DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
METRO AREA RESIDENT OFFICE
1900 HEMPSTEAD TURNPIKE, SUITE 316
EAST MEADOW, NEW YORK 11554

REPLY TO
ATTENTION OF:

APR 22 1996

Resident Engineer

April 16, 1996

SUBJECT: Storage Tank & Jetfuel Pipeline Closure Reports
Contract No. DACA51-94-C-0037
Removal/Disposal of Storage
Tanks, Drums & Miscellaneous
Various Locations, New York

New York State
Dept. of Environmental Conservation
Attn: Nick Acompora
Bldg. 40, SUNY
Stony Brook, New York 11790-2356

Dear Sir:

Enclosed please find the Storage Tank and Jetfuel Pipeline Closure Reports for Suffolk County Airport in Westhampton, New York.

If you have any questions, please contact the undersigned or Mr. Richard McInerney at (516) 794-2913.

Sincerely,

Donald P. Braun
Resident Engineer

ENCL

CF w/ Encl: Air National Guard
Suffolk County Health Dept.

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE

(Read instructions on the reverse side prior to initiating this form)

DATE: 18-Jan-96

TRANSMITTAL NO. JET PIPE

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS *(This section will be initiated by the Contractor)*

TO: Richard McInerney
USACE
1900 Hempstead Turnpike
Suite 316
East Meadow, New York 11554

FROM: TRI-GEM'S BUILDERS
P.O. BOX 144
Sicklerville, New Jersey 08081

CONTRACT NO. DACA51-94-C-0037

CHECK ONE:
☐ THIS IS A NEW TRANSMITTAL
☒ THIS IS A RESUBMITTAL OF TRANSMITTAL No. (NA)

SPECIFICATION SECTION NUMBER (Cover only one section with each transmittal): 02071

PROJECT TITLE AND LOCATION: Removal of Storage Tanks, Transformers, & Miscellaneous, Various Locatiopns, New York

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED Type, size, model number, etc. b.	MFG. or CONT. CAT., CURVE DRAWING OR BROCHURE See instruction 8 c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA. NO. e.	CONTRACT REFERENCE DOCUMENT DRAWING SHEET NO. f.	FOR CONT. USE CODE g.	VARIATION (See instruction No. 6) h.	FOR CE USE CODE i.
	UST CLOSURE REPORT		5	3.11				
	JET FUEL PIPELINE; SCAFB							

REMARKS: This report has been updated to include laboratory data from the tar paper sample and from the second round of sampling conducted at the site.

I certify that the above-submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

CHRIS D. ELLIOTT/CQC Chris D. Elliott
NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURE RETURNED (List by Item No.)	NAME, TITLE, AND SIGNATURE OF APPROVING AUTHORITY:	DATE:

ENG FORM 4025-E **(Proponent: CEMP-CE)**

NES 00002

TRI-GEM'S BUILDERS
P.O. BOX 144
SICKLERVILLE, NEW JERSEY 08081

CERTIFICATION OF CONTRACT COMPLIANCE

CONTRACT #DACA51-94-C-0037; REMOVAL OF STORAGE TANKS, TRANSFORMERS, & MISCELLANEOUS, VARIOUS LOCATIONS, NEW YORK

"I hereby certify that the (equipment)(material)(article) shown and marked in this submittal is that proposed to be incoeporated with the Contract, is in compliance with the Contract drawings and specifications, can be installed in the allocated spaces, and is submitted for Government approval. Government approval of proposed variation, if any, is recommended."

Certified By Submittal Reviewer Chris D. Sillioth Chris D. Sillioth, Date 1/18/96
Name/Signature

Certifed By QC Manager SAME AS ABOVE Date __/__/____
Name/Signature

JET FUEL PIPELINE CLOSURE REPORT

SUFFOLK COUNTY AIR FORCE BASE
CONTRACT #DACA51-94-C-0037
TITLE: REMOVAL OF STORAGE TANKS, TRANSFORMERS, & MISCELLANEOUS; VARIOUS LOCATIONS; NEW YORK

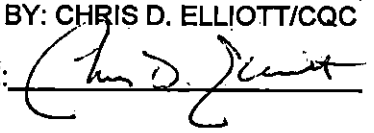
PRESENTED TO:

USACE
1900 HEMPSTEAD TURNPIKE
SUITE 316
EAST MEADOW, NEW YORK 11554

BY:

TRI-GEM'S BUILDERS
P.O. BOX 144
SICKLERVILLE, NEW JERSEY 08081

PREPARED BY: CHRIS D. ELLIOTT/CQC

SIGNATURE: 

16 JAN 1996

This report was originally submitted in January of 1995, and results of the second round of sampling with summary conclusion submitted in May of 1995.

This report combines the (2) separate reports, and includes complete laboratory data from the second round of sampling. Laboratory results from the first round of sampling have been previously submitted on the date noted above.

JET FUEL PIPELINE CLOSURE REPORT

INTRODUCTION

As part of the Contract requirements, the Contractor was required to take samples of the soil exposed after the Jet Fuel Pipeline (JFP) at the site was removed. A total of approximately 80 samples were taken, a significant number of which were contaminated with compounds from the list of Poly-Aromatic Hydrocarbons (PAHs).

Based on sample results obtained from the first round of sampling on the soil beneath the Jet Fuel Pipeline, it was impossible to determine the source of the contamination, based on the fact that Jet Fuel by definition contains none of the compounds in the Poly-Aromatic Hydrocarbon (PAH) range other than Naphthalene, and this at a very low level, since Naphthalene is at the peak of the boiling range during the processing of the product.

Several theories were discussed, among them that the contamination could have come from the leaching of the tar paper coating on the pipeline of its constituents into the surrounding soil. There was also the suggestion that because so many of the high readings were obtained from samples taken from 1.5 to 2.0', that there had been a fire in the area, leading to the manufacture of certain hydrocarbons which were observed during the sample analysis.

A subsequent meeting with Nick Acampora of the NYSDEC and Rich McInerney of the Government held for the purpose of determining further course(s) of action resulted in the NYSDEC taking the position that regardless of where the contamination came from, it would have to be removed, in the form of re-sampling the area to delineate the soil, and excavating, removing and disposing of the contaminated soil. The Government agreed with this position, and requested that the Contractor take a sample of the tar paper that coated the JFP, as well as a sample of the contents of the 25,000 gallon tank (designated UST #10) and the JFP, which was used to transport the fuel from the P.O.L. area to the tank and back. Also at the request of the NYSDEC, a soil sampling plan was prepared and submitted, designed to determine if the contamination still remaining in the ground had leached any further than the depth of the pipeline. The sampling plan was accepted and this second round of samples taken on 4/20/95.

As a basis for comparison, a sample of the tar paper was taken and analyzed for the same parameters as the soil, i.e. EPA Method(s) 8021 & 8270. Discussions with Sean Walters, the Environmental Compliance Representative for Suffolk County AFB, revealed that the product which was in the tank and the JFP was no longer used at the site, and a sample was not available. The Contractor did, however, learn that the fuel product used in the tank and JFP was JP-4. The Environmental Compliance Office then informed the Contractor that a phone number of the supplier of the JP-4 was available. The Contractor proceeded to contact the supplier, Ashland Oil Company, who related sufficient information to enable us to make a clear determination of the actual constituents of the JP-4. Upon discovery of this information, and comparison with the soil sample results and those of the tar paper, it became clear to the Contractor that the contaminants in the soil were(are) unrelated to the contaminants that could be expected to be found if JP-4 had leaked into the soil.

JP-4 CONSTITUENTS

Upon discussion with a representative of Ashland Oil Company, a manufacturer of JP-4, it was learned that JP-4 is a very "light", volatile compound due to the nature of the manufacturing process. This process involves heating raw petroleum to a point where only the compounds most volatile in nature, which have the lowest boiling point, are separated by evaporation. The compounds with the lowest boiling points correspond with those found in the Volatile Organic Scan, otherwise known as EPA Method 8021. The compound with the highest boiling range which also makes up a very small percentage of JP-4 is Naphthalene. This compound is found at the tail end of the Volatile Organic Scan; and also at the beginning of the Poly-Aromatic Hydrocarbon (PAH) Scan, otherwise known as EPA Method 8270. Any compound with a higher boiling point than Naphthalene is *not* a constituent of JP-4.

TAR PAPER CONSTITUENTS

Listed on the enclosed laboratory data summary sheet are the results from the tar paper. As is obvious from this analysis, there are no Volatile Organic compounds in this tar paper other than a *very* small amount of Naphthalene.

SOIL SAMPLE CONTAMINANTS

Previously submitted sample results revealed contamination only in the PAH range, and all the compounds analyzed for in this range are represented. Any Volatile Organic contamination in these samples, as well as all others taken from the soil underneath the JFP, is minimal to non-existent.

CONCLUSION

The information presented above in conjunction with the laboratory analysis data summary sheet enclosed prove conclusively that the contaminants found in the soil are ***not*** from the JP-4 that was transported in the JFP, and very possibly could have leached from the tar paper.

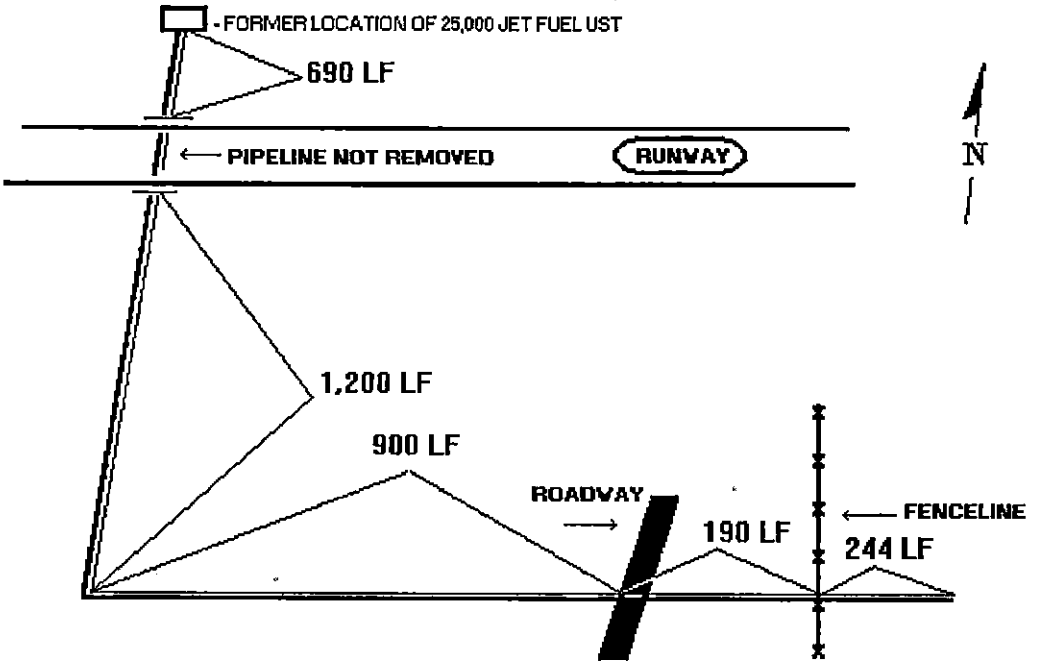
It is our conclusion that based on these results the material has not leached, will not affect the ground-water, (which is at 30'), and no further remedial action is necessary.

Included with this report (in the order listed below), is the necessary documentation to support our conclusion:

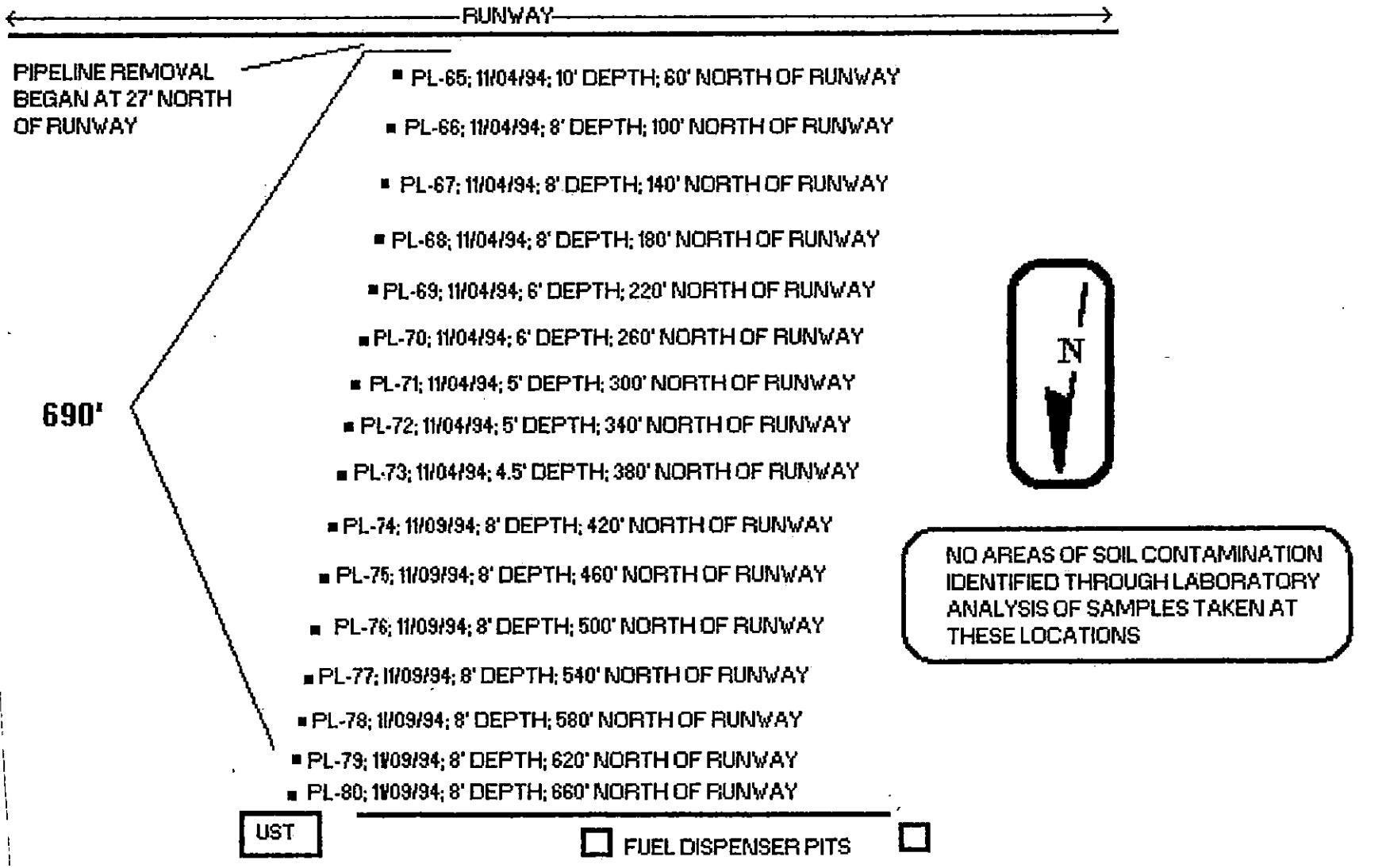
1. Soil sample location maps, documenting areas of potential contamination;
2. Sample results summary(s) for the 80 sample taken during the first round of sampling;
3. Sample results summary for the tar paper, including a comparison to (2) samples from the first round of sampling;
4. Complete laboratory data for the tar paper sample;
5. A list of the highest readings (in PPM TPH) obtained from the first round of sampling;
6. Sample location map for the second round of sampling;
7. Sample results summary(s) for the second round of sampling, and;
8. Complete laboratory data for the second round of samples.

SOIL SAMPLE LOCATION MAPS; FIRST ROUND OF SAMPLING

6" & 8" JET FUEL PILELINE(S) REMOVED, SUFFOLK COUNTY AFB, NY



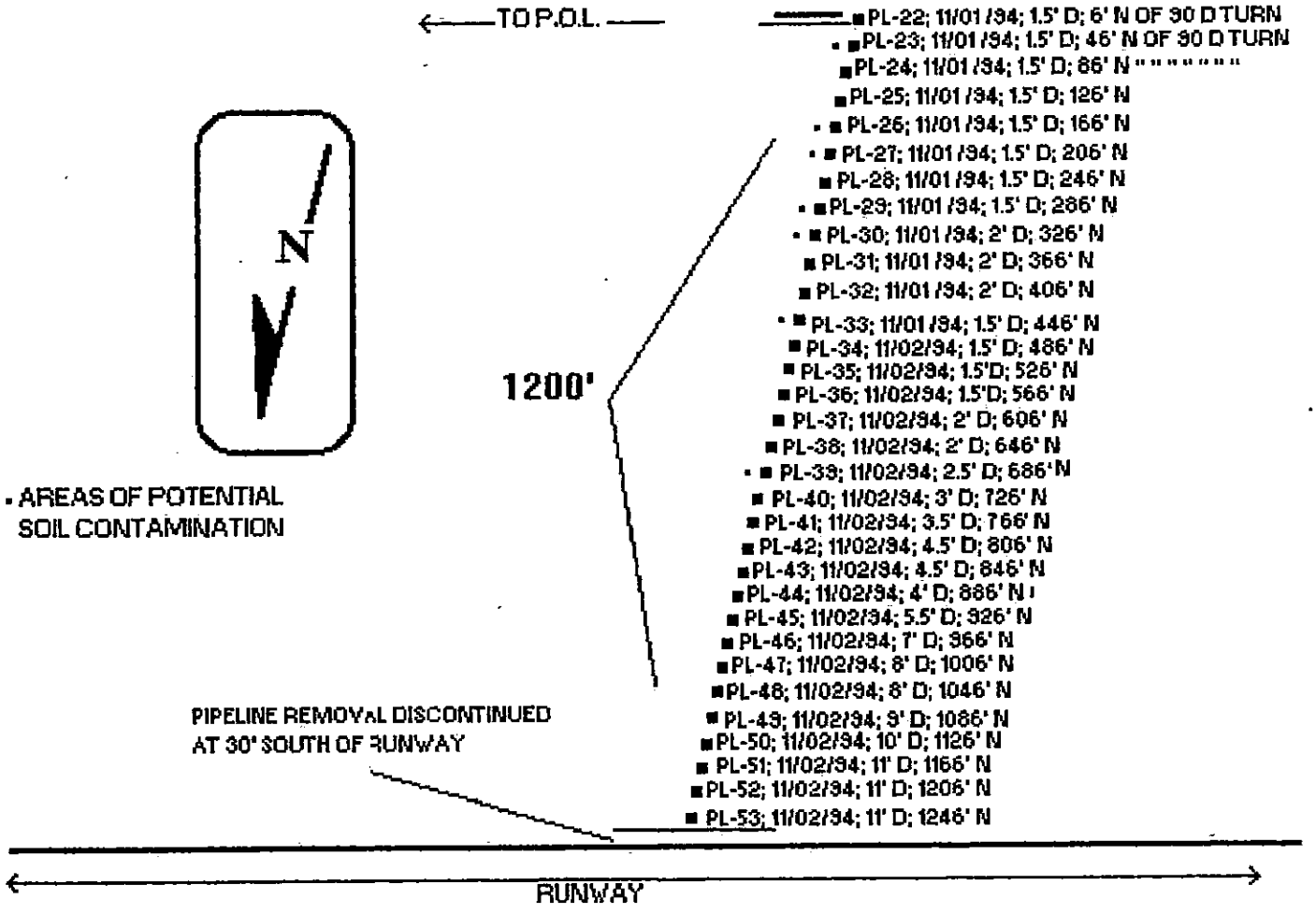
SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE(S) - MAP 1
FROM FLIGHTLINE (25,000 G UST) TO RUNWAY



NES 00009

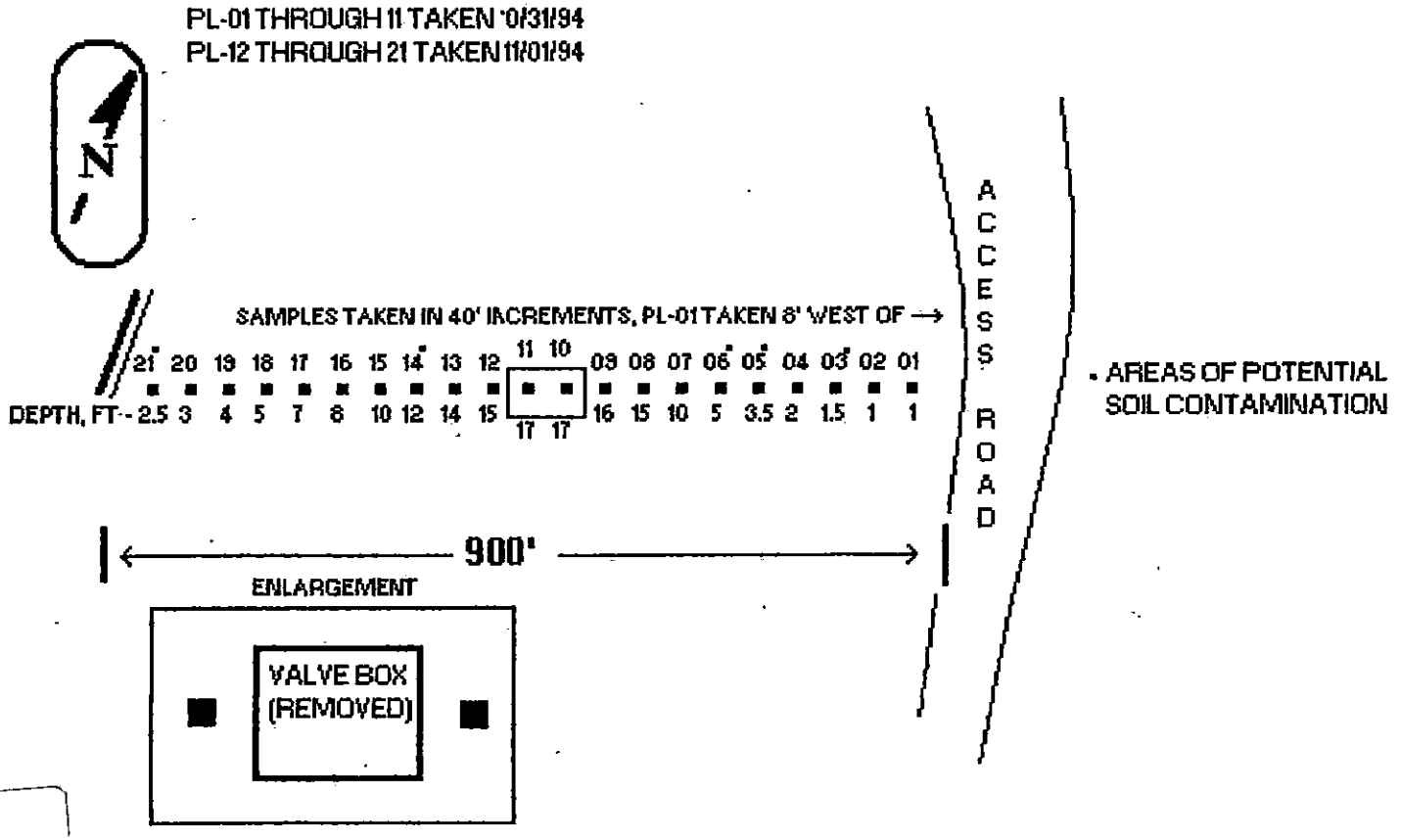
005

SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE(S) - MAP 2
FROM RUNWAY TO 90 DEGREE TURN IN PIPELINE



NES 00010

SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE(S) - MAP 3
FROM 90 DEGREE TURN HEADING EAST TOWARDS P.O.L. AREA



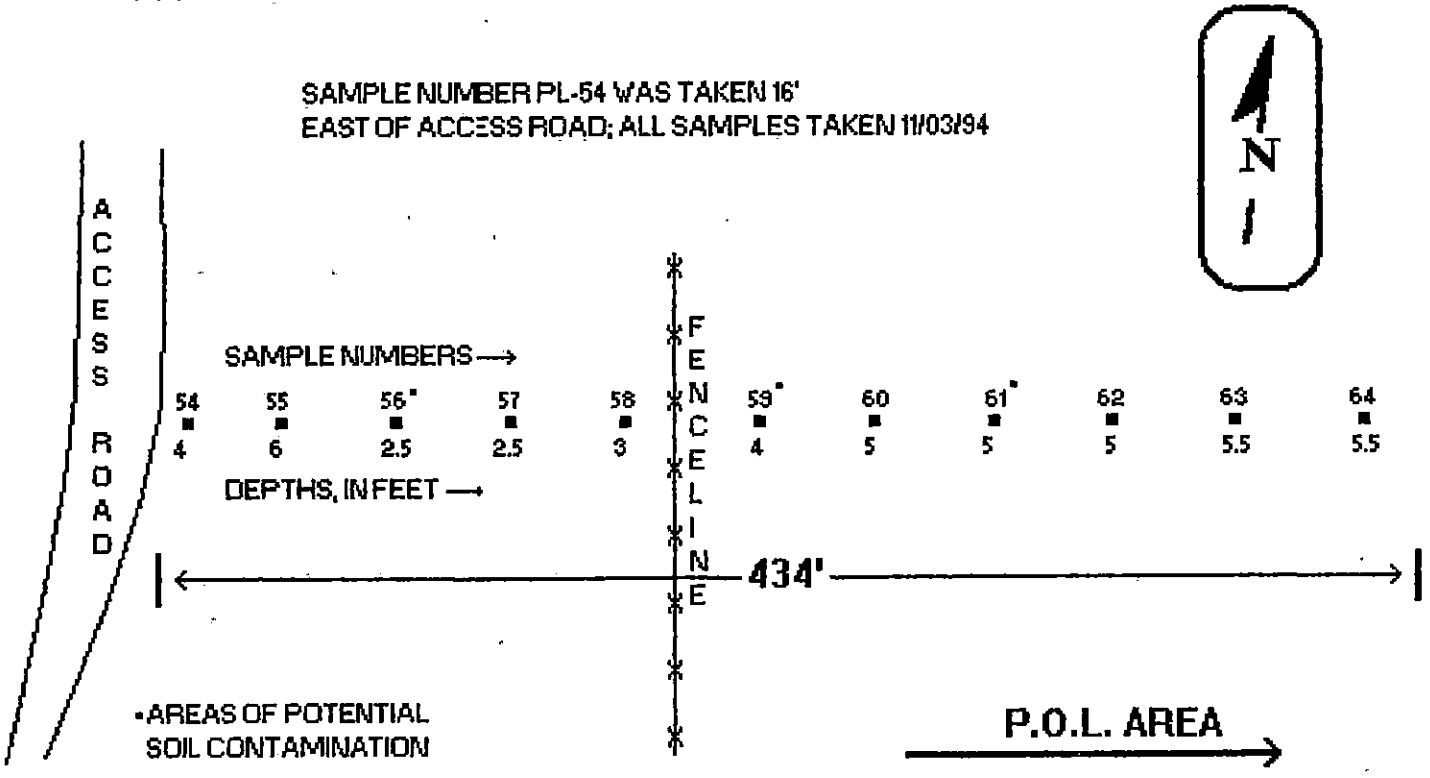
L00

CONTAMINATED SOIL SAMPLES
JET FUEL PIPELINE, SCAFB, WESTHAMPTON BEACH, NEW YORK
CONTRACT NUMBER: 94-C-0037

CONTAMINATED SOIL SAMPLES, TOTAL PAH IN ppm

PL-003	12.3	PL-023	5.1	PL-033	433.0
PL-005	17.0	PL-026	74.9	PL-039	33.1
PL-006	3.4	PL-027	364.6	PL-055	27.0
PL-014	42.8	PL-029	61.9	PL-059	10.0
PL-021	12.7	PL-030	27.7	PL-061	5.0

SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE - MAP 4
FROM ACCESS ROAD TO P.O.L. AREA HEADING EAST



NES 00013

008

SAMPLE RESULTS SUMMARY; TAR PAPER

SUFFOLK COUNTY AFB, TAR PAPER RESULTS

Volatile Compounds, (ppb)

Benzene	U
Toluene	U
Ethylbenzene	U
m-p Xylenes	U
o-Xylene	U
Isopropylbenzene	U
n-Propylbenzene	U
p-Isopropyltoluene	U
1,3,5-Trimethylbenzene	U
1,2,4-Trimethylbenzene	U
t-butylbenzene	U
Methyl-t-butylether	U
sec-Butylbenzene	U
n-Butylbenzene	U
Napthalene (8021)	22.0

Semi-volatile Compounds, (ppb)		PL-027*	PL-033*
Napthalene	see above		
Acenapthene	320,000	3,800	17,000
Fluorene	340,000	4,800	14,000
Phenanthrene	730,000	39,000	64,000
Anthracene	730,000	12,000	23,000
Fluoranthene	**3,000,000**	**53,000**	**69,000**
Pyrene	**2,900,000**	**47,000**	**61,000**
Benzo(a)anthracene	1,200,000	33,000	35,000
Chrysene	1,500,000	30,000	35,000
Benzo(b)fluoranthene	170,000	41,000	39,000
Benzo(k)fluoranthene	200,000	19,000	11,000
Benzo(a)pyrene	850,000	30,000	24,000
Indeno(1,2,3-cd)pyrene	450,000	21,000	16,000
Dibenz(a,h)anthracene	260,000	11,000	9,000
Benzo(g,h,i)perylene	400,000	20,000	16,000

* These soil samples were chosen for comparison because they displayed the highest levels of contamination. The numbers that have been high-lighted above represent the (2) constituents (Fluoranthene and Pyrene) of the tar paper with the highest values.By comparison, the highest levels of contamination in the soil samples were the same as in the tar paper. Conclusion: The tar paper leached into the surrounding soil. See accompanying dissertation on the subject.

SAMPLE RESULTS SUMMARY(S); FIRST ROUND OF SAMPLING

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-001	PL-002	PL-003	PL-004	PL-005	PL-006	PL-007	PL-008
Date:		10/31/94	10/31/94	10/31/94	10/31/94	10/31/94	10/31/94	10/31/94	10/31/94
Depth (Ft.):		1.0	1.0	1.5	2.0	3.6	5.0	10.0	15.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	U	U	U	U	U	U	U
Toluene	100	U	U	U	U	U	1.1	1.3	1.3
Ethylbenzene	100	U	U	U	U	U	U	U	U
m-p Xylenes	100	U	U	U	U	U	1.1	U	U
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	1.3	U	17	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	68 J	U	U	U
Fluorene	1000	U	U	190 J	110 J	720 J	220 J	U	U
Phenanthrene	1000	U	140 J	1600	1200	3600	1200	U	U
Anthracene	1000	U	U	440	290 J	1000	310 J	U	U
Fluoranthene	1000	U	160 J	2700	1600	3700	1200	U	U
Pyrene	1000	U	110 J	2300	1200	3000	1000	U	U
Benzo(a)anthracene	.04*	U	54 J	1400	600	1600	470	U	U
Chrysene	.04*	U	55 J	1500	640	1600	520	U	U
Benzo(b)fluoranthene	.04*	U	U	1700	520	1400	330 J	U	U
Benzo(k)fluoranthene	.04*	U	U	780	430	980	360	U	U
Benzo(a)pyrene	.04*	U	U	1100	440	1100	340	U	U
Indeno(1,2,3-cd)pyrene	.04*	U	U	780	270 J	720	190 J	U	U
Dibenz(a,h)anthracene	1000	U	U	450	150 J	440	100 J	U	U
Benzo(g,h,i)perylene	.04*	U	U	760	250 J	640	180 J	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-009	PL-010	PL-011	PL-012	PL-013	PL-014	PL-015	PL-016
Date:		10/31/94	10/31/94	10/31/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94
Depth (Ft.):		16.0	17.0	17.0	15.0	14.0	12.0	10.0	8.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	4.6	U	U	U	U	U	U	U
Toluene	100	2.9	U	1.2	3.6	U	U	U	3.2
Ethylbenzene	100	64	U	U	U	U	U	U	9.8
m-p Xylenes	100	240	U	U	3.3	U	U	U	4.1
o-Xylene	100	48	U	U	U	U	U	U	U
Isopropylbenzene	100	22	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	11	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	65	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	1.2
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	36	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	U	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	49 J	1300	U	U
Fluorene	1000	U	U	U	43 J	66 J	1400	U	U
Phenanthrene	1000	U	U	U	310 J	410	7100	U	U
Anthracene	1000	U	U	U	180 J	320 J	2100	U	U
Fluoranthene	1000	U	U	U	340 J	460	7800	U	U
Pyrene	1000	U	U	U	240 J	360	5900	U	U
Benzo(a)anthracene	.04*	U	U	U	110 J	180 J	3400	U	U
Chrysene	.04*	U	U	U	130 J	200 J	3200	U	U
Benzo(b)fluoranthene	.04*	U	U	U	100 J	160 J	2500	U	U
Benzo(k)fluoranthene	.04*	U	U	U	100 J	130 J	2600	U	U
Benzo(a)pyrene	.04*	U	U	U	100 J	140 J	2500	U	U
Indeno(1,2,3-cd)pyrene	.04*	U	U	U	54 J	63 J	1500	U	U
Dibenz(a,h)anthracene	1000	U	U	U	U	U	450 J	U	U
Benzo(g,h,i)perylene	.04*	U	U	U	55 J	64J	1500	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-017	PL-018	PL-019	PL-020	PL-021	PL-022	PL-023	PL-024
Date:		11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94
Depth (Ft.):		7.0	5.0	4.0	3.0	2.5	1.5	1.5	1.5
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	U	U	U	U	U	3.4	U
Toluene	100	5.5	1.9	2.2	U	U	U	1.2	3.6
Ethylbenzene	100	U	U	U	U	U	U	U	U
m-p Xylenes	100	3.1	2.0	3.7	1.2	U	U	U	3.3
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	1.1	U	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	1.3	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	2.5	U	U
Napthalene (8021)	200	U	U	U	U	3.1	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	270 J	U	220 J	89 J
Fluorene	1000	U	U	U	U	320 J	U	220 J	78 J
Phenanthrene	1000	U	U	U	U	2400	54 J	1600	690
Anthracene	1000	U	U	U	U	680	U	390	150 J
Fluoranthene	1000	U	U	U	U	3000	63 J	2000	820
Pyrene	1000	U	U	U	U	2400	45 J	1500	560
Benzo(a)anthracene	.04*	U	U	U	U	1300	U	780	290 J
Chrysene	.04*	U	U	U	U	1200	U	700	270 J
Benzo(b)fluoranthene	.04*	U	U	U	U	1300	U	720	290 J
Benzo(k)fluoranthene	.04*	U	U	U	U	850	U	570	200 J
Benzo(a)pyrene	.04*	U	U	U	U	1100	U	610	220 J
Indeno(1,2,3-cd)pyrene	.04*	U	U	U	U	650	U	360	150 J
Dibenz(a,h)anthracene	1000	U	U	U	U	180 J	U	110	46 J
Benzo(g,h,i)perylene	.04*	U	U	U	U	640	U	360	140 J

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-025	PL-026	PL-027	PL-028	PL-029	PL-030	PL-031	PL-032
Date:		11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94	11/01/94
Depth (Ft.):		1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	U	U	U	U	U	U	U
Toluene	100	U	U	U	U	1.6	1.4	U	3.5
Ethylbenzene	100	U	U	U	U	U	U	U	1.7
m-p Xylenes	100	U	U	U	U	2.8	2.2	U	5.7
o-Xylene	100	U	U	U	U	U	U	U	1.7
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	2.1	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	U	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	2500	3800	U	1500	370	U	U
Fluorene	1000	U	2300	4800	U	1400	360	U	U
Phenanthrene	1000	190 J	13000	39000	97 J	9900	3400	U	U
Anthracene	1000	67 J	3400	12000	U	2500	1000	U	U
Fluoranthene	1000	200 J	14000	53000	270 J	12000	4500	U	U
Pyrene	1000	160 J	10000	47000	200 J	8800	4600	U	U
Benzo(a)anthracene	.04*	77 J	5500	33000	120 J	4800	2600	U	U
Chrysene	.04*	68 J	4800	30000	110 J	4600	2800	U	U
Benzo(b)fluoranthene	.04*	58 J	4100	41000	150 J	3800	2800	U	U
Benzo(k)fluoranthene	.04*	71 J	5400	19000	130 J	4200	1500	U	U
Benzo(a)pyrene	.04*	58 J	4500	30000	120 J	3800	1900	U	U
Indeno(1,2,3-cd)pyrene	.04*	U	2700	21000	96 J	2300	1300	U	U
Dibenz(a,h)anthracene	1000	U	820	11000	U	740	740	U	U
Benzo(g,h,i)perylene	.04*	U	2700	20000	92 J	2300	1300	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-033	PL-034	PL-035	PL-036	PL-037	PL-038	PL-039	PL-040
Date:		11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94
Depth (Ft.):		1.5	1.5	1.5	1.5	2.0	2.0	2.5	3.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	2.8	6.6	U	U	U	U	U
Toluene	100	U	U	U	2.0	U	U	U	U
Ethylbenzene	100	U	U	1.4	U	U	U	U	U
m-p Xylenes	100	U	1.8	U	2.3	U	U	U	U
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	3.2	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	17000	U	U	U	U	U	930	U
Fluorene	1000	14000	U	U	U	U	U	860	U
Phenanthrene	1000	64000	130 J	570	U	94 J	43 J	5500	55 J
Anthracene	1000	23000	U	120 J	U	U	U	1600	U
Fluoranthene	1000	69000	180 J	960	U	200 J	58 J	6800	210
Pyrene	1000	61000	130 J	690	U	130 J	37 J	4300	120
Benzo(a)anthracene	.04*	35000	U	410	U	73 J	U	3000	81 J
Chrysene	.04*	35000	57 J	390	U	71 J	U	2700	89 J
Benzo(b)fluoranthene	.04*	39000	U	330 J	U	81 J	U	2900	110 J
Benzo(k)fluoranthene	.04*	11000	U	340 J	U	64 J	U	1600	75 J
Benzo(a)pyrene	.04*	24000	U	330 J	U	68 J	U	2100	79 J
Indeno(1,2,3-cd)pyrene	.04*	16000	U	190 J	U	38 J	U	1400	55 J
Dibenz(a,h)anthracene	1000	9000	U	U	U	U	U	470	U
Benzo(g,h,i)perylene	.04*	16000	U	190 J	U	43	U	1200	61 J

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-041	PL-042	PL-043	PL-044	PL-045	PL-046	PL-047	PL-048
Date:		11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/02/94
Depth (Ft.):		3.5	4.5	4.5	4.0	5.5	7.0	8.0	8.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	U	U	U	U	U	U	U
Toluene	100	U	U	U	U	U	U	1.9	1.5
Ethylbenzene	100	U	U	U	U	U	U	U	U
m-p Xylenes	100	U	U	2.8	U	U	U	3.6	3.2
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	1.9
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	U	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	U	U	U	U
Fluorene	1000	U	U	U	U	U	U	U	U
Phenanthrene	1000	U	310 J	U	U	300 J	U	U	U
Anthracene	1000	U	130 J	U	U	54 J	U	U	U
Fluoranthene	1000	U	1300	U	U	320 J	U	U	U
Pyrene	1000	U	840	U	U	230 J	U	U	U
Benzo(a)anthracene	.04*	U	500	U	U	120 J	U	U	U
Chrysene	.04*	U	440	U	U	110 J	U	U	U
Benzo(b)fluoranthene	.04*	U	510	U	U	100 J	U	U	U
Benzo(k)fluoranthene	.04*	U	270 J	U	U	110 J	U	U	U
Benzo(a)pyrene	.04*	U	370	U	U	88 J	U	U	U
Indeno(1,2,3-cd)pyrene	.04*	U	220 J	U	U	47 J	U	U	U
Dibenz(a,h)anthracene	1000	U	110 J	U	U	U	U	U	U
Benzo(g,h,i)perylene	.04*	U	230 J	U	U	50 J	U	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-049	PL-050	PL-051	PL-052	PL-053	PL-054	PL-055	PL-056
Date:		11/02/94	11/02/94	11/02/94	11/02/94	11/02/94	11/03/94	11/03/94	11/03/94
Depth (Ft.):		3.5	4.5	4.5	4.0	5.5	7.0	8.0	8.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	3.1	U	U	U	U	U	U
Toluene	100	U	U	2.0	U	U	U	U	U
Ethylbenzene	100	U	U	U	U	U	U	U	U
m-p Xylenes	100	U	U	3.0	U	U	U	U	U
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	U	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	U	U	430	U
Fluorene	1000	U	U	U	U	U	U	510	U
Phenanthrene	1000	38 J	U	U	U	U	U	3800	68 J
Anthracene	1000	U	U	U	U	U	U	1000	U
Fluoranthene	1000	42 J	U	U	U	U	43 J	5200	100 J
Pyrene	1000	U	U	U	U	U	U	4700	73 J
Benzo(a)anthracene	.04*	U	U	U	U	U	U	2500	39 J
Chrysene	.04*	U	U	U	U	U	U	2700	39 J
Benzo(b)fluoranthene	.04*	U	U	U	U	U	U	2700	U
Benzo(k)fluoranthene	.04*	U	U	U	U	U	U	1400	U
Benzo(a)pyrene	.04*	U	U	U	U	U	U	1800	U
Indeno(1,2,3-cd)pyrene	.04*	U	U	U	U	U	U	1200	U
Dibenz(a,h)anthracene	1000	U	U	U	U	U	U	630	U
Benzo(g,h,i)perylene	.04*	U	U	U	U	U	U	U	1200

