKE
Misc: N/A,N/A,30G,N/A,N/A,12/9/92
Method: ABN0002s.M
Title: BNA CALIBRATION METHOD (SHORTRPT) ALL COMPS
Last Calibration: Tue Dec 15 10:31:53 1992
Quantitated using Multiple Level Calibration

ENVIRONMENTAL CONSULTANTS RESEARCH AND ANALYTICAL LABORATORIES, INC.



ENVIRO SCIENCES, INC.
HEADQUARTERS
111 HOWARD BOULEVARD, SUITE 108
MOUNT ARLINGTON, N.J. 07856
(201) 398-8183 • FAX (201) 398-8037

Exhibit D

October 27, 1992

VIA AIRBORNE EXPRESS

Ms. Jeanette Cleary
NJDEPE/BEECRA
401 East State Street - 5th Floor
Trenton, New Jersey 08608

RE: ECRA Initial Notice Submission
Pantone, Inc.
55 Knickerbocker Road
Moonachie, New Jersey 07074

Dear Ms. Cleary:

On behalf of Pantone, Inc., Enviro-Sciences, Inc. (ESI), is submitting, in triplicate, a completed and notarized General Information Submission (GIS) and Site Evaluation Submission (SES). This document fulfills the Initial Notice filing requirements as required by N.J.A.C. 7:26B-3. Enclosed with this document is the fee submittal form, and a check in the amount of $2,000 to cover the Initial Notice review fees.

If you have any questions or comments, please call me at (201) 398-8183.

Sincerely yours,
ENVIRO-SCIENCES, INC.

Christopher D. Klein
Project Manager

cc: Ken Smith - Pantone, Inc.
Ralph Manfredonia - Knickerbocker Enterprises

Enclosures

CDK/pls 92619d

ECRA-011
12/88

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECITON
INDUSTRIAL SITE EVALUATION ELEMENT

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

FEE SUBMITTAL FORM

THIS FORM MUST BE RETURNED WITH ANY APPLICATION OR FILING

Case # (if known) _____

Case Name (Active Cases) _____

Name of Business/Owner for Applicability Determination Pantone, Inc.

Check drawn from account of Knickerbocker Enterprises Check/M.O.# 1303

Amount enclosed $2,000.00

PUT AN "X" IN THE APPROPRIATE PAYMENT BLOCK(S)

	Normal Fee	ACTIVITY	Small Business Fee	
		Initial Notice Review		
[X]	$ 2,000	without a Sampling Plan	$ 750	[ ]
[ ]	$ 3,000	with Sampling Plan with UGT analysis. No GW monitoring	$ 1,500	[ ]
[ ]	$ 5,000	with Sampling Plan other than 2 above or 4 below	$ 3,000	[ ]
[ ]	$ 7,500	with Sampling Plan that includes GW monitoring	$ 4,500	[ ]
[ ]	$ 1,000	Sampling Data Review	$ 1,000	[ ]
[ ]	$ 500	Negative Declaration Review	$ 250	[ ]
		Cleanup Plan Review *(Based on Cost)*		
[ ]	$ 1,000	$1 - $9,999	$ 1,000	[ ]
[ ]	$ 2,500	$10,000 - $99,999	$ 2,500	[ ]
[ ]	$ 5,000	$100,000 - $499,999	$ 5,000	[ ]
[ ]	$ 8,000	$500,000 - $999,999	$ 8,000	[ ]
[ ]	$11,000	over $1,000,000	$11,000	[ ]
		Cleanup Oversight Plan *(Based on Cost)*		
[ ]	$ 1,000	$1 - $9,999	$ 1,000	[ ]
[ ]	$ 3,000	$10,000 - $99,999	$ 3,000	[ ]
[ ]	$ 7,000	$100,000 - $499,999	$ 7,000	[ ]
[ ]	$10,000	$500,000 - $999,999	$10,000	[ ]
[ ]	$12,000	over $1,000,000	$12,000	[ ]
		Other		
[ ]	$ 200	Applicability Determination	$ 200	[ ]
[ ]	$ 300	Deminimus Quantity Exemption	$ 300	[ ]
[ ]	$ 500	Limited Conveyance Review	$ 250	[ ]
[ ]	$ 2,000	Administrative Consent Order	$ 2,000	[ ]
[ ]	$ 500	Amendment to ACO	$ 500	[ ]
[ ]	$ 350	Confidentiality Claim	$ 350	[ ]

OFFICE USE ONLY

BEAC No.

THIS CHECK IS DELIVERED IN CONNECTION WITH THE FOLLOWING ACCOUNT (S)

DATE		AMOUNT
	Initial Notice Review Fee	
	Pantone Bldg	

KNICKERBOCKER ENTERPRISES
500 WEST COMMERCIAL AVE.
MOONACHIE, N. J. 07074

1303

55-271/212

Oct 12 1992

PAY TO THE ORDER OF N.J. Dept Environmental Protection & Energy $ 2000 00/xx

Two Thousand Dollars & 00 DOLLARS

VOID

National Community Bank of New Jersey 01
RUTHERFORD OFFICE, RUTHERFORD NJ 07070

FOR

⑈001303⑈ ⑆021202719⑆ 00084 855 7⑈

ECRA-001
4/90

FOR DEP USE ONLY

Date Rec'd. _____

Notice No. _____

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
INDUSTRIAL SITE EVALUATION ELEMENT
CN 028, TRENTON, NJ. 08625-0028

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

INITIAL NOTICE

GENERAL INFORMATION SUBMISSION (GIS)

This is the first part of a two-part application form. This information must be submitted within 5 days following any applicable situation as specified at N.J. A. C. 7:26B-1.5 or any triggering event as specified at N.J. A. C. 7:26B-1.6. Please refer to the instructions and N.J.A.C. 7:26B-3.2 before filling out this form. Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Element. Submitting insufficient data may cause processing delays and possible postponement of your transaction. Please call (609) 633-7141 between the hours of 8:30 a.m. and 4:30 p.m. to request assistance.

PLEASE TYPE OR PRINT

Date October 27, 1992

1. A. Industrial Establishment

Name Pantone, Inc. Telephone # (201) 935-5500

Street Address 55 Knickerbocker Road

City of Town Moonachie State N.J. Zip Code 07074

Municipality Moonachie County Bergen

B. Tax Block Number(s) 67 Tax Lot Number(s) 3

C. Standard Industrial Classification (SIC) Number 2752

D. Current Property Owner(s)

Name _____ Telephone # (201) 939-3728

Firm Knickerbocker Associates

Street Address 500 West Commercial Avenue

Municipality Moonachie State N.J. Zip Code 07074

E. Current Business Operator(s) of Industrial Establishment

Name Same as 1A Telephone # ( )

Firm _____

Street Address _____

Municipality _____ State _____ Zip Code _____

F. Current Business Owner(s)

Name Same as 1A Telephone # (____)_____

Firm _____

Street Address _____

Municipality _____ State _____ Zip Code _____

G. Have there been any previous ECRA submissions (including Applicability Determinations) by this Industrial Establishment or another Industrial Establishment which occupied the same tax block and lot number?

____ Yes X No

If Yes, Name of Industrial Establishment _____

ECRA Case No. _____ Date Submitted _____

Current Status _____

_____

2. Describe the transaction in terms of the action which initiates the ECRA review. (See N.J.A.C. 7:26B-1.5&1.6)

Cessation of operations

_____

_____

3. Is a cessation of operations involved at this location? X Yes ____ No

If Yes, give the date of public release of the decision to close the facility. Date ____/____/____

Is a copy of the public release enclosed? ____ Yes X No

If No, state the reason No public release will be issued

_____

_____

4. If the transaction initiating an ECRA review is an agreement of sale or execution of an option to purchase, fill in the date of execution of that instrument plus provide one (1) copy of the document. Date_____

A. Is a sale involved? ____ Yes X No (If no, skip 4B, C and D.)

B. Date of Agreement/Letter of Intent/Notifications of Option to Purchase ____/____/____

C. Is a copy of the agreement of sale or option to purchase enclosed? ____ Yes ____ No

If No, state the reason _____

_____

D. List other parties (purchasers) to the transaction:

NAME	STREET ADDRESS & MUNICIPALITY	PHONE NO.

5. Date proposed for closure of operations or transfer of title November 15, 1992

6. Authorized agent designated to work with the Department

Name Michael S. Brogan Telephone # (201) 398-8183

Firm Enviro-Sciences, Inc.

Street Address 111 Howard Blvd., Suite 108

Municipality Mount Arlington State N.J. Zip Code 07856

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Typed/Printed Name Michael Garin Title Senior Vice President

Signature Date 10-26-92

Sworn to and Subscribed Before Me
on this 26
Date of October 1992

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
Commission Expires June 10, 1993

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, 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. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13.

Typed/Printed Name Lawrence Herbert Title Chief Executive Officer

Signature Date 10-26-92

Sworn to and Subscribed Before Me
on this 26
Date of October 1992

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
My Commission Expires June 10, 1993

ECRA-002
12/87

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
INDUSTRIAL SITE EVALUATION ELEMENT
CN 028, TRENTON, N.J. 08625

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

INITIAL NOTICE

SITE EVALUATION SUBMISSION (SES)

This is the second part of a two-part application form. This information must be submitted within 45 days following any applicable situation as specified at N.J.A.C. 7:26B-1.5 or any triggering event as specified at N.J.A.C. 7:26B-1.6. Please refer to the instructions and N.J.A.C. 7:26B-3.2 before filling out this form. Answer all questions. Should you encounter any problems in completing this form, we recommend that you discuss the matter with a representative from the Element. Submitting incorrect or insufficient data may cause processing delays and possible postponement of your transaction. Please call (609) 633-7141 between the hours of 8:30 a.m. and 4:30 p.m. to request assistance.

PLEASE PRINT OR TYPE

Date October 27, 1992

1. Industrial Establishment

Name Pantone, Inc.

Address 55 Knickerbocker Rd.

City or Town Moonachie Zip Code 07074

Municipality Moonachie County Bergen

A. Operational and Ownership History: *(Attach additional sheets if necessary)*

Name	Owner/ Operator	From	To	Current Address
Pantone, Inc.	Operator	1972	1992	55 Knickerbocker Rd. Moonachie, New Jersey
Knickerbocker Associates	Owner	1972	1992	500 W. Commercial Ave. Moonachie, New Jersey
Esselte Letraset, USA	Operator	1973	1979	40 Eisenhower Drive Paramus, New Jersey

B. Brief description of past operation(s) conducted on site *(Attach additional sheets if necessary)*

Pantone, Inc. has been the primary operator at the facility since its construction in 1972. Letraset leased a portion of the building for approximately six years to manufacture marking pens. The process included mixing solvents, resins, and dyes to fill the pens, injection molding of plastic parts, and lithographic printing. The specific solvents utilized were isopropyl alcohol and xylene compounds. These solvents were stored in underground storage tanks which since have been properly removed.

2. List all federal and state environmental permits applied for, or received, or both, at this facility *(Attach additional sheets if necessary)*

Check here if no permits are involved _____

A.. New Jersey Bureau of Air Pollution Control

Permit Number	Certificate Number	Date of Approval or Denial	Reason for Denial (if applicable)	Expiration Date
01078	099535	Approved 12/21/90		03/14/97
01078	098060	Approved 09/26/90		03/18/97

B. New Jersey Pollutant Discharge Elimination System (NJPDES)

Number	Discharge Activity	Date Issued or Denied	Expiration Date	Body of Water Discharged Into
N/A				

C. United State Environmental Protection Agency (EPA) Identification Number and copy of the most recent generator Annual Report prepared pursuant to the New Jersey Hazardous Waste Regulations. *(If applicable)*

ID # NJD001253384

Is a copy of the Annual Report attached? X Yes (See Attachment # 1) ____ No

D. Resource, Conservation, Recovery Act (RCRA) Permit # N/A

E. Bureau of Underground Storage Tank Registration Number(s) N/A

F. All other federal, state, local governmental permits.

Agency Issuing Permit	Permit No.	Date of Approval or Denial	Expiration Date
Bergen County Utilities Authority	92-040	03/13/92	03/13/93

3. Summary of Enforcement Actions for Violation of Environmental Laws or Regulations:

Check here if no enforcement actions are involved _____

A. Date of Action See Attachment #2

Section of Law or Statute violated _____

Type of Enforcement Action _____

Description of the Violation _____

How was the violation resolved? _____

B. Date of Action _____

Section of Law or Statute violated _____

Type of Enforcement Action _____

Description of the Violation _____

How was the violation resolved? _____

4. Site Map

Is this map enclosed? X Yes (See Attachment # 3) ____ No

If No, state the reason _____

(Attach additional pages, if necessary)

5. Decription of Operations:

Is this report enclosed? X Yes (See Attachment # 4) ____ No

If No, state the reason _____

6. Description of Building Heating System:

A. How is the Industrial Establishment currently heated? (Oil, Gas, Electric) Gas

How long has the Industrial Establishment been heated by the above fuel/energy source: 20 years

B. Was the Industrial Establishment heated by fuel oil at any time: ____ Yes X No

Is information on the decommissioning of underground fuel oil tanks included with item No. 14 of this form?

____ Yes ____ No If no, explain below: None existing

C. Are the results of the Integrity Evaluation for Existing Underground Fuel Oil Tanks enclosed?

____ Yes (See Attachment #_____) ____ No If no, state the reason None existing

7. Summary of Industrial Establishment Wastewater Discharges of Sanitary and/or Industrial Waste:

A. Discharge Period

From	To	Discharge Type	Treatment By
1972	Present	Sanitary & Industrial Process Wastewater	Bergen County Utilities Authority

B. If the Industrial Establishment discharges sanitary and/or industrial wastes to a publicly-owned treatment plant, provide the name/address of that facility.

Name Bergen County Utilities Authority Telephone # (201) 641-2552

Street Address Merhoff Road

Municipality Little Ferry State N.J. Zip Code 07643

Date(s) of Discharge	Nature of Discharge
1. 1972-Present	Sanitary & Industrial Wastewater
2.	
3.	

8. Hazardous Substance and Waste Containment Description: *(Attach additional sheets if necessary)*

Type of Storage Unit	Date Installed	Area or Volumetric Capacity (include units)	Material Stored	Construction Type	Location Reference	Decommissioning or Sampling Reference
* Blanket Roller Degreasing Tank	1986	Approx. 110 gallons	Dissolin VF Solvent & Excess Ink	Steel	Pressroom	N/A

* Note: This tank is an above ground holding tank that is located inside the building.

9. Hazardous Substance/Waste Inventory:

Material Name	Quantity (indicate units)	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain on Site (Yes or No)
See Attachment #5					

10. Discharge History of Hazardous Substances and Wastes:

A. Have there been any discharges of hazardous substances and wastes?
_____Yes (Complete Item B below) __X__No (Go to Item 10C)

B. Summary of Discharges and Resolutions

Description of Discharge Event	Response and Resolutions

C. Is this Industrial Establishment subject to Spill Prevention Control and Countermeasure (SPCC) per 40 CFR Part 112 or Discharge Prevention, Containment and Countermeasure (DPCC) Plan per NJAC 7:1E-4.1 requirements?

_____Yes __X__No A copy of the Plan(s) may be required at the discretion of the Department.

11. Sampling Plan Proposal

A. Is sampling proposed at the facility? _____Yes (See Attachment #_____) No__X__

If sampling is not proposed, please explain below. *(Attach additional sheets if necessary)*

_____

_____

_____

_____

B. Is groundwater sampling proposed? _____Yes __X__No

Note: If groundwater sampling is proposed under the plan, you must complete ECRA Form 002A "Request for Hydrogeologic Assessment" and submit it with the application.

12. Decontamination/Decommissioning Plan

A. Is the facility Decontamination/Decommissioning Plan enclosed?

____Yes (See Attachment #_____) __X_No

B. If no, specify why decontamination/decommissioning is not considered necessary.

All machinery and supplies, including inks, solvents, chemicals, and cleaning supplies will be moved to the new facility. The current facility will be broom swept before vacating.

13. Historical Data on environmental quality at the Industrial Establishment

A. Were sampling results obtained on Environmental Quality for the Industrial Establishment?

_X_Yes (See Attachment #_6_) ____No

B. If sampling results were obtained but are not part of this application, please explain below:

14. List any other information you are submitting or which has been formally requested by the Department:

Description	Attachment #

FEE CHECKLIST

Include below a breakdown of the total fee submitted with this application. (See N.J.A.C. 7:26B-1.10 for the appropriate fees.)

Item	Amount ($)
1. Initial Notice Review	
i. Without Sampling Plan	2000.00
ii. With Sampling Plan that includes only underground storage tank analysis without groundwater monitoring	
iii. With Sampling Plan other than ii. above or iv. below	
iv. With Sampling Plan that includes any groundwater monitoring	
2. Sampling Data Review	
3. Negative Declaration Review	
4. Cleanup Plan Review	
5. Oversight of Cleanup Plan Implementation	
TOTAL FEE ENCLOSED	$ 2000.00

ARE FEES ENCLOSED? _X_YES

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13

Typed/Printed Name Michael Garin Title Senior Vice President

Signature _____ Date 10-26-92

Sworn to and Subscribed Before Me
on this 26
Date of October 1992

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
My Commission Expires June 10, 1993

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, 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. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13

Typed/Printed Name Lawrence Herbert Title Chief Executive Officer

Signature _____ Date 10-26-92

Sworn to and Subscribed Before Me
on this 26
Date of October 1992

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
My Commission Expires June 10, 1993

ATTACHMENT 1

PANTONE, INC.
MOONACHIE, N.J.

WASTE GENERATOR ANNUAL REPORT 1990

ENVIRO SCIENCES, INC.

OFFICE USE ONLY
Ann. Fee _____
RA _____
Date _____
Rec'd By _____

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1990
CERTIFICATION FORM

ITEM 1 USEPA Identification (Generator) Number: NJD001253384

ITEM 2 Generator (Company) Name: Pantone, Inc.

ITEM 3 Contact Person: Ken Niepokoy

ITEM 4 Phone Number: (201) 935-5500

ITEM 5 Certification:

I certify that the information given in this annual report is true, accurate and complete.

Ken Niepokoy	Ken Niepokoy	2/7/91
(Print or type name)	(Signature)	(Date)

ITEM 6 **Place an X next to the letter that applies:**

A ____ This site (company) manifested less than 1.33 tons of hazardous waste for the calendar year 1990 (No Fee)

B _X_ This site (company) manifested 1.33 tons or more of hazardous waste but less than 10 tons of hazardous waste during the calendar year 1990 (Fee $200)

C ____ This site (company) manifested 10 tons or more of hazardous waste but less than 100 tons of hazardous waste during the calendar year (Fee $300)

D ____ This site (company) manifested 100 tons or more hazardous waste during the calendar year (Fee $400)

ITEM 7 Federal Vendor Identification Number (Tax Identification Number)

135583503

PLEASE SUBMIT CHECK WITH YOUR COMPLETED REPORT.

C

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM 01

OFF-SITE IDENTIFICATION

INSTRUCTIONS: Read the detailed instructions on the back of this page before completing this form.

Site 1

A. EPA ID No. of off-site installation or transporter: NYD057770109

B. Name of off-site installation or transporter: Northeast Environmental Services, Inc.

C. Handler type (CHECK ALL THAT APPLY):
- ☐ Generator
- ☐ Transporter
- ☒ TSDR

D. Address of off-site installation:
Street: Canal Road
City: Wampsville State: NY Zip Code: 13163-

Site 2

A. EPA ID No. of off-site installation or transporter: NJD05Y126164

B. Name of off-site installation or transporter: Freehold Cartage, Inc.

C. Handler type (CHECK ALL THAT APPLY):
- ☐ Generator
- ☒ Transporter
- ☐ TSDR

D. Address of off-site installation:
Street: N/A
City: State: Zip Code:

Site 3

A. EPA ID No. of off-site installation or transporter: NYD980769947

B. Name of off-site installation or transporter: Haz-Mat Environmental Group, Inc.

C. Handler type (CHECK ALL THAT APPLY):
- ☐ Generator
- ☒ Transporter
- ☐ TSDR

D. Address of off-site installation:
Street: N/A
City: State: Zip Code:

Site 4

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY):
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of off-site installation:
Street:
City: State: Zip Code:

Site 5

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY):
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of off-site installation:
Street:
City: State: Zip Code:

Comments:

OMB# 2050-0024 Expires 3-31-92

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM IC

IDENTIFICATION AND CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 7 of the 1990 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete items A through H. Check the box ☒ in items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 7.

A. EPA ID No. Same as label ☒ or ——→
B. Site/company name Same as label ☒ or ——→
C. Has the site name associated with this EPA ID changed since 19677 ☐ 1 Yes ☒ 2 No
D. Street name and number. If not applicable, enter industrial park, building name or other physical location description. Same as label ☒ or ——→
E. City, town, village, etc. Same as label ☒ or ——→
F. County Bergen
G. State Same as label ☒
H. Zip Code Same as label ☒

SEC. II Mailing address of site. Instruction page 7.

A. Is the mailing address the same as the location address? ☒ 1 Yes (SKIP TO SEC. III) ☐ 2 No (COMPLETE SEC. II)
B. Number and street name of mailing address
C. City, town, village, etc.
D. State
E. Zip Code

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 7.

A. Please print: Last name	First name	M.I.	B. Title	C. Telephone
Niepokoy	Ken		Operations Mgr Textile Div.	201 935-5500 Extension 67

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 8.

A.	B.	C.	D.
2752	NA	NA	NA

SEC. V I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Number of form pages submitted
Form IC 2 Form GM 5 Form WR NA Form PS NA

B. Please print: Last name Niepokoy First name Ken M.I.
C. Title Operations Mgr.-Textile Division
D. Signature Ken Niepokoy
E. Date of signature 12 MO. 07 DAY 91 YR.

OVER —>

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

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): Soil samples obtained while drilling monitoring wells in connection with underground storage tank remediation.

B. EPA hazardous waste code (Page 15): F003 | NA | NA | NA

C. State hazardous waste code (Page 16): NA | NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A69

F. Form code (Page 16): B407

G. Origin (Page 16) Code: 6 System type: M | NA

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): NA

B. Quantity generated in 1990 (Page 17): 1800

C. UOM (Page 18): 1

D. Density (Page 18): DK. ☐ 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	NYD057770109	M043	1800
Site 2	NA	M NA	NA

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)
W W / W W	☐ 1 Yes ☐ 2 No		.	

Comments: Well cuttings obtained while installin monitoring wells
soil 99.9% acetone ppb.
6.6

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Waste water obtained while purging and sampling monitoring wells in conjunction with underground storage tank remediation program.

B. EPA hazardous waste code (Page 15): F003 | N/A | N/A | N/A

C. State hazardous waste code (Page 16): N/A | N/A

D. SIC code (Page 16): 2752

E. Source code (Page 16): A69

F. Form code (Page 16): B101

G. Origin (Page 16) Code: 6 System type: M | N/A

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. ___ 2. ___ 3. ___ 4. ___ 5. ___

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): N/A

B. Quantity generated in 1990 (Page 17): 275

C. UOM (Page 18): 5

D. Density (Page 18): DK . ___ ☐ 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	NYD057770109	M129	275
Site 2	N/A	M N/A	N/A

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)
W / W / W / W	☐ 1 Yes ☐ 2 No		.	

Comments: Waste water obtained from monitoring well development and sampling water 99.9% acetone 6.6 ppb.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

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): Spend isopropanol and water mixture which is used as a dampening agent in lithographic printing.

B. EPA hazardous waste code (Page 15): D001 | NA | NA | NA

C. State hazardous waste code (Page 16): NA | NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A89

F. Form code (Page 16): B101

G. Origin (Page 16): Code 1 | System type M | NA

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): 110

B. Quantity generated in 1990 (Page 17): 110

C. UOM (Page 16): 5

D. Density (Page 16): DK . ☐ 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	NYD057770109	M041	110
Site 2	NA	M NA	NA

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)
W / W / W / W	☐ 1 Yes ☐ 2 No		.	

Comments: Dampening agent for lithographic printing.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Spent flammable solvent from parts cleaning tank operation in printing plant, mixture of dissolin and waste non hazardous printing ink.

B. EPA hazardous waste code (Page 15): F002 | NA | NA | NA

C. State hazardous waste code (Page 16): NA | NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A19

F. Form code (Page 16): B211

G. Origin (Page 16) Code: 1 System type: M | NA

H. TRI constituent (Page 17): 1

I. CAS numbers (Page 17): 1. ___ 2. ___ 3. ___ 4. ___ 5. ___

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): NA

B. Quantity generated in 1990 (Page 17): 440

C. UOM (Page 16): 5

D. Density (Page 16): DK ☐ 1 lbs/gal ☐ 2 sg

E. Was this waste treated, disposed or recycled on site or discharged to a sewer/POTW? (Page 16)
☐ 1 Yes (CONTINUE TO SYSTEM 1)
☒ 2 No (SKIP TO SEC. III)

SYSTEM 1
System type (Page 16): M
Quantity treated, disposed or recycled in 1990 (Page 16): ___

SYSTEM 2
System type (Page 16): M
Quantity treated, disposed or recycled in 1990 (Page 16): ___

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	NYD057701099	M041	440
Site 2	NA	M NA	NA

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): W | W | W | W

C. Other effects (Page 21): ☐ 1 Yes ☐ 2 No

D. Quantity recycled in 1990 due to new activities (Page 21): ___

E. Activity/Production Index (Page 21): ___

F. Source Reduction Quantity (Page 22): ___

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Ink and mineral spirit blend discard of obsolete or off spec materials from printing operation. Clean up of all unknowns throughout facility.

B. EPA hazardous waste code (Page 15): D001 NA NA NA

C. State hazardous waste code (Page 16): NA NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A58

F. Form code (Page 16): B1114

G. Origin (Page 16): Code 1; System type M041

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): NA

B. Quantity generated in 1990 (Page 17): 275

C. UOM (Page 16): 5

D. Density (Page 16): DK ☐ 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	NYD057770110109	M041	275
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)
W W W W	☐ 1 Yes ☐ 2 No			

Comments:

ATTACHMENT 2

PANTONE, INC.
MOONACHIE, N.J.

SUMMARY OF ENFORCEMENT ACTIONS

ENVIRO SCIENCES, INC.

ATTACHMENT 2

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-7.4(f)2

Type of Enforcement Action: None

Description of the Violation: Failure to keep a copy of the 1987 Hazardous Waste Generator Annual Report.

How was the Violation Resolved: Resubmission of the 1987 Hazardous Waste Generator Annual Report which had been previously accepted by the NJDEPE.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-7.4(h)1,(h)2

Type of Enforcement Action: None

Description of the Violation: (1) Missing the return copy of a hazardous waste manifest with an authorized signature from the TSD facility. (2) Failure to submit an exemption report when a copy of the manifest was not received within 45 days of shipment of waste.

How was the Violation Resolved: Submission of missing manifest with appropriate signatures (manifest document #NJA0635587).

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.3(a)1, (a)3

Type of Enforcement Action: None

Description of the Violation: (1) Storage of hazardous waste for more then 90 days. (2) Failure to mark containers with accumulation start date.

How was the Violation Resolved: Prompt shipment of hazardous waste and verification that all containers of hazardous waste are marked with accumulation start dates.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.4(d)5

Type of Enforcement Action: None

Description of the Violation: Failure to inspect hazardous waste storage area on a daily basis.

How was the Violation Resolved: Implementation of daily inspection program and verification of ongoing procedure by submitting the daily inspection log to the NJDEPE.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.4(g)8

Type of Enforcement Action: None

Description of the Violation: No procedure in place to conduct semi-annual fire drills.

How was the Violation Resolved: Notification to the NJDEPE and local fire department concerning the implementation of semi-annual fire inspections, and fire drills.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.6(e)

Type of Enforcement Action: None

Description of the Violation: Inadequate aisle space in the hazardous waste storage area.

How was the Violation Resolved: Designation of a hazardous waste storage area with an 18" aisle space for drums.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.6(f), (f)4 and 7:26-9.7 et seq.

Type of Enforcement Action: None

Description of the Violation: (1) Failure to submit layout of facility to police, fire and emergency response authorities. (2) No correspondence with the local hospital concerning the hazardous wastes handled at the facility. (3) Lack of a contingency plan and emergency plan procedures.

How was the Violation Resolved: Submission of a contingency plan prepared by American Environmental and Tank Testing. This plan included contacting the local authorities and hospitals.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: February 5, 1990

Section of Law or Statute Violated: N.J.A.C. 7:26-9.6(f)3

Type of Enforcement Action: None

Description of the Violation: No prior arrangements existed with an-emergency response team.

How was the Violation Resolved: Contractual agreement with ENSI Inc. to serve as an emergency response service for Pantone Inc. beginning February 1990.

ATTACHMENT 2 (continued)

SUMMARY OF ENFORCEMENT ACTIONS

Date of Action: August 28, 1990

Section of Law or Statute Violated: N.J.A.C. 7:27-8.3(a) & (b)

Type of Enforcement Action: Fine in the amount of $800.

Description of the Violation: Installation and operation of (1) an exhaust fan to vent fumes from the offset printing presses and (2) a hood to vent fumes from a degreasing tank, without the necessary air permits.

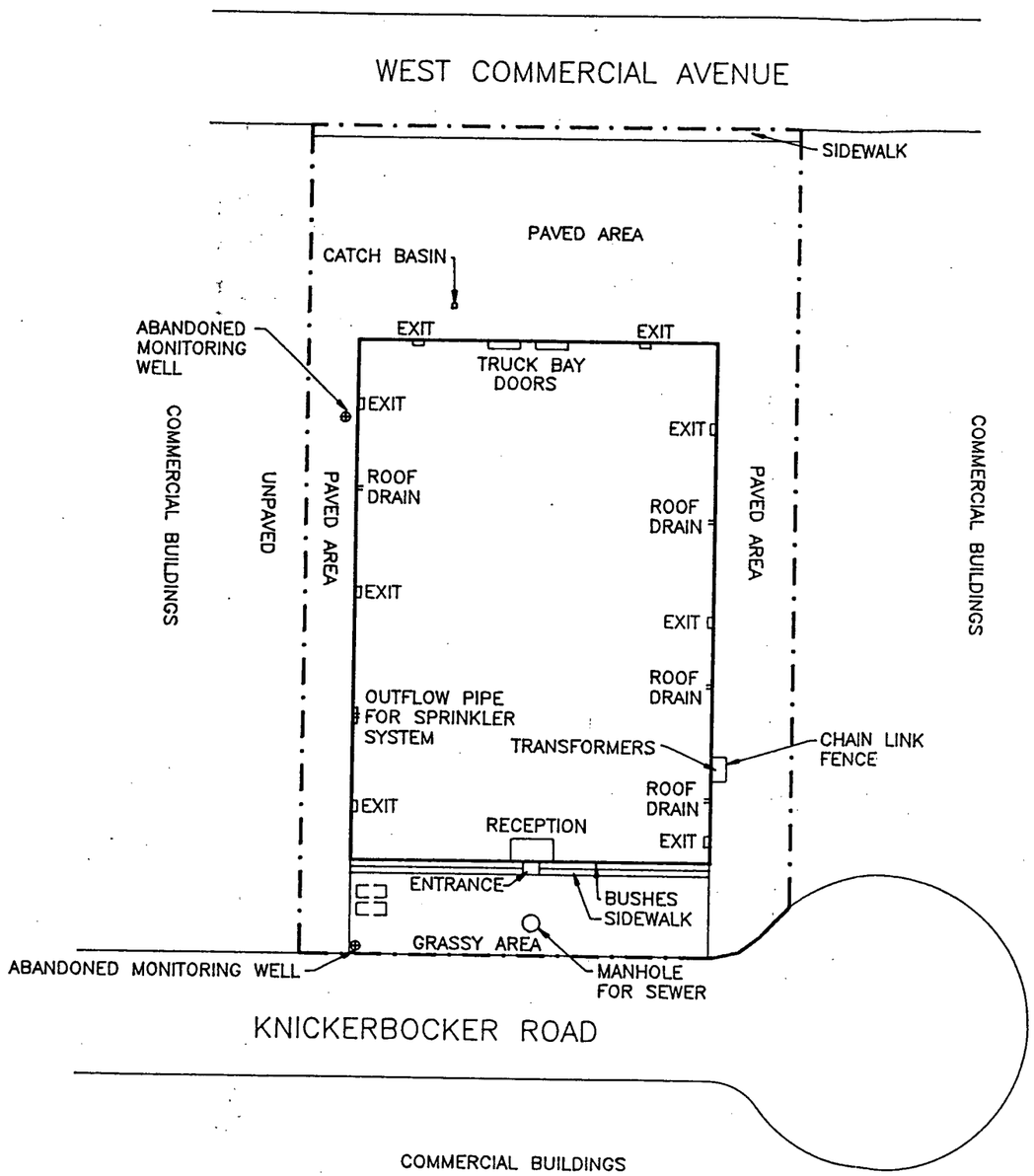
How was the Violation Resolved: Submission of the required permit and certificate applications, VEM-003 (Permit to construct, install, or alter control apparatus or equipment and certificate to operate control apparatus or equipment) and VEM-004 (source emissions and source data form). The applications were submitted on August 30, 1990.

ATTACHMENT 3

PANTONE, INC.
MOONACHIE, N.J.

SITE MAP

ENVIRO SCIENCES, INC.



LEGEND

- PROPERTY LINE
- EXTERIOR WALL
- FORMER LOCATION OF 2,000 GALLON UNDERGROUND STORAGE TANK

N

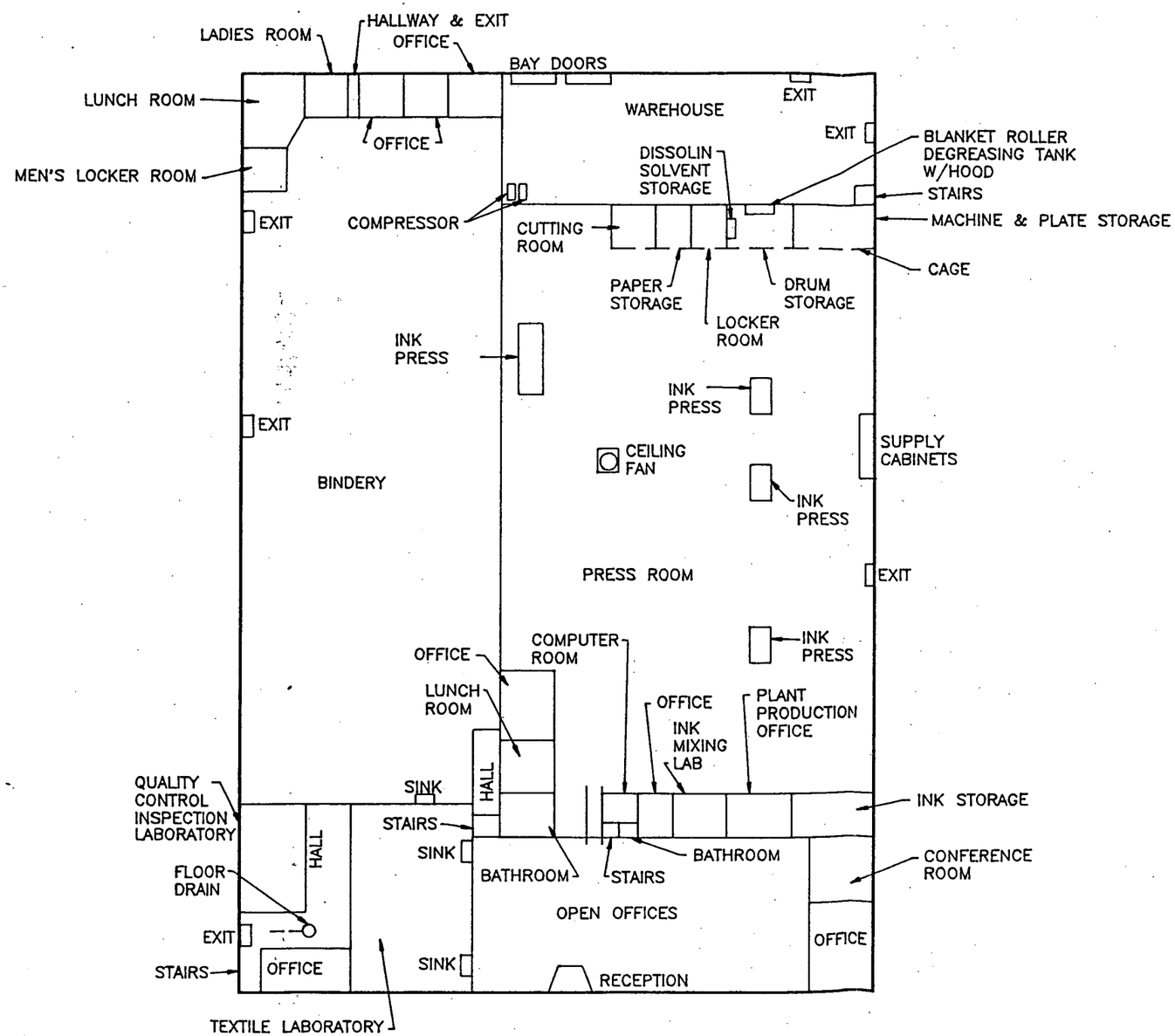
0 60' 120'

FIGURE 1

PANTONE INC.

ENVIRO-SCIENCES, INC.

BUILDING EXTERIOR	KNICKER
	KNI92240
	08-27-92



LEGEND

- - - - UNDERGROUND PIPING

——— EXTERIOR WALL

NOTE: THE FLOOR DRAIN WAS NEVER UTILIZED BY PANTONE INC. A DYE TRACE COULD NOT BE PERFORMED BECAUSE THE PIPING UNDERNEATH THE BUILDING WAS DAMAGED. ALTHOUGH THE FINAL DESTINATION OF THE PIPE COULD NOT BE DETERMINED, A CERTIFIED PLUMBER WAS ABLE TO TRACE THE PIPE 7 FEET IN THE NORTH WEST DIRECTION TOWARDS THE BUILDING EXIT.

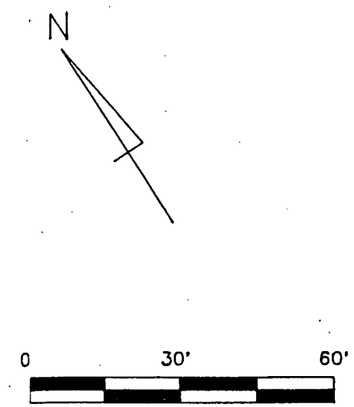
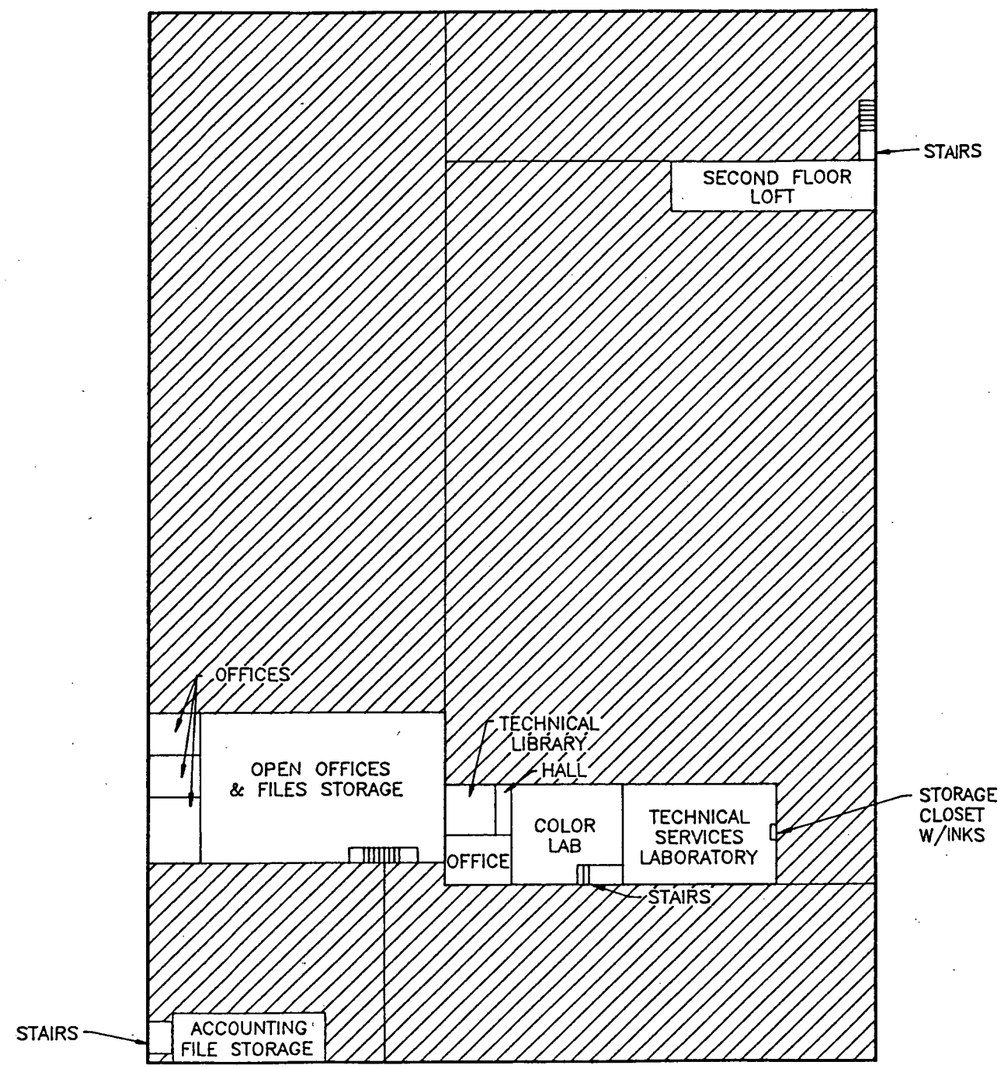


FIGURE 2

PANTONE INC.

ENVIRO–SCIENCES, INC.

BUILDING INTERIOR– FIRST FLOOR	KNICKER
	KNI92240
	08–27–92



LEGEND

AREA IN WHICH SECOND FLOOR LOFTS DO NOT EXIST

EXTERIOR WALL

N

0 30' 60'

FIGURE 3

PANTONE INC.

ENVIRO–SCIENCES, INC.

BUILDING INTERIOR– SECOND FLOOR LOFTS	KNICKER
	KNI92240
	08–27–92

ATTACHMENT 4

PANTONE, INC.
MOONACHIE, N.J.

DESCRIPTION OF OPERATIONS

ENVIRO SCIENCES, INC.

ATTACHMENT 4

DESCRIPTION OF OPERATIONS

Pantone, Inc. has operated the facility at 55 Knickerbocker Road since 1972 as a printing establishment. Its primary operations include lithographic printing to produce publication materials for books and brochures. Cutting, binding and gluing processes are utilized to achieve the final product. Pantone, Inc. also operates two laboratories. The colors research laboratory experiments with producing new and innovative colors, while the QA/QC laboratory examines the quality of the colors produced.

Pantone, Inc. operates Miller and Miehle offset presses, Miehle vertical presses and a Heidelberg letterpress. Petroleum oils are utilized to keep the machines lubricated. Various mineral spirits are applied to the machines with cotton rags and are used to remove ink from rollers. The cotton rags are collected in a drum and picked up by Coyne Textile Services, Inc. for cleaning on a weekly basis.

During the printing process, paper is sheet fed into the press. The ink is picked up from an ink fountain by a roller and is applied to the rubber covered blanket cylinder. The blanket cylinder then prints the image on the paper. Pantone, Inc. utilizes printing inks which contain high boiling point solvents which do not readily degrade or volatilize. These inks are mainly stored in the ink storage room. Any obsolete inks and/or mineral spirits generated from the printing operation are collected in a 55-gallon drum and manifested off site.

When printing is complete, the fountain parts are removed and cleaned in a degreasing tank which contains dissolin VF (an aliphatic solvent) to remove the ink. The solvent is recycled in the tank and changed approximately twice a year, where upon it is collected in a 55-gallon drum and manifested off site. When in operation, the solvent vapor is exhausted into the atmosphere through a ventilation hood. The operation and the emissions generated from the degreasing tank have been registered with the New Jersey Bureau of Air Pollution Control, with the required permit number of 01078.

(CK92526b)

ATTACHMENT 5

PANTONE, INC.
MOONACHIE, N.J.

HAZARDOUS WASTE/SUBSTANCE INVENTORY

ENVIRO SCIENCES, INC.

ATTACHMENT 5

HAZARDOUS WASTE/SUBSTANCE INVENTORY

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Acetic Acid	.75 liter	Textile Laboratory	Glass reagent bottle	0.4 liters	No
Ammonium Sulfate	2.0 pounds	Textile Laboratory	Plastic bottle	0*	No
Barium	10-4 oz. samples	Technical service laboratory	Metal cans/Plastic bottle	0*	No
2-Butoxy ethenol	3.7 gallons	Press room/textile laboratory	Glass and plastic bottle	11.1 gallons	No
Carbon black	4-4 oz. samples	Technical service laboratory	Metal can	0*	No
Cobalt	>.2 gallon	Ink room/Technical service laboratory	Plastic bottle	.06 gallon	No
Copper	10-4 oz. samples	Ink room/technical service laboratory	Metal can	0*	No
Cyclohexanone	.04 gallons	Press room	Plastic bottle	.1 gallon	No
Dimethylformamide	1.0-1.5 gallon	Textile laboratory	Glass reagent bottle	0	No
Ethyl butyl ketone	.06 gallon	Press room	Glass reagent bottle	.4 gallons	No
Ethylene glycol	4.0 gallon	Press room/Textile service laboratory	Plastic bottles and metal cans	.8 gallons	No

* Small quantities utilized in lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Formic acid	500 ml	Textile laboratory	Glass reagent bottle	0*	No
Gum arabic	10 gallons	Press room	Plastic bottles	1.1 gallon	No
Hydrogen chloride	2.5 liters	Textile laboratory	Glass reagent bottle	0*	No
Hydrogen peroxide	400 cc	Textile laboratory	Plastic bottle	100cc*	No
Inks/Printers	avg.-12,500 pounds	Ink room	Metal cans	8,045 pounds	No
Iodine	500 grams	Textile laboratory	Glass reagent bottle	0*	No
Isopropyl alcohol	55 gallons	Press room	Steel drum, plastic jugs	110.6 gallons	No
Kerosene	.14 gallons	Press room	Steel drum	.4 gallons	No
Liquid ketones	33 gallons	Press room	Steel drum	132 gallons	No
Methylene chloride	1.6 gallons	Press room	Glass reagent bottles/ metal cans	2.7 gallons	No
Petroleum distillates	25.6 gallons	Press room, ink room	Metal cans	25 gallons	No
Petroleum oil	2-12 gallons	Press room, ink room	Metal cans	2 gallons	No

* Small quantities utilized in lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Phenol flex glue	500-600 pounds	Bindery	Box	1,800 pounds	No
Phosphoric acid	.08 gallons	Press room	Plastic jugs	.2 gallons	No
Pine oil	.9 gallons	Press room	Metal cans	4.4 gallons	No
Potassium dichromate	500 grams	Textile laboratory	Plastic bottles	0*	No
Polyethylene glycol	25 gallons	Warehouse/textile laboratory	Steel drums	4 gallons	No
Rags, oily	200 pounds	Ubiquitous	Steel drums	Sent to cleaning service	No
Sodium dithionite	1.0-1.5 gallons	Textile laboratory	Glass reagent bottles	0*	No
Sodium hydroxide	2-12 gallons	Textile laboratory	Plastic bottles	1 gallon*	No
Sodium nitrate	500 grams	Textile laboratory	Glass reagent bottles	0*	No
Sodium sulfate	100 pounds	Textile laboratory	Glass reagent bottles	75-100 pounds	No
Solvents/aliphatic hydrocarbons	120 gallons	Press room, warehouse	Metal cans/steel drums	940 gallons	No
Solvents/aromatic hydrocarbons	2.9 gallons	Press room	Metal cans	3.8 gallons	No

* Small quantiites utilized lab only

Material Name	Quantity	Location Reference	Storage Method Container Type/Size	Typical Annual Usage	To Remain Onsite (Yes or No)
Stoddard solvent	.05 gallons	Press room	Plastic bottles	.1 gallon	No
Sulfuric acid	2.5 liters	Textile laboratory	Glass reagent bottles	.5 liter *	No
Trichloroethane resin glue	500-600 pounds	Bindery	5-gallon plastic containers	1,800 pounds	No
Vinyl acetate resin glue	500-600 pounds	Bindery	5-gallon plastic containers	1,800 pounds	No
Xylenes	2.1 gallons	Press room	Metal cans	3.6 gallons	No

* Small quantities utilized in lab only

ck92528d

ATTACHMENT 6

PANTONE, INC.
MOONACHIE, N.J.

HISTORICAL DISCHARGE INVESTIGATION REPORTS

ENVIRO SCIENCES, INC.

ATTACHMENT 6

HISTORICAL DISCHARGE INVESTIGATION REPORTS

Introduction

ENSI Environmental Services removed two 2,000-gallon underground storage tanks from 55 Knickerbocker Road in October 1989. The contents of the tanks were isopropyl alcohol and xylene. These solvents were utilized by Letraset, Inc., a co-tenant of the facility from 1973-1979, in the manufacturing of marking pens.

Post-excavation sampling revealed that the soil was contaminated with substances which were never stored in the tanks. The New Jersey Bureau of Underground Storage Tanks was notified and assigned a case number #89-11-20-1511.

International Exploration, Inc. (INTEX) was contracted by Pantone, Inc. to determine if the discharge originated from the underground storage tanks and whether it had an impact on the groundwater quality. INTEX prepared a Discharge Investigation and Corrective Action Report (DICAR) in August 1990 and addendum to the DICAR in November 1990. These reports are included for review and can be found in Appendix 1.

The New Jersey Department of Environmental protection and Energy (NJDEPE) approved of the corrective actions undertaken at the Pantone, Inc. establishment. A copy of the NJDEPE approved letter is included in Appendix 2.

APPENDIX 1

PANTONE, INC.
MOONACHIE, N.J.

INTERNATIONAL EXPLORATION INC.
DICAR REPORT AND ASSOCIATED ADDENDUM

ENVIRO SCIENCES, INC.

DISCHARGE INVESTIGATION AND CORRECTIVE ACTION REPORT
PANTONE SITE, MOONACHIE, NEW JERSEY

Prepared for:

Pantone

INTERNATIONAL EXPLORATION, INC.
577 SACKETTSFORD ROAD
WARMINSTER, PA 18974-1398
(215) 598-7137

August, 1990

INTRODUCTION

A hydrogeologic investigation was conducted at the Pantone site, Knickerbocker Road, Moonachie, Bergen County, New Jersey (Figure 1). Pantone leases the property from Knickerbocker Enterprises.

Two underground storage tanks were removed from a single excavation in October, 1989. Post excavation soil sampling indicated that a discharge had occurred. Two groundwater monitoring wells were installed at the site to determine if the groundwater had been contaminated by the discharge from the tanks.

The investigation followed the guidelines set forth in the New Jersey Department of Environmental Protection Underground Storage Tank (NJ DEP UST) Division's "Scope of Work for Investigation and Corrective Action Requirements for Discharge from Underground Storage Tanks and Piping Systems." The NJ DEP case worker for this project is Mr. Dave Ruben and the case number is 89-11-20-1511.

SITE CHARACTERISTICS

On-Site Features

Two underground storage tanks were removed from a single excavation on the southwest side of the property (Attachment 1). The tanks' long axes were oriented parallel to the road; the tank closest to the building contained isopropyl alcohol and the tank closest to the road contained xylene. Both steel tanks were 2000

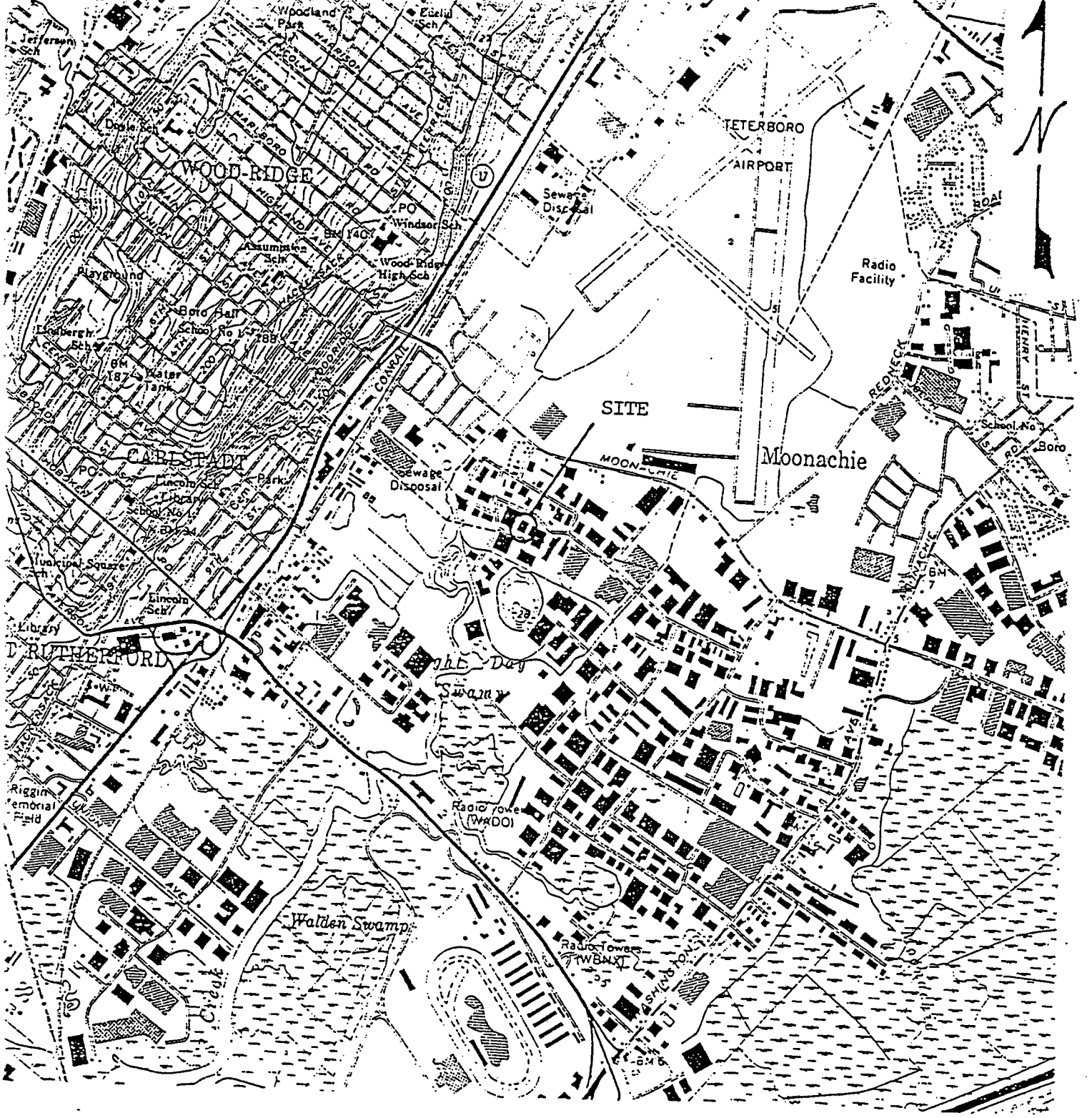


FIGURE 1: LOCATION OF PANTONE FACILITY IN MOONACHIE, BERGEN COUNTY, NEW JERSEY

SCALE: 1 inch = 2000 feet

SOURCE: Weehawken, New Jersey, 7.5-minute U.S.G.S quadrangle.

gallons in volume, 5 feet in diameter, and approximately 12 feet long (Table 1). The tanks were strapped to a concrete pad that was located at a depth of approximately 7 to 9 feet below the surface.

The tanks were installed in 1972 by a company that rented the southwest corner of the building from Pantone; the tanks were not used after 1979, and Pantone did not operate these tanks.

Although the tanks were in relatively good condition (no holes), post excavation soil sampling revealed the presence of 4-methyl-2-pentanone, toluene, xylene, and total petroleum hydrocarbons in the soil.

TABLE 1
TANK SPECIFICATIONS

Tank Contents	Size (gal) & Const.	Active/ Removed	Age (ybr)*	Dimension	Reg. Number
isopropyl alcohol	2,000 steel	Removed	17	12' long; 5' dia	0186500
xylene	2,000 steel	Removed	17	12' long; 5' dia	0186500

* years before removal

The facility is serviced by public water, public sewer, and public gas. The public water line enters the property on the west-southwest side, passes under the excavation, and leads to the building (Attachment 1). There is a public sewer manhole in south-center portion of the property; the sewer line runs

parallel to the Pantone building (Knickerbocker Road). The public gas line enters the site from Knickerbocker Road and connects with the facility on its southeast side. There is also an underground telephone line that parallels the gas line. There are three storm drains at the site; the storm drains were checked for vapors with a photoionization detector (PID) and none were detected. Overhead telephone and electric lines are oriented parallel to Knickerbocker Road on the south side of the Pantone site.

There are no on-site wells at the facility, and Pantone personnel are not aware of any wells previously located there.

The building does not have a basement; there is one indoor floor drain that is located in the southwest portion of the building. The PID reading in the drain was 0.5 ppm above background.

The public sewer manhole could not be removed and was therefore not checked for vapors at the time of drilling/sampling.

Surface Water Bodies

Berry Creek is approximately 1000 feet west of the Pantone site (Figure 1). The creek flows south near the site, turns southwest between Eight Day Swamp and Walden Swamp, and before discharging into the Hackensack River turns southeast. Approximately 1350 feet south of the site is a depression that is 28 feet below sea

level. This area appears to have been quarried; there are large blocks of rock around the perimeter of this feature. There are numerous wetlands south, southeast, and southwest of the site at a distance of 1 to 2 miles.

Land Use and Population

The land near the Pantone site is used primarily for industrial purposes although there are some scattered commercial properties in the area (Appendix I, Aerial Photograph). There are also some residential properties approximately 1/4 mile north-northwest (single-family dwellings) and northeast (trailer park) of the site.

The Borough Administration (Personal Communication, 1990) estimated that the population of Moonachie is 2,730.

Climate

The Lodi precipitation collection center is approximately 2.8 miles from the Pantone site (NOAA, 1988). During 1988 a total of 42.98 inches of precipitation was measured at the collection center.

Soil Unit

The soil in the vicinity of the Pantone site is mapped as Urban Land (Appendix I, Soil Survey Map). This is material that has been altered by human activity or that has been brought to the

property as back fill (Soil Survey of Bergen County, In Review).

Well Search

A Bureau of Water Allocation well search was conducted to identify all the wells within a 1/2 mile radius of the site. The search revealed a total of 49 wells and 12 boreholes in the area, including 27 monitoring wells, 10 cooling/air conditioning wells, 8 industrial wells, 2 domestic wells, 1 irrigation well, and 1 washing (car?) well. Table 2 is summary of the well search. Appendix II contains the well construction sheets and contains a map of the distribution of the wells based on the New Jersey Coordinate System "unit."

GEOLOGY, HYDROGEOLOGY, AND WELL CONSTRUCTION

Geology and Hydrogeology

Moonachie is located within the Triassic Lowland section of the Piedmont Physiographic Province.

The Pantone site is mapped as underlain by the Brunswick Formation of the Newark Group of rocks (Appendix III, Geologic Map). The Brunswick Formation is commonly intercalated with the Watchung Basalt in this region. The Brunswick Formation is composed of interbedded brown, reddish-brown, and gray shales, sandy shale, sandstone, and conglomerate (Nichols, 1968).

TABLE 2

WATER ALLOCATION BUREAU WELL SEARCH

OWNER	USE*	TOTAL DEPTH (ft)	SCREENED INTERVAL OR CASING DEPTH (ft)	YIELD (gpm)	WATER QUALITY	COORDINATES
Roadway Services	M2	9	0-9	-	-	26 03893
Roadway Services	M1	9.5	0-9.5	-	-	26 03893
Mobay Synthetic Co.	M1	4	1.5-4	-	-	26 03977
Mobay Synthetic Co.	M4	2	1.5-3	-	-	26 03977
Mobay Synthetic co.	M3	4.5	2-4.5	-	-	26 03977
Yellow Freight System	M4	12	2-12	-	-	26 13233
Yellow Freight System	M5	10	3-10	-	-	26 13233
Yellow Freight System	M6	9	2-9	-	-	26 13233
Yellow Freight System	M1	11	3-11	-	-	26 13233
Yellow Freight System	M2	13	3-13	-	-	26 13233
Yellow Freight System	M3	13	3-13	-	-	26 13233
Hackensack Water Co. (Carlstadt Test Well #2)	-	263	--------abandoned------			26 03888
Carlstadt Test Well #3	-	86	-	-	poor	26 03888
Carlstadt Test Well #1	-	243	113-123	60	-	26 03888
Henkel Corp. P-6	M?	15	13' length	-	-	26 03888
Henkel Corp. P-5	M	15	13' length	-	-	26 03888
Henkel " P-9B	M	55	15' length	-	-	26 03888
Henkel " P-11B	M	55	15' length	-	-	26 03888
Henkel Corp. P-7	M	15	13' length	-	-	26 03888
Henkel " P-2	M	50	13' length	-	-	26 03888
Henkel " P-1	M	18	13' length	-	-	26 03888
Henkel " P-4	M	15	13' length	-	-	26 03888
Henkel " P-9	M	15	13' length	-	-	26 03888

TABLE 2 (CONT'D)

WATER ALLOCATION BUREAU WELL SEARCH

OWNER	USE*	TOTAL DEPTH (ft)	SCREENED INTERVAL OR CASING DEPTH (ft)	YIELD (gpm)	WATER QUALITY	COORDINATES
Paradise & Rosen, Inc.	M1	12.5	2.5-12.5	-	-	26 03898
Paradise & Rosen, Inc.	M2	12.5	2.5-12.5	-	-	26 03899
Paradise & Rosen, Inc.	M3	12.5	2.5-12.5	-	-	26 03899
Paradise & Rosen, Inc.	M4	12.5	3.5-12.5	-	-	26 03899
Pilot Wood Working Co. PT1	M	Boring - 7'	-	-	-	26 11664
Pilot Wood Working Co. PT2	M	Boring - 7'	-	-	-	26 11664
Pilot Wood Working Co. PT3	M	Boring - 7'	-	-	-	26 11664
Pilot Wood Working Co. PT4	M	Boring - 7'	-	-	-	26 11664
Burroughs Corp.	M	Boring - 9'	-	-	-	26 03883
Borroughs Corp.	M	Boring - 9'6"	-	-	-	26 03883
Borroughs Corp.	M	Boring - 9'6"	-	-	-	26 03883
Borroughs Corp.	M	Boring - 5'	-	-	-	26 03883
Borroughs Corp.	M	Boring - 10'	-	-	-	26 03883
Morris Park Area Corp.	-	Boring - 32'	-	-	-	26 03898
Morris Park Area Corp.	-	Boring - 32'	-	-	-	26 03898
Morris Park Area Corp.	-	Boring - 32'	-	-	-	26 03898
T. Basse	D	61	59 casing	30	good	26 08867
A. Feretti	D	103	24 casing	15	good	26 03867
River Renaissance	F	273	103 casing	60	-	26 13231
Compo Indust.	I	220	53 casing	60	good	26 13312
Yoo-Hoo Bev.	I	303	22 casing	95	good	26 13312
Carlton Cook	I	255	12 casing	150	okay	26 03974
F. Rity	I	160	131 casing	20	okay	26 03895

TABLE 2 (CONT'D)

WATER ALLOCATION BUREAU WELL SEARCH

OWNER	USE*	TOTAL DEPTH (ft)	SCREENED INTERVAL OR CASING DEPTH (ft)	YIELD (gpm)	WATER QUALITY	COORDINATES
F. Cascelle (Sanitary)	I	160	96 casing	5	okay	26 03895
Berger Iron & Eng. Co.	I	205	53 casing	13	-	26 03885
Lancaster Chem.	I	400	311 casing	55	-	26 03888
Record Elec. Plating	I	200	41 casing	90	-	26 03888
Yoo Hoo Bev.	Washing	300	43 casing	100	-	26 13312
Yoo Hoo Bev.	Cooling	393	20 casing	50	good	26 13312
Tech. Oil Production	Cooling	296	124 casing	70	good	26 13312
Verflex Co.	Cooling	205	30 casing	105	-	26 03978
DuBois Chem.	Cooling	305	216 casing	150	-	26 03867
Buff's Diner	Air	250	166 casing	45	good	26 03886
Benedict Pkg.Co.	Air	153	27 casing	50	-	26 03886
Benedict Pkg.Co.	Air	350	27 casing	175	-	26 03886
Manhatten Products	Cooling	300	100 casing	65	-	26 03894
Thumann, Inc.	Cooling	300	53 casing	250	-	26 03895
Carter Manufacuting	Cooling	202	145 casing	45	-	26 03897

** M = Monitoring Well*
F = Irrigation
I = Industrial
D = Domestic

The Brunswick Formation, in nearby Essex County, generally yields between 35 gpm and 820 gpm; the highest yielding water bearing zones are at depths of 300 to 400 feet (Nichols, 1968). In nearby Passaic County the yields from the Brunswick Formation range from 50 to 510 gpm (Carswell and Rooney, 1976). The water migration in the Brunswick is preferentially along bedrock strike; interconnection between different water bearing zones is generally poor.