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-057	PL-058	PL-059	PL-060	PL-061	PL-062	PL-063	PL-064
Date:		11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94	11/03/94
Depth (Ft.):		2.5	3.0	4.0	5.0	5.0	5.0	5.5	5.5
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	U	U	U	U	U	U	U	U
Toluene	100	U	U	U	U	1.5	U	U	U
Ethylbenzene	100	U	U	U	U	U	U	U	U
m-p Xylenes	100	U	U	U	U	1.4	U	U	1.2
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	U	U	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	2.6	2.9	U	U	2.2	1.1	U	2.1
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	66J	U	280 J	U	270 J	U	U	U
Fluorene	1000	64 J	U	460	U	260 J	U	U	U
Phenanthrene	1000	530	250 J	2500	97 J	1800	U	U	68 J
Anthracene	1000	120 J	55 J	270 J	U	480	U	U	U
Fluoranthene	1000	680	350	2500	160 J	1800	93 J	U	100 J
Pyrene	1000	520	280 J	2300	130 J	1400	73 J	U	73 J
Benzo(a)anthracene	.04*	250 J	120 J	910	58 J	660	38 J	U	39 J
Chrysene	.04*	290 J	160 J	1300	74 J	660	44 J	U	39 J
Benzo(b)fluoranthene	.04*	210 J	110 J	1400	60 J	640	U	U	U
Benzo(k)fluoranthene	.04*	200 J	110 J	660	50 J	740	U	U	U
Benzo(a)pyrene	.04*	190 J	100 J	910	52 J	650	47 J	U	U
Indeno(1,2,3-cd)pyrene	.04*	110 J	57 J	640	U	U	U	U	U
Dibenz(a,h)anthracene	1000	61 J	U	330 J	U	120 J	U	U	U
Benzo(g,h,i)perylene	.04*	U	110 J	57 J	660	U	360	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-065	PL-066	PL-067	PL-068	PL-069	PL-070	PL-071	PL-072
Date:		11/04/94	11/04/94	11/04/94	11/04/94	11/04/94	11/04/94	11/04/94	11/04/94
Depth (Ft.):		10.0	8.0	8.0	8.0	7.0	6.0	5.0	5.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	1.5	U	U	U	U	U	U	U
Toluene	100	2.4	1.2	U	3.1	1.3	1.4	U	U
Ethylbenzene	100	1.1	U	U	1.2	U	U	U	U
m-p Xylenes	100	5.0	2.7	2.7	4.1	1.8	2.7	2.4	2.8
o-Xylene	100	U	U	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	1.6	U	1.1	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	2.1	U	1.3	1.2	U	1.4	U	U
t-butylbenzene	100	U	U	U	U	U	U	U	1.5
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	U	U	U	U	0.92	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	55 J	U	U	U	U	U	U
Fluorene	1000	U	72 J	U	U	U	U	U	U
Phenanthrene	1000	U	330 J	U	U	U	U	U	U
Anthracene	1000	U	50 J	U	U	U	U	U	U
Fluoranthene	1000	U	200 J	72 J	U	U	U	U	U
Pyrene	1000	U	160 J	57 J	U	U	U	U	U
Benzo(a)anthracene	.04*	U	52 J	35 J	U	U	U	U	U
Chrysene	.04*	U	42 J	U	U	U	U	U	U
Benzo(b)fluoranthene	.04*	U	U	U	U	U	U	U	U
Benzo(k)fluoranthene	.04*	U	U	U	U	U	U	U	U
Benzo(a)pyrene	.04*	U	U	U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	.04*	U	U	U	U	U	U	U	U
Dibenz(a,h)anthracene	1000	U	U	U	U	U	U	U	U
Benzo(g,h,i)perylene	.04*	U	U	U	U	U	U	U	U

* Detection limit for these compounds is 330 ppb in the best of cases

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS

Field Sample No.:		PL-073	PL-074	PL-075	PL-076	PL-077	PL-078	PL-079	PL-080
Date:		11/09/94	11/09/94	11/09/94	11/09/94	11/09/94	11/09/94	11/09/94	11/09/94
Depth (Ft.):		4.5	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Volatile Compounds, (ppb)									
	Guidance Value, (ppb)								
Benzene	14	1.5	U	U	U	U	U	U	U
Toluene	100	2.3	U	U	U	U	U	U	U
Ethylbenzene	100	1.5	5.6	U	U	U	U	U	U
m-p Xylenes	100	6.0	22	U	U	U	U	2.4	U
o-Xylene	100	U	3.8	U	U	U	U	U	U
Isopropylbenzene	100	U	U	U	U	U	U	U	U
n-Propylbenzene	100	1.6	7.9	U	U	U	U	U	U
p-Isopropyltoluene	100	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	100	U	3.6	U	U	U	U	U	U
1,2,4-Trimethylbenzene	100	U	U	U	U	U	U	U	U
t-butylbenzene	100	3.2	U	U	U	U	U	U	U
Methyl-t-butylether	100	U	U	U	U	U	U	U	U
sec-Butylbenzene	100	U	U	U	U	U	U	U	U
n-Butylbenzene	100	U	U	U	U	U	U	U	U
Napthalene (8021)	200	U	5.2	U	U	U	U	U	U
Semi-volatile Compounds, (ppb)									
Napthalene	see above								
Acenapthene	400	U	U	U	U	U	U	80 J	U
Fluorene	1000	U	U	U	U	U	U	100 J	U
Phenanthrene	1000	U	97 J	U	84 J	U	U	600	U
Anthracene	1000	U	98 J	U	U	U	U	140 J	U
Fluoranthene	1000	U	95 J	U	150 J	U	U	580	U
Pyrene	1000	U	67 J	U	110 J	U	U	400	U
Benzo(a)anthracene	.04*	U	U	U	53 J	U	U	180 J	U
Chrysene	.04*	U	U	U	52 J	U	U	190 J	U
Benzo(b)fluoranthene	.04*	U	U	U	50 J	U	U	110 J	U
Benzo(k)fluoranthene	.04*	U	U	U	34 J	U	U	170 J	U
Benzo(a)pyrene	.04*	U	U	U	U	U	U	130 J	U
Indeno(1,2,3-cd)pyrene	.04*	U	U	U	U	U	U	57 J	U
Dibenz(a,h)anthracene	1000	U	U	U	U	U	U	36 J	U
Benzo(g,h,i)perylene	.04*	U	U	U	U	U	U	55 J	U

* Detection limit for these compounds is 330 ppb in the best of cases

NES .00026

CONTAMINATED SOIL SAMPLES; TOTAL PETROLEUM HYDROCARBONS (PPM)

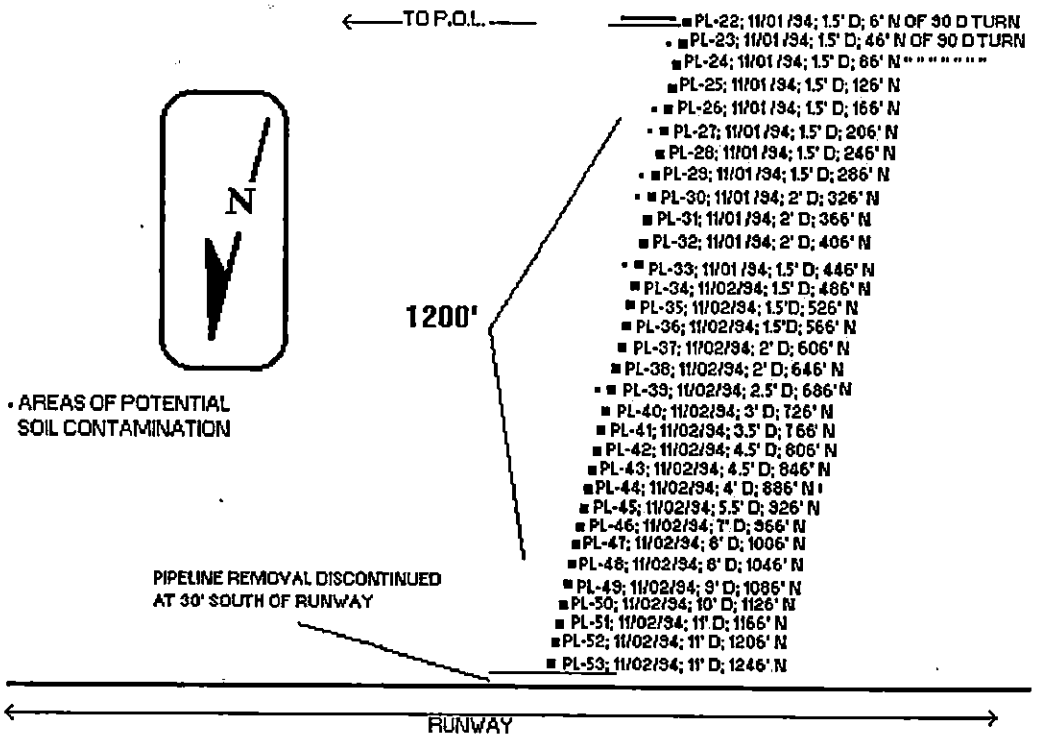
USACE CONTRACT #94-C-0037
SUFFOLK COUNTY AIR FORCE BASE
WESTHAMPTON BEACH, LONG ISLAND, NEW YORK

JET FUEL PIPELINE
CONTAMINATED SOIL SAMPLE LOCATIONS
FIRST ROUND

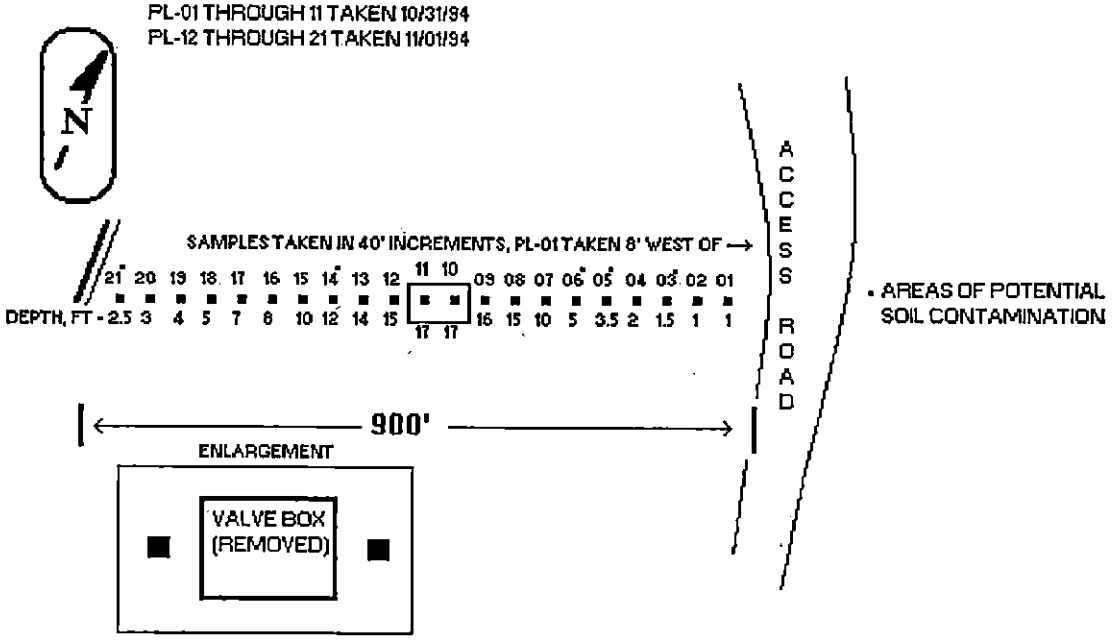
CONTAMINATED SOIL SAMPLES, TOTAL PAH IN ppm

PL-003	12.3	PL-023	5.1	PL-33	433.0
PL-005	17.0	PL-026	74.9	PL-039	33.1
PL-006	3.4	PL-027	364.6	PL-055	27.0
PL-014	42.8	PL-029	61.9	PL-059	10.0
PL-021	12.7	PL-030	27.7	PL-061	5.0

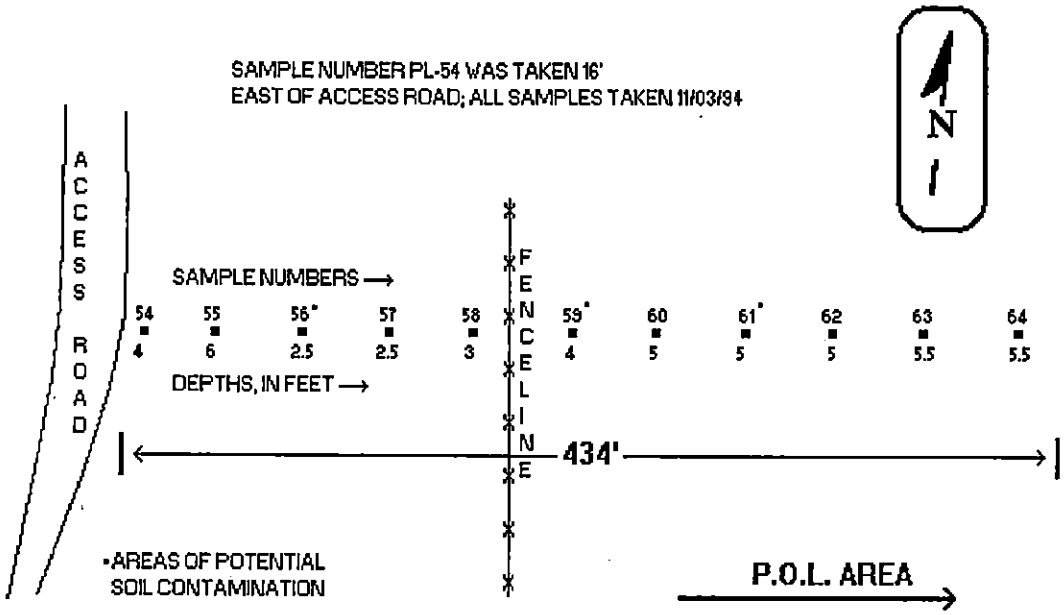
SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE(S) - MAP 2
FROM RUNWAY TO 90 DEGREE TURN IN PIPELINE



SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE(S) - MAP 3
FROM 90 DEGREE TURN HEADING EAST TOWARDS P.O.L. AREA

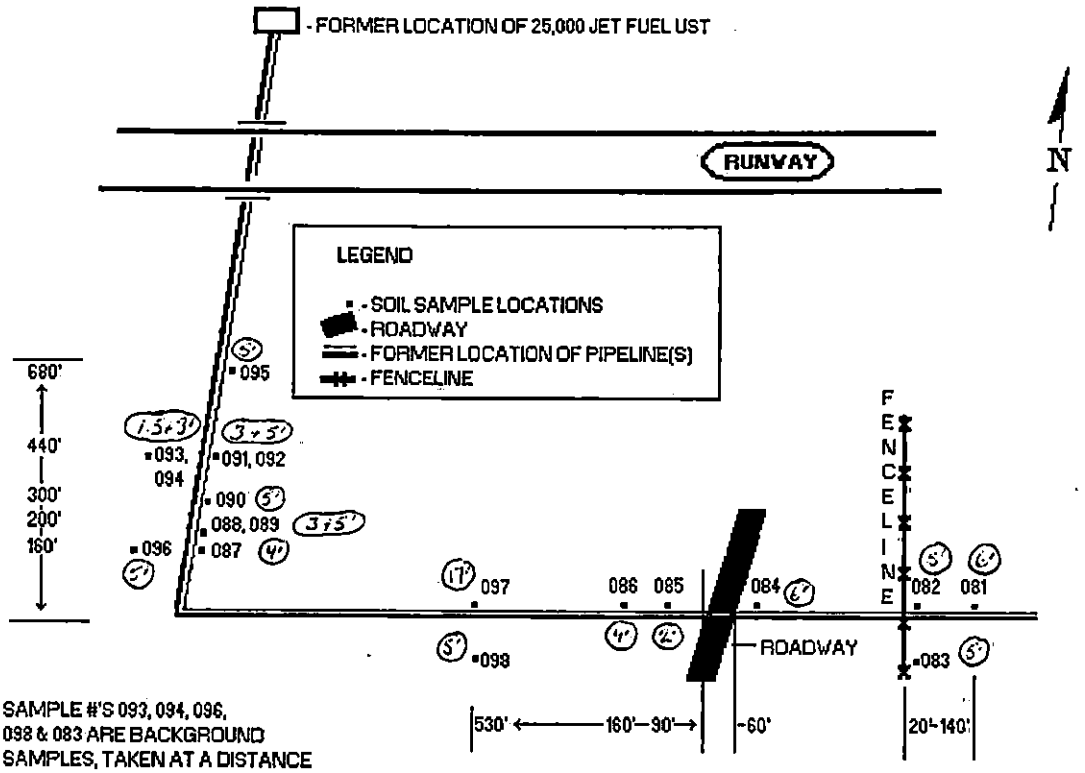


SOIL SAMPLE LOCATION MAP - JET FUEL PIPELINE - MAP 4
FROM ACCESS ROAD TO P.O.L. AREA HEADING EAST



SOIL SAMPLE LOCATION MAP; SECOND ROUND OF SAMPLING

SECOND ROUND OF SAMPLING - SOIL SAMPLE LOCATIONS & RESULTS



Sample depths — (5')

SAMPLE RESULTS SUMMARY(S); SECOND ROUND OF SAMPLING

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS, 2ND ROUND

Field Sample No.:	081	082	083	084	085	086	087	088
Date:	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95
Depth (Ft.):	6.0	5.0	5.0	6.0	2.0	4.0	4.0	3.0
Semi-Volatile Compounds, (ppb)*								
Napthalene	U	U	U	U	U	U	U	U
Acenapthene	U	U	U	U	U	U	U	U
Fluorene	U	U	U	U	U	U	U	U
Phenanthrene	U	41 J	760	U	U	U	U	U
Anthracene	U	U	94 J	U	U	U	U	U
Fluoranthene	U	71 J	910	U	U	U	U	U
Pyrene	U	93 J	1200	U	U	U	U	U
Benzo(a)anthracene	U	U	350	U	U	U	U	U
Chrysene	U	45 J	640	U	U	U	U	U
Benzo(b)fluoranthene	U	75 J	710	U	U	U	U	U
Benzo(k)fluoranthene	U	110 J	530	U	U	U	U	U
Benzo(a)pyrene	U	49 J	520	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	U	U	260 J	U	U	U	U	U
Dibenz(a,h)anthracene	U	U	130 J	U	U	U	U	U
Benzo(g,h,i)perylene	U	U	280 J	U	U	U	U	U

* Detection limit for these compounds is 330 ppb in the best of cases; for the purposes of this report, U will denote <350ppb

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS, 2ND ROUND, CONT...

Field Sample No.:	089	090	091	092	093	094	095	096
Date:	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95	4/20/95
Depth (Ft.):	5.0	5.0	3.0	5.0	1.5	3.0	5.0	5.0
Semi-Volatile Compounds, (ppb)*								
Napthalene	U	U	U	U	U	U	U	U
Acenapthene	U	U	U	U	U	U	U	U
Fluorene	U	U	U	U	U	U	U	U
Phenanthrene	U	U	U	U	U	U	U	U
Anthracene	U	U	U	U	U	U	U	U
Fluoranthene	U	U	U	U	U	U	U	U
Pyrene	U	U	U	U	U	U	U	U
Benzo(a)anthracene	U	U	U	U	U	U	U	U
Chrysene	U	U	U	U	U	U	U	U
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U
Benzo(a)pyrene	U	U	U	U	U	U	U	U
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U
Dibenz(a,h)anthracene	U	U	U	U	U	U	U	U
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U

* Detection limit for these compounds is 330 ppb in the best of cases; for the purposes of this report, U will denote <350ppb

SUFFOLK COUNTY AFB, PIPELINE SAMPLING RESULTS, 2ND ROUND, CONT...

Field Sample No.:	097	098
Date:	4/20/95	4/20/95
Depth (Ft.):	17.0	5.0
Volatile Compounds, (ppb)*		
Benzene		U
Toluene		U
Ethylbenzene		U
m-p Xylenes		U
o-Xylene		U
Isopropylbenzene		U
n-Propylbenzene		U
p-Isopropyltoluene		U
1,3,5-Trimethylbenzene		U
1,2,4-Trimethylbenzene		U
t-butylbenzene		U
Methyl-t-butylether		U
sec-Butylbenzene		U
n-Butylbenzene		U
Semi-Volatile Compounds, (ppb)**		
Napthalene	U	43 J
Acenapthene	U	210 J
Fluorene	U	180 J
Phenanthrene	490	2000
Anthracene	74 J	540
Fluoranthene	680	2000
Pyrene	910	2700
Benzo(a)anthracene	260 J	1100
Chrysene	510	1300
Benzo(b)fluoranthene	460	1400
Benzo(k)fluoranthene	550	1100
Benzo(a)pyrene	420	1100
Indeno(1,2,3-cd)pyrene	210 J	480
Dibenz(a,h)anthracene	110 J	300 J
Benzo(g,h,i)perylene	250 J	460

* Detection limit for these compounds is 0.53 to 1.10 ppb; for the purposes of this report, U<1.00 ppb

** Detection limit for these compounds is 330 ppb in the best of cases; for the purposes of this report, U<350 ppm

LABORATORY SAMPLE DATA; TAR PAPER

Laboratory Resources INC.
Teterboro Division
[illegible]0 Hollister Road
[illegible]terboro, New Jersey 07608
[illegible]X: 201-288-5311
201-288-3700

LABORATORY ANALYSIS REPORT

Client: C. U. T. E.
103 Godwin Ave
PO Box 237
Midland Park NJ 07432

Project Manager: Ms. Nancy Williams
Project: Suffolk County AFB

Laboratory Report: T412290

Date Received: 12/16/94 **Date Reported:** 1/16/95

Lab ID No.	Client Sample ID	Matrix	Collection Date & Time
T412290 - 1	TAR PAPER	Soil	12/16/94 8:15 AM

Moe R. Amirsoleymani
Quality Assurance Manager

N.J. Certification #02046
N.Y. Certification #11321
P.A. Certification #68-420

LABORATORY SAMPLE DATA; SECOND ROUND OF SAMPLING

Laboratory Resources INC.
Teterboro Division
Hollister Road
Teterboro, New Jersey 07608
FAX: 201-288-5311
201-288-3700

LABORATORY ANALYSIS REPORT

Client: C. U. T. E.
103 Godwin Ave
PO Box 237
Midland Park NJ 07432

Project Manager: Ms. Nancy Williams
Project: Suffolk County AFB

Laboratory Report: T504299

Date Received: 4/20/95 **Date Reported:** 5/10/95

Lab ID No.	Client Sample ID	Matrix	Collection Date & Time
T504299 - 1	PL-081	Soil	04/18/95 10:25 AM
T504299 - 2	PL-082	Soil	04/18/95 10:50 AM
T504299 - 3	PL-083	Soil	04/18/95 11:00 AM
T504299 - 4	PL-084	Soil	04/18/95 11:15 AM
T504299 - 5	PL-085	Soil	04/18/95 11:30 AM
T504299 - 6	PL-086	Soil	04/18/95 11:50 AM
T504299 - 7	PL-087	Soil	04/18/95 12:00 PM
T504299 - 8	PL-088	Soil	04/18/95 12:10 PM
T504299 - 9	PL-089	Soil	04/18/95 12:15 PM
T504299 - 10	PL-090	Soil	04/18/95 12:20 PM
T504299 - 11	PL-091	Soil	04/18/95 12:35 PM
T504299 - 12	PL-092	Soil	04/18/95 12:40 PM
T504299 - 13	PL-093	Soil	04/18/95 12:45 PM
T504299 - 14	PL-094	Soil	04/18/95 12:50 PM
T504299 - 15	PL-095	Soil	04/18/95 1:05 PM
T504299 - 16	PL-096	Soil	04/18/95 1:10 PM
T504299 - 17	PL-097	Soil	04/18/95 1:20 PM
T504299 - 18	PL-098	Soil	04/18/95 2:50 PM

Moe R. Amirsoleymani
Quality Assurance Manager

N.J. Certification #02046
N.Y. Certification #11321
P.A. Certification #68-420

NES 00039

TABLE OF CONTENTS

ITEM	PAGE NO.
Chain of Custody	1
Methodology Summary	6
Non-Conformance Summaries	6B
Laboratory Chronicle	7
Holding Time Chronicle	9
Case Narrative	11
Summary Spreadsheet Report	12
GC/MS Semivolatiles Package	
Conformance/Non-Conformance Checklist	17
Analytical Results Summaries	18
Tuning Results Summaries	42
Method Blank Results Summaries	47
Initial Calibration Summaries	49
Continuing Calibration Summaries	58
Surrogate Compound Recovery Summaries	64
MS/MSD Recovery Summaries	66
Internal Standard Area Summaries	67
Chromatograms and Quantitation Reports	75
GC Volatiles Package	
Conformance/Non-Conformance Checklist	127
Analytical Results Summaries	128
Method Blank Results Summaries	129
Calibration Summaries	131
Surrogate Compound Recovery Summaries	134
MS/MSD Recovery Summaries	135
GC Report History	136
Chromatograms and Quantitation Reports	138
Table of Abbreviations	147

LRI QUOTE # T504299

Laboratory Resources Inc

CHAIN OF CUSTODY

PAGE 1 OF 2

CUSTOMER INFORMATION

CUSTOMER: CUTE Inc

ADDRESS: 103 Godwin Ave
Box 237
Midland Park NJ 07432

TELEPHONE: 201-423-2881

FAX: 201-423-6020

PROJECT INFORMATION

USACE Contract W9Y-C-9937

PROJECT: Removal of tanks, Pipelines & Misc. Various Locations

PROJECT LOCATION: Suffolk County AFB Westhampton STATE: NY

PROJECT MANAGER: C Elliott

IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:

NAME: C. Elliot

TELEPHONE: 201-907-8569

FAX: 201-423-6050

BILLING INFORMATION

BILL TO: Same as Customer

ADDRESS:

ATTENTION:

TELEPHONE:

PO #:

LAB ID CODE	SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	8021	8270	ANALYSIS	PRESERVATIVES: H2SO4	HCL	HNO3	NAOH	NON-PRES
1)	PL-081	4/16/96	1025		X	Soil	2	✓	✓						
2)	PL-082	4/16/96	1050		X	Soil	2	✓	✓	NYDEC "STARS"					
3)	PL-083	4/16/96	1100		X	Soil	2	✓	✓	TARGET Comp's					
4)	PL-084	4/16/96	1115		X	Soil	2	✓	✓	8270 only					
5)	PL-085	4/16/96	1130		X	Soil	2	✓	✓						
6)	PL-086	4/16/96	1150		X	Soil	2	✓	✓						
7)	PL-087	4/16/96	1200		X	Soil	2	✓	✓						
8)	PL-088	4/16/96	1210		X	Soil	2	✓	✓						
9)	PL-089	4/16/96	1215		X	Soil	2	✓	✓						

TURNAROUND (INDICATE IN CALENDAR DAYS): _____ FAX _____ HARD COPY _____ DELIV. PKG.

NAME OF LAB PERSONNEL CONFIRMING:

DELIVERABLES / (CIRCLE ONE): DATA DATA/QC RED/DELIV NJ/CLP I NJ/CLP II NJ/REGL NY/ASP CLP OTHER Per CDAP

SAMPLER / AFFILIATION:	Dan Seaman / CUTE	DATE: 4/20/96
RECEIVED / AFFILIATION:	M Berlin / CUTE	TIME: 0900
RELINQUISHED / AFFILIATION:	M Berlin	DATE: 4/20
RECEIVED / AFFILIATION:	B. Ronalter	TIME: 11:50
RELINQUISHED / AFFILIATION:		DATE:
RECEIVED / AFFILIATION:		TIME:

☐ RETURN TO CLIENT FOR DISPOSAL ☐ LAB DISPOSAL

KNOWN HAZARD (FLAMMABLE, EXPLOSIVE, TOXIC)

☐ YES ☐ NO (IF YES EXPLAIN UNDER COMMENTS)

LAB USE CONDITIONS OF BOTTLES AND COOLER AT RECEIPT:

☐ COMPLIANT ☐ NOT COMPLIANT (IF NOT EXPLAIN UNDER COMMENTS)

COMMENTS

NES 00041

LRI QUOTE # T504299

Laboratory Resources Inc.

CHAIN OF CUSTODY

PAGE 2 of 2

USACE Contract #DACW-C-0037

CUSTOMER INFORMATION

CUSTOMER: CUTE Inc

ADDRESS: 103 Godwin Ave
Box 237
Midland Park NJ 07432

TELEPHONE: 201-427-2881

FAX: 201-423-6050

PROJECT INFORMATION

PROJECT: Misc. Various Locations
Suffolk County AFB

PROJECT LOCATION: Westhampton STATE: NY

PROJECT MANAGER: C. Elliot

IN CASE WE HAVE ANY QUESTIONS WHEN SAMPLES ARRIVE WE SHOULD CALL:

NAME: C. Elliot

TELEPHONE: 201-907-8569

FAX: 201-423-6050

BILLING INFORMATION

BILL TO: Same as Left

ADDRESS:

ATTENTION:

TELEPHONE:

PO #:

LAB ID CODE	SAMPLE IDENTIFICATION	DATE COLLECTED	TIME COLLECTED	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: GRAB	SAMPLE MATRIX	# OF BOTTLES	8021	8270	ANALYSIS	PRESERVATIVES: H2SO4	HCL	HNO3	NAOH	NON-PRES
10)	PL-090	4/18/95	1220		✓	Soil	1	✓	✓						
11)	PL-091	4/18/95	1235		✓	Soil	1	✓	✓	NYDEC STARS					
12)	PL-092	4/18/95	1240		✓	Soil	1	✓	✓	TARGET Comp.					
13)	PL-093	4/18/95	1245		✓	Soil	1	✓	✓	8270 on all					
14)	PL-094	4/18/95	1250		✓	Soil	1	✓	✓	8021 on PL-098 only					
15)	PL-095	4/18/95	1305		✓	Soil	1	✓	✓						
16)	PL-096	4/18/95	1310		✓	Soil	1	✓	✓						
17)	PL-097	4/18/95	1320		✓	Soil	1	✓	✓						
18)	PL-098	4/18/95	1450		✓	Soil	2	✓	✓						

TURNAROUND (INDICATE IN CALENDAR DAYS): _____ FAX _____ HARD COPY _____ DELIV. PKG.

NAME OF LAB PERSONNEL CONFIRMING:

DELIVERABLES / (CIRCLE ONE): DATA DATA/QC RED/DELIV NJ/CLP I NJ/CLP II NJ/REGL NY/ASP CLP OTHER CDAP

SAMPLER / AFFILIATION:	David Keegan	DATE: 4/18/95
RECEIVED / AFFILIATION:	D.K. Keegan	TIME: 08 00
RELINQUISHED / AFFILIATION:	D.K. Keegan	DATE: 4/20
RECEIVED / AFFILIATION:	L. Conover	TIME: 11:55
RELINQUISHED / AFFILIATION:		DATE:
RECEIVED / AFFILIATION:		TIME:

☐ RETURN TO CLIENT FOR DISPOSAL ☐ LAB DISP

KNOWN HAZARD (FLAMMABLE, EXPLOSIVE, T

☐ YES ☐ NO (IF YE

LAB USE: CONDITIONS OF BOTT

☐ COMPLIANT ☐ NOT C

COMMENTS

NES .00042

CENED-ED-GL-E

SAMPLE CONTAINER RECEIPT FORM

PROJECT: CUTE

Container received on 4/20/95 and inspected on 4/20/95 by: K-DOSS

1. Shipper: (USM, UPS, DHL, FEDEX, P/C, AIR EXP, HAND-DELIVERED)
2. Container type (Cooler, box, envelope, etc.) _____
3. Were custody seals on outside of container? N/A (Yes) No
   How many & where : 2, seal date: 4/20/95, seal name: 18992 | 18993
4. Were custody papers taped to lid inside container? (N/A) Yes No
5. Were custody papers properly filled out? (ink, signed, etc.) (Yes) No
6. Was project identifiable from custody papers? (Yes) No
7. Did you sign custody papers in appropriate place? (Yes) No
8. Did you attach shipper's packing form to this form? (N/A) Yes No
9. Packing material (peanuts, vermiculite, bubble wrap, paper, cans, other)
10. Was sufficient ice used? Temperature 4.6 °C upon arrival N/A (Yes) No
11. Were all samples sealed in separate plastic bags? (N/A) Yes No
12. Did all samples arrive in good condition? (Yes) No
13. Sample labels complete? (#, date, analysis, preservation, sign) (Yes) No
14. Did all sample labels agree with custody papers? (Yes) No
15. Were correct sample containers used for tests indicated? N/A (Yes) No
16. Were correct preservatives used? (TM pH___, CN- pH___) (N/A) Yes No
    (TOC pH___, NUTRIENT pH___, TOX pH___, TPH pH___, OTHER pH___)
17. Were VOA vials bubble-free (H_2O) or no headspace (soil) (N/A) Yes No
18. Was sufficient amount of sample sent in each container? (Yes) No
19. Were air volumes noted for air samples? (N/A) Yes No
20. Were initial weights noted for pre-weighted filters? (N/A) Yes No

Discrepancies: _____

003

ENCLOSURE #5

DEPE-077 NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

Page ___ of ___

Rev. 2.0, 2/92

INTERNAL CHAIN OF CUSTODY

INSTRUCTIONS: Use 1 form for each 20 samples or aliquot.

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Laboratory Resources Name: Krishna Daggumati	Location: Teterboro Title: Sample Management Supervisor
Field Sample Seal No: 1504299	Date Broken 4/20/95	Military Time Seal Broken:
CaseNo:	Analytical Parameter/Fraction	

SAMPLE NO.	ALIQUOT/EXTRACT NO.	SAMPLE NO.	ALIQUOT/EXTRACT NO.
1504299-01		1504299-11	
-02		12	
-03		13	
-04		-14	
-05		-15	
-06		-16	
-07		-17	
-08		-18	
-09		-19	
-10		-20	

Date	Time	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
4/21	1:00	PRINTED NAME Ashok SIGNATURE AP	PRINTED NAME Octavio Ortiz SIGNATURE Octavio Ortiz	Relinquished Ext. #1 to 20
4/21	15:00	PRINTED NAME Octavio Ortiz SIGNATURE Octavio Ortiz	PRINTED NAME Ashok SIGNATURE AP	Ret.
4/24	9:00	PRINTED NAME Ashok SIGNATURE AP	PRINTED NAME [illegible] SIGNATURE	1-18 ?. M
4/24	16:00	PRINTED NAME [illegible] SIGNATURE	PRINTED NAME Ashok SIGNATURE AP	Ret.
4/25	11:00	PRINTED NAME Ashok SIGNATURE AP	PRINTED NAME CHOWKIDAR SIGNATURE	18. Gc.Vox
4/25	17:00	PRINTED NAME CHOWKIDAR SIGNATURE	PRINTED NAME Ashok SIGNATURE AP	Ret.
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	004

NES 00044

DEPE-077 NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY Page ___ of ___

Rev. 2.0, 2/92

INTERNAL CHAIN OF CUSTODY

INSTRUCTIONS: Use 1 form for each 20 samples or aliquot.

Laboratory Person Breaking Field Seal on Sample Shuttle & Accepting Responsibility for Sample	Laboratory: Laboratory Resources Name: Miriam Mercedes	Location: Teterboro Title: Sample Extraction Supervisor
Field Sample Seal No: 1504299	Date Broken ___/___/___	Military Time Seal Broken:
CaseNo:	Analytical Parameter/Fraction	

SAMPLE NO.	ALIQUOT/EXTRACT NO.	SAMPLE NO.	ALIQUOT/EXTRACT NO.
T504299-01	Reg BN SOIL Ext	T504299-11	
02	"	12	
03		13	
04		14	
05		15	
06		16	
07		17	
08		18	
09		NO MORE	
10	"		

Date	Time	RELINQUISHED BY	RECEIVED BY	PURPOSE OF CHANGE OF CUSTODY
4/20	1:00	PRINTED NAME Ashok SIGNATURE AP	PRINTED NAME Ortivio Ortiz SIGNATURE Ortivio Ortiz	Reg BN Soil Ext
4/23		PRINTED NAME Ortivio Ortiz SIGNATURE Ortivio Ortiz	PRINTED NAME Jeanne Revolus SIGNATURE Revolus	Delivered 7 GC MS
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	
		PRINTED NAME SIGNATURE	PRINTED NAME SIGNATURE	

005

SEMIVOLATILE ORGANICS METHODOLOGY

Sample Extraction and Analysis, Aqueous

Code of Federal Regulations, Title 40, Part 136, Office of the Federal Register, National Archives and Records Administration, Washington, DC 20402, Method 625, "Base/Neutrals and Acids", modified using EPA/CLP internal and surrogate standards.

Sample Extraction, Solids

Test Methods for Evaluating Solid Waste (SW-846), USEPA Office of Solid Waste and Emergency Response, Washington, DC 20460, 3rd Edition, November 1986, Method 3550, "Sonication Extraction."

Sample Preparation, Organic Liquids

Test Methods for Evaluating Solid Waste (SW-846), USEPA Office of Solid Waste and Emergency Response, Washington, DC 20460, 3rd Edition, November 1986, Method 3580, "Waste Dilution."

Analysis, Nonaqueous

Test Methods for Evaluating Solid Waste (SW-846), USEPA Office of Solid Waste and Emergency Response, Washington, DC 20460, 3rd Edition, November 1986, Method 8270, "Gas Chromatography/Mass Spectrometry for Semivolatile Organics: Capillary Column Technique."

METHODS SUMMARY

VOLATILE ORGANIC ANALYSIS BY METHOD 8021

Method 8021 provides gas chromatographic conditions for the detection of halogenated and aromatic volatile organic compounds. Samples can be analyzed using direct injection or purge-and-trap (Method 5030). Ground water samples must be analyzed using Method 5030. A temperature program is used in the gas chromatograph to separate the organic compounds. Detection is achieved by a halogen-specific (HALL) and a photoionization detector (PID) in series.

Tentative identifications are obtained by analyzing standards under the sample conditions used for samples and comparing resultant GC retention times. Confirmatory information can be gained by comparing the relative response from the two detectors. Concentrations of the identified components are measured by relating the response produced for that compound to the response produced by a compound that is used as an internal standard.

ORGANIC NONCONFORMANCE SUMMARY T504299

1. The surrogate recovery of 2-Fluorobiphenyl was outside of acceptable QC limits in sample T504299-01.

2. Samples T504299-02,08,10,11, and 15, were reanalyzed to confirm that internal standard recoveries were outside of acceptable QC limits. Both runs are included in the data package.