Well Construction

Bedrock was not encountered during drilling therefore unconsolidated well construction methods were used to install the monitoring wells. Two 4-inch PVC groundwater monitoring wells were installed at the site on May 18th, 1990. The wells were drilled by Empire Soils Investigation, Inc. using a hollow-stem auger drilling rig. An INTEX geologist was present at the site to characterize the lithology of the continuous split spoon samples. Soil/sediment samples were collected from the split spoons every five feet or at stratigraphic boundaries. The geologist inspected the samples for free product, staining, odor, and vapors. The split spoon samples, the downhole air space, and the working air space were monitored for organic vapors with a photoionization detector (PID). The lithologic logs, the PID readings, and the blow counts are located in Appendix III.

Monitoring well 1 was drilled upgradient of the excavation to establish ambient conditions at the site. It was drilled to a

total depth of 15 feet. From the ground surface to a depth of 3 feet, drilling revealed fill materials including blacktop, crushed stone, brick, and dark brown sandy silt, sand, and gravel. Black-gray micaceous silt was present between 3 feet and 5 feet. Green-gray silt (5'-6.5'), yellow brown clayey silt (6.5'-8'), and gray silty clay (8'-15') were present from 5 feet to 15 feet. The 0 to 15 feet interval is assumed to be back fill, because none of the materials encountered can be explained by the weathering of Brunswick shale. The presence of building materials such as brick fragments supports this contention.

Water was initially encountered in well 1 at 7 feet and the static water level after drilling was 7.11 feet below grade. No vapors were detected with the PID during drilling. No visibly contaminated soil was encountered and no sheens were present on the water surface. The yield of the well estimated at the time of installation was 1.5 gallons per minute.

Monitoring well 2 was drilled downgradient of the excavation. The total depth of the well was 12.5 feet. Between the ground surface and 12. 5 feet a mixture of dark gray micaceous sand, silt, and gravel was followed by dark gray clayey silt and brick fragments. None of the unconsolidated sediments in this well are breakdown products of Brunswick shale; Brunswick shale typically weathers to a red-brown silt.

Water was first encountered in well 2 at a depth of 4 feet. The

static water level upon completing drilling was 4.5 feet below grade. No vapors were detected with the PID, no sheens were present, and no soil staining was observed.

TABLE 3

WELL CONSTRUCTION AND WATER ELEVATIONS

Well No.	Permit Number	Water Level (ft. BT Rim)	Rim of Well Elevation (ft. ASL)	Water Elevation (ft. ASL)
MW-1	26-20341-3	4.13	5.35	1.22
MW-2	26-20342-1	3.90	5.52	1.62

Well No.	Total Depth (feet)	Screened Interval (feet)	Well Yield (gpm)	Stain, Odor, PID or Sheen
MW-1	15	5-15	1.5	none
MW-2	12.5	2.5-12.5	10+	odor 6/5

As previously mentioned the Pantone site contains back fill material. The property has apparently been built up from swamps/wetlands. The groundwater flow direction in the vicinity of the site, estimated on basis of topography and on the proximity to the nearby surface stream, Berry Creek, is interpreted to be roughly southwest toward the creek. Note, the water elevation in well 1 is lower than the water elevation in well 2, but all the streams in the area including the Hackensack River and Berry Creek are draining southeast, south, or southwest.

The topography at the site is very gentle. It follows that the hydraulic gradient at the site would also be very gentle. In

cases where there is a gentle gradient the groundwater flow direction can change seasonally depending on such factors as precipitation, and resulting groundwater recharge, evapotranspiration, evaporation, etc. Additionally, the location of the storm drains may locally influence the water elevation depending on the quantity of surface water being discharged into the system after precipitation events. In cases where the hydraulic gradient is gentle, contamination emanating from a point source (tank) may even spread radially by diffusion across concentration gradients rather than in the direction suggested by the hydraulic gradient. When the hydraulic gradient is very gentle it is often not possible to get accurate readings from closely spaced wells (100s of feet).

A northern groundwater flow direction is not indicated by the topography of the ground surface or the location of the nearby surface stream; although tidal influence in the area could possibly cause the observed water elevations in the wells. The Coast Guard Group of New York (1990 personal communication) was contacted about the site; they indicated that little information is available in the area and that there may be a minor (less than 1 foot) tidal influence. Therefore the interpretation of a southwesterly flow direction is the only logical one for this area.

GROUNDWATER SAMPLING AND CHEMICAL ANALYSES

Groundwater samples were collected from the two monitoring wells on June 5th, 1990. Prior to sampling the wells were purged of three volumes of the water contained in the well, using a 1.5-gallon teflon bailer. The wells were sampled with dedicated 1-liter, stainless steel bailers. All sampling was conducting according to the guidelines set forth in the NJ DEP "Field Sampling Procedures Manual (1988)."

At the time of sampling an odd sheen was noticed on the water surface in well 2; it had a murky (swamp-like) appearance and an odor similar to decomposing organic matter.

The samples were delivered to First Environmental Laboratories, a New Jersey certified laboratory, for analysis. The groundwater samples from monitoring well 1, monitoring well 2, and a field rinsate blank were analyzed for volatile and semi-volatile unknown compounds by EPA method 624+15 (including calibration for xylene, MTBE, TBA, and isopropyl alcohol) and EPA method 625+15. The trip blank was analyzed for volatiles by EPA method 624+15 (including calibration for xylene, MTBE, TBA, and isopropyl alcohol). Appendix IV contains the sampling sheets and the Tier II report of the results of the chemical analyses. Table 4 is a summary of the results.

TABLE 4

CHEMICAL ANALYSES
(All Concentrations in ppb)

Sampling Parameter	Well #1	Well #2	Field Blank	Trip Blank
Volatiles	ND*			
Methylene Chloride		6.6	4.6	5.9
Acetone			2.4	
Unknown		23		
Semi-Volatiles	ND	ND	ND	ND
Isopropyl Alcohol	ND	ND	ND	ND

*ND = None Detected

No volatile organic compounds were detected in well 1. Methylene chloride was detected in well 2, the field blank, and the trip blank. Acetone was identified in the field blank.

An unknown volatile organic compound was detected in well 2, the downgradient well. The concentration was estimated to be 23 ppb. Note, the field blank and the trip blank did not have any unknown tentatively identified compounds.

No semi-volatile compounds were present in the groundwater samples collected from the wells or in the blanks.

DISCUSSION

The methylene chloride present in well 2, the field blank, and the trip blank and the acetone in the field blank could have been introduced into the system by the laboratory/field. Because methylene chloride was analyzed in the trip blank at a similar level as in the sample, its presence in the sample can be attributed to laboratory contamination. The presence of acetone in the field blank, and the absence in the sample or the trip blank, indicates that the most likely source of acetone is equipment contamination. A dilute solution containing acetone was used to decontaminate the bailer. However, since acetone was not present in the sample, it is not a concern for this site.

The only possible contaminant detected at the site was the unknown volatile compound detected in well 2. Its estimated concentration was 23 ppb; the laboratory had calibrated the gas chromatograph (GSMS) for both xylene and isopropyl alcohol and the unknown compound was not matched with either substance. Although the possibility that the unknown represents a degradation product of either xylene or isopropyl alcohol cannot be ruled out, its low estimated concentration and the fact that the unknown cannot be definitely attributed to known contents of the underground storage tanks suggests that any releases from the xylene tank or the isopropyl alcohol tank did not adversely affect the groundwater.

CONCLUSIONS

1 - A xylene tank and an isopropyl alcohol tank were removed from a single excavation in October of 1989. An upgradient well and a downgradient well were installed to determine if releases from the tanks had affected the groundwater quality in the vicinity of the tanks.

2 - The groundwater flow direction based on the location of the nearby surface water body, Berry Creek, is roughly southwest.

3 - An unknown volatile organic compound was detected in well 2. With the exception of methylene chloride (which was also present in the trip blank) no other volatile or semi-volatile organic compounds were detected in well 2. No volatile or semi-volatile compounds were detected in well 1.

4 - Based on the groundwater sample analyses, the leaking of the underground storage tanks did not adversely affect the groundwater at the site.

RECOMMENDATIONS

Because no positively identified volatile or semi-volatile organic compounds were detected in the groundwater samples collected from the two on-site monitoring wells, and because of the very low estimated level of the unidentified volatile compound, we recommend that the Pantone underground storage tank case be closed.

The NJ DEP normally requires a confirmatory round of chemical analyses for the closure of a case. We therefore recommend collection of an additional round of groundwater samples from the on-site wells. Sampling should take place a minimum of thirty days after the first set of samples was collected.

ADDENDUM TO DI CAR
PANTONE, INC.
BERGEN COUNTY, NEW JERSEY

Prepared for:

Pantone, Inc.

INTERNATIONAL EXPLORATION, INC.
577 SACKETTSFORD ROAD
WARMINSTER, PA 18974-1398
(215) 598-7137

November, 1990

INTRODUCTION

In August, 1990 a DICAR was submitted to the NJ DEP UST Division for the Pantone site, Knickerbocker Road, Moonachie, Bergen County, New Jersey (Figure 1). Two monitoring wells were installed at the site to monitor the groundwater in the vicinity of a xylene-isopropyl alcohol underground storage tank excavation. Only one tentatively identified volatile organic compound (23 ppb) was identified in well #2, the downgradient well. The wells were resampled on September 13th, 1990 for volatile organic compounds (including xylene, TBA, MTBE, and isopropyl alcohol). This brief report is a summary and discussion of the results of the September 13th sampling.

The NJ DEP case worker for this site is Mr. David Ruben and the case number is 89-11-20-1511.

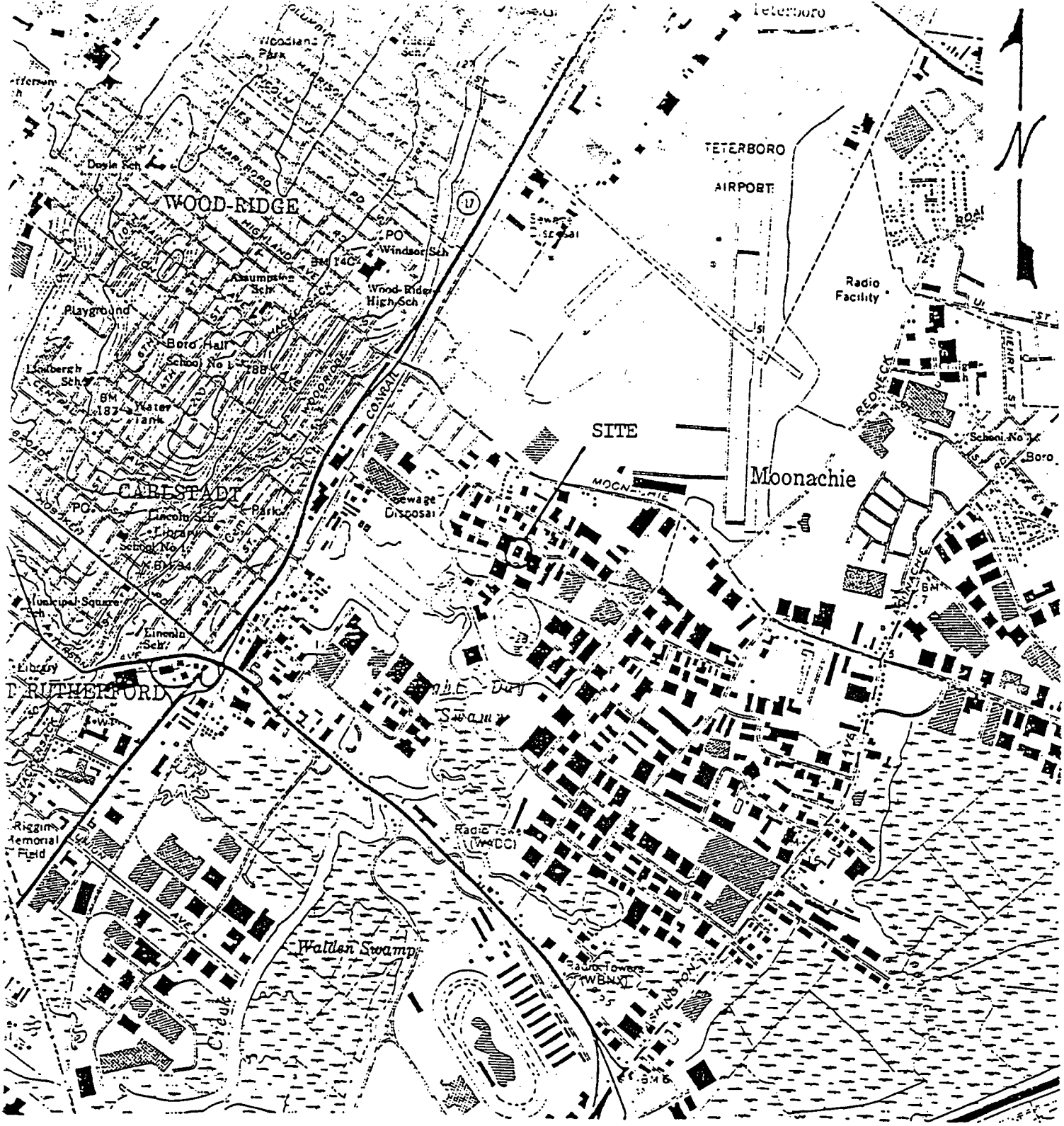


FIGURE 1: LOCATION OF PANTONE
FACILITY IN MOONACHIE,
BERGEN COUNTY, NEW JERSEY

SCALE: 1 inch = 2000 feet

SOURCE: Weehawken, New Jersey, 7.5-minute U.S.G.S quadrangle.

GROUNDWATER SAMPLING

After purging the two wells of three standing volumes of water with a 1-gallon teflon bailer, each well was sampled with a dedicated 1-liter stainless steel bailer. The purge water was containerized in 55-gallon drums for disposal. All field procedures comply with the guidelines presented in the NJ DEP "Field Sampling Procedures Manual."

The samples were delivered to Laboratory Resources, Inc. (Intech Biolabs), a New Jersey certified laboratory (12427) for analysis for volatile organic compounds including calibration for xylene TBA, MTBE, and isopropyl alcohol (EPA method 624+15). A trip blank consisting of laboratory distilled water accompanied the bottleware to and from the site. A field rinsate blank was collected prior to sampling well 2 to verify the laboratory decontamination of the sampling equipment. The trip blank and the field blank were analyzed for volatile organic compounds (including xylene, TBA, MTBE, and isopropyl alcohol).

Prior to collecting the groundwater samples water level readings were collected in both of the monitoring wells. Table 1 is a summary of the water level, well elevation, and water elevation data. Appendix I contains the groundwater sampling data sheets.

TABLE 1

MONITORING WELL WATER ELEVATIONS

Well No.	Depth to H_2O*	Well Rim Elev.#	Water Elev.#	Total Depth	Screened Interval
MW-1	5.72	5.35	-0.37	15 ft.	5-15 feet
MW-2	3.87	5.52	1.65	12.5	2.5-12.5

* ft. Below the Rim
\# ft. ASL

Although the water elevation in well 2 is higher than the water elevation in well 1, the groundwater flow direction based on the location of the nearby surface stream, Berry Creek, is interpreted to be roughly southwest.

Based on the interpreted flow direction well 1 would be considered the upgradient well and well 2 would be considered the downgradient well. For a more in depth discussion of the groundwater flow direction the reader is referred to the DICAR.

CHEMICAL ANALYSIS

Table 2 is a summary of the chemical analyses from the two groundwater monitoring wells sampled on September 13th, 1990. Appendix II contains the Tier II laboratory report.

TABLE 2

ANALYTICAL RESULTS: September 13, 1990
(All Concentrations in ppb)

Chemical Compound	MW-1	MW-2	Field Rinsate Blank	Trip Blank
Methylene Chloride	7	9	9	13
Acetone	34	21		
MTBE		4 J	3 J	
Benzene	2 J	1 J		
Toluene		10		
Xylene	ND	ND	ND	ND
Isopropyl Alcohol	ND	ND	ND	ND
Tent. Id. Compound				5

J = Estimated Concentration
ND = Not Detected

Methylene chloride, methyl tert-butyl ether (MTBE), and a tentatively identified volatile organic compound were detected in the wells and/or in the blanks.

Low concentrations of acetone, benzene, and toluene were detected in the monitoring wells.

DISCUSSION AND RECOMMENDATIONS

The methylene chloride and MTBE detected in the samples can be attributed to laboratory/field contamination by these compounds, based on the presence of these compounds in the field rinsate blank and/or trip blank.

Acetone, which was detected in the two monitoring wells, is also a common laboratory/field contaminant. Acetone is used to decontaminate field equipment and is commonly found in laboratory distilled water. Although acetone was not detected in the field rinsate blank or the laboratory trip blank, based on the fact that acetone was reportedly not stored in the underground storage tanks and because of the low concentrations detected in the wells, acetone is not considered a concern at the site.

Benzene was detected in both monitoring wells and toluene was detected in monitoring well 2. The estimated benzene concentrations for wells 1 and 2 were 2 ppb and 1 ppb, respectively. The NJ Drinking Water Standard for benzene is 1 ppb. The concentrations of benzene in the two wells were equal to or slightly higher than the drinking water standard. There is no established NJ Drinking Water Standard for toluene. The EPA MCLG for toluene is 2000 ppb. The concentration of toluene in well 2 (10 ppb) is significantly lower than the EPA MCLG.

Benzene and toluene are constituents of gasoline. Reportedly, the

underground storage tanks at the Pantone site never contained gasoline. According to Pantone, their neighbors to the south and to the west have underground storage tanks containing gasoline. The presence of benzene in both the upgradient and the downgradient monitoring wells and the fact that Pantone apparently did not store gasoline in their USTs suggest that the benzene and possibly the toluene are from an off-site source.

Xylene and isopropyl alcohol were not detected in the groundwater samples collected from the two monitoring wells. Xylene and isopropyl alcohol were the two substances stored in the underground storage tanks. Because xylene and isopropyl alcohol were not detected during either round of sampling and because of the industrialized nature of the immediate vicinity, we recommend that the UST case be closed.

CONCLUSIONS

1 - Methylene chloride, MTBE, and the tentatively identified compound are interpreted to be due to laboratory/field contamination. Acetone, although not detected in the trip/field rinsate blanks, is also a common laboratory/field contaminant and is not considered a concern at the site.

2 - Low concentrations of benzene were detected in both monitoring wells. A low concentration of toluene was detected in monitoring well 2, the downgradient well. These two phases are present in gasoline, which was reportedly never stored in the underground storage tanks at the site.

3 - Xylene and isopropyl alcohol were not detected in the groundwater samples. These are the two compounds that were reportedly stored in the underground storage tanks.

APPENDIX 2

PANTONE, INC.
MOONACHIE, N.J.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND ENERGY APPROVAL LETTER

AUG 28 1991

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 029
Trenton, NJ 08625-0029
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

AUG 22 1991

Mr. Ken Niepokoy
Pantone, Inc.
55 Knickerbocker Road
Moonachie, NJ 07074

RE: Pantone, Inc., 55 Knickerbocker Avenue
Moonachie, Bergen County
Case # 89-11-20-1511; UST # 0186500

Dear Mr. Niepokoy:

On August 10, 1990 and November 15, 1990 the New Jersey Department of Environmental Protection (the Department) received reports from your company. Additional information was received on August 7, 1991. These reports document the corrective action measures undertaken in response to the discharge from your underground storage tank system.

Based on our review of the information submitted, we find that you have complied with the Department's existing requirements regarding corrective action for the investigated underground storage tank system. Therefore, no further corrective action will be required at this time. Should the Department have further requirements in the future, you will be contacted at that time.

In addition, all monitoring wells installed as part of the investigation and corrective action of the discharge at your facility that you no longer plan to use for ground water monitoring must be sealed properly in accordance with the requirements of N.J.A.C. 7:9-9.1 et seq. by a licensed well driller certified to seal wells. The well abandonment forms must be completed and submitted to the Bureau of Water Allocation

Thank you for your cooperation in this matter.

Very truly yours,

Joseph A. Miller
Section Chief
Northern Tank Management Section
Bureau of Underground Storage Tanks

GWQM # 391: JCB
c: Stephen C. Tiffenger, Bergen Co. Dept. of Health Services
John Blankenship, Bureau of Underground Storage Tanks
Jennifer Burns, Intex, Inc.
Robert Mancini, Bureau of Water Allocation

Exhibit E1

ENVIRO SCIENCES, INC.
HEADQUARTERS
111 HOWARD BOULEVARD, SUITE 108
MOUNT ARLINGTON, N.J. 07856
(201) 398-8183 • FAX (201) 398-8037

January 20, 1993

Joseph Nowak
NJDEPE-BEECRA
401 East State Street - 5th Floor
Trenton, New Jersey 08625-0028

RE: Pantone, Inc.; ECRA Case #92617

Dear Mr. Nowak:

The following is a point by point response to the letter which the New Jersey Department of Environmental Protection and Energy (NJDEPE) sent to Enviro-Sciences, Inc. (ESI) on December 17, 1992 regarding the Pantone, Inc. facility, currently under ECRA review:

Points # 1 and 2:

The intentions of Pantone, Inc. to decontaminate/decommission the facility located at 55 Knickerbocker Road, Moonachie, New Jersey are stated in a letter to ESI on January 13, 1993 and can be found in Attachment #1.

In summary, Pantone, Inc. plans to decommission its facility by moving the complete inventory of pigments, printing inks, machinery and the associated lubricating oils to its new facility located at 590 Commerce Boulevard, Carlstadt, New Jersey. Furthermore, Pantone plans to properly dispose of all its exhausted inks, paints, and solvents by contracting its certified waste hauler to subsequently manifest any waste off site. Pantone anticipates the final shipment of waste from this facility to occur during the week of January 25, 1993. My client will provide you with copies of the manifests upon return from the treatment and disposal facility. Pantone plans to decontaminate its facility by broom sweeping the floors.

Point # 3:

A search of the files of the property owner and site operator did not yield a letter from the Bureau of Water Allocation regarding the verification of proper abandonment of the two monitoring wells on site. However, as I discussed with you on the telephone, copies of the well abandonment reports submitted by

International Exploration to the Bureau of Water Allocation should satisfy your needs, to the extent of proving to the NJDEPE that these wells were closed and sealed properly. The well abandonment reports are enclosed in Attachment #2.

Points # 4 and 5:

The owner of the facility, Knickerbocker Enterprises, contracted ESI to assess the quality of the soil at the discharge point of the floor drain located in the Northwest corner of the building. ESI proceeded by sampling the soil at peril on December 3, 1992, two weeks prior to the NJDEPE's December 17, 1992 letter, an activity that precludes the necessity for a formal sampling plan. Enclosed with this letter, in Attachment 3, is a report concerning the field operations, soil logs and sampling results which evaluate the floor drain and the soil beneath it. Also enclosed is a fee check list and the associated sampling review fee of $1,000.

I hope I have addressed all the needs outlined in the December 17, 1992 letter to your satisfaction. If you have any other concerns or questions about this case, please do not hesitate to call me at (201) 398-8183.

Sincerely,

ENVIRO-SCIENCES, INC.

Christopher D. Klein
Project Manager

Enclosures

cc: Ralph Manfredonia - Knickerbocker Enterprises
Ken Smith - Pantone, Inc.

CDK/lh
(CK93004b)

ENVIRO SCIENCES, INC.

ECRA-011
12/88

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECITON
INDUSTRIAL SITE EVALUATION ELEMENT

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

FEE SUBMITTAL FORM

THIS FORM MUST BE RETURNED WITH ANY APPLICATION OR FILING

Case # (if known) #92617

Case Name (Active Cases) Pantone Inc.

Name of Business/Owner for Applicability Determination Pantone Inc.

Check drawn from account of National Community Bank, NJ Check/M.O.# 1320

Amount enclosed $1000.

PUT AN "X" IN THE APPROPRIATE PAYMENT BLOCK(S)

	Normal Fee	ACTIVITY	Small Business Fee	
		Initial Notice Review		
☐	$ 2,000	without a Sampling Plan	$ 750	☐
☐	$ 3,000	with Sampling Plan with UGT analysis. No GW monitoring	$ 1,500	☐
☐	$ 5,000	with Sampling Plan other than 2 above or 4 below	$ 3,000	☐
☐	$ 7,500	with Sampling Plan that includes GW monitoring	$ 4,500	☐
☒	$ 1,000	Sampling Data Review	$ 1,000	☐
☐	$ 500	Negative Declaration Review	$ 250	☐
		Cleanup Plan Review *(Based on Cost)*		
☐	$ 1,000	$1 - $9,999	$ 1,000	☐
☐	$ 2,500	$10,000 - $99,999	$ 2,500	☐
☐	$ 5,000	$100,000 - $499,999	$ 5,000	☐
☐	$ 8,000	$500,000 - $999,999	$ 8,000	☐
☐	$11,000	over $1,000,000	$11,000	☐
		Cleanup Oversight Plan *(Based on Cost)*		
☐	$ 1,000	$1 - $9,999	$ 1,000	☐
☐	$ 3,000	$10,000 - $99,999	$ 3,000	☐
☐	$ 7,000	$100,000 - $499,999	$ 7,000	☐
☐	$10,000	$500,000 - $999,999	$10,000	☐
☐	$12,000	over $1,000,000	$12,000	☐
		Other		
☐	$ 200	Applicability Determination	$ 200	☐
☐	$ 300	Deminimus Quantity Exemption	$ 300	☐
☐	$ 500	Limited Conveyance Review	$ 250	☐
☐	$ 2,000	Administrative Consent Order	$ 2,000	☐
☐	$ 500	Amendment to ACO	$ 500	☐
☐	$ 350	Confidentiality Claim	$ 350	☐

OFFICE USE ON

BEAC No.

ATTACHMENT 1

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

PANTONE, INC. INTENTIONS
TO DECONTAMINATE/DECOMMISSION
THE SUBJECT FACILITY

ENVIRO SCIENCES, INC.

PANTONE®*

January 13, 1993

Mr. Chris Klein
Enviro Sciences, Inc.
111 Howard Boulevard, Suite 108
Mt. Arlington, NJ 07856

Dear Chris:

We plan to follow the ECRA-002, Item #12, A & B as stated in the initial notice filing under the site evaluation submission (SES).

As stated in #12B, we will move all of our machinery and consumable supplies to our new facility. On this basis, it will not be necessary to file a plan as specified in #12A.

We will dispose of any remaining hazardous materials in complete accordance with all prescribed regulations as set forth by NJDEP and the USEPA. We are familiar with the procedures and have followed them on a timely basis.

I anticipate that we will have a small final shipment of hazardous materials to be manifested the week of January 25, 1993.

The current schedule for the move to our new facility anticipates us to vacating 55 Knickerbocker by January 31, 1993. Pantone will move to 590 Commerce Boulevard, Carlstadt, New Jersey.

I trust that the information I have provided will satisfy the ECRA process.

Best regards,

Kenneth W. Smith
Director - Print Operations

KWS/ck

Pantone, Inc. 55 Knickerbocker Road Moonachie, New Jersey 07074 (201) 935-5500
* Pantone, Inc.'s check-standard trademark for color reproduction and color reproduction materials.
TELEFAX: (201) 896-0242 TWX: 710-989-0114

ATTACHMENT 2

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

WELL ABANDONMENT REPORTS

ENVIRO SCIENCES, INC.

INTERNATIONAL EXPLORATION

INTEX
EST. 1973

212 N. MAIN STREET
DOYLESTOWN, PA 18901
TELEPHONE: 215-345-5586
TELEFAX: 215-345-7108

BRANCH OFFICES:
NEWARK, NEW JERSEY
201-589-3850
SYRACUSE, NEW YORK
315-697-3979

September 13, 1991

Mr. Ken Niepokoy
PANTONE, Inc.
55 Knickerbocker Rd.
Moonachie, NJ 07074

Dear Mr. Niepokoy:

Enclosed please find the well abandonment reports for MW-1 and MW-2. Copies have been sent to the appropriate state and county agencies. If we can be of any future service to you, please do not hesitate to contact us.

Sincerely,

INTEX, Inc.

Jennifer Burns /Ct

Jennifer Burns
Project Hydrogeologist

JB:cnm
Enc.

DWR-020
8/89

New Jersey Department of Environmental Protection
Division of Water Resources — Bureau of Water Allocation

WELL ABANDONMENT REPORT

MAIL TO:

Bureau of Water Allocation
CN 029
Trenton, NJ 08625

SEP 09

WELL PERMIT # 2620341-3
of well sealed

DATE WELL SEALED 8-29-91

PROPERTY OWNER KNICKERBOCKER ENTERPRISES

ADDRESS GRAND & CHRISTIANIA ST., MOONACHIE, NJ 07074

WELL LOCATION 55 KNICKERBOCKER RD., MOONACHIE TWSP., BERGEN CO.
Street & No., Township, County

MW-1, LOT 3 & BLK 67 (26:03.856)
Well No., Lot & Block No., Longitude & Latitude (N.J. Grid # may be substituted for longitude & latitude)

TYPE OF WELL ABANDONED: MONITORING

REASON FOR ABANDONMENT: MONITORING PROGRAM COMPLETED.

WAS A NEW WELL DRILLED? ☐ YES ☑ NO PERMIT # OF NEW WELL: _____

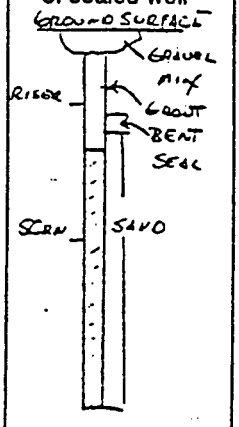
TOTAL DEPTH OF WELL 15'
DIAMETER 4"
CASING LENGTH 5'
SCREEN LENGTH 10'
NUMBER OF CASINGS 1

MATERIAL USED TO SEAL WELL:

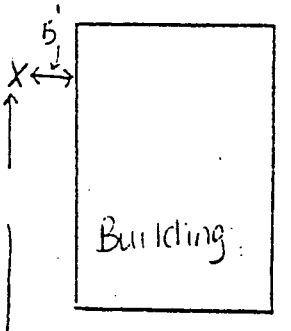
6 Gallons of Water
94 Lbs. of Cement
10 Lbs. of Bentonite
125 Lbs. of Sand/Gravel
(none if well is contaminated)

FORMATION: ___ Consolidated ✓ Unconsolidated

Cross-section of sealed well



Draw a sketch showing distance and relations of well site to nearest roads, buildings, etc.



Knickerbocker Rd
N

To permit adequate grouting, the casing should remain in place, but ungrouted liner pipes or any other obstructions must be removed. Pressure grouting is the only accepted method.

WAS CASING LEFT IN PLACE? ☑ YES ☐ NO CASING MATERIAL: PVC

WERE OTHER OBSTRUCTIONS REMOVED? ☐ YES ☐ NO WHAT WERE THE OBSTRUCTIONS: _____

I certify that this well was sealed in accordance with N.J.A.C. 7:9-9.1 et seq.

Name of Person Doing Sealing Work (Print or Type)

P.O. BOX 1747 HAINESPORT NJ 08036
Address

9-4-91
Mailing Date

WILLIAM A. SHINN JR.
Signature of Person Doing Sealing Work

1289
License #

COPIES: White - Water Allocation Yellow - Owner Pink - Health Dept. Goldenrod - Driller

DWR-020
8/89

New Jersey Department of Environmental Protection
Division of Water Resources — Bureau of Water Allocation

WELL ABANDONMENT REPORT

MAIL TO:

Bureau of Water Allocation
CN 029
Trenton, NJ 08625

SEP 09

WELL PERMIT # 2620341-3
of well sealed

DATE WELL SEALED 8-29-91

PROPERTY OWNER Knickerbocker Enterprises

ADDRESS Grant & Christiania St. Moonachie NJ 07074

WELL LOCATION 55 Knickerbocker Rd. Moonachie Twsp. Bergen Co.
Street & No., Township, County

MW-2, Lot 3, Block 67 NJ Grid# 26:03:856
Well No., Lot & Block No., Longitude & Latitude (N.J. Grid # may be substituted for longitude & latitude)

TYPE OF WELL ABANDONED: Monitoring

REASON FOR ABANDONMENT: Monitoring Program Completed

WAS A NEW WELL DRILLED? ☐ YES ☑ NO PERMIT # OF NEW WELL: _____

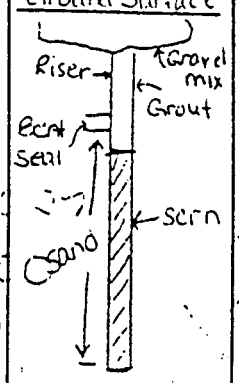
TOTAL DEPTH OF WELL 12.5'
DIAMETER 4"
CASING LENGTH 2.5'
SCREEN LENGTH 10'
NUMBER OF CASINGS 1

MATERIAL USED TO SEAL WELL:

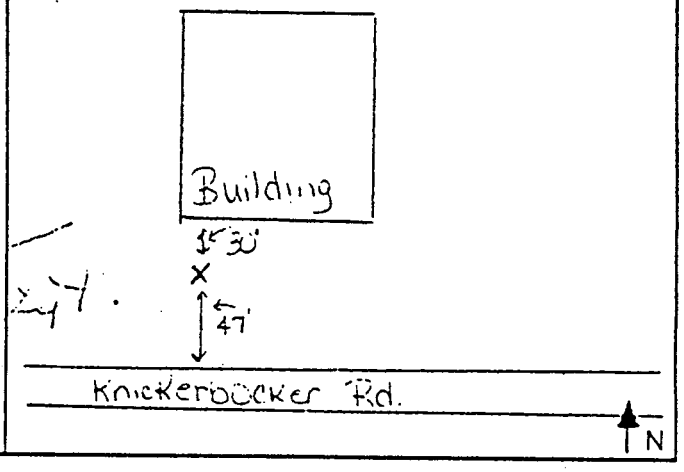
6 Gallons of Water
94 Lbs. of Cement
10 Lbs. of Bentonite
125 Lbs. of Sand/Gravel
(none if well is contaminated)

FORMATION: ___ Consolidated
✓ Unconsolidated

Cross-section of sealed well



Draw a sketch showing distance and relations of well site to nearest roads, buildings, etc.



To permit adequate grouting, the casing should remain in place, but ungrouted liner pipes or any other obstructions must be removed. Pressure grouting is the only accepted method.

WAS CASING LEFT IN PLACE? ☑ YES ☐ NO CASING MATERIAL: PVC

WERE OTHER OBSTRUCTIONS REMOVED? ☐ YES ☐ NO WHAT WERE THE OBSTRUCTIONS: _____

I certify that this well was sealed in accordance with N.J.A.C. 7:9-9.1 et seq.

William A Shinn Jr. — Name of Person Doing Sealing Work (Print or Type)

P.O. Box 747 Hainesport NJ 08036 — Address

9-4-91 — Mailing Date

Signature of Person Doing Sealing Work

1289 — License #

COPIES: *White - Water Allocation* *Yellow - Owner* *Pink - Health Dept.* *Goldenrod - Driller*

ATTACHMENT 3

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

EVALUATION OF FLOOR DRAIN REPORT

ENVIRO SCIENCES, INC.

EVALUATION OF FLOOR DRAIN

Pantone, Inc. Facility
55 Knickerbocker Road
Moonachie, New Jersey

I. BACKGROUND INFORMATION

A floor drain is located in the northwest corner of the subject facility, presently occupied by Pantone, Inc. The drain is approximately 6" in diameter and feeds into a cast iron discharge pipe, located 15" below the surface of the concrete floor. The discharge point of the underground piping was not known, but the plumbing techniques utilized suggested that the underground piping headed in the northwest direction, towards an existing exit (refer to Attachment 3 of the ECRA-SES; Figure 2).

The past occupant of this portion of the building was the Esselte Letraset Corporation, which leased a part of the building from 1973 to 1979, to manufacture marking pens. The corporation utilized the space in question to store inks and dyes for use as filling material in the pens. Pantone, Inc., the present occupants, use the space to operate a quality control and textile laboratory, where colors and dyes are mixed to produce new pigments. In the initial notice submitted to the NJDEPE on October 27, 1992, Pantone, Inc. has certified that it has never used the floor drain; however, no individual was able to make that certification from the Letraset Corporation. At the request of the NJDEPE case manager, Janice Bolden, a further evaluation of the drainage system, including sampling at the discharge point, would be required for ECRA compliance.

The following narrative details the field operations undertaken to determine the discharge point of the floor drain and the sampling event to determine if any discharges had been made to the environment.

II. THE FLOOR DRAINAGE SYSTEM EVALUATION

On December 3, 1992, Enviro-Sciences, Inc. (ESI) cored through the concrete floor approximately one foot from the floor drain to determine the exact direction of the underground piping. The path of the piping was found to travel in a northern direction at approximately a 20 degree angle from that which was originally surmised (see Figure 1 of Appendix A). An access hole was made in the top of the cast iron piping and was snaked 22 feet before encountering soil.

The discharge point of the floor drainage system was determined by removing the asphalt and the soil in the parking area alongside the building with a backhoe. The underground piping was found to exit the boundary of the building at a depth of approximately one foot below the asphalt parking area as shown in Appendix A Figure 1. After the soil directly below the outfall

point was sampled further soil was removed to determine if there existed additional underground piping associated with the drainage system. A six foot by 10 foot area to a depth of three feet was removed. There was no evidence of broken cast iron piping, nor was there any sight of additional underground piping which would lead to a dry well or a seepage pit. The drainage system therefore discharged directly to the soil adjacent to the building beneath the paved parking area. It appeared as if the drainage system was intended to discharge to a dry well, but the project was aborted for an unknown reason.

The soil beneath the paved parking area consisted of fill material with coarse sand and silt. This area also contained a considerable amount of debris, consisting of bricks, pieces of lumber, and concrete chips, most likely left from the construction of the building. ESI obtained one soil sample, at peril, just beneath the outfall point of the discharge pipe, at a depth of 14-18 inches below grade. A soil log for this sample is enclosed in Appendix B. The sample was taken to Environmental Consultants Research Analytical (ECRA) Laboratories (NJDEPE Certification #14580) and analyzed for petroleum hydrocarbons (PHC), base neutrals plus a forward library search (BN+15), volatile organics plus a forward library search (VO+15), and 13 priority pollutant metals.

The existing excavation was promptly filled in and leveled once the soil sample was taken.

III. EVALUATION OF SOIL BENEATH THE DISCHARGE PIPE

The analytical results from the sole soil sample (A01) was compared to the NJDEPE's proposed cleanup standards of February 3, 1992, for residential and subsurface soil. The analytical results indicate that PHC exists in the soil at 111 parts per million (ppm). Furthermore, the results indicate the soil did not exceed the established cleanup standards for any individual compound for base neutral extractables, volatile organics, or the 10,000 ppm aggregate standard for total organic material. Sample A01 was analyzed for 13 priority pollutant metals in which beryllium (at 2.32 ppm) and cadmium (at 1.78 ppm) slightly exceeded the established cleanup standards of 2.0 ppm and 1.0 ppm respectively. The remaining metals were below the ECRA cleanup guidelines.

The analytical results of this sampling location is summarized in Table 1 of Appendix C, the laboratory data sheets and QA/QC data can be found in Appendix D and E, respectively.

IV. PRESENT STATUS OF THE FLOOR DRAIN

The floor drain has since been decommissioned as it served no functional purpose. ESI personnel sealed the drain and filled a portion of the discharge pipe with cement to prevent any accidental discharges to the environment.

V. CONCLUSION

The property located at 55 Knickerbocker Road in Moonachie, New Jersey, is located within an industrial area of the borough. The land is a filled in swampland, and is part of the New Jersey Meadowlands. Historically, much of the soil in this area was prepared for construction of industrial complexes by trucking in soil and fill material without much regard to its environmental quality.

The analytical results from the soil sample taken at the discharge point of the drainage system revealed levels of beryllium and cadmium at 2.32 and 1.78 ppm, which slightly exceed the NJDEPE's proposed soil standards for residential property. Conspicuously missing from the analytical results were any significant levels of volatile organic compounds, lead, copper, or chromium, which are often found in dyes and pigments. This fact tends to support the assertion that the floor drain has not been used to intentionally or accidentally discharge pigments and/or wastes.

In conclusion, ESI does not regard these low levels of beryllium and cadmium as a threat to human health or the environment. Furthermore, the low concentrations of metals, which are above the cleanup standards, may be attributed to the fill material previously used to prepare the site for construction. This may be an area-wide condition of the meadowlands industrial area.

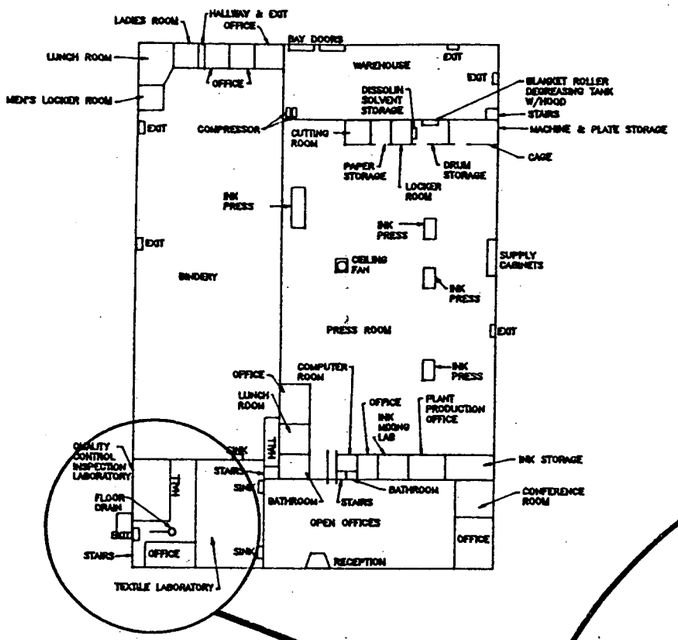
ESI submits this data report to fulfill the requirements of the ECRA investigation of the Pantone, Inc. facility and does not propose any further investigation of the drainage system.

(CK93004b)

APPENDIX A

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

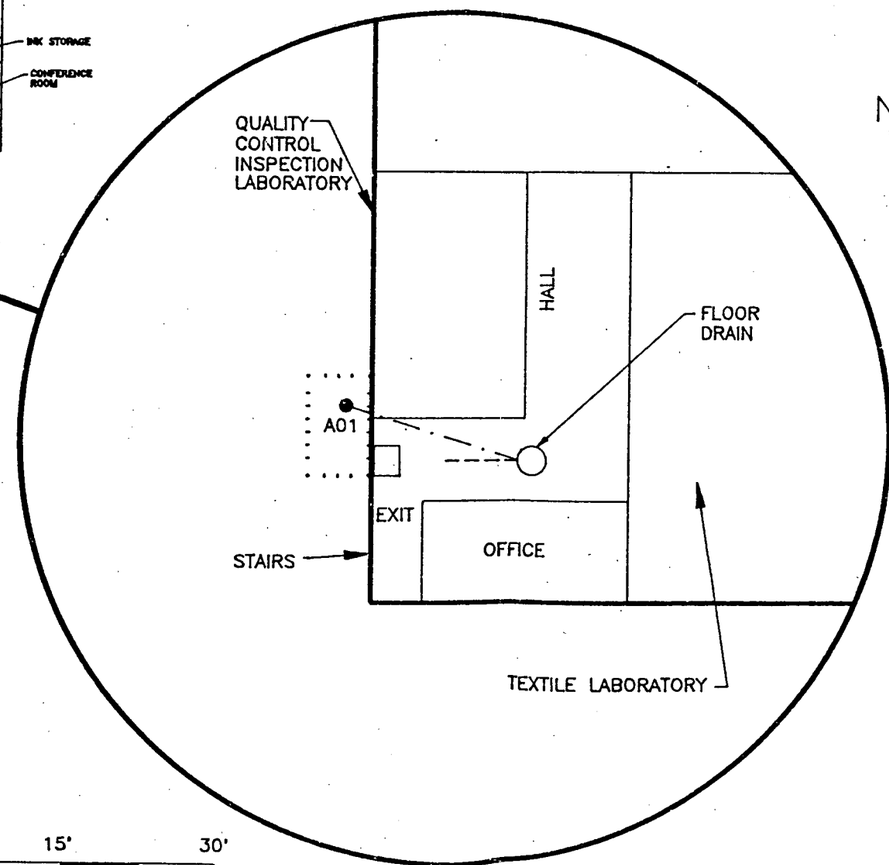
FIGURE 1



Sb	ANTIMONY	Pb	LEAD
As	ARSENIC	Hg	MERCURY
Be	BERYLLIUM	Ni	NICKEL
Cd	CADMIUM	Se	SELENIUM
Cr	CHROMIUM	Ag	SILVER
Cu	COPPER	Tl	THALLIUM
		Zn	ZINC

LEGEND

- - - - SUSPECTED PATH OF THE DRAINAGE SYSTEM
——— EXTERIOR WALL
· · · · · · BOUNDARY OF SOIL REMOVAL
— · — ACTUAL PATH OF DRAINAGE SYSTEM
● SAMPLE LOCATION
* DENOTES SAMPLING RESULTS ARE BELOW THE NJDEPE PROPOSED RESIDENTIAL SURFACE SOIL CLEANUP STANDARDS
ND NOT DETECTED
VOA VOLATILE ORGANIC COMPOUNDS
BN BASE NEUTRAL / SEMIVOLATILE COMPOUNDS
PHC PETROLEUM HYDROCARBONS



A01	PHC	BN	VOA	TOTAL ORGANICS
14–18"	111	*	*	140.9 *

METAL RESULTS	A01
Sb	ND*
As	0.808*
Be	2.32
Cd	1.78
Cr	18.9*
Cu	26.5*
Pb	24.8*
Hg	0.214*
Ni	29.6*
Se	ND*
Ag	ND*
Tl	ND*
Zn	72.3*

N

NOTES: (1) THE UNDERGROUND PIPING EXISTS AT A DEPTH OF APPROXIMATELY ONE FOOT BELOW THE ASPHALT PARKING LOT

(2) ALL SAMPLE RESULTS ARE REPORTED IN PARTS PER MILLION (PPM).

0 60' 120'

FIGURE 1

PANTONE INC.

ENVIRO–SCIENCES, INC.

FLOOR DRAIN SAMPLING RESULTS

KNICKER
KNI93006
01–06–93

APPENDIX B

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

SOIL LOG

ENVIRO SCIENCES, INC.

ENVIRO SCIENCES, INC.

SOIL LOG

Project: PANTONE INC./ECRA
Location: 55 KNICKERBOCKER ROAD
MOONACHIE, NEW JERSEY

project #: 92-032
date: 12/03/92
boring #: A01
sampling device: HAND TROWEL
depth to water: NA feet
logged by: C KLEIN

Depth (ft)	Sample Number	Soil Graph	Soil Description
SURFACE			
0			Asphalt 0-3"
1	A01		Coarse sand, silt, with construction debris (ie. bricks, wood splints and concrete) 14-18"
2			
3			NOTE: This sample was taken from soil directly below the discharge point of the drainage system.
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			

APPENDIX C

PANTONE, INC.
MOONACHIE, NEW JERSEY
ECRA CASE #92617

TABLE 1

Table 1

Pantone Inc. - ECRA Case #92617

Soil Sampling Results - drainage system

Sample ID #				A01	FB	MB-PHC	MB-METALS	MB-VOA	MB-VOA	MB-BN
Location #	RESIDENTIAL SURFACE (<24") SOIL STANDARDS	NON RESIDENTIAL SURFACE (<24") SOIL STANDARDS	SUBSURFACE (>24") SOIL STANDARDS	--	--	--	--	--	--	--
Depth (inches)				14-18	--	--	--	--	--	--
Sample Date				12/03/92	12/03/92	--	--	--	--	--
PPM (mg/kg)										
Analysis Date	--	--	--	12/17-24/92	--	--	12/17-24/92	--	--	--
Antimony	14	340	NLE	ND	NA	NA	ND	NA	NA	NA
Arsenic	20	20	NLE	0.808	NA	NA	ND	NA	NA	NA
Beryllium	2	2	NLE	2.320	NA	NA	ND	NA	NA	NA
Cadmium	1	100	NLE	1.780	NA	NA	ND	NA	NA	NA
Chromium	NLE	NLE	NLE	18.900	NA	NA	ND	NA	NA	NA
Copper	600	600	NLE	26.500	NA	NA	ND	NA	NA	NA
Lead	100	600	NLE	24.800	NA	NA	ND	NA	NA	NA
Mercury	14	260	NLE	0.214	NA	NA	ND	NA	NA	NA
Nickel	250	2,400	NLE	29.600	NA	NA	ND	NA	NA	NA
Selenium	1	1000	NLE	ND	NA	NA	ND	NA	NA	NA
Silver	40	1000	NLE	ND	NA	NA	ND	NA	NA	NA
Thallium	2	2	NLE	ND	NA	NA	ND	NA	NA	NA
Zinc	1,500	1,500	NLE	72.300	NA	NA	ND	NA	NA	NA
VO+15 (mg/kg)										
Analysis Date	--	--	--	12/11/92	12/09/92	--	--	12/09/92	12/11/92	--
Priority Pollutant VO										
Chloromethane	520	1,000	10	ND	ND	NA	NA	ND	ND	NA
Bromomethane	790	1,000	1	ND	ND	NA	NA	ND	ND	NA
Vinyl Chloride	2	7	1	ND	ND	NA	NA	ND	ND	NA
Chloroethane	NLE	NLE	NLE	ND	ND	NA	NA	ND	ND	NA
Methylene Chloride	49	170	10	0.017 B	0.007 B	NA	NA	0.002 J	0.008	NA
Trichlorofluoromethane	NLE	NLE	NLE	0.003 J	ND	NA	NA	ND	ND	NA
1,1-Dichloroethene	51	940	10	ND	ND	NA	NA	ND	ND	NA
1,1-Dichloroethane	1,000	1,000	1	0.003 J	ND	NA	NA	ND	ND	NA
Trans-1,2-Dichloroethylene	960	10,000	50	0.007	ND	NA	NA	ND	ND	NA
Chloroform	19	28	1	0.005 J	ND	NA	NA	ND	ND	NA
1,2-Dichloroethane	6	24	1	ND	ND	NA	NA	ND	ND	NA
1,1,1-Trichloroethane	210	3800	50	0.002 J	ND	NA	NA	ND	ND	NA
Carbon Tetrachloride	2	4	1	0.002 J	ND	NA	NA	ND	ND	NA
Bromodichloromethane	5	22	1	0.007	ND	NA	NA	ND	ND	NA
1,2-Dichloropropane	NLE	NLE	NLE	ND	ND	NA	NA	ND	ND	NA
cis & trans-1,3-Dichloropropene	4	5	1	ND	ND	NA	NA	ND	ND	NA
2-Chloroethyl vinyl ether	NLE	NLE	NLE	ND	ND	NA	NA	ND	ND	NA
Trichloroethylene	NLE	NLE	NLE	ND	ND	NA	NA	ND	ND	NA
Dibromochloromethane	110	1,000	1	ND	ND	NA	NA	ND	ND	NA
1,1,2-Trichloroethane	23	420	1	ND	ND	NA	NA	ND	ND	NA
Benzene	3	13	1	ND	ND	NA	NA	ND	ND	NA
Bromoform	86	370	1	ND	ND	NA	NA	ND	ND	NA

Table 1

Pantone Inc. - ECRA Case #92617

Soil Sampling Results - drainage system

Sample ID #				A01	FB	MB-PHC	MB METALS	MB-VOA	MB-VOA	MB-BN
Location #	RESIDENTIAL SURFACE (<24") SOIL STANDARDS	NON RESIDENTIAL SURFACE (<24") SOIL STANDARDS	SUBSURFACE (>24") SOIL STANDARDS	--	--	--	--	--	--	--
Depth (inches)				14-18	--	--	--	--	--	--
Sample Date				12/03/92	12/03/92	--	--	--	--	--
Tetrachloroethylene	9	37	1	ND	ND	NA	NA	ND	ND	NA
1,1,2,2-Tetrachloroethane	34	70	1	ND	ND	NA	NA	ND	ND	NA
Toluene	1,000	1,000	500	0.005 JB	ND	NA	NA	ND	0.003 JB	NA
Chlorobenzene	37	690	1	ND	ND	NA	NA	ND	ND	NA
Ethylbenzene	1,000	1,000	100	ND	ND	NA	NA	ND	ND	NA
M,O,P-Xylene	360	6,300	10	ND	ND	NA	NA	ND	ND	NA
1,2-Dichlorobenzene	5,100	10,000	50	ND	ND	NA	NA	ND	ND	NA
1,3-Dichlorobenzene	5,100	10,000	100	ND	ND	NA	NA	ND	ND	NA
1,4-Dichlorobenzene	280	1,200	100	ND	ND	NA	NA	ND	ND	NA
TOTAL PRIORITY POLLUTANT VO	--	--	--	0.051	0.007	NA	NA	0.002	0.011	NA
Library VO Compounds										
2-Propanone	1,000	1,000	50	ND	ND	NA	NA	ND	ND	NA
TOTAL LIBRARY SEARCH VO	--	--	--	0.000	0.000	NA	NA	0.000	0.000	NA
TOTAL VO COMPOUNDS	--	--	--	0.051	0.007	NA	NA	0.002	0.011	NA
BN+15										
Extraction Date	--	--	--	12/09/92	--	--	--	--	--	12/09/92
Priority Pollutant BN										
bis(2-Chloroethyl)Ether	1	3	1	0.190 J	NA	NA	NA	NA	NA	ND
1,3-Dichlorobenzene	5,100	10,000	100	ND	NA	NA	NA	NA	NA	ND
1,4-Dichlorobenzene	280	1,200	100	ND	NA	NA	NA	NA	NA	ND
N-Nitrosodimethylamine	NLE	NLE	NLE	ND	NA	NA	NA	NA	NA	ND
1,2-Dichlorobenzene	5,100	10,000	50	ND	NA	NA	NA	NA	NA	ND
bis(2-Chloroisopropyl)ether	2,300	10,000	10	ND	NA	NA	NA	NA	NA	ND
N-Nitroso-Di-n-propylamine	0.66	0.66	1	ND	NA	NA	NA	NA	NA	ND
Hexachloroethane	1,700	10,000	100	ND	NA	NA	NA	NA	NA	ND
Nitrobenzene	1	520	50	ND	NA	NA	NA	NA	NA	ND
Isophorone	1,100	10,000	10	ND	NA	NA	NA	NA	NA	ND
bis(2-Chloroethoxy)methane	NLE	NLE	NLE	ND	NA	NA	NA	NA	NA	ND
1,2,4-Trichlorobenzene	1,100	10,000	100	ND	NA	NA	NA	NA	NA	ND
Naphthalene	230	4,200	100	ND	NA	NA	NA	NA	NA	ND
Hexachlorobutadiene	11	210	50	ND	NA	NA	NA	NA	NA	ND
Hexachlorocyclopentadiene	400	7,300	100	ND	NA	NA	NA	NA	NA	ND
2-Chloronaphthalene	NLE	NLE	NLE	ND	NA	NA	NA	NA	NA	ND
Dimethylphthalate	10,000	10,000	50	ND	NA	NA	NA	NA	NA	ND
Acenaphthylene	NLE	NLE	NLE	0.141 J	NA	NA	NA	NA	NA	ND
2,6-Dinitrotoluene	NLE	NLE	NLE	ND	NA	NA	NA	NA	NA	ND
Acenaphthene	3,400	10,000	100	ND	NA	NA	NA	NA	NA	ND

Table 1
Pantone Inc. - ECRA Case #92617
Soil Sampling Results - drainage system

Sample ID #				A01		FB	MB-PHC	MB-METALS	MB-VOA	MB-VOA	MB-BN
Location #	RESIDENTIAL SURFACE (<24") SOIL STANDARDS	NON RESIDENTIAL SURFACE (<24") SOIL STANDARDS	SUBSURFACE (>24") SOIL STANDARDS	--		--	--	--	--	--	--
Depth (inches)				14-18		--	--	--	--	--	--
Sample Date				12/03/92		12/03/92	--	--	--	--	--
Benzidine	NLE	NLE	NLE	ND		NA	NA	NA	NA	NA	ND
2,4-Dinitrotoluene	1	4	10	ND		NA	NA	NA	NA	NA	ND
Diethylphthalate	10,000	10,000	50	ND		NA	NA	NA	NA	NA	ND
4-Chlorophenyl-phenylether	NLE	NLE	NLE	ND		NA	NA	NA	NA	NA	ND
Fluorene	2,300	10,000	100	ND		NA	NA	NA	NA	NA	ND
N-Nitrosodiphenylamine	140	590	100	ND		NA	NA	NA	NA	NA	ND
4-Bromophenyl-phenylether	NLE	NLE	NLE	ND		NA	NA	NA	NA	NA	ND
Hexachlorobenzene	0.42	2	50	ND		NA	NA	NA	NA	NA	ND
Phenanthrene	NLE	NLE	NLE	0.131	J	NA	NA	NA	NA	NA	ND
Anthracene	10,000	10,000	500	0.102	J	NA	NA	NA	NA	NA	ND
Di-n-butylphthalate	5,700	10,000	100	ND		NA	NA	NA	NA	NA	ND
Fluoranthene	2,300	10,000	500	0.389		NA	NA	NA	NA	NA	ND
Pyrene	1,700	10,000	500	0.637		NA	NA	NA	NA	NA	ND
Butylbenzylphthalate	10,000	10,000	100	ND		NA	NA	NA	NA	NA	ND
3,3'-Dichlorobenzidine	2	7	100	ND		NA	NA	NA	NA	NA	ND
Benzo(a)anthracene	0.66	2.5	500	0.365		NA	NA	NA	NA	NA	ND
Chrysene	0.66	2.5	500	0.398		NA	NA	NA	NA	NA	ND
bis(2-Ethylhexyl)phthalate	49	210	100	0.532		NA	NA	NA	NA	NA	ND
Di-n-octylphthalate	1,100	10,000	100	ND		NA	NA	NA	NA	NA	ND
Benzo(b)fluoranthene	0.66	2.5	500	0.372		NA	NA	NA	NA	NA	ND
Benzo(k)fluoranthene	0.66	2.5	500	0.338		NA	NA	NA	NA	NA	ND
Benzo(a)pyrene	0.66	0.66	100	0.333		NA	NA	NA	NA	NA	ND
Indeno(1,2,3-cd)pyrene	0.66	2.5	500	0.091	J	NA	NA	NA	NA	NA	ND
Dibenzo(a,h)anthracene	0.66	0.66	500	ND		NA	NA	NA	NA	NA	ND
Benzo(g,h,i)perylene	0.66	2.5	500	0.107	J	NA	NA	NA	NA	NA	ND
4-Chloroaniline	NLE	NLE	NLE	ND		NA	NA	NA	NA	NA	ND
Dibenzofuran	NLE	NLE	NLE	ND		NA	NA	NA	NA	NA	ND
TOTAL PRIORITY POLLUTANT BN	--	--	--	4.126		NA	NA	NA	NA	NA	0.000
Library BN Compounds											
Tetrachloroethane				1.000		NA	NA	NA	NA	NA	0.016
Unknown Phenol Containing Compound				14.430		NA	NA	NA	NA	NA	ND
Tetramethylbutyl Phenol Isomer				5.400		NA	NA	NA	NA	NA	ND
Unknown				3.630		NA	NA	NA	NA	NA	0.006
Benzofluroene Isomer				1.200		NA	NA	NA	NA	NA	ND
Octamethyltetrasiloxane				ND		NA	NA	NA	NA	NA	0.008
TOTAL LIBRARY SEARCH BN	--	--	--	25.660		NA	NA	NA	NA	NA	0.030
TOTAL BN COMPOUNDS	--	--	--	29.786		NA	NA	NA	NA	NA	0.030
Total PHC (mg/kg)				111.000		NA	18.000	NA	NA	NA	NA
Analysis Date				12/04/92		--	12/04/92	--	--	--	--

Exhibit F

ENVIRO SCIENCES, INC.
HEADQUARTERS
111 HOWARD BOULEVARD, SUITE 108
MOUNT ARLINGTON, N.J. 07856
(201) 398-8183 • FAX (201) 398-8037

JAN 26 1993

January 21, 1993

Mr. Ken Smith
Pantone, Inc.
55 Knickerbocker Road
Moonachie, New Jersey 07074

RE: NJDEPE Withdrawal of Proposed Cleanup Standards

Dear Mr. Smith:

In the course of our communications with the New Jersey Department of Environmental Protection and Energy, we have been advised that the Agency is planning to withdraw the "Cleanup Standards for Contaminated Sites", proposed on February 3, 1992. This event is expected to occur within the next two weeks and will be accompanied by issuance of a new proposal containing substantially modified standards.

We have been led to believe that some of the numerical soil and groundwater standards will be higher than those in the existing proposal, while others will be lower. Extensive procedural changes are also anticipated. At this time, we cannot be specific regarding the likely effect of the these events on your operation, but plan to monitor this situation and will keep you fully apprised of all new developments.

Please feel free to contact me at (201) 398-8183 should you have any questions.

Very truly yours,
ENVIRO-SCIENCES, INC.