Fax: 05/01/95
Report: 05/11/95
Received: 04/20/95
Client: C. U. T. E.
Deliverable: Other-Client Specified Disk Due:
Regulation: NY-Spill Tech And Remediation Series
Special Requirements:

LRI Laboratory Chronicle
MS Semivolatiles

Report # T504299

Page: 1
5/1/95
1:50:49 PM

QT	Lb	pH	Sample	mat	Test Type	Extracted Date	Extracted By	Analysis Date	Analysis By	Batch	Data File	Dil File	Calc	% Sol	# Ht
✓	R	R	1 : PL-081	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	KV	9556	D4606		34.72	95.5	0
✓	R	R	2 : PL-082	S	8270SVA-/sys00047	04/18 04/21	OS	↓	↓	9556	D4587		35.09	94.1	7
✓	R	R	3 : PL-083	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	9556	D4595		35.46	93.6	12
✓	R	R	4 : PL-084	S	8270SVA-/sys00047	04/18 04/21	OS	5/4/95	KV	9556	D4569		34.72	95.8	0
✓	R	R	5 : PL-085	S	8270SVA-/sys00047	04/18 04/21	OS	5/2/95	↓	9556	D4592		34.01	97.8	1
✓	R	R	6 : PL-086	S	8270SVA-/sys00047	04/18 04/21	OS	↓	↓	9556	D4593		34.72	95.7	0
✓	R	R	7 : PL-087	S	8270SVA-/sys00047	04/18 04/21	OS	↓	↓	9556	D4594		34.01	98.4	0
✓	R	R	8 : PL-088	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	9556	D4588		34.72	96.3	0
✓	R	R	9 : PL-089	S	8270SVA-/sys00047	04/18 04/21	OS	5/4/95	↓	9556	D4609		34.36	96.9	0
✓	R	R	10 : PL-090	S	8270SVA-/sys00047	04/18 04/21	OS	5/2/95	↓	9556	D4574		34.36	96.8	0
✓	R	R	11 : PL-091	S	8270SVA-/sys00047	04/18 04/21	OS	↓	↓	9556	D4575		34.36	97.1	1
	R	R	12 : PL-092	S	8270SVA-/sys00047	04/18 04/21	OS	5/4/95	ICV	9556 -1	D4566		34.01	97.7	0
✓	R	R	13 : PL-093	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4589		35.09	94.9	0
✓	R	R	14 : PL-094	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4585		35.84	92.5	0
✓	R	R	15 : PL-095	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4590		35.46	93.9	0
✓	R	R	16 : PL-096	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4591		35.09	94.5	0
✓	R	R	17 : PL-097	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4596		35.84	93.4	12
✓	R	R	18A: PL-098	S	8270SVA-/sys00047	04/18 04/21	OS	5/3/95	↓	-1	D4597		35.09	95.0	15

T504299-08 RE D4607
-08 RE D4608
-10 RE D4610
-11 RE D4611

T504299-15 RE D4612

QC CHRONICLE

Blanks				Spikes			
	#	mat		sample	M file	MS file	MSD file
QM9556T1		S	D4564	T504299-12	D4566	D4567	D4568

Calibration

	Date	File	MS
init	5/1/95	D4557 –	D4561
	5/2/95	D4578 –	D4582
	5/3/95	D4599 –	D4603
chk	5/1/95	D4563	
	5/2/95	D4584	

007

DL LIST: DLS447 REVIEWED: K.V LAB TAT: CHECKED:

Fax: 05/01/95
Report: 05/11/95
Received: 04/20/95
Client: C. U. T. E.
Deliverable: Other-Client Specified
Regulation: NY-Spill Tech And Remediation Series
Special Requirements:

LRI Laboratory Chronicle
GC Volatiles

Disk Due:

Report # T504299

4/26/95
10:52:47 AM

QT	Lb	pH	Sample	mat	Test Type	Collected Date	Collected By	Analysis Date	Analysis By	Batch	Data File	Dil File	Calc	% Sol	# Ht
			18B: PL-098	S	8021SVOA-/sys00004	04/18		4/26	C.Z	BH10425	H9726		1.05	95.0	0

QC CHRONICLE

Blanks				Spikes			
	#	mat		sample	M file	MS file	MSD file
BH10425		S	H9758				
BH10423		S	H9711	T504216-1A	H9727	H9728	H9729

Calibration

	Date	File	MS
init	3/27	H	
chk	4/25	H9726	
	4/23	H9710	V
			008

DL LIST: DL8020 REVIEWED: C.Z LAB TAT: CHECKED: Andy P 5-2-95

HOLDING TIMES, PRESERVATION TECHNIQUES, AND REQUIRED TECHNIQUES

Name	Container[1]	Preservation	Max. Holding Time
Bacterial Tests:			
Coliform, fecal & total	P,G	Cool,4°C,0.008% $Na_2S_2O_3$	6 hours
Fecal streptococci	P,G	Cool,4°C,0.008% $Na_2S_2O_3$	6 hours
Metals:			
Chromium VI	P,G	Cool,4°C	24 hours
Mercury	P,G	HNO_3 to pH<2	28 days
Metals, except chromium VI & mercury	P,G	HNO_3 to pH<2	6 months
Inorganic Tests:			
Acidity	P,G	Cool,4°C	14 days
Alkalinity	P,G	Cool,4°C	14 days
Ammonia	P,G	Cool,4°C,H_2SO_4 to pH<2	28 days
Biochemical oxygen demand(5)	P,G	Cool,4°C	48 hours
Biochemical oxygen demand(20)	P,G	Cool,4°C	48 hours
Biochemical oxygen demand, carbonaceous	P,G	Cool,4°C	48 hours
Bromide	P,G	None required	28 days
Chemical oxygen demand	P,G	Cool,4°C, H_2SO_4 to pH<2	28 days
Chloride	P,G	None required	28 days
Chlorine, total residual	P,G	None required	Analyze immed.
Color	P,G	Cool,4°C	48 hours
Cyanide, total & amenable to chlorination	P,G	Cool,4°C, NaOH to pH>12, 0.6g ascorbic acid	14 days
Cyanide, reactive	P,G	None required	NA
Fluoride	P	None required	28 days
Hardness	P,G	HNO_3 to pH<2,H_2SO_4 to pH<2	6 months
Hydrogen ion (pH)	P,G	None required	Analyze immed.
Ignitability (flash points)	P,G	None required	NA
Kjeldahl & organic nitrogen	P,G	Cool,4°C,H_2SO_4 to pH<2	28 days
Nitrate	P,G	Cool,4°C	48 hours
Nitrate-Nitrite	P,G	Cool,4°C,H_2SO_4 to pH<2	28 days
Nitrite	P,G	Cool,4°C	48 hours
Odor	P,G	None required	Analyze immed.
Oil & Grease	G	Cool,4°C,H_2SO_4 to pH<2	28 days
Total Organic Carbon	P,G	Cool,4°C,HCl or H_2SO_4 to pH<2	28 days
Orthophosphate	P,G	Filter immediately,Cool,4°C	48 hours
Phosphate, total	P,G	H_2SO_4 to pH<2	28 days
Oxygen, Dissolved Probe	G Bottle & top	None required	Analyze immed.
Winkler	do	Fix in site & store in dark	8 hours
Phenols	G only	Cool,4°C,H_2SO_4 to pH<2	28 days
Phophorus (elemental)	G	Cool,4°C	48 hours
Phosphorus, total	P,G	Cool,4°C,H_2SO_4 to pH<2	28 days
Residue, Total	P,G	Cool,4°C	7 days
Residue, Filterable (TDS)	P,G	Cool,4°C	7 days
Residue, Nonfilterable(TSS)	P,G	Cool,4°C	7 days
Residue, Settleable	P,G	Cool,4°C	48 hours
Residue, volatile	P,G	Cool,4°C	7 days
Silica	P	Cool,4°C	28 days
Specific Conductance	P,G	Cool,4°C	28 days
Sulfate	P,G	Cool,4°C	28 days
Sulfide, reactive	P,G	Cool,4°C	NA
Sulfide, total	P,G	Cool,4°C, add zinc acetate plus sodium hydoxide to pH>9	7 days

Name	Container[1]	Preservation	Max. Holding Time
Sulfite	P,G	None Required	Analyze immed.
Surfactants (MBAS)	P,G	Cool,4°C	48 hours
TPH (water)	G	H_2SO_4 to pH<2	7 days
TPH (soil)	G	H_2SO_4 to pH<2	28 days
Temperature	P,G	None Required	Analyze
Turbidity	P,G	Cool,4°C	48 hours
Organic Tests:			
Purgeable halocarbons	G,Teflon-lined septum	Cool,4°C,0.008% $Na_2S_2O_3$	14 days
Purgeable aromatic hydrocarbons	G,Teflon-lined septum	Cool,4°C,0.008% $Na_2S_2O_3$ HCl to pH2	14 days
Acrolein & acrylonitrile	G,Teflon-lined septum	Cool,4°C,0.008% $Na_2S_2O_3$ adjust pH to 4-5	14 days
Phenols	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$	7 days til extraction 40 days after extract.
Benzidines	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$	7 days til extraction
Phthalate esters	G,Teflon-lined cap	Cool,4°C	7 days til extraction 40 days after extract.
Nitrosamines	G,Teflon-lined cap	Cool,4°C,store in dark 0.008% $Na_2S_2O_3$	40 days after extraction
PCBs, acrylonitrile	G,Teflon-lined cap	Cool,4°C	40 days after extraction
Nitroaromatics & isophorone	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$, store in dark	40 days after extraction
Polynuclear aromatic hydrocarbons	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$, store in dark	40 days after extraction
Haloethers	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$,	40 days after extraction
Chlorinated hydrocarbons	G,Teflon-lined cap	Cool,4°C	40 days after extraction
TCDD	G,Teflon-lined cap	Cool,4°C,0.008% $Na_2S_2O_3$,	40 days after extraction
Total organic halogens	G,Teflon-lined cap	Cool,4°C,H_2SO_4 to pH <2	28 days
Pesticides Tests:			
Pesticides	G,Teflon-lined cap	Cool,4°C,pH 5-9	40 days after extraction
Radiological Tests:			
Alpha, beta, & radium	P,G	HNO_3 to pH<2	6 months

[1] Polyethylene (P) or Glass (G).

Note: All holding times mentioned above are based upon the date of sample collection.

Test Method for Evaluating Solid Waste Physical/Chemical Methods SW 846 Final Update-I July 1992.

Standard Method for the Examination of Water and Waste Water 18th Edition 1992.

CASE NARRATIVE

Laboratory Resources, New Jersey Division, received eighteen (18) soil samples for Reduced Deliverables Format on April 20, 1995. The samples were analyzed for the parameters outlined in the chain of custody.

The samples were analyzed within the required holding time. Any parameters which were outside of their respective quality control ranges are noted in the non-conformance summaries.

All soil, sludge and sediment samples are reported in dry weight.

Please contact us if there are any questions regarding the enclosed results.

SUMMARY SPREADSHEET REPORT

<LRI Sample No> Client Sample Description
Collection Date

GC Volatiles	<1>PL-081 04/18/95	<2>PL-082 04/18/95	<3>PL-083 04/18/95	<4>PL-084 04/18/95	<5>PL-085 04/18/95
Benzene					
n-Butylbenzene					
sec-Butylbenzene					
tert-Butylbenzene					
Ethylbenzene					
Isopropylbenzene					
p-Isopropyltoluene					
Methyl-tert-butyl ether					
Naphthalene					
n-Propylbenzene					
Toluene					
1,2,4-Trimethylbenzene					
1,3,5-Trimethylbenzene					
o-Xylene					
m,p-Xylenes					

GC/MS Semivolatiles	<1>PL-081 04/18/95	<2>PL-082 04/18/95	<3>PL-083 04/18/95	<4>PL-084 04/18/95	<5>PL-085 04/18/95
Acenaphthene	ND	ND	ND	ND	ND
Anthracene	ND	ND	94J ug/kg	ND	ND
Benzo[a]anthracene	ND	ND	350 ug/kg	ND	ND
Benzo[a]pyrene	ND	40J ug/kg	520 ug/kg	ND	ND
Benzo[b]fluoranthene	ND	58J ug/kg	710 ug/kg	ND	ND
Benzo[g,h,i]perylene	ND	ND	280J ug/kg	ND	ND
Benzo[k]fluoranthene	ND	49J ug/kg	530 ug/kg	ND	ND
Chrysene	ND	44J ug/kg	640 ug/kg	ND	ND
Dibenzo[a,h]anthracene	ND	ND	130J ug/kg	ND	ND
Fluoranthene	ND	71J ug/kg	910 ug/kg	ND	ND
Fluorene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	260J ug/kg	ND	ND
Naphthalene	ND	ND	ND	ND	ND
Phenanthrene	ND	36J ug/kg	760 ug/kg	ND	ND
Pyrene	ND	75J ug/kg	1200 ug/kg	ND	ND

SUMMARY SPREADSHEET REPORT

<LRI Sample No> Client Sample Description
Collection Date

GC Volatiles	<6>PL-086 04/18/95	<7>PL-087 04/18/95	<8>PL-088 04/18/95	<9>PL-089 04/18/95	<10>PL-090 04/18/95
Benzene					
n-Butylbenzene					
sec-Butylbenzene					
tert-Butylbenzene					
Ethylbenzene					
Isopropylbenzene					
p-Isopropyltoluene					
Methyl-tert-butyl ether					
Naphthalene					
n-Propylbenzene					
Toluene					
1,2,4-Trimethylbenzene					
1,3,5-Trimethylbenzene					
o-Xylene					
m,p-Xylenes					

GC/MS Semivolatiles	<6>PL-086 04/18/95	<7>PL-087 04/18/95	<8>PL-088 04/18/95	<9>PL-089 04/18/95	<10>PL-090 04/18/95
Acenaphthene	ND	ND	ND	ND	ND
nthracene	ND	ND	ND	ND	ND
enzo[a]anthracene	ND	ND	ND	ND	ND
enzo[a]pyrene	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND

SUMMARY SPREADSHEET REPORT

<LRI Sample No> Client Sample Description
Collection Date

GC Volatiles	<11>PL-091 04/18/95	<12>PL-092 04/18/95	<13>PL-093 04/18/95	<14>PL-094 04/18/95	<15>PL-095 04/18/95
Benzene					
n-Butylbenzene					
sec-Butylbenzene					
tert-Butylbenzene					
Ethylbenzene					
Isopropylbenzene					
p-Isopropyltoluene					
Methyl-tert-butyl ether					
Naphthalene					
n-Propylbenzene					
Toluene					
1,2,4-Trimethylbenzene					
1,3,5-Trimethylbenzene					
o-Xylene					
m,p-Xylenes					

GC/MS Semivolatiles	<11>PL-091 04/18/95	<12>PL-092 04/18/95	<13>PL-093 04/18/95	<14>PL-094 04/18/95	<15>PL-095 04/18/95
Acenaphthene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Benzo[a]anthracene	ND	ND	ND	ND	ND
Benzo[a]pyrene	ND	ND	ND	ND	ND
Benzo[b]fluoranthene	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND
Dibenzo[a,h]anthracene	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND

SUMMARY SPREADSHEET REPORT

<LRI Sample No> Client Sample Description
Collection Date

GC Volatiles	<16>PL-096 04/18/95	<17>PL-097 04/18/95	<18>PL-098 04/18/95
Benzene			ND
n-Butylbenzene			ND
sec-Butylbenzene			ND
tert-Butylbenzene			ND
Ethylbenzene			ND
Isopropylbenzene			ND
p-Isopropyltoluene			ND
Methyl-tert-butyl ether			ND
Naphthalene			ND
n-Propylbenzene			ND
Toluene			ND
1,2,4-Trimethylbenzene			ND
1,3,5-Trimethylbenzene			ND
o-Xylene			ND
m,p-Xylenes			ND

GC/MS Semivolatiles	<16>PL-096 04/18/95	<17>PL-097 04/18/95	<18>PL-098 04/18/95
Acenaphthene	ND	ND	210J ug/kg
thracene	ND	74J ug/kg	540 ug/kg
nzo[a]anthracene	ND	260J ug/kg	1100 ug/kg
Benzo[a]pyrene	ND	420 ug/kg	1100 ug/kg
Benzo[b]fluoranthene	ND	460 ug/kg	1400 ug/kg
Benzo[g,h,i]perylene	ND	250J ug/kg	460 ug/kg
Benzo[k]fluoranthene	ND	550 ug/kg	1100 ug/kg
Chrysene	ND	510 ug/kg	1300 ug/kg
Dibenzo[a,h]anthracene	ND	110J ug/kg	300J ug/kg
Fluoranthene	ND	680 ug/kg	2000 ug/kg
Fluorene	ND	ND	180J ug/kg
Indeno[1,2,3-cd]pyrene	ND	210J ug/kg	480 ug/kg
Naphthalene	ND	ND	43J ug/kg
Phenanthrene	ND	490 ug/kg	2000 ug/kg
Pyrene	ND	910 ug/kg	2700 ug/kg

NON-CLP

Organic Flags Used in Result Sheet
"B" = Found in method blank
"J" = Estimated result, less than the quantitation limit
"E" = Exceeds calibration range
"D" = Dilution performed
"ND" = Not Detected

Inorganic Flags Used in Result Sheet
"EC" = Estimated count
"TNTC" = Too numerous to count
"S" = Result quantified by method of standard addition
"ND" = Not Detected

CLP

Organic Flags Used in Result Sheet
"B" = Found in method blank
"J" = Estimated result, less than the quantitation limit
"P" = This flag is used for a pesticide/aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns
= This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument
= Dilution performed
= Not Detected

SUMMARY SPREADSHEET REPORT

<LRI Sample No> Client Sample Description
Collection Date

Inorganic Flags Used in Result Sheet

"E" = The reported value is estimated because of the presence of interference
"M" = Duplicate injection precision not met
"N" = Spiked sample recovery not within control limits
"S" = Result quantified by method of standard addition
"W" = Post-digestion spike for furnace AA analysis is out of control limits
"*" = Duplicate analysis not within control limits
"+" = Correlation coefficient for the MSA is less than 0.995
"U"= Not Detected

GC/MS CONFORMANCE/NONCONFORMANCE SUMMARY

WORK ORDER No. T504299

		No	Y
1.	Chromatograms Labeled/Compounds Identified	___	✓
2.	Tune Specifications		
	a. BFB Meets Criteria	___	✓
	b. DFTPP Meets Criteria	___	✓
3.	Tuning Frequency Performed every 24 hours for 600 series and 12 hours for 8000 series	___	✓
4.	Calibration Frequency Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series	___	✓
5.	Calibration Requirements		
	a. Calibration Check Compounds (CCCs)	___	✓
	b. System Performance Check Compounds (SPCCs)	___	✓
6.	Blank Contamination If yes, list compounds and concentrations in each blank:	✓	___
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
7.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	✓	✗
	a. VOA Fraction		
	b. B/N Fraction → Sample T504299-17 Recovery for (2-Fluorobiphenyl = 29%)		
	c. Acid Fraction		
	If not met, were the calculations checked and the results qualified as estimated?	___	___
8.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	___	✓
	a. VOA Fraction		
	b. B/N Fraction		
	c. Acid Fraction		
9.	Internal Standard Areas and Retention Time Shifts Meet Criteria Internal standard areas between -50% and +100% of daily standard	✓	✗
10.	Extraction Holding Time Met If not met, list number of days exceeded for each sample:	___	✓
11.	Analysis Holding Time Met If not met, list number of days exceeded for each sample:	___	✓

Laboratory Supervisor: _____ Date: 5/9/95

017

Client Sample ID No.: PL-081

Lab Name: LRI

Lab Sample ID: T504299-01

Matrix: [soil/water] SOIL

Lab File ID: >D4606

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 4.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 34.72

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-082

Lab Sample ID: T504299-02

Matrix: [soil/water] SOIL

Lab File ID: >D4587

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 5.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	41	J
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	70	J
129-00-0	Pyrene	92	J
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	45	J
205-99-2	Benzo(b)fluoranthene	74	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	49	J
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.09

Total Hit(s): 7

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Client Sample ID No.: PL-082 RE

Lab Name: LRI

Lab Sample ID: T504299-02RE

Matrix: [soil/water] SOIL

Lab File ID: >D4607

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 6.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	36	J
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	71	J
129-00-0	Pyrene	75	J
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	44	J
205-99-2	Benzo(b)fluoranthene	58	J
207-08-9	Benzo(k)fluoranthene	49	J
50-32-8	Benzo(a)pyrene	40	J
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.46

Total Hit(s): 7

020

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-083

Lab Sample ID: T504299-03

Matrix: [soil/water] SOIL

Lab File ID: >D4595

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 6.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	760	
120-12-7	Anthracene	94	J
206-44-0	Fluoranthene	910	
129-00-0	Pyrene	1200	
56-55-3	Benzo(a)anthracene	350	
218-01-9	Chrysene	640	
205-99-2	Benzo(b)fluoranthene	710	
207-08-9	Benzo(k)fluoranthene	530	
50-32-8	Benzo(a)pyrene	520	
193-39-5	Indeno(1,2,3-cd)pyrene	260	J
53-70-3	Dibenz(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	280	J

SADF: 35.46

Total Hit(s): 12

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-084

Lab Sample ID: T504299-04

Matrix: [soil/water] SOIL

Lab File ID: >D4569

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 4.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/02/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 34.72

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-085

Lab Sample ID: T504299-05

Matrix: [soil/water] SOIL

Lab File ID: >D4592

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 2.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.01

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-086

Lab Sample ID: T504299-06

Matrix: [soil/water] SOIL

Lab File ID: >D4593

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 4.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 34.72

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-087

Lab Sample ID: T504299-07

Matrix: [soil/water] SOIL

Lab File ID: >D4594

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 2.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.01

Total Hit(s): 0

025

NES 00067

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-088

Lab Sample ID: T504299-08

Matrix: [soil/water] SOIL

Lab File ID: >D4588

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 4.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 34.72

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Client Sample ID No.: PL-088 RE

Lab Name: LRI

Lab Sample ID: T504299-08RE

Matrix: [soil/water] SOIL

Lab File ID: >D4608

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 4.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/04/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 34.72

Total Hit(s): 0

027

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-089

Lab Sample ID: T504299-09

Matrix: [soil/water] SOIL

Lab File ID: >D4609

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 3.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/04/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.36

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-090

Lab Sample ID: T504299-10

Matrix: [soil/water] SOIL

Lab File ID: >D4574

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 3.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/02/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.36

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Client Sample ID No.: PL-090 RE

Lab Name: LRI

Lab Sample ID: T504299-10RE

Matrix: [soil/water] SOIL

Lab File ID: >D4610

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 3.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/04/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.36

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-091

Lab Sample ID: T504299-11

Matrix: [soil/water] SOIL

Lab File ID: >D4575

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 3.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/02/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.36

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-091 RE

Lab Sample ID: T504299-11RE

Matrix: [soil/water] SOIL

Lab File ID: >D4611

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 3.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/04/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.36

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-092

Lab Sample ID: T504299-12

Matrix: [soil/water] SOIL

Lab File ID: >D4566

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 2.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/02/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q.
91-20-3	Naphthalene	340	U
83-32-9	Acenaphthene	340	U
86-73-7	Fluorene	340	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
56-55-3	Benzo(a)anthracene	340	U
218-01-9	Chrysene	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenz(a,h)anthracene	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

SADF: 34.01

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-093

Lab Sample ID: T504299-13

Matrix: [soil/water] SOIL

Lab File ID: >D4589

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 5.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.09

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-094

Lab Sample ID: T504299-14

Matrix: [soil/water] SOIL

Lab File ID: >D4585

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 7.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	360	U
83-32-9	Acenaphthene	360	U
86-73-7	Fluorene	360	U
85-01-8	Phenanthrene	360	U
120-12-7	Anthracene	360	U
206-44-0	Fluoranthene	360	U
129-00-0	Pyrene	360	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenz(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U

SADF: 35.84

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-095

Lab Sample ID: T504299-15

Matrix: [soil/water] SOIL

Lab File ID: >D4590

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 6.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.46

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-095 RE

Lab Sample ID: T504299-15RE

Matrix: [soil/water] SOIL

Lab File ID: >D4612

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 6.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/04/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.46

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-096

Lab Sample ID: T504299-16

Matrix: [soil/water] SOIL

Lab File ID: >D4591

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 5.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	350	U
83-32-9	Acenaphthene	350	U
86-73-7	Fluorene	350	U
85-01-8	Phenanthrene	350	U
120-12-7	Anthracene	350	U
206-44-0	Fluoranthene	350	U
129-00-0	Pyrene	350	U
56-55-3	Benzo(a)anthracene	350	U
218-01-9	Chrysene	350	U
205-99-2	Benzo(b)fluoranthene	350	U
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenz(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U

SADF: 35.09

Total Hit(s): 0

038

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: PL-097

Lab Sample ID: T504299-17

Matrix: [soil/water] SOIL

Lab File ID: >D4596

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 7.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	360	U
83-32-9	Acenaphthene	360	U
86-73-7	Fluorene	360	U
85-01-8	Phenanthrene	490	
120-12-7	Anthracene	74	J
206-44-0	Fluoranthene	680	
129-00-0	Pyrene	910	
56-55-3	Benzo(a)anthracene	260	J
218-01-9	Chrysene	510	
205-99-2	Benzo(b)fluoranthene	460	
207-08-9	Benzo(k)fluoranthene	550	
50-32-8	Benzo(a)pyrene	420	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J
53-70-3	Dibenz(a,h)anthracene	110	J
191-24-2	Benzo(g,h,i)perylene	250	J

SADF: 35.84

Total Hit(s): 12

Client Sample ID No.

Lab Name: LRI

Lab Sample ID: T504299-18

PL-098

Matrix: [soil/water] SOIL

Lab File ID: >D4597

Sample wt/vol: 30.00 [g/mL] G

Extract Vol: 1000 uL

Run Type: 8270SVA

Date Received: 04/20/95

% Moisture: 5.0

Date Extracted: 04/21/95

Dilution Factor: 1

Date Analyzed: 05/03/95

GPC Cleanup (Y/N) N

pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	43	J
83-32-9	Acenaphthene	210	J
86-73-7	Fluorene	180	J
85-01-8	Phenanthrene	2000	
120-12-7	Anthracene	540	
206-44-0	Fluoranthene	2000	
129-00-0	Pyrene	2700	
56-55-3	Benzo(a)anthracene	1100	
218-01-9	Chrysene	1300	
205-99-2	Benzo(b)fluoranthene	1400	
207-08-9	Benzo(k)fluoranthene	1100	
50-32-8	Benzo(a)pyrene	1100	
193-39-5	Indeno(1,2,3-cd)pyrene	480	
53-70-3	Dibenz(a,h)anthracene	300	J
191-24-2	Benzo(g,h,i)perylene	460	

SADF: 35.09

Total Hit(s): 15

NES 00082

ORGANICS ANALYSIS DATA SHEET-SEMIVOLATILE COMPOUNDS

METHOD BLANK

Lab Name: LRI

Lab Sample ID: SBLKQM9556T1 | SBLKQM9556T1

Matrix: [soil/water] SOIL | Lab File ID: >D4564

Sample wt/vol: 30.00 [g/mL] G | Extract Vol: 1000 uL

Run Type: 8270SVA | Date Received:

% Moisture: NA | Date Extracted: 04/21/95

Dilution Factor: 1 | Date Analyzed: 05/01/95

GPC Cleanup (Y/N) N | pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
91-20-3	Naphthalene	330	U
83-32-9	Acenaphthene	330	U
86-73-7	Fluorene	330	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenz(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U

SADF: 33.33

Total Hit(s): 0

CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: LRI

Lab File ID: >D4556 DFTPP Injection Date: 5/01/95

trument ID: MSD/D DFTPP Injection Time: 16:28

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	46.3	
68	Less than 2.0% of mass 69	0.0	0.0)1
69	(reference only)	56.	
70	Less than 2.0% of mass 69	0.0	0.0)1
127	40.0 - 60.0% of mass 198	51.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.	
199	5.0 - 9.0% of mass 198	6.7	
275	10.0 - 30.0% of mass 198	20.2	
365	Greater than 1.00% of mass 198	2.81	
441	Present but less than mass 443	8.2	
442	Greater than 40% of mass 198	50.0	
443	17.0 - 23.0% of mass 442	9.6	19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANK, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050	SSTD050	>D4557	950501	17:51
2	SSTD020	SSTD020	>D4558	950501	19:08
3	SSTD080	SSTD080	>D4559	950501	19:57
4	SSTD120	SSTD120	>D4560	950501	20:46
5	SSTD160	SSTD160	>D4561	950501	21:36

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: LRI

Lab File ID: >D4562

DFTPP Injection Date: 5/01/95

Instrument ID: MSD/D

DFTPP Injection Time: 22:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	41.1	
68	Less than 2.0% of mass 69	0.0	0.0)1
69	(reference only)	50.	
70	Less than 2.0% of mass 69	0.0	0.0)1
127	40.0 - 60.0% of mass 198	47.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.	
199	5.0 - 9.0% of mass 198	6.6	
275	10.0 - 30.0% of mass 198	22.0	
365	Greater than 1.00% of mass 198	2.94	
441	Present but less than mass 443	8.9	
442	Greater than 40% of mass 198	54.0	
443	17.0 - 23.0% of mass 442	10.3	19.1)2

1-Value is % mass 69

2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANK, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050	SSTD050	>D4563	950501	22:51
2	SBLKQM9556T1	SBLKQM9556T1	>D4564	950501	23:41
3	PL-092	T504299-12	>D4566	950502	01:19
4	PL-092 MS	T504299-12MS	>D4567	950502	02:08
5	PL-092 MSD	T504299-12MSD	>D4568	950502	02:58
6	PL-084	T504299-04	>D4569	950502	03:47
7	PL-090	T504299-10	>D4574	950502	07:54
8	PL-091	T504299-11	>D4575	950502	09:46

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: LRI

Lab File ID: >D4577 DFTPP Injection Date: 5/02/95

Instrument ID: MSD/D DFTPP Injection Time: 21:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	58.3	
68	Less than 2.0% of mass 69	0.0	0.0)1
69	(reference only)	76.	
70	Less than 2.0% of mass 69	0.0	0.0)1
127	40.0 - 60.0% of mass 198	45.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.	
199	5.0 - 9.0% of mass 198	7.4	
275	10.0 - 30.0% of mass 198	22.7	
365	Greater than 1.00% of mass 198	2.23	
441	Present but less than mass 443	9.8	
442	Greater than 40% of mass 198	67.8	
443	17.0 - 23.0% of mass 442	12.8	18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANK, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD020	SSTD020	>D4578	950502	21:33
2	SSTD050	SSTD050	>D4579	950502	22:30
3	SSTD080	SSTD080	>D4580	950502	23:20
4	SSTD120	SSTD120	>D4581	950503	00:10
5	SSTD160	SSTD160	>D4582	950503	00:59

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: LRI

Lab File ID: >D4583 DFTPP Injection Date: 5/03/95

rument ID: MSD/D DFTPP Injection Time: 1:42

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	55.1	
68	Less than 2.0% of mass 69	0.0	0.0)1
69	(reference only)	74.	
70	Less than 2.0% of mass 69	0.0	0.0)1
127	40.0 - 60.0% of mass 198	44.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.	
199	5.0 - 9.0% of mass 198	6.5	
275	10.0 - 30.0% of mass 198	19.7	
365	Greater than 1.00% of mass 198	1.84	
441	Present but less than mass 443	6.9	
442	Greater than 40% of mass 198	53.6	
443	17.0 - 23.0% of mass 442	10.3	19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANK, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050	SSTD050	>D4584	950503	02:00
2	PL-094	T504299-14	>D4585	950503	02:49
3	PL-082	T504299-02	>D4587	950503	04:28
4	PL-088	T504299-08	>D4588	950503	05:18
5	PL-093	T504299-13	>D4589	950503	06:07
6	PL-095	T504299-15	>D4590	950503	06:57
7	PL-096	T504299-16	>D4591	950503	07:46
8	PL-085	T504299-05	>D4592	950503	08:36
9	PL-086	T504299-06	>D4593	950503	09:26
10	PL-087	T504299-07	>D4594	950503	10:16
11	PL-083	T504299-03	>D4595	950503	11:06
12	PL-097	T504299-17	>D4596	950503	11:56
13	PL-098	T504299-18	>D4597	950503	12:47

SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: LRI

Lab File ID: >D4598 DFTPP Injection Date: 5/03/95

Instrument ID: MSD/D DFTPP Injection Time: 17:19

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0% of mass 198	45.1	
68	Less than 2.0% of mass 69	0.0	0.0)1
69	(reference only)	47.	
70	Less than 2.0% of mass 69	0.0	0.0)1
127	40.0 - 60.0% of mass 198	40.4	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.	
199	5.0 - 9.0% of mass 198	6.4	
275	10.0 - 30.0% of mass 198	24.9	
365	Greater than 1.00% of mass 198	3.51	
441	Present but less than mass 443	11.4	
442	Greater than 40% of mass 198	68.1	
443	17.0 - 23.0% of mass 442	14.1	20.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANK, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050	SSTD050	>D4599	950503	17:36
2	SSTD020	SSTD020	>D4600	950503	18:33
3	SSTD080	SSTD080	>D4601	950503	19:24
4	SSTD120	SSTD120	>D4602	950503	20:13
5	SSTD160	SSTD160	>D4603	950503	21:03
6	PL-081	T504299-01	>D4606	950503	22:53
7	PL-089	T504299-09	>D4609	950504	01:21

Lab Name: LRI Contract No.:

Lab Sample ID: SBLKQM9556T1 Case No.:

Matrix: SOIL Fraction : BNA

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES,MS, AND MSD:

LAB FILE ID	NJDEP SAMPLE ID	LAB SAMLPE ID	DATE OF ANALYSIS	TIME OF ANALYSIS
>D4606	PL-081	T504299-01	05/03/95	22:53
>D4587	PL-082	T504299-02	05/03/95	04:28
>D4595	PL-083	T504299-03	05/03/95	11:06
>D4569	PL-084	T504299-04	05/02/95	03:47
>D4592	PL-085	T504299-05	05/03/95	08:36
>D4593	PL-086	T504299-06	05/03/95	09:26
>D4594	PL-087	T504299-07	05/03/95	10:16
>D4588	PL-088	T504299-08	05/03/95	05:18
>D4609	PL-089	T504299-09	05/04/95	01:21
>D4574	PL-090	T504299-10	05/02/95	07:54
>D4575	PL-091	T504299-11	05/02/95	09:46
>D4566	PL-092	T504299-12	05/02/95	01:19
>D4589	PL-093	T504299-13	05/03/95	06:07
>D4585	PL-094	T504299-14	05/03/95	02:49
>D4590	PL-095	T504299-15	05/03/95	06:57
>D4591	PL-096	T504299-16	05/03/95	07:46
>D4596	PL-097	T504299-17	05/03/95	11:56
>D4597	PL-098	T504299-18	05/03/95	12:47

COMMENTS:

METHOD BLANK SUMMARY

Lab Name: LRI Contract No.:

Lab Sample ID: SBLKQM9556T1 Case No.:

Matrix: SOIL Fraction : BNA

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES,MS, AND MSD:

LAB FILE ID	NJDEP SAMPLE ID	LAB SAMLPE ID	DATE OF ANALYSIS	TIME OF ANALYSIS
>D4566	PL-092	T504299-12	05/02/95	01:19
>D4567	PL-092 MS	T504299-12MS	05/02/95	02:08
>D4568	PL-092 MSD	T504299-12MSD	05/02/95	02:58

COMMENTS:

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/02/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4558	>D4557	>D4559	>D4560	>D4561					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine		1.18909	1.05734	.79671	.94852	.96367	.267	.99106	14.617		
N-Nitrosodimethylamine		.55433	.57864	.51828	.55021	.51460	.271	.54321	4.929		
2-Fluorophenol	(S)	1.04712	.96625	.95790	.88393	.84099	.635	.93924	8.489		
Aniline		1.99754	1.80806	1.78912	1.73540	1.66401	.918	1.79883	6.913		
Phenol-d5	(S)	1.57314	1.25870	.98053	.86720	.76816	.948	1.08955	29.990		
bis(2-chloroethyl)ether		1.33817	.97317	.77108	.73307	.62295	.947	.88769	31.754		
2-Chlorophenol		1.43514	1.21453	.96121	.84316	.70228	.951	1.03126	28.487		
Phenol		1.58394	1.26195	1.04826	.95573	.81934	.952	1.13385	26.347	*	
1,3-Dichlorobenzene		1.45442	1.37243	1.26756	1.22183	1.09958	.986	1.28317	10.672		
1,4-Dichlorobenzene		1.48164	1.32826	1.27692	1.09779	1.03854	1.005	1.24463	14.386	*	
1,2-Dichlorobenzene		1.44184	1.28903	1.18668	1.04038	.92915	1.065	1.17742	17.138		
Benzyl alcohol		.99132	.86950	.84238	.88502	.85639	1.079	.88892	6.679		
2,2'-oxybis(1-Chloropropane)		2.19011	2.20886	2.12929	2.07055	1.93089	1.128	2.10594	5.315		
2-Methylphenol		1.38344	1.27299	1.18958	1.11605	1.04138	1.141	1.20069	11.119		
Hexachloroethane		.76031	.68825	.61584	.57074	.51268	1.165	.62956	15.451		
N-Nitroso-di-n-propylamine		1.25364	1.06306	.69850	.66317	1.05160	1.180	.94599	26.989		**
3&4-Methylphenol		1.53683	1.29637	1.15357	1.03216	.92818	1.199	1.18942	20.001		(Conc=40.0,100.0,160.0
Nitrobenzene-d5	(S)	.30946	.29487	.27244	.26242	.25050	.836	.27794	8.635		
Nitrobenzene		.31307	.28961	.24342	.19467	.17638	.840	.24343	24.177		
Isophorone		.72194	.68724	.67004	.71736	.74268	.901	.70785	4.092		
2-Nitrophenol		.20763	.21658	.20854	.20513	.22458	.918	.21249	3.767	*	
2,4-Dimethylphenol		.31802	.29896	.28495	.29246	.29504	.952	.29789	4.149		
bis(2-Chloroethoxy)methane		.47669	.42461	.42941	.42729	.45507	.968	.44261	5.114		
2,4-Dichlorophenol		.34069	.32763	.30771	.30591	.31585	.983	.31956	4.567	*	
1,2,4-Trichlorobenzene		.31338	.30525	.30164	.29597	.30038	.994	.30332	2.151		
Benzoic acid		.17982	.19607	.20852	.22691	.23648	1.011	.20956	10.917		
Naphthalene		1.07449	.91558	.83682	.86521	.82824	1.005	.90407	11.193		
4-Chloroaniline		.54984	.49196	.48875	.48377	.48624	1.038	.50011	5.592		
Hexachlorobutadiene		.17421	.17214	.17296	.16987	.17201	1.057	.17224	.922	*	
4-Chloro-3-methylphenol		.44157	.37485	.32916	.31985	.32973	1.183	.35903	14.167	*	

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/02/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Compound	Laboratory ID: >D4558 RF 20.00	>D4557 RF 50.00	>D4559 RF 80.00	>D4560 RF 120.00	>D4561 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene	1.06349	.90059	.77533	.75217	.75239	1.181	.84880	15.894		
Hexachlorocyclopentadiene	.15656	.20689	.31600	.36329	.46621	.855	.30179	40.958		**
2,4,6-Trichlorophenol	.37273	.36480	.48907	.56144	.46012	.877	.44963	18.366	*	
2,4,5-Trichlorophenol	.40640	.38711	.41446	.31346	.28968	.885	.36222	15.702		
2-Fluorobiphenyl (S)	1.06036	.95423	.88060	.84580	.83671	.889	.91554	10.183		
2-Chloronaphthalene	1.05710	1.00052	1.24792	1.34677	.65835	.899	1.06213	25.016		
2-Nitroaniline	.49667	.44143	.41256	.39378	.37499	.933	.42388	11.209		
Acenaphthylene	1.99093	1.80701	2.14875	2.26244	2.76121	.972	2.19407	16.425		
Dimethylphthalate	1.52318	1.24402	1.30776	1.31572	1.31553	.976	1.34124	7.907		
2,4-Dinitrotoluene	.64602	.62082	.62800	.62252	.64673	1.055	.63282	2.000		
Acenaphthene	1.01076	.86271	1.07733	1.15759	1.43299	1.006	1.10828	19.068	*	
3-Nitroaniline	.42614	.36718	.37375	.38842	.41334	1.009	.39376	6.434		
2,4-Dinitrophenol	.12611	.21378	.25946	.30587	.31729	1.028	.24450	31.844		**
Dibenzofuran	1.85895	1.56218	1.53524	1.39908	1.43979	1.035	1.55905	11.578		
2,6-Dinitrotoluene	.42411	.38328	.38308	.36416	.40897	.987	.39272	6.035		
4-Nitrophenol	.40668	.40898	.41723	.41981	.42704	1.059	.41595	1.990		**
Fluorene	1.51128	1.27458	1.19065	1.06930	1.05469	1.096	1.22010	15.263		
Chlorophenyl-phenylether	.66467	.57697	.57143	.56296	.58616	1.103	.59244	6.963		
ethylphthalate	1.69843	1.36134	1.32613	1.28523	1.34579	1.105	1.40339	11.927		
4-Nitroaniline	.57174	.52874	.56341	.53987	.58745	1.122	.55824	4.267		
2,4,6-Tribromophenol (S)	.24658	.24355	.26014	.25660	.28168	1.145	.25771	5.840		
4,6-Dinitro-2-methylphenol	.16681	.19452	.18656	.14933	.13441	.895	.16633	15.068		
N-Nitrosodiphenylamine (1)	.56270	.47265	.37275	.33047	.29436	.897	.40659	27.018	*	
Azobenzene	.89593	.77374	.74543	.67955	.74134	.898	.76720	10.395		
4-Bromophenyl-phenylether	.23603	.22933	.21303	.19315	.18268	.943	.21084	10.834		
Hexachlorobenzene	.30434	.28803	.27438	.24863	.23458	.959	.26999	10.533		
Pentachlorophenol	.14727	.18049	.18924	.17726	.17250	.990	.17335	9.120	*	
Phenanthrene	1.20560	1.10907	1.01766	.90866	.86100	1.004	1.02040	13.865		
Anthracene	1.28561	1.15112	1.04752	.93117	.90460	1.010	1.06400	14.862		
Carbazole	1.39435	1.23055	1.09602	.97046	.91089	1.040	1.12045	17.521		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