Christopher Klein
Project Manager

CK/pls cleanup3

[Exhibit G]

ENVIRO SCIENCES, INC.
HEADQUARTERS
111 HOWARD BOULEVARD, SUITE 108
MOUNT ARLINGTON, N.J. 07856
(201) 398-8183 • FAX (201) 398-8037

February 22, 1993
Airborne Express

Joseph Nowak
NJDEPE/BEECRA
401 East State Street - 5th Floor
Trenton, New Jersey 08608

RE: Negative Declaration Affidavit
Pantone, Inc.
55 Knickerbocker Road
Moonachie, New Jersey 07074
ECRA Case #92617

Dear Mr. Nowak:

On behalf of the Pantone, Inc., Enviro-Sciences, Inc. is submitting a completed and notarized Negative Declaration Affidavit. This document is the final step in completing the ECRA process. Also enclosed are a fee submittal form and a check in the amount of $500 to cover the Negative Declaration review fees.

If you have any questions or comments, please do not hesitate to call me at (201) 398-8183.

Sincerely yours,

ENVIRO-SCIENCES, INC.

Christopher D. Klein
Project Manager

Enclosures

cc: Michael Fondo - Knickerbocker Enterprises
Ken Smith - Pantone, Inc.

CDK/lh (CK93047b)

ECRA-011
Rev. 12/86

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECITON
INDUSTRIAL SITE EVALUATION ELEMENT

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

FEE SUBMITTAL FORM

THIS FORM MUST BE RETURNED WITH ANY APPLICATION OR FILING

Case # (if known) 92617

Case Name (Active Cases) Pantone, Inc.

Name of Business/Owner for Applicability Determination Pantone, Inc.

Check drawn from account of National Community Bank Check/M.O.# 1322

Amount enclosed $500 of N.J.

PUT AN "X" IN THE APPROPRIATE PAYMENT BLOCK(S)

	Normal Fee	ACTIVITY	Small Business Fee	
		Initial Notice Review		
☐	$ 2,000	without a Sampling Plan	$ 750	☐
☐	$ 3,000	with Sampling Plan with UGT analysis. No GW monitoring	$ 1,500	☐
☐	$ 5,000	with Sampling Plan other than 2 above or 4 below	$ 3,000	☐
☐	$ 7,500	with Sampling Plan that includes GW monitoring	$ 4,500	☐
☐	$ 1,000	Sampling Data Review	$ 1,000	☐
☒	$ 500	Negative Declaration Review	$ 250	☐
		Cleanup Plan Review *(Based on Cost)*		
☐	$ 1,000	$1 - $9,999	$ 1,000	☐
☐	$ 2,500	$10,000 - $99,999	$ 2,500	☐
☐	$ 5,000	$100,000 - $499,999	$ 5,000	☐
☐	$ 8,000	$500,000 - $999,999	$ 8,000	☐
☐	$11,000	over $1,000,000	$11,000	☐
		Cleanup Oversight Plan *(Based on Cost)*		
☐	$ 1,000	$1 - $9,999	$ 1,000	☐
☐	$ 3,000	$10,000 - $99,999	$ 3,000	☐
☐	$ 7,000	$100,000 - $499,999	$ 7,000	☐
☐	$10,000	$500,000 - $999,999	$10,000	☐
☐	$12,000	over $1,000,000	$12,000	☐
		Other		
☐	$ 200	Applicability Determination	$ 200	☐
☐	$ 300	Deminimus Quantity Exemption	$ 300	☐
☐	$ 500	Limited Conveyance Review	$ 250	☐
☐	$ 2,000	Administrative Consent Order	$ 2,000	☐
☐	$ 500	Amendment to ACO	$ 500	☐
☐	$ 350	Confidentiality Claim	$ 350	☐

OFFICE USE ONLY

BEAC No.

FORM IA.

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT
NEGATIVE DECLARATION AFFIDAVIT

1. Industrial Establishment: Pantone, Inc.

Facility Address: 55 Knickerbocker Road
Moonachie, New Jersey 07074

Municipality: Moonachie

County: Bergen

Tax Block(s): 67

Tax Lot(s): 3

ECRA Case No.: #92617

ECRA Trigger(s)/ Transaction(s): Cessation of operations

Seller(s): _____

Buyer(s): _____

2. I Michael Garin (Name), as Senior Vice President (Business Entity Affiliation/Title) of the above industrial establishment, have specific knowledge of the operations of Pantone, Inc. (Industrial Establishment) and

3. hereby state that:

X a. there have been no discharge(s) or spill(s) of hazardous substances and wastes on site.

___ b. any discharge(s) or spill(s) of hazardous substances and wastes on or from the industrial establishment have been cleaned up to the current satisfaction of the Department.

4. I also state that:

X a. there remain no hazardous substances and wastes on the industrial establishment.

___ b. the hazardous substances and wastes to remain on the industrial establishment are those as certified in the Initial Notice (ECRA 1 and 2) dated _____ and supplements thereto.

FORM IB.
TWO-PART CERTIFICATIONS

PART A

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13

Printed Name Michael Garin Title Senior Vice President

Signature Michael Garin Date 2/17/93

Sworn and Subscribed Before Me
on this 17
Date of February 1993

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
My Commission Expires June 10, 1983

PART B

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-13

Printed Name Lawrence Herbert Title Chief Executive Officer

Signature Date 2/17/93

Sworn and Subscribed Before Me
on this 17
Date of February 1993

Notary

SHELLEE SUE GERO
Notary Public of New Jersey
No. 2041491
My Commission Expires June 10, 1983

Exhibit H. KS

February 3, 1993

Mr. Chris Klein
Enviro Sciences, Inc.
111 Howard Boulevard, Suite 108
Mount Arlington, NJ 07856

Dear Chris:

Enclosed is a faxed copy of the hazardous waste manifest for the final shipment of hazardous material from Pantone. Please note that this manifest is for 55 Knickerbocker Road in Moonachie.

I trust that this information, along with the negative declaration, will complete Pantone's involvement in the ECRA process.

Best regards,

Kenneth W. Smith
Director - Print Operations

KWS/ck

Enclosures

48-14-1 (3/89)—7f

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NJD001253384 — Manifest Document No.: 00002
2. Page 1 of 1 — Information in the shaded areas is not required by Federal Law.

A. State Manifest Document No.: NYB 426291 3

3. Generator's Name and Mailing Address
PANTONE, INC.
55 KNICKERBOCKER ROAD MOONACHIE, NJ 07074

4. Generator's Phone (201) 935-5500

B. State Generator's ID: same

5. Transporter 1 (Company Name): HAZ-MAT ENVIRONMENTAL GROUP, INC.
6. US EPA ID Number: NYD980769947

C. State Transporter's ID: NY 4077P
D. Transporter's Phone (716) 827-7200

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
NORTHEAST ENVIRONMENTAL SERVICES, INC.
CANAL ROAD
WAMPSVILLE, NY 13163

10. US EPA ID Number: NYD057770109

G. State Facility's ID:
H. Facility's Phone (315) 697-3979

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers	13. Total Quantity	14. Unit Wt./Vol.	I. Waste No.
a. WASTE FLAMMABLE LIQUID, N.O.S. FLAMMABLE LIQUID UN 1993 (D001)RQ	004 DM	00220	G	EPA F002 D001 STATE
b.				EPA STATE
c.				EPA STATE
d.				EPA STATE

J. Additional Descriptions for Materials listed Above
PETROLEUM DISTILLATES

K. Handling Codes for Wastes Listed Above
a. B c.
b. d.

15. Special Handling Instructions and Additional Information
EMERGENCY RESPONSE # 201-589-0900
a) 8091-H-A007 RQ-100 lbs.
8091-2-93

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 internal and national government regulations and/or [illegible] regulations.
If I am a large quantity generator, I certify that I have 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 generator I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Mo. Day Year
NELSON CAPOTE	[signature]	01 27 93

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Year
RONALD Briggs	Ronald Briggs	01 27 93

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. 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	Mo. Day Year
Matthew P. Kyle	Matthew P. Kyle	01 28 93

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 1 - Disposer State - Mailed by TSD Facility

In case of emergency or spill immediately call the National Response Center (800) 424-8[illegible] Dept. of Environmental Conservation (518) 457-7362.

Exhibit I

ENVIRO SCIENCES, INC.
HEADQUARTERS
111 HOWARD BOULEVARD, SUITE 108
MOUNT ARLINGTON, N.J. 07856
(201) 398-8183 · FAX (201) 398-8037

March 31, 1993
Certified Mail

Mr. Michael Fondo
Knickerbocker Enterprises
500 West Commercial Avenue
Moonachie, New Jersey 07074

RE: Negative Declaration Approval

Dear Mr. Fondo:

Enviro-Sciences, Inc. is pleased to present you with the original Negative Declaration Approval issued to your establishment by the New Jersey Department of Environmental Protection and Energy (NJDEPE). This document completes the Environmental Cleanup Responsibility Act (ECRA) process and allows Pantone Inc. to legally cease operations at the 55 Knickerbocker Road facility.

If you have any questions or concerns, please do not hesitate to contact me. ESI appreciates the opportunity to work with you and your company and we look forward to assisting you with all your future environmental requirements.

Sincerely

ENVIRO-SCIENCES, INC.

Christopher D. Klein
Project Manager

Enclosure

cc: Ken Smith - Pantone Inc.

CDK/lh
(CK93138b)

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0028

RECEIVED
MAR 30 1993
ENVIRO-SCIENCES, INC.

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

MAR 25 1993

Michael Brogan
Enviro-Sciences, Inc.
111 Howard Blvd.
Mt. Arlington, NJ 07856

RE: Industrial Establishment: Pantone, Inc.
Location: 55 Knickerbocker Rd., Moonachie Borough, Bergen County
Block: 67 Lot: 3
ECRA Case # 92617
Transaction: Cessation of Operations
Negative Declaration by operator dated February 17, 1993

Dear Mr. Brogan:

Pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection and Energy (NJDEPE) by the Environmental Cleanup Responsibility Act (ECRA), (N.J.S.A. 13:1K-6 et seq.) and duly delegated to the Assistant Director of the Industrial Site Evaluation Element pursuant to N.J.S.A. 13:1B-4, the referenced Negative Declaration is hereby approved. This approval is based upon information provided in your Initial Notice as well as NJDEPE investigation of the site.

This approval shall be limited to the above referenced transaction only and shall not restrict or prohibit the NJDEPE or any other agency from taking regulatory action under any other statute, rule or regulation. By issuing this Negative Declaration, NJDEPE continues to reserve all rights to pursue any penalties allowable under the law for violations of the ECRA statute or regulations associated with this transaction.

Sincerely,

Kenneth T. Hart, Assistant Director
Industrial Site Evaluation Element

c: Guy Stark, Health Officer
Pantone, Inc.
Knickerbocker Associates
BUST, UST# 0186500, Case# 89-11-20-1511
BAC, UST# 0186500, Case# 89-11-20-1511

Exhibit J

LH, MG, SG/KS 012593

I received an ECRA update from Enviro Science (agent for Knickerbocker) today.

I called Chris Klein of Enviro Science to review the status of the ECRA.

The following are highlights of the ECRA process.

The lab analysis of soil samples from the textile lab area drain have been completed and sent to NJDEP. Attached is the Enviro Science conclusion related to the soil analysis. The news is good. The VOC results are below Federal and State standards.

V. CONCLUSION

The property located at 55 Knickerbocker Road in Moonachie, New Jersey, is located within an industrial area of the borough. The land is a filled in swampland, and is part of the New Jersey Meadowlands. Historically, much of the soil in this area was prepared for construction of industrial complexes by trucking in soil and fill material without much regard to its environmental quality.

The analytical results from the soil sample taken at the discharge point of the drainage system revealed levels of beryllium and cadmium at 2.32 and 1.78 ppm, which slightly exceed the NJDEPE's proposed soil standards for residential property. Conspicuously missing from the analytical results were any significant levels of volatile organic compounds, lead, copper, or chromium, which are often found in dyes and pigments. This fact tends to support the assertion that the floor drain has not been used to intentionally or accidentally discharge pigments and/or wastes.

In conclusion, ESI does not regard these low levels of beryllium and cadmium as a threat to human health or the environment. Furthermore, the low concentrations of metals, which are above the cleanup standards, may be attributed to the fill material previously used to prepare the site for construction. This may be an area-wide condition of the meadowlands industrial area.

ESI submits this data report to fulfill the requirements of the ECRA investigation of the Pantone, Inc. facility and does not propose any further investigation of the drainage system.

(CK93004b)

Exhibit K

AUG 28 1991

FYI

AA

GG

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 029
Trenton, NJ 08625-0029
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

AUG 22 1991

Mr. Ken Niepokoy
Pantone, Inc.
55 Knickerbocker Road
Moonachie, NJ 07074

RE: Pantone, Inc., 55 Knickerbocker Avenue
Moonachie, Bergen County
Case # 89-11-20-1511; UST # 0186500

Dear Mr. Niepokoy:

On August 10, 1990 and November 15, 1990 the New Jersey Department of Environmental Protection (the Department) received reports from your company. Additional information was received on August 7, 1991. These reports document the corrective action measures undertaken in response to the discharge from your underground storage tank system.

Based on our review of the information submitted, we find that you have complied with the Department's existing requirements regarding corrective action for the investigated underground storage tank system. Therefore, no further corrective action will be required at this time. Should the Department have further requirements in the future, you will be contacted at that time.

In addition, all monitoring wells installed as part of the investigation and corrective action of the discharge at your facility that you no longer plan to use for ground water monitoring must be sealed properly in accordance with the requirements of N.J.A.C. 7:9-9.1 et seq. by a licensed well driller certified to seal wells. The well abandonment forms must be completed and submitted to the Bureau of Water Allocation

Thank you for your cooperation in this matter.

Very truly yours,

Joseph A. Miller
Section Chief
Northern Tank Management Section
Bureau of Underground Storage Tanks

GWQM # 391: JCB
c: Stephen C. Tiffenger, Bergen Co. Dept. of Health Services
John Blankenship, Bureau of Underground Storage Tanks
Jennifer Burns, Intex, Inc.
Robert Mancini, Bureau of Water Allocation

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Recycled Paper

DEQ-094
9/91

Exhibit L

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

COMMUNITY RIGHT TO KNOW SURVEY FOR 1991

PART 1

to satisfy requirements under SARA, Title III, Section 312
and New Jersey Community Right to Know

Please type this form.

3 3 1 2 5 8 0 0 0 0 1--2 7 5 2--0 2 0 5 nic.

PANTONE INC

(CARLSTADT FACILITY)
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

Indicate changes to mailing address on the mailing label.

(A) FACILITY LOCATION

If the facility location is different than the address on the facility identification label on Part 2 or is not shown, enter the correct facility address below and correct the facility identification label.

(B) Does this facility use, store or produce any compressed gases, or any flammable, combustible, reactive, corrosive or toxic substances?

(See Reportable Substances and Thresholds) ☐ Yes ☒ No

(C) Briefly describe the nature of the operations or business conducted by your company at this facility:

Publication work - Printed Matter

(D) Number of employees at facility: 27

(E) *Number of facilities in New Jersey* 2

(F) *Dun and Bradstreet No.*

(G) Check the box if you have a R&D laboratory exemption or if you have attached a R&D exemption application. ☐

(H) CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature [signature] Date 2/14/92 Fax # (201) 935-4147 Phone # (201) 935-5501

Name (Type) Michael Garin Title Sr. Vice President

(I) POLICE AND FIRE DEPARTMENT — Enter the respective phone numbers, names and addresses (including Zip Code) of your local police and fire departments in the spaces below.

POLICE DEPT. Phone Number (201) 438-4300
Name Carlstadt Police Dept.
Address 500 Madison
Municipality Carlstadt Zip 07072

FIRE DEPT. Phone Number (201) 438-4300
Name Carlstadt Fire Department
Address 500 Madison
Municipality Carlstadt Zip 07072

(J) FACILITY EMERGENCY CONTACT

Name Michael Garin Title Sr. Vice President

Facility Phone Number (201) 935-5501 Emergency Contact Phone Number (908) 530-1096

NOTE: Make copies of this survey! The law requires that you send a copy to your COUNTY LEAD AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE AND YOUR LOCAL POLICE AND FIRE DEPARTMENTS.
(County agency and local committee addresses in Instructions)

Return original to: NJDEPE
COMMUNITY RIGHT TO KNOW
CN 405
Trenton, NJ 08625-0405

DEQ-094
9/91

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

COMMUNITY RIGHT TO KNOW SURVEY FOR 1991

PART 1

to satisfy requirements under SARA, Title III, Section 312
and New Jersey Community Right to Know

Please type this form.

3 3 1 2 5 8 0 0 0 0 1--2 7 5 2--0 2 0 5 nic.

PANTONE INC

(CARLSTADT FACILITY)
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

Indicate changes to mailing address on the mailing label.

(A) FACILITY LOCATION

If the facility location is different than the address on the facility identification label on Part 2 or is not shown, enter the correct facility address below and correct the facility identification label.

(B) Does this facility use, store or produce any compressed gases, or any flammable, combustible, reactive, corrosive or toxic substances?

(See Reportable Substances and Thresholds) ☐ Yes ☒ No

(C) Briefly describe the nature of the operations or business conducted by your company at this facility:

Publication work - Printed Matter

(D) Number of employees at facility: 27

(E) *Number of facilities in New Jersey* 2

(F) *Dun and Bradstreet No.*

(G) Check the box if you have a R&D laboratory exemption or if you have attached a R&D exemption application. ☐

(H) CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature Michael Garin Date 2/14/92 Fax # (201) 935-4147 Phone # (201) 935-5501

Name (Type) Michael Garin Title Sr. Vice President

(I) POLICE AND FIRE DEPARTMENT — Enter the respective phone numbers, names and addresses (including Zip Code) of your local police and fire departments in the spaces below.

POLICE DEPT. Phone Number (201) 438-4300
Name Carlstadt Police Dept.
Address 500 Madison
Municipality Carlstadt Zip 07072

FIRE DEPT. Phone Number (201) 438-4300
Name Carlstadt Fire Department
Address 500 Madison
Municipality Carlstadt Zip 07072

(J) FACILITY EMERGENCY CONTACT

Name Michael Garin Title Sr. Vice President

Facility Phone Number (201) 935-5501 Emergency Contact Phone Number (908) 530-1096

NOTE: Make copies of this survey! The law requires that you send a copy to your COUNTY LEAD AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE AND YOUR LOCAL POLICE AND FIRE DEPARTMENTS.
(County agency and local committee addresses in Instructions)

Return original to: NJDEPE
COMMUNITY RIGHT TO KNOW
CN 405
Trenton, NJ 08625-0405

9/91

DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

COMMUNITY RIGHT TO KNOW SURVEY FOR 1991

PART 1

to satisfy requirements under SARA, Title III, Section 312 and New Jersey Community Right to Know

Please type this form.

3 3 1 2 5 8 0 0 0 0--2 7 5 2--0 2 3 7

PANTONE INC

(MOONACHIE FACILITY)
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

Indicate changes to mailing address on the mailing label.

Ⓐ FACILITY LOCATION

If the facility location is different than the address on the facility identification label on Part 2 or is not shown, enter the correct facility address below and correct the facility identification label.

Ⓑ Does this facility use, store or produce any compressed gases, or any flammable, combustible, reactive, corrosive or toxic substances?

(See Reportable Substances and Thresholds) [X] Yes [ ] No

Ⓒ Briefly describe the nature of the operations or business conducted by your company at this facility:

Publication work - Printed matter

Ⓓ Number of employees at facility: 97

Ⓔ *Number of facilities in New Jersey* 2

Ⓕ *Dun and Bradstreet No.*

Ⓖ Check the box if you have a R&D laboratory exemption or if you have attached a R&D exemption application. [ ]

Ⓗ CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature _____ Date 2/14/92 Fax # (201) 896-0242 Phone # (201) 935-5500

Name (Type) Michael Garin Title Sr. Vice President

Ⓘ POLICE AND FIRE DEPARTMENT — Enter the respective phone numbers, names and addresses (including Zip Code) of your local police and fire departments in the spaces below.

POLICE DEPT.	FIRE DEPT.
Phone Number (201) 641-9100	Phone Number (201) 641-9100
Name: Moonachie Police Department	Name: Moonachie Fire Department
Address: Moonachie Road	Address: Moonachie Road
Municipality: Moonachie Zip: 07074	Municipality: Moonachie Zip: 07074

Ⓙ FACILITY EMERGENCY CONTACT

Name Michael Garin Title Sr. Vice President

Facility Phone Number (201) 935-5500 Emergency Contact Phone Number (908) 530-1096

NOTE: Make copies of this survey! The law requires that you send a copy to your COUNTY LEAD AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE AND YOUR LOCAL POLICE AND FIRE DEPARTMENTS.

(County agency and local committee addresses in Instructions)

Return original to: NJDEPE
COMMUNITY RIGHT TO KNOW
CN 405
Trenton, NJ 08625-0405

FOR INTERNAL USE ONLY U STAT [ ] F STAT [ ]

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Acetic Acid CAS No. 64 - 19 - 7 DOT No. 2789+ Substance No. (if available) 0004 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, 68, 69, 70	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Acetic Acid CAS No. 64 - 19 - 7 DOT No. 2789+ Substance No. (if available) 0004 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, 69, 70	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Aerosol Dispensers CAS No. - - DOT No. 1950 Substance No. (if available) 2068 (gen) Percent 61 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, 69, 70,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ubiguitous
Substance Air, Compressed CAS No. - - DOT No. 1002 Substance No. (if available) 2070 (gen) Percent 60 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	69, , , ,	Max. Daily 12 Avg. Daily 12 Days Onsite 365 (Actual Number)	Container 48 Conditions 01, 04 Location(s) Pressroom, warehouse, Bindery, Textile Laboratory
Substance Alcohol CAS No. - - DOT No. 1987 Substance No. (if available) 2079 (gen) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ammonia CAS No. 7664 - 41 - 7 DOT No. 1005+ Substance No. (if available) 0084 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ammonium Dichromate CAS No. 7789 - 09 - 5 DOT No. 1439 Substance No. (if available) 0097 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom

See Instructions for codes.

Photocopy this sheet, if you need additional forms.

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

PART 2

CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Ammoniom Floride CAS No. 12125 - 01 - 8 DOT No. 2505 Substance No. (if available) 0099 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ammonium Sulfate CAS No. 7783 - 20 - 2 DOT No. Substance No. (if available) 2892 Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Textile Laboratory
Substance Benzine CAS No. 8030 - 30 - 6 DOT No. 1115+ Substance No. (if available) 0206 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 69, 70,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46,38 Conditions 01, 04 Location(s) Pressroom
Substance Benzine CAS No. 8030 - 36 - 6 DOT No. 1115+ Substance No. (if available) 0206 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 69, 70,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Paint Laboratory
Substance n-Butyl Acetate CAS No. 123 - 86 - 4 DOT No. 1123 Substance No. (if available) 1329 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance 2-Butoxy Ethenol CAS No. 111 - 76 - 2 DOT No. 2369 Substance No. (if available) 0275 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38,39 Conditions 01, 04 Location(s) Pressroom Textile Laboratory
Substance 2-Butoxy Ethenol CAS No. 111 - 76 - 2 DOT No. 2369 Substance No. (if available) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom

See Instructions for codes.

Photocopy this sheet, if you need additional forms.

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Carbon Black CAS No. 1333 - 86 - 4 DOT No. ____ Substance No. (if available) 0342 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, ____, ____, ____, ____	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 46 Conditions 01, 04 Location(s) Ink Room, Tech. Services Laboratory
Substance Chromic Sulfate CAS No. 10101 - 53 - 8 DOT No. 9100 Substance No. (if available) ____ Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Chromium CAS No. ____ - ____ - ____ DOT No. ____ Substance No. (if available) 2870 (gen) Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Chromium III CAS No. 1308 - 38 - 9 DOT No. ____ Substance No. (if available) 0434 Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Chromium III CAS No. 1308 - 38 - 9 DOT No. ____ Substance No. (if available) 0434 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Cleaning Compound CAS No. ____ - ____ - ____ DOT No. 1142 Substance No. (if available) 2253 (gen) Percent ____ (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) All lavatories and cleaning supply cabinet in Pressroom
Substance Cobalt CAS No. 7740 - 48 - 4 DOT No. ____ Substance No. (if available) 0520 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom, Ink Room, Tech. Service Laboratory

See Instructions for codes.

Photocopy this sheet, if you need additional forms.

Staple Here

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Copper CAS No. 7440 - 50 - 8 DOT No. ____ Substance No. (if available) 0528 Percent 57 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ____, ____, ____	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 46 Conditions 01, 04 Location(s) Ink Room, Technical Service Laboratory
Substance Corrosive Liquids CAS No. ____ - ____ - ____ DOT No. 1760 Substance No. (if available) 2282 (gen) Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance p-Cresol CAS No. 106 - 44 - 5 DOT No. 2076 Substance No. (if available) 1468 Percent 51 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Cyclohexanone CAS No. 108 - 94 - 1 DOT No. 1915 Substance No. (if available) 0570 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Dimethylformamide CAS No. 68 - 12 - 2 DOT No. 2265 Substance No. (if available) 0759 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Dimethyl-Phthalate CAS No. 131 - 11 - 3 DOT No. ____ Substance No. (if available) 0765 Percent 51 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Di-N-Batyl Phthalate CAS No. 84 - 74 - 2 DOT No. 9095 Substance No. (if available) 0773 Percent 52 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory

See Instructions for codes.

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Dipropylene Glycol EtherMethyl CAS No. 34590 - 94 - 8 DOT No. ____ Substance No. (if available) 0804 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ethanolamine CAS No. 141 - 43 - 5 DOT No. 2491 Substance No. (if available) 0835 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance 2-Ethoxy Ethyl Acetate CAS No. 111 - 15 - 9 DOT No. 1172 Substance No. (if available) 0840 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ethyl Alcohol CAS No. 64 - 17 - 5 DOT No. 1170 Substance No. (if available) 0844 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ethyl Butyl Ketone CAS No. 106 - 35 - 4 DOT No. 1224 Substance No. (if available) 0860 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom
Substance Ethylene Glycol CAS No. 107 - 21 - 1 DOT No. 1142 Substance No. (if available) 0878 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38,46 Conditions 01, 04 Location(s) Pressroom, Paint Lab.
Substance Ethylene Glycol CAS No. 107 - 21 - 1 DOT No. 1142 Substance No. (if available) 0878 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38,46 Conditions 01, 04 Location(s) Pressroom, Textile Lab, Paint Lab

See Instructions for codes.

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PANTONE INC

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PART 2

CHEMICAL INVENTORY PAGE

DEQ-09

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Formaldehyde CAS No. 50 - 00 - 0 DOT No. 1198+ Substance No. (if available) 0946 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ___, ___, ___	(Enter Code) Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 38, 39 Conditions 01, 04 Location(s) Bindery, Textile Laboratory
Substance Formic Acid CAS No. 64 - 18 - 6 DOT No. 1779 Substance No. (if available) 0948 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Gum Arabic CAS No. 9000 - 01 - 5 DOT No. ___ Substance No. (if available) 0965 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Hexylene Glycol CAS No. 107 - 41 - 5 DOT No. ___ Substance No. (if available) 1003 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Hydrogen Chloride CAS No. 7647 - 01 - 0 DOT No. 1050 Substance No. (if available) 1012 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Hydrogen Fluoride CAS No. 7664 - 39 - 3 DOT No. 1052+ Substance No. (if available) 1014 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Hydrogen Peroxide CAS No. 7722 - 84 - 1 DOT No. 2984 Substance No. (if available) 1015 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ___, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38, 39 Conditions 01, 04 Location(s) Pressroom and Textile Laboratory

See Instructions for codes.

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IDENTIFICATION AND SITE LOCATION

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Inks/printers CAS No. - - DOT No. 1210 Substance No. (if available) 2483 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, , , ,	Max. Daily 13 Avg. Daily 13 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ink Room
Substance Iodine CAS No. 7553 - 56 - 2 DOT No. 1851 Substance No. (if available) 1026 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, , , ,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Isobutyl Alcohol CAS No. 78 - 83 - 1 DOT No. 1212 Substance No. (if available) 1043 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, , ,	Max. Daily 12 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s) Pressroom
Substance Isopropyl Alchohol CAS No. 67 - 63 - 0 DOT No. 1219 Substance No. (if available) 1076 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, , ,	Max. Daily 11 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s) Pressroom,
Substance Isopropyl Alcohol CAS No. 67 - 63 - 0 DOT No. 1219 Substance No. (if available) 1043 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46,39 Conditions 01, 04 Location(s) Pressroom, Textile Lab.
Substance Kerosene CAS No. 8008 - 20 - 6 DOT No. 1223 Substance No. (if available) 1091 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, , , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Ketones, Liquid CAS No. - - DOT No. 1224 Substance No. (if available) 2510 (gen) Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, , ,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s) Pressroom

See Instructions for codes.

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-

IMPORTANT!
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Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Magnesium Nitrate CAS No. 10377 - 60 - 3 DOT No. 1474 Substance No. (if available) 1143 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, 68, ___, ___	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 38 Conditions 01, 04 Location(s) Pressroom
Substance 2-Methoxyethanol CAS No. 109 - 86 - 4 DOT No. 1188 Substance No. (if available) 1211 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38,46 Conditions 01, 04 Location(s) Pressroom
Substance Methyl Alcohol CAS No. 67 - 56 - 1 DOT No. 1230 Substance No. (if available) 1222 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom
Substance Methyl Chloroform CAS No. 71 - 55 - 6 DOT No. 2831 Substance No. (if available) 1237 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 69, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Methyl Chloroform CAS No. 71 - 55 - 6 DOT No. 2831 Substance No. (if available) 1237 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 34* Conditions 01, 04 Location(s) Bindery * 5gal. plastic buckets
Substance Methylene Chloride CAS No. 75 - 09 - 2 DOT No. 1593 Substance No. (if available) 1255 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39,46 Conditions 01, 04 Location(s) Pressroom
Substance Methyl Isobutyl Ketone CAS No. 108 - 10 - 1 DOT No. 1245 Substance No. (if available) 1268 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom

See Instructions for codes.

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FACILITY AND SITE LOCATION

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DE

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 199

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Morpholine CAS No. 110 - 91 - 8 DOT No. 2054+ Substance No. (if available) 1315 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, 70,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Nickel Chloride CAS No. 7718 - 54 - 9 DOT No. 9139 Substance No. (if available) 1344 Percent 56 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom
Substance Oil Mist, Mineral CAS No. 8012 - 95 - 1 DOT No. Substance No. (if available) 1437 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory, Pressroom
Substance Paints, Enamels CAS No. - - DOT No. 1263 Substance No. (if available) 2628 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Paint Laboratory
Substance Paint, Latex CAS No. - - DOT No. 2810 Substance No. (if available) 2885 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Paint Laboratory
Substance Petroleum Distillates CAS No. 8002 - 05 - 9 DOT No. 1268 Substance No. (if available) 2648 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom, Ink Room, Textile Laboratory
Substance Petroleum Oil CAS No. - - DOT No. 1270 Substance No. (if available) 2651 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 34*, 46 Conditions 01, 04 Location(s) Pressroom *5-gal. plastic buckets

See Instructions for codes.

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PANTONE INC

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PART 2
CHEMICAL INVENTORY PAGE

DEQ-C

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Phenol CAS No. 108 - 95 - 2 DOT No. 1671+ Substance No. (if available) 1487 Percent 51 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 41 Conditions 01, 04 Location(s) Bindery
Substance Phosphoric Acid CAS No. 7664 - 38 - 2 DOT No. 1805 Substance No. (if available) 1516 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Phthalate Esters CAS No. ___ - ___ - ___ DOT No. ___ Substance No. (if available) 3005 (gen) Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 70, ___, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Pine Oil CAS No. 8002 - 09 - 3 DOT No. 1272 Substance No. (if available) 2684 (gen) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ___, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Postassium Dichromate CAS No. 7778 - 50 - 9 DOT No. 1479 Substance No. (if available) 1564 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Textile Laboratory
Substance Potassium Hydroxide CAS No. 1310 - 58 - 3 DOT No. 1813+ Substance No. (if available) 1571 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Propyl Alcohol CAS No. 71 - 23 - 8 DOT No. 1219 Substance No. (if available) 1605 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 10 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

PART 2

CHEMICAL INVENTORY PAGE

DEQ-(

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Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance: Polyethylene Glycol CAS No. 25322-68-2 DOT No. Substance No. (if available) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s): Warehouse, Textile Laboratory
Substance: Rags, Oily CAS No. -- DOT No. 1856 Substance No. (if available) 2738 (gen) Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	70	Max. Daily 12 Avg. Daily 12 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s): Ubiquitous
Substance: Resin Oil CAS No. -- DOT No. 1286 Substance No. (if available) 2748 (gen) Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 70	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s): Pressroom
Substance: Sodium Dithionite CAS No. 7775-14-6 DOT No. 1384 Substance No. (if available) 1697 Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s): Textile Laboratory
Substance: Sodium Hydroxide CAS No. 1310-73-2 DOT No. 1823+ Substance No. (if available) 1706 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s): Textile Laboratory
Substance: Sodium Nitrate CAS No. 7632-00-0 DOT No. 1500 Substance No. (if available) 2258 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s): Textile Laboratory
Substance: Sodium Sulfate CAS No. 7757-82-6 DOT No. Substance No. (if available) 2906 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s): Textile Laboratory

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PANTONE INC

55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT!
Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Solvents/Aliphatic Hydrocarbon CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 12 Avg. Daily 12 Days Onsite 365 (Actual Number)	Container 46,47 Conditions 01, 04 Location(s) Pressroom, Warehouse
Substance Solvents/Aliphatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Solvents/Aliphatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 56 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Solvents/Aliphatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Solvents/Aliphatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Solvents/Aromatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Solvents/Aromatic Hydrocarbons CAS No. ___-___-___ DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom

See Instructions for codes.

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55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

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Read all instructions before completing.
Please type all responses.

Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Stoddard Solvent CAS No. 8052 - 41 - 3 DOT No. 1993 Substance No. (if available) 1736 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, 70, ___, ___	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 38 Conditions 01, 04 Location(s) Pressroom
Substance Sulfuric Acid CAS No. 7664 - 93 - 9 DOT No. 2789+ Substance No. (if available) 0004 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Terpene Hydrocarbons CAS No. 68956 - 56 - 9 DOT No. 2319 Substance No. (if available) 2802 (gen) Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 10 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom
Substance Tolvene CAS No. 108 - 88 - 3 DOT No. 1294 Substance No. (if available) 1866 Percent 57 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom
Substance 1,2,4 Trichlorobenzene CAS No. 120 - 82 - 1 DOT No. 2321 Substance No. (if available) 1887 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Vinyl Acetate CAS No. 108 - 05 - 4 DOT No. 1301 Substance No. (if available) 1998 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 12 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 34*, 38 Conditions 01, 04 Location(s) Bindery, Pressroom *5-gal plastic buckets
Substance Wax, liquid CAS No. ___ - ___ - ___ DOT No. ___ Substance No. (if available) 2854 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ___, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom (cleaning supply cabinet)

See Instructions for codes.

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55 KNICKERBOCKER RD, MOONACHIE

CHEMICAL INVENTORY PAGE

IMPORTANT!
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Reporting Period: January 1 - December 31, 1991

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Xylenes CAS No. 1330 - 20 - 7 DOT No. 1307 Substance No. (if available) 2014 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66 , 67 , 70 , ,	(Enter Code) Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 46 Conditions 01 , 04 Location(s) Pressroom
Substance Zinc CAS No. 7440 - 66 - 6 DOT No. 1436+ Substance No. (if available) 2021 Percent 54 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66 , 67 , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01 , 04 Location(s) Ink Room, Technical Service Laboratory
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)	, , , ,	Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions , Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)	, , , ,	Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions , Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)	, , , ,	Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions , Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)	, , , ,	Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions , Location(s)
Substance CAS No. - - DOT No. Substance No. (if available) Percent (Code) State (Code) Trade Secret ☐ (Check if claiming)	, , , ,	Max. Daily Avg. Daily Days Onsite (Actual Number)	Container Conditions , Location(s)

See Instructions for codes.

Photocopy this sheet, if you need additional forms.

Staple Here

:Q-094
92

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

PART 1

COMMUNITY RIGHT TO KNOW SURVEY FOR 1992

Exhibit M

to satisfy requirements under SARA, Title III, Section 312 and New Jersey Community Right to Know

Please type this form.

3 3 1 2 5 8 0 0 0 0 0 | 2 7 3 1 | 0 2 3 7

PANTONE INC
(MOONACHIE FACILITY)
ATTN: MICHAEL C. GARIN, SR VICE PRESIDEN
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

Indicate changes to mailing address on the above label.

(A) FACILITY LOCATION

If the facility location is different than the address on the facility identification label on Part 2 or is not shown, enter the correct facility address below and correct the facility identification label.

(B) Does this facility use, store or produce any compressed gases, or any flammable, combustible, reactive, corrosive or toxic substances?

(See Reportable Substances and Thresholds) [X] Yes [ ] No

(C) Briefly describe the nature of the operations or business conducted by your company at this facility:

Publication work - Printer matter

(D) Number of employees at facility: 97

(E) Number of facilities in New Jersey: 2

(F) Dun and Bradstreet No.:

(G) Check the box if you have an approved R&D exemption or if you have attached a R&D exemption application. [ ]

(H) POLICE DEPT. Phone Number (201) 641-9100
Name Moonachie Police Department
Municipality Moonachie, NJ 07074

FIRE DEPT. Phone Number (201) 641-9100
Name Moonachie Fire Department
Municipality Moonachie, NJ 07074

(I) FACILITY EMERGENCY CONTACT
Name Michael Garin
Facility Phone Number (201) 935-5500
Title Sr. Vice President
Emergency Contact Phone Number (908) 530-1096

[ ] NOTE: Mark this box if there are any changes on this page (Part 1) since your last submittal.

(J) CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature Michael Garin Date 2/25/93

Fax # (201) 896-0242
Phone # (201) 935-5500

Name Michael Garin Title Sr. Vice President

*** You are required to send copies to your COUNTY LEAD AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE AND YOUR LOCAL POLICE AND FIRE DEPARTMENTS. KEEP A COPY AT YOUR FACILITY.**

(County agency and local committee addresses in Instructions)

Return original to: NJDEPE
COMMUNITY RIGHT TO KNOW
CN 405
Trenton, NJ 08625-0405

EQ-094
92

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

PART 1

COMMUNITY RIGHT TO KNOW SURVEY FOR 1992

to satisfy requirements under SARA, Title III, Section 312 and New Jersey Community Right to Know

Please type this form.

3 3 1 2 5 8 0 0 0 0 1 | 2 7 5 2 | 0 2 0 5

PANTONE INC
(CARLSTADT FACILITY)
ATTN: MICHAEL GARIN, SR VICE PRES
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

Indicate changes to mailing address on the above label.

(A) FACILITY LOCATION

If the facility location is different than the address on the facility identification label on Part 2 or is not shown, enter the correct facility address below and correct the facility identification label.

(B) Does this facility use, store or produce any compressed gases, or any flammable, combustible, reactive, corrosive or toxic substances?

(See Reportable Substances and Thresholds) ☐ Yes ☒ No

(C) Briefly describe the nature of the operations or business conducted by your company at this facility:

Publication work - Printed matter

(D) Number of employees at facility: 30

(E) Number of facilities in New Jersey: 2

(F) Dun and Bradstreet No.:

(G) Check the box if you have an approved R&D exemption or if you have attached a R&D exemption application. ☐

(H) POLICE DEPT. Phone Number (201) 438-4300
Name Carlstadt Police Dept.
Municipality Carlstadt, NJ 07072

FIRE DEPT. Phone Number (201) 438-4300
Name Carlstadt Fire Department
Municipality Carlstadt, NJ 07072

(I) FACILITY EMERGENCY CONTACT
Name Michael Garin
Facility Phone Number (201) 935-5501
Title Sr. Vice President
Emergency Contact Phone Number (908) 530-1096

☐ NOTE: Mark this box if there are any changes on this page (Part 1) since your last submittal.

(J) CERTIFICATION OF OWNER/OPERATOR OR AUTHORIZED REPRESENTATIVE — I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Signature Michael Garin Date 2/25/93 Fax # (201) 935-4147 Phone # (201) 935-5501

Name Michael Garin Title Sr. Vice President

*** You are required to send copies to your COUNTY LEAD AGENCY, LOCAL EMERGENCY PLANNING COMMITTEE AND YOUR LOCAL POLICE AND FIRE DEPARTMENTS. KEEP A COPY AT YOUR FACILITY.**

(County agency and local committee addresses in Instructions)

Return original to: NJDEPE
COMMUNITY RIGHT TO KNOW
CN 405
Trenton, NJ 08625-0405

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Acetic Acid CAS No. 64 - 19 - 7 DOT No. 2789+ Substance No. (if available) 0004 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, 69, 70	Max. Daily 10 Avg. Daily 10 Days Onsite ___ (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Acetic Acid CAS No. 64 - 19 - 7 DOT No. 2789 Substance No. (if available) 0004 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, 69, 70	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom AGE
Substance Acetone CAS No. 67 - 64 - 1 DOT No. 1090 Substance No. (if available) 0006 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 12 Avg. Daily 12 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s) Pressroom Speedy
Substance Acrylamide CAS No. 79 - 06 - 1 DOT No. 2074 Substance No. (if available) 0022 Percent 52 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily NA Avg. Daily NA Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Printing plates
Substance Aerosol Dispensers CAS No. ___ - ___ - ___ DOT No. 1950 Substance No. (if available) 2068 (gen) Percent 61 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, 69, 70, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ubiguitous

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance: Air, Compressed CAS No. ___-___-___ DOT No. 1002 Substance No. (if available): 2070 (gen) Percent: 60 (Code) State: G (Code) Trade Secret ☐ (Check if claiming)	69, ___, ___, ___, ___	Max. Daily: 12 Avg. Daily: 12 Days Onsite: 365 (Actual Number)	Container: 48 Conditions: 01, 04 Location(s): Pressroom, warehouse, Bindery, Textile Laboratory
Substance: Ammoniom Floride CAS No. 12125 - 01 - 8 DOT No. 2505 Substance No. (if available): 0099 Percent: 52 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily: 09 Avg. Daily: 09 Days Onsite: 365 (Actual Number)	Container: 38 Conditions: 01, 04 Location(s): Pressroom 3M Deletion Fluid
Substance: Ammonia CAS No. 7664 - 41 - 7 DOT No. 1005 Substance No. (if available): 0084 Percent: 52 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily: 10 Avg. Daily: 10 Days Onsite: 365 (Actual Number)	Container: 39 Conditions: 01, 04 Location(s): Pressroom Blanket Restorer
Substance: Ammonium Chlorides CAS No. 12125 - 02 - 9 DOT No. 9085 Substance No. (if available): 0093 Percent: 52 (Code) State: G (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily: 10 Avg. Daily: 10 Days Onsite: 365 (Actual Number)	Container: 34 Conditions: 01, 04 Location(s): Pressroom Statikill (Aerosol)
Substance: Butane CAS No. 106 - 97 8 DOT No. 1011 Substance No. (if available): 0273 Percent: 57 (Code) State: G (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily: 10 Avg. Daily: 10 Days Onsite: 365 (Actual Number)	Container: 34 Conditions: 01, 04 Location(s): Pressroom Sta-open (aerosol)

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01	Ambient* pressure
02	Greater than ambient pressure
03	Less than ambient pressure

Temperature

04	Ambient temperature
05	Greater than ambient temperature
06	Less than ambient temperatures but not cryogenic (freezing conditions)
07	Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance 2- Butoxy Ethanol CAS No. 111 - 76 - 2 DOT No. 2369 Substance No. (if available) 0275 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Blanket Hardener, Coppering Solution
Substance 2-Butoxy Ethanol CAS No. 111 - 76 - 2 DOT No. 2369 Substance No. (if available) 0275 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom Alkaless R
Substance Carbon Dioxide CAS No. 124 - 38 - 9 DOT No. 1013 Substance No. (if available) 0343 Percent 52 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom LPS1 (Aerosol Can)
Substance Cleaning Compound CAS No. ___ - ___ - ___ DOT No. 1142 Substance No. (if available) 2253 (gen) Percent ___ (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ___, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) All lavatories and cleaning supply cabinet in pressroom
Substance Cleaning Compound CAS No. ___ - ___ - ___ DOT No. 1142 Substance No. (if available) 2253 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, ___, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container ___ Conditions 01, 04 Location(s) Pressroom Prisco Roller Lube

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Cobalt CAS No. 7740 - 48 - 4 DOT No. ____ Substance No. (if available) 0520 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom Superior Super X, Van Son
Substance Cobalt CAS No. 7740 - 48 - 4 DOT No. ____ Substance No. (if available) 0520 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Ink Room, Press room, Tech. Service Laboratory
Substance Carbon Black CAS No. 1333 - 86 - 4 DOT No. ____ Substance No. (if available) 0342 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, ____, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ink Room, Tech. Services, Laboratory
Substance Copper CAS No. 7440 - 50 - 8 DOT No. ____ Substance No. (if available) 0528 Percent 57 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ink Room, Tech. Service Laboratory
Substance Cyclohexanone CAS No. 108 - 94 - 1 DOT No. 1915 Substance No. (if available) 0570 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom Age

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (In lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01	Ambient* pressure	02	Greater than ambient pressure
03	Less than ambient pressure		

Temperature

04	Ambient temperature
05	Greater than ambient temperature
06	Less than ambient temperatures but not cryogenic (freezing conditions)
07	Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read Instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Dimethylformamide CAS No. 68 - 12 - 2 DOT No. 2265 Substance No. (if available) 0759 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, 70,	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance 1,4, Dioxane CAS No. 123 - 91 - 1 DOT No. 1165 Substance No. (if available) 0789 Percent 52 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Sta-Open (Aerosol)
Substance 1,2,1 Trichloroethane CAS No. 71 - 55 - 6 DOT No. Substance No. (if available) Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34, 38 Conditions 01, 04 Location(s) Bindery 5 gallon plastic buckets (glue)
Substance 2-Ethoxy Ethyl Acetate CAS No. 111 - 15 - 9 DOT No. 1172 Substance No. (if available) 0840 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom 3M Deletion Fluid
Substance Ethyl Butyl Ketone CAS No. 106 - 35 - 4 DOT No. 1224 Substance No. (if available) 0860 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom (3M Image Guard)

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Ethylene Glycol CAS No. 107 - 21 - 1 DOT No. 1142 Substance No. (if available) 0878 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ___, ___, ___	(Enter Code) Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 38 Conditions 01, 04 Location(s) Pressroom Preparation-N-Plus, Copperizing Solution
Substance Ethylbenene CAS No. 100 - 41 - 4 DOT No. 1175 Substance No. (if available) 0851 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Bryant Wash
Substance Formaldehyde CAS No. 50 - 00 - 0 DOT No. 1198 Substance No. (if available) 0946 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom 3M Image Guard
Substance Formic Acid CAS No. 64 - 18 - 6 DOT No. 1779 Substance No. (if available) 0948 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Hexane CAS No. 110 - 54 - 3 DOT No. 1208 Substance No. (if available) 1340 Percent 53 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Statikill (Aerosol)

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Hexylene Glycol CAS No. 107 - 41 - 5 DOT No. ____ Substance No. (if available) 1003 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ____, ____, ____	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 46 Conditions 01, 04 Location(s) Pressroom Blanket Hardener
Substance Hydrogen Chloride CAS No. 7647 - 01 - 0 DOT No. 1050 Substance No. (if available) 1012 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom Copperizing Solution
Substance Hydrogen Chloride CAS No. 7647 - 01 - 0 DOT No. 1050 Substance No. (if available) 1012 Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Hydrogen Peroxide CAS No. 7722 - 84 - 1 DOT No. 2984 Substance No. (if available) 1015 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 68, ____, ____, ____	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38, 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Inks/printers CAS No. ____ - ____ - ____ DOT No. 1210 Substance No. (if available) 2483 (gen) Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	67, ____, ____, ____, ____	Max. Daily 13 Avg. Daily 13 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Ink Room, Pressroom Paste Sheetfed Inks Add Tech. Service Laboratory

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance: Iodine CAS No. 7553 - 56 - 2 DOT No. 1851 Substance No. (if available): 1026 Percent: 60 (Code) State: S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily: 09 Avg. Daily: 09 Days Onsite: 365 (Actual Number)	Container: 39 Conditions: 01, 04 Location(s): Textile Laboratory
Substance: ___ CAS No. ___ - ___ - ___ DOT No. ___ Substance No. (if available): ___ Percent: ___ (Code) State: ___ (Code) Trade Secret ☐ (Check if claiming)	___, ___, ___, ___, ___	Max. Daily: ___ Avg. Daily: ___ Days Onsite: ___ (Actual Number)	Container: ___ Conditions: ___, ___ Location(s): ___
Substance: Isopropyl Alcohol CAS No. 67 - 63 - 0 DOT No. 1219 Substance No. (if available): 1076 Percent: 60 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily: 12 Avg. Daily: 12 Days Onsite: 365 (Actual Number)	Container: 47 Conditions: 01, 04 Location(s): Pressroom Isopropyl Alcohol
Substance: Isopropyl Alcohol CAS No. 67 - 63 - 0 DOT No. 1219 Substance No. (if available): ___ Percent: 55 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily: 10 Avg. Daily: 10 Days Onsite: 365 (Actual Number)	Container: 38 Conditions: 01, 04 Location(s): Pressroom Coppering Solution, Stratikill
Substance: Kerosene CAS No. 8008 - 20 - 26 DOT No. 1223 Substance No. (if available): 1091 Percent: 52 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily: 11 Avg. Daily: 11 Days Onsite: 365 (Actual Number)	Container: 38 Conditions: 01, 04 Location(s): Pressroom Age

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
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PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read Instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance 2-Methoxyethanol CAS No. 109 - 86 - 4 DOT No. 1188 Substance No. (if available) 1211 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ___, ___, ___	(Enter Code) Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 38 Conditions 01, 04 Location(s) Pressroom 3M Delection Fluid
Substance Methylene Chloride CAS No. 75 - 09 - 2 DOT No. 1593 Substance No. (if available) 1255 Percent 58 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom Blanket Restorer
Substance Methyl Alcohol CAS No. 67 - 56 - 1 DOT No. 1230 Substance No. (if available) 1222 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Pressroom Blanket Restorer
Substance Methylene Chloride CAS No. 75 - 09 - 2 DOT No. 1593 Substance No. (if available) 1255 Percent 53 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Sta-Open (Aerosol Can)
Substance Methylene Chloride CAS No. 75 - 09 - 02 DOT No. 1593 Substance No. (if available) 1255 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Blanket Hardener, Bryant Wash

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure 02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

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Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance: Nickel Dichloride CAS No.: 7718 - 54 - 9 DOT No.: 9139 Substance No. (if available): 1344 Percent: 56 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___, ___	Max. Daily: 09 Avg. Daily: 09 Days Onsite: 365 (Actual Number)	Container: 39 Conditions: 01, 04 Location(s): Pressroom 3M Plate Tusche
Substance: CAS No.: - - DOT No.: Substance No. (if available): Percent: (Code) State: (Code) Trade Secret ☐ (Check if claiming)	___, ___, ___, ___, ___	Max. Daily: Avg. Daily: Days Onsite: (Actual Number)	Container: Conditions: ___, ___ Location(s):
Substance: Petroleum Distillates CAS No.: 8002 - 05 - 9 DOT No.: 1268 Substance No. (if available): 2648 Percent: 54 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___, ___	Max. Daily: 13 Avg. Daily: 13 Days Onsite: 365 (Actual Number)	Container: 46 Conditions: 01, 04 Location(s): Pressroom, Ink Room DTE-EH, Tex. Lab. Dissolin
Substance: Petroleum Oil CAS No.: - - DOT No.: 1270 Substance No. (if available): 2651 Percent: 60 (Code) State: L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___, ___	Max. Daily: 11 Avg. Daily: 11 Days Onsite: 365 (Actual Number)	Container: 34 Conditions: 01, 04 Location(s): Pressroom Uni Grease
Substance: Phenol CAS No.: 108 - 95 - 2 DOT No.: 1671+ Substance No. (if available): 1487 Percent: 51 (Code) State: S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___, ___	Max. Daily: 11 Avg. Daily: 11 Days Onsite: 365 (Actual Number)	Container: 41 Conditions: 01, 04 Location(s): Bindery Flex Glue

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01	Ambient* pressure
02	Greater than ambient pressure
03	Less than ambient pressure

Temperature

04	Ambient temperature
05	Greater than ambient temperature
06	Less than ambient temperatures but not cryogenic (freezing conditions)
07	Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

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Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Phosphoric Acid CAS No. 7664 - 38 - 2 DOT No. 1805 Substance No. (if available) 1516 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, 68, ,	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 39 Conditions 01, 04 Location(s) Pressroom 3M Image Guard, Age
Substance Pine Oil CAS No. 8002 - 09 - 3 DOT No. 1272 Substance No. (if available) 2684 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, , ,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Cleansall, Lithotine
Substance Potassium Dichromate CAS No. 7778 - 50 - 9 DOT No. 1479 Substance No. (if available) 1564 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, , ,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Textile Laboratory
Substance Potassium Hydroxide CAS No. 1310 - 58 - 3 DOT No. 1813 Substance No. (if available) 1571 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom 3M Scratch Remover
Substance Rags, Oily CAS No. - - DOT No. 1856 Substance No. (if available) 2738 Percent 60 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	70, , , ,	Max. Daily 12 Avg. Daily 12 Days Onsite 365 (Actual Number)	Container 47 Conditions 01, 04 Location(s) Ubiquitous

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

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Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Hydrocarbon Middle Distillate CAS No. 64742 46 - 7 DOT No. ____ Substance No. (if available) ____ Percent 60 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 67, ____, ____, ____, ____	(Enter Code) Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 46 Conditions 01, 04 Location(s) Ink Room, Tech. Service Laboratory
Substance Sodium Hydroxide CAS No. 1310 - 73 - 2 DOT No. 1823+ Substance No. (if available) 1706 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Textile Laboratory
Substance Sodium Hydroxide CAS No. 1310 - 73 - 2 DOT No. 1823 Substance No. (if available) 1706 Percent 52 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ____, ____	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom Scratch Remover
Substance Sodium Nitrite CAS No. 07632 - 00 - 0 DOT No. 1500 Substance No. (if available) 2258 Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite ____ (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance Sodium Sulfate CAS No. 7757 - 82 - 6 DOT No. ____ Substance No. (if available) 2906 Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____, ____, ____	Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S	Solid
L	Liquid
G	Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01	Ambient* pressure
02	Greater than ambient pressure
03	Less than ambient pressure

Temperature

04	Ambient temperature
05	Greater than ambient temperature
06	Less than ambient temperatures but not cryogenic (freezing conditions)
07	Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms. Please type all responses.*

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS (Codes for all that apply.)	Inventory (Ranges) (Enter Code)	STORAGE CODES AND LOCATIONS (Enter Codes, except Location(s); supply narrative.)
Substance Solvents/Aliphatic Hydrocarbons CAS No. 64742 - 88 - 7 DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Lithotine
Substance Solvents/Aromatic Hydrocarbons CAS No. 64742 - 95 - 6 DOT No. 1993 Substance No. (if available) 2784 (gen) Percent 53 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Ezzy Klene
Substance Stoddard Solvent CAS No. 8052 - 41 - 3 DOT No. 1993 Substance No. (if available) 1736 Percent 54 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 70,	Max. Daily 11 Avg. Daily 11 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Pressroom 3M Scratch Remover
Substance Sulfuric Acid CAS No. 7664 - 93 - 9 DOT No. 2789+ Substance No. (if available) 0004 Percent 59 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 39 Conditions 01, 04 Location(s) Textile Laboratory
Substance 1, 1, 1-Trichloroethane CAS No. 71 - 55 - 6 DOT No. ____ Substance No. (if available) ____ Percent 54 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, ____,	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Sta-Open (Aerosol)

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag		
41	Box	32	Plastic drums

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

3 3 1 2 5 8 0 0 0 0 0

PANTONE INC
55 KNICKERBOCKER RD, MOONACHIE

PART 2
CHEMICAL INVENTORY PAGE

DEQ-094

IMPORTANT! *Read instructions. Photocopy this page if you need additional forms.* ***Please type all responses.***

Reporting Period: January 1 - December 31, 1992

CHEMICAL DESCRIPTION	HAZARDS	Inventory (Ranges)	STORAGE CODES AND LOCATIONS
Substance Vinyl Acetate CAS No. 108 - 05 - 4 DOT No. 1301 Substance No. (if available) 1998 Percent 51 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	(Codes for all that apply.) 66, 67, ___, ___, ___	(Enter Code) Max. Daily 12 Avg. Daily 11 Days Onsite 365 (Actual Number)	(Enter Codes, except Location(s); supply narrative.) Container 34, 38 Conditions 01, 04 Location(s) Bindery Resin glue 5 gallon plastic bucket
Substance Xylene CAS No. 1330 - 20 - 7 DOT No. 1307 Substance No. (if available) 2014 Percent 55 (Code) State L (Code) Trade Secret ☐ (Check if claiming)	66, 67, ___, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 46 Conditions 01, 04 Location(s) Pressroom Blanket Hardener, Bryant Wash
Substance Ammonium Sulfate CAS No. 7783 - 20 - 2 DOT No. ___ Substance No. (if available) 2892 Percent 59 (Code) State S (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 38 Conditions 01, 04 Location(s) Textile Laboratory
Substance Propane CAS No. 74 - 98 - 6 DOT No. 1978 Substance No. (if available) 1594 Percent 54 (Code) State G (Code) Trade Secret ☐ (Check if claiming)	66, 67, 68, ___, ___	Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number)	Container 34 Conditions 01, 04 Location(s) Pressroom Sta-Open (Aerosol), Statikill
Substance ___ CAS No. ___ - ___ - ___ DOT No. ___ Substance No. (if available) ___ Percent ___ (Code) State ___ (Code) Trade Secret ☐ (Check if claiming)	___, ___, ___, ___, ___	Max. Daily ___ Avg. Daily ___ Days Onsite ___ (Actual Number)	Container ___ Conditions ___, ___ Location(s) ___

PERCENTAGE CODES

61	Unknown
60	100%
59	90 - 99%
58	80 - 89%
57	70 - 79%
56	60 - 69%
55	50 - 59%
54	25 - 49%
53	10 - 24%
52	1 - 9%
51	0 - 0.9%

PHYSICAL STATE CODES

S - Solid
L - Liquid
G - Gas

HAZARD CATEGORY CODES

70	Fire hazard
69	Sudden release of pressure
68	Reactive
67	Immediate (acute) health hazard
66	Delayed (chronic) health hazard

INVENTORY RANGE CODES (in lbs.)

20	Greater than 10 million lbs.
19	1,000,001 - 10 million
18	500,001 - 1 million
17	250,001 - 500,000
16	100,001 - 250,000
15	50,001 - 100,000
14	10,001 - 50,000
13	1,001 - 10,000
12	101 - 1,000
11	11 - 100
10	1 - 10
09	Less than 1 lb.

CONTAINER CODES

50	Above ground tank	40	Cylinder
49	Below ground tank (steel)	39	Bottles or jugs (glass)
48	Tank inside building	38	Bottles or jugs (plastic)
47	Steel drum	37	Tote bin
46	Can	36	Tank wagon
45	Carboy	35	Railcar
44	Silo	34	Other (Describe)
43	Fiber drum	33	Below ground tank (fiberglass)
42	Bag	32	Plastic drums
41	Box		

STORAGE CONDITION CODES

Pressure

01 Ambient* pressure
02 Greater than ambient pressure
03 Less than ambient pressure

Temperature

04 Ambient temperature
05 Greater than ambient temperature
06 Less than ambient temperatures but not cryogenic (freezing conditions)
07 Cryogenic conditions (less than -200 degrees C)

*Ambient means "normal", "surrounding" or "room" conditions

Exhibit N

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1986
- CERTIFICATION FORM -

I. EPA ID Number: NJD001253384

II. Generator Name: Pantone, Inc.

III. Contact Person: _____

IV. Phone Number: (201) 935-5500

V. Certification:

I certify that the information given in this annual report is true, accurate and complete.

Michael C. Garin		
(Print or type name)	(Signature)	(Date)

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1986
- REPORT FORM -

1. Generator Name: Pantone, Inc. EPA ID No.: NJD001253384

Site Address: 55 Knickerbocker Road, Moonachie, NJ 07074

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 Avenue, South Kearney, NJ 07032

A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units	
X-900	Hazardous Waste Liquid NOS	ORM-E NA9189	908	G	(1815 gal. of waste was actually carted away in 1986. Howeve 907 gal. were empty dirty ink cans that we crushed and put into the same drum.)
D-001	Waste Combustible Liquid NOS	Combustible Liquid NA 1993	330	G	

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1986
- WASTE SUMMARY FORM -

Generator Name: Pantone, Inc.

EPA ID No.: NJD001253384

Please indicate below the total quantity of hazardous waste manifested during the 1986 report year for each unit of measure:

1238 G - Gallons (liquids only)

0 P - Pounds

0 T - Tons (2,000 lbs.)

0 Y - Cubic Yards

0 L - Liters (liquids only)

0 K - Kilograms

0 M - Metric Tons (1,000 kg)

0 N - Cubic Meters

*Enter zero (0) for units of measure which were not utilized.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
HAZARDOUS WASTE GENERATOR WASTE MINIMIZATION REPORT: 1986

COMPANY: Pantone, Inc. (Name) EPA ID NO.: NJD001253384

MAILING ADDRESS: 55 Knickerbocker Road, Moonachie, NJ 07074
(Street) (City) (State)

LOCATION OF GENERATOR SITE: _____
(If different from mailing address)

CONTACT PERSON: Michael C. Garin (Name) (201) 935-5500 (Telephone Number)

_____ (Signature) Vice President - Technical (Title)

PLEASE COMPLETE THE FOLLOWING SURVEY AND REPORT. FOR ASSISTANCE CALL (609) 292-8341

PART I: HAZARDOUS WASTE MINIMIZATION SURVEY

1. What problems are you encountering in attempting to reduce waste generation?
   - ___ Economic
   - ___ Technical
   - ___ Regulatory
   - x Other (explain) Need to know if any companies do solvent recovery of dirty solvents containing some printing ink.

2. What can government do to help you reduce your generation of hazardous waste?
   - ___ Amend Regulations
   - ___ Grants
   - x Technical Assistance
   - x Other (explain)
   - ___ Loans
   - ___ Tax Incentives
   - ___ Impose generation limits or standards

   Tech: Is there a simple filtering system for cleaning our dirty solvent?

   Other: Are there any companies that will provide this service, and will it be less expensive then carting it away?