HSL Compounds

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/02/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4558	>D4557	>D4559	>D4560	>D4561					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Di-n-butylphthalate		2.28880	1.98693	1.68422	1.44335	1.35310	1.108	1.75128	22.158		
Fluoranthene		1.75181	1.60547	1.40695	1.25448	1.26620	1.173	1.45698	14.914	*	
Benzidine		.53562	.46539	.42138	.36591	.32985	.871	.42363	19.183		
Pyrene		1.40016	1.22018	1.05940	.94974	.85028	.872	1.09595	19.941		
Terphenyl-d14	(S)	.89402	.77448	.68481	.63596	.58346	.896	.71455	17.147		
Butylbenzylphthalate		1.06232	.91224	.76147	.65466	.61102	.956	.80034	23.353		
Benzo(a)anthracene		1.55486	1.39000	1.22840	1.12914	1.07804	.998	1.27609	15.365		
3,3'-Dichlorobenzidine		.50824	.42922	.38383	.34574	.31869	1.003	.39714	18.820		
Chrysene		1.22548	1.07534	.94940	.80965	.78195	1.003	.96836	19.171		
bis(2-Ethylhexyl)phthalate		1.59912	1.35519	1.07966	.93088	.82717	1.020	1.15840	27.321		
Di-n-octylphthalate		2.05333	1.68925	1.30139	1.12909	1.10409	.950	1.45543	28.032	*	
Benzo(b)fluoranthene		1.27167	1.04206	1.12796	1.02962	1.01949	.971	1.09816	9.662		
Benzo(k)fluoranthene		.88053	.90694	.66156	.62599	.53816	.973	.72264	22.527		
Benzo(a)pyrene		1.07762	.99863	.90863	.83536	.80544	.996	.92514	12.243	*	
Indeno(1,2,3-cd)pyrene		1.28183	1.22436	1.14255	1.08038	1.02978	1.081	1.15178	8.923		
Dibenz(a,h)anthracene		1.00954	.92832	.84321	.75503	.72746	1.083	.85271	13.830		
Benzo(g,h,i)perylene		1.09587	1.04879	.97834	.94781	.91588	1.103	.99734	7.403		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/03/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4578	>D4579	>D4580	>D4581	>D4582					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine		1.37914	1.25291	1.12339	1.04514	1.21035	.245	1.20218	10.589		
N-Nitrosodimethylamine		.92035	.95275	.76665	.87067	.86882	.248	.87585	8.052		
2-Fluorophenol	(S)	1.15256	1.08896	1.02084	.96380	.90651	.611	1.02653	9.514		
Aniline		2.46850	2.30134	2.06809	2.09934	1.91700	.913	2.17086	9.926		
Phenol-d5	(S)	1.71684	1.44109	1.19185	1.10783	.97843	.946	1.28721	22.812		
bis(2-chloroethyl)ether		1.43452	1.25260	.99964	.89718	.78929	.945	1.07464	24.608		
2-Chlorophenol		1.28980	1.09520	.88149	.81015	.71245	.947	.95782	24.313		
Phenol		1.85538	1.62927	1.37894	1.33306	1.15654	.950	1.47064	18.597	*	
1,3-Dichlorobenzene		1.57059	1.52428	1.29276	1.19536	1.07361	.985	1.33132	15.972		
1,4-Dichlorobenzene		1.52505	1.42507	1.20610	1.16207	1.01834	1.007	1.26733	16.177	*	
1,2-Dichlorobenzene		1.52452	1.42285	1.19085	1.07532	.93054	1.070	1.22882	19.895		
Benzyl alcohol		1.05161	1.00017	.87010	.86485	.85515	1.084	.92837	9.804		
2,2'-oxybis(1-Chloropropane)		2.82474	2.79413	2.49017	2.41005	2.28028	1.138	2.55987	9.378		
2-Methylphenol		1.46820	1.40023	1.19297	1.13008	1.03529	1.153	1.24535	14.687		
Hexachloroethane		.75894	.70580	.59746	.57273	.52372	1.175	.63173	15.427		
N-Nitroso-di-n-propylamine		1.52592	1.47499	1.34303	1.41106	1.30732	1.195	1.41246	6.397		**
3&4-Methylphenol		1.54884	1.40280	1.16252	1.07512	.91592	1.214	1.22104	20.812		(Conc=40.0,100.0,160.0
Nitrobenzene-d5	(S)	.45987	.41983	.38908	.37345	.35780	.829	.40001	10.142		
Nitrobenzene		.46771	.43190	.41278	.39630	.33524	.833	.40878	11.976		
Isophorone		1.11262	.98571	.99689	1.00028	1.03590	.897	1.02628	5.047		
2-Nitrophenol		.25629	.24566	.22978	.22389	.22457	.915	.23604	6.069	*	
2,4-Dimethylphenol		.34642	.31775	.30450	.30247	.29736	.952	.31370	6.305		
bis(2-Chloroethoxy)methane		.65939	.59288	.58402	.61583	.61760	.970	.61394	4.764		
2,4-Dichlorophenol		.41474	.36463	.34214	.33350	.33824	.983	.35865	9.356	*	
1,2,4-Trichlorobenzene		.35659	.32967	.30998	.30734	.30300	.994	.32132	6.913		
Benzoic acid		-	.12540	.20250	.24753	.25758	1.029	.20825	28.910		
Naphthalene		1.16800	.99182	.91675	.87888	.84773	1.005	.96064	13.304		
4-Chloroaniline		.66157	.54505	.50997	.49957	.48992	1.041	.54122	13.013		
Hexachlorobutadiene		.19959	.18173	.16422	.16378	.16029	1.060	.17392	9.547	*	
4-Chloro-3-methylphenol		.49750	.44915	.40881	.40371	.38974	1.191	.42978	10.198	*	

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

HSL Compounds

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/03/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4578	>D4579	>D4580	>D4581	>D4582					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene		1.30432	1.09784	.96767	.92578	.88209	1.189	1.03554	16.468		
Hexachlorocyclopentadiene		.07577	.14182	.17924	.26408	.28595	.853	.18937	45.868		**
2,4,6-Trichlorophenol		.41463	.38937	.36450	.52818	.53839	.875	.44701	18.076	*	
2,4,5-Trichlorophenol		.18333	.16969	.25769	.26053	.25783	.883	.22581	20.051		
2-Fluorobiphenyl	(S)	1.17070	.97266	.92349	.87603	.81702	.887	.95198	14.197		
2-Chloronaphthalene		1.16983	1.00357	.93228	1.21035	1.22427	.896	1.10806	11.905		
2-Nitroaniline		.63026	.57947	.57050	.50710	.49379	.932	.55622	10.065		
Acenaphthylene		2.16314	1.82893	1.66765	2.17861	1.35179	.971	1.83802	18.988		
Dimethylphthalate		1.60884	1.38384	1.18923	1.25550	1.22522	.978	1.33253	12.833		
2,4-Dinitrotoluene		.63565	.61185	.56413	.58478	.53906	1.058	.58709	6.492		
Acenaphthene		1.11388	.90222	.84358	1.09719	1.07424	1.006	1.00622	12.349	*	
3-Nitroaniline		.44518	.41138	.36851	.37887	.38633	1.010	.39805	7.720		
2,4-Dinitrophenol		.10528	.21289	.25486	.23320	.23679	1.034	.20860	28.596		**
Dibenzofuran		1.92693	1.60332	1.33965	1.45689	1.35986	1.037	1.53733	15.706		
2,6-Dinitrotoluene		.41323	.39605	.33229	.30335	.34233	.988	.35745	12.812		
4-Nitrophenol		.27221	.37316	.40411	.51682	.33286	1.061	.37983	23.981		**
Fluorene		1.52788	1.26628	1.01873	1.01782	.97482	1.099	1.16110	20.248		
Chlorophenyl-phenylether		.69487	.60029	.50556	.52515	.69812	1.108	.60480	15.026		
ethylphthalate		1.83920	1.59788	1.47447	1.93521	1.84913	1.110	1.73918	11.155		
4-Nitroaniline		.54532	.52122	.46972	.66742	.66213	1.126	.57316	15.352		
2,4,6-Tribromophenol	(S)	.21460	.20476	.21613	.19508	.27319	1.150	.22075	13.821		
4,6-Dinitro-2-methylphenol		.14182	.17830	.17945	.14260	.10998	.894	.15043	19.355		
N-Nitrosodiphenylamine (1)		.60758	.45042	.42585	.49502	.50258	.896	.49629	14.066	*	
Azobenzene		1.22535	1.08491	1.01017	.80146	.75897	.897	.97617	20.020		
4-Bromophenyl-phenylether		.23579	.21368	.18929	.18492	.17961	.943	.20066	11.751		
Hexachlorobenzene		.29080	.26854	.24364	.23148	.22419	.959	.25173	10.957		
Pentachlorophenol		.14876	.18127	.14988	.13263	.13895	.994	.15030	12.459	*	
Phenanthrene		1.32167	1.14118	1.09324	1.37460	1.43059	1.004	1.27226	11.606		
Anthracene		1.37644	1.14340	.97063	1.02314	.65808	1.010	1.03434	25.335		
Carbazole		1.36670	1.19311	1.01778	.99064	.98598	1.041	1.11084	14.991		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

Case No:

Instrument ID: D

Contractor: LRI

Calibration Date: 05/03/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % RSD for CCC is 30%

Compound		Laboratory ID: >D4578 RF 20.00	>D4579 RF 50.00	>D4580 RF 80.00	>D4581 RF 120.00	>D4582 RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Di-n-butylphthalate		2.16228	1.92444	1.75932	1.99982	1.97699	1.113	1.96457	7.386		
Fluoranthene		1.57911	1.39719	1.21237	1.21043	1.17271	1.176	1.31436	13.080	*	
Benzidine		.55127	.47656	.40042	.34852	.33599	.869	.42255	21.478		
Pyrene		1.53000	1.29227	1.12619	1.00870	.97397	.870	1.18623	19.297		
Terphenyl-d14	(S)	.92208	.79564	.72954	.67056	.66004	.896	.75557	14.249		
Butylbenzylphthalate		1.09766	.98407	.90152	.84567	.82715	.957	.93122	11.949		
Benzo(a)anthracene		1.50267	1.33772	1.19932	1.11796	1.04497	.998	1.24053	14.706		
3,3'-Dichlorobenzidine		.52679	.44049	.38179	.30194	.27155	1.004	.38451	26.953		
Chrysene		1.26703	1.05975	.87126	.76701	.72053	1.003	.93712	24.102		
bis(2-Ethylhexyl)phthalate		1.59220	1.37858	1.22458	1.20346	1.05243	1.024	1.29025	15.854		
Di-n-octylphthalate		2.01003	1.73301	1.52894	1.32916	1.20130	.953	1.56049	20.650	*	
Benzo(b)fluoranthene		1.21946	1.00967	1.11836	1.13715	.97488	.971	1.09190	9.098		
Benzo(k)fluoranthene		.95655	.93726	.68478	.59435	.56141	.973	.74687	25.203		
Benzo(a)pyrene		1.07415	1.01973	.92361	.85962	.80578	.996	.93658	11.823	*	
Indeno(1,2,3-cd)pyrene		1.30176	1.21492	1.14404	1.12018	1.03868	1.079	1.16392	8.548		
Dibenz(a,h)anthracene		1.08094	.94994	.82345	.75740	.67583	1.081	.85751	18.682		
Benzo(g,h,i)perylene		1.10956	1.04941	.98024	.95889	.91210	1.098	1.00204	7.767		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/04/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:	>D4600	>D4599	>D4601	>D4602	>D4603					
Compound	RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Di-n-butylphthalate	1.89786	1.60544	1.36231	1.19198	1.24940	1.116	1.46140	19.909		
Fluoranthene	1.72309	1.49770	1.28780	1.16167	1.18406	1.179	1.37087	17.328	*	
Benzidine	.48800	.36533	.33569	.28065	.27042	.869	.34802	25.135		
Pyrene	1.34052	1.09377	.99005	.93912	.98320	.869	1.06933	15.137		
Terphenyl-d14 (S)	.91547	.78080	.72047	.66703	.69181	.895	.75512	13.133		
Butylbenzylphthalate	.81027	.67659	.63927	.59906	.61002	.958	.66704	12.820		
Benzo(a)anthracene	1.48808	1.34591	1.25246	1.16726	1.19605	.998	1.28995	10.083		
3,3'-Dichlorobenzidine	.44069	.48664	.43345	.37042	.29441	1.004	.40512	18.379		
Chrysene	1.28105	1.06068	.88623	.74461	.68371	1.003	.93126	26.152		
bis(2-Ethylhexyl)phthalate	1.16845	.93222	.84535	.79017	.78084	1.026	.90340	17.702		
Di-n-octylphthalate	1.46234	1.16882	.99962	.86313	.85056	.954	1.06889	23.833	*	
Benzo(b)fluoranthene	1.13649	1.05653	.99426	1.01518	.96377	.971	1.03325	6.470		
Benzo(k)fluoranthene	1.01202	.88194	.71185	.57664	.50652	.973	.73779	28.440		
Benzo(a)pyrene	1.04310	.98941	.88321	.83844	.78523	.996	.90788	11.735	*	
Indeno(1,2,3-cd)pyrene	1.21539	1.16037	1.08378	1.07842	1.04959	1.079	1.11751	6.118		
Dibenz(a,h)anthracene	.97014	.87883	.77691	.75385	.68006	1.081	.81196	13.974		
Benzo(g,h,i)perylene	.99816	.97528	.91969	.88417	.88865	1.097	.93319	5.507		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

HSL Compounds

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/04/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4600	>D4599	>D4601	>D4602	>D4603					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
Pyridine		1.26587	1.11320	1.17930	1.13774	1.18809	.236	1.17684	4.962		
N-Nitrosodimethylamine		.64624	.64813	.68851	.70706	.67436	.239	.67286	3.888		
2-Fluorophenol	(S)	.97763	.93503	.93706	.87999	.89906	.598	.92575	4.082		
Aniline		1.93452	1.96945	1.89787	1.78116	1.85562	.912	1.88772	3.871		
Phenol-d5	(S)	1.54646	1.29559	1.14598	.99563	.99371	.949	1.19547	19.452		
bis(2-chloroethyl)ether		1.34263	1.01288	.84845	.71231	.73303	.945	.92986	27.939		
2-Chlorophenol		1.35051	1.13784	.97538	.84050	.80081	.947	1.02101	22.193		
Phenol		1.60717	1.45275	1.34290	1.27239	1.24850	.954	1.38474	10.652	*	
1,3-Dichlorobenzene		1.43898	1.33069	1.13219	.96954	.94226	1.071	1.16273	18.812		
1,4-Dichlorobenzene		1.43898	1.33069	1.13219	.96954	.94226	1.071	1.16273	18.812	*	
1,2-Dichlorobenzene		1.43898	1.33069	1.13219	.96954	.94226	1.071	1.16273	18.812		
Benzyl alcohol		.93940	.94348	.92532	.88795	.89311	1.092	.91785	2.822		
2,2'-oxybis(1-Chloropropane)		2.95840	2.97530	2.72173	2.47128	2.48923	1.145	2.72319	8.940		
2-Methylphenol		1.38101	1.33701	1.25358	1.08524	1.09632	1.163	1.23063	11.025		
Hexachloroethane		.75364	.69899	.66447	.56334	.55480	1.181	.64705	13.357		
N-Nitroso-di-n-propylamine		1.41440	1.11280	1.04959	.97337	1.48427	1.204	1.20689	18.900		**
3&4-Methylphenol		1.48137	1.23114	1.04633	.90669	.87556	1.228	1.10822	22.690		(Conc=40.0,100.0,160.0
Nitrobenzene-d5	(S)	.30487	.26447	.24097	.22882	.23579	.825	.25498	12.132		
Nitrobenzene		.40406	.28335	.47905	.46315	.46503	.830	.41893	19.355		
Isophorone		.75899	.72903	.72260	.74757	.80245	.896	.75213	4.207		
2-Nitrophenol		.20903	.20616	.20604	.18327	.19389	.913	.19968	5.445	*	
2,4-Dimethylphenol		.31427	.30223	.27307	.26139	.28196	.955	.28658	7.504		
bis(2-Chloroethoxy)methane		.48933	.45517	.43270	.39949	.48174	.971	.45169	8.148		
2,4-Dichlorophenol		.27154	.32886	.28622	.26816	.28052	.985	.28706	8.513	*	
1,2,4-Trichlorobenzene		.37638	.35607	.32472	.30546	.30551	.994	.33363	9.473		
Benzoic acid		-	.14032	.15540	.21216	.27666	1.044	.19613	31.589		
Naphthalene		1.08735	.98706	.88238	.79638	.83456	1.005	.91755	12.950		
4-Chloroaniline		.59022	.53408	.43016	.41033	.44908	1.043	.48278	15.819		
Hexachlorobutadiene		.24198	.24507	.21862	.19980	.20027	1.062	.22115	9.866	*	
4-Chloro-3-methylphenol		.46014	.43256	.38915	.35543	.36721	1.199	.40090	11.052	*	

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

Case No: Instrument ID: D

Contractor: LRI Calibration Date: 05/04/95

Contract No:

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % RSD for CCC is 30%

Laboratory ID:		>D4600	>D4599	>D4601	>D4602	>D4603					
Compound		RF 20.00	RF 50.00	RF 80.00	RF 120.00	RF 160.00	$\overline{RRT}$	$\overline{RF}$	% RSD	CCC	SPCC
2-Methylnaphthalene		.78134	.74506	.64712	.51081	.63973	1.193	.66481	15.897		
Hexachlorocyclopentadiene		.06798	.20034	.20313	.22243	.22883	.851	.18454	35.923		**
2,4,6-Trichlorophenol		.39766	.47606	.39404	.34025	.34472	.875	.39055	14.027	*	
2,4,5-Trichlorophenol		.39766	.41601	.37630	.40126	.36107	.881	.39046	5.561		
2-Fluorobiphenyl	(S)	1.24760	.93134	.88589	.78570	.78426	.886	.92696	20.528		
2-Chloronaphthalene		1.11239	1.02043	.83960	.74885	.77535	.895	.89932	17.725		
2-Nitroaniline		.50751	.51495	.45694	.44931	.44911	.932	.47556	6.900		
Acenaphthylene		2.10585	1.80501	1.45258	1.22531	1.30422	.970	1.57859	23.388		
Dimethylphthalate		1.64852	1.47768	1.28346	1.21630	1.23582	.980	1.37236	13.547		
2,4-Dinitrotoluene		.65540	.65906	.56798	.51514	.44488	1.060	.56849	16.190		
Acenaphthene		1.04994	.94814	.73504	.64586	.65324	1.006	.80644	22.673	*	
3-Nitroaniline		.41086	.40865	.37062	.33065	.32775	1.011	.36971	10.900		
2,4-Dinitrophenol		-	.10420	.12591	.17306	.17957	1.033	.14569	25.093		**
Dibenzofuran		2.10244	1.67253	1.39618	1.18298	1.22429	1.037	1.51568	25.097		
2,6-Dinitrotoluene		.39935	.38957	.32826	.31219	.27278	.989	.34043	15.687		
4-Nitrophenol		.16207	.27135	.29249	.30285	.30664	1.068	.26708	22.570		**
Fluorene		1.57525	1.29791	1.04919	.93537	.92002	1.101	1.15555	24.157		
4-Chlorophenyl-phenylether		.89455	.77585	.62652	.56965	.52226	1.110	.67777	22.751		
Diethylphthalate		1.83412	1.61617	1.30262	1.14269	1.13137	1.115	1.40539	22.015		
4-Nitroaniline		.53758	.49022	.41684	.41906	.34129	1.130	.44100	17.104		
2,4,6-Tribromophenol	(S)	.28985	.41343	.31708	.27655	.26433	1.154	.31225	19.170		
4,6-Dinitro-2-methylphenol		.12317	.18553	.15464	.12189	.10171	.895	.13739	23.950		
N-Nitrosodiphenylamine (1)		.51259	.40119	.31383	.29872	.30310	.896	.36588	25.173	*	
Azobenzene		.83140	.67624	.57824	.52844	.51979	.895	.62682	20.768		
4-Bromophenyl-phenylether		.29094	.27396	.24215	.22146	.21826	.942	.24935	12.889		
Hexachlorobenzene		.36318	.34043	.30933	.28315	.26932	.958	.31308	12.456		
Pentachlorophenol		.12723	.21427	.17484	.13571	.16063	1.012	.16254	21.307	*	
Phenanthrene		1.18431	1.07196	.95808	.84649	.98031	1.004	1.00823	12.597		
Anthracene		1.25081	1.06252	.84561	.85470	.85408	1.011	.97354	18.486		
Carbazole		1.23855	1.02984	.94449	.84249	.86831	1.042	.98473	16.206		

RF - Response Factor (Subscript is amount in NG)

$\overline{RRT}$ - 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 (**)

HSL Compounds

Case No: Calibration Date: 05/01/95

Contractor: LRI Time: 22:51

Contract No: Laboratory ID: >04563

Instrument ID: D Initial Calibration Date: 05/02/95

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC	
Pyridine		.99106	.62140	37.30			
N-Nitrosodimethylamine		.54321	.59944	10.35			
2-Fluorophenol	(S)	.93924	.94894	1.03			
Aniline		1.79883	1.88675	4.89			(Conc=50.00)
Phenol-d5	(S)	1.08955	1.22024	12.00			
bis(2-chloroethyl)ether		.88769	1.00404	13.11			
2-Chlorophenol		1.03126	1.12620	9.21			
Phenol		1.13385	1.27390	12.35	*		
1,3-Dichlorobenzene		1.28317	1.33953	4.39			
1,4-Dichlorobenzene		1.24463	1.30162	4.58	*		
1,2-Dichlorobenzene		1.17742	1.28940	9.51			
Benzyl alcohol		.88892	.88634	.29			
2,2'-oxybis(1-Chloropropane)		2.10594	2.22806	5.80			
2-Methylphenol		1.20069	1.23818	3.12			
Hexachloroethane		.62956	.70228	11.55			
N-Nitroso-di-n-propylamine		.94599	1.16475	23.12		**	
3&4-Methylphenol		1.18942	1.39283	17.10			(Conc=100.00)
Nitrobenzene-d5	(S)	.27794	.29536	6.27			
Nitrobenzene		.24343	.31573	29.70			
Isophorone		.70785	.71739	1.35			
2-Nitrophenol		.21249	.22343	5.15	*		
2,4-Dimethylphenol		.29789	.30377	1.98			
bis(2-Chloroethoxy)methane		.44261	.46655	5.41			
2,4-Dichlorophenol		.31956	.32991	3.24	*		
1,2,4-Trichlorobenzene		.30332	.31327	3.28			
Benzoic acid		.20956	.22046	5.20			
Naphthalene		.90407	.96050	6.24			
4-Chloroaniline		.50011	.51612	3.20			
Hexachlorobutadiene		.17224	.18049	4.79	*		
4-Chloro-3-methylphenol		.35903	.37718	5.05	*		
2-Methylnaphthalene		.84880	.91907	8.28			
Hexachlorocyclopentadiene		.30179	.21564	28.55		**	

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

Case No:

Calibration Date: 05/01/95

Contractor: LRI

Time: 22:51

Contract No:

Laboratory ID: >D4563

Instrument ID: D

Initial Calibration Date: 05/02/95

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol		.44963	.40098	10.82	*	
2,4,5-Trichlorophenol		.36222	.41088	13.43		
2-Fluorobiphenyl	(S)	.91554	1.05530	15.27		
2-Chloronaphthalene		1.06213	1.04832	1.30		
2-Nitroaniline		.42388	.44591	5.20		
Acenaphthylene		2.19407	1.95340	10.97		
Dimethylphthalate		1.34124	1.36953	2.11		
2,4-Dinitrotoluene		.63282	.63572	.46		
Acenaphthene		1.10828	.91949	17.03	*	
3-Nitroaniline		.39376	.37834	3.92		
2,4-Dinitrophenol		.24450	.27070	10.72		**
Dibenzofuran		1.55905	1.65073	5.88		
2,6-Dinitrotoluene		.39272	.40555	3.27		
4-Nitrophenol		.41595	.43717	5.10		**
Fluorene		1.22010	1.30652	7.08		
4-Chlorophenyl-phenylether		.59244	.59155	.15		
Diethylphthalate		1.40339	1.35110	3.73		
4-Nitroaniline		.55824	.52276	6.36		
2,4,6-Tribromophenol	(S)	.25771	.27804	7.89		
4,6-Dinitro-2-methylphenol		.16633	.18648	12.11		
N-Nitrosodiphenylamine (1)		.40659	.43202	6.26	*	
Azobenzene		.76720	.73928	3.64		
4-Bromophenyl-phenylether		.21084	.23361	10.80		
Hexachlorobenzene		.26999	.28600	5.93		
Pentachlorophenol		.17335	.17437	.59	*	
Phenanthrene		1.02040	1.02653	.60		
Anthracene		1.06400	1.07339	.88		
Carbazole		1.12045	1.13347	1.16		
Di-n-butylphthalate		1.75128	1.88653	7.72		
Fluoranthene		1.45698	1.44743	.66	*	
Benzidine		.42363	.40500	4.40		
Pyrene		1.09595	1.26378	15.31		

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

Case No: Calibration Date: 05/01/95

Contractor: LRI Time: 22:51

Contract No: Laboratory ID: >D4563

Instrument ID: D Initial Calibration Date: 05/02/95

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14	(S)	.71455	.79823	11.71		
Butylbenzylphthalate		.80034	.88303	10.33		
Benzo(a)anthracene		1.27609	1.42359	11.56		
3,3'-Dichlorobenzidine		.39714	.43243	8.89		
Chrysene		.96836	1.05509	8.96		
bis(2-Ethylhexyl)phthalate		1.15840	1.30883	12.99		
Di-n-octylphthalate		1.45543	1.62111	11.38	*	
Benzo(b)fluoranthene		1.09816	1.14273	4.06		
Benzo(k)fluoranthene		.72264	.80640	11.59		
Benzo(a)pyrene		.92514	1.01608	9.83	*	
Indeno(1,2,3-cd)pyrene		1.15178	1.24561	8.15		
Dibenz(a,h)anthracene		.85271	.94059	10.31		
Benzo(g,h,i)perylene		.99734	1.08466	8.76		

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

Case No: Calibration Date: 05/03/95

Contractor: LRI Time: 02:00

Contract No: Laboratory ID: >D4584

Instrument ID: D Initial Calibration Date: 05/03/95

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC	
Pyridine		1.20218	1.21848	1.36			
N-Nitrosodimethylamine		.87585	.95171	8.66			
2-Fluorophenol	(S)	1.02653	1.09440	6.61			
Aniline		2.17086	2.30183	6.03			(Conc=50.00)
Phenol-d5	(S)	1.28721	1.41686	10.07			
bis(2-chloroethyl)ether		1.07464	1.18237	10.02			
2-Chlorophenol		.95782	1.05775	10.43			
Phenol		1.47064	1.59940	8.76	*		
1,3-Dichlorobenzene		1.33132	1.44686	8.68			
1,4-Dichlorobenzene		1.26733	1.39894	10.39	*		
1,2-Dichlorobenzene		1.22882	1.34052	9.09			
Benzyl alcohol		.92837	.92720	.13			
2,2'-oxybis(1-Chloropropane)		2.55987	2.78169	8.67			
2-Methylphenol		1.24535	1.29423	3.92			
Hexachloroethane		.63173	.69117	9.41			
N-Nitroso-di-n-propylamine		1.41246	1.43393	1.52		**	
3&4-Methylphenol		1.22104	1.33156	9.05			(Conc=100.00)
trobenzene-d5	(S)	.40001	.44185	10.46			
trobenzene		.40878	.44076	7.82			
Isophorone		1.02628	1.02448	.18			
2-Nitrophenol		.23604	.24407	3.40	*		
2,4-Dimethylphenol		.31370	.32242	2.78			
bis(2-Chloroethoxy)methane		.61394	.62873	2.41			
2,4-Dichlorophenol		.35865	.36511	1.80	*		
1,2,4-Trichlorobenzene		.32132	.35221	9.62			
Benzoic acid		.20825	.17813	14.46			
Naphthalene		.96064	1.02633	6.84			
4-Chloroaniline		.54122	.55787	3.08			
Hexachlorobutadiene		.17392	.18872	8.51	*		
4-Chloro-3-methylphenol		.42978	.44809	4.26	*		
2-Methylnaphthalene		1.03554	1.08204	4.49			
Hexachlorocyclopentadiene		.18937	.16666	11.99		**	

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

NES 00103

Case No:

Calibration Date: 05/03/95

Contractor: LRI

Time: 02:00

Contract No:

Laboratory ID: >D4584

Instrument ID: D

Initial Calibration Date: 05/03/95

Minimum $\overline{RF}$ for SPCC is 0.05

Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
2,4,6-Trichlorophenol		.44701	.40422	9.57	*	
2,4,5-Trichlorophenol		.22581	.20622	8.68		
2-Fluorobiphenyl	(S)	.95198	.99210	4.21		
2-Chloronaphthalene		1.10806	1.00781	9.05		
2-Nitroaniline		.55622	.60100	8.05		
Acenaphthylene		1.83802	1.85207	.76		
Dimethylphthalate		1.33253	1.37238	2.99		
2,4-Dinitrotoluene		.58709	.60997	3.90		
Acenaphthene		1.00622	.90253	10.31	*	
3-Nitroaniline		.39805	.42060	5.67		
2,4-Dinitrophenol		.20860	.17889	14.24		**
Dibenzofuran		1.53733	1.64670	7.11		
2,6-Dinitrotoluene		.35745	.39341	10.06		
4-Nitrophenol		.37983	.40614	6.93		**
Fluorene		1.16110	1.25692	8.25		
4-Chlorophenyl-phenylether		.60480	.60741	.43		
Diethylphthalate		1.73918	1.58552	8.84		
4-Nitroaniline		.57316	.52512	8.38		
2,4,6-Tribromophenol	(S)	.22075	.23239	5.27		
4,6-Dinitro-2-methylphenol		.15043	.19663	30.71		
N-Nitrosodiphenylamine (1)		.49629	.43481	12.39	*	
Azobenzene		.97617	1.04396	6.94		
4-Bromophenyl-phenylether		.20066	.22461	11.94		
Hexachlorobenzene		.25173	.27499	9.24		
Pentachlorophenol		.15030	.14341	4.58	*	
Phenanthrene		1.27226	1.06954	15.93		
Anthracene		1.03434	1.11429	7.73		
Carbazole		1.11084	1.17221	5.52		
Di-n-butylphthalate		1.96457	1.91284	2.63		
Fluoranthene		1.31436	1.37273	4.44	*	
Benzidine		.42255	.43998	4.12		
Pyrene		1.18623	1.29344	9.04		

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

Case No:

Calibration Date: 05/03/95

Contractor: LRI

Time: 02:00

Contract No:

Laboratory ID: >04584

Instrument ID: D

Initial Calibration Date: 05/03/95

Minimum $\overline{RF}$ for SPCC is 0.05 Maximum % Diff for CCC is 25%

Compound		$\overline{RF}$	RF	%Diff	CCC	SPCC
Terphenyl-d14	(S)	.75557	.84372	11.67		
Butylbenzylphthalate		.93122	.96943	4.10		
Benzo(a)anthracene		1.24053	1.35882	9.54		
3,3'-Dichlorobenzidine		.38451	.43824	13.97		
Chrysene		.93712	1.02886	9.79		
bis(2-Ethylhexyl)phthalate		1.29025	1.35067	4.68		
Di-n-octylphthalate		1.56049	1.77349	13.65	*	
Benzo(b)fluoranthene		1.09190	1.12487	3.02		
Benzo(k)fluoranthene		.74687	.90456	21.11		
Benzo(a)pyrene		.93658	1.03140	10.12	*	
Indeno(1,2,3-cd)pyrene		1.16392	1.25426	7.76		
Dibenz(a,h)anthracene		.85751	.93317	8.82		
Benzo(g,h,i)perylene		1.00204	1.07374	7.16		

RF - Response Factor from daily standard file at 50.00 NG

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

%Diff - % Difference from original average or curve

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

SEMIVOLATILE SURROGATE RECOVERY DATA SHEET

Lab Name: LRI Contract No.

Case Number:

Matrix: Soil Level: LOW

	CLIENT SAMPLE NUMBER	LAB SAMPLE NUMBER	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
1	PL-081	T504299-01	79	73	76	---	---	---	0
2	PL-082	T504299-02	98	72	85	---	---	---	0
3	PL-083	T504299-03	114	73	77	---	---	---	0
4	PL-084	T504299-04	72	75	81	---	---	---	0
5	PL-085	T504299-05	113	73	89	---	---	---	0
6	PL-086	T504299-06	108	70	82	---	---	---	0
7	PL-087	T504299-07	110	70	80	---	---	---	0
8	PL-088	T504299-08	109	74	83	---	---	---	0
9	PL-089	T504299-09	84	76	81	---	---	---	0
10	PL-090	T504299-10	70	65	76	---	---	---	0
11	PL-091	T504299-11	78	65	82	---	---	---	0
12	PL-092	T504299-12	24	29*	30	---	---	---	1
13	PL-093	T504299-13	102	71	77	---	---	---	0
14	PL-094	T504299-14	78	60	64	---	---	---	0
15	PL-095	T504299-15	94	69	77	---	---	---	0
16	PL-096	T504299-16	104	72	82	---	---	---	0
17	PL-097	T504299-17	108	68	76	---	---	---	0
18	PL-098	T504299-18	103	68	79	---	---	---	0
19	PL-082 RE	T504299-02RE	72	73	78	---	---	---	0
20	PL-088 RE	T504299-08RE	79	74	78	---	---	---	0
21	PL-090 RE	T504299-10RE	72	65	72	---	---	---	0
22	PL-091 RE	T504299-11RE	74	67	79	---	---	---	0
23	PL-095 RE	T504299-15RE	79	70	79	---	---	---	0

S1 (NBZ) = Nitrobenzene-d5 (23-120)
S2 (FBP) = 2-Fluorobiphenyl (30-115)
S3 (TPH) = Terphenyl-d14 (18-137)
S4 (PHL) = Phenol-d6 (24-113)
S5 (2FP) = 2-Fluorophenol (25-121)
S6 (TBP) = 2,4,6-Tribromophenol (19-122)

Column to be used to flag recovery values
* Values outside of QC limits

SEMIVOLATILE SURROGATE RECOVERY DATA SHEET

Lab Name: LRI Contract No.

Case Number:

Matrix: Soil Level: LOW

	CLIENT SAMPLE NUMBER	LAB SAMPLE NUMBER	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
1	SBLKQM9556T1	SBLKQM9556T1	68	72	75	---	---	---	0
2	PL-092	T504299-12	24	29*	30	---	---	---	1
3	PL-092 MS	T504299-12MS	78	75	79	---	---	---	0
4	PL-092 MSD	T504299-12MSD	79	73	81	---	---	---	0

S1 (NBZ) = Nitrobenzene-d5 (23-120)
S2 (FBP) = 2-Fluorobiphenyl (30-115)
S3 (TPH) = Terphenyl-d14 (18-137)
S4 (PHL) = Phenol-d6 (24-113)
S5 (2FP) = 2-Fluorophenol (25-121)
S6 (TBP) = 2,4,6-Tribromophenol (19-122)

Column to be used to flag recovery values
* Values outside of QC limits

SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY SUMMARY

Lab Name: LRI Contract No.: Case No.:

Matrix: SOIL Analytical Method: 8270SVA

Matrix Spike - Client Sample ID: PL-092

Matrix Spike - Lab Sample ID: T504299-12

COMPOUND	SPIKE ADDED (UG/KG)	SAMPLE CONCENTRATION (UG/KG)	MS CONCENTRATION (UG/KG)	MS % REC	QC. LIMITS REC.
1,4-Dichlorobenzene	3401	ND	2375	70	28-104
N-Nitroso-di-n-propylamine	3401	ND	3064	90	41-126
1,2,4-Trichlorobenzene	3401	ND	2390	70	38-107
Acenaphthene	3401	ND	1688	50	31-137
2,4-Dinitrotoluene	3401	ND	1738	51	28- 89
Pyrene	3401	ND	2624	77	35-142

COMPOUND	SPIKE ADDED (UG/KG)	MSD CONCENTRATION (UG/KG)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	3401	2244	66	5.9	27	28-104
N-Nitroso-di-n-propylamine	3401	3010	88	2.2	38	41-126
1,2,4-Trichlorobenzene	3401	2346	69	1.4	23	38-107
Acenaphthene	3401	1590	47	6.2	19	31-137
2,4-Dinitrotoluene	3401	1656	49	4.0	47	28- 89
Pyrene	3401	2640	78	1.3	36	35-142

RPD: 0 out of 6 outside limits
RECOVERY: 0 out of 12 outside limits

Comment: _____

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4563 Instrument ID: MSD/D

Date Analyzed: 950501 Time Analyzed: 22:51

	IS1(DBC) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	16103	8.26	74124	11.91	55837	17.30
UPPER LIMIT	32206		148248		111674	
LOWER LIMIT	8052		37062		27919	
LAB SAMPLE NO.						
SBLKQM9556T1	17887	8.26	80246	11.91	57303	17.28
T504299-12	17497	8.26	87301	11.91	63256	17.30
T504299-12MS	18428	8.26	85741	11.91	69393	17.30
T504299-12MSD	20060	8.26	89894	11.91	73570	17.30

IS1(DCB) = 1,4-Dichlorobenzene-d10
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% ofinternal standard area
LOW LIMIT = - 50% of internal standard area

Column used for flag internal standard areavalues with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4563 Instrument ID: MSD/D

Date Analyzed: 950501 Time Analyzed: 22:51

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	113550	21.81	132072	30.06	189858	34.21
UPPER LIMIT	227100		264144		379716	
LOWER LIMIT	56775		66036		94929	
LAB SAMPLE NO.						
SBLKQM9556T1	106700	21.78	125209	30.03	151866	34.17
T504299-12	114674	21.80	129681	30.03	157494	34.17
T504299-12MS	120298	21.81	129737	30.05	153025	34.17
T504299-12MSD	116057	21.81	129062	30.04	130394	34.17

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4563 Instrument ID: MSD/D

Date Analyzed: 950501 Time Analyzed: 22:51

	IS1(DBC) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	16103	8.26	74124	11.91	55837	17.30
UPPER LIMIT	32206		148248		111674	
LOWER LIMIT	8052		37062		27919	
LAB SAMPLE NO.						
T504299-12	17497	8.26	87301	11.91	63256	17.30
T504299-04	21216	8.26	95373	11.91	64995	17.28
T504299-10	18011	8.20	84792	11.85	57110	17.24
T504299-11	13028	8.22	71905	11.87	47711	17.24

IS1(DCB) = 1,4-Dichlorobenzene-d10
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100%
ofinternal standard area
LOW LIMIT = - 50%
of internal standard area

Column used for flag internal standard areavalues with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4563 Instrument ID: MSD/D

Date Analyzed: 950501 Time Analyzed: 22:51

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	113550	21.81	132072	30.06	189858	34.21
UPPER LIMIT	227100		264144		379716	
LOWER LIMIT	56775		66036		94929	
LAB SAMPLE NO.						
T504299-12	114674	21.80	129681	30.03	157494	34.17
T504299-04	110208	21.79	115152	30.03	107147	34.16
T504299-10	92856	21.73	86362	29.97	72427*	34.08
T504299-11	81986	21.73	77570	29.98	63467*	34.09

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100%
of internal standard area
LOWER LIMIT = - 50%
of internal standard area

Column used to flag internal standard area values with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4584 Instrument ID: MSD/D

Date Analyzed: 950503 Time Analyzed: 02:00

	IS1(DBC) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	31919	7.73	126526	11.36	103065	16.69
UPPER LIMIT	63838		253052		206130	
LOWER LIMIT	15959		63263		51533	
LAB SAMPLE NO.						
T504299-14	33199	7.73	129899	11.34	98016	16.68
T504299-02	32785	7.71	135231	11.34	101318	16.66
T504299-08	30863	7.71	127978	11.32	97035	16.65
T504299-13	32622	7.69	136769	11.30	103850	16.63
T504299-15	33861	7.67	140699	11.30	101651	16.63
T504299-16	32039	7.67	138858	11.28	105941	16.61
T504299-05	36024	7.65	150418	11.28	112374	16.61
T504299-06	35574	7.63	153097	11.26	111858	16.59
T504299-07	33396	7.63	144931	11.26	109797	16.59
T504299-03	34792	7.62	155640	11.25	117563	16.57
T504299-17	38103	7.62	164050	11.25	122223	16.57
T504299-18	35503	7.63	159433	11.24	119313	16.56

IS1(DCB) = 1,4-Dichlorobenzene-d10
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100% ofinternal standard area
LOW LIMIT = - 50% of internal standard area

Column used for flag internal standard areavalues with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4584 Instrument ID: MSD/D

Date Analyzed: 950503 Time Analyzed: 02:00

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	179708	21.16	186307	29.35	242509	33.45
UPPER LIMIT	359416		372614		485018	
LOWER LIMIT	89854		93153		121255	
LAB SAMPLE NO.						
T504299-14	138103	21.14	179595	29.32	190972	33.41
T504299-02	161738	21.13	155270	29.31	113429*	33.39
T504299-08	165122	21.12	166375	29.28	115227*	33.37
T504299-13	176317	21.11	168306	29.27	128028	33.35
T504299-15	179010	21.09	174377	29.25	115250*	33.34
T504299-16	180259	21.06	166334	29.23	124940	33.33
T504299-05	183101	21.06	171919	29.23	138771	33.32
T504299-06	190646	21.05	176931	29.22	137368	33.31
T504299-07	179757	21.04	165203	29.21	142128	33.29
T504299-03	193518	21.03	182334	29.20	144988	33.30
T504299-17	192474	21.03	184123	29.20	153512	33.28
T504299-18	192448	21.04	167515	29.21	135115	33.29

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4599 Instrument ID: MSD/D

Date Analyzed: 950503 Time Analyzed: 17:36

	IS1(DBC) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	25844	7.43	127358	11.06	104274	16.36
UPPER LIMIT	51688		254716		208548	
LOWER LIMIT	12922		63679		52137	
LAB SAMPLE NO.						
T504299-01	24273	7.41	128550	11.02	102070	16.33
T504299-02RE	22931	7.41	121483	11.02	92899	16.34
T504299-08RE	21608	7.41	115059	11.02	88512	16.33
T504299-09	22776	7.41	118105	11.02	89929	16.33
T504299-10RE	23730	7.41	116316	11.02	88053	16.31
T504299-11RE	23139	7.39	121439	11.00	89082	16.31
T504299-15RE	20287	7.39	106664	11.00	76820	16.29

IS1(DCB) = 1,4-Dichlorobenzene-d10
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

UPPER LIMIT = + 100%
ofinternal standard area
LOW LIMIT = - 50%
of internal standard area

Column used for flag internal standard areavalues with an asterisk

Lab Name: Laboratory Resources Inc.

Lab File ID (Standard): >D4599 Instrument ID: MSD/D

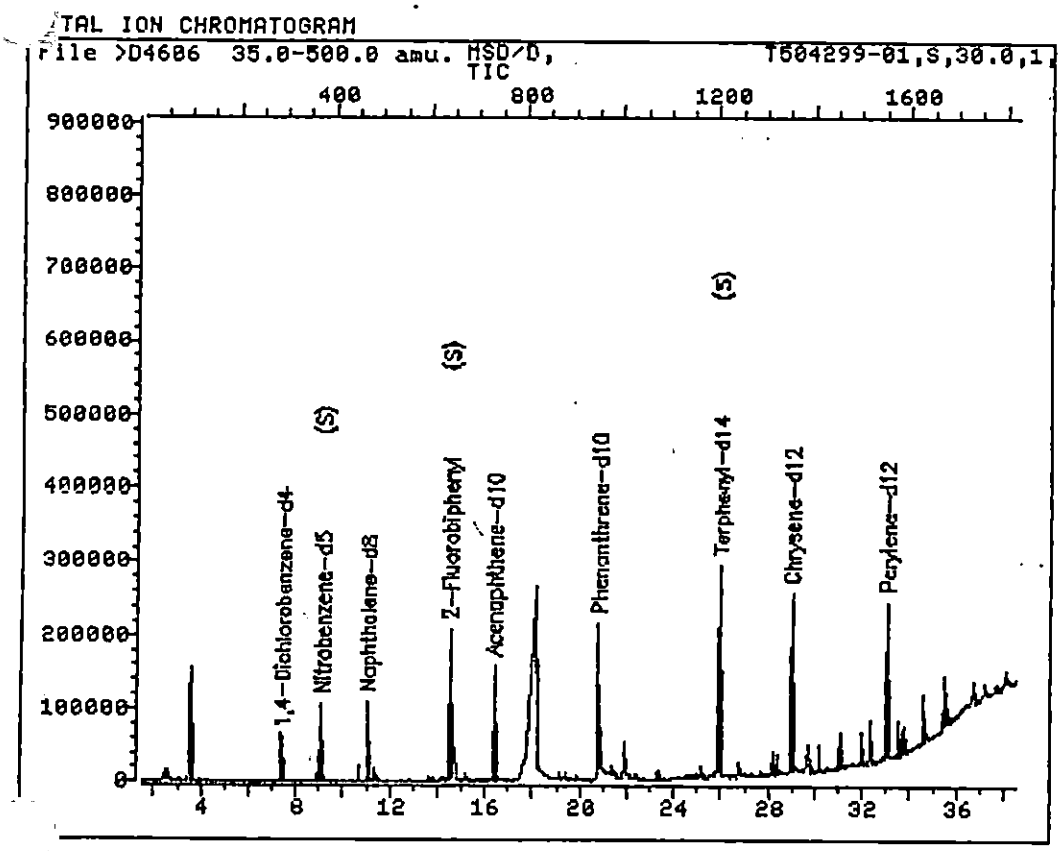
Date Analyzed: 950503 Time Analyzed: 17:36

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT	AREA #	RT	AREA #	RT
12 HOUR STD	221201	20.81	301366	28.97	424458	33.05
UPPER LIMIT	442402		602732		848916	
LOWER LIMIT	110601		150683		212229	
LAB SAMPLE NO.						
T504299-01	196323	20.78	255007	28.93	243851	33.01
T504299-02RE	185985	20.79	231609	28.94	200033*	33.02
T504299-08RE	175348	20.78	212500	28.94	199793*	33.01
T504299-09	175735	20.78	209453	28.92	227539	33.01
T504299-10RE	163845	20.76	177385	28.91	193090*	33.00
T504299-11RE	162597	20.76	168825	28.91	159500*	32.98
T504299-15RE	141319	20.74	145966*	28.89	121666*	32.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

UPPER LIMIT = + 100% of internal standard area
LOWER LIMIT = - 50% of internal standard area

Column used to flag internal standard area values with an asterisk



Data File: >D4606::A3 Quant Output File: ^D4606::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-01,S,30.0,1,1,PL-081, BTL# 9

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

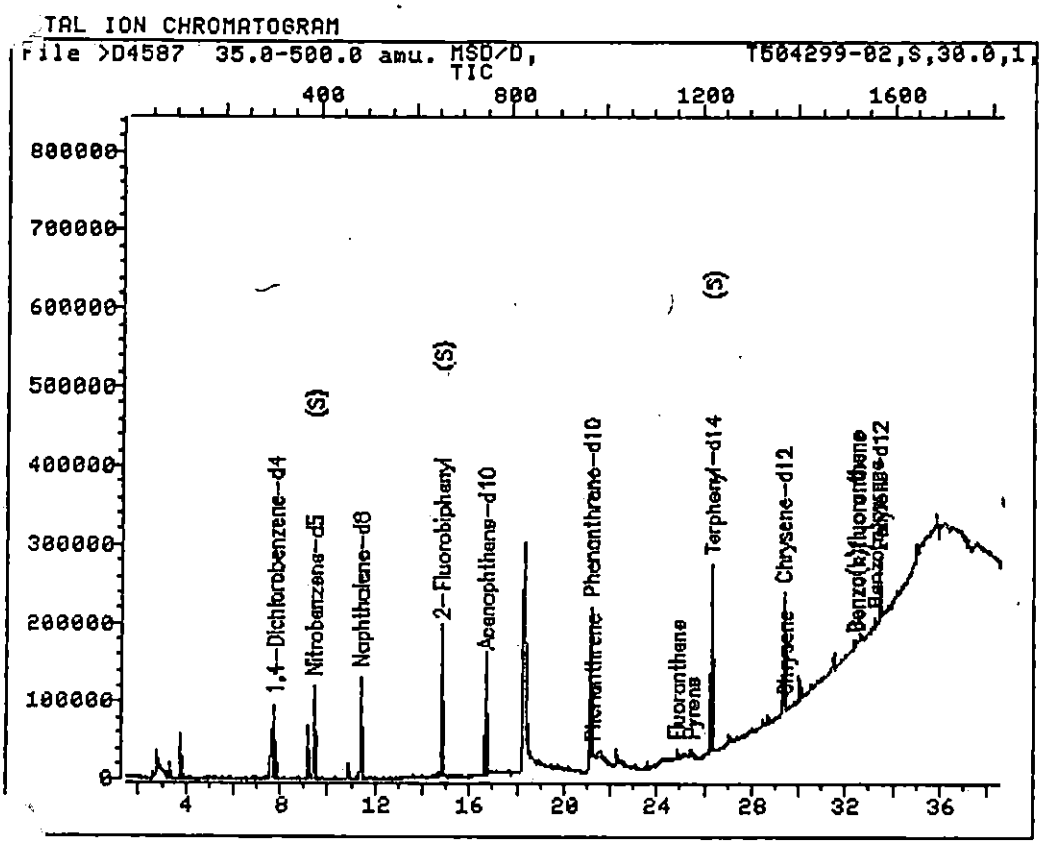
Operator ID: BNA3
Quant Time : 950504 10:02
Injected at: 950503 22:53

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:02
Output File: ^D4606::QT Injected at: 950503 22:53
Data File: >D4606::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-01,S,30.0,1,1,PL-081, BTL# 9

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.41	152.0	24273	40.00	NG	97
19)	*Naphthalene-d8		11.02	136.0	128550	40.00	NG	94
20)	Nitrobenzene-d5	(S)	9.09	82.0	70419	78.84	NG	93
34)	*Acenaphthene-d10		16.33	164.0	102070	40.00	NG	97
38)	2-Fluorobiphenyl	(S)	14.47	172.0	169931	72.74	NG	93
55)	*Phenanthrene-d10		20.78	188.0	196323	40.00	NG	93
67)	*Chrysene-d12		28.93	240.0	255007	40.00	NG	87
70)	Terphenyl-d14	(S)	25.92	244.0	344393	75.60	NG	91
	*Perylene-d12		33.01	264.0	243851	40.00	NG	96

* Compound is ISTD



Data File: >D4587::A2 Quant Output File: ^D4587::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-02,S,30.0,1,1,PL-082, BTL#11

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 09:51
Injected at: 950503 04:28

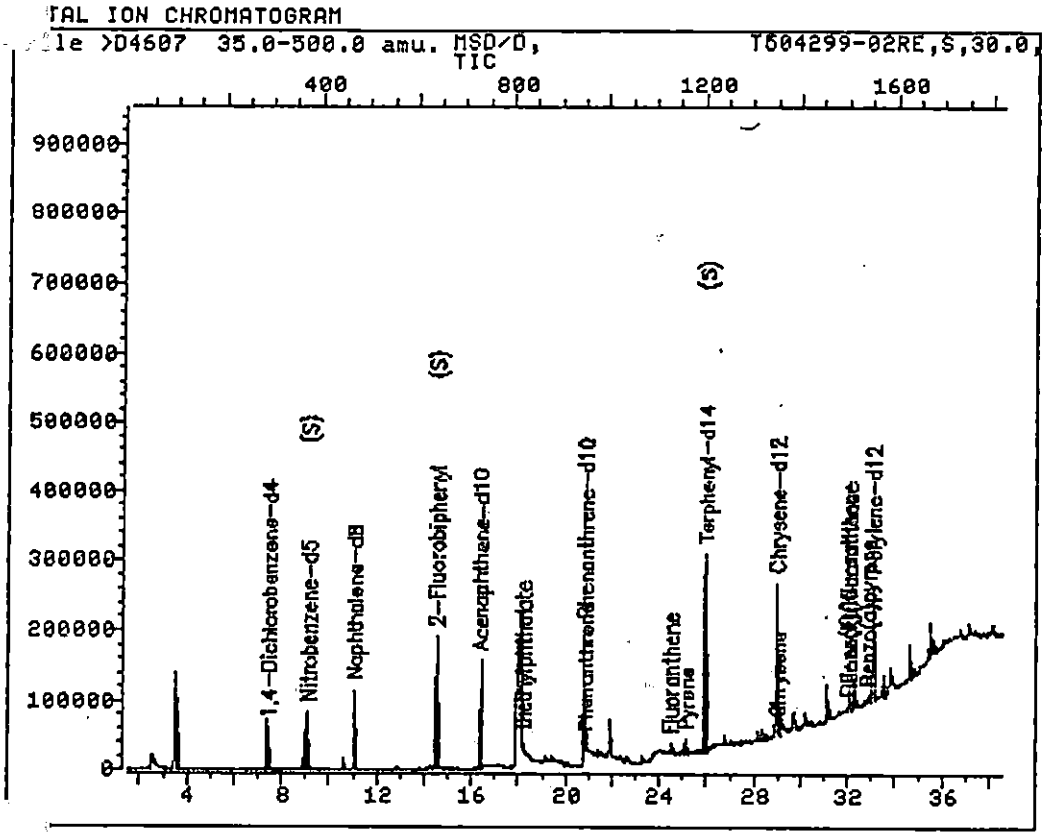
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 09:51
Output File: ^D4587::QT Injected at: 950503 04:28
Data File: >D4587::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-02,S,30.0,1,1,PL-082, BTL#11

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.71	152.0	32785	40.00	NG	96
19)	*Naphthalene-d8		11.34	136.0	135231	40.00	NG	87
20)	Nitrobenzene-d5	(S)	9.37	82.0	91649	97.54	NG	92
34)	*Acenaphthene-d10		16.66	164.0	101318	40.00	NG	96
38)	2-Fluorobiphenyl	(S)	14.77	172.0	167084	72.05	NG	97
55)	*Phenanthrene-d10		21.13	188.0	161738	40.00	NG	76
62)	Phenanthrene		21.19	178.0	4786	1.16	NG	98
64)	Fluoranthene		24.83	202.0	11717	1.99	NG	86
	*Chrysene-d12		29.31	240.0	155270	40.00	NG	84
	Pyrene		25.47	202.0	11099	2.61	NG	96
70)	Terphenyl-d14	(S)	26.28	244.0	237106	85.48	NG	84
74)	Chrysene		29.37	228.0	4792	1.27	NG	89
76)	*Perylene-d12		33.39	264.0	113429	40.00	NG	95
78)	Benzo(b)fluoranthene		32.38	252.0	6592M	2.12	NG	85
79)	Benzo(k)fluoranthene		32.42	252.0	6133M	2.99	NG	86
80)	Benzo(a)pyrene		33.20	252.0	3641	1.39	NG	72

* Compound is ISTD

NES 00120



Data File: >D4607::A3 Quant Output File: ^D4607::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-02RE,S,30.0,1,1,PL-082 RE, BTL#10

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:04
Injected at: 950503 23:43

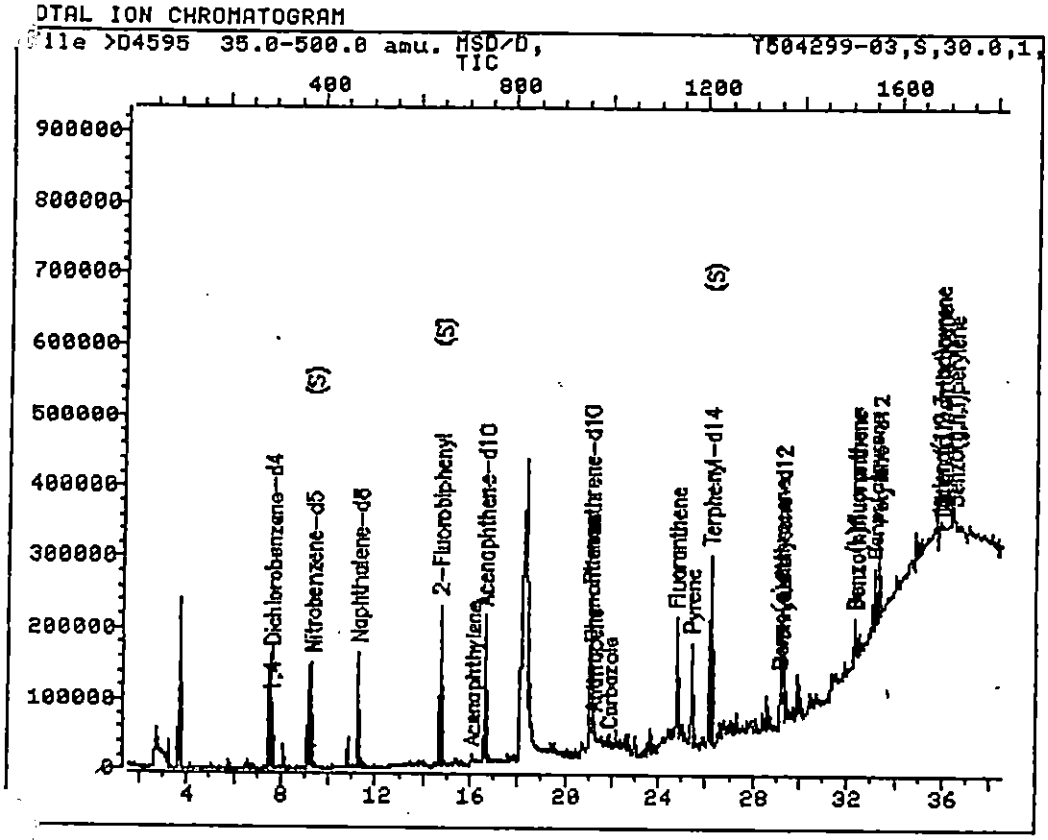
QUANT REPORT

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:04
Output File: ^D4607::QT Injected at: 950503 23:43
Data File: >D4607::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-02RE,S,30.0,1,1,PL-082 RE, BTL#10

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.41	152.0	22931	40.00	NG	95
19)	*Naphthalene-d8		11.02	136.0	121483	40.00	NG	95
20)	Nitrobenzene-d5	(S)	9.07	82.0	60825	72.06	NG	87
34)	*Acenaphthene-d10		16.34	164.0	92899	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.47	172.0	154187	72.51	NG	90
52)	Diethylphthalate		18.16	149.0	2010	.617	NG	93
55)	*Phenanthrene-d10		20.79	188.0	185985	40.00	NG	90
62)	Phenanthrene		20.83	178.0	4813	1.01	NG	95
	Fluoranthene		24.47	202.0	13649	2.01	NG	92
	*Chrysene-d12		28.94	240.0	231609	40.00	NG	85
69)	Pyrene		25.12	202.0	13334	2.10	NG	98
70)	Terphenyl-d14	(S)	25.94	244.0	321839	77.79	NG	90
74)	Chrysene		28.98	228.0	6887	1.23	NG	92
76)	*Perylene-d12		33.02	264.0	200033	40.00	NG	97
78)	Benzo(b)fluoranthene		32.01	252.0	8979M	1.64	NG	82
79)	Benzo(k)fluoranthene		32.03	252.0	5037M	1.39	NG	84
80)	Benzo(a)pyrene		32.83	252.0	5147	1.11	NG	83

* Compound is ISTD



Data File: >D4595::A2 Quant Output File: ^D4595::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-03,S,30.0,1,1,PL-083, BTL#19

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 11:45
Injected at: 950503 11:06

QUANT REPORT

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 11:45
Output File: ^D4595::QT Injected at: 950503 11:06
Data File: >D4595::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-03,S,30.0,1,1,PL-083, BTL#19

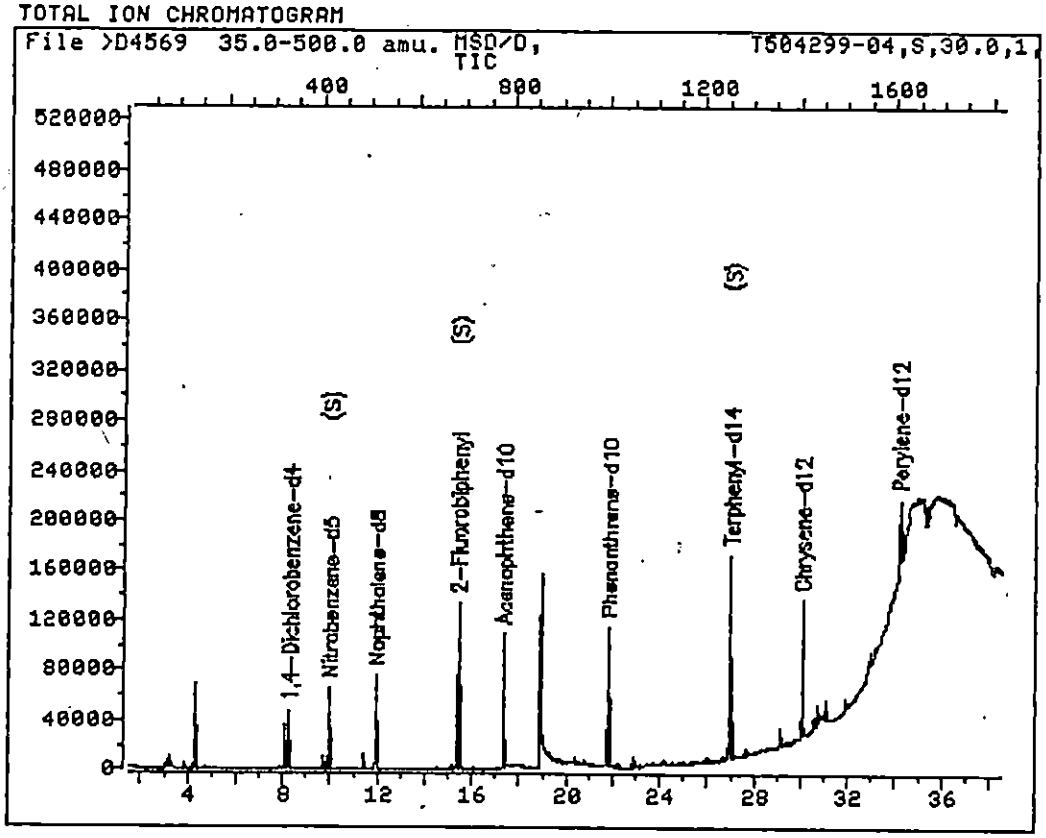
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.62	152.0	34792	40.00	NG	98
19)	*Naphthalene-d8		11.25	136.0	155640	40.00	NG	78
20)	Nitrobenzene-d5	(S)	9.28	82.0	123518	114.21	NG	93
34)	*Acenaphthene-d10		16.57	164.0	117563	40.00	NG	94
38)	2-Fluorobiphenyl	(S)	14.68	172.0	195593	72.69	NG	94
41)	Acenaphthylene		16.08	152.0	9097	1.41	NG	95
55)	*Phenanthrene-d10		21.03	188.0	193518	40.00	NG	64
42)	Phenanthrene		21.09	178.0	105472	21.37	NG	96
)	Anthracene		21.21	178.0	13648	2.65	NG	93
	Carbazole		21.89	167.0	10396	1.92	NG	89
66)	Fluoranthene		24.74	202.0	180166	25.56	NG	84
67)	*Chrysene-d12		29.20	240.0	182334	40.00	NG	81
69)	Pyrene		25.37	202.0	168889	33.81	NG	96
70)	Terphenyl-d14	(S)	26.17	244.0	250196	76.81	NG	81
72)	Benzo(a)anthracene		29.14	228.0	58120	9.99	NG	94
74)	Chrysene		29.26	228.0	79806	18.08	NG	93
76)	*Perylene-d12		33.30	264.0	144988	40.00	NG	97
78)	Benzo(b)fluoranthene		32.29	252.0	80108M	20.13	NG	80
79)	Benzo(k)fluoranthene		32.34	252.0	39405M	15.04	NG	75
80)	Benzo(a)pyrene		33.11	252.0	49165	14.66	NG	84
81)	Indeno(1,2,3-cd)pyrene		35.87	276.0	30365	7.27	NG	78
82)	Dibenz(a,h)anthracene		35.93	278.0	11527	3.73	NG	95
83)	Benzo(g,h,i)perylene		36.46	276.0	28271	7.82	NG	91

* Compound is ISTD

12 hits

TOTAL ION CHROMATOGRAM



Data File: >D4569::A4 Quant Output File: ^D4569::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-04,S,30.0,1,1,PL-084, BTL#14

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

Operator ID: BNA3
Quant Time : 950502 10:47
Injected at: 950502 03:47

NES 00125

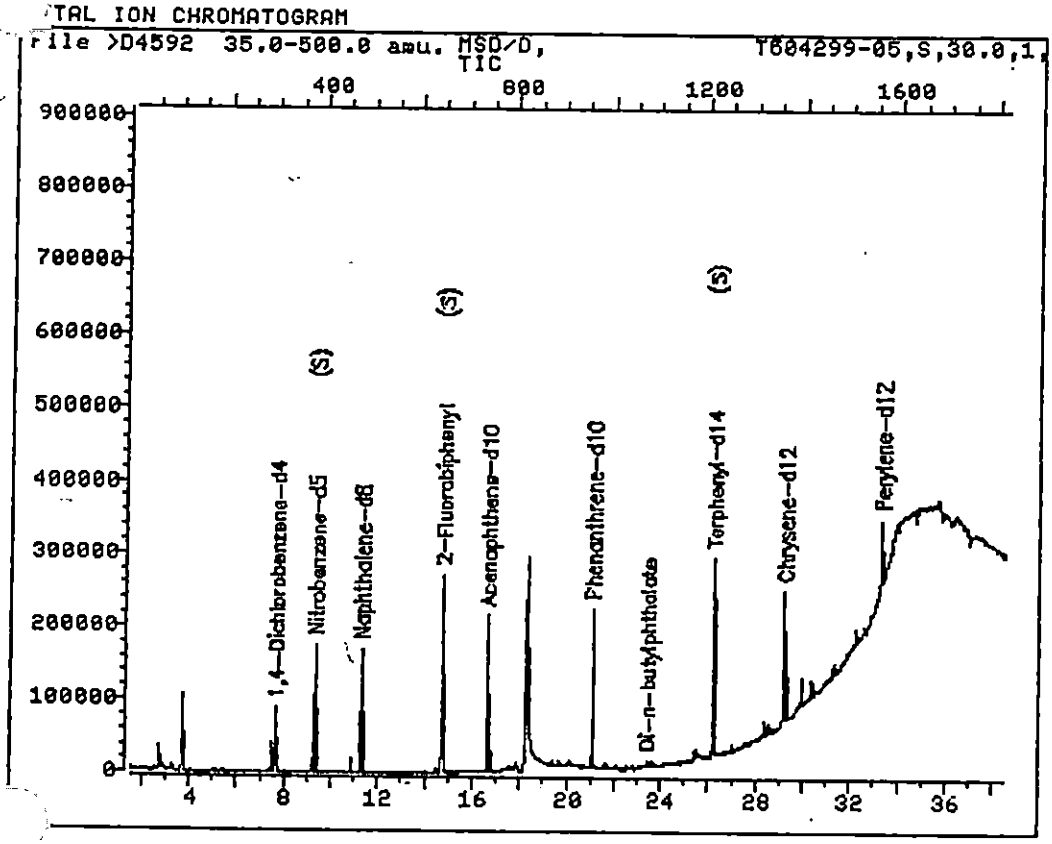
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950502 10:47
Output File: ^D4569::QT Injected at: 950502 03:47
Data File: >D4569::A4 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-04,S,30.0,1,1,PL-084, BTL#14

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		8.26	152.0	21216	40.00	NG	95
19)	*Naphthalene-d8		11.91	136.0	95373	40.00	NG	91
20)	Nitrobenzene-d5	(S)	9.94	82.0	47672	71.94	NG	86
34)	*Acenaphthene-d10		17.28	164.0	64995	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	15.36	172.0	112103	75.36	NG	94
55)	*Phenanthrene-d10		21.79	188.0	110208	40.00	NG	85
67)	*Chrysene-d12		30.03	240.0	115152	40.00	NG	84
70)	Terphenyl-d14	(S)	26.95	244.0	167162	81.26	NG	88
76)	*Perylene-d12		34.16	264.0	107147	40.00	NG	96

* Compound is ISTD

NES 00126



Data File: >D4592::A2 Quant Output File: ^D4592::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-05,S,30.0,1,1,PL-085, BTL#16

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 10:18
Injected at: 950503 08:36

NES 00127

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 10:18
Output File: ^D4592::QT Injected at: 950503 08:36
Data File: >D4592::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-05,S,30.0,1,1,PL-085, BTL#16

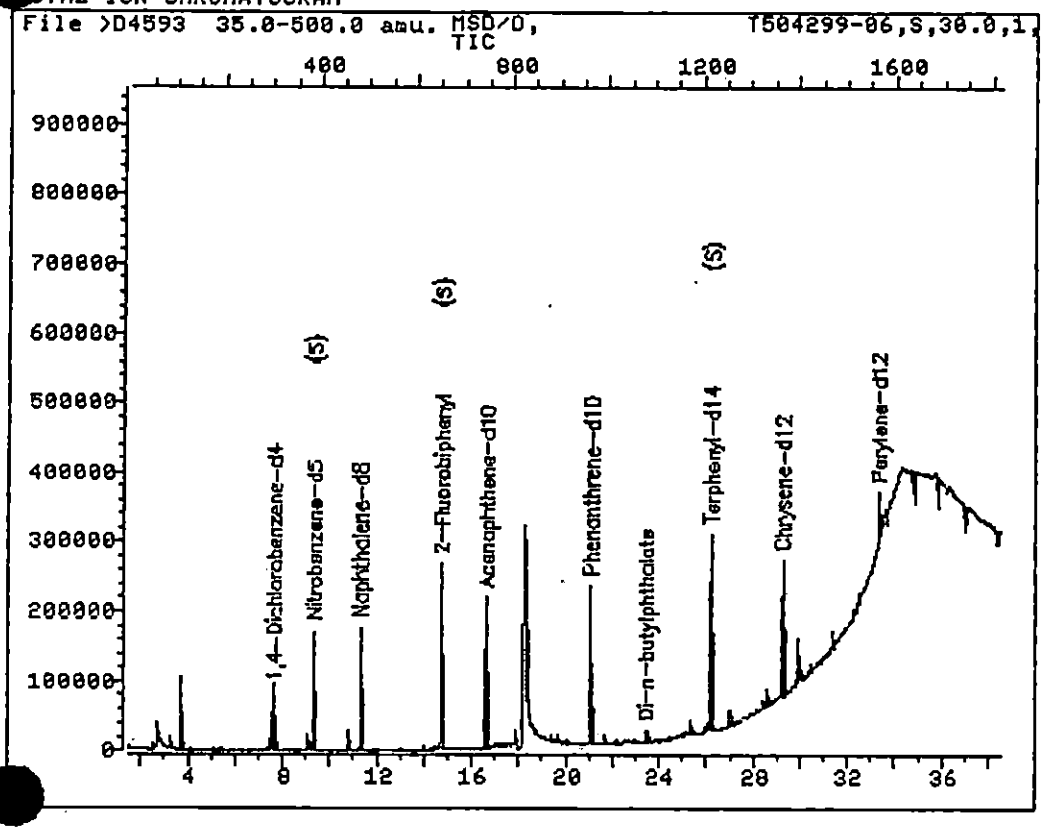
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.65	152.0	36024	40.00	NG	96
19)	*Naphthalene-d8		11.28	136.0	150418	40.00	NG	86
20)	Nitrobenzene-d5	(S)	9.33	82.0	117708	112.62	NG	91
34)	*Acenaphthene-d10		16.61	164.0	112374	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.72	172.0	186643	72.57	NG	93
55)	*Phenanthrene-d10		21.06	188.0	183101	40.00	NG	70
65)	Di-n-butylphthalate		23.44	149.0	9592	1.20	NG	92
67)	*Chrysene-d12		29.23	240.0	171919	40.00	NG	85
	Terphenyl-d14	(S)	26.21	244.0	273576	89.08	NG	83
	*Perylene-d12		33.32	264.0	138771	40.00	NG	98

* Compound is ISTD

NES 00128

TAL ION CHROMATOGRAM



Data File: >D4593::A2 Quant Output File: ^D4593::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-06,S,30.0,1,1,PL-086, BTL#17

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 10:21
Injected at: 950503 09:26

NES 00129

QUANT REPORT

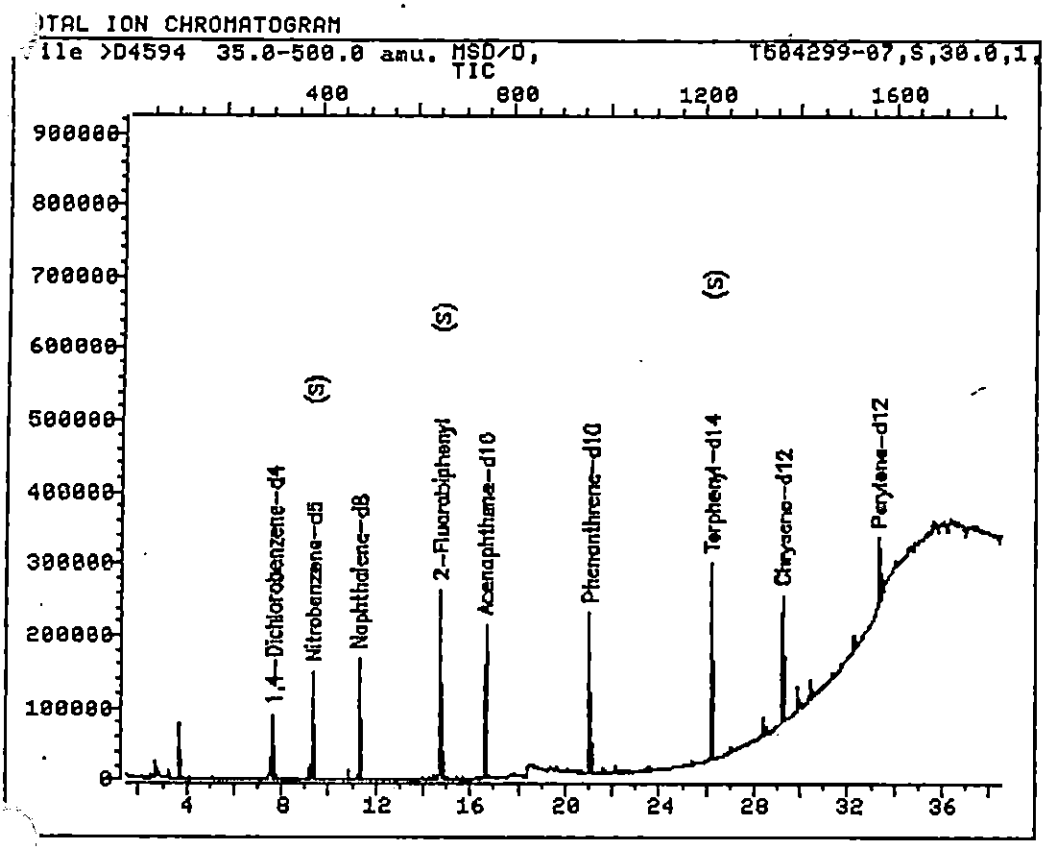
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 10:21
Output File: ^D4593::QT Injected at: 950503 09:26
Data File: >D4593::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-06,S,30.0,1,1,PL-086, BTL#17

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.63	152.0	35574	40.00	NG	97
19)	*Naphthalene-d8		11.26	136.0	153097	40.00	NG	86
20)	Nitrobenzene-d5	(S)	9.31	82.0	115156	108.25	NG	92
34)	*Acenaphthene-d10		16.59	164.0	111858	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.71	172.0	179408	70.07	NG	96
55)	*Phenanthrene-d10		21.05	188.0	190646	40.00	NG	66
65)	Di-n-butylphthalate		23.42	149.0	17288	2.07	NG	91
67)	*Chrysene-d12		29.22	240.0	176931	40.00	NG	80
70)	Terphenyl-d14	(S)	26.19	244.0	257992	81.63	NG	82
71)	*Perylene-d12		33.31	264.0	137368	40.00	NG	97

* Compound is ISTD

NES 00130



Data File: >D4594::A2 Quant Output File: ^D4594::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-07,S,30.0,1,1,PL-087, BTL#18

Id File: IDD8NA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 10:56
Injected at: 950503 10:16

NES 00131

QUANT REPORT

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 10:56
Output File: ^D4594::QT Injected at: 950503 10:16
Data File: >D4594::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-07,S,30.0,1,1,PL-087, BTL#18

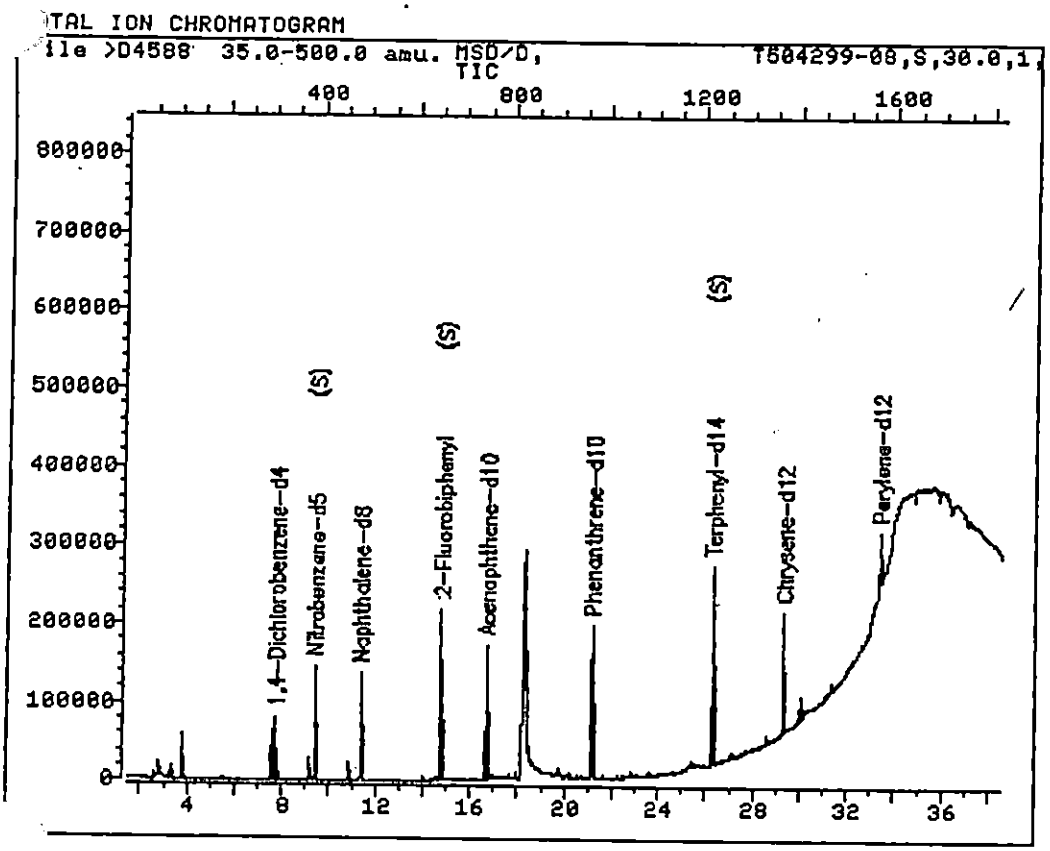
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.63	152.0	33396	40.00	NG	98
19)	*Naphthalene-d8		11.26	136.0	144931	40.00	NG	79
20)	Nitrobenzene-d5	(S)	9.31	82.0	110737	109.96	NG	93
34)	*Acenaphthene-d10		16.59	164.0	109797	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.71	172.0	175578	69.87	NG	93
55)	*Phenanthrene-d10		21.04	188.0	179757	40.00	NG	62
67)	*Chrysene-d12		29.21	240.0	165203	40.00	NG	79
70)	Terphenyl-d14	(S)	26.19	244.0	237560	80.50	NG	81
	*Perylene-d12		33.29	264.0	142128	40.00	NG	96

* Compound is ISTD

o hods

NES 00132



Data File: >D4588::A2 Quant Output File: ^D4588::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-08,S,30.0,1,1,PL-088, BTL#12

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 09:54
Injected at: 950503 05:18

NES 00133

QUANT REPORT

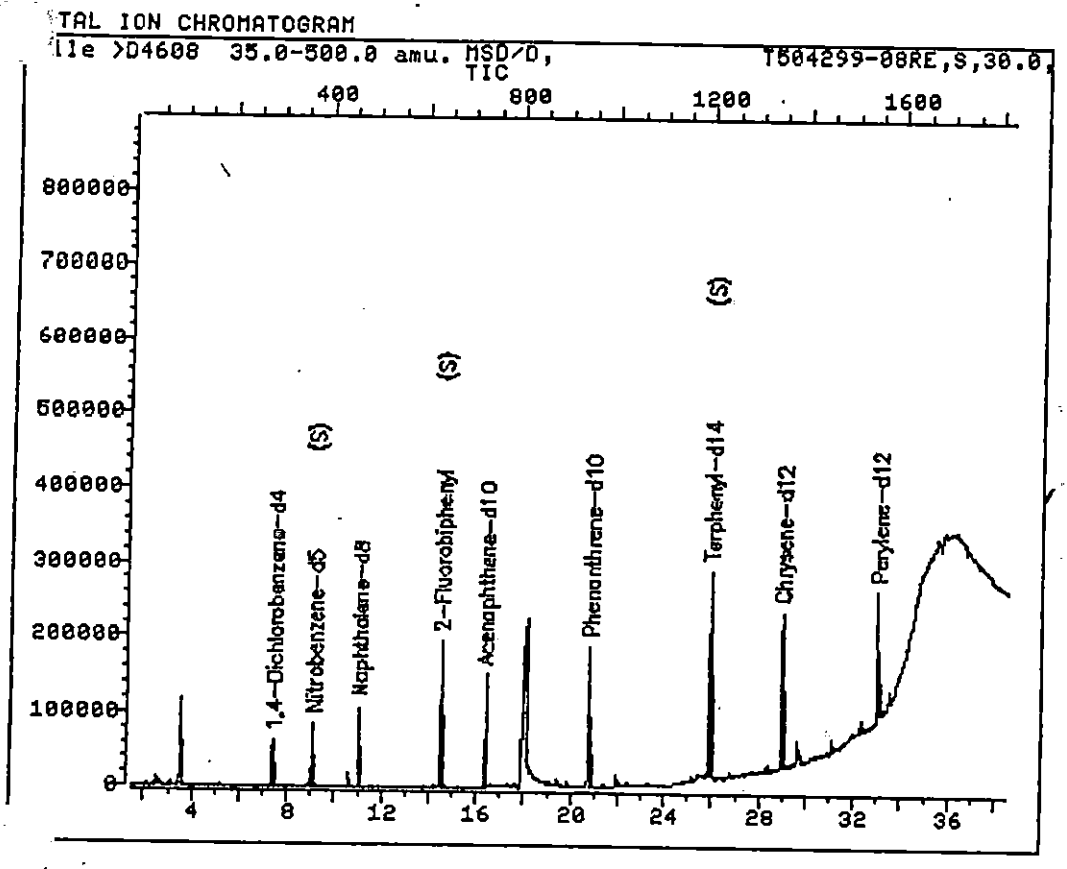
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 09:54
Output File: ^D4588::QT Injected at: 950503 05:18
Data File: >D4588::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-08,S,30.0,1,1,PL-088, BTL#12

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.71	152.0	30863	40.00	NG	96
19)	*Naphthalene-d8		11.32	136.0	127978	40.00	NG	91
20)	Nitrobenzene-d5	(S)	9.37	82.0	96513	108.53	NG	90
34)	*Acenaphthene-d10		16.65	164.0	97035	40.00	NG	96
38)	2-Fluorobiphenyl	(S)	14.77	172.0	164542	74.09	NG	95
55)	*Phenanthrene-d10		21.12	188.0	165122	40.00	NG	73
67)	*Chrysene-d12		29.28	240.0	166375	40.00	NG	85
70)	Terphenyl-d14	(S)	26.26	244.0	245913	82.74	NG	85
	*Perylene-d12		33.37	264.0	115227	40.00	NG	97

* Compound is ISTD

NES 00134



Data File: >D4608::A3 Quant Output File: ^D4608::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-08RE,S,30.0,1,1,PL-088 RE, BTL#11

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:07
Injected at: 950504 00:32

QUANT REPORT

Operator ID: BNA3
Output File: ^D4608}:QT
Data File: >D4608::A3
Name: MSD/D,
Misc: T504299-08RE,S,30.0,1,1,PL-088 RE,

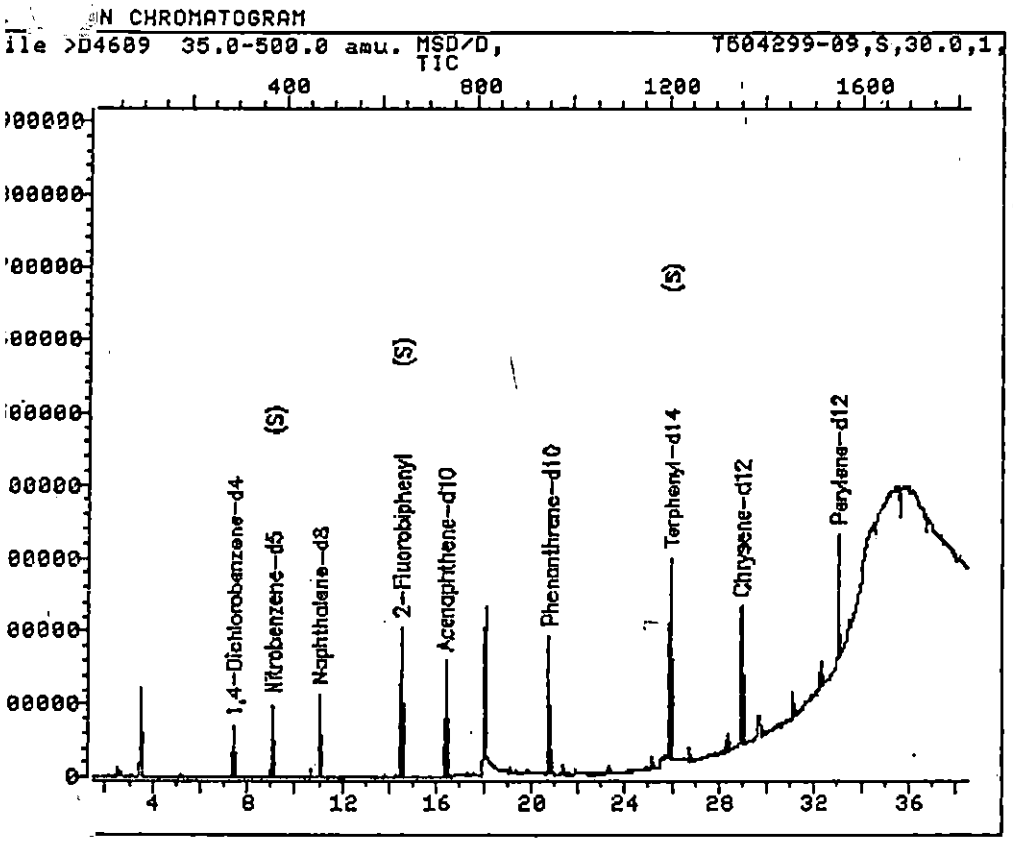
Quant Rev: 7
Quant Time: 950504 10:07
Injected at: 950504 00:32
Dilution Factor: 1.00000
Instrument ID: D
BTL#11

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36
Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.41	152.0	21608	40.00	NG	99
19)	*Naphthalene-d8		11.02	136.0	115059	40.00	NG	95
20)	Nitrobenzene-d5	(S)	9.07	82.0	62882	78.65	NG	85
34)	*Acenaphthene-d10		16.33	164.0	88512	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.46	172.0	149423	73.76	NG	93
55)	*Phenanthrene-d10		20.78	188.0	175348	40.00	NG	88
67)	*Chrysene-d12		28.94	240.0	212500	40.00	NG	84
70)	Terphenyl-d14	(S)	25.92	244.0	296578	78.13	NG	91
	*Perylene-d12		33.01	264.0	199793	40.00	NG	98

* Compound is ISTD

NES 00136



Data File: >D4609::A3 Quant Output File: ^D4609::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-09,S,30.0,1,1,PL-089, BTL#12

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:09
Injected at: 950504 01:21

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:09
Output File: ^D4609::QT Injected at: 950504 01:21
Data File: >D4609::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-09,S,30.0,1,1,PL-089, BTL#12

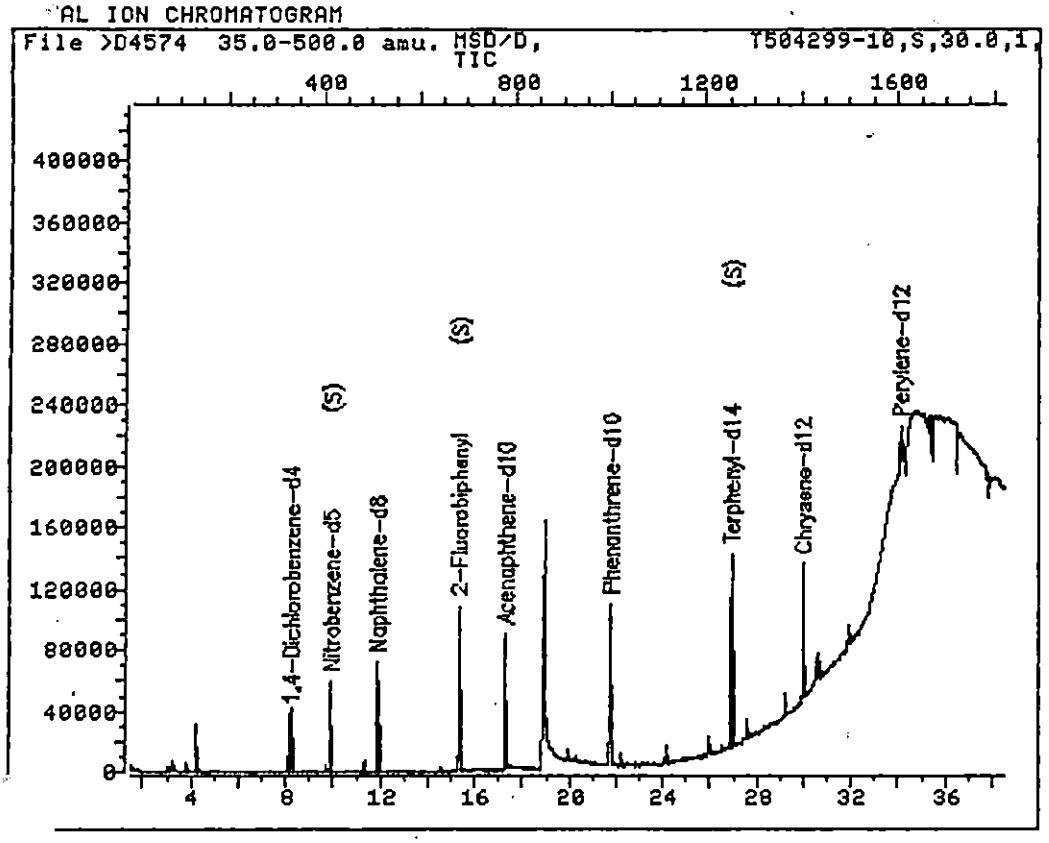
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.41	152.0	22776	40.00	NG	98
19)	*Naphthalene-d8		11.02	136.0	118105	40.00	NG	97
20)	Nitrobenzene-d5	(S)	9.07	82.0	68788	83.82	NG	86
34)	*Acenaphthene-d10		16.33	164.0	89929	40.00	NG	96
38)	2-Fluorobiphenyl	(S)	14.46	172.0	157221	76.38	NG	92
55)	*Phenanthrene-d10		20.78	188.0	175735	40.00	NG	87
67)	*Chrysene-d12		28.92	240.0	209453	40.00	NG	87
70)	Terphenyl-d14	(S)	25.92	244.0	302949	80.97	NG	90
	*Perylene-d12		33.01	264.0	227539	40.00	NG	97

* Compound is ISTD

o hits

NES 00138



Data File: >D4574::A4 Quant Output File: ^D4574::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-10,S,30.0,1,1,PL-090, BTL#19

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

Operator ID: BNA3
Quant Time : 950502 11:01
Injected at: 950502 07:54

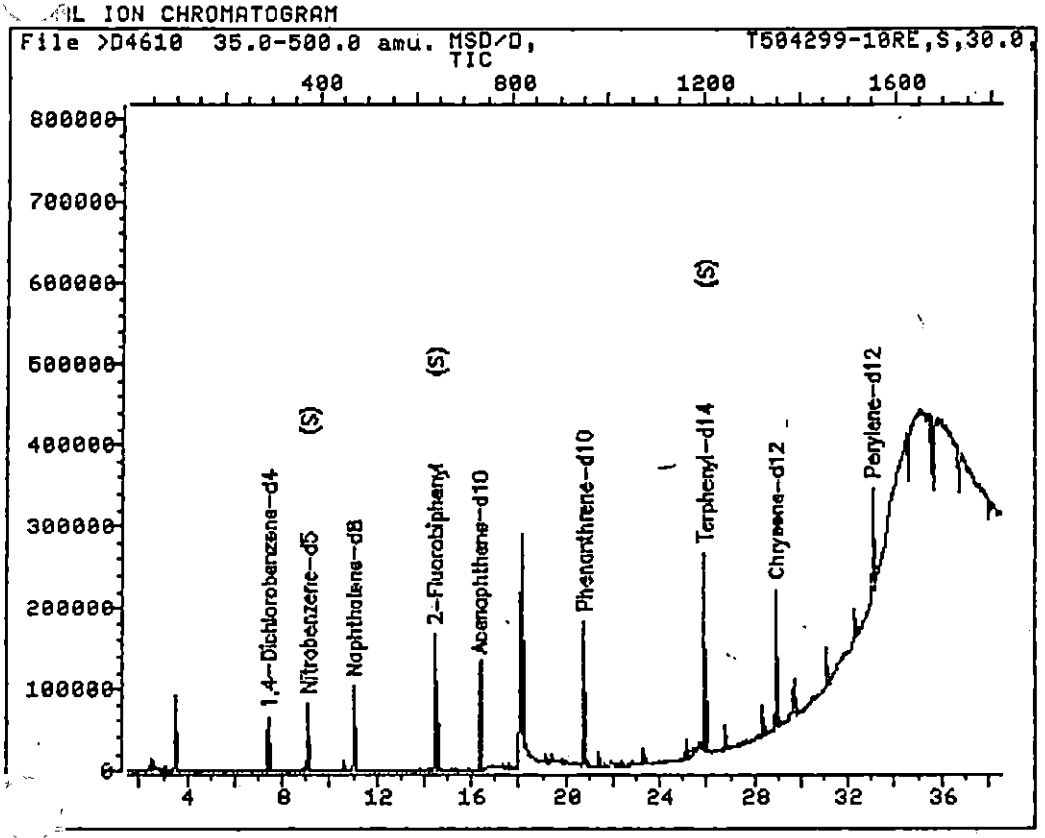
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950502 11:01
Output File: ^D4574::QT Injected at: 950502 07:54
Data File: >D4574::A4 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-10,S,30.0,1,1,PL-090, BTL#19

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		8.20	152.0	18011	40.00	NG	96
19)	*Naphthalene-d8		11.85	136.0	84792	40.00	NG	97
20)	Nitrobenzene-d5	(S)	9.88	82.0	41249	70.01	NG	83
34)	*Acenaphthene-d10		17.24	164.0	57110	40.00	NG	97
38)	2-Fluorobiphenyl	(S)	15.31	172.0	85342	65.29	NG	92
55)	*Phenanthrene-d10		21.73	188.0	92856	40.00	NG	81
67)	*Chrysene-d12		29.97	240.0	86362	40.00	NG	86
70)	Terphenyl-d14	(S)	26.89	244.0	118015	76.50	NG	81
	*Perylene-d12		34.08	264.0	72427	40.00	NG	96

* Compound is ISTD

AL ION CHROMATOGRAM



Data File: >D4610::A3 Quant Output File: ^D4610::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-10RE,S,30.0,1,1,PL-090 RE, BTL#13

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:11
Injected at: 950504 02:11

NES 00141

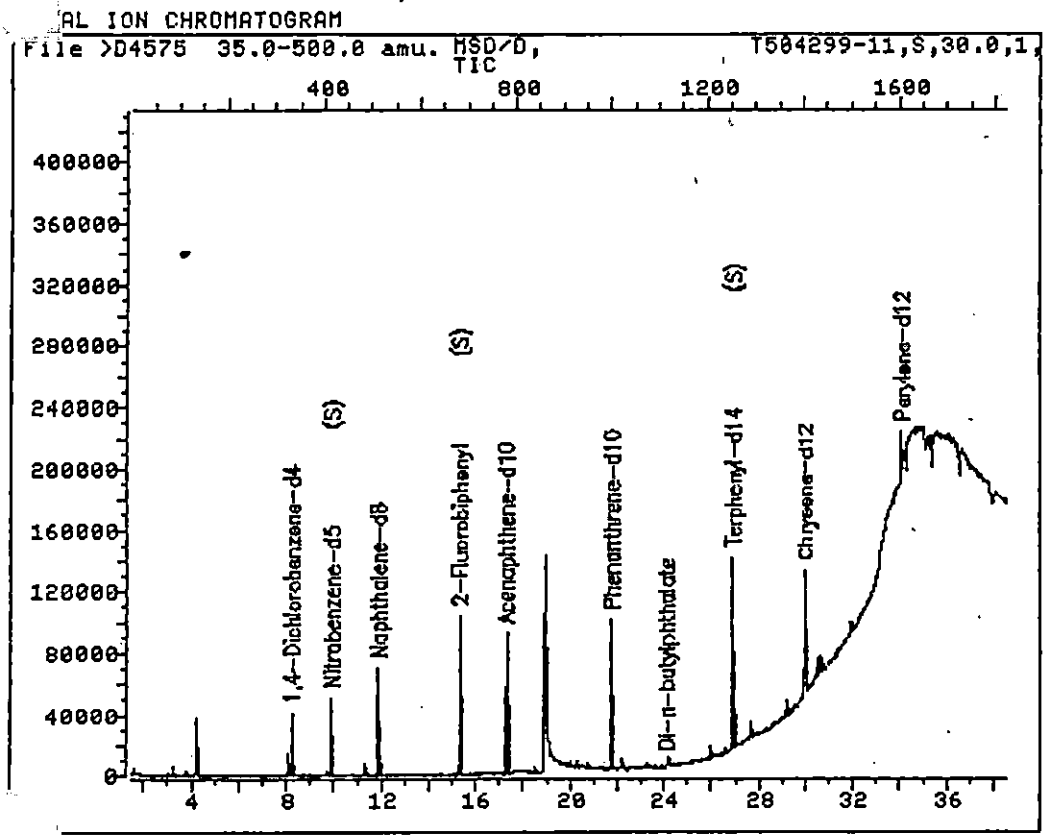
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:11
Output File: ^D4610::QT Injected at: 950504 02:11
Data File: >D4610::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-10RE,S,30.0,1,1,PL-090 RE, BTL#13

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.41	152.0	23730	40.00	NG	91
19)	*Naphthalene-d8		11.02	136.0	116316	40.00	NG	98
20)	Nitrobenzene-d5	(S)	9.07	82.0	58286	72.12	NG	93
34)	*Acenaphthene-d10		16.31	164.0	88053	40.00	NG	97
38)	2-Fluorobiphenyl	(S)	14.44	172.0	131663	65.33	NG	90
55)	*Phenanthrene-d10		20.76	188.0	163845	40.00	NG	85
67)	*Chrysene-d12		28.91	240.0	177385	40.00	NG	83
70)	Terphenyl-d14	(S)	25.91	244.0	228164	72.00	NG	88
	*Perylene-d12		33.00	264.0	193090	40.00	NG	97

* Compound is ISTD

NES 00142



Data File: >D4575::A4 Quant Output File: ^D4575::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-11,S,30.0,1,1,PL-091, BTL#20

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

Operator ID: BNA3
Quant Time : 950502 11:04
Injected at: 950502 09:46

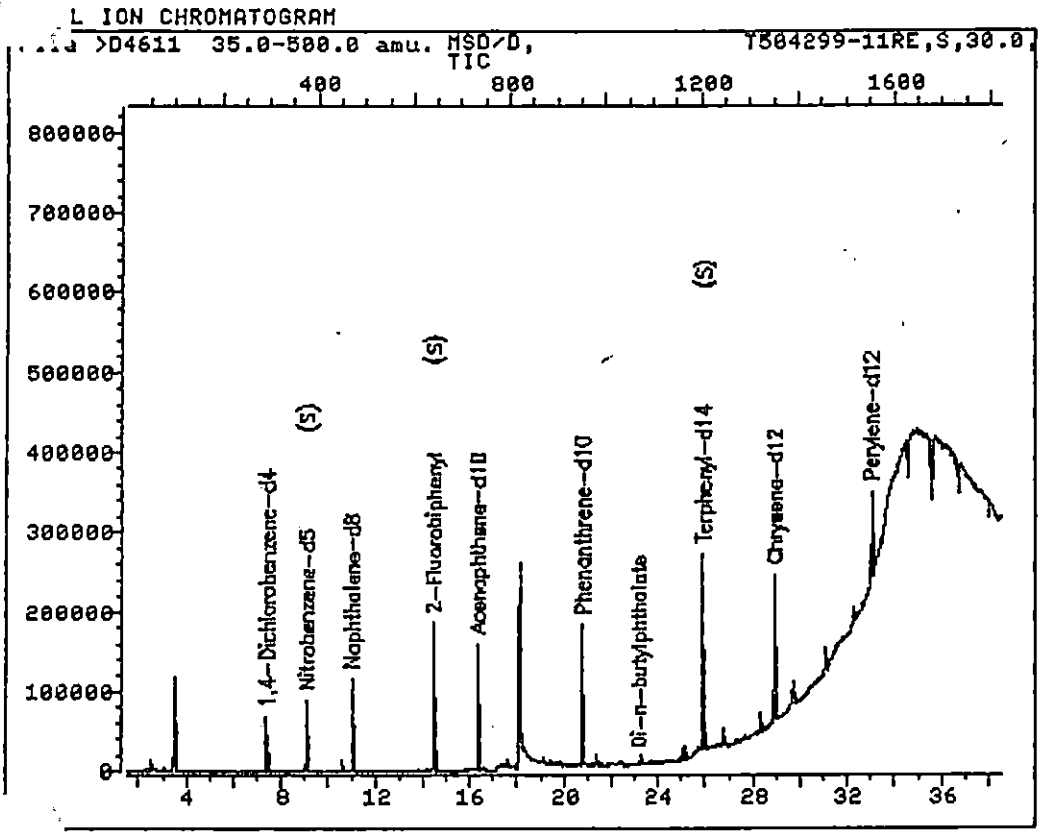
NES 00143

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950502 11:04
Output File: ^D4575::QT Injected at: 950502 09:46
Data File: >D4575::A4 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-11,S,30.0,1,1,PL-091, BTL#20

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		8.22	152.0	13028	40.00	NG	92
19)	*Naphthalene-d8		11.87	136.0	71905	40.00	NG	99
20)	Nitrobenzene-d5	(S)	9.90	82.0	38877	77.81	NG	88
34)	*Acenaphthene-d10		17.24	164.0	47711	40.00	NG	98
38)	2-Fluorobiphenyl	(S)	15.31	172.0	71306	65.30	NG	92
55)	*Phenanthrene-d10		21.73	188.0	81986	40.00	NG	74
65)	Di-n-butylphthalate		24.07	149.0	4550	1.27	NG	92
67)	*Chrysene-d12		29.98	240.0	77570	40.00	NG	83
	Terphenyl-d14	(S)	26.90	244.0	112991	81.54	NG	82
	*Perylene-d12		34.09	264.0	63467	40.00	NG	96

* Compound is ISTD



Data File: >D4611::A3 Quant Output File: ^D4611::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-11RE,S,30.0,1,1,PL-091 RE, BTL#14

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:13
Injected at: 950504 03:00

NES 00145

QUANT REPORT Page 1

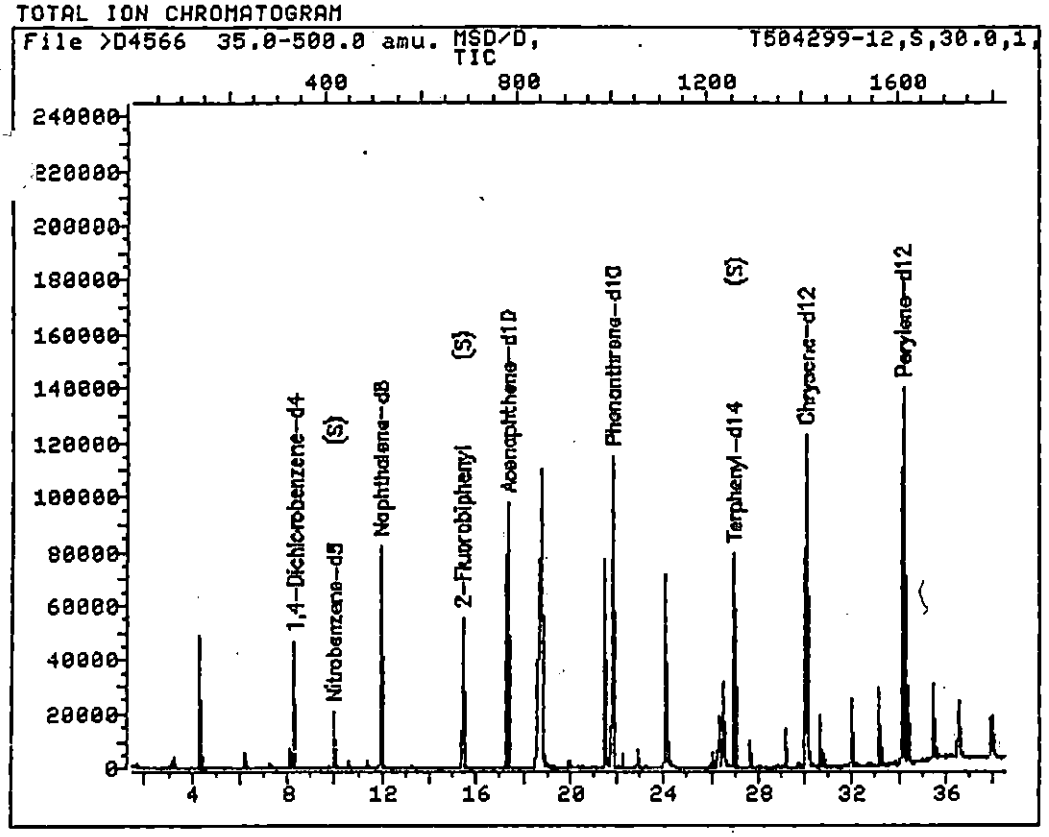
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:13
Output File: ^D4611::QT Injected at: 950504 03:00
Data File: >D4611::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-11RE,S,30.0,1,1,PL-091 RE, BTL#14

ID File: IDDBNA::FB,
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.39	152.0	23139	40.00	NG	97
19)	*Naphthalene-d8		11.00	136.0	121439	40.00	NG	97
20)	Nitrobenzene-d5	(S)	9.05	82.0	62304	73.84	NG	89
34)	*Acenaphthene-d10		16.31	164.0	89082	40.00	NG	98
38)	2-Fluorobiphenyl	(S)	14.44	172.0	137389	67.38	NG	90
55)	*Phenanthrene-d10		20.76	188.0	162597	40.00	NG	80
65)	Di-n-butylphthalate		23.16	149.0	8067	1.13	NG	91
67)	*Chrysene-d12		28.91	240.0	168825	40.00	NG	79
	Terphenyl-d14	(S)	25.91	244.0	237259	78.67	NG	86
78)	*Perylene-d12		32.98	264.0	159500	40.00	NG	98

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >D4566::A4 Quant Output File: ^D4566::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-12,S,30.0,1,1,PL-092, BTL#11

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

Operator ID: BNA3
Quant Time : 950502 10:37
Injected at: 950502 01:19

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950502 10:37
tput File: ^D4566::QT Injected at: 950502 01:19
ta File: >D4566::A4 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-12,S,30.0,1,1,PL-092, BTL#11

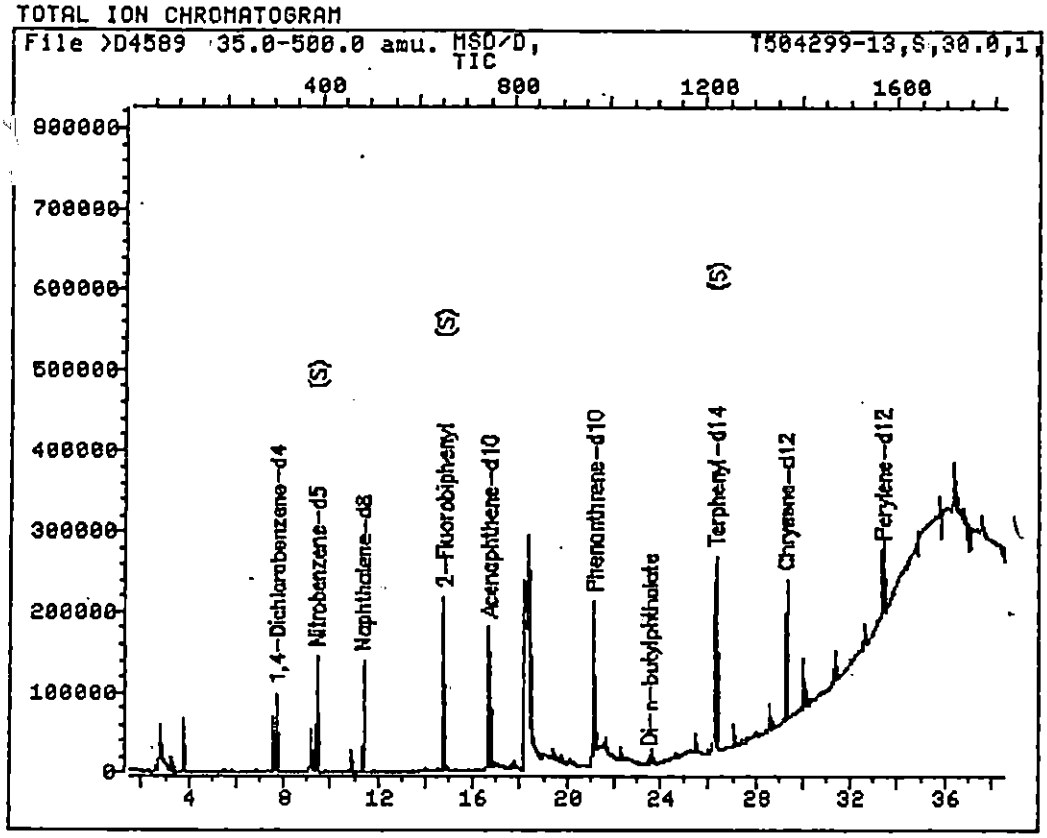
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		8.26	152.0	17497	40.00	NG	99
19)	*Naphthalene-d8		11.91	136.0	87301	40.00	NG	90
20)	Nitrobenzene-d5	(S)	9.94	82.0	14705	24.24	NG	83
34)	*Acenaphthene-d10		17.30	164.0	63256	40.00	NG	96
38)	2-Fluorobiphenyl	(S)	15.35	172.0	42213	29.16	NG	96
55)	*Phenanthrene-d10		21.80	188.0	114674	40.00	NG	92
67)	*Chrysene-d12		30.03	240.0	129681	40.00	NG	89
70)	Terphenyl-d14	(S)	26.93	244.0	70417	30.40	NG	84
76)	*Perylene-d12		34.17	264.0	157494	40.00	NG	96

* Compound is ISTD

o hrstn

TOTAL ION CHROMATOGRAM



Data File: >D4589::A2 Quant Output File: ^D4589::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-13,S,30.0,1,1,PL-093, BTL#13

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 09:57
Injected at: 950503 06:07

NES 00149

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 09:57
Output File: ^D4589::QT Injected at: 950503 06:07
Data File: >D4589::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-13,S,30.0,1,1,PL-093, BTL#13

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

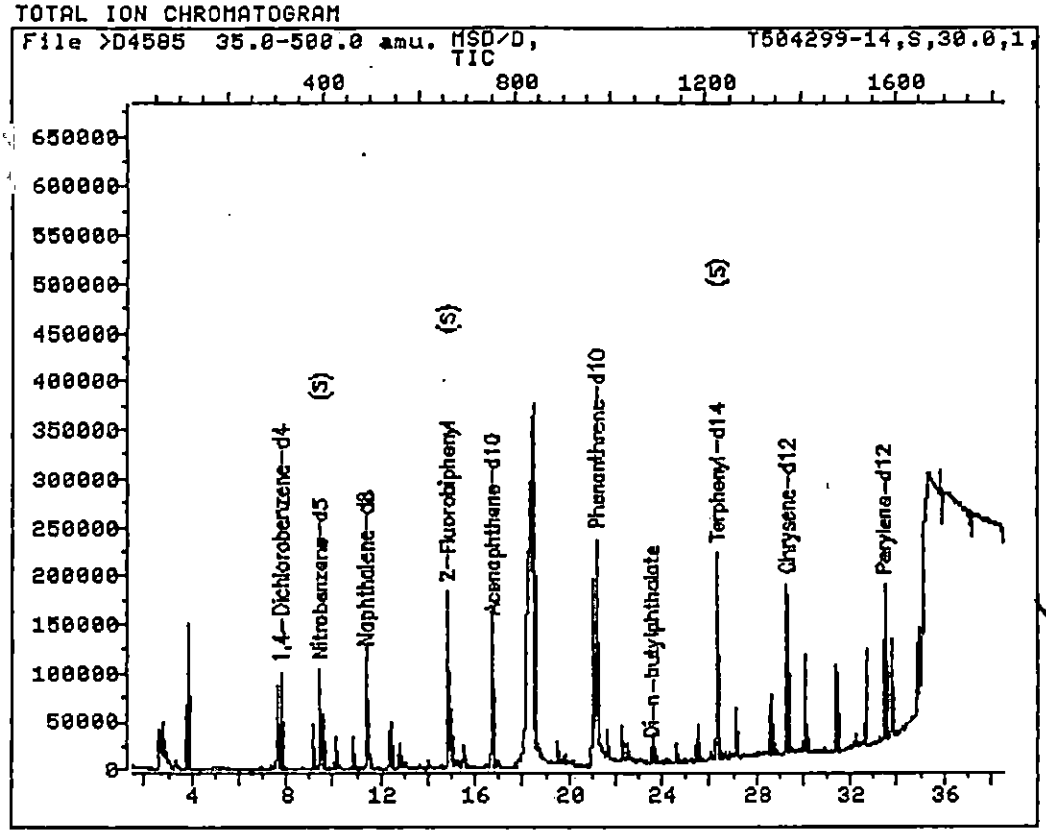
	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.69	152.0	32622	40.00	NG	98
19)	*Naphthalene-d8		11.30	136.0	136769	40.00	NG	91
20)	Nitrobenzene-d5	(S)	9.35	82.0	96509	101.55	NG	93
34)	*Acenaphthene-d10		16.63	164.0	103850	40.00	NG	95
38)	2-Fluorobiphenyl	(S)	14.75	172.0	169121	71.15	NG	96
55)	*Phenanthrene-d10		21.11	188.0	176317	40.00	NG	69
65)	Di-n-butylphthalate		23.49	149.0	14436	1.87	NG	92
67)	*Chrysene-d12		29.27	240.0	168306	40.00	NG	84
70)	Terphenyl-d14	(S)	26.25	244.0	230623	76.71	NG	82
76)	*Perylene-d12		33.35	264.0	128028	40.00	NG	96

* Compound is ISTD

o hits

NES 00150

TOTAL ION CHROMATOGRAM



Data File: >D4585::A2 Quant Output File: ^D4585::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-14,S,30.0,1,1,PL-094, BTL# 9

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 09:44
Injected at: 950503 02:49

NES 00151

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 09:44
put File: ^D4585::QT Injected at: 950503 02:49
a File: >D4585::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-14,S,30.0,1,1,PL-094, BTL# 9

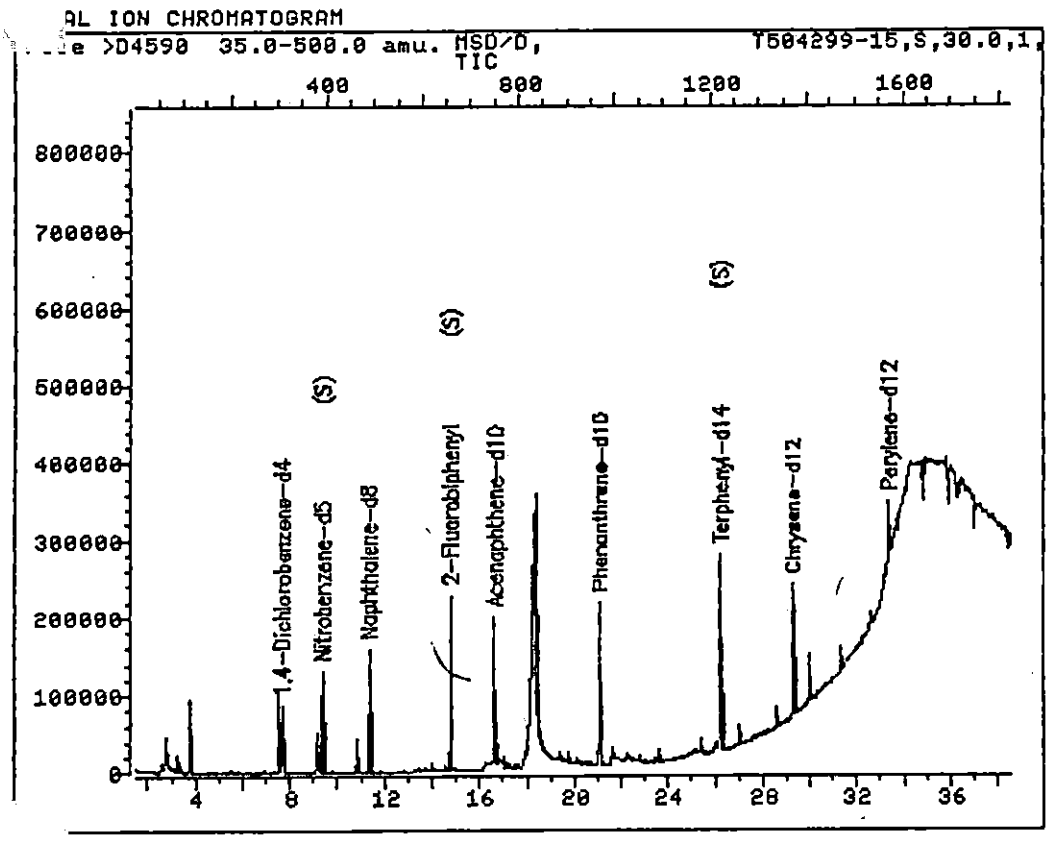
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.73	152.0	33199	40.00	NG	97
19)	*Naphthalene-d8		11.34	136.0	129899	40.00	NG	97
20)	Nitrobenzene-d5	(S)	9.39	82.0	70630	78.25	NG	92
34)	*Acenaphthene-d10		16.68	164.0	98016	40.00	NG	98
38)	2-Fluorobiphenyl	(S)	14.79	172.0	134595	59.99	NG	97
55)	*Phenanthrene-d10		21.14	188.0	138103	40.00	NG	78
65)	Di-n-butylphthalate		23.52	149.0	19358	3.20	NG	91
67)	*Chrysene-d12		29.32	240.0	179595	40.00	NG	87
70)	Terphenyl-d14	(S)	26.29	244.0	204866	63.86	NG	85
76)	*Perylene-d12		33.41	264.0	190972	40.00	NG	96

* Compound is ISTD

o hits

NES 00152



Data File: >D4590::A2 Quant Output File: ^D4590::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-15,S,30.0,1,1,PL-095, BTL#14

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 10:04
Injected at: 950503 06:57

NES 00153

QUANT REPORT Page 1

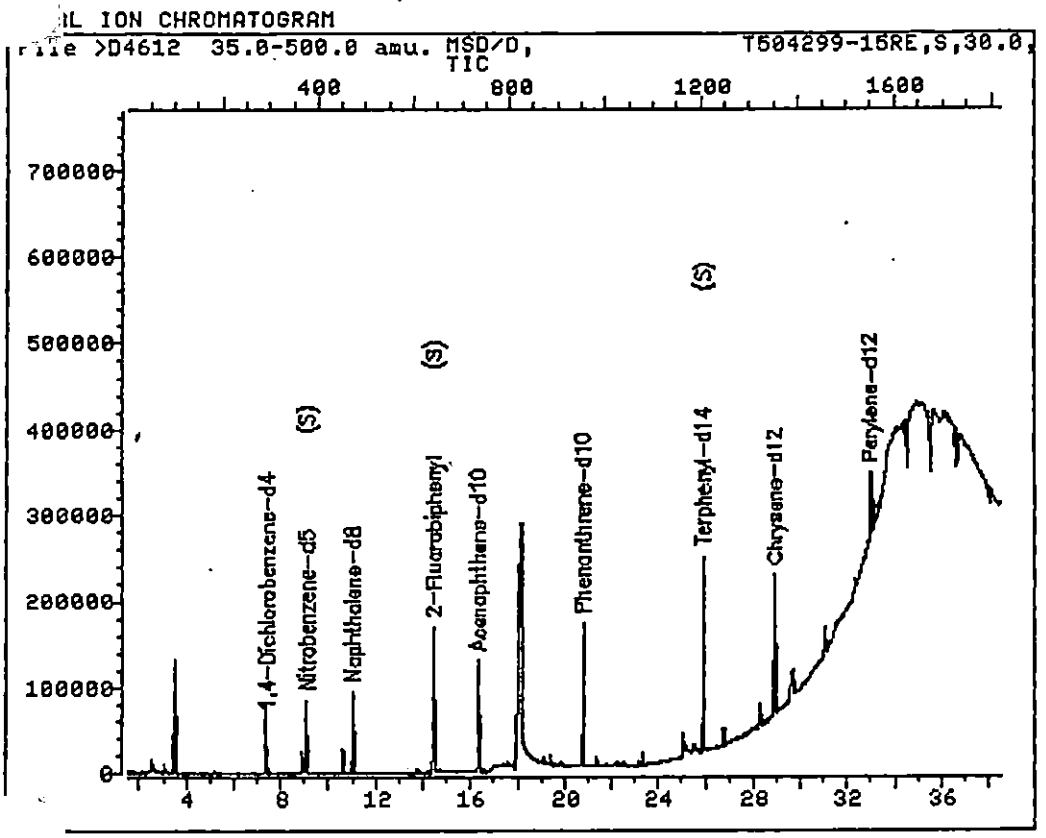
Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 10:04
Output File: ^D4590::QT Injected at: 950503 06:57
Data File: >D4590::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-15,S,30.0,1,1,PL-095, BTL#14

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.67	152.0	33861	40.00	NG	96
19)	*Naphthalene-d8		11.30	136.0	140699	40.00	NG	88
20)	Nitrobenzene-d5	(S)	9.35	82.0	91489	93.58	NG	95
34)	*Acenaphthene-d10		16.63	164.0	101651	40.00	NG	94
38)	2-Fluorobiphenyl	(S)	14.75	172.0	160467	68.97	NG	93
55)	*Phenanthrene-d10		21.09	188.0	179010	40.00	NG	74
67)	*Chrysene-d12		29.25	240.0	174377	40.00	NG	86
[illegible]	Terphenyl-d14	(S)	26.23	244.0	240313	77.15	NG	84
	*Perylene-d12		33.34	264.0	115250	40.00	NG	96

* Compound is ISTD

o hilds



Data File: >D4612::A3 Quant Output File: ^D4612::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-15RE,S,30.0,1,1,PL-095 RE, BTL#15

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

Operator ID: BNA3
Quant Time : 950504 10:18
Injected at: 950504 03:49

NES 00155

QUANT REPORT Page 1

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950504 10:18
Output File: ^D4612::QT Injected at: 950504 03:49
Data File: >D4612::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-15RE,S,30.0,1,1,PL-095 RE, BTL#15

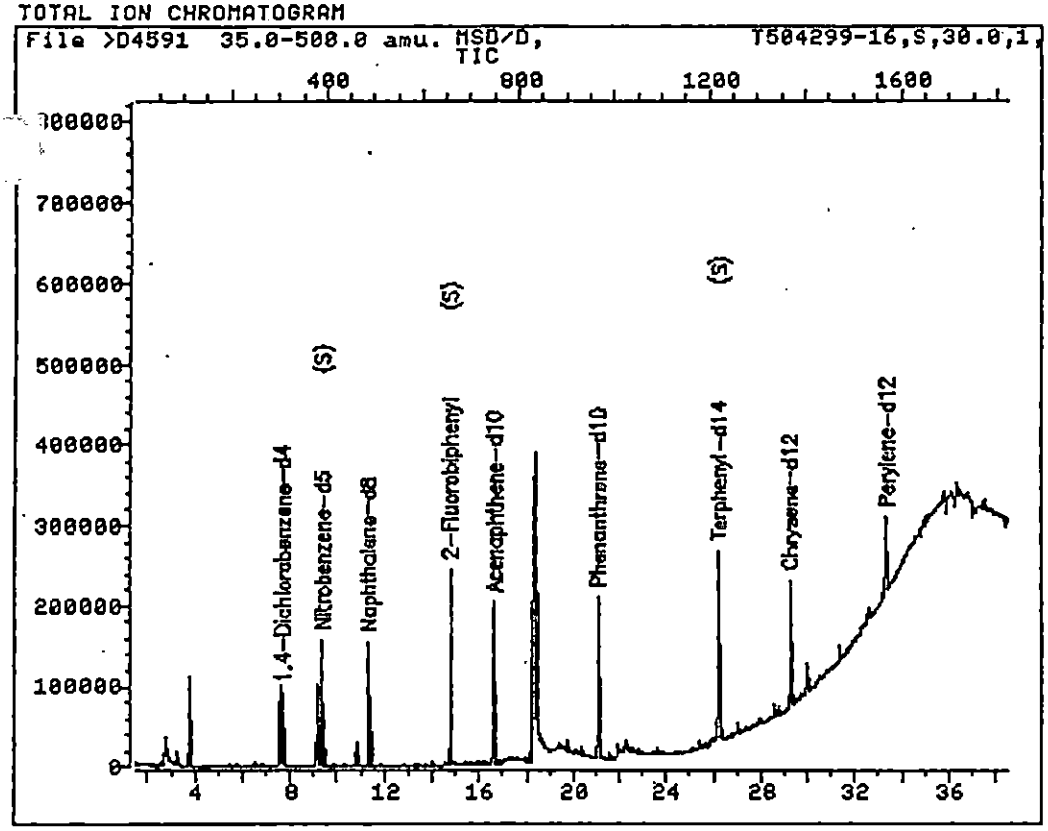
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 17:36

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.39	152.0	20287	40.00	NG	94
19)	*Naphthalene-d8		11.00	136.0	106664	40.00	NG	96
20)	Nitrobenzene-d5	(S)	9.05	82.0	58530	78.97	NG	95
34)	*Acenaphthene-d10		16.29	164.0	76820	40.00	NG	97
38)	2-Fluorobiphenyl	(S)	14.43	172.0	122828	69.86	NG	92
55)	*Phenanthrene-d10		20.74	188.0	141319	40.00	NG	78
67)	*Chrysene-d12		28.89	240.0	145966	40.00	NG	77
7[illegible]	Terphenyl-d14	(S)	25.89	244.0	205390	78.77	NG	83
	*Perylene-d12		32.95	264.0	121666	40.00	NG	97

* Compound is ISTD

NES 00156

TOTAL ION CHROMATOGRAM



Data File: >D4591::A2 Quant Output File: ^D4591::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-16,S,30.0,1,1,PL-096, BTL#15

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 10:16
Injected at: 950503 07:46

NES 00157

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 10:16
Output File: ^D4591::QT Injected at: 950503 07:46
Data File: >D4591::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-16,S,30.0,1,1,PL-096, BTL#15

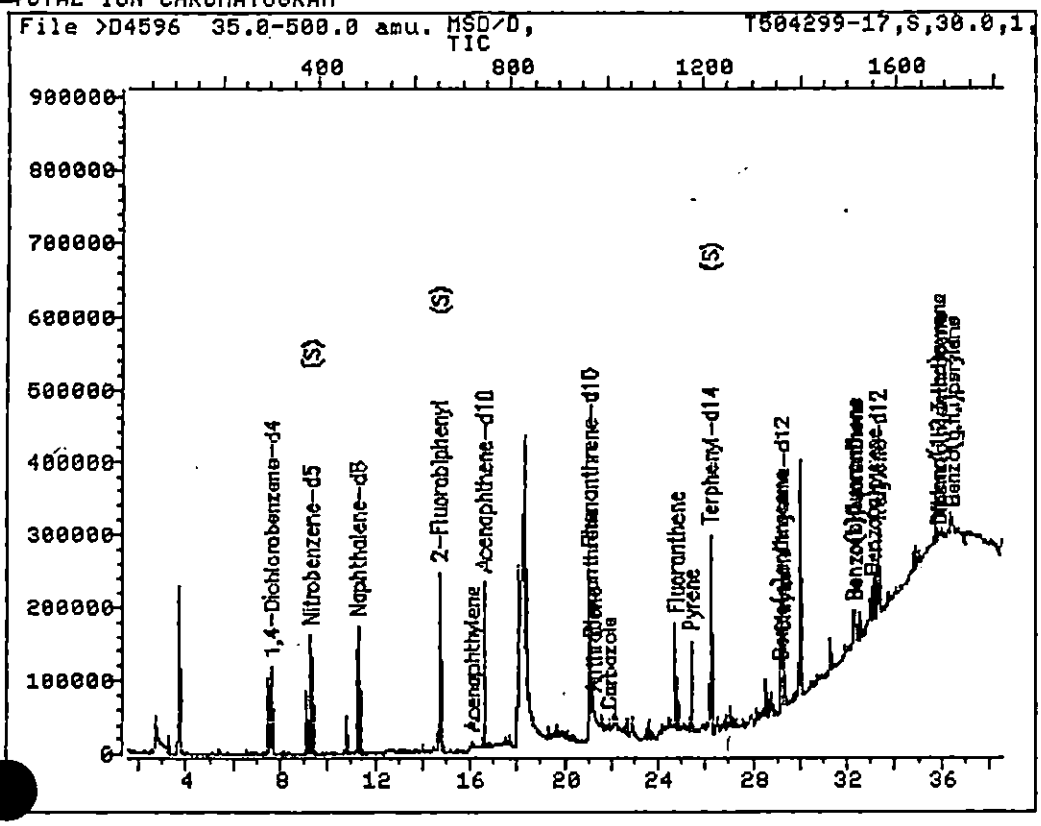
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.67	152.0	32039	40.00	NG	99
19)	*Naphthalene-d8		11.28	136.0	138858	40.00	NG	87
20)	Nitrobenzene-d5	(S)	9.33	82.0	100443	104.10	NG	92
34)	*Acenaphthene-d10		16.61	164.0	105941	40.00	NG	94
38)	2-Fluorobiphenyl	(S)	14.73	172.0	174881	72.12	NG	95
55)	*Phenanthrene-d10		21.06	188.0	180259	40.00	NG	77
67)	*Chrysene-d12		29.23	240.0	166334	40.00	NG	85
70)	Terphenyl-d14	(S)	26.21	244.0	244205	82.19	NG	84
76)	*Perylene-d12		33.33	264.0	124940	40.00	NG	97

* Compound is ISTD

NES 00158

TOTAL ION CHROMATOGRAM



Data File: >D4596::A2 Quant Output File: ^D4596::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-17,S,30.0,1,1,PL-097, BTL#20

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 12:36
Injected at: 950503 11:56

NES 00159

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 12:36
Output File: ^D4596::QT Injected at: 950503 11:56
Data File: >D4596::A2 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-17,S,30.0,1,1,PL-097, BTL#20

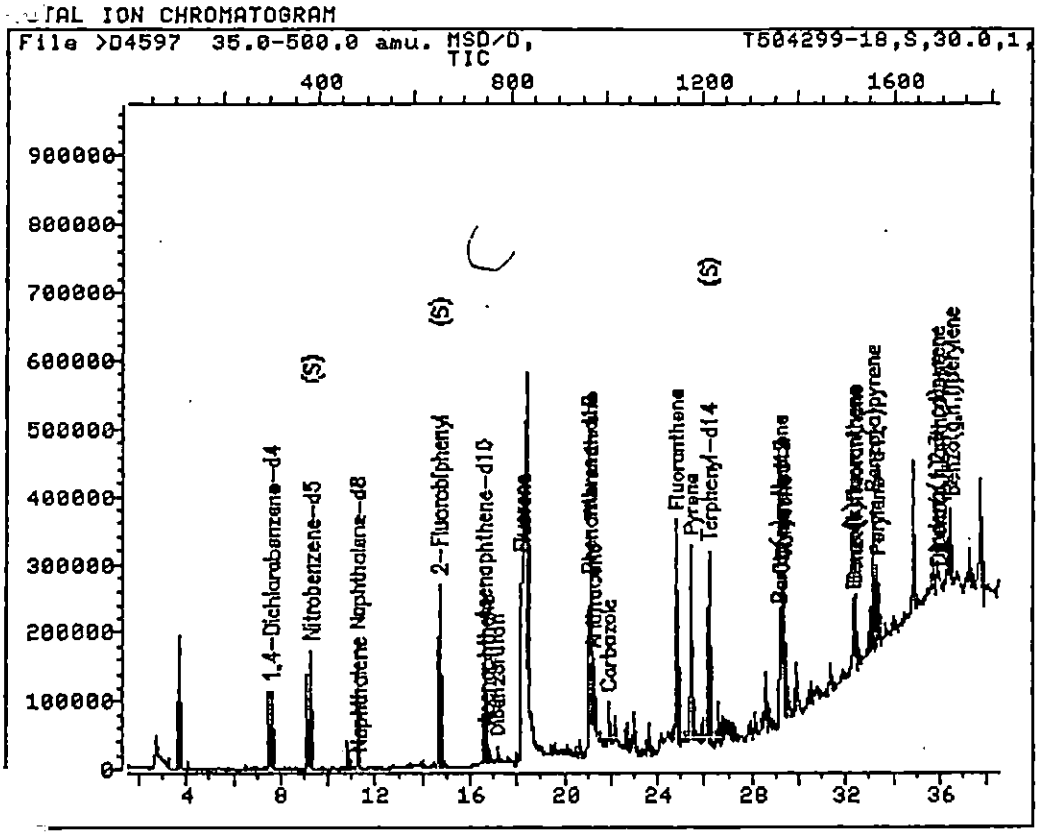
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.62	152.0	38103	40.00	NG	96
19)	*Naphthalene-d8		11.25	136.0	164050	40.00	NG	77
20)	Nitrobenzene-d5	(S)	9.28	82.0	123040	107.94	NG	91
34)	*Acenaphthene-d10		16.57	164.0	122223	40.00	NG	96
38)	2-Fluorobiphenyl	(S)	14.68	172.0	189401	67.70	NG	93
41)	Acenaphthylene		16.08	152.0	7874	1.17	NG	94
55)	*Phenanthrene-d10		21.03	188.0	192474	40.00	NG	64
42)	Phenanthrene		21.09	178.0	66968	13.64	NG	96
	Anthracene		21.21	178.0	10578	2.07	NG	93
	Carbazole		21.88	167.0	7387	1.37	NG	87
66)	Fluoranthene		24.74	202.0	133823	19.09	NG	81
67)	*Chrysene-d12		29.20	240.0	184123	40.00	NG	82
69)	Pyrene		25.37	202.0	127951	25.36	NG	96
70)	Terphenyl-d14	(S)	26.17	244.0	248700	75.61	NG	81
72)	Benzo(a)anthracene		29.13	228.0	43232	7.36	NG	93
74)	Chrysene		29.26	228.0	63476	14.24	NG	93
76)	*Perylene-d12		33.28	264.0	153512	40.00	NG	96
78)	Benzo(b)fluoranthene		32.27	252.0	53588	12.72	NG	82
79)	Benzo(k)fluoranthene		32.31	252.0	42508M	15.33	NG	78
80)	Benzo(a)pyrene		33.09	252.0	41257	11.62	NG	84
81)	Indeno(1,2,3-cd)pyrene		35.84	276.0	26345	5.96	NG	81
82)	Dibenz(a,h)anthracene		35.91	278.0	9786	2.99	NG	88
83)	Benzo(g,h,i)perylene		36.44	276.0	26954	7.04	NG	86

* Compound is ISTD

12 hits

TAL ION CHROMATOGRAM



Data File: >D4597::A3 Quant Output File: ^D4597::QT
Name: MSD/D, Instrument ID: D
Misc: T504299-18,S,30.0,1,1,PL-098, BTL#21

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

Operator ID: BNA3
Quant Time : 950503 13:26
Injected at: 950503 12:47

NES 00161

QUANT REPORT Page 1

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950503 13:26
Output File: ^D4597::QT Injected at: 950503 12:47
Data File: >D4597::A3 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: T504299-18,S,30.0,1,1,PL-098, BTL#21

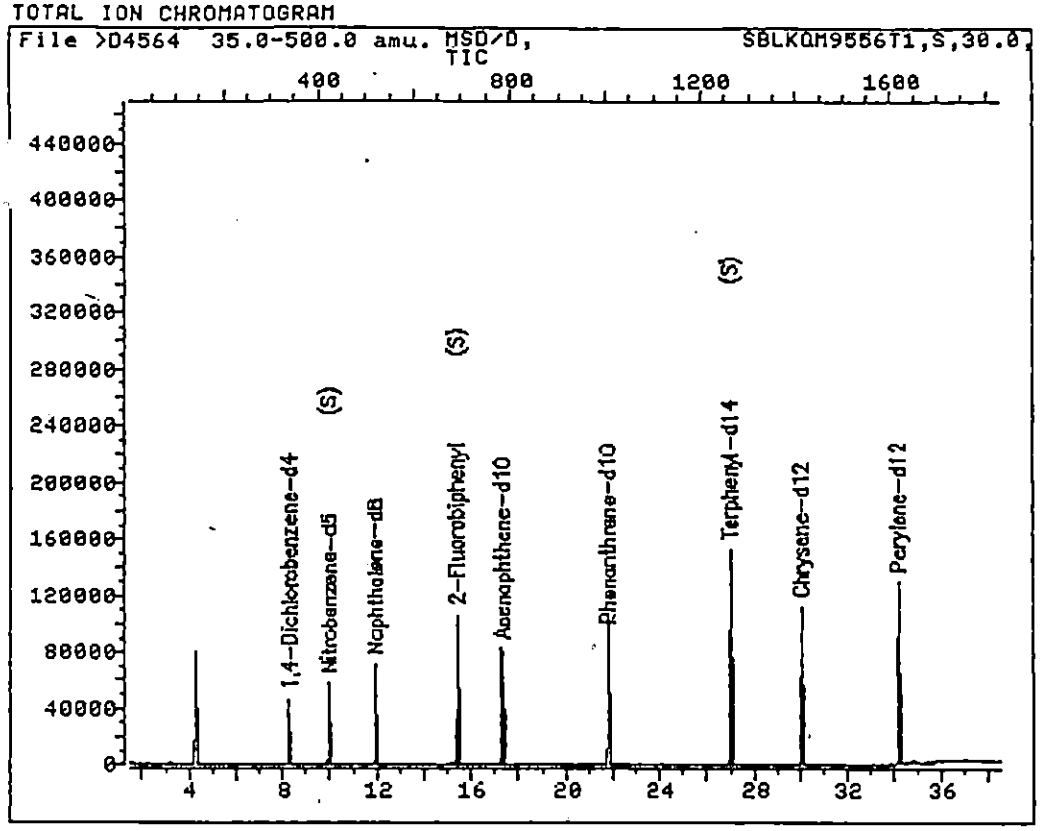
ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950503 02:00

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		7.63	152.0	35503	40.00	NG	94
19)	*Naphthalene-d8		11.24	136.0	159433	40.00	NG	81
20)	Nitrobenzene-d5	(S)	9.29	82.0	114528	103.38	NG	96
29)	Naphthalene		11.28	128.0	4413	1.22	NG	96
34)	*Acenaphthene-d10		16.56	164.0	119313	40.00	NG	94
38)	2-Fluorobiphenyl	(S)	14.69	172.0	186494	68.29	NG	92
44)	Acenaphthene		16.66	154.0	19600	5.93	NG	98
47)	Dibenzofuran		17.15	168.0	17839	3.84	NG	90
	Fluorene		18.19	166.0	18661	5.13	NG	99
	*Phenanthrene-d10		21.04	188.0	192448	40.00	NG	57
62)	Phenanthrene		21.10	178.0	275281	56.07	NG	92
63)	Anthracene		21.22	178.0	78396	15.31	NG	92
64)	Carbazole		21.87	167.0	53295	9.89	NG	89
66)	Fluoranthene		24.77	202.0	402876	57.47	NG	83
67)	*Chrysene-d12		29.21	240.0	167515	40.00	NG	79
69)	Pyrene		25.40	202.0	354119	77.16	NG	91
70)	Terphenyl-d14	(S)	26.18	244.0	237656	79.42	NG	80
72)	Benzo(a)anthracene		29.15	228.0	174051	32.57	NG	91
74)	Chrysene		29.29	228.0	144750	35.69	NG	91
76)	*Perylene-d12		33.29	264.0	135115	40.00	NG	97
78)	Benzo(b)fluoranthene		32.31	252.0	145129	39.12	NG	81
79)	Benzo(k)fluoranthene		32.35	252.0	77409M	31.71	NG	76
80)	Benzo(a)pyrene		33.13	252.0	95887	30.68	NG	82
81)	Indeno(1,2,3-cd)pyrene		35.86	276.0	53617	13.78	NG	75
82)	Dibenz(a,h)anthracene		35.92	278.0	24407	8.47	NG	89
83)	Benzo(g,h,i)perylene		36.48	276.0	44112	13.09	NG	80

* Compound is ISTD

NES 00162

TOTAL ION CHROMATOGRAM



Data File: >D4564::A4 Quant Output File: ^D4564::QT
Name: MSD/D, Instrument ID: D
Misc: SBLKQM9556T1,S,30.0,1,1,SBLKQM9556T1, BTL# 9

Id File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

Operator ID: BNA3
Quant Time : 950502 10:33
Injected at: 950501 23:41

NES 00163

Operator ID: BNA3 Quant Rev: 7 Quant Time: 950502 10:33
Input File: ^D4564::QT Injected at: 950501 23:41
Data File: >D4564::A4 Dilution Factor: 1.00000
Name: MSD/D, Instrument ID: D
Misc: SBLKQM9556T1,S,30.0,1,1,SBLKQM9556T1, BTL# 9

ID File: IDDBNA::FB
Title: GC/MS METHOD 8270 FOR BASE/NEUTRAL & ACID EXTRACTABLES
Last Calibration: 950502 09:36 Last Qcal Time: 950501 22:51

	Compound		R.T.	Q ion	Area	Conc	Units	q
1)	*1,4-Dichlorobenzene-d4		8.26	152.0	17887	40.00	NG	91
19)	*Naphthalene-d8		11.91	136.0	80246	40.00	NG	92
20)	Nitrobenzene-d5	(S)	9.94	82.0	38115	68.36	NG	82
34)	*Acenaphthene-d10		17.28	164.0	57303	40.00	NG	98
38)	2-Fluorobiphenyl	(S)	15.35	172.0	94022	71.69	NG	94
55)	*Phenanthrene-d10		21.78	188.0	106700	40.00	NG	96
67)	*Chrysene-d12		30.03	240.0	125209	40.00	NG	90
70)	Terphenyl-d14	(S)	26.95	244.0	168308	75.25	NG	90
76)	*Perylene-d12		34.17	264.0	151866	40.00	NG	96

* Compound is ISTD

NES 00164

BATCH NO. QM9556
CASE NO. _____

LRI SAMPLE PREP LOG

Rog BN SOIL EXT.

LRI SAMPLE NUMBER	SAMPLE AMT. (gr)	DATE	PH	FINAL VOLUME (ml) SOIL MS BNA	SOIL GC	WATER MS BN	WATER MS A	WATER MS BNA	WATER GC	VER SUR	VER SPK	COMMENTS
T504299-01	30.0	4/21		1.0						05		
-02	30.0			1.0						05		
-03	30.0			1.0						05		
-04	30.0			1.0						05		
-05	30.0			1.0						05		
-06	30.0			1.0						05		
-07	30.0			1.0						05		
-08	30.0			1.0						05		
-09	30.0			1.0						05		
-10	30.0			1.0						05		
-11	30.0			1.0						05		
-12	30.0			1.0						05		
-13	30.0			1.0						05		
-14	30.0			1.0						05		
-15	30.0			1.0						05		
-16	30.0			1.0						05		
-17	30.0			1.0						05		
-18	30.0	↓		1.0						05		
QBLANKB	30.0	4/21		1.0						05		
QBKSPKBS	30.0	↓		1.0						05	05	
T504299MS 12	30.0	↓		1.0						05	05	
T504299MSD12	30.0	↓		1.0						06	05	

JA 4/24/95

JA 4/24/95

MATRIX: Solid ✓ Liquid (H2O) ___ Sludge ___ Oil ___ Solvent ___
Other _____

TESTS: BN ✓ BNA ___ CLP-PCB/Pest & BNA ___ Herb ___
PCB/PEST ___ ASP-PCB/Pest & BNA ___ Other ___

METHODS: Low ✓ Medium ___ Waste Dilution ___ Other ___

EXTRACTION: Continuous ___ Sep funnel ___ Soxhlet ___ Sonication ✓
Signature Octavio Ortiz Date 4/21/95

CLEANUP: Sulfur ___ GPC ___ Fluorisil ___ Other ___
Signature _____ Date _____

SETUP: Signature Octavio Ortiz Date 4/21/95

SPIKE	VOL (ml)	CONC (ug/ml)	LOT NO.
Blank Spike	1.0	100/200	ES795-38
QC MS/MSD	↓	↓	↓
Surrogate	1.0	100	ES795-42

SUPERVISOR Manuel Mercedes

06123

LRI GC-MS ANALYSIS LOG

DATE (START) 5-1-95 END _____

TEST _____

QA/QC TYPE _____

GC-MS D · GL INJ _____

TUNE FILE MTD001

SEQUENCE FILE _____

METHOD FILE MEBNA0 DFTPPD

ID FILE IDDBNA

CB FILE CBDBNA

ANALYSTS IDV

SUPERVISOR _____

BATCH #s _____

CASE # _____

TAPE # _____

STANDARD	CONC PPM	LOT NO	LOT VOL
SSTD #160	80	T225	
120	60	T226	
080	40	T227	
050	25	T228	
020	10	T229	
SSTD 100 ppm		T224	
DFTPP		T231	
SUIS	4000	A004580	

SAMPLE NUMBER	DATA FILE	VOA AMT	DIL FACT	ALS #	INJ TIME	COMMENTS	SUR	IS	TIC
DFTPP	D4556			1	16:28	ES,408			
SSTD050	57			2		OK for BNA 8270 IDD502 CBD502			
020	58			3					
080	59			4					
120	60			5					
160	61			6					
DFTPP	62			7	22:18	ES,409			
SSTD050	63			8		OK			
SBLKQ4955GTJ	64			9		OK	✓	✓	
SBLKQ4955GMS	65			10		OK	✓	✓	
T304299-12	66			11		OK	✓	✓	
4299-12MS	67			12		OK	✓	✓	
4299-12MSD	68			13		OK	✓	✓	
4299-04	69			14		OK	✓	✓	
4299-05	70			15		RR	✓	#6 ↓	
-06	71			16		RR	✓		
-07	72			17		RR	✓		
-09	73			18			✓		
-10	74			19		OK D4610 C-F	✓		
-11	75			20		OK ~~STOPED~~ D4611 ~~RR~~	✓		
-14	76			21		out of 12 hrs	✓	↓	
	77			22					
	78			23					
	79			24					
	80			25					

LRI GC-MS ANALYSIS LOG

DATE (START) 5/2/95 END _____
TEST _____
QA/QC TYPE _____
GC-MS D GL INJ _____
TUNE FILE MTD001
SEQUENCE FILE _____
METHOD FILE MEBNAD, DFTPPD
ID FILE IDDBNA
CB FILE CBDBNA
ANALYSTS KAV
SUPERVISOR _____
BATCH #s _____
CASE # _____
TAPE # _____

STANDARD	CONC PPM	LOT NO	LOT VOL
SSTD160			
120			
080			
050			
040			
See PS			

SAMPLE NUMBER	DATA FILE	VOA AMT	DIL FACT	ALS #	INJ TIME	COMMENTS	SUR	IS	TIC
DFTPP	D4577			1	21:14	ES349			
SSTD040	D4578			2					
050	79			3					
080	80			4		OK			
120	81			5		IDD502			
160	82			6		CBD502			
DFTPP	83			7	1:42	ES, 349			
SSTD050	84			8		OK			
TS04299-14	85			9		/ OK	/	/	
TS04299-01	86			10		/ RR	/	#6L	
-02	87			11		OK D4607 C-F/ RR	/		
-08	88			12		OK D4608 C-F/ RR	/	↓	
-13	89			13		/ OK	/	/	
-15	90			14		OK D4612 C-F/ RR	/	#6L	
-16	91			15		/ OK	/	/	
-05	92			16		/ OK	/	/	
-06	93			17		/ OK	/	/	
-07	94			18		/ OK	/	/	
-03	95			19		/ OK	/	/	
-17	96			20		/ OK	/	/	
-18	97			21		-OK	/	-	

LRI GC-MS ANALYSIS LOG

DATE (START) 5/3/95 END _____
TEST _____
QA/QC TYPE _____
GC-MS D GL INJ _____
TUNE FILE MTDOOL
SEQUENCE FILE _____
METHOD FILE MEBNAD DFTDOD
ID FILE IDDBNA
CB FILE CBDBNA
ANALYSTS KOV
SUPERVISOR _____
BATCH #s _____
CASE # _____
TAPE # _____

STANDARD	CONC PPM	LOT NO	LOT VOL
SSTD160	80	T225	
120	60	T226	
080	40	T227	
050	25	T228	
020	10	T229	
SSTD 100ppm		T224	
DFTPP		T231	
SUIS	4000	A004580	

SAMPLE NUMBER	DATA FILE	VOA AMT	DIL FACT	ALS #	INJ TIME	COMMENTS	SUR	IS	TIC
DFTPP	D4598			1	~~17:15~~ 14:45	ES,33			
SSTD050	99			2					
090	D4600			3		OK IDDS03 CBDS03			
080	1			4					
120	2			5					
160	3			6					
DFTPP	4			7	21:45	ES,34			
SSTD050	5			8		NO Good			
T504299-01	6			9		OK	✓	✓	
T504299-02	7			10			✓	#6 ↓	
T504299-08	8			11			✓	↓	
T504299-09	9			12		0/C	✓	✓	
T504299-10	10			13			✓	#6 ↓	
T504299-11	11			14			✓	↓	
T504299-15	12			15	3:49		✓	↓	
				16					
				17					
				18					
				19					
				20					

126 025

GC CONFORMANCE/NONCONFORMANCE SUMMARY

		No	Yes
1.	Chromatograms Labeled/Compounds Identified	___	✓
2.	Standards Summary Submitted	___	✓
3.	Calibration Frequency Initial calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis	___	✓
4.	Blank Contamination If yes, list compounds and concentrations in each blank:	✓	___
	a. Volatile Fraction ___		
	b. Pesticides/PCBs ___		
	c. Herbicide Fraction ___		
	d. Other ___		
5.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	___	✓
	a. Volatile Fraction ___		
	b. Pesticides/PCBs ___		
	c. Herbicide Fraction ___		
	d. Other ___		
	If not met, were the calculations checked and the results qualified as estimated?	___	___
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range:	___	✓
	a. Volatile Fraction ___		
	b. Pesticides/PCBs ___		
	c. Herbicide Fraction ___		
	d. Other ___		
7.	Retention Time Shifts Meet Criteria If not, list those samples which fall outside the acceptable range:	___	✓
	a. Volatile Fraction ___		
	b. Pesticides/PCBs ___		
	c. Herbicide Fraction ___		
	d. Other ___		
8.	Extraction Holding Time Met If not met, list analysis and number of days exceeded for each sample:	___	N/A
	___		
	___		
	___		
9.	Analysis Holding Time Met If not met, list analysis and number of days exceeded for each sample:	___	✓
	___		
	___		
	___		

Laboratory Supervisor: Andy Panagiotou Date: 12-22-95

ORGANICS ANALYSIS DATA SHEET-VOLATILE COMPOUNDS

Client Sample ID No.: PL-098

Lab Name: LRI

Lab Sample ID: T504299-18B

Matrix: [soil/water] SOIL

Lab File ID: >H9776

Sample wt/vol: 5.0 [g/mL] G

Run Type: 8021SVOA

Level: [low/med] LOW

Date Received: 04/20/95

% Moisture: 5.0

Date Analyzed : 04/26/95

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
71-43-2	Benzene	.53	U
108-88-3	Toluene	.53	U
100-41-4	Ethylbenzene	.53	U
108-38-3	meta + para-Xylenes	1.10	U
95-47-6	ortho-Xylene	.53	U
98-82-8	Isopropylbenzene	.53	U
103-65-1	n-Propylbenzene	.53	U
99-87-6	p-Isopropyltoluene	.53	U
108-67-8	1,3,5-Trimethylbenzene	.53	U
95-63-6	1,2,4-Trimethylbenzene	.53	U
98-06-6	tert-Butylbenzene	.53	U
1634-04-4	Methyl-tert-butyl ether	.53	U
135-98-8	sec-Butylbenzene	.53	U
104-51-8	n-Butylbenzene	.53	U
91-20-3	Naphthalene	.53	U

ADF: 1.09

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-VOLATILE COMPOUNDS

Lab Name: LRI

Client Sample ID No.: VBLK23

Lab Sample ID: VBLK-QH0423

Matrix: [soil/water] SOIL

Lab File ID: >H9711

Sample wt/vol: 5.0 [g/mL] G

Run Type: 8021SVOA

Level: [low/med] LOW

Date Received:

% Moisture: 0.0

Date Analyzed : 04/23/95

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
71-43-2	Benzene	.50	U
108-88-3	Toluene	.50	U
100-41-4	Ethylbenzene	.50	U
108-38-3	meta + para-Xylenes	1.00	U
95-47-6	ortho-Xylene	.50	U
98-82-8	Isopropylbenzene	.50	U
103-65-1	n-Propylbenzene	.50	U
99-87-6	p-Isopropyltoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
1634-04-4	Methyl-tert-butyl ether	.50	U
135-98-8	sec-Butylbenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
91-20-3	Naphthalene	.50	U

ADF: 1.00

Total Hit(s): 0

ORGANICS ANALYSIS DATA SHEET-VOLATILE COMPOUNDS

Client Sample ID No.: VBLK25

Lab Name: LRI

Lab Sample ID: VBLK-QH0425

Matrix: [soil/water] SOIL

Lab File ID: >H9758

Sample wt/vol: 5.0 [g/mL] G

Run Type: 8021SVOA

Level: [low/med] LOW

Date Received:

% Moisture: 0.0

Date Analyzed : 04/25/95

GC Column: DB-VRX ID: 0.45 (mm)

Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: UG/KG	Q
71-43-2	Benzene	.50	U
108-88-3	Toluene	.50	U
100-41-4	Ethylbenzene	.50	U
108-38-3	meta + para-Xylenes	1.00	U
95-47-6	ortho-Xylene	.50	U
98-82-8	Isopropylbenzene	.50	U
103-65-1	n-Propylbenzene	.50	U
99-87-6	p-Isopropyltoluene	.50	U
108-67-8	1,3,5-Trimethylbenzene	.50	U
95-63-6	1,2,4-Trimethylbenzene	.50	U
98-06-6	tert-Butylbenzene	.50	U
1634-04-4	Methyl-tert-butyl ether	.50	U
135-98-8	sec-Butylbenzene	.50	U
104-51-8	n-Butylbenzene	.50	U
91-20-3	Naphthalene	.50	U

DF: 1.00

Total Hit(s): 0

Calibration Report

Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Calibrated: ~~950320 17:18~~ 950327. e.z . 3/28

Compound	Files: >H9222 RF 1.00	>H9224 RF 10.00	>H9225 RF 20.00	>H9226 RF 50.00	>H9229 RF 120.00	$\overline{RRT}$	$\overline{RF}$	% RSD	
Fluorobenzene (Surr)	1.37182	1.37113	1.43020	1.34950	1.25758	.761	1.35605	4.622	(Conc=20.0,20.0,20.0,20.0,20.0)
Methyl-tert-butyl ether	.80593	.71977	.70349	.74760	.72383	.465	.74012	5.408	
Benzene	2.31177	2.13797	2.18989	2.33923	2.21384	.733	2.23854	3.777	
Toluene	2.37630	2.20092	2.22971	2.34323	2.20793	.920	2.27162	3.610	
Ethylbenzene	2.24724	2.04473	2.03814	2.16361	1.99884	1.022	2.09851	4.931	
meta + para-Xylenes	2.68872	2.50562	2.51074	2.59939	2.34432	1.034	2.52976	5.057	(Conc=2.00,20.0,40.0,100.0,240.(
ortho-Xylene	2.24593	2.12295	2.19582	2.39018	2.22698	1.057	2.23637	4.378	
Isopropylbenzene	1.81136	1.62730	1.67221	1.84663	1.75687	1.078	1.74287	5.290	
n-Propylbenzene	2.05432	1.79806	1.81703	2.01187	1.89035	1.102	1.91433	5.994	
1,3,5-Trimethylbenzene	3.16576	2.84030	2.85215	2.96199	2.78630	1.120	2.92130	5.163	
tert-Butylbenzene	1.84889	1.46063	1.49259	1.64075	1.59989	1.134	1.60855	9.540	
1,2,4-Trimethylbenzene	2.34930	1.99431	2.02287	2.26311	2.18385	1.140	2.16269	7.060	
sec-Butylbenzene	2.03325	1.78751	1.59026	1.83992	1.64326	1.146	1.77884	9.837	
p-Isopropyltoluene	2.01481	1.88459	1.90459	2.08348	2.00658	1.152	1.97881	4.183	
n-Butylbenzene	1.94897	1.71933	1.77284	1.86887	1.81445	1.178	1.82489	4.847	
Naphthalene	1.48543	1.39436	1.42221	1.37437	1.48105	1.281	1.43148	3.509	

RF - Response Factor (Subscript is amount in PPB)

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

$\overline{\ }$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Check Report

Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Calibrated: 950328 17:18

Check Standard Data File: >H9710
Injection Time: 950423 16:14

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Fluorobenzene (Surr)	1.35605	1.41743	4.53	Average	(Conc=20.00)
Methyl-tert-butyl ether	.74012	.74098	.12	Average	
Benzene	2.23854	2.01412	10.03	Average	
Toluene	2.27162	2.01873	11.13	Average	
Ethylbenzene	2.09851	1.89663	9.62	Average	
meta + para-Xylenes	2.52976	2.22057	12.22	Average	(Conc=40.00)
ortho-Xylene	2.23637	2.03907	8.82	Average	
Isopropylbenzene	1.74287	1.59978	8.21	Average	
n-Propylbenzene	1.91433	1.72684	9.79	Average	
1,3,5-Trimethylbenzene	2.92130	2.50318	14.31	Average	
tert-Butylbenzene	1.60855	1.44689	10.05	Average	
1,2,4-Trimethylbenzene	2.16267	1.94389	10.12	Average	
sec-Butylbenzene	1.77884	1.55534	12.56	Average	
p-Isopropyltoluene	1.97881	1.79776	9.15	Average	
n-Butylbenzene	1.82489	1.67680	8.12	Average	
Naphthalene	1.43148	1.26890	11.36	Average	

RF - Response Factor from daily standard file at 20.00 PPB

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

%Diff - % Difference from original average or curve

Calibration Check Report

Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Calibrated: ~~950329 17:18~~ 950327 C 2

ck Standard Data File: >H9756
Injection Time: 950425 12:15

Compound	$\overline{RF}$	RF	%Diff	Calib Meth	
Fluorobenzene (Surr)	1.35605	1.34664	.69	Average	(Conc=20.00)
Methyl-tert-butyl ether	.74012	.78396	5.92	Average	
Benzene	2.23854	2.05669	8.12	Average	
Toluene	2.27162	2.02132	11.02	Average	
Ethylbenzene	2.09851	1.94626	7.26	Average	
meta + para-Xylenes	2.52976	2.29909	9.12	Average	(Conc=40.00)
ortho-Xylene	2.23637	2.09474	6.33	Average	
Isopropylbenzene	1.74287	1.65888	4.82	Average	
n-Propylbenzene	1.91433	1.80235	5.85	Average	
1,3,5-Trimethylbenzene	2.92130	2.57380	11.90	Average	
tert-Butylbenzene	1.60855	1.49722	6.92	Average	
1,2,4-Trimethylbenzene	2.16269	2.03511	5.90	Average	
sec-Butylbenzene	1.77884	1.52906	14.04	Average	
p-Isopropyltoluene	1.97881	1.93940	1.99	Average	
n-Butylbenzene	1.82489	1.74066	4.62	Average	
Naphthalene	1.43148	1.60884	12.39	Average	

RF - Response Factor from daily standard file at 20.00 PPB

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

%Diff - % Difference from original average or curve

LABORATORY
RESOURCES INC.

JOB NUMBER: T504299

QUALITY CONTROL RESULTS
SURROGATE SPIKES

	SAMPLE ID	CLIENT ID	PERCENT RECOVERY
1	VBLK-QH0423	VBLK23	96
2	T504216-14B	0037-TP06-041395-003	94
3	T504216-14BMS	0037-TP06-041395-003	93
4	T504216-14BMSD	0037-TP06-041395-003	95
5	VBLK-QH0425	VBLK25	99
6	T504299-18B	PL-098	104

Surrogate Compound - Fluorobenzene. Surrogate Limit : 70—131% (Soil)

QUALITY CONTROL RESULTS
MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Sample Spiked : 0037-TP06-041395-003
Matrix : Soil

	SAMPLE RESULT UG/KG	MS %	MSD %	RPD %
Benzene	ND	93	96	3.0
Toluene	ND	94	95	1.0
Ethylbenzene	ND	96	97	1.0
meta + para-Xylenes	ND	96	98	2.0
ortho-Xylene	ND	93	93	0.0
Isopropylbenzene	ND	91	94	3.0
n-Propylbenzene	ND	94	93	1.0
p-Isopropylbenzene	ND	91	93	2.0
1,2,4-Trimethylbenzene	ND	93	94	1.0
1,3,5-Trimethylbenzene	ND	94	95	1.0
n-Butylbenzene	ND	88	87	1.0
sec-Butylbenzene	ND	104	95	9.0
tert-Butylbenzene	ND	90	90	0.0
Naphthalene	ND	91	107	16.0
Methyl-tert-butyl ether	ND	99	94	5.0

COMMENTS: _____

LABORATORY
RESOURCES INC.

QUALITY CONTROL RESULTS : REPORT HISTORY

JOB NUMBER : INI.CAL

GC COLUMN : DB-VRX
INSTRUMENT ID : T9000

LAB SAMPLE ID.	CLIENT SAMPLE ID.	DATE OF ANALYSIS	TIME OF ANALYSIS
VSID001	VSTD 03/27/95	950327	13:10
VSID005	VSTD 03/27/95	950327	14:02
VSID010	VSTD 03/27/95	950327	14:53
VSID020	VSTD 03/27/95	950327	15:46
VSID050	VSTD 03/27/95	950327	16:38
VSID075	VSTD 03/27/95	950327	17:31
VSID120	VSTD 03/27/95	950327	19:20

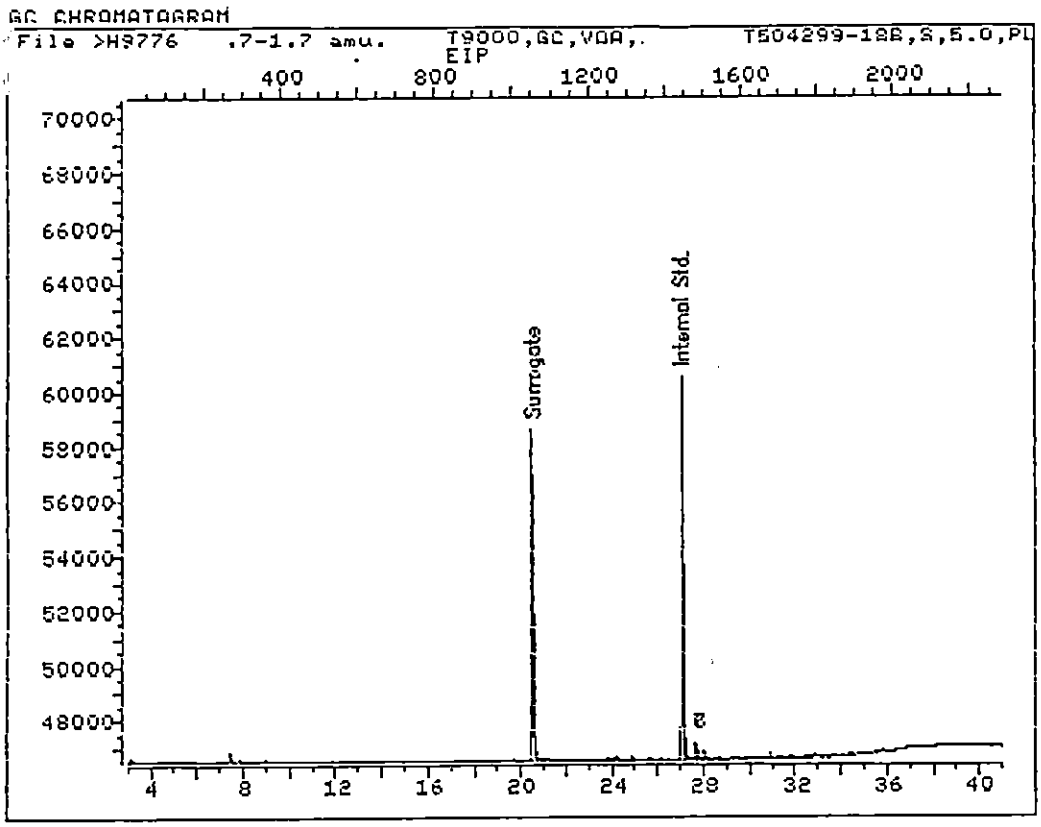
LABORATORY
RESOURCES INC.

QUALITY CONTROL RESULTS : REPORT HISTORY

JOB NUMBER : T504299

GC COLUMN : DB-VRX
INSTRUMENT ID : T9000

LAB SAMPLE ID.	CLIENT SAMPLE ID.	DATE OF ANALYSIS	TIME OF ANALYSIS
VSTD020	VSTD 04/23/95	950423	16:14
VBLK-QH0423	VBLK23	950423	17:05
T504216-14B	0037-TP06-041395-00	950424	08:44
T504216-14BMS	0037-TP06-041395-00	950424	09:37
T504216-14BMSD	0037-TP06-041395-00	950424	10:28
VSTD020	VSTD 04/25/95	950425	12:15
VBLK-QH0425	VBLK25	950425	14:15
T504299-18B	PL-098	950426	05:49



Data File: >H9776::35 Quant Output File: ^H9776::QQ
Name: T9000,GC,VOA, Instrument ID: H
Misc: T504299-18B,S,5.0,PL-098,

Id File: IDSTRH::N8
Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Last Calibration: 950328 17:20 Last Qcal Time: 950425 12:15

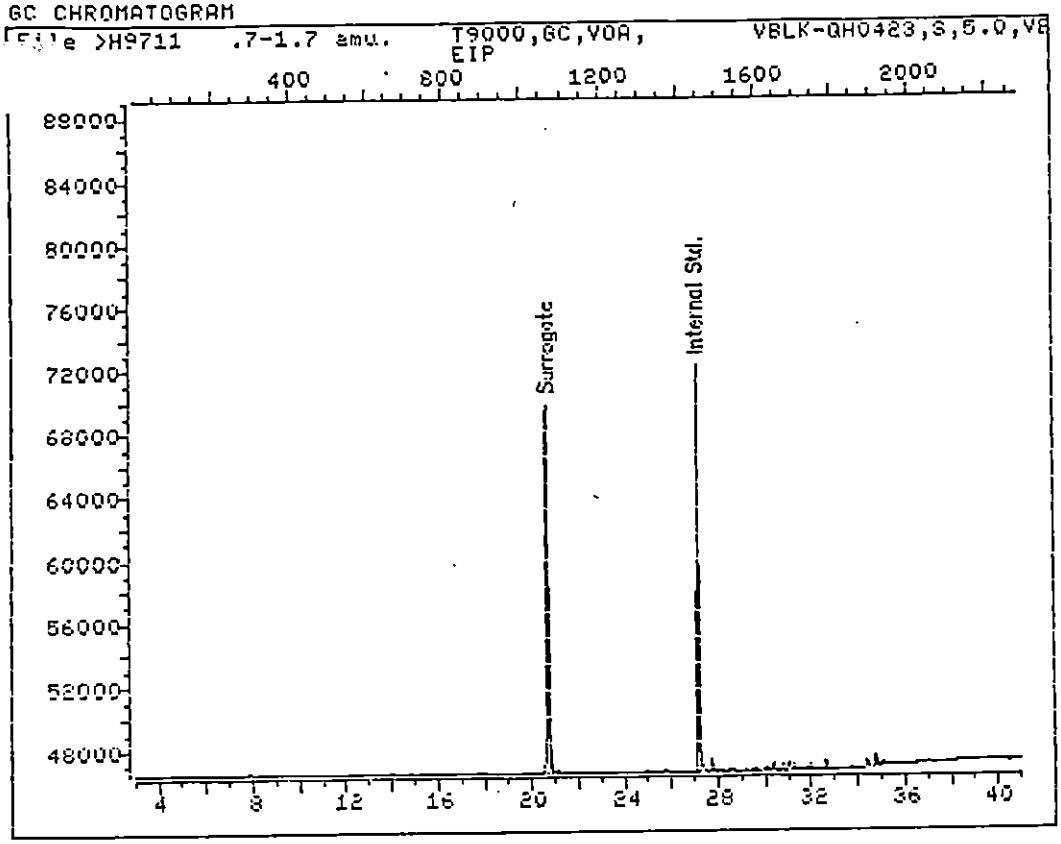
Operator ID: GC1
Quant Time : 950426 06:33
Injected at: 950426 05:49

: or ID: GC1 Quant Rev: 7 Quant Time: 950426 06:33
utput File: ^H9776::QQ Injected at: 950426 05:49
sta File: >H9776::35 Dilution Factor: 1.00000
ame: T9000,GC,VOA, Instrument ID: H
isc: T504299-18B,S,5.0,PL-098,

D File: IDSTRH::N8
itle: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
ast Calibration: 950328 17:20 Last Qcal Date: 950425 12:15

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Chlorofluorobenzene(ISTD)	27.03	1443	43799	20.00	PPB	100
2)	Fluorobenzene (Surr)	20.48	1050	61144	20.73	PPB	100

* Compound is ISTD



Data File: >H9711::34 Quant Output File: ^H9711::QQ
Name: T9000,GC,VOA, Instrument ID: H
Misc: VBLK-QH0423,S,5.0,VBLK23,

Id File: IDSTRH::N8
Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Last Calibration: 950328 17:20 Last Qcal Time: 950423 16:14

Operator ID: GC1
Quant Time : 950424 09:18
Injected at: 950423 17:05

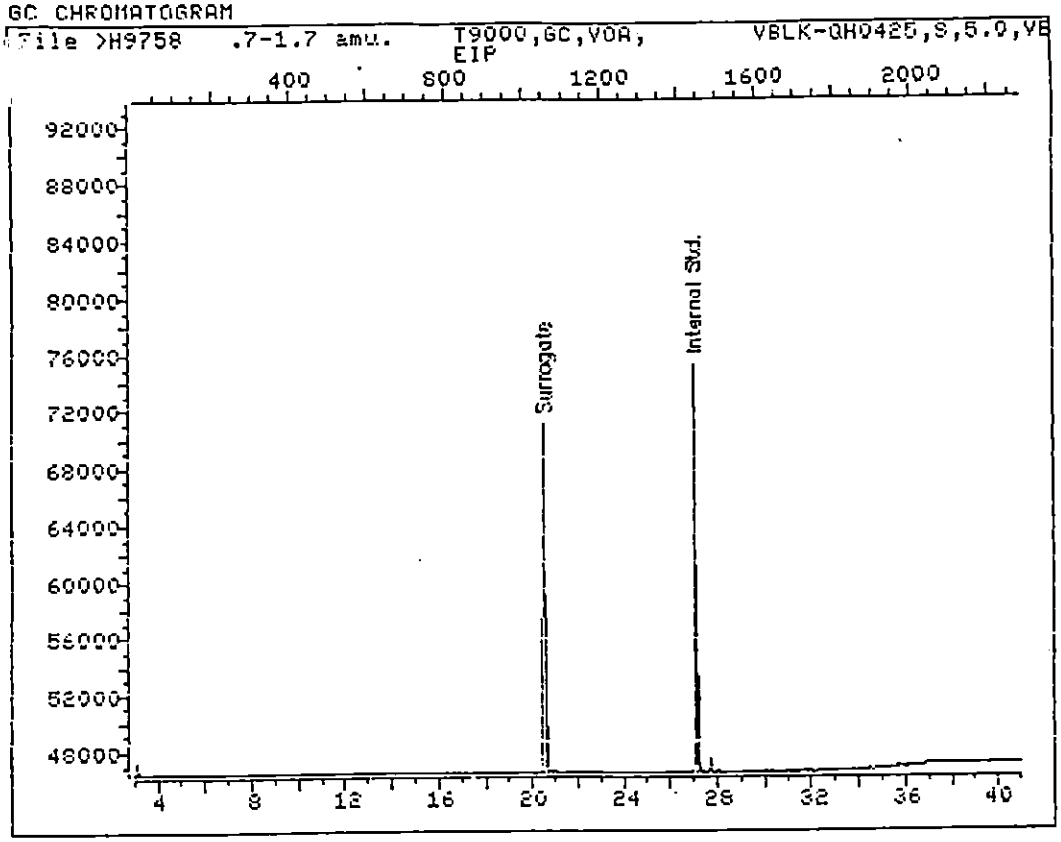
ator ID: GC1 Quant Rev: 7 Quant Time: 950424 09:18
Output File: ^H9711::QQ Injected at: 950423 17:05
Data File: >H9711::34 Dilution Factor: 1.00000
Name: T9000,GC,VOA, Instrument ID: H
Misc: VBLK-QH0423,S,5.0,VBLK23,

ID File: IDSTRH::N8
Title: EPA METHOD 8021SVOA, GC/VOA USING PID DETECTOR.
Last Calibration: 950328 17:20 Last Qcal Time: 950423 16:14

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Chlorofluorobenzene(ISTD)	27.08	1446	86440	20.00	PPB	100
2)	Fluorobenzene (Surr)	20.67	1061	117111	19.12	PPB	100

* Compound is ISTD

GC CHROMATOGRAM



Data File: >H9758::35 Quant Output File: ^H9758::QQ
Name: T9000,GC,VOA, Instrument ID: H
Misc: VBLK-QH0425,S,5.0,VBLK125

Id File: ID800H::N8
Title: EPA METHOD 8000, GC/VOA USING PID DETECTOR.
Last Calibration: 950328 17:30 Last Qcal Time: 950425 12:15

Operator ID: GC1
Quant Time : 950425 15:00
Injected at: 950425 14:15

QUANT REPORT Page 1

Operator ID: GC1 Quant Rev: 7 Quant Time: 950425 15:00
Output File: ^H9758::QQ Injected at: 950425 14:15
Data File: >H9758::35 Dilution Factor: 1.00000
Name: T9000,GC,VOA, Instrument ID: H
Misc: VBLK-QH0425,S,5.0,VBLK125

ID File: ID800H::N8
Title: EPA METHOD 8000, GC/VOA USING PID DETECTOR.
Last Calibration: 950328 17:30 Last Qcal Time: 950425 12:15

	Compound	R.T.	Scan#	Area	Conc	Units	c
1)	*Chlorofluorobenzene(ISTD)	27.05	1444	96407	20.00	PPB	1(
2)	Fluorobenzene (Surr)	20.53	1053	128360	19.77	PPB	1(

* Compound is ISTD

LRI GC ANALYSIS LOG

DATE (START) 2/27 END
TEST W. VOA
QA/QC TYPE 5 points, 500 low. Std
GC H/I UL INJ 5.0
SEQUENCE FILE START H/I
METHOD FILE HI502
ID FILE ID 502 H/I
CB FILE CB 502 H/I
ANALYSTS E.Z
SUPERVISOR AP
BATCH #s 0H0327
CASE #
TAPE #
CARTRIDGE

STANDARD	CONC PPM	LOT NO	LOT VOL
502 VOA	50	051-270	
502 GAS	50	051-271	
MTBE	50	051-272	
CE'VE	50	051273	
502 VOA	10	051-266	
502 GAS	10	051-265	
MTBE	10	051-267	
CE'VE	10	051-268	

CB502H → CB327H :: NB
CB502I → CB327I :: NB.
CB600H → CB327H :: NB, CB800H → CB327H :: NB
CB600I → CB327I :: NB. CB800I → CB327I :: NB
CB5TRH → CB327H :: NB

SAMPLE NUMBER	ml QUANT ~~ODEL~~	Matrix	DATA FILE	ALS #	DIL. FACTOR	COMMENTS
VSTD004	5.0	W	H9221			
VSTD006	"	"	H9222			OK
VSTD005	"	"	H9223			OK CB,CAL 502 H/I
VSTD010	"	"	H9224			OK 600 "
VSTD020	"	"	H9225			OK 800 "
VSTD050	"	"	H9226			OK STD H
VSTD075	"	"	H9227			OK
VSTD100	"	"	H9228			OK
VSTD120	"	"	H9229			OK
~~VSTD000~~	~~1~~		~~H9232~~			
VSTD01C	5.0	W	H9233			OK
VSTD010	"	"	H9234			OK
VSTD010	"	"	H9235			OK
VSTD010	"	"	H9236			OK
VSTD020	"	"	H9238			OK
VSTD020	"	"	H9238			OK
VSTD020	"	"	H9239			OK
VSTD020	"	"	H9240			OK

LRI GC ANALYSIS LOG

DATE (START) 1/23 END
TEST 5. VOA
QA/QC TYPE 8000
GC H UL INJ 5000
SEQUENCE FILE KVOA H1
METHOD FILE H2O2 :: N8
ID FILE ID 800H STRH
CB FILE CB 800 H
ANALYSTS C. Z.
SUPERVISOR AB
BATCH #s 8HOK23.
CASE #
TAPE #
CARTRIDGE

STANDARD	CONC PPM	LOT NO	LOT VOL
8270.17.			

SAMPLE NUMBER	wt. g ~~QUANT~~	~~DILUTION~~ QDEL	DATA FILE	ALS #	DIL. FACTOR	COMMENTS
VSTM020	5.0	"	H9710			
VBLIC	5.0	"	H9711			OK
T5042IC-1	5.0	"	H9714	7		OK
-2	"	"	H9715	8		OK
-3	"	"	H9716	9		OK
-4	"	"	H9717	10		OK
-5	"	"	H9718	11		OK
-6	"	"	H9719	12		OK
-7	"	"	H9720	13		OK
-8	"	"	H9721	14		OK
-9	"	"	H9722	15		OK
-10	"	"	H9723	16		OK
-11	"	"	H9724	1		OK
-12	"	"	H9725	2		OK
-13	"	"	H9726	3		OK
-14	"	"	H9727	4		OK
105 -15	"	"	H9728	2		OK
1057 -16	"	"	H9729	3		OK

LRI GC ANALYSIS LOG

DATE (START) 4/25. 12:15 END 4/26
TEST V.S. UV4
QA/QC TYPE 600. 800
GC H/T UL INJ 5000
SEQUENCE FILE RUN.H/T
METHOD FILE HT502
ID FILE ID 600. 800 STR H
CB FILE CB 600. 800. STR H
ANALYSTS C.Z
SUPERVISOR JD
BATCH #s 8H0425
CASE #
TAPE #
CARTRIDGE

STANDARD	CONC PPM	LOT NO	LOT VOL
See p.17.			

SAMPLE NUMBER	~~QUANT~~ wt %	~~QDEL~~ dect?	DATA FILE	ALS #	DIL. FACTOR	COMMENTS
VSTD020	5.0	W	H9756	16		OK QCAL. 600. 800.
VBLK	"	W	H9757	1		OK
VBLK	"	S	H9758	2		OK
T50K199-2	5.0	W	H9759	3		OK
T50K200-2	"	W	H9760	4		OK
T50K216-15	5.0	S	H9761	5		OK
-16	"	"	H9762	6		OK
-17	"	"	H9763	7		OK
-18	"	"	H9764	8		OK
-19	"	"	H9765	9		OK
-20	"	"	H9766	10		OK
-21	"	"	H9767	11		OK
-22	"	"	H9768	12		OK
T5K314-1	"	"	H9769	13		OK
-2	"	"	H9770	14		OK
-3	"	"	H9771	15		OK
-4	"	"	H9772	16		OK
-5	"	"	H9773	1		OK
-6	"	"	H9774	2		OK
-7	"	"	H9775	3		OK
T50K299-18	"	"	H9776	4		OK
T50K270-1	"	"	H9777	5		LR 5.0. Surrogate out
-2	"	"	H9778	6		OK
T50K270-1	"	"	H9779	7		OK
T50K216-19	"	"	H9780	8		OK
-19 RE	"	"	H9781	9		NQ Data.

TABLE OF ABBREVIATIONS

ORGANIC QUALIFIERS

B= Compound also detected in method blank
J= Below method detection limit
E= Exceeds calibration range
D= Dilution performed
U= Undetected
RE= Re-analysis performed

INORGANIC QUALIFIERS

EC= Estimated count
TNTC= Too numerous to count
QL= Quantitation limit
U= Undetected
S= Result quantitated by Method of Standard Additions
*= Duplicate analysis outside of required quality control limits
N= Matrix spike recovery outside of required quality control limits
ND= Not determinable
T= True Color
A= Apparent Color

PICTURES





JET FUEL PIPELINE REMOVAL

NES 00191



JET FUEL PIPELINE REMOVAL



JET FUEL PIPELINE REMOVAL



JET FUEL PIPELINE REMOVAL - INITIAL EXPOSURE OF LINE



JET FUEL PIPELINE REMOVAL - INITIAL CUT



JET FUEL PIPELINE - VALVE BOX TRENCH - DEEPEST PART OF EXCAVATION FOR REMOVAL OF THE PIPELINE - 17' - NOTE SLIGHT SOIL STAINING



JET FUEL PIPELINE REMOVAL

WASTE CLASSIFICATION ANALYSIS - LABORATORY SUMMARY SHEET(S) - PRODUCT CONTAINED IN PIPELINE

NES 00196

CycleChem Recycling Treatment & Disposal of Hazardous Waste

New Jersey Certification #20109

January 31, 1995

ATTN: Ms. Debbie Blendowski
C.U.T.E Inc.
103 Godwin Ave.
Midland Park, NJ 07432

RE: Suffolk County Sample Analysis - Manifest No. NJA1907286 (Sample ID#295017) and NJA1907290(Sample ID#297066)

Dear Ms. Blendowski:

The subject samples were received November 2 and November 11 respectively and were taken from bulk loads which had arrived on site. Sample 295017 was a 3% dark brown organic liquid on top of a 97% clear aqueous liquid. Sample 297066 was a 50% dark brown organic liquid on top of a 50% brown aqueous liquid. The test results were as follows:

Test	Sample Results #295017	Sample Results #297066	Method
Paint Filter	Liquid	Liquid	SW-846, Method #9095
Flashpoint	74 deg F	75 deg F	ASTM D93-80
BTU's/lb.	not done	21,391	ASTM D240-87
Chloride spot	negative	%Cl=0.117	Ignition flame color/ SW-846, Mtds 5050/9252
Tests For Each Layer:	Org. / Aqu.	Org. / Aqu.	
Specific grav.	N/A / 0.971	0.766 / 0.979	Std. Mtd. 2710F
Compatibility			
with fuel	pos./neg.	pos./neg.	Direct mix solubility
with water	neg./pos.	neg./pos.	Direct mix solubility
pH	6	6 / 7	SW-846, #9041
Oxidizer spot	N/A /neg.	N/A /neg.	Starch-iodide paper
Reactivity	No reaction	No reaction	Tested against acid, base, and water(40 CFR 261.123)
Cyanide spot	N/A /neg.	N/A /neg.	Std. Mtd. 4500 CN , K.
Sulfide spot	N/A /neg.	N/A /neg.	Std. Mtd. 4500 S , A.
PCB's	None detected	None detected	SW-846, Methods 3620 & 8080

217 South First Street, Elizabeth, NJ 07206 • 908-355-5800, FAX: 908-355-0562

NES 00197

171

Test	Sample Results		Method
	#295017	#297066	
Tests For Each Layer:	Org. / Aqu.	Org. / Aqu.	
Moisture	N/A	277 ppm / N/A	Karl Fischer Titration
TOC(ppm)	N/A / 1228	N/A / 12067	Std. Mtd. 5310 C.
DOC(ppm)	N/A / 1209	N/A / 651.4	Std. Mtd. 5310 C.
TSS(ppm)	N/A / None Detected	N/A / 900.0	Std. Mtd. 2540 D.

Please call me if there are any questions.

Sincerely,

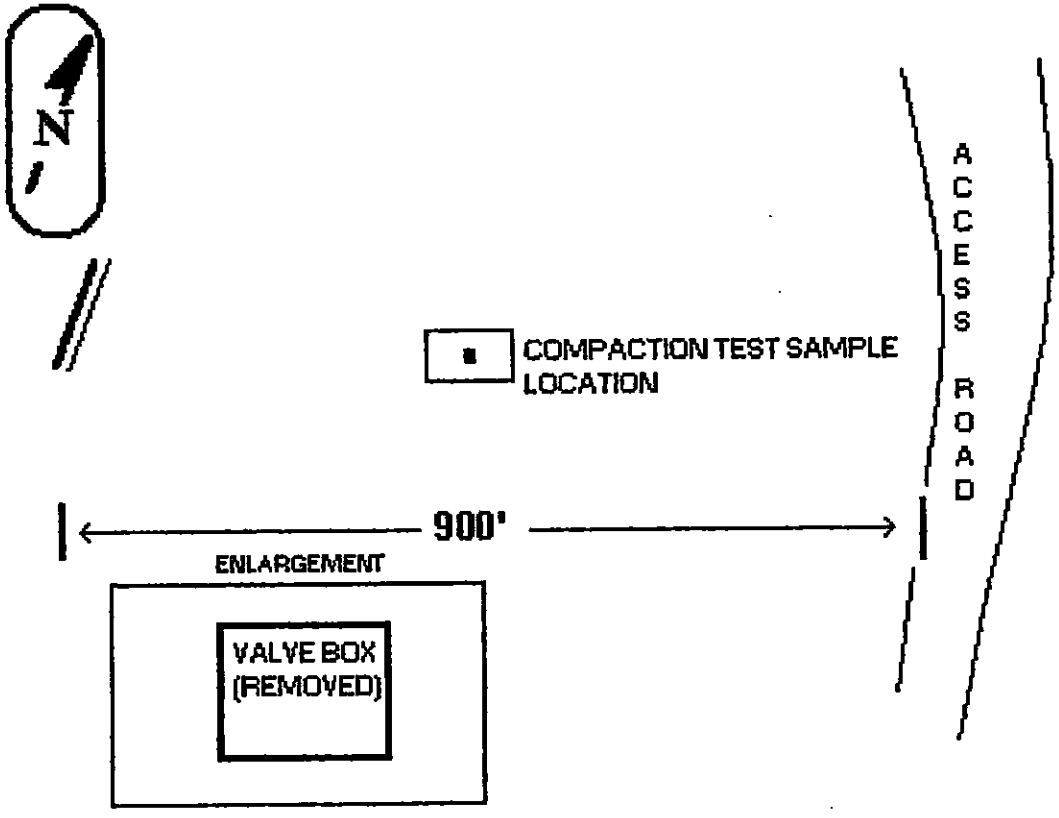
Jim Marshall-Zank
Lab Manager

cuteino.ltr

TOTAL P.02

JET FUEL PIPELINE - COMPACTION TESTS RESULTS SAMPLE LOCATION MAP

COMPACTION TEST LOCATION MAP - JET FUEL PIPELINE- VARIOUS DEPTHS



NES 00200

173

SUBSOIL INVESTIGATIONS

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783
(516) 221-2333 • FAX (516) 221-0254

LETTER OF TRANSMITTAL

DATE: 11/9/94
JOB NO.: 94-798
RE: Suffolk Co. Airport
Westhampton Beach, NY

TO: CLEANING UP THE ENVIRONMENT INC.
103 Goldwin Avenue
Midland Park, NJ 07432
ATT: Dave Beeman

WE ARE SENDING YOU THE FOLLOWING ITEMS: X Attached ___ Under Separate Cover via _____

___ Prints
___ Change Order
___ Shop Drawings
___ Copy of Letter
___ Plans
___ Samples
___ Specifications
___ _____

COPIES	DATE	NO.	DESCRIPTION
1		1	Modified Proctor ASM D 1557
1		2	Sieve Analyses ASTM C 136
			BILLING

THESE ARE TRANSMITTED AS CHECKED BELOW:

___ For approval
X For your use
___ As requested
___ For review and comment
___ Approved as submitted
___ Approved as noted
___ Returned for corrections
___ Resubmit ___ copies for approval
___ Submit ___ copies for distribution
___ Return ___ corrected prints
___ Other: _____
___ FOR BIDS DUE _____ 19___
___ PRINTS RETURNED AFTER LOAN TO US

REMARKS: _____

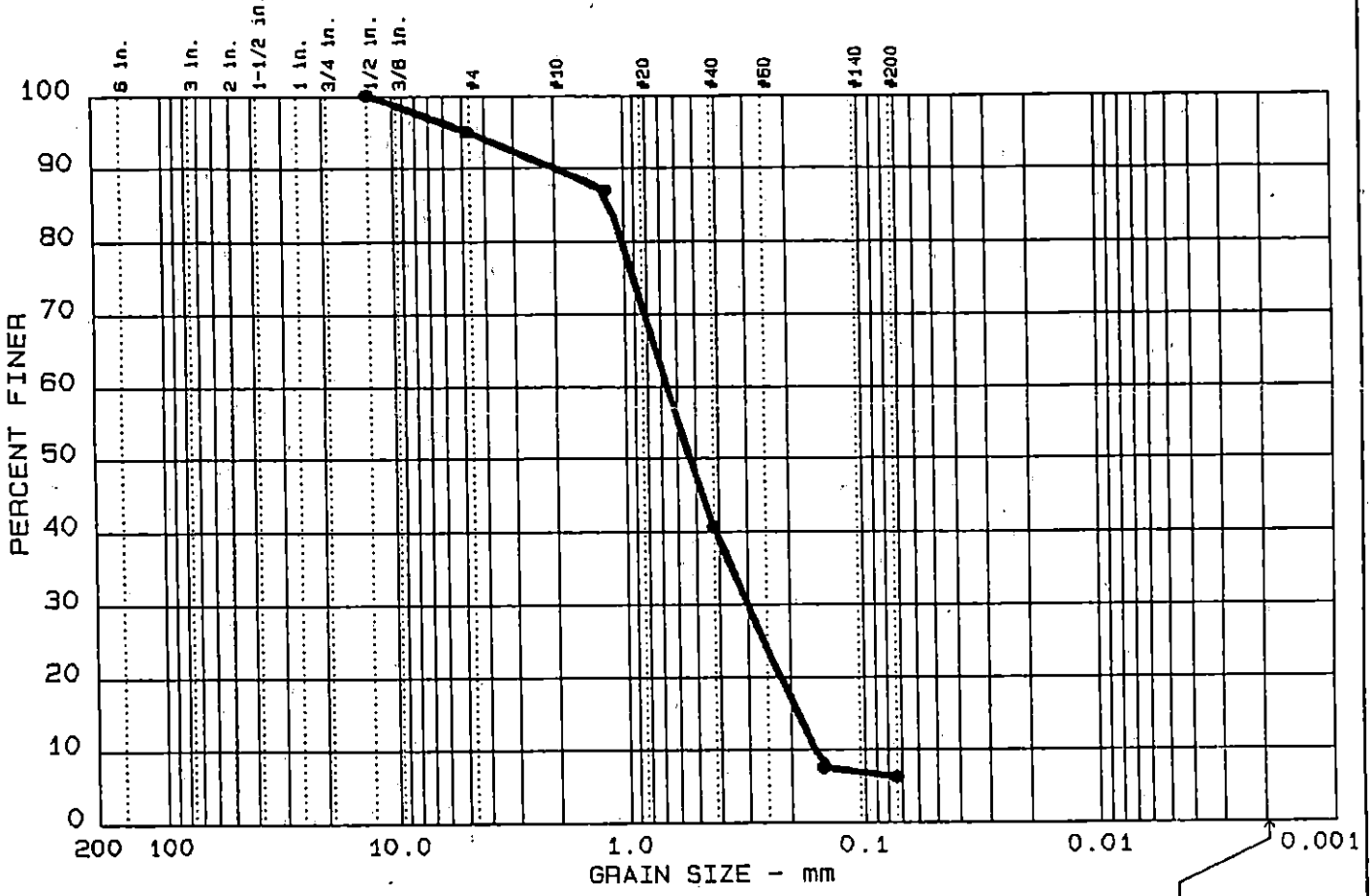
COPY TO: _____

SIGNED: Julia D'Antonio

NES 00201

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD L. I., NEW YORK 11783
(516) 221-2333 • FAX (516) 221-0254

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	17	0.0	5.1	88.8	6.1	

SIEVE SIZES

	0.5"	#4	#16	#40	#100	#200
●	100.0	94.9	87.0	40.5	7.5	6.1

SPECIFICATIONS

Project No.: 94-798 Date: 11-7-94
Project: Suffolk Co. Airport
● Location: On site
Material: Sand, trace gravel & silt-br.

Remarks:
Suitable for fill

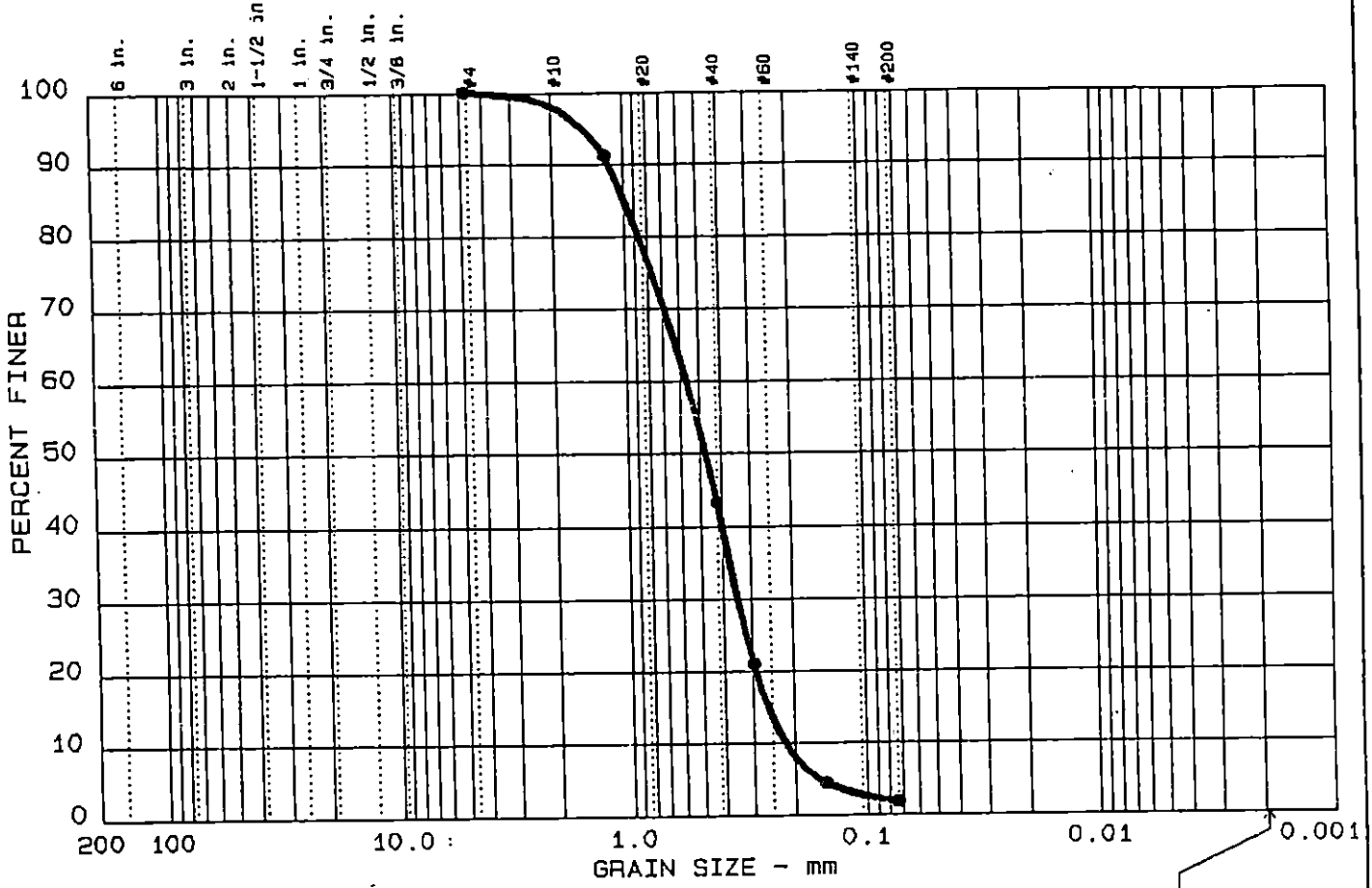
Figure No. 1

NES 00202

175

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783
(516) 221-2333 • FAX (516) 221-0254

GRAIN SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY
●	18	0.0	0.0	98.3	1.7	

SIEVE SIZES

	#4	#16	#40	#50	#100	#200
●	100.0	91.2	43.2	20.9	4.3	1.7

SPECIFICATIONS

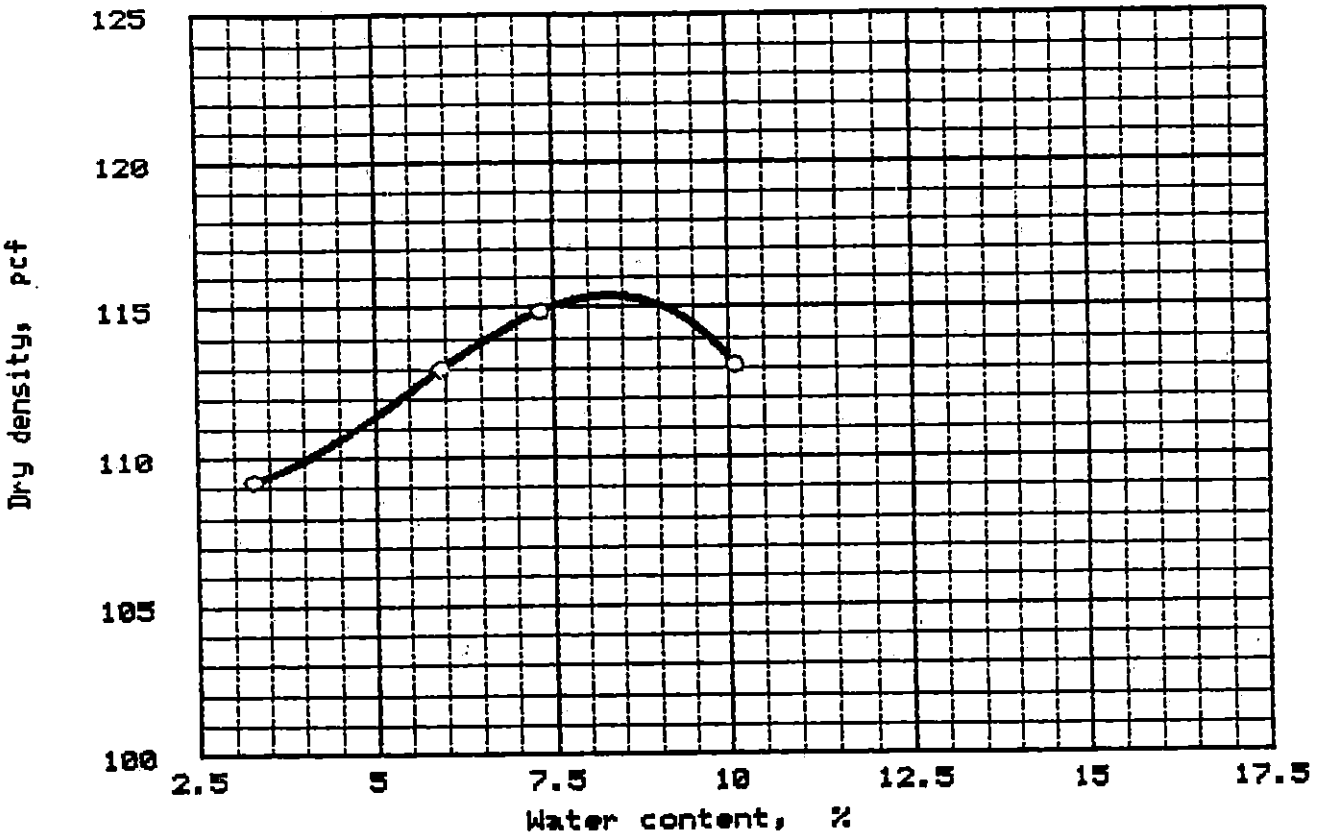
Project No.: 94-798 Date: 11-7-94
Project: Suffolk Co. Airport
● Location: Imported
Material: V.fine to coarse sand-tan (clean)

Remarks:
Suitable for mixing or use as controlled fill

Figure No.2

SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD, L I NEW YORK 11783
(516) 221-2333 • FAX (516) 221-0254

PROCTOR TEST REPORT



"Modified" Proctor, ASTM D 1557, Method A

Elev/ Depth	Classification USCS	Classification AASHTO	Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200

TEST RESULTS	MATERIAL DESCRIPTION
Optimum moisture = 8.3 % Maximum dry density = 115.4 pcf	Sand, trace gravel & silt
Project No.: 94-798 Project: Suffolk Co. Airport, Westhampton Beach Location: On site soil Date: Nov. 7, 1994 PROCTOR TEST REPORT	Remarks: Suitable for use as fill Figure No. 1

NES 00204

94-798



SOIL MECHANICS DRILLING CORP.
3770 MERRICK ROAD • SEAFORD, L. I., NEW YORK 11783
(516) 221-2333 • FAX (516) 221-0254

DATE 11/14/94

FIELD REPORT

	AM	PM
AIR TEMP.	30°	40°
WEATHER	CLEAR	CLEAR

CLIENT CLEANING UP THE ENVIRONMENT
CONTRACTOR CLEANING UP THE ENVIRONMENT
PROJECT SUFFOLK COUNTY AIRPORT

AREA WORKED PIPE TRENCH & 25,000 GALLON JET FUEL TANK EXCAVATION
CONCRETE ☐
ASPHALT ☐
OTHER ☒ COMPACTION TESTS
TOTAL MATERIAL PLACED _____ PLANT INSPECTION YES ☐ NO ☐

CONCRETE

NO. OF CYLINDERS CAST _____ SLUMPS _____ CONCRETE TEMP. _____
AIR CONTENT _____ ADMIXTURES _____

REINFORCING STEEL INSPECTION

LOCATION INSPECTED & APPROVED TYPE RE-BAR USED ____ GRADE _____

A) SAME AS ABOVE LOCATION ☐
B) ADDITIONAL OR DIFFERENT LOCATION ☐ _____

REJECTIONS ☐ EXPLANATION _____

SOILS

REMARKS I AM UNABLE TO VERIFY THE COMPACTION FOR THE ENTIRE DEPTH OF FILL FOR WHETHER THE PIPE TRENCH NOR THE 25,000 GALLON FUEL TANK EXCAVATION. THIS IS DUE TO THE FACT THAT UPON MY ARRIVAL ALL 17' OF FILL FOR BOTH LOCATIONS HAD ALREADY BEEN PLACED. HOWEVER, I WAS PROVIDED WITH HOLES IN BOTH AREAS IN VARIOUS LOCATIONS AT VARIOUS DEPTHS (RANGING FROM 1' BELOW GRADE TO 8') IN WHICH TO TEST THE COMPACTION. THE RESULTS OF THESE TESTS ALL EITHER MET OR SURPASSED THE REQUIRED 90% OF MAXIMUM DENSITY.

INSPECTED BY _____

SUBSOIL INVESTIGATIONS

SOIL MECHANICS DRILLING CORP.

3770 MERRICK ROAD • SEAFORD, L.I., NEW YORK 11783 • (516) 221-2333

Date: 11/14/94

PROJECT: SUFFOLK COUNTY AIRPORT

TEST # 4 Depth of test from final grade: 5'

FIELD DENSITY TEST

1. Wt. of Sand & Cone (a) = 1537
2. Wt. of Sand & Cone (b) = - 631
   Wt. of Sand = 906
   Sand in Cone = - 394
   NET SAND = 512 (c)
3. Volume of Soil = 0.0528

   $\frac{\text{Net Sand (c)}}{\text{Sand Volume}} = \frac{512}{97.0}$
4. Wt. of Soil & Can = 6.95
   Wt. of Can = - 0.69
   Wt. of Soil = 6.26 (d)
5. Moist. Density = 118.6

   $\frac{\text{Wt. of Soil (d)}}{\text{Vol. of Soil (3)}} = \frac{6.26}{.0528}$
6. WET Cup & Soil = ____ Cup = ____ Soil Wet = ____ (e)
   DRY Cup & Soil = ____ Cup = ____ Soil Dry = ____ (f)
   Soil Wet ____ Soil Dry ____ Moisture =
7. Moisture =

   $\frac{\text{Wet (e) - Dry (f) X100}}{\text{Dry (f)}} = \text{____} = 5.4$ (7) %
8. Dry Density =

   $\frac{\text{Moist. Density (5)}}{1.+ \frac{\% \text{ Moist. (7)}}{100}} = \frac{118.6}{1.054} = 112.5$
9. % Compaction = $\frac{\text{Dry Density}}{\text{Max. Density}} = \frac{112.5}{115.4} = 97.5$ %
10. Req. Density 90 %
11. Pass ✓ Fail ____

LOCATION: PIPE TRENCH

TEST BORINGS • GROUND WATER DETERMINATIONS • FOUNDATION RECOMMENDATIONS • HOLLOW STEM AUGER BORINGS
LABORATORY ANALYSES • CONTROLLED LANDFILL • DIAMOND CORE DRILLING • SAND & GRAVEL PROSPECTING
BEARING VALUES • WELL POINT INSTALLATIONS • ENGINEERING SUPERVISION • PERCOLATION TESTS
SANITARY INVESTIGATIONS • UNDISTURBED SAMPLING • TEST PITS • TOP SOIL ANALYSES

SUBSOIL INVESTIGATIONS

SOIL MECHANICS DRILLING CORP.

3770 MERRICK ROAD • SEAFORD, L.I., NEW YORK 11783 • (516) 221-2333

Date: 11/14/94

PROJECT: SUFFOLK COUNTY AIRPORT

TEST # 5 Depth of test from final grade: 6'

FIELD DENSITY TEST

1. Wt. of Sand & Cone (a) = 15.18
2. Wt. of Sand & Cone (b) = -5.57
   Wt. of Sand = 9.61
   Sand in Cone = -3.94
   NET SAND = 5.67 (c)
3. Volume of Soil = 0.0585

   Net Sand (c) / Sand Volume = 5.67 / 97.0
4. Wt. of Soil & Can = 7.70
   Wt. of Can = -0.69
   Wt. of Soil = 7.01 (d)
5. Moist. Density = 119.8

   Wt. of Soil (d) / Vol. of Soil (3) = 7.01 / .0585
6. WET
   Cup & Soil=
   Cup =
   Soil Wet = (e)

   DRY
   Cup & Soil=
   Cup =
   Soil Dry = (f)

   Soil Wet
   Soil Dry
   Moisture=
7. Moisture=

   [Wet (e) - Dry (f)] X100 / Dry (f) = 5.4 (7) %
8. Dry Density =

   Moist. Density (5) / 1.+ % Moist. (7) / 100 = 119.8 / 1.054 = 113.7
9. % Compaction = Dry Density / Max. Density = 113.7 / 115.4 = 98.5 %
10. Req. Density: 90 %
11. Pass ✓ Fail

LOCATION: PIPE TRENCH

TEST BORINGS • GROUND WATER DETERMINATIONS • FOUNDATION RECOMMENDATIONS • HOLLOW STEM AUGER BORINGS
LABORATORY ANALYSES • CONTROLLED LANDFILL • DIAMOND CORE DRILLING • SAND & GRAVEL PROSPECTING
BEARING VALUES • WELL POINT INSTALLATIONS • ENGINEERING SUPERVISION • PERCOLATION TESTS
SANITARY INVESTIGATIONS • UNDISTURBED SAMPLING • TEST PITS • TOP SOIL ANALYSES