3. If you intend to implement a hazardous waste reduction program how much reduction do you expect to achieve: If we can be helped with (1) or (2) then

   < 10% ___ 10 – 25% X 26 – 50 % ___ 51 – 75% ___ > 75% ___

4. Enter the codes (1–7 below) of source reduction approach(es) to be used: 1 2 (Dependent on above)
   - 1–Recycling (reuse) onsite
   - 2–Recycling (reuse) offsite
   - 3–Equipment/technology modifications
   - 4–Process procedure modifications
   - 5–Reformulation/redesign of product
   - 6–Substituting raw materials
   - 7–Improved operations due to: housekeeping, training, inventory control

5. Check the reason(s) for implementing this source reduction program:
   - x High costs of hazardous waste disposal
   - ___ Increased insurance costs & liability
   - ___ To lessen the impact of increasingly complex & restrictive regulations
   - ___ To increase product marketability by decreasing product cost through improving manufacturing process efficiency
   - ___ Other (explain)

PART II: 1986 WASTE MINIMIZATION REPORT DATA

EXPLANATIONS and SAMPLE CALCULATIONS:

WASTE NUMBER	1985 AMOUNT	1985 AMT WASTE / UNIT PRODUCT	1986 AMOUNT	1986 AMT WASTE / UNIT PRODUCT	UNIT (WEIGHT OR VOLUME)	INCREASE OR DECREASE OF AMT WASTE / UNIT PRODUCT	REDUCTION CODE(s)	DISPOSAL CODE
See NJAC. 7:26–8.9 –8.15	Total waste generated in 1985	Divide waste generated by unit of product produced	Total waste generated in 1986	Divide waste generated by unit of product produced	G–Gallons T–Tons P–Pounds 1 TON = 2000 LBS	2.0 gal/unit 1986 –2.5 gal/unit 1985 ---- –0.5 gal per unit of product produced; reduced from 1985 to 1986	See pg 1 for explanation & legend	See pg 2 for explanation & legend
SAMPLE DATA:								
1. F001	335	2.5	420	2.0	G	–0.5	3	RF
SIC CODE for Waste Stream No 1 – 3679					Product Produced – Circuit Boards			
1. X900	770	($6,500,000) .0001	908	($8,200,000) .0001	G	0	9	RF & L
SIC CODE for Waste Stream No 1 – 2731					Product Produced – Printed Matter			
2. D001	0	($6,500,000) 0	330	(8,200,000) .00004	G	.00004	10 (New large cleaning mach.)	RF & L
SIC CODE for Waste Stream No 2 – 2731					Product Produced – Printed Matter			
3.								
SIC CODE for Waste Stream No 3 –					Product Produced –			
4.								
SIC CODE for Waste Stream No 4 –					Product Produced –			
5.								
SIC CODE for Waste Stream No 5 –					Product Produced –			

Exhibit O

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1987
- CERTIFICATION FORM -

I. EPA ID Number: NJD001253384

II. Generator Name: Pantone, Inc.

III. Contact Person: Ken Niepokoy

IV. Phone Number: (201) 935-5500

V. Certification:

I certify that the information given in this annual report is true, accurate and complete.

Ken Niepokoy
(Print or type name)

Ken Niepokoy
(Signature)

*3/1/90
(Date)

* This form was submitted in 1987 but was submitted with incomplete information. On 3/1/90, the report was resubmitted with complete information.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1987
- REPORT FORM -

1. Generator Name: Pantone, Inc. 2. EPA ID No.: NJD001253384
3. Site Address: 55 Knickerbocker Road, Moonachie, NJ 07074
4. Transporter Name: S & W Waste Inc. 5. EPA ID No.: NJD991291105
6. TSD Facility Name: S & W Waste, Inc. 7. EPA ID No.: NJD991291105
8. TSD Address: 105 Jacobus Avenue, South Kearney, NJ 07032

9.

A.) Waste Number	B.) Waste Description	C.) DOT Haz Class	D.) Total Quantity	E.) Units
X900	Hazardous Waste Liquid NOS	ORM-E NA9189	825	G
C306	Hazardous Waste Solid NOS	ORM-E NA9189	15,200	P

(Both waste streams contain the same contents: waste ink, empty cans and stained weighing papers. The amount of debris in the drums changed the waste number from a pumpable waste to a non-pumpable waste. Waste approval number from the TSD did not change with the waste number.)

NOTE: For each combination of transporter and TSD facility, list the total quantity manifested for each waste type.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1987
- WASTE SUMMARY FORM -

Generator Name: Pantone, Inc.

EPA ID No.: NJD001253384

DIRECTIONS:

Please indicate below the total quantity of hazardous waste manifested during the 1987 report year for each unit of measure. Enter the units of measure as they appeared on the manifest(s). Do not convert one form of unit of measure to another.

825 G - Gallons (liquids only)

15,200 P - Pounds

0 T - Tons (2,000 lbs.)

0 Y - Cubic Yards

0 L - Liters (liquids only)

0 K - Kilograms

0 M - Metric Tons (1,000 kg)

0 N - Cubic Meters

*Enter zero (0) for units of measure which were not utilized.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
HAZARDOUS WASTE GENERATOR WASTE MINIMIZATION REPORT: 1987

COMPANY: Pantone, Inc. (Name) EPA ID NO.: NJD00125338

MAILING ADDRESS: 55 Knickerbocker Road, Moonachie, NJ 07074
(Street) (City) (State/Zip Code)

LOCATION OF GENERATOR SITE: _____
(If different from mailing address)

CONTACT PERSON: Ken Niepokoy (Name) (201) 935-5500 (Telephone Number)

Ken Niepokoy (Signature) (Title)

PART I – PLEASE COMPLETE THE FOLLOWING SURVEY AND REPORT. FOR ASSISTANCE CALL (609) 292-8341

1. Did this site create or expand a source reduction and recycling program?

	Prior Years Yes	Prior Years No	1986 Yes	1986 No	1987 Yes	1987 No
Create	☐	X	☐	X	☐	X
Expand	☐	X	☐	X	☐	X

2. Did this site have a written policy or statement that outlined goals, objectives and methods for source reduction and recycling of hazardous waste?

	Prior Years	1986	1987
Yes	☐	☐	☐
No	X	X	☐

3. What was the dollar amount of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste? Enter zero (0) if none.

	Prior Years	1986	1987
Capital expenditures	$ 0	$ 0	$ 0
Operating costs	$ 0	$ 0	$ 0

4. Did this site have an employee training program or provide incentives (bonuses, awards, personal recognition, etc.) to identify and implement source reduction and recycling opportunities and activities?

	Prior Years Yes	Prior Years No	1986 Yes	1986 No	1987 Yes	1987 No
Training	X	☐	X	☐	X	☐
Incentives	☐	X	☐	X	☐	X

WASTE MINIMIZATION - PART I - Continued

5. Did this site conduct a source reduction and/or recycling opportunity assessment or audit? Note: an opportunity assessment or audit is a procedure that can be implemented to reduce the generation of hazardous waste or the quantity which must subsequently be treated, stored or disposed.

	Prior Years		1986		1987	
	Yes	No	Yes	No	Yes	No
Site-Wide	☐	☒	☐	☒	☒	☐
Process-Specific	☐	☐	☐	☐	☐	☐

6. Did this site identify or implement new SOURCE REDUCTION opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site?

	Prior Years		1986		1987	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☒	☐	☒
Implement	☐	☒	☐	☒	☐	☒

7. What factors have delayed or prevented implementation of SOURCE REDUCTION opportunities. MARK ☒ FOR ALL THAT APPLY.

- ☐ a. Insufficient capital to install new source reduction equipment or implement new source reduction practices.
- ☒ b. Lack of technical information on source reduction techniques, applicable to my specific production processes.
- ☐ c. Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- ☐ d. Concern that product quality may decline as a result of source reduction.
- ☒ e. Technical limitations of the production processes.
- ☐ f. Permitting burdens.
- ☐ g. Other (Specify) _____

8. Did this site identify or implement new RECYCLING opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site or subsequently treated, stored, or disposed of on site or off site?

	Prior Years		1986		1987	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☒	☐	☒
Implement	☐	☒	☐	☒	☐	☒

9. What factors have delayed or prevented implementation of on-site or off-site RECYCLING opportunities. MARK ☒ FOR ALL THAT APPLY.

- ☐ a. Insufficient capital to install new recycling equipment or implement new recycling practices.
- ☒ b. Lack of technical information on recycling techniques applicable to this site's specific production processes.
- ☒ c. Recycling is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- ☐ d. Concern that product quality may decline as a result of recycling.
- ☐ e. Requirements to manifest wastes inhibit shipments off site for recycling.
- ☐ f. Financial liability provisions inhibit shipments off site for recycling.
- ☐ g. Technical limitations of product processes inhibit shipments off site for recycling.
- ☒ h. Technical limitations of production processes inhibit on-site recycling.
- ☐ i. Permitting burdens inhibit recycling.
- ☐ j. Lack of permitted off-site recycling facilities.
- ☒ k. Unable to identify a market for recyclable materials.
- ☐ l. Other (Specify) _____

10. Has this site requested or received technical information or financial assistance on source reduction and/or recycling practices from any of the following sources? MARK ☒ FOR ALL THAT APPLY.

	Prior Years		1986		1987	
	Technical	Financial	Technical	Financial	Technical	Financial
a. Local government	☐	☐	☐	☐	☐	☐
b. State government	☐	☐	☐	☐	☐	☐
c. Federal government	☐	☐	☐	☐	☐	☐
d. Trade associations	☐	☐	☐	☐	☐	☐
e. Educational institutions	☐	☐	☐	☐	☐	☐
f. Suppliers	☐	☐	☒	☐	☒	☐
g. Other parts of your firm	☐	☐	☐	☐	☐	☐
h. Other firms/consultants	☐	☐	☐	☐	☐	☐
i. No request made	☐	☐	☐	☐	☐	☐
j. Other (conferences, literature, etc.)_____	☐	☐	☐	☐	☐	☐

Comments:

Pantone, Inc. is a specialty printing company. Our waste stream consists of contaminated ink and pigments which have no value. We also dispose of the containers in which the ink and pigments are placed in.

PART II: 1987 WASTE MINIMIZATION REPORT DATA

Explanations and Sample Calculations:

New Jersey Waste Number	1986 Amt of Waste & Unit	1986 Amt Waste / Unit of Production	1987 Amt of Waste & Unit	1987 Amt Waste / Unit of Production	Unit of Production	Increase or Decrease of Amt Waste / Unit of Production	Reduction Code(s)	Disposal Code
See NJAC 7:26-8.9 -8.16	Total Waste generated in 1986 & unit of waste	Divide Waste generated by unit of product produced	Total Waste generated in 1987 & unit of waste	Divide Waste generated by unit of product produced	PR= Product SD= Sales $ LH= Labor Hours RM= Raw Materials Used	0.044 p/PR 1987 −0.051 p/PR 1986 − 0.07 p/PR {Waste (p) reduced 0.07 per unit of production (PR)}	See Pg 4 for explanation and legend	See Pg 4 for explanation and legend

Sample Data:

F006	335 p	335 p / 6000 PR = 0.051 p/PR	420 p	420 p / 9600 PR = 0.044 p/PR	PR	0.07 p/PR	[illegible]	[illegible]
SIC CODE for Waste Stream No 1 – 3679			Product Produced – Circuit Boards			Source Code – [illegible]		
PROCESS DESCRIPTION – [illegible]						PROJECTED % RED./CODE(S) – [illegible]		

★ For further SAMPLE DATA and an explanation of SAMPLE DATA see Page 9. Enter your data below.

1. X900	908	.188g/LH	825	.0979/LH	8469LH	-.091g/LH	10	PT
SIC CODE for Waste Stream No 1 – 2752			Product Produced – printed matter			Source Code – B		
PROCESS DESCRIPTION – Lithographic printing/cleaning techniques						PROJECTED % RED./CODE(S) – 0%/4		
2. C 306	0	0/LH	15,200	1.79p/LH	8469 LH	+ 1.79 p/LH	10	PT
SIC CODE for Waste Stream No 2 – 275			Product Produced – printed matter			Source Code – B		
PROCESS DESCRIPTION – Lithographic printing/cleaning techniques, obsolete prod.						PROJECTED % RED./CODE(S) – 5%/4		
3. D001	330	.068q/LH	0	09/LH	8469LH	-.068 q/LH	4	PT
SIC CODE for Waste Stream No 3 – 2752			Product Produced – printed matter			Source Code – B		
PROCESS DESCRIPTION – Lithographic printing/cleaning techniques, obsolete products						PROJECTED % RED./CODE(S) – 0%/4		
4.								
SIC CODE for Waste Stream No 4 –			Product Produced –			Source Code –		
PROCESS DESCRIPTION –						PROJECTED % RED./CODE(S) –		
5.								
SIC CODE for Waste Stream No 5 –			Product Produced –			Source Code –		
PROCESS DESCRIPTION –						PROJECTED % RED./CODE(S) –		

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management

Hazardous Waste Generator Waste Administration Report 1986/87
SUPPLEMENTAL INFORMATION SHEET NUMBER (1) OF (1).
EPA ID NO. NJD0012533384

In 1987, the unit of production needed to be changed from sales dollars to labor hours. The waste stream generated is more closely connected to direct labor than to sales dollars. This is attributable to internal changes within the company in areas which do not require printing.

Labor Hours	1985 vs. 1986		% increase/decrease
	6336.5	4805.1	-24%
	1986 vs	1987	% increase/decrease
	4805.1	8469	+75%

Reduction Codes: The X900 and C306 waste streams are identical products, both are either color contaminated inks or pigments combined with their packaging containers and soiled weighing papers. In the 1987 calendar year, we expanded our work area and as a result of our expansion, it became necessary to clean out our storage area. We disposed of a large quantity of obsolete inks/inks which no longer matched current color standards. Inks were of no commercial value for recycling.

Exhibit P

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1988
CERTIFICATION FORM

ITEM 1 USEPA Identification Number: NJD001253384

ITEM 2 Generator (Company) Name: Pantone, Inc.

ITEM 3 Contact Person: Ken Niepokoy

ITEM 4 Phone Number: (201) 935-5500

ITEM 5 Certification:

I certify that the information given in this annual report is true, accurate and complete and that I have received the following guide, "GENERATOR'S GUIDE TO UNDERSTANDING THE NEW JERSEY HAZARDOUS WASTE REGULATIONS ".

_____	_____	12/18/89
(Print or type name)	(Signature)	(Date)

ITEM 6

A ☐ This site (company) generated less than 1.33 tons of hazardous waste for the calendar year 1988 (No Fee)

B ☒ This site (company) generated greater than 1.33 tons of hazardous waste but less than 10 tons of hazardous waste during the calendar year 1988 (Fee $200)

C ☐ This site (company) generated greater than 10 tons of hazardous but less than 100 tons of hazardous waste during the calendar year (Fee $300)

D ☐ This site (company) generated greater than 100 tons of hazardous waste during the calendar year (Fee $400)

ITEM 7 Federal Vendor Identification Number
135583503

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1988
- REPORT FORM -

1. **Generator Name** Pantone, Inc.
2. **USEPA ID Number** NJD001253384
3. **Site Address** 55 Knickerbocker Road, Moonachie, NJ 07074
4. **Transporter Name** S & W Waste, Inc.
5. **Transporter USEPA ID Number** NJD991291105
6. **TSD Facility Name** S & W Waste, Inc.
7. **TSD Facility EPA ID Number** NJD991291105
8. **TSD Address** 105 Jacobus Ave., South Kearny, NJ 07052

9.

A.) Waste Number (I)	B.) Waste Description (11)	C.) DOT Haz Class (11 or J)	D.) Total Quantity (13)	E.) Units (14)
C306	Hazardous Waste Solid NOS NA 9189	T/S Pigments & Ink Sludge	13,630	P

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1988
WASTE SUMMARY FORM

Generator (Company) Name Pantone, Inc.

US EPA ID Number NJD 001253384

Directions

Please indicate below the total quantity of hazardous waste manifested during the 1988 report year for each unit of measure. Enter the units of measure as they appeared in item #14 of the manifest. Do not convert one form of unit of measure to another.

_____ G - Gallons (liquids only)

13,630 P - Pounds

_____ T - Tons

_____ Y - Cubic Yards

_____ L - Liters (Liquids only)

_____ K - Kilograms

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
HAZARDOUS WASTE GENERATOR WASTE MINIMIZATION REPORT: 1988

Company: Pantone, Inc. (Name) **EPA ID No.:** NJD001253384

Mailing Address: 55 Knickerbocker Road (Street) Moonachie (City) NJ 07074 (State/Zip Code)

Location of Generator Site: _____ (If different from mailing address)

Contact Person: Ken Niepokoy (Name) 201-935-5500 (Telephone Number)

_____ (Signature) _____ (Title)

PART I - PLEASE COMPLETE THE FOLLOWING SURVEY AND REPORT. FOR ASSISTANCE CALL (609) 292-8341

DEFINITIONS

Create – means to start the type of activity referred to in the question

Expand – means to improve upon or increase the scope of an active or existing activity

Recycling – means the processes constituting "use or reuse" and "reclamation". "Use or reuse" means the procedure whereby a residual is employed as an ingredient in an industrial process to make a product. "Reclamation" means a procedure whereby a material is treated to recover a useable product, or where a material is regenerated. For example, distillation and recovery of spent solvents for reuse is recycling.

Source Reduction – means the reduction or elimination of the volume and/or toxicity of hazardous waste generation at the source, usually within a process or procedure before the waste is generated.

1. Did this site create or expand a source reduction and recycling program?

	Prior Years		1987		1988	
	Yes	No	Yes	No	Yes	No
Create	☐	☒	☐	☒	☐	☒
Expand	☐	☒	☐	☒	☐	☒

2. Did this site have a written policy or statement that outlined goals, objectives and methods for source reduction and recycling of hazardous waste?

	Prior Years	1987	1988
Yes	☐	☐	☐
No	☒	☒	☒

3. What was the dollar amount of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste? Enter zero (0) if none.

	Prior Years	1987	1988
Capital expenditures	$ 0	$ 0	$ 0
Operating costs	$ 0	$ 0	$ 0

4. Did this site have an employee training program or provide incentives (bonuses, awards, personal recognition, etc.) to identify and implement source reduction and recycling opportunities and activities?

	Prior Years		1987		1988	
	Yes	No	Yes	No	Yes	No
Training	☒	☐	☒	☐	☒	☐
Incentives	☐	☒	☐	☒	☐	☒

WASTE MINIMIZATION - PART I - Continued

5. Did this site conduct a source reduction and/or recycling opportunity assessment or audit? Note: an opportunity assessment or audit is a procedure that can be implemented to reduce the generation of hazardous waste or the quantity which must subsequently be treated, stored or disposed.

	Prior Years		1987		1988	
	Yes	No	Yes	No	Yes	No
Site-Wide	☐	☒	☒	☐	☒	☐
Process-Specific	☐	☐	☐	☐	☐	☐

6. Did this site identify or implement new SOURCE REDUCTION opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site?

	Prior Years		1987		1988	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☒	☐	☒
Implement	☐	☒	☐	☒	☐	☒

7. What factors have delayed or prevented implementation of SOURCE REDUCTION opportunities. MARK ☒ FOR ALL THAT APPLY.

- ☐ a. Insufficient capital to install new source reduction equipment or implement new source reduction practices.
- ☒ b. Lack of technical information on source reduction techniques, applicable to my specific production process.
- ☐ c. Source reduction is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- ☐ d. Concern that product quality may decline as a result of source reduction.
- ☒ e. Technical limitations of the production processes.
- ☐ f. Permitting burdens.
- ☐ g. Other (Specify) _____

8. Did this site identify or implement new RECYCLING opportunities to reduce the volume and/or toxicity of hazardous waste generated at this site or subsequently treated, stored, or disposed of on site or off site?

	Prior Years		1987		1988	
	Yes	No	Yes	No	Yes	No
Identify	☐	☒	☐	☒	☒	☐
Implement	☐	☒	☐	☒	☒	☐

WASTE MINIMIZATION - PART I - Continued

9. What factors have delayed or prevented implementation of on-site or off-site RECYCLING opportunities. MARK ☒ FOR ALL THAT APPLY.

- ☐ a. Insufficient capital to install new recycling equipment or implement new recycling practices.
- ☒ b. Lack of technical information on recycling techniques applicable to this site's specific production processes.
- ☒ c. Recycling is not economically feasible: cost savings in waste management or production will not recover the capital investment.
- ☐ d. Concern that product quality may decline as a result of recycling.
- ☐ e. Requirements to manifest wastes inhibit shipments off site for recycling.
- ☐ f. Financial liability provisions inhibit shipments off site for recycling.
- ☐ g. Technical limitations of product processes inhibit shipments off site for recycling.
- ☒ h. Technical limitations of productin processes inhibit on-site recycling.
- ☐ i. Permitting burdens inhibit recycling.
- ☐ j. Lack of permitted off-site recycling facilities.
- ☒ k. Unable to identify a market for recyclable materials.
- ☐ l. Other (Specify) _____

10. Has this site requested or received technical information or financial assistance on source reduction and/or recycling practices from any of the following sources? MARK ☒ FOR ALL THAT APPLY.

	Prior Years		1987		1988	
	Technical	Financial	Technical	Financial	Technical	Financial
a. Local government	☐	☐	☐	☐	☐	☐
b. State government	☐	☐	☐	☐	☐	☐
c. Federal government	☐	☐	☐	☐	☐	☐
d. Trade associations	☐	☐	☐	☐	☐	☐
e. Educational institutions	☒	☐	☒	☐	☒	☐
f. Suppliers	☐	☐	☐	☐	☒	☐
g. Other parts of your firm	☐	☐	☐	☐	☐	☐
h. Other firms/consultants	☐	☐	☐	☐	☐	☐
i. No request made	☐	☐	☐	☐	☐	☐
j. Other (conferences, literature, etc.) _____	☐	☐	☐	☐	☐	☐

Comments: Pantone, Inc. is a printing company. Our waste stream consists of contaminated ink and pigments which have no value. We also dispose of the containers in which the ink and pigments are placed in.

PART II: 1987/1988 WASTE MINIMIZATION REPORT DATA

EPA ID #: NJD001253384

Waste Stream		a. New Jersey Waste Number (See your Manifest or Annual Report	1987 b. Enter total Amount and Unit of Waste	1987 c. Total Amount of Product Produced and Unit of Production (See Page 3)	1987 d. Amount of Waste Divided by Total Amount of Production $d = \frac{b}{c}$	1988 e. Enter total Amount and Unit of Waste	1988 f. Total Amount of Product Produced and Unit of Production (See Page 3)	1988 g. Amount of Waste Divided By Total Amount of Production $g = \frac{e}{f}$	h. Increase or Decrease of Amount of Waste Divided by Unit of Production $h = g - d$
A.	1	a. C306	b. 22,081	c. 8469 LH	d. 2.60	e. 13,630	f. 8570 LH	g. 1.59	h. -1.01
	2	i. Reduction Code: 7	j. Disposal Code: PT	k. SIC CODE for Waste Stream A: 2752		l. Product Produced: Printed matter			m. Source Code: B
	3	n. PROCESS DESCRIPTION: Lithographic printing/cleaning techniques						o. PROJECTED % RED./CODE(S) - 2%/7	
B.	1	a.	b.	c.	d.	e.	f.	g.	h.
	2	i. Reduction Code:	j. Disposal Code:	k. SIC CODE for Waste Stream B:		l. Product Produced:			m. Source Code:
	3	n. PROCESS DESCRIPTION:						o. PROJECTED % RED./CODE(S) -	
C.	1	a.	b.	c.	d.	e.	f.	g.	h.
	2	i. Reduction Code:	j. Disposal Code:	k. SIC CODE for Waste Stream C:		l. Product Produced:			m. Source Code:
	3	n. PROCESS DESCRIPTION:						o. PROJECTED % RED./CODE(S) -	
D.	1	a.	b.	c.	d.	e.	f.	g.	h.
	2	i. Reduction Code:	j. Disposal Code:	k. SIC CODE for Waste Stream D:		l. Product Produced:			m. Source Code:
	3	n. PROCESS DESCRIPTION:						o. PROJECTED % RED./CODE(S) -	
E.	1	a.	b.	c.	d.	e.	f.	g.	h.
	2	i. Reduction Code:	j. Disposal Code:	k. SIC CODE for Waste Stream E:		l. Product Produced:			m. Source Code:
	3	n. PROCESS DESCRIPTION:						o. PROJECTED % RED./CODE(S) -	
F.	1	a.	b.	c.	d.	e.	f.	g.	h.
	2	i. Reduction Code:	j. Disposal Code:	k. SIC CODE for Waste Stream F:		l. Product Produced:			m. Source Code:
	3	n. PROCESS DESCRIPTION:						o.	

SUPPLEMENTAL INFORMATION SHEET

In early 1987, the waste classification was changed by our designated facility, S & W Waste, Inc., from X910 expressed in gallons to C306 express in pounds. Our waste stream has remained consistent even though the classification changed. We feel that the conversion from gallons to pounds and the methods which were previously employed for packaging our waste stream inflated the net quantity.

Exhibit Q

OMB#: Expires

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

DRAFT
8-25-89

FORM
IC

U.S. ENVIRONMENTAL PROTECTION AGENCY

1989 Waste Minimization Report

IDENTIFICATION AND CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 6 of the 1989 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete items A through H. Check the box ☒ in items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 6.

A. EPA ID No. Same as label ☒ or →

B. Site/company name Same as label ☒ or →

C. Has the site name associated with this EPA ID changed since 1987? ☐ 1 Yes ☒ 2 No

D. Street name and number. If not applicable, enter industrial park, building name or other physical location description. Same as label ☒ or →

E. City, town, village, etc. Same as label ☒ or →

F. County: Bergen

G. State Same as label ☒

H. Zip Code Same as label ☒

SEC. II Mailing address of site. Instruction page 6.

A. Is the mailing address the same as the location address? ☒ 1 Yes (SKIP TO SEC. III) ☐ 2 No (COMPLETE SEC. II)

B. Number and street name of mailing address

C. City, town, village, etc.

D. State

E. Zip Code

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 6.

A. Please print: Last name: Niepokoy First name: Kenneth M.I.: A.

B. Title: Operations Manager/ Textile

C. Telephone: 201 935-5500 Extension 67

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 7.

A.	B.	C.	D.
2752	NA	NA	NA

SEC. V I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Number of form pages submitted: Form IC 2 Form WM NA

B. Please print: Last name: Niepokoy First name: Kenneth M.I.: A

C. Title: Operations Mgr. Textile Division

D. Signature: Kenneth A Niepokoy

E. Date of signature: 01 12 90 (MO. DAY YR.)

EPA Form Revised

OVER →

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1989
WASTE SUMMARY FORM

Generator (Company) Name Pantone, Inc.

US EPA ID Number NJD001253384

Directions

Please indicate below the total quantity of hazardous waste manifested during the 1989 report year for each unit of measure. Enter the units of measure as they appeared in item #14 of the manifest. Do not convert one form of unit of measure to another.

650 G - Gallons (liquids only)

8,350 P - Pounds

_____ T - Tons

_____ Y - Cubic Yards

_____ L - Liters (Liquids only)

_____ K - Kilograms

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1989
- REPORT FORM -

1. Generator Name Pantone, Inc.

2. USEPA ID Number NJD001253384

3. Site Address 55 Knickerbocker Road, Moonachie, NJ 07074

4. Transporter Name Freehold Cartage

5. Transporter USEPA ID Number NJD05426164

6. TSD Facility Name Northeast Environmental Services, Inc.

7. TSD Facility EPA ID Number NYD057770109

8. TSD Address Canal Road, Wampsville, NY 13163

9.

A.) Waste Number (I)	B.) Waste Description (11)	C.) DOT Haz Class (11 or J)	D.) Total Quantity (13)	E.) Units (14)
D001	Waste Flammable Solid NOS	UN1325	400	P
F003	Hazardous Waste Liquid NOS ORME	NA9189	375	G
D001	Waste Isopro Panol Flammable Liquid	UN1219	110	G
F003	Waste Xylene Flammable Liquid	UN1307	165	G
F003	Waste Flammable Solid NOS Flammable Solid	UN1325	450	P

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1989
- REPORT FORM -

1. Generator Name Pantone, Inc.

2. USEPA ID Number NJD001253384

3. Site Address 55 Knickerbocker Road, Moonachie, NJ 07074

4. Transporter Name S & W Waste, Inc.

5. Transporter USEPA ID Number NJD991291105

6. TSD Facility Name S & W Waste, Inc.

7. TSD Facility EPA ID Number NJD991291105

8. TSD Address 115 Jacobus Avenue
South Kearny, NJ 07032

9.

A.) Waste Number (I)	B.) Waste Description (11)	C.) DOT Haz Class (11 or J)	D.) Total Quantity (13)	E.) Units (14)
C215	Hazardous Waste Solid NOS ORME	NA9189	7,500	P

NOTE: For each combination of transporter and treatment, storage and disposal facility (TSDF), list the TOTAL quantity manifested for each waste type

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1989
CERTIFICATION FORM

ITEM 1 USEPA Identification Number: NJD001253384

ITEM 2 Generator (Company) Name: Pantone, Inc.

ITEM 3 Contact Person: Ken Niepokoy

ITEM 4 Phone Number: (201) 935-5500

ITEM 5 Certification:

I certify that the information given in this annual report is true, accurate and complete.

Ken Niepokoy	Ken Niepokoy	4/6/90
(Print or type name)	(Signature)	(Date)

ITEM 6

A ☐ This site (company) generated less than 1.33 tons of hazardous waste for the calendar year 1989 (No Fee)

B ☒ This site (company) generated greater than 1.33 tons of hazardous waste but less than 10 tons of hazardous waste during the calendar year 1989 (Fee $200)

C ☐ This site (company) generated greater than 10 tons of hazardous but less than 100 tons of hazardous waste during the calendar year (Fee $300)

D ☐ This site (company) generated greater than 100 tons of hazardous waste during the calendar year (Fee $400)

ITEM 7 Federal Vendor Identification Number

135583503

* Please submit check with your completed report.

Exhibit R 7

OFFICE USE ONLY
Ann. Fee _____
RA _____
Date _____
Rec'd By _____

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
HAZARDOUS WASTE GENERATOR ANNUAL REPORT 1990
CERTIFICATION FORM

ITEM 1 USEPA Identification (Generator) Number: NJD001253384

ITEM 2 Generator (Company) Name: Pantone, Inc.

ITEM 3 Contact Person: Ken Niepokoy

ITEM 4 Phone Number: (201) 935-5500

ITEM 5 Certification:

I certify that the information given in this annual report is true, accurate and complete.

Ken Niepokoy	Ken Niepokoy	2/7/91
(Print or type name)	(Signature)	(Date)

ITEM 6 **Place an X next to the letter that applies:**

A ____ This site (company) manifested less than 1.33 tons of hazardous waste for the calendar year 1990 (**No Fee**)

B _X_ This site (company) manifested 1.33 tons or more of hazardous waste but less than 10 tons of hazardous waste during the calendar year 1990 (**Fee $200**)

C ____ This site (company) manifested 10 tons or more of hazardous waste but less than 100 tons of hazardous waste during the calendar year (**Fee $300**)

D ____ This site (company) manifested 100 tons or more of hazardous waste during the calendar year (**Fee $400**)

ITEM 7 Federal Vendor Identification Number (Tax Identification Number)

135583503.

PLEASE SUBMIT CHECK WITH YOUR COMPLETED REPORT.

C

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM 01

OFF-SITE IDENTIFICATION

INSTRUCTIONS: Read the detailed instructions on the back of this page before completing this form.

Site 1

A. EPA ID No. of off-site installation or transporter: NYD057770109

B. Name of off-site installation or transporter: Northeast Environmental Services, Inc.

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☒ TSDR

D. Address of off-site installation
Street: Canal Road
City: Wampsville State: NY Zip Code: 13163-

Site 2

A. EPA ID No. of off-site installation or transporter: NJD05Y12616 4

B. Name of off-site installation or transporter: Freehold Cartage, Inc.

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☒ Transporter
- ☐ TSDR

D. Address of off-site installation
Street: N/A
City: State: Zip Code: -

Site 3

A. EPA ID No. of off-site installation or transporter: NYD980769947

B. Name of off-site installation or transporter: Haz-Mat Environmental Group, Inc.

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☒ Transporter
- ☐ TSDR

D. Address of off-site installation
Street: N/A
City: State: Zip Code: -

Site 4

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of off-site installation
Street:
City: State: Zip Code: -

Site 5

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of off-site installation
Street:
City: State: Zip Code: -

Comments:

OMB# 2050-0024 Expires 3-31-92

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
EPA ID NO. MOONACHIE, NJ 07074

U.S. ENVIRONMENTAL PROTECTION AGENCY

1990 Hazardous Waste Report

FORM **IC**

IDENTIFICATION AND CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 7 of the 1990 Hazardous Waste Report booklet before completing this form.

SEC. I Site name and location address. Complete Items A through H. Check the box ☒ in Items A, B, D, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 7.

A. EPA ID No. Same as label ☒ or →
B. Site/company name Same as label ☒ or →
C. Has the site name associated with this EPA ID changed since 1987? ☐ 1 Yes ☒ 2 No
D. Street name and number. If not applicable, enter industrial park, building name or other physical location description. Same as label ☒ or →
E. City, town, village, etc. Same as label ☒ or →
F. County Bergen
G. State Same as label ☒
H. Zip Code Same as label ☒

SEC. II Mailing address of site. Instruction page 7.

A. Is the mailing address the same as the location address? ☒ 1 Yes (SKIP TO SEC. III) ☐ 2 No (COMPLETE SEC. II)
B. Number and street name of mailing address
C. City, town, village, etc.
D. State
E. Zip Code

SEC. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 7.

A. Please print: Last name Niepokoy First name Ken M.I.
B. Title Operations Mgr Textile Div.
C. Telephone 201 935-5500 Extension 67

SEC. IV Enter the Standard Industrial Classification (SIC) Code that describes the principal products, group of products, produced or distributed, or the services rendered at the site's physical location. Enter more than one SIC Code only if no one industry description includes the combined activities of the site. Instruction page 8.

A.	B.	C.	D.
2752	NA	NA	NA

SEC. V I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Number of form pages submitted
Form IC 2 Form GM 5 Form WR NA Form PB NA

B. Please print: Last name Niepokoy First name Ken M.I.
C. Title Operations Mgr.-Textile Division
D. Signature Ken Niepokoy
E. Date of signature 02 07 91 (MO. DAY YR.)

OVER →

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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: Soil samples obtained while drilling monitoring wells in connection with underground storage tank remediation.

B. EPA hazardous waste code, Page 15: F003 | NA | NA | NA

C. State hazardous waste code, Page 16: NA | NA

D. SIC code, Page 16: 2752

E. Source code, Page 16: A69

F. Form code, Page 16: B407

G. Origin, Page 16: Code 6; System type M NA

H. TRI constituent, Page 17:

I. CAS numbers, Page 17: 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989, Instruction Page 17: NA

B. Quantity generated in 1990, Page 17: 1800

C. UOM, Page 18: 1

D. Density, Page 18: DK . ☐ 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	NYD057770109	M043	1800
Site 2	NA	MNA	NA

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
W W W W	☐ 1 Yes ☐ 2 No		.	

Comments: Well cuttings obtained while installin monitoring wells
soil 99.9% acetone ppb.
6.6

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Waste water obtained while purging and sampling monitoring wells in conjunction with underground storage tank remediation program.

B. EPA hazardous waste code (Page 15): F003 | N/A | N/A | N/A

C. State hazardous waste code (Page 16): N/A | N/A

D. SIC code (Page 16): 2752

E. Source code (Page 16): A69

F. Form code (Page 16): B101

G. Origin (Page 16) Code: 6 System type: M | N/A

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. - - 2. - - 3. - - 4. - - 5. - -

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): N/A

B. Quantity generated in 1990 (Page 17): 275

C. UOM (Page 18): 5

D. Density (Page 18): DK . ☐ 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	NYD057771019	M129	275
Site 2	N/A	M/N/A	N/A

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)
W / W / W / W	☐ 1 Yes ☐ 2 No		.	

Comments: Waste water obtained from monitoring well development and sampling water 99.9% acetone 6.6 ppb.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Spend isopropanol and water mixture which is used as a dampening agent in lithographic printing.

B. EPA hazardous waste code (Page 15): D001 | NA | NA | NA

C. State hazardous waste code (Page 16): NA | NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A89

F. Form code (Page 16): B101

G. Origin (Page 16) Code: 1 System type: M NA

H. TRI constituent (Page 17):

I. CAS numbers (Page 17): 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): 110

B. Quantity generated in 1990 (Page 17): 110

C. UOM (Page 18): 5

D. Density (Page 18): DK . ☐ 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	NYD057770109	M041	110
Site 2	NA	M NA	NA

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)
W W W W	☐ 1 Yes ☐ 2 No		.	

Comments: Dampening agent for lithographic printing.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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): Spent flammable solvent from parts cleaning tank operation in printing plant, mixture of dissolin and waste non hazardous printing ink.

B. EPA hazardous waste code (Page 15): F002 | NA | NA | NA

C. State hazardous waste code (Page 16): NA | NA

D. SIC code (Page 16): 2752

E. Source code (Page 16): A19

F. Form code (Page 16): B211

G. Origin (Page 16) Code 1 System type M | NA

H. TRI constituent (Page 17): 1

I. CAS numbers (Page 17): 1. ___ 2. ___ 3. ___ 4. ___ 5. ___

Sec. II

A. Quantity generated in 1989 (Instruction Page 17): NA

B. Quantity generated in 1990 (Page 17): 440

C. UOM (Page 18): 5

D. Density (Page 18): DK. ☐ 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	NYD057770109	M041	440
Site 2	NA	MNA	NA

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)
W ___ W ___	☐ 1 Yes	___	___	___
W ___ W ___	☐ 2 No			

Comments:

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME NJD001253384

PANTONE, INC,
55 KNICKERBOCKER ROAD
MOONACHIE, NJ 07074

EPA ID NO.

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: Ink and mineral spirit blend discard of obsolete or off spec materials from printing operation. Clean up of all unknowns throughout facility.

B. EPA hazardous waste code, Page 15: D001 NA NA NA

C. State hazardous waste code, Page 16: NA NA

D. SIC code, Page 16: 2752

E. Source code, Page 16: A58

F. Form code, Page 16: B1114

G. Origin, Page 16: Code 1; System type M041

H. TRI constituent, Page 17:

I. CAS numbers, Page 17: 1. 2. 3. 4. 5.

Sec. II

A. Quantity generated in 1989, Instruction Page 17: NA

B. Quantity generated in 1990, Page 17: 275

C. UOM, Page 18: 5

D. Density, Page 18: DK ☐ 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	NYD057770110 9	M041	275
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
W W W W	☐ 1 Yes ☐ 2 No		.	

Comments:

This Shipping Order must be legibly filled in, in ink, in indelible pencil, or in Carbon, and retained by the Agent.

Shipper No.

Carrier No. Exhibit 5

Page 1 of 1

Tri-S (Name of carrier) (SCAC)

Date

8091-2-92

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: Consignee: Northeast Environmental Services, Inc.

Street: Canal Road

City: Wampsville State: NY Zip Code: 13163

FROM: Shipper: Pantone, Inc.

Street: 55 Knickerbacker Road

City: Moonachie State: NJ Zip Code: 07074

24 hr. Emergency Contact Tel. No.: (201)589-0900

Route

Vehicle Number

No.of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class Identification Number (UN or NA) per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
OIL x 55gal DM		8091-H-A006/Waste Ink Sludge Non-Hazardous	4000		5	
		Received By: Northeast Environmental Services, Inc. Date:				

PLACARDS TENDERED: YES ☐ NO ☒

REMIT C.O.D. TO: ADDRESS

Note — Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

$ _____ per _____

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 ☒ Rail ☒ Highway ☒ Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable International and national governmental regulations.

_____ Signature

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER Pantone, Inc.

PER [signature] 9/2/92

CARRIER Tri-S

PER [signature]

DATE 9/2/92

2

Permanent post-office address of shipper.

STYLE F60 LABELMASTER, Div. of American Labelmark Co., Chicago, IL 60646 312/478-0900

48-14-1 (3/89)—77

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. NJ0091233304 Manifest Document No. 00003

2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address
Pantone Inc.
55 Knickerbocker Road - Moonachie, NJ 07074

4. Generator's Phone (201) 935-3500

A. State Manifest Document No. NY B 576175 5

B. Generator's ID Sara

5. Transporter 1 (Company Name) Tri-S

6. US EPA ID Number CTD016421 0

C. State Transporter's ID

D. Transporter's Phone (203) 875-2110

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
Northeast Environmental Services, Inc.
Canal Road
Hampsville, NY 13163

10. US EPA ID Number NYD057770109

G. State Facility's ID

H. Facility's Phone (315) 697-3979

GENERATOR

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, N.O.S. Flammable Liquid UN 1993 (D001)RQ	1	DM	100	G	EPA D001,F003 STATE
b.					EPA STATE
c.					EPA STATE
d.					EPA STATE

J. Additional Descriptions for Materials listed Above
a. Petroleum Distillates, Acetone
b. c. d.

K. Handling Codes for Wastes Listed Above
a. S c.
b. d.

15. Special Handling Instructions and Additional Information
a) 8091-H-3007
RQ- 100 lbs.
Emergency Response: (201)589-0900
8091-2-91

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 state laws and regulations.

If I am a large quantity generator, I certify that I have 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 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 generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jesse [illegible] Signature: [illegible] Mo. Day Year: 09-07-92

TRANSPORTER

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Sherwood [illegible] Signature: [illegible] Mo. Day Year: 09 07 92

18. Transporter 2 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Signature: Mo. 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: Mo. Day Year:

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Dept. of Environmental Conservation (518) 457-7362.

NY B 576175 5

EPA Form 3700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 2 Generator - retained by generator

Section 3 **OTHER RESTRICTED WASTES (268.33, 268.34, 268.35)**

(check here if applicable) ☑

Restricted Waste(s) contained in this shipment and referenced by the above manifest No. are listed below and are subject to the treatment standards set forth in 268.41, 268.42, and/or 268.43.

For each waste code, list the corresponding **Subcategory,** if applicable and **Treatability Group** (NWW or WW). Record an **"X"** in the appropriate treatment standard column below for CCWE or CCW based standards. For Waste codes based on a specified technology, write the 5-digit code indicating that technology in the space provided in the center column below.

MCS No.	USEPA Hazardous Waste Code(s)	Subcategory If Applicable	Treatability Group	Treatment Standard - 40 CFR: CCWE 268.41(a)	Spec. Tech 268.42(a)	CCW 268.43(a)
8091-H B007	D001	IL, High TOC	NWW	☐	INCIN, FSUBS07R02	☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐
				☐		☐

Section 4 **RESTRICTED WASTES SUBJECT TO AN EXTENSION IN THE EFFECTIVE DATE (40 CFR 268 Appendix VII)**

(check here if applicable) ☐

The wastes contained in this shipment as referenced by the above manifest no. which are subject to an Extenson in the Effective Date in accordance with 40 CFR Subpart C are identified below:

MCS No.	USEPA Hazardous Waste Code	Extension Date

(These wastes may be subject to the California List Prohibitions)

Section 5 **LAB PACK CERTIFICATION**

(check here if applicable) ☐

In accordance with 40 CFR 268.7(a)(7) and regarding those lab pack wastes corresponding to USEPA Hazardous Waste Codes _____ _____ identified as restricted wastes contained in this shipment and referenced by the above manifest no., I submit the following certifications statement(s) where applicable.

Appendix IV Lab Pack Wastes (Organometallic)

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in appendix IV to part 268 or solid wastes not subject to regulation under 40 CFR Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Signature _____

Title _____ Date _____

Appendix V Lab Pack Wastes (Organic)

I certify under penalty of law that I pesonally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste and that the lab pack contains only organic wastes specified in Appendix V to Part 268 or solid wastes not subject to regulation under 40 CFR Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Signature _____

Title _____ Date _____

Lab pack wastes with hazardous waste codes not specified by EPA in Appendix IV or V are referenced in Section III of this form.

NOTIFICATION STATEMENT

Waste analysis is attached where available, otherwise, the information herein is based upon my thorough knowledge of the waste(s).

I hereby certify that all information submitted in this document is complete and accurate to the best of my knowledge and information.

Signature _____ Title _____ Date _____

LAND DISPOSAL RESTRICTION NOTIFICATION FORM

Wastes that do not meet treatment standards

Generator Name Pantone, Inc. MCS No. (s) 8091-H-B007

Address 55 Knickerbacker Road Manifest No. NYB5761755

Moonachie, NJ 07074 EPA I.D. No. NJD001253384

Section 1 **SPENT SOLVENT WASTE (268.30)**

(check here if applicable) ☒

The shipment, as referenced by the above manifest number, contains waste(s) corresponding to USEPA hazardous waste codes check off below:

☐ F001 ☐ F002 ☑ F003 ☐ F004 ☐ F005

These waste(s) must be treated to meet the LDR treatment standards listed below.

F001-F005 SPENT SOLVENTS	WASTEWATERS	NON-WASTEWATERS
	Treatment standards expressed as constituent concentration in the waste extract as outlined in 40CFR 268.41 (CCWE) in Mg/L	
Acetone	0.05	0.59
n-Butyl Alcohol	5.0	5.0
Carbon Disulfide	1.05	4.81
Carbon Tetrachloride	0.05	0.96
Chlorobenzene	0.15	0.05
Cresols (and Cresylic Acid)	2.82	0.75
Cyclohexanone	0.125	0.75
1,2 Dichlorobenzene	0.65	0.125
Ethyl Acetate	0.05	0.75
Ethyl Benzene	0.05	0.053
Ethyl Ether	0.05	0.75
Isobutanol	5.0	5.0
Methanol	0.25	0.75
Methylene Chloride	0.20	0.96
Methylene Chloride (Pharmaceutical Industry)	~~12.7~~ 0.44 *	0.96
Methyl Ethyl Ketone	0.05	0.75
Methyl Isobutyl Ketone	0.05	0.33
Nitrobenzene	0.66	0.125
Pyridine	1.12	0.33
Tetrachloroethylene	0.079	0.05
Toluene	1.12	0.33
1,1,1-Trichloroethane	1.05	0.41
1,1,2-Trichloro-1,2,2-Triflouroethane	1.05	0.96
Trichloroethylene	0.062	0.091
Trichlorofluoromethane	0.05	0.96
Xylene	0.05	0.15
	* Treatment standards expressed as constituent concentration in the waste as outlined in 40CFR 268.43 (CCW) (wastewaters in Mg/L; non-wastewaters in mg/Kg.)	
Benzene	0.07	3.7
1,1,2-Trichlorethane	0.030	7.6

Section 2 **CALIFORNIA LIST WASTE (268.32)**

(check here if applicable) ☐

This shipment, as referenced by the above manifest number, contains waste(s) corresponding to USEPA Hazardous Codes: __

The above referenced waste(s) must be treated to meet the treatment standards as set forth in 40 CFR 268 Subpart D, or where specific treatment standards are not applicable, the waste must be treated in accordance with the requirements specified in 40 CFR 268.32 and RCRA Section 3004(d).

CALIFORNIA LIST CONSTITUENTS AND THEIR PROHIBITION LEVELS

MCS NO.	CONSTITUENT	CONCENTRATION (MG/L)
	☐ Liquid wastes containing Arsenic	500
	☐ Liquid wastes containing Mercury	20
	☐ Liquid wastes containing Nickel	134
	☐ Liquid wastes containing Thallium	130
	☐ Liquid wastes containing HOC's*	1000 mg/kg

*Halogenated Organic Carbon (See 40 CFR Appendix III).

Exhibit T

NORTHEAST ENVIRONMENTAL SERVICES, INC.

A Subsidiary of
Environmental Services of America, Inc.

SEP 14 1992

Sept. 10, 1992

Nelson Cabte
Pantone, Inc.
55 Knickerbacker Road
Moonachie, NJ 07074

Dear Mr. Cabte,

Re: Manifest No(s): NYB576175 5 and BoL.

Enclosed please find the Generator's copy of the above referenced manifest(s). Please retain as proof of the legal disposal of your wastes.

If you should have any questions, please do not hesitate to contact me.

Thank You.

Sincerely,

David J. Chmielewski

David J. Chmielewski
General Manager

DJC/ lb

Enc.

NEW JERSEY DIVISION
119 Paris Street
Newark, NJ 07105-3831
Telephone (201) 589-3850
Fax (201) 817-9669

HEADQUARTERS
Marguerite Drive West
RR3, Box 8B
Canastota, NY 13032
Telephone (315) 697-3979
Fax (315) 697-3867

PENNSYLVANIA DIVISION
Building C-2
2495 Boulevard of The Generals
Norristown, PA 19403
Telephone (215) 631-5110
Fax (215) 630-9674

STRAIGHT BILL OF LADING

ORIGINAL—NOT NEGOTIABLE

Shipper No.

âge 1 of 1

Tri-S

Carrier No.

8091-2-92

(Name of carrier)

(SCAC)

Date

Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

D:

nsignee Northeast Environmental Services, Inc.

eet Canal Road

/ Wampsville State NY Zip Code 13163

e

FROM:

Shipper Pantone, Inc.

Street 55 Knickerbacker Road

City Moonachie State NJ Zip Code 07074

24 hr. Emergency Contact Tel. No. (201)589-0900

No. of Units Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class Identification Number (UN or NA) per 172.101, 172.202, 172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
55gal DM		8091-H-A006/Waste Ink Sludge Non-Hazardous	4000			
		Received By: Matthew P. Kyle Northeast Environmental Services, Inc. Date: 9/2/92				

Vehicle Number

PLACARDS TENDERED: YES ☐ NO ☒

Where the rate is dependent on value, shippers are o state specifically in writing the agreed or declared he property.
reed or declared value of the property is hereby y stated by the shipper to be not exceeding

per

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 ■ Rail ■ Highway ■ Water (DELETE NON-APPLICABLE MODE OF TRANSPORT) according to applicable international and national governmental regulations.

Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES: $

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and lawfully filed tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

Pantone, Inc.

9/2/92

st-office address of shipper.

CARRIER Tri-S

PER

DATE 9/2/92

1

STYLE F60 LABELMASTER, Div. of American Labelmark Co., Chicago, IL 60646 312/478-0900

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS SUBSTANCES REGULATION

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Print or type. Do not Staple.

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. NJD001253384 — Manifest Document No. 00002
2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address
Pantone Inc.
55 Knickerbacker Road - Moonachie, NJ 07074

4. Generator's Phone (201) 935-5500

5. Transporter 1 (Company Name) Tri-S
6. US EPA ID Number CTD016424210

7. Transporter 2 (Company Name)
8. US EPA ID Number

9. Designated Facility Name and Site Address
Northeast Environmental Services, Inc.
Canal Road
Wampsville, NY 13163

10. US EPA ID Number NYD057770109

A. State Manifest Document No. NY B576175 5
B. Generator's ID Same
C. State Transporter's ID 88857 CT
D. Transporter's Phone (203) 875-2110
E. State Transporter's ID
F. Transporter's Phone ( )
G. State Facility's ID
H. Facility's Phone (315) 697-3979

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, N.O.S. Flammable Liquid UN 1993 (D001)RQ	004	DM	180	G	EPA D001,F003 STATE
b.					EPA STATE
c.					EPA STATE
d.					EPA STATE

J. Additional Descriptions for Materials listed Above
a. Petroleum Distillates, Acetone
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. B
b.
c.
d.

15. Special Handling Instructions and Additional Information
a) 8091-H-8007
RQ= 100 lbs.
Emergency Responses (201)589-0900

8091-2-92

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 state laws and regulations.
If I am a large quantity generator, I certify that I have 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 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 generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Nelson Capote — Signature: [signature] — Mo. Day Year: 09 02 92

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: Sherwood Perry — Signature: [signature] — Mo. Day Year: 09 02 92

18. Transporter 2 (Acknowledgement or Receipt of Materials)
Printed/Typed Name — Signature — Mo. 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: Matthew P. Kyle — Signature: [signature] — Mo. Day Year: 09 02 92

GENERATOR — TRANSPORTER — FACILITY

NY B 576175 5

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY 5 - Generator-mailed by TSD facility

Dept. of Environmental Conservation (518) 457-7362.

Exhibit U

Site Name Pantone Inc.

55 Knickerbocker Road, Moonachie NJ 07074

EPA ID No. N J D 0 0 1 2 5 3 3 8 4

OFFICIAL USE ONLY	
Ann. Fee	
RA	
Date	
Rec'd By	

1993 FEE VERIFICATION WORKSHEET

INSTRUCTIONS: Complete the below fee category information. If your site is required to submit a fee, then attach the check where indicated. When submitting multiple reports, each site will require a FeeVerification Worksheet; however, any fees owed may be combined into one check.

Attach check here (do not send cash)

Make Payable to: Treasurer State of New Jersey

Mail Report to: NJDEPE, Bureau of Revenue
Attention: Annual Reports Unit
CN 417
Trenton, New Jersey 08625-0417

Fee Category

[ ]	No Fee	This site (company) manifested less than 1.33 tons of hazardous waste for the calendar year.
[X]	$125.00	This site (company) manifested 1.33 tons or more of hazardous waste but less than 10 tons of hazardous waste during the calendar year.
[ ]	$180.00	This site (company) manifested 10 tons or more of hazardous waste but less than 100 tons of hazardous waste during the calendar year.
[ ]	$300.00	This site (company) manifested 100 tons or more of hazardous waste but less tha 150 tons of hazardous waste during the calendar year.
[ ]	$400.00	This site (company) manifested 150 tons of more of hazardous waste during the calendar year.

FORM GM

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Pantone Inc.
55 Knickerbocker Rd., Moonachie NJ 07074

EPA ID NO: NJD 001 253 384

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

1993 Hazardous Waste Report

FORM GM

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 16 of the 1993 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description - Instruction page 18. Ignitable spent solvent from cleaning operation in printing plant, mixture of aliphatic solvents and non-hazardous printing ink sludge

B. EPA hazardous waste code Page 19.
D001 F002

C. State hazardous waste code Page 19.
NA NA

D. SIC code Page 19.	E. Origin code Page 19.	F. Source code Page 20.	G. Point of measurement Page 20.	H. Form code Page 20.	I. RCRA-radioactive mixed Page 20.
2752	1 System type M125	A19	3	B211	2

Sec. II

A. Quantity generated in 1992 Instruction Page 21.	B. Quantity generated in 1993 Page 21.	C. UOM Density Page 21.	D. Did this site do any of the following to the waste; treat on site, dispose on site, recycle on site, or discharge to a sewer/POTW? Page 21.
400.0	220.0	5 DK	☐ 1 Yes (CONTINUE TO SYSTEM 1) ☒ 2 No (SKIP TO SEC. III)
		☒ 1 lbs/gal ☐ 2 sg	

ON-SITE PROCESS SYSTEM 1

On-site system type Page 22. M

Quantity treated, disposed or recycled on site in 1993

ON-SITE PROCESS SYSTEM 2

On-site system type Page 22. M

Quantity treated, disposed or recycled on site in 1993

Sec. III

A. Was any of this waste shipped off-site in 1993 Instruction Page 23. ☒ 1 Yes (CONTINUE TO BOX B) ☐ 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility waste was shipped to Page 23.	C. System type shipped to Page 23.	D. Off-site availability code Page 23.	E. total quantity shipped in
Site 1	NYD 057 770 109	M125	1	220.0
Site 2	NA	M		

Sec. IV

A. Did new activities in 1993 result in minimization of this waste: Instruction Page 23. ☐ 1 Yes (CONTINUE TO SYSTEM 1) ☒ 2 No (THIS FORM IS COMPLETE)

B. Activity Page 24.	C. Other effects Page 24.	D. Quantity recycled in 1993 due to new activities Page 25.	E. Activity/ production index Page 24.	F. 1993 source reduction quantity Page 26.
W W W W	☐ 1 Yes ☐ 2 No			

Comments: Sec. 1.E and Sec. III C. Cleaning of printing press parts.

FORM GM

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Pantone Inc.

55 Knickerbocker Rd., Moonachie, NJ 07074

EPA ID NO: NJD 001 253 384

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

1993 Hazardous Waste Report

FORM GM

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 16 of the 1993 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description - Instruction page 18. Mixture of ignitable solvent, oil, grease, and absorbant pads and rags collected from drip trays around printing presses.

B. EPA hazardous waste code Page 19.

F002 F003

C. State hazardous waste code Page 19.

NA NA

D. SIC code Page 19.	E. Origin code Page 19.	F. Source code Page 20.	G. Point of measurement Page 20.	H. Form code Page 20.	I. RCRA-radioactive mixed Page 20.
2752	1 System type M125	A92	3	B	

Sec. II

A. Quantity generated in 1992 Instruction Page 21. 0.0

B. Quantity generated in 1993 Page 21. 350.0

C. UOM Density Page 21. 1

☐ 1 lbs/gal
☐ 2 sg

D. Did this site do any of the following to the waste; treat on site, dispose on site, recycle on site, or discharge to a sewer/POTW? Page 21.

☐ 1 Yes (CONTINUE TO SYSTEM 1)
☒ 2 No (SKIP TO SEC. III)

ON-SITE PROCESS SYSTEM 1

On-site system type Page 22. M

Quantity treated, disposed or recycled on site in 1993

ON-SITE PROCESS SYSTEM 2

On-site system type Page 22. M

Quantity treated, disposed or recycled on site in 1993

Sec. III

A. Was any of this waste shipped off-site in 1993 Instruction Page 23.

☒ 1 Yes (CONTINUE TO BOX B)
☐ 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility waste was shipped to Page 23.	C. System type shipped to Page 23.	D. Off-site availability code Page 23.	E. total quantity shipped in
Site 1	NYD057770109	M125	1	350.0
Site 2	NA	M		

Sec. IV

A. Did new activities in 1993 result in minimization of this waste: Instruction Page 23.

☐ 1 Yes (CONTINUE TO SYSTEM 1)
☐ 2 No (THIS FORM IS COMPLETE)

B. Activity Page 24.	C. Other effects Page 24.	D. Quantity recycled in 1993 due to new activities Page 25.	E. Activity/ production index Page 24.	F. 1993 source reduction quantity Page 26.
W W W W	☐ 1 Yes ☐ 2 No			

Comments: Sec I.E, Sec. IIIC. Routine operation, lubrication and cleaning of printing press.

FORM GM

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Pantone Inc.
55 Knickerbocker Rd., Moonachie, NJ 07074

EPA ID NO: N J D 0 0 1 2 5 3 3 8 4

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

1993 Hazardous Waste Report

FORM GM

WASTE GENERATION AND MANAGEMENT

INSTRUCTIONS: Read the detailed instructions beginning on page 16 of the 1993 Hazardous Waste Report booklet before completing this form.

Sec. I

A. Waste description - Instruction page 18. Ignitable mixture of oil based and water based paints Part of a plant wide cleanup.

B. EPA hazardous waste code Page 19.
D001

C. State hazardous waste code Page 19.
NA NA

D. SIC code Page 19.	E. Origin code Page 19.	F. Source code Page 20.	G. Point of measurement Page 20.	H. Form code Page 20.	I. RCRA-radioactive mixed Page 20.
2752	1	A21	3	B209	2
	System type M125				

Sec. II

A. Quantity generated in 1992 Instruction Page 21.
NA

B. Quantity generated in 1993 Page 21.
550

C. UOM Density Page 21.
5 DK
[X] 1 lbs/gal
[ ] 2 sg

D. Did this site do any of the following to the waste; treat on site, dispose on site, recycle on site, or discharge to a sewer/POTW? Page 21.
[ ] 1 Yes (CONTINUE TO SYSTEM 1)
[X] 2 No (SKIP TO SEC. III)

ON-SITE PROCESS SYSTEM 1

On-site system type Page 22.
M

Quantity treated, disposed or recycled on site in 1993

ON-SITE PROCESS SYSTEM 2

On-site system type Page 22.
M

Quantity treated, disposed or recycled on site in 1993

Sec. III

A. Was any of this waste shipped off-site in 1993 Instruction Page 23.
[X] 1 Yes (CONTINUE TO BOX B)
[ ] 2 No (SKIP TO SEC. IV)

	B. EPA ID No. of facility waste was shipped to Page 23.	C. System type shipped to Page 23.	D. Off-site availability code Page 23.	E. total quantity shipped in
Site 1	NYD057770109	M125	1	550
Site 2	NA	M		

Sec. IV

A. Did new activities in 1993 result in minimization of this waste: Instruction Page 23.
[ ] 1 Yes (CONTINUE TO SYSTEM 1)
[X] 2 No (THIS FORM IS COMPLETE)

B. Activity Page 24.	C. Other effects Page 24.	D. Quantity recycled in 1993 due to new activities Page 25.	E. Activity/ production index Page 24.	F. 1993 source reduction quantity Page 26.
W W W W	[ ] 1 Yes [ ] 2 No			

Comments: Sec. I.E and Sec. IIIC. Plant wide cleanup of old paint cans.

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Pantone Inc.
55 Knickerbocker Rd., Moonachie, NJ 07074

EPA ID NO: N J D 0 0 1 2 5 3 3 2 4

FORM **IC**

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

1993 Hazardous Waste Report

IDENTIFICATION AND CERTIFICATION

INSTRUCTIONS: Read the detailed instructions beginning on page 9 of the 1993 Hazardous Waste Report booklet before completing this form.

Sec. I Site name and location address. Complete A through H. Check the box ☒ in items A, C, E, F, G, and H if same as label; if different, enter corrections. If label is absent, enter information. Instruction page 10.

A. EPA ID No.	B. County: Bergen
C. Site/company name	D. Has the site name associated with this EPA ID changed since 1991? ☐ 1 Yes ☒ 2 No
E. Street name and number. If not applicable, enter industrial park, building name, or other physical location description.	
F. City, town, village, etc.	G. State: Same as label; H. Zip Code: Same as label

Sec. II Mailing address of site. Instruction page 10.

A. Is the mailing address the same as the location address? ☐ 1 Yes (SKIP TO SEC. III) ☒ 2 No (GO TO BOX B)

B. Number and street name of mailing address: 590 Commerce Boulevard

C. City, town, village, etc.: Carlstadt

D. State: N J

E. Zip Code: 0 7 0 7 2 -

Sec. III Name, title, and telephone number of the person who should be contacted if questions arise regarding this report. Instruction page 10.

A. Please print: Last Name	First name	M.I.	B. Title	C. Telephone
Niepokoy	Ken		Technical Director Product Dev.	2 0 1 9 3 5 - 5 5 0 0 Extension 1 1 9 1 1

Sec. IV I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties under N.J.A.C. 7:26 and under Section 3008 of the Resource Conservation and Recovery Act for submitting false information, including the possibility of fine and imprisonment for knowing violations."

A. Please print: Last Name	First name	M.I.	B. Title
Niepokoy	Ken		Technical Director Product Development

C. Signature: Ken Niepokoy

D. Date of signature: 0 2 1 1 9 4 (MO. DAY YR.)

Over —

BEFORE COPYING FORM, ATTACH SITE IDENTIFICATION LABEL OR ENTER:

SITE NAME: Pantone Inc.
55 Knickerbocker Rd., Moonachie NJ 07074

EPA ID NO: NJD 001 253 384

FORM OI

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

1993 Hazardous Waste Report

OFF-SITE IDENTIFICATION

INSTRUCTIONS: Read the detailed instructions on the reverse side before completing this form.

Site 1

A. EPA ID No. of off-site installation or transporter: NYD 980 769 947

B. Name of off-site installation or transporter: Haz-Mat Environmental Group, Inc.

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☒ Transporter
- ☐ TSDR

D. Address of generator
Street: N/A
City:
State: Zip:

Site 2

A. EPA ID No. of off-site installation or transporter: NYD 057 770 109

B. Name of off-site installation or transporter: Northeast Environmental Services Inc.

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☒ TSDR

D. Address of generator
Street: Canal Road
City: Wampsville
State: NY Zip: 13163

Site 3

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of generator
Street:
City:
State: Zip:

Site 4

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of generator
Street:
City:
State: Zip:

Site 5

A. EPA ID No. of off-site installation or transporter:

B. Name of off-site installation or transporter:

C. Handler type (CHECK ALL THAT APPLY)
- ☐ Generator
- ☐ Transporter
- ☐ TSDR

D. Address of generator
Street:
City:
State: Zip:

Comments